• Does not have federalism implications as specified in Executive Order 13132 (64 FR 43255, August 10, 1999);

• Is not subject to Executive Order 13045 (62 FR 19885, April 23, 1997) because it proposes to approve a State program;

• Is not a significant regulatory action subject to Executive Order 13211 (66 FR 28355, May 22, 2001); and

• Is not subject to requirements of section 12(d) of the National Technology Transfer and Advancement Act of 1995 (15 U.S.C. 272 note) because application of those requirements would be inconsistent with the Clean Air Act.

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

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

The State did not evaluate EJ considerations as part of its SIP submittal; the CAA and applicable implementing regulations neither prohibit nor require such an evaluation. The EPA did not perform an EJ analysis and did not consider EJ in this action. Consideration of EJ is not required as part of this action, and there is no information in the record inconsistent with the stated goal of E.O. 12898 of achieving EJ for people of color, low-income populations, and Indigenous peoples.

List of Subjects in 40 CFR Part 52

Environmental protection, Air pollution control, Incorporation by reference, Intergovernmental relations, Ozone, Reporting and recordkeeping requirements, Volatile organic compounds.

Dated: August 13, 2024.

Martha Guzman Aceves,

Regional Administrator, Region IX.

[FR Doc. 2024–18458 Filed 8–16–24; 8:45 am]

BILLING CODE 6560–50–P

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 52

[EPA–R03–OAR–2023–0301; FRL–10191–01–R3]

Approval and Promulgation of Air Quality Implementation Plans; Delaware; Regional Haze State Implementation Plan for the Second Implementation Period

AGENCY: Environmental Protection Agency (EPA).

ACTION: Proposed rule.

SUMMARY: The Environmental Protection Agency (EPA or ''the Agency'') is proposing to approve the regional haze State implementation plan (SIP) revision submitted by Delaware on August 8, 2022, and supplemented on March 7, 2024, as satisfying applicable requirements under the Clean Air Act (CAA) and EPA's Regional Haze Rule (RHR) for the program's second implementation period. Delaware's SIP submission addresses the requirement that States must periodically revise their long-term strategies for making reasonable progress towards the national goal of preventing any future, and remedying any existing, anthropogenic impairment of visibility, including regional haze, in mandatory Class I Federal areas. The SIP submission also addresses other applicable requirements for the second implementation period of the regional haze program. EPA is taking this action pursuant to sections 110 and 169A of the CAA.

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

ADDRESSES: Submit your comments, identified by Docket ID No. EPA–R03–OAR–2023–0301 at *www.regulations.gov.* For comments submitted at *www.regulations.gov,* follow the online instructions for submitting comments. Once submitted, comments cannot be edited or removed from *www.regulations.gov.* For either manner of submission, the EPA may publish any comment received to its public docket. Do not submit electronically any information you consider to be confidential business information (CBI) or other information whose disclosure is restricted by statute. Multimedia submissions (audio, video, etc.) must be accompanied by a written comment. The written comment is considered the official comment and should include discussion of all points you wish to make. The EPA will generally not consider comments or comment contents located outside of the primary submission (*i.e.,* on the web, cloud, or other file sharing system). For additional submission methods, please contact the person identified in the **FOR FURTHER INFORMATION CONTACT** section. For the full EPA public comment policy, information about CBI or multimedia submissions, and general guidance on making effective comments, please visit *www.epa.gov/dockets/commenting-epa-dockets.*

FOR FURTHER INFORMATION CONTACT: Adam Yarina, U.S. Environmental Protection Agency, Air & Radiation Division, U.S. Environmental Protection Agency, Region III, Four Penn Center, 1600 John F Kennedy Boulevard, Philadelphia, Pennsylvania 19103. The telephone number is (215) 814–2108. Mr. Yarina can also be reached via electronic mail at *yarina.adam@epa.gov.*

SUPPLEMENTARY INFORMATION:

Table of Contents

I. What action is EPA proposing?

On August 8, 2022, the Delaware Department of Natural Resources and Environmental Control (DNREC) submitted a revision to its SIP to address regional haze for the second implementation period; with a supplement submitted on March 7, 2024. DNREC made this SIP submission to satisfy the requirements of the CAA's regional haze program pursuant to CAA sections 169A and 169B and 40 CFR 51.308. EPA is proposing to find that the Delaware regional haze SIP submission for the second implementation period meets the applicable statutory and regulatory requirements and thus proposes to approve Delaware's submission into its SIP.

II. Background and Requirements for Regional Haze Plans

A. Regional Haze Background

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

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

To address regional haze visibility impairment, the 1999 RHR established an iterative planning process that requires both States in which Class I Areas are located and States ''the emissions from which may reasonably be anticipated to cause or contribute to any impairment of visibility'' in a Class I Area to periodically submit SIP revisions to address such impairment. CAA 169A(b)(2);[4] see also 40 CFR 51.308(b), (f) (establishing submission dates for iterative regional haze SIP revisions); (64 FR 35714 at 35768, July 1, 1999). Under the CAA, each SIP submission must contain ''a long-term (ten to fifteen years) strategy for making reasonable progress toward meeting the national goal,'' CAA 169A(b)(2)(B); the initial round of SIP submissions also had to address the statutory requirement that certain older, larger sources of visibility impairing pollutants install and operate the best available retrofit technology (BART). CAA 169A(b)(2)(A); 40 CFR 51.308(d), (e). States' first regional haze SIPs were due by December 17, 2007, 40 CFR 51.308(b), with subsequent SIP submissions containing updated long-term strategies originally due July 31, 2018, and every ten years thereafter. (64 FR 35714 at 35768, July 1, 1999). EPA established in the 1999 RHR that all States either have Class I Areas within their borders or ''contain sources whose emissions are reasonably anticipated to contribute to regional haze in a Class I Area''; therefore, all States must submit regional haze SIPs.[5] *Id.* at 35721.

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

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

[2] In addition to the generally applicable regional haze provisions at 40 CFR 51.308, EPA also promulgated regulations specific to addressing regional haze visibility impairment in Class I Areas on the Colorado Plateau at 40 CFR 51.309. The latter regulations are applicable only for specific jurisdictions' regional haze plans submitted no later than December 17, 2007, and thus are not relevant here.

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

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

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

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

States were also required to calculate baseline (using the five year period of 2000–2004) and natural visibility conditions (*i.e.,* visibility conditions without anthropogenic visibility impairment) for each Class I Area, and to calculate the linear rate of progress needed to attain natural visibility conditions, assuming a starting point of baseline visibility conditions in 2004 and ending with natural conditions in 2064. This linear interpolation is known as the uniform rate of progress (URP) and is used as a tracking metric to help States assess the amount of progress they are making towards the national visibility goal over time in each Class I Area.[6] 40 CFR 51.308(d)(1)(i)(B), (d)(2). The 1999 RHR also provided that States' long-term strategies must include the ''enforceable emissions limitations, compliance schedules, and other measures as necessary to achieve the reasonable progress goals.'' 40 CFR 51.308(d)(3). In establishing their long-term strategies, States are required to consult with other States that also contribute to visibility impairment in a given Class I Area and include all measures necessary to obtain their shares of the emission reductions needed to meet the RPGs. 40 CFR 51.308(d)(3)(i) and (ii). Section 51.308(d) also contains seven additional factors States must consider in formulating their long-term strategies, 40 CFR 51.308(d)(3)(v), as well as provisions governing monitoring and other implementation plan requirements. 40 CFR 51.308(d)(4). Finally, the 1999 RHR required States to submit periodic progress reports—SIP revisions due every five years that contain information on States' implementation of their regional haze plans and an assessment of whether anything additional is needed to make reasonable progress, see 40 CFR 51.308(g), (h)—and to consult with the Federal Land Manager(s)[7] (FLMs) responsible for each Class I Area according to the requirements in CAA 169A(d) and 40 CFR 51.308(i).

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

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

[6] EPA established the URP framework in the 1999 RHR to provide ''an equitable analytical approach'' to assessing the rate of visibility improvement at Class I Areas across the country. The start point for the URP analysis is 2004 and the endpoint was calculated based on the amount of visibility improvement that was anticipated to result from implementation of existing CAA programs over the period from the mid-1990s to approximately 2005. Assuming this rate of progress would continue into the future, EPA determined that natural visibility conditions would be reached in 60 years, or 2064 (60 years from the baseline starting point of 2004). However, EPA did not establish 2064 as the year by which the national goal *must* be reached. 64 FR 35714 at 35731–32, July 1, 1999. That is, the URP and the 2064 date are not enforceable targets, but are rather tools that ''allow for analytical comparisons between the rate of progress that would be achieved by the state's chosen set of control measures and the URP.'' (82 FR 3078 at 3084, January 10, 2017).

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

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

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

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

[11] Recommendation for the Use of Patched and Substituted Data and Clarification of Data Completeness for Tracking Visibility Progress for the Second Implementation Period of the Regional Haze Program. *www.epa.gov/visibility/memo-and-technical-addendum-ambient-data-usage-and-completeness-regional-haze-program.* The EPA

As previously explained in the 2021 Clarifications Memo, EPA intends the second implementation period of the regional haze program to secure meaningful reductions in visibility impairing pollutants that build on the significant progress States have achieved to date. The Agency also recognizes that analyses regarding reasonable progress are State-specific and that, based on States' and sources' individual circumstances, what constitutes reasonable reductions in visibility impairing pollutants will vary from state-to-state. While there exist many opportunities for States to leverage both ongoing and upcoming emission reductions under other CAA programs, the Agency expects States to undertake rigorous reasonable progress analyses that identify further opportunities to advance the national visibility goal consistent with the statutory and regulatory requirements. See generally 2021 Clarifications Memo. This is consistent with Congress' determination that a visibility protection program is needed in addition to the CAA's National Ambient Air Quality Standards and Prevention of Significant Deterioration programs, as further emission reductions may be necessary to adequately protect visibility in Class I Areas throughout the country.[12]

B. Roles of Agencies in Addressing Regional Haze

Because the air pollutants and pollution affecting visibility in Class I Areas can be transported over long distances, successful implementation of the regional haze program requires long-term, regional coordination among multiple jurisdictions and agencies that have responsibility for Class I Areas and the emissions that impact visibility in those areas. In order to address regional haze, States need to develop strategies in coordination with one another, considering the effect of emissions from one jurisdiction on the air quality in another. Five regional planning organizations (RPOs),[13] which include representation from State and Tribal governments, EPA, and FLMs, were developed in the lead-up to the first implementation period to address regional haze. RPOs evaluate technical information to better understand how emissions from State and Tribal land impact Class I Areas across the country, pursue the development of regional strategies to reduce emissions of particulate matter and other pollutants leading to regional haze, and help States meet the consultation requirements of the RHR.

The Mid-Atlantic/Northeast Visibility Union (MANE–VU), one of the five RPOs described above, is a collaborative effort of State governments, Tribal governments, and various Federal agencies established to initiate and coordinate activities associated with the management of regional haze, visibility, and other air quality issues in the Mid-Atlantic and Northeast corridor of the United States. Member States and Tribal governments (listed alphabetically) include: Connecticut, Delaware, the District of Columbia, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Penobscot Indian Nation, Rhode Island, St. Regis Mohawk Tribe, and Vermont. The Federal partner members of MANE–VU are EPA, U.S. National Parks Service (NPS), U.S. Fish and Wildlife Service (FWS), and U.S. Forest Service (USFS).

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

Under the CAA and EPA's regulations, all 50 States, the District of Columbia, and the U.S. Virgin Islands are required to submit regional haze SIPs satisfying the applicable requirements for the second implementation period of the regional haze program by July 31, 2021. Each State's SIP must contain a long-term strategy for making reasonable progress toward meeting the national goal of remedying any existing and preventing any future anthropogenic visibility impairment in Class I Areas. CAA 169A(b)(2)(B). To this end, 40 CFR 51.308(f) lays out the process by which States determine what constitutes their long-term strategies, with the order of the requirements in 40 CFR 51.308(f)(1) through (3) generally mirroring the order of the steps in the reasonable progress analysis [14] and paragraphs (f)(4) through (6) containing additional, related requirements. Broadly speaking, a State first must identify the Class I Areas within the State and determine the Class I Areas outside the State in which visibility may be affected by emissions from the State. These are the Class I Areas that must be addressed in the State's long-term strategy. See 40 CFR 51.308(f), (f)(2). For each Class I Area within its borders, a State must then calculate the baseline, current, and natural visibility conditions for that area, as well as the visibility improvement made to date and the URP. See 40 CFR 51.308(f)(1). Each State having a Class I Area and/or emissions that may affect visibility in a Class I Area must then develop a long-term strategy that includes the enforceable emission limitations, compliance schedules, and other measures that are necessary to make reasonable progress in such areas. A reasonable progress determination is based on applying the four factors in CAA section 169A(g)(1) to sources of visibility-impairing pollutants that the State has selected to assess for controls for the second implementation period. See 40 CFR 51.308(f)(2). A State evaluates potential emission reduction measures for those selected sources and determines which are necessary to make reasonable progress. Those measures are then incorporated into the State's long-term strategy. After a State has developed its long-term strategy, it then establishes RPGs for each Class I Area within its borders by modeling the visibility impacts of all reasonable progress controls at the end of the second implementation period, *i.e.,* in 2028, as well as the impacts of other requirements of the CAA. The RPGs include reasonable progress controls not only for sources in the State in which the Class I Area is located, but also for sources in other States that contribute to visibility impairment in that area. The RPGs are then compared to the baseline visibility conditions and the URP to ensure that progress is being made towards the statutory goal of preventing any future and remedying any existing anthropogenic visibility impairment in Class I Areas. 40 CFR 51.308(f)(2) and (3).

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

A State must submit its regional haze SIP and subsequent SIP revisions to

Office of Air Quality Planning and Standards, Research Triangle Park (June 3, 2020).

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

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

[14] EPA explained in the 2017 RHR Revisions that we were adopting new regulatory language in 40 CFR 51.308(f) that, unlike the structure in 40 CFR 51.308(d), ''tracked the actual planning sequence.'' (82 FR 3078 at 3091, January 10, 2017).

EPA according to the requirements applicable to all SIP revisions under the CAA and EPA's regulations. See CAA 169A(b)(2); CAA 110(a). Upon EPA approval, a SIP is enforceable by the Agency and the public under the CAA. If EPA finds that a State fails to make a required SIP revision, or if EPA finds that a State's SIP is incomplete or disapproves the SIP, the Agency must promulgate a Federal implementation plan (FIP) that satisfies the applicable requirements. CAA 110(c)(1).

A. Identification of Class I Areas

The first step in developing a regional haze SIP is for a State to determine which Class I Areas, in addition to those within its borders, ''may be affected'' by emissions from within the State. In the 1999 RHR, EPA determined that all States contribute to visibility impairment in at least one Class I Area, 64 FR 35714 at 35720–22 (July 1, 1999), and explained that the statute and regulations lay out an ''extremely low triggering threshold'' for determining ''whether States should be required to engage in air quality planning and analysis as a prerequisite to determining the need for control of emissions from sources within their State.'' *Id.* at 35721.

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

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

As part of assessing whether a SIP submission for the second implementation period is providing for reasonable progress towards the national visibility goal, the RHR contains requirements in 40 CFR 51.308(f)(1) related to tracking visibility improvement over time. The requirements of this section apply only to States having Class I Areas within their borders; the required calculations must be made for each such Class I Area. EPA's 2018 Visibility Tracking Guidance [15] provides recommendations to assist States in satisfying their obligations under 40 CFR 51.308(f)(1); specifically, in developing information on baseline, current, and natural visibility conditions, and in making optional adjustments to the URP to account for the impacts of international anthropogenic emissions and prescribed fires. See 82 FR 3078 at 3103–05 (January 10, 2017).

The RHR requires tracking of visibility conditions on two sets of days: the clearest and the most impaired days. Visibility conditions for both sets of days are expressed as the average deciview index for the relevant five-year period (the period representing baseline or current visibility conditions). The RHR provides that the relevant sets of days for visibility tracking purposes are the 20% clearest (the 20% of monitored days in a calendar year with the lowest values of the deciview index) and 20% most impaired days (the 20% of monitored days in a calendar year with the highest amounts of anthropogenic visibility impairment).[16] 40 CFR 51.301. A State must calculate visibility conditions for both the 20% clearest and 20% most impaired days for the baseline period of 2000–2004 and the most recent five-year period for which visibility monitoring data are available (representing current visibility conditions). 40 CFR 51.308(f)(1)(i) and (iii). States must also calculate natural visibility conditions for the clearest and most impaired days,[17] by estimating the conditions that would exist on those two sets of days absent anthropogenic visibility impairment. 40 CFR 51.308(f)(1)(ii). Using all these data, States must then calculate, for each Class I Area, the amount of progress made since the baseline period (2000–2004) and how much improvement is left to achieve in order to reach natural visibility conditions.

Using the data for the set of most impaired days only, States must plot a line between visibility conditions in the baseline period and natural visibility conditions for each Class I Area to determine the URP—the amount of visibility improvement, measured in deciviews, that would need to be achieved during each implementation period in order to achieve natural visibility conditions by the end of 2064. The URP is used in later steps of the reasonable progress analysis for informational purposes and to provide a non-enforceable benchmark against which to assess a Class I Area's rate of visibility improvement.[18] Additionally, in the 2017 RHR Revisions, EPA provided States the option of proposing to adjust the endpoint of the URP to account for impacts of anthropogenic sources outside the United States and/or impacts of certain types of wildland prescribed fires. These adjustments, which must be approved by EPA, are intended to avoid any perception that States should compensate for impacts from international anthropogenic sources and to give States the flexibility to determine that limiting the use of wildland-prescribed fire is not necessary for reasonable progress. See 82 FR 3078 at 3107, January 10, 2017, footnote 116.

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

C. Long-Term Strategy for Regional Haze

The core component of a regional haze SIP submission is a long-term strategy that addresses regional haze in each Class I Area within a State's

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

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

[17] The RHR at 40 CFR 51.308(f)(1)(ii) contains an error related to the requirement for calculating two sets of natural conditions values. The rule says ''most impaired days or the clearest days'' where it should say ''most impaired days and clearest days.'' This is an error that was intended to be corrected in the 2017 RHR Revisions but did not get corrected in the final rule language. This is supported by the preamble text at 82 FR 3078 at 3098: ''In the final version of 40 CFR 51.308(f)(1)(ii), an occurrence of ''or'' has been corrected to ''and'' to indicate that natural visibility conditions for both the most impaired days and the clearest days must be based on available monitoring information.''

[18] Being on or below the URP is not a ''safe harbor''; *i.e.,* achieving the URP does not mean that a Class I area is making ''reasonable progress'' and does not relieve a state from using the four statutory factors to determine what level of control is needed to achieve such progress. *See, e.g.,* 82 FR 3078 at 3093 (January 10, 2017).

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

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

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

EPA explained in the 2021 Clarifications Memo that each State has an obligation to submit a long-term strategy that addresses the regional haze visibility impairment that results from emissions from within that State. Thus, source selection should focus on the in-State contribution to visibility impairment and be designed to capture a meaningful portion of the State's total contribution to visibility impairment in Class I Areas. A State should not decline to select its largest in-State sources on the basis that there are even larger out-of-State contributors. 2021 Clarifications Memo at 4.[19]

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

Once a State has selected the set of sources, the next step is to determine the emissions reduction measures for those sources that are necessary to make reasonable progress for the second implementation period.[20] This is accomplished by considering the four factors—''the costs of compliance, the time necessary for compliance, and the energy and nonair quality environmental impacts of compliance, and the remaining useful life of any existing source subject to such requirements.'' CAA 169A(g)(1). EPA has explained that the four-factor analysis is an assessment of potential emission reduction measures (*i.e.,* control options) for sources; ''use of the terms 'compliance' and 'subject to such requirements' in section 169A(g)(1) strongly indicates that Congress intended the relevant determination to be the requirements with which sources would have to comply in order to satisfy the CAA's reasonable progress mandate.'' 82 FR 3078 at 3091 (January 10, 2017). Thus, for each source it has selected for four-factor analysis,[21] a State must consider a ''meaningful set'' of technically feasible control options for reducing emissions of visibility impairing pollutants. *Id.* at 3088. The 2019 Guidance provides that ''[a] state must reasonably pick and justify the measures that it will consider, recognizing that there is no statutory or regulatory requirement to consider all technically feasible measures or any particular measures. A range of technically feasible measures available to reduce emissions would be one way to justify a reasonable set.'' 2019 Guidance at 29.

EPA's 2021 Clarifications Memo provides further guidance on what constitutes a reasonable set of control options for consideration: ''A reasonable four-factor analysis will consider the full range of potentially reasonable options for reducing emissions.'' 2021

[19] Similarly, in responding to comments on the 2017 RHR Revisions EPA explained that ''[a] state should not fail to address its many relatively low-impact sources merely because it only has such sources and another state has even more low-impact sources and/or some high impact sources.'' Responses to Comments on Protection of Visibility: Amendments to Requirements for State Plans; Proposed Rule (81 FR 26942, May 4, 2016) at 26987–26988.

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

[21] ''Each source'' or ''particular source'' is used here as shorthand. While a source-specific analysis is one way of applying the four factors, neither the statute nor the RHR requires states to evaluate individual sources. Rather, states have ''the flexibility to conduct four-factor analyses for specific sources, groups of sources or even entire source categories, depending on state policy preferences and the specific circumstances of each state.'' 82 FR 3078 at 3088, January 10, 2017. However, not all approaches to grouping sources for four-factor analysis are necessarily reasonable; the reasonableness of grouping sources in any particular instance will depend on the circumstances and the manner in which grouping is conducted. If it is feasible to establish and enforce different requirements for sources or subgroups of sources, and if relevant factors can be quantified for those sources or subgroups, then States should make a separate reasonable progress determination for each source or subgroup. 2021 Clarifications Memo at 7–8.

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

After identifying a reasonable set of potential control options for the sources it has selected, a State then collects information on the four factors with regard to each option identified. EPA has also explained that, in addition to the four statutory factors, States have flexibility under the CAA and RHR to reasonably consider visibility benefits as an additional factor alongside the four statutory factors.[22] The 2019 Guidance provides recommendations for the types of information that can be used to characterize the four factors (with or without visibility), as well as ways in which States might reasonably consider and balance that information to determine which of the potential control options is necessary to make reasonable progress. See 2019 Guidance at 30–36. The 2021 Clarifications Memo contains further guidance on how States can reasonably consider modeled visibility impacts or benefits in the context of a four-factor analysis. 2021 Clarifications Memo at 12–13, 14–15. Specifically, EPA explained that while visibility can reasonably be used when comparing and choosing between multiple reasonable control options, it should not be used to summarily reject controls that are reasonable given the four statutory factors. 2021 Clarifications Memo at 13. Ultimately, while States have discretion to reasonably weigh the factors and to determine what level of control is needed, 40 CFR 51.308(f)(2)(i) provides that a State ''must include in its implementation plan a description of . . . how the four factors were taken into consideration in selecting the measure for inclusion in its long-term strategy.''

As explained above, 40 CFR 51.308(f)(2)(i) requires States to determine the emission reduction measures for sources that are necessary to make reasonable progress by considering the four factors. Pursuant to 40 CFR 51.308(f)(2), measures that are necessary to make reasonable progress towards the national visibility goal must be included in a State's long-term strategy and in its SIP.[23] If the outcome of a four-factor analysis is a new, additional emission reduction measure for a source, that new measure is necessary to make reasonable progress towards remedying existing anthropogenic visibility impairment and must be included in the SIP. If the outcome of a four-factor analysis is that no new measures are reasonable for a source, continued implementation of the source's existing measures is generally necessary to prevent future emission increases and thus to make reasonable progress towards the second part of the national visibility goal: preventing future anthropogenic visibility impairment. See CAA 169A(a)(1). That is, when the result of a four-factor analysis is that no new measures are necessary to make reasonable progress, the source's existing measures are generally necessary to make reasonable progress and must be included in the SIP. However, there may be circumstances in which a State can demonstrate that a source's existing measures are *not* necessary to make reasonable progress. Specifically, if a State can demonstrate that a source will continue to implement its existing measures and will not increase its emission rate, it may not be necessary to have those measures in the long-term strategy in order to prevent future emission increases and future visibility impairment. EPA's 2021 Clarifications Memo provides further explanation and guidance on how States may demonstrate that a source's existing measures are not necessary to make reasonable progress. See 2021 Clarifications Memo at 8–10. If the State can make such a demonstration, it need not include a source's existing measures in the long-term strategy or its SIP.

As with source selection, the characterization of information on each of the factors is also subject to the documentation requirement in 40 CFR 51.308(f)(2)(iii). The reasonable progress analysis, including source selection, information gathering, characterization of the four statutory factors (and potentially visibility), balancing of the four factors, and selection of the emission reduction measures that represent reasonable progress, is a technically complex exercise, but also a flexible one that provides States with bounded discretion to design and implement approaches appropriate to their circumstances. Given this flexibility, 40 CFR 51.308(f)(2)(iii) plays an important function in requiring a State to document the technical basis for its decision making so that the public and EPA can comprehend and evaluate the information and analysis the State relied upon to determine what emission reduction measures must be in place to make reasonable progress. The technical documentation must include the modeling, monitoring, cost, engineering, and emissions information on which the State relied to determine the measures necessary to make reasonable progress. This documentation requirement can be met through the provision of and reliance on technical analyses developed through a regional planning process, so long as that process and its output has been approved by all State participants. In addition to the explicit regulatory requirement to document the technical basis of their reasonable progress determinations, States are also subject to the general principle that those determinations must be reasonably moored to the statute.[24] That is, a State's decisions about the emission

[22] *See, e.g.,* Responses to Comments on Protection of Visibility: Amendments to Requirements for State Plans; Proposed Rule (81 FR 26942, May 4, 2016), Docket Number EPA–HQ–OAR–2015–0531, U.S. Environmental Protection Agency at 186; 2019 Guidance at 36–37.

[23] States may choose to, but are not required to, include measures in their long-term strategies beyond just the emission reduction measures that are necessary for reasonable progress. See 2021 Clarifications Memo at 16. For example, states with smoke management programs may choose to submit their smoke management plans to EPA for inclusion in their SIPs but are not required to do so. See, *e.g.,* 82 FR 3078 at 3108–09, January 10, 2017 (requirement to consider smoke management practices and smoke management programs under 40 CFR 51.308(f)(2)(iv) does not require states to adopt such practices or programs into their SIPs, although they may elect to do so).

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

reduction measures that are necessary to make reasonable progress must be consistent with the statutory goal of remedying existing and preventing future visibility impairment.

The four statutory factors (and potentially visibility) are used to determine what emission reduction measures for selected sources must be included in a State's long-term strategy for making reasonable progress. Additionally, the RHR at 40 CFR 51.308(f)(2)(iv) separately provides five ''additional factors'' [25] that States must consider in developing their long-term strategies: (1) emission reductions due to ongoing air pollution control programs, including measures to address reasonably attributable visibility impairment; (2) measures to reduce the impacts of construction activities; (3) source retirement and replacement schedules; (4) basic smoke management practices for prescribed fire used for agricultural and wildland vegetation management purposes and smoke management programs; and (5) the anticipated net effect on visibility due to projected changes in point, area, and mobile source emissions over the period addressed by the long-term strategy. The 2019 Guidance provides that a State may satisfy this requirement by considering these additional factors in the process of selecting sources for four-factor analysis, when performing that analysis, or both, and that not every one of the additional factors needs to be considered at the same stage of the process. See 2019 Guidance at 21. EPA provided further guidance on the five additional factors in the 2021 Clarifications Memo, explaining that a State should generally not reject cost-effective and otherwise reasonable controls merely because there have been emission reductions since the first planning period owing to other ongoing air pollution control programs or merely because visibility is otherwise projected to improve at Class I Areas. Additionally, States should not rely on these additional factors to summarily assert that the State has already made sufficient progress and, therefore, no sources need to be selected or no new controls are needed regardless of the outcome of four-factor analyses. 2021 Clarifications Memo at 13.

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

D. Reasonable Progress Goals

Reasonable progress goals ''measure the progress that is projected to be achieved by the control measures States have determined are necessary to make reasonable progress based on a four-factor analysis.'' 82 FR 3078 at 3091 (January 10, 2017). Their primary purpose is to assist the public and EPA in assessing the reasonableness of States' long-term strategies for making reasonable progress towards the national visibility goal. See 40 CFR 51.308(f)(3)(iii) and (iv). States in which Class I Areas are located must establish two RPGs, both in deciviews—one representing visibility conditions on the clearest days and one representing visibility on the most anthropogenically impaired days—for each area within their borders. 40 CFR 51.308(f)(3)(i). The two RPGs are intended to reflect the projected impacts, on the two sets of days, of the emission reduction measures the State with the Class I Area, as well as all other contributing States, have included in their long-term strategies for the second implementation period.[26] The RPGs also account for the projected impacts of implementing other CAA requirements, including non-SIP based requirements. Because RPGs are the modeled result of the measures in States' long-term strategies (as well as other measures required under the CAA), they cannot be determined before States have conducted their four-factor analyses and determined the control measures that are necessary to make reasonable progress. See 2021 Clarifications Memo at 6.

For the second implementation period, the RPGs are set for 2028. Reasonable progress goals are not enforceable targets, 40 CFR 51.308(f)(3)(iii); rather, they ''provide a way for the states to check the projected outcome of the [long-term strategy] against the goals for visibility improvement.'' 2019 Guidance at 46. While States are not legally obligated to achieve the visibility conditions described in their RPGs, 40 CFR 51.308(f)(3)(i) requires that ''[t]he long-term strategy and the reasonable progress goals must provide for an improvement in visibility for the most impaired days since the baseline period and ensure no degradation in visibility for the clearest days since the baseline period.'' Thus, States are required to have emission reduction measures in their long-term strategies that are projected to achieve visibility conditions on the most impaired days that are better than the baseline period and show no degradation on the clearest days compared to the clearest days from the baseline period. The baseline period for the purpose of this comparison is the baseline visibility condition—the annual average visibility condition for the period 2000–2004. See 40 CFR 51.308(f)(1)(i), 82 FR 3078 at 3097–98 (January 10, 2017).

So that RPGs may also serve as a metric for assessing the amount of progress a State is making towards the

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

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

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

The 2017 RHR, 2019 Guidance, and 2021 Clarifications Memo also explain that projecting an RPG that is on or below the URP based on only on-the-books and/or on-the-way control measures (*i.e.,* control measures already required or anticipated before the four-factor analysis is conducted) is not a ''safe harbor'' from the CAA's and RHR's requirement that all States must conduct a four-factor analysis to determine what emission reduction measures constitute reasonable progress. The URP is a planning metric used to gauge the amount of progress made thus far and the amount left before reaching natural visibility conditions. However, the URP is not based on consideration of the four statutory factors and therefore cannot answer the question of whether the amount of progress being made in any particular implementation period is ''reasonable progress.'' See 82 FR 3078 at 3093, 3099–3100 (January 10, 2017); 2019 Guidance at 22; 2021 Clarifications Memo at 15–16.

E. Monitoring Strategy and Other State Implementation Plan Requirements

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

All States' SIPs must provide for procedures by which monitoring data and other information are used to determine the contribution of emissions from within the State to regional haze visibility impairment in affected Class I Areas. 40 CFR 51.308(f)(6)(ii) and (iii). *S*ection 51.308(f)(6)(v) further requires that all States' SIPs provide for a statewide inventory of emissions of pollutants that are reasonably anticipated to cause or contribute to visibility impairment in any Class I Area; the inventory must include emissions for the most recent year for which data are available and estimates of future projected emissions. States must also include commitments to update their inventories periodically. The inventories themselves do not need to be included as elements in the SIP and are not subject to EPA review as part of the Agency's evaluation of a SIP revision.[27] All States' SIPs must also provide for any other elements, including reporting, recordkeeping, and other measures, that are necessary for States to assess and report on visibility. 40 CFR 51.308(f)(6)(vi). Per the 2019 Guidance, a State may note in its regional haze SIP that its compliance with the Air Emissions Reporting Rule (AERR) in 40 CFR part 51, subpart A satisfies the requirement to provide for an emissions inventory for the most recent year for which data are available. To satisfy the requirement to provide estimates of future projected emissions, a State may explain in its SIP how projected emissions were developed for use in establishing RPGs for its own and nearby Class I Areas.[28]

Separate from the requirements related to monitoring for regional haze purposes under 40 CFR 51.308(f)(6), the RHR also contains a requirement at 40 CFR 51.308(f)(4) related to any additional monitoring that may be needed to address visibility impairment in Class I Areas from a single source or a small group of sources. This is called ''reasonably attributable visibility impairment.'' [29] Under this provision, if EPA or the FLM of an affected Class I Area has advised a State that additional monitoring is needed to assess reasonably attributable visibility impairment, the State must include in its SIP revision for the second implementation period an appropriate strategy for evaluating such impairment.

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

Section 51.308(f)(5) requires a State's regional haze SIP revision to address the requirements of paragraphs 40 CFR 51.308(g)(1) through (5) so that the plan revision due in 2021 will serve also as a progress report addressing the period since submission of the progress report for the first implementation period. The regional haze progress report requirement is designed to inform the public and EPA about a State's implementation of its existing long-term strategy and whether such implementation is in fact resulting in the expected visibility improvement. See 81 FR 26942, 26950 (May 4, 2016), (82 FR 3078 at 3119, January 10, 2017). To this end, every State's SIP revision for the second implementation period is required to describe the status of implementation of all measures included in the State's long-term strategy, including BART and reasonable progress emission reduction measures from the first implementation

[27] *See* ''Step 8: Additional requirements for regional haze SIPs'' in 2019 Regional Haze Guidance at 55.

[28] *Id.*

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

period, and the resulting emissions reductions. 40 CFR 51.308(g)(1) and (2).

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

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

G. Requirements for State and Federal Land Manager Coordination

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

IV. EPA's Evaluation of Delaware's Regional Haze Submission for the Second Implementation Period

A. Background on Delaware's First Implementation Period SIP Submission

DNREC submitted its regional haze SIP for the first implementation period to EPA on September 25, 2008. EPA approved Delaware's first implementation period regional haze SIP submission on July 19, 2011 (76 FR 42557). Delaware has no Class I Areas within its borders but was identified as influencing the visibility impairment of the Brigantine National Wildlife Refuge Class I Area (''Brigantine'' or ''Brigantine Wilderness Class I Area''), located in the State of New Jersey. EPA's approval included the portions of the plan that addressed the reasonable progress requirements and Delaware's implementation of Best Available Retrofit Technologies (BART) on eligible sources. The requirements for regional haze SIPs for the first implementation period are contained in 40 CFR 51.308(d) and (e). 40 CFR 51.308(b). Pursuant to 40 CFR 51.308(g), Delaware was also responsible for submitting a five-year progress report as a SIP revision for the first implementation period, which it did on September 24, 2013. EPA approved the progress report into the Delaware SIP on May 5, 2014. *See* 79 FR 25506.

B. Delaware's Second Implementation Period SIP Submission and EPA's Evaluation

In accordance with CAA sections 169A and the RHR at 40 CFR 51.308(f), on August 8, 2022, DNREC submitted a revision to the Delaware SIP, titled ''Delaware's Visibility SIP Revision Final August 2022'' to address its regional haze obligations for the second implementation period, which runs through 2028. DNREC subsequently submitted a supplemental SIP submittal to EPA on March 7, 2024, referred to as ''Supplemental Submission for Delaware's Second Regional Haze SIP'', which included title V permit provisions for three facilities owned by Calpine Mid-Atlantic Generation, LLC to be incorporated into the Delaware SIP. These permits and their associated public notice and transmittal letters are included in the rulemaking docket for this action.[30]

The following sections describe Delaware's SIP submission, including analyses conducted by MANE–VU and Delaware's determinations based on those analyses, Delaware's assessment of progress made since the first implementation period in reducing emissions of visibility impairing pollutants, and the visibility improvement progress at the nearby Class I Area. This rulemaking also contains EPA's evaluation of Delaware's submission against the requirements of the CAA and RHR for the second implementation period of the regional haze program.

C. Identification of Class I Areas

Section 169A(b)(2) of the CAA requires each State in which any Class I Area is located or ''the emissions from which may reasonably be anticipated to cause or contribute to any impairment of visibility'' in a Class I Area to have a plan for making reasonable progress toward the national visibility goal. The RHR implements this statutory requirement at 40 CFR 51.308(f), which provides that each State's plan ''must address regional haze in each

[30] DNREC provided a clarification of this supplemental SIP submittal on May 28, 2024, that specified which provisions of the Title V permits it intended to be incorporated by reference into the Delaware SIP.

mandatory Class I Area located within the State and in each mandatory Class I Area located outside the State that may be affected by emissions from within the State,'' and (f)(2), which requires each State's plan to include a long-term strategy that addresses regional haze in such Class I Areas.

Delaware does not have a Class I Area located within its borders, but has been identified as influencing the visibility impairment of the Brigantine Wilderness Class I Area, located in the State of New Jersey. For the second implementation period, MANE–VU performed technical analyses [31] to help assess source and State-level contributions to visibility impairment and the need for interstate consultation. MANE–VU used the results of these analyses to determine which States' emissions ''have a high likelihood of affecting visibility in MANE–VU's Class I Areas.'' [32] Similar to metrics used in the first implementation period,[33] MANE–VU used a greater than 2 percent of sulfate plus nitrate emissions contribution criteria to determine whether emissions from individual jurisdictions within the region affected visibility in any Class I Areas. The MANE–VU analyses for the second implementation period used a combination of data analysis techniques, including emissions data, distance from Class I Areas, wind trajectories, and California Puff Model (CALPUFF) dispersion modeling. Although many of the analyses focused only on SO_2 emissions and resultant particulate sulfate contributions to visibility impairment, some also incorporated NO_X emissions to estimate particulate nitrate contributions.

One MANE–VU analysis used for contribution assessment was CALPUFF air dispersion modeling. The CALPUFF model was used to estimate sulfate and nitrate formation and transport in MANE–VU and nearby regions originating from large electric generating unit (EGU) point sources and other large industrial and institutional sources in the eastern and central United States. Information from an initial round of CALPUFF modeling was collated for the 444 EGUs that were determined to warrant further scrutiny based on their emissions of SO_2 and NO_X. The list of EGUs was based on an enhanced ''Q/d'' analysis [34] that considered recent SO_2 emissions in the eastern United States and an analysis that adjusted previous 2002 MANE–VU CALPUFF modeling by applying a ratio of 2011 to 2002 SO_2 emissions. This list of sources was then enhanced by including the top five SO_2 and NO_X emission sources for 2011 for each State included in the modeling domain. A total of 311 EGU stacks (as opposed to individual units) were included in the CALPUFF modeling analysis. Initial information was also collected on the 50 industrial and institutional sources that, according to 2011 Q/d analysis, contributed the most to visibility impact in each Class I Area. The ultimate CALPUFF modeling run included a total of 311 EGU stacks and 82 industrial facilities. The summary report for the CALPUFF modeling included the top 10 most impacting EGUs and the top five most impacting industrial/institutional sources for each Class I Area and compiled those results into a ranked list of the most impacting EGUs and industrial sources at MANE–VU Class I Areas.[35]

The second MANE–VU contribution analysis used a meteorologically weighted Q/d calculation to assess States' contributions to visibility impairment at MANE–VU Class I Areas.[36] This analysis focused predominantly on SO_2 emissions and used cumulative SO_2 emissions from a source and a State for the variable ''Q,'' and the distance of the source or State to the IMPROVE monitor receptor at a Class I Area as ''d.'' The result is then multiplied by a constant (C_i), which is determined based on the prevailing wind patterns. MANE–VU selected a meteorologically weighted Q/d analysis as an inexpensive initial screening tool that could easily be repeated to determine which States, sectors, or sources have a larger relative impact and warrant further analysis. MANE–VU's analysis estimated SO_2 emission contribution from Delaware sources of less than 2% of visibility impairment for all seven MANE–VU Class I Areas. Although MANE–VU did not originally estimate nitrate impacts, the MANE–VU Q/d analysis was subsequently extended to account for nitrate contributions from NO_X emissions and to approximate the nitrate impacts from area and mobile sources. MANE–VU therefore developed a ratio of nitrate to sulfate impacts based on the previously described CALPUFF modeling and applied those to the sulfate Q/d results in order to derive nitrate contribution estimates. Several States did not have CALPUFF nitrate to sulfate ratio results, however, because there were no point sources modeled with CALPUFF.

To develop a final set of contribution estimates, MANE–VU weighted the results from both the Q/d and CALPUFF analyses. The MANE–VU mass-weighted sulfate and nitrate contribution results were reported for the MANE–VU Class I Areas (the Q/d summary report included results for several non-MANE–VU areas as well). If a State's contribution to sulfate and nitrate concentrations at a particular Class I Area was 2 percent or greater, MANE–VU regarded that State as contributing to visibility impairment in that area. Delaware's highest mass-weighted sulfate and nitrate contribution to any Class I Area was 0.6% to the Brigantine Wilderness Class I Area. Even with a contribution level below 2 percent threshold, Delaware agreed to participate in the consultation process, as part of the MANE–VU RPO.

As explained above, the EPA concluded in the 1999 RHR that ''all [s]tates contain sources whose emissions are reasonably anticipated to contribute to regional haze in a Class I Area,'' 64 FR 35714 at 35721 (July 1, 1999), and this determination was not changed in the 2017 RHR. Critically, the statute and regulation both require that the cause-or-contribute assessment consider all emissions of visibility-impairing pollutants from a State, as opposed to emissions of a particular pollutant or emissions from a certain set of sources. Consistent with these requirements, the 2019 Guidance makes it clear that ''all types of anthropogenic sources are to be included in the determination'' of whether a State's emissions are reasonably anticipated to result in any visibility impairment. 2019 Guidance at 8.

First, as an aside, the screening analyses on which MANE–VU relied are useful for certain purposes. MANE–VU used information from its technical analysis to rank the largest contributing States to sulfate and nitrate impairment in five Class I Areas within MANE–VU States and three additional, nearby Class I Areas.[37] The rankings were used to

[31] The contribution assessment methodologies for MANE–VU Class I Areas are summarized in appendix 1–1 of the DE Regional Haze SIP submission, ''Selection of States for MANE–VU Regional Haze Consultation (2018)'' in the docket.

[32] *Id.*

[33] *See* docket EPA–R03–OAR–2011–0289 for MANE–VU supporting materials.

[34] ''Q/d'' is emissions (Q) in tons per year, typically of one or a combination of visibility-impairing pollutants, divided by distance to a class I area (d) in kilometers. The resulting ratio is commonly used as a metric to assess a source's potential visibility impacts on a particular class I area.

[35] *See* tables 34 and 35 of appendix 8–5 of the DE 2022 Regional haze SIP submission, ''2016 MANE–VU CALPUFF Modeling Report'' in the docket.

[36] *See* appendix 8–2, ''Contribution to Regional Haze in the Northeast and Mid-Atlantic United States: Preliminary Update Through 2007.''

[37] The Class I Areas analyzed were Acadia National Park in Maine, Brigantine Wilderness in New Jersey, Great Gulf Wilderness in New

determine upwind States that were deemed important to include in state-to-state consultation (based on an identified impact screening threshold). Additionally, large individual source impacts were used to target MANE–VU control analysis ''Asks'' [38] of States and sources both within and upwind of MANE–VU.[39] EPA finds the nature of the analyses generally appropriate to support decisions on States with which to consult. However, we have cautioned that source selection methodologies that target the largest regional contributors to visibility impairment across multiple States may not be reasonable for a particular State if it results in few or no sources being selected for subsequent analysis. 2021 Clarifications Memo at 3. Delaware has participated in the MANE–VU visibility analysis and has provided information in its SIP submission on the magnitude of visibility impacts from certain Delaware emission sources, specifically the Indian River Generating Station and the Edge Moor Energy Center (EMEC), on nearby Class I Areas.

With regard to the analysis and determinations regarding Delaware's contribution to visibility impairment at out-of-state Class I Areas, the MANE–VU technical work focuses on the magnitude of visibility impacts from certain Delaware emissions on its Class I Area and other nearby Class I Areas. However, the analyses did not account for all emissions and all components of visibility impairment (*e.g.,* primary PM emissions, and impairment from fine PM, elemental carbon, and organic carbon). In addition, Q/d analyses with a relatively simplistic accounting for wind trajectories and CALPUFF applied to a very limited set of EGUs, and major industrial sources of SO_2 and NO_X are not scientifically rigorous tools capable of evaluating contribution to visibility impairment from *all* emissions in a State. We again clarify that each State is obligated under the CAA and RHR to address regional haze visibility impairment resulting from emissions from within the State, irrespective of whether another State's contribution is greater. See 2021 Clarifications Memo at 3. Additionally, we note that the 2 percent or greater sulfate-plus-nitrate threshold used to determine whether Delaware's emissions contribute to visibility impairment at a particular Class I Area may be higher than what EPA believes is an ''extremely low triggering threshold'' intended by the statute and regulations. In sum, based on the information provided, it is clear that emissions from Delaware contribute to visibility impairment at out-of-state Class I Areas. However, due to the low triggering threshold implied by the Rule and the lack of rigorous modeling analyses, we do not necessarily agree with the level of the State's 2% contribution threshold.

Delaware determined that sources and emissions within the State contribute to visibility impairment at three out-of-state Class I Areas.[40] Furthermore, the State took part in the emission control strategy consultation process as a member of MANE–VU pursuant to the regulatory requirements. As part of that process, MANE–VU developed a set of emissions reduction measures identified as being necessary to make reasonable progress in the five MANE–VU Class I Areas. This strategy consists of six ''Asks'' for States within MANE–VU and five ''Asks'' for States outside the region that were found to impact visibility at Class I Areas within MANE–VU.[41] Delaware's submission discusses each of the ''Asks'' and explains why or why not each is applicable and how it has complied with the relevant components of the emissions control strategy MANE–VU has laid out for its States. Delaware worked with MANE–VU to determine potential reasonable measures that could be implemented by 2028, considering the cost of compliance, the time necessary for compliance, the energy and non-air quality environmental impacts, and the remaining useful life of any potentially affected sources. As discussed in further detail below, the EPA is proposing to find that Delaware has submitted a regional haze plan that meets the requirements of 40 CFR 51.308(f)(2) related to the development of a long-term strategy. Although we have concerns regarding some aspects of MANE–VU's technical analyses supporting States' contribution determinations, we propose to find that Delaware has nevertheless satisfied the applicable regulatory requirements for making reasonable progress towards natural visibility conditions in Class I Areas that may be affected by emissions from the State.

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

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

Delaware does not have any Class I Area within its borders therefore, § 51.308(f)(1) and its requirements do not apply.[42]

E. Long-Term Strategy for Regional Haze

a. Delaware's Response to the Six MANE–VU Asks

Each State having a Class I Area within its borders or emissions that may affect visibility in a Class I Area must develop a long-term strategy for making reasonable progress towards the national visibility goal. CAA 169A(b)(2)(B). As explained in the Background section of this rulemaking, reasonable progress is achieved when all States contributing to visibility impairment in a Class I Area are implementing the measures determined—through application of the four statutory factors to sources of visibility impairing pollutants—to be necessary to make reasonable progress. 40 CFR 51.308(f)(2)(i). Each State's long-term strategy must include the enforceable emission limitations,

Hampshire, Lye Brook Wilderness in Vermont, Moosehorn Wilderness in Maine, Shenandoah National Park in Virginia, James River Face Wilderness in Virginia, and Dolly Sods/Otter Creek Wildernesses in West Virginia.

[38] As explained more fully in section IV.E.a, of this document MANE–VU refers to each of the components of its overall strategy as an ''Ask'' of its member states.

[39] The MANE–VU consultation report (appendix D) explains that ''[t]he objective of this technical work was to identify states and sources from which MANE–VU will pursue further analysis. This screening was intended to identify which states to invite to consultation, not a definitive list of which states are contributing.''

[40] Brigantine in NJ, James River Face in WV and Shenandoah National Park in VA.

[41] *See* appendix 9–1 of the DE Regional Haze SIP submittal, ''Statement of the Mid-Atlantic/Northeast Visibility Union (MANE–VU) Concerning a Course of Action within MANE–VU toward Assuring Reasonable Progress for the Second Regional Haze Implementation Period (2018–2028), (August 2017).''

[42] While Delaware noted that it was not required to comply with 40 CFR 51.308(f)(1), elsewhere in its SIP submission (section 8.10), Delaware included a visibility metric graph of a nearby Class I area, which was taken from a MANE–VU report referenced in their SIP submittal, titled ''Mid-Atlantic/Northeast U.S. Visibility Data 2004–2019 (2nd RH SIP Metrics) (May 1, 2020 revisions) (January 21, 2021 revision).''

compliance schedules, and other measures that are necessary to make reasonable progress. 40 CFR 51.308(f)(2). All new (*i.e.,* additional) measures that are the outcome of four-factor analyses are necessary to make reasonable progress and must be in the long-term strategy. If the outcome of a four-factor analysis and other measures necessary to make reasonable progress is that no new measures are reasonable for a source, that source's existing measures are necessary to make reasonable progress, unless the State can demonstrate that the source will continue to implement those measures and will not increase its emission rate. Existing measures that are necessary to make reasonable progress must also be in the long-term strategy. In developing its long-term strategies, a State must also consider the five additional factors in 40 CFR 51.308(f)(2)(iv). As part of its reasonable progress determinations, the State must describe the criteria used to determine which sources or group of sources were evaluated (*i.e.,* subjected to four-factor analysis) for the second implementation period and how the four factors were taken into consideration in selecting the emission reduction measures for inclusion in the long-term strategy. 40 CFR 51.308(f)(2)(iii).

The following section summarizes how Delaware's SIP submission addressed the requirements of 40 CFR 51.308(f)(2)(i). Specifically, it describes MANE–VU's development of the six Asks and how Delaware addressed each one.

States may rely on technical information developed by the RPOs of which they are members to select sources for four-factor analysis and to conduct that analysis, as well as to satisfy the documentation requirements under 40 CFR 51.308(f). Where an RPO has performed source selection and/or four-factor analyses (or considered the five additional factors in 40 CFR 51.308(f)(2)(iv)) for its member States, those States may rely on the RPO's analyses for the purpose of satisfying the requirements of 40 CFR 51.308(f)(2)(i) so long as the States have a reasonable basis to do so and all State participants in the RPO process have approved the technical analyses. 40 CFR 51.308(f)(3)(iii). States may also satisfy the requirement of 40 CFR 51.308(f)(2)(ii) to engage in interstate consultation with other States that have emissions that are reasonably anticipated to contribute to visibility impairment in a given Class I Area under the auspices of intra- and inter-RPO engagement.

Delaware is a member of the MANE–VU RPO and participated in the RPO's regional approach to developing a strategy for making reasonable progress towards the national visibility goal in the MANE–VU Class I Areas. MANE–VU's strategy includes a combination of: (1) measures for certain source sectors and groups of sectors that the RPO determined were reasonable for States to pursue, and (2) a request for member States to conduct four-factor analyses for individual sources that it identified as contributing to visibility impairment. MANE–VU refers to each of the components of its overall strategy as an Ask of its member States. On August 25, 2017, the Executive Director of MANE–VU, on behalf of the MANE–VU States and Tribal nations, signed a statement that identifies six emission reduction measures that comprise the ''Asks'' for the second implementation period.[43] The ''Asks'' were ''designed to identify reasonable emission reduction strategies that must be addressed by the states and tribal nations of MANE–VU through their regional haze SIP updates.'' [44] The statement explains that ''[i]f any State cannot agree with or complete a Class I State's Asks, the State must describe the actions taken to resolve the disagreement in the Regional Haze SIP.'' [45]

MANE–VU's recommendations as to the appropriate control measures were based on technical analyses documented in the RPO's reports and included as appendices to or referenced in Delaware's regional haze SIP submission. One of the initial steps of MANE–VU's technical analysis was to determine which visibility-impairing pollutants should be the focus of its efforts for the second implementation period. In the first implementation period, MANE–VU determined that sulfates were the most significant visibility impairing pollutant at the region's Class I Areas. To determine the impact of certain pollutants on visibility at Class I Areas for the purpose of second implementation period planning, MANE–VU conducted an analysis comparing the pollutant contribution on the clearest and most impaired days in the baseline period (2000–2004) to the most recent period (2012–2016) [46] at MANE–VU and nearby Class I Areas. MANE–VU found that while SO_2 emissions were decreasing and visibility was improving, sulfates still made up the most significant contribution to visibility impairment at MANE–VU and nearby Class I Areas. According to the analysis, NO_X emissions have begun to play a more significant role in visibility impacts in recent years, especially at the Brigantine Wilderness Class I Area. The technical analyses used by Delaware are included in their submission and are as follows:

- The Nature of the Fine Particle and Regional Haze Air Quality Problems in the MANE–VU Region: A Conceptual description (NESCAUM, November 2006, Revised August 2010 and July 2012) (Appendix 8–1)
- Contributions to Regional Haze in the Northeast and Mid-Atlantic United States: Preliminary Update Through 2007 (NESCAUM, March 2012) (Appendix 8–2)
- MANE–VU Updated Q/d*C Contribution Assessment. (MANE–VU, April 2016) (Appendix 8–3)
- 2016 Updates to the Assessment of Reasonable Progress in MANE–VU Class I Areas (MARAMA, January 2016) (Appendix 8–4)
- 2016 MANE–VU Source Contribution Modeling Report—CALPUFF Modeling of Large Electrical Generating Units and Industrial Sources (MANE–VU, April 2017) (Appendix 8–5)
- Regional Haze Metrics Trends and HYSPLIT Trajectory Analysis. (MANE–VU, May 2017) (Appendix 8–6)
- Permit Cancellation Documents for McKee Run Generating Station, City of Dover. (DNREC, November 2021) (Appendix 8–7)
- Recommendation on Approaches to Selecting the 20% Most Impaired Days. (MANE–VU, March 2017) (Appendix 8–8)
- Analysis of Speciation Trends Network Data Measured at the State of Delaware, Philip K. Hopke and Eugene Kim, Center for Air Resources Engineering and Science Clarkson University. (January 2005) (Appendix 8–9)

To support development of the ''Asks,'' MANE–VU gathered information on each of the four statutory factors for six source sectors it determined, based on an examination of annual emission inventories, ''had emissions that were reasonabl[y] anticipated to contribute to visibility

[43] *See* appendix 9–1 of the DE Regional Haze SIP submittal, ''Statement of the Mid-Atlantic/Northeast Visibility Union (MANE–VU) Concerning a Course of Action within MANE–VU toward Assuring Reasonable Progress for the Second Regional Haze Implementation Period (2018–2028), (August 2017).''

[44] *Id.*

[45] *Id.*

[46] The period of 2012–2016 was the most recent period for which data was available at the time of analysis.

degradation in MANE–VU:'' electric generating units (EGUs), industrial/commercial/institutional boilers (ICI boilers), cement kilns, heating oil, residential wood combustion, and outdoor wood combustion.[47] MANE–VU also collected data on individual sources within the EGU, ICI boiler, and cement kiln sectors.[48] Information for the six sectors included explanations of technically feasible control options for SO_2 or NO_X, illustrative cost-effectiveness estimates for a range of model units and control options, sector-wide cost considerations, potential time frames for compliance with control options, potential energy and non-air-quality environmental impacts of certain control options, and how the remaining useful lives of sources might be considered in a control analysis.[49] Source-specific data included SO_2 emissions [50] and existing controls [51] for certain existing EGUs, ICI boilers, and cement kilns. MANE–VU considered this information on the four factors as well as the analyses developed by the RPO's Technical Support Committee when it determined specific emission reduction measures that were found to be reasonable for certain sources within two of the sectors it had examined—EGUs and ICI boilers. The ''Asks'' were based on this analysis and looked to either optimize the use of existing controls, have States conduct further analysis on EGU or ICI boilers with considerable visibility impacts, implement low sulfur fuel standards, or lock-in lower emission rates.

MANE–VU Ask 1 is ''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'' at EGUs with a nameplate capacity larger than or equal to 25 megawatts (MW) with already installed NO_X and/or SO_2 controls.[52]

To address Ask 1, first, Delaware indicated that all the units that burn fuel oil are covered year-round by a Delaware low sulfur fuel regulation at Title 7 Delaware Administrative Code (7 DE Admin Code) 1108,[53] that was approved into the SIP on July 11, 2022 (87 FR 41074). Delaware's SIP-approved low sulfur fuel regulation reduces the SIP-approved maximum allowable sulfur content limit for distillate fuels from 3,000 ppm to 15 ppm, for residual fuel from 1% to 0.5% by weight, and for any other fuel, the sulfur content would remain at 1.0% by weight. Based on that, the State asserted that it met the request to ensure SO_2 controls year-round under Ask 1.

Delaware then focused its efforts on the control of NO_X emissions and identified 10 EGUs with nameplate capacity larger than or equal to 25 MW, of which four had permits that did not require the use of NO_X controls year-round on some of their units. The four sources are Christiana Energy Center (ChEC), Edge Moor Energy Center (EMEC), Garrison Energy Center (GEC), and Hay Road Energy Center (HREC), which are all owned by Calpine Mid-Atlantic Generation, LLC (Calpine). To meet the Ask, Delaware requested the EGUs to perform four-factor analyses on the pertinent units to determine if year-round NO_X controls are feasible. Details of the EGUs' four-factor analyses with regard to Ask 1 can be found in a technical support document (TSD) of this proposed rulemaking action; specifically, it describes how Delaware addressed each Ask.

Based on the four-factor analyses performed by the sources to evaluate adding or expanding NO_X controls year-round, only one of the sources, ChEC, concluded that it was feasible to operate the existing controls for an additional period throughout the year. Based upon that conclusion and in order to meet the Ask, Delaware updated applicable permits in May 2021 to reflect the new measures, and submitted the redacted permits for incorporation into the SIP. Additional details can be found in the TSD (section III–a.–1. at 8). Delaware therefore concluded that it met Ask 1.

MANE–VU Ask 2 requests that States ''perform a four-factor analysis for reasonable installation or upgrade to emissions controls'' for specified sources. MANE–VU developed its Ask 2 list of sources for analysis by performing modeling and identifying facilities with the potential for 3.0 inverse megameters (Mm^{-1}) or greater impacts on visibility at any Class I Area in the MANE–VU region.[54] Delaware explained that it has no facilities that were modeled by MANE–VU to impact visibility at any Class I Area by 3.0 Mm^{-1} or more and concluded that it is currently meeting Ask 2. While Delaware did not select sources that fell under MANE–VU's 3.0 Mm^{-1} threshold for four-factor analysis, it did provide supplemental information about a large source that was identified by commenters and explanation supporting its decision not to request the facility to evaluate measures for reasonable progress because the facility is effectively controlled.

Specifically, commenters asserted that Delaware should have selected the Delaware City Refinery Company, LLC (DCRC) for a four-factor analysis of possible controls. In its SIP submission, Delaware explained the reasons it did not conduct a four-factor analysis for DCRC. First, based on MANE–VU's modeling results, DCRC showed that its impact on visibility impairment was low; [55] second, Delaware relied on the threshold that was agreed to by all MANE–VU States, including those that have Class I Areas within their boundaries; and third, the source is well controlled for SO_2 and NO_X through existing State regulations and several consent decrees. Section 8.13.2 of the SIP submission contains a detailed description of controls required for SO_2 and NO_X emissions, pursuant to two Federal consent decrees, an agreement governing the acquisition and operation of the facility, and State and Federal regulations that DCRC is subject to.[56] More details about Delaware's response to Ask 2 can be found in the TSD of this proposed rulemaking action.

MANE–VU Ask 3 requests that ''each MANE–VU State that has not yet fully adopted an ultra-low fuel oil standard as

[47] *See* MANE–VU's ''Four Factor Data Collection'' Memo at 1, March 30, 2017, available at *otcair.org/MANEVU/Upload/Publication/Reports/Four-Factor%20Data%20Collection%20Memo%20-%20170314.pdf.* The six sectors were identified in the first implementation period pursuant to MANE–VU's contribution assessment; MANE–VU subsequently updated its information on these sectors for the second implementation period.

[48] *See* appendix 8–4 ''2016 Updates to the Assessment of Reasonable Progress for Regional Haze in MANE–VU Class I Areas, January 31, 2016.''

[49] *Id.*

[50] *See* docket document, ''MANE–VU's ''Four Factor Data Collection Memo'' March 30, 2017, table 1 contains 2011 SO_2 data from specific sources.

[51] The ''Status of the Top 167 EGUs that Contributed to Visibility Impairment at MANE–VU Class I Areas during the 2008 Regional Haze Planning Period'' July 25, 2016, reviews the existing and soon to be installed, at the time of the report, emission controls at individual EGU sources that were a part of the MANE–VU Ask from the first implementation period. Available at: *otcair.org/MANEVU/Upload/Publication/Reports/Status%20of%20the%20Top%20167%20Stacks%20from%20the%202008%20MANE-VU%20Ask.pdf.*

[52] *See* appendix 8–12 ''MANE–VU Regional Haze Consultation Report.''

[53] 7 DE Admin Code 1108 ''Sulfur Dioxide Emissions from Fuel Burning Equipment.'' *See* 87 FR 41074, July 11, 2022.

[54] *See* appendix 8–12 ''MANE–VU Regional Haze Consultation Report.''

[55] The Q/d for this facility, as calculated by MANE–VU, ranged from 0.36–3.25 for the eight Class I Areas in the MANE–VU analysis, with Brigantine Wilderness Area being at the top of this range; see docket documents, ''Delaware Response to EPA Regional Haze Info Request 11–3–23'' and ''Attachment E—QDCPointOnly—Delaware1.xlsx''. In addition, this facility was not one of the 82 Industrial, Commercial, and Institutional sources identified by MANE–VU's CALPUFF modeling as having emissions similar in magnitude to the EGUs modeled in this exercise or that are close enough to a Class I area that they would have the potential for visibility impacts.

[56] *See* the DE Regional Haze SIP submittal at 91.

requested by MANE–VU in 2007'', to ''pursue this standard as expeditiously as possible and before 2028, depending on supply availability.'' The Ask includes percent by weight standards for #2 distillate oil (0.0015% sulfur by weight or 15 parts per million (ppm)), #4 residual oil (0.25–0.5% sulfur by weight), and #6 residual oil (0.3–0.5% sulfur by weight). Delaware explained that, in 2013, it adopted the 7 DE Admin Code 1108 low-sulfur fuel regulation [57] which went into effect on July 1, 2016. Delaware therefore concluded that it is meeting Ask 3. Additional details about Delaware's response to Ask 3 can be found in the TSD of this proposed rulemaking action at 24.

MANE–VU Ask 4 requests States to ''pursue updating permits, enforceable agreements, and/or rules to ''lock in'' lower emissions rates for SO_2, NO_X and PM'' at emission sources larger than 250 million British Thermal Units (MMBtu) per hour heat input that have switched to lower emitting fuels.[58] Based on Delaware's SIP submission, two EGUs fell under Ask 4. The first source is Calpine's EMEC, which had switched operations to lower emitting fuels and had its permits updated to lock in lower emission rates for SO_2, NO_X and PM. A second source, City of Dover McKee Run Generating Station, had its permits cancelled in November 2021.[59] Based on these updates, Delaware concluded it is meeting Ask 4. More details about Delaware's response to Ask 4 are included in the TSD of this proposed rulemaking action.

MANE–VU Ask 5 requests that MANE–VU States ''where emission rules have not been adopted, control NO_X emissions for peaking combustion turbines that have the potential to operate on high electric demand days (HEDD)'' by either: (a) striving to meet NO_X emissions standards specified in the Ask for turbines that run on natural gas and fuel oil, (b) performing a four-factor analysis for reasonable installation of or upgrade to emission controls, or (c) obtaining equivalent alternative emission reductions on HEDD.[60] The Ask requests States to strive for NO_X emission standards of no greater than 25 ppm for natural gas and 42 ppm for fuel oil, or at a minimum, NO_X emissions standards of no greater than 42 ppm for natural gas and 96 ppm for fuel oil.

For Ask 5, Delaware identified seven sources with units affected by HEDD,[61] and two of the seven sources met the emission limits provided in option (a). Delaware requested that each of the remaining five sources perform four-factor analyses as stated in option (b) of the Ask because their current Title V permits do not meet the NO_X standards from option (a).[62] Based on the four-factor analyses conducted by the five sources to evaluate potential control options for HEDD units, three of them found it economically feasible to operate existing controls during two additional months adjacent to the ozone season, for which Delaware updated their Title V permits accordingly and submitted the permits for incorporation into the SIP. For the remaining two sources, Delaware reviewed the facilities' estimates of compliance costs [63] of $192,000/ton of NO_X removed for one and $334,897/ton of NO_X removed for the other to upgrade their respective units,[64] and Delaware concluded that it was not an economically feasible option for these sources to upgrade their existing control given the limited operational time and low level of reported annual NO_X emissions within the State as shown on table 10–5 of the SIP submittal. In addition, Delaware evaluated various potential new control options for the five sources but found that these were neither economically nor technically feasible. Because Delaware conducted four-factor analyses on the selected sources, Delaware concluded it has satisfied Ask 5 through option (b). More details about Delaware's EGUs four-factor analyses with regards to Ask 5 can be found in the TSD of this proposed rulemaking action.

MANE–VU Ask 6, requests that ''each State should consider and report in their SIP measures or programs to: (a) decrease energy demand through the use of energy efficiency and (b) increase the use within their State of Combined Heat and Power (CHP) and other clean Distributed Generation technologies including fuel cells, wind and solar.'' [65] Delaware stated that it implemented a number of measures with regard to this Ask. Some of these include the Energy Task Force Executive Order signed on April 26, 2002, the Delaware Energy Efficiency Advisory Council (EEAC), the 2005 Renewable Energy Portfolio Standards Act which is the basis for Delaware's renewable energy portfolio standards (RPS), and the Regional Greenhouse Gas Initiative (RGGI), to name a few. Based on these measures, Delaware concluded it is meeting Ask 6. Additional details about Delaware's response to Ask 6 can be found in the TSD of this proposed rulemaking action.

b. EPA's Evaluation of Delaware's Response to the Six MANE–VU Asks and Compliance With 40 CFR 51.308(f)(2)(i)

EPA is proposing to find that Delaware has satisfied the requirements of 40 CFR 51.308(f)(2)(i) related to evaluating sources and determining the emission reduction measures that are necessary to make reasonable progress by considering the four statutory factors.

Through Ask 1, MANE–VU instructed States to ''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'' at EGUs with a nameplate capacity larger than or equal to 25 megawatts (MW) with already installed NO_X and/or SO_2 controls.[66]

EPA reviewed and evaluated Delaware's response to the four-factor analyses on the four sources with permits that did not require NO_X controls year-round on some of their units and found that the State agreed with Calpine's conclusions for each of the sources. For ChEC and EMEC, Delaware agreed that it is not economically feasible to operate their NO_X existing controls year-round because the units' operation and, hence, NO_X emissions are both limited. On the other hand, for GEC and HREC, Delaware agreed that it is not technically feasible to retrofit the sources' NO_X existing controls to operate year-round due to the same conclusion that operation and NO_X emissions are limited. To support their conclusion, on table 10–2 of the SIP submittal, Delaware included the annual average operating hours and NO_X emissions of the sources for a five-year period, which demonstrate the generally limited operation and the significantly low NO_X emissions in recent years (*i.e.,* the tons of NO_X emitted per unit per year ranging from less than two to less than 150).

[57] *See* 87 FR 41074 (July 11, 2022).

[58] *See* appendix 8–12 ''MANE–VU Regional Haze Consultation Report.''

[59] *See* appendix 8–7 ''McKee Run Permit Cancellation Letter.''

[60] *See* appendix 8–12 ''MANE–VU Regional Haze Consultation Report.''

[61] *See* table 10–4 (Delaware Units Affected by HEDD ''Ask #5'') of the DE Regional Haze SIP submittal at 110.

[62] *See* table 10–5 (Average Operating Hours and NO_X Emissions for Units Under ''Ask #5'') of the DE Regional Haze SIP submittal at 111.

[63] Per the DE Regional Haze SIP submittal section 10.5, costs were based on similar projects in other states for the one facility, and vendor quotes and EPA's Air Pollution Control Cost Manual for the other facility.

[64] *See* section 10.5 of the DE Regional Haze SIP submittal.

[65] *See* appendix 8–12 ''MANE–VU Regional Haze Consultation Report.''

[66] *Id.*

EPA agrees with Delaware that it is not reasonable to upgrade any of the sources' NO_X existing controls due to the extremely low emission reductions that would have been achieved, and that the costs of compliance, as demonstrated through the four-factor analyses, are not justified by the low amount of NO_X emission reductions that the sources would achieve if these were reconfigured. More information on the amount of NO_X emitted from these units can be found in the TSD at 32–33.

EPA also reviewed and evaluated the State's selection and modification of the applicable EGUs' title V permits to incorporate the regional haze requirements of the second planning period. To meet Ask 1, DNREC updated ChEC, EMEC, and HREC's title V permits after conducting four-factor analyses. For ChEC, DNREC added the 88 ppm NO_X emission limit during April and October. For EMEC and HREC, DNREC added language requiring the facilities to operate and maintain their existing NO_X control systems in accordance with Calpine's maintenance protocol. Based on the above, EPA thus agrees with Delaware's conclusions and proposes to find that Delaware reasonably satisfied Ask 1.

For Ask 2, MANE–VU requested that States ''perform a four-factor analysis for reasonable installation or upgrade to emissions controls'' for specified sources. MANE–VU developed its Ask 2 list of sources for analysis by performing modeling and identifying facilities with the potential for 3.0 inverse megameters (Mm^{-1}) or greater impacts on visibility at any Class I Area in the MANE–VU region.[67]

As an initial matter, EPA does not necessarily agree that MANE–VU 3.0 Mm^{-1} visibility impact is a reasonable threshold for source selection. The RHR recognizes that, due to the nature of regional haze visibility impairment, numerous and sometimes relatively small sources may need to be selected and evaluated for control measures in order to make reasonable progress. See 2021 Clarifications Memo at 4. As explained in the 2021 Clarifications Memo, while states have discretion to choose any source selection threshold that is reasonable, ''[a] state that relies on a visibility (or proxy for visibility impact) threshold to select sources for four-factor analysis should set the threshold at a level that captures a meaningful portion of the State's total contribution to visibility impairment to Class I Areas.'' 2021 Memo at 3. In this case, the 3.0 Mm^{-1} threshold did not identify sources in Delaware (only 22 across the entire MANE–VU region), indicating that it may be unreasonably high.[68]

However, EPA proposes to find that Delaware reasonably determined that it has satisfied Ask 2. As explained above, we do not necessarily agree that a 3.0 Mm^{-1} threshold for selecting sources for four-factor analysis results in a set of sources the evaluation of which has the potential to meaningfully reduce the State's contribution to visibility impairment. MANE–VU's Ask 2 did not identify any source in Delaware for a four-factor analysis; however, as part of EPA's evaluation, we note that other MANE–VU Asks identified multiple sources and sectors for four-factor analyses in Delaware, and Delaware did evaluate additional control measures and conducted four-factor analyses through other Asks to meet the regional haze requirements for the second planning period. Ask 2 is not the only source selection process for this State, and thus EPA is basing this proposed finding on the State's consideration of the four factors and units and sectors analyzed in Asks 1, 3, and 5.

Ask 3 requests that, for ''each MANE–VU State that has not yet fully adopted an ultra-low fuel oil standard as requested by MANE–VU in 2007'', to ''pursue this standard as expeditiously as possible and before 2028, depending on supply availability.'' EPA proposes to find that Delaware reasonably relied on MANE–VU's four-factor analysis for a low-sulfur fuel oil regulation, which engaged with each of the statutory factors and explained how the information supported a conclusion that a 15 ppm-sulfur fuel oil standard for fuel oils is reasonable. Delaware's ultra-low sulfur fuel oil regulations,[69] which, as previously stated, were approved into Delaware's SIP on July 11, 2022 (87 FR 41074), are consistent with Ask 3. EPA therefore proposes to find that Delaware reasonably determined that it has satisfied Ask 3.

MANE–VU Ask 4 requests that States ''pursue updating permits, enforceable agreements, and/or rules to lock-in lower emission rates for SO_2, NO_X, and PM'' at ''EGUs and other large point emission sources larger than 250 MMBTU per hour heat input that have switched to lower emitting fuels.'' Ask 4 also states that ''the permit, enforceable agreement, and/or rule can allow for suspension of the lower emission rate during natural gas curtailment.'' Delaware concluded that no additional updates were needed to meet Ask 4 because the EGU that fell under this Ask, Calpine EMEC, switched operations to lower emitting fuels and has already locked into the lower emission rates for NO_X, SO_2, and PM by permits. In addition, the McKee Run Generating Station, that fell under this Ask, had its permits cancelled on November 12, 2021. Finally, modified units in Delaware are required to amend their permits through the New Source Review (NSR) process if they plan to switch back to coal or a fuel that will increase emissions. A change in fuel, unless already allowed in the permit, would generally be a modification,[70] and Delaware's operating permits regulations require that an application to modify the permit be submitted prior to the change in fuel.[71]

EPA proposes to find that Delaware reasonably determined it has satisfied Ask 4. This is because the permitting and regulatory requirements outlined above, including the fact that sources that have switched fuel are generally required to revise their permits to reflect the change, and because the State rules make any proposed reversion difficult

[67] *See* appendix 8–12 ''MANE–VU Regional Haze Consultation Report.''

[68] Even though MANE–VU's 3.0 Mm^{-1} threshold did not identify sources in Delaware, two EGU sources were selected for CALPUFF modeling and identified as impacting two Class I Areas, Shenandoah National Park (SHEN) and James River Face National Park (JARI). These sources were the Indian River and the Edge Moor Energy Centers, whose highest impacts to these Class I Areas were at 1.7 Mm^1 in 2011 and 0.5 Mm^{-1} in 2015 from Indian River to SHEN, 1.1 Mm^{-1} in 2011 and 0.7 Mm^{-1} in 2015 from Indian River to JARI, 0.2 Mm^{-1} in 2011 and none in 2015 from Edge Moor to SHEN, and 0.4 Mm^{-1} in 2011 and none in 2015 from Edge Moor to JARI. Nonetheless, their impacts were well below the 3.0 Mm^{-1} threshold during the selected base years of 2011 and 2015. *See* DE Regional Haze SIP submittal at 75.

[69] *See* 7 DE Admin Code 1108 ''Sulfur Dioxide Emissions from Fuel Burning Equipment.''

[70] *See* 7 DE Admin Code 1101, defining ''Modification'' means any physical change in, or change in the method of operation of, any air contaminant source which results in an emission to the atmosphere of a new air contaminant or an increase in the emission rate to the atmosphere of one or more existing air contaminants. Upon modification, an existing source shall become subject to 7 DE Admin Code 1120 only with respect to those pollutants which, after modification, are either newly emitted, or emitted at an increased rate. Routine maintenance, repair and replacement shall not be considered a modification. Conversion to coal required for energy considerations, as specified in section 113(d)(5) of the 1977 Clean Air Act, shall not be considered a modification. The relocation of an existing facility shall be considered a modification whenever the Department determines it necessary to maintain ambient air quality standards. Change in ownership of an existing facility shall not be considered a modification. This definition shall not apply to 7 DE Admin Code 1125.

[71] *See* 7 DE Admin Code 1101, ''Operating Permits,'' which states that ''written notice that the operation of any air contaminant source or control device has been approved by the Department.''

by requiring permitting and other control analyses, including NSR.

Ask 5 requested that ''where emission rules have not been adopted,'' MANE–VU States ''control NO_X emissions for peaking combustion turbines that have the potential to operate on HEDD'' by meeting at least one of three options: (a) striving to meet NO_X emissions standards specified in the Ask for turbines that run on natural gas and fuel oil, (b) performing a four-factor analysis for reasonable installation of or upgrade to emission controls, or (c) obtaining equivalent alternative emission reductions on HEDD.[72]

For Ask 5, EPA reviewed and evaluated Delaware's response to the four-factor analyses on the five sources and found that the State agreed with Calpine's conclusions for each of the sources. Delaware agreed that it is economically and technically infeasible to retrofit the sources' existing NO_X controls or to add new NO_X controls to further reduce NO_X emissions during HEDD, because the units' operation and, hence, NO_X emissions are both limited. To support their conclusion, on table 10–5 of the SIP submittal, Delaware included the annual average operating hours and NO_X emissions of the sources for a five-year period, which demonstrate the limited operation and the significantly low NO_X emissions in recent years (*i.e.,* less than 4.5 tons of NO_X emitted per unit per year). EPA agrees with Delaware that it is not reasonable to upgrade any of the sources' NO_X existing controls or to install new controls due to the extremely low emission reductions that would have been achieved, and that the costs of compliance, as demonstrated through the four-factor analyses, are not justified by the low amount of NO_X emission reductions that the sources would achieve if these were reconfigured. More information on the extremely low amount of NO_X emitted from these units with can be found in the TSD at 32–33.

EPA also reviewed and evaluated the State's selection and modification of the applicable EGUs' title V permits to incorporate the regional haze requirements of the second planning period. To meet Ask 5, DNREC updated ChEC, DEC, and WEC's Title V permits after conducting four-factor analyses and added the 88 ppm NO_X emission limit during April and October. Delaware issued the new permits on May 19, 2021 and included them in appendix 10–2 of its SIP submittal; redacted copies of these permits were subsequently resubmitted to EPA with an effective date of December 19, 2023 so that the portions relevant to compliance with the regional haze requirements of the second planning period could be incorporated into the Delaware SIP.[73] Based on the above-mentioned facts, EPA thus agrees with Delaware's conclusions and proposes to find that Delaware reasonably determined it has satisfied Ask 5.

Through Ask 6, MANE–VU requests that ''each State should consider and report in their SIP measures or programs to: (a) decrease energy demand through the use of energy efficiency, and (b) increase the use within their State of Combined Heat and Power (CHP) and other clean Distributed Generation technologies including fuel cells, wind, and solar.'' [74] The fact that Delaware has listed its various greenhouse gas initiatives and clean energy requirements within the State including Executive Order 31—Energy Task Force, energy efficiency initiatives such as the EEAC, grants programs, Delaware Energy Code Coalition, and CHP Grant Pathway Program, RPS, RGGI, Delaware's Climate Change Impact Assessment and a Climate Action Plan, suggests that Delaware has in fact reasonably satisfied the Ask. EPA is therefore proposing to find that Delaware has reasonably determined it has met Ask 6's request to consider and report in its SIP measures or programs related to energy efficiency, cogeneration, and other clean distributed generation technologies.

Based on all of the above, EPA is proposing to find that—based on Delaware's participation in the MANE–VU planning process, how it has addressed each of the Asks, its supplemental information and explanation regarding NO_X sources and emissions, and EPA's additional assessment of Delaware's emissions and point sources—Delaware has complied with the requirements of 40 CFR 51.308(f)(2).[75]

As explained above, Delaware relied on MANE–VU's technical analyses and framework (*i.e.,* the Asks) to select sources and form the basis of its long-term strategy. MANE–VU conducted an inventory analysis to identify the source sectors that produced the greatest amount of SO_2 and NO_X emissions in 2011; inventory data were also projected to 2018. Based on this analysis, MANE–VU identified the top-emitting sectors for each of the two pollutants, which for SO_2 include coal-fired EGUs, industrial boilers, oil-fired EGUs, and oil-fired area sources including residential, commercial, and industrial sources. Major-emitting sources of NO_X include on-road vehicles, non-road vehicles, and EGUs. The RPO's documentation explains that ''[EGUs] emitting SO_2 and NO_X and industrial point sources emitting SO_2 were found to be sectors with high emissions that warranted further scrutiny. Mobile sources were not considered in this analysis because any ask concerning mobile sources would be made to EPA and not during the intra-RPO and inter-RPO consultation process among the states and tribes.'' EPA proposes to find that Delaware reasonably evaluated the two pollutants—SO_2 and NO_X—that currently drive visibility impairment within the MANE–VU region and that it adequately explained and supported its decision to focus on these two pollutants through its reliance on the MANE–VU technical analyses cited in its submission.

Section 51.308(f)(2)(i) requires States to evaluate and determine the emission reduction measures that are necessary to make reasonable progress by applying the four statutory factors to sources in a control analysis. As explained previously, the MANE–VU Asks are a mix of measures for sectors and groups of sources identified as reasonable for States to address in their regional haze plans. While MANE–VU formulated the Asks to be ''reasonable emission reduction strategies'' to control emissions of visibility impairing pollutants, EPA believes that Delaware's responses to four of the Asks, in particular, engage with the requirement that States determine the emission reduction measures that are necessary to make reasonable progress through consideration of the four factors. Specifically, MANE–VU Asks 1, 2, 3

[72] *See* appendix 8–12 ''MANE–VU Regional Haze Consultation Report.''

[73] DNREC public noticed the submission of the three Calpine Title V permits to the Delaware SIP on February 4, 2024; these permits were substantively identical to those issued by DNREC on May 21, 2021, and were updated to remove language designating the April and October NO_X limit as state enforceable only. DNREC accepted public comment regarding the submittal of the permits to the SIP through March 5, 2024. No public comment was received. DNREC submitted the three permits as a supplement to its original Second Visibility Plan to EPA on March 7, 2024. On May 28, 2024, DNREC provided a clarification of this supplemental SIP submittal that specified which provisions of the Title V permits it intended to be incorporated by reference into the Delaware SIP. As a result, the 88 ppm NO_X emission limit as extended to April and October and related permit conditions will be federally enforceable. These permits and their associated public notice and transmittal letters are included in the rulemaking docket for this action.

[74] *See* appendix 8–12 ''MANE–VU Regional Haze Consultation Report.''

[75] More details about how Delaware met the requirements of 40 CFR 51.308(f)(2) can be found in the TSD of this rulemaking action.

and 5 engage with the requirement that States evaluate and determine the emission reduction measures that are necessary to make reasonable progress by considering the four statutory factors. EPA is proposing to find that Delaware's approach to Asks 1, 2, 3 and 5 is reasonable because it demonstrated that the sources and source sectors with impacts on visibility either: (1) have reduced their emissions so significantly that it is clear a four-factor analysis would not yield further reasonable emission reductions, (2) completed four-factor analyses and adopted economically feasible controls, or (3) are subject to stringent emission control measures. Delaware's SIP-approved control measures, emissions inventory [76] and information provided in response to comments [77] demonstrate that the sources of SO_2 and NO_X within the State that would be expected to contribute to visibility impairment have low emissions of NO_X and SO_2, are well controlled, or both. Therefore, it is reasonable to assume that selecting additional sources for four-factor analysis would not have resulted in additional emission reduction measures being determined to be necessary to make reasonable progress for the second implementation period. EPA is proposing to incorporate the redacted permits submitted on March 7, 2024 into the SIP.

c. Additional Long-Term Strategy Requirements

The consultation requirements of 40 CFR 51.308(f)(2)(ii) provide that States must consult with other States that are reasonably anticipated to contribute to visibility impairment in a Class I Area to develop coordinated emission management strategies containing the emission reductions measures that are necessary to make reasonable progress. Section 51.308(f)(2)(ii)(A) and (B) require States to consider the emission reduction measures identified by other States as necessary for reasonable progress and to include agreed upon measures in their SIPs, respectively. Section 51.308(f)(2)(ii)(C) speaks to what happens if States cannot agree on what measures are necessary to make reasonable progress.

Delaware participated in and provided documentation of the MANE–VU intra- and inter-RPO consultation processes and addressed the MANE–VU Asks by providing information on the measures it has in place that satisfy each Ask.[78] [79] MANE–VU also documented disagreements that occurred during consultation. MANE–VU noted in their Consultation Report that upwind States expressed concern regarding the analyses the RPO utilized for the selection of States for the consultation. MANE–VU agreed that these tools, as all models, have their limitations, but nonetheless deemed them appropriate. Additionally, there were several comments regarding the choice of the 2011 modeling base year. MANE–VU agreed that the choice of base year is critical to the outcome of the study. MANE–VU acknowledged that there were newer versions of the emission inventories and the need to use the best available inventory for each analysis. However, MANE–VU disagreed that the choice of these inventories was not appropriate for the analysis. Upwind States also suggested that MANE–VU States adopt the 2021 timeline for regional haze SIP submissions for the second planning period. MANE–VU agreed with the reasons the comments provided, such as collaboration with data and planning efforts. However, MANE–VU disagreed that the 2018 timeline would prohibit collaboration. Additionally, upwind States noted that they would not be able to address the MANE–VU Asks until they finalize their SIPs. MANE–VU believed the assumption of the implementation of the Asks from upwind States in its 2028 control case modeling was reasonable.

In sum, Delaware participated in the MANE–VU intra- and inter-RPO consultation and satisfied the MANE–VU Asks, satisfying 40 CFR 51.308(f)(2)(ii)(A) and (B). Delaware satisfied 40 CFR 51.308(f)(2)(ii)(C) by participating in MANE–VU's consultation process, which documented the disagreements between the upwind States and MANE–VU and explained MANE–VU's reasoning on each of the disputed issues. Based on the entirety of MANE–VU's intra- and inter-RPO consultation and both MANE–VU's and Delaware's responses to States' comments on the SIP submission and various technical analyses therein, we propose to determine that Delaware has satisfied the consultation requirements of 40 CFR 51.308(f)(2)(ii).

The documentation requirement of 40 CFR 51.308(f)(2)(iii) provides that States may meet their obligations to document the technical bases on which they are relying to determine the emission reductions measures that are necessary to make reasonable progress through an RPO, as long as the process has been ''approved by all State participants.'' As explained above, Delaware chose to rely on MANE–VU's technical information, modeling, and analysis to support development of its long-term strategy. The MANE–VU technical analyses on which Delaware relied are listed in the State's SIP submission and include source contribution assessments, information on each of the four factors and visibility modeling information for certain EGUs, and evaluations of emission reduction strategies for specific source categories. Delaware also provided supplemental information to further demonstrate the technical bases and emission information on which it relied on to determine the emission reductions measures that are necessary to make reasonable progress. Based on the documentation provided by the State, we propose to find Delaware satisfies the requirements of 40 CFR 51.308(f)(2)(iii).

Section 51.308(f)(2)(iii) also requires that the emissions information considered to determine the measures that are necessary to make reasonable progress include information on emissions for the most recent year for which the State has submitted triennial emissions data to EPA (or a more recent year), with a 12-month exemption period for newly submitted data. Delaware's SIP submission included 2017 NEI emission data for NO_X, SO_2, PM, VOCs and NH_3, and 2017 Air Markets Program Data (AMPD) emissions for NO_X and SO_2. Delaware's SIP submission also included 2019 AMPD for NO_X and SO_2.[80] Based on Delaware's consideration and analysis of the 2017 and 2019 emission data in their SIP submittal and supplemental documentation, EPA proposes to find that Delaware has satisfied the emissions information requirement in 40 CFR 51.308(f)(2)(iii).

We also propose to find that Delaware reasonably considered the five additional factors in 40 CFR 51.308(f)(2)(iv) in developing its long-term strategy. Pursuant to 40 CFR 51.308(f)(2)(iv)(A), Delaware noted that existing and ongoing State and Federal emission control programs that contribute to emission reductions through 2028 would impact emissions of visibility impairing pollutants from point and nonpoint sources in the second implementation period.

[76] *See* appendix 1–1, ''Selection of States for MANE–VU Regional Haze Consultation (2018)—Final''.

[77] *See* the ''Response to Comment Memo'' document in the docket of this rulemaking action.

[78] *See* appendix 9–2 ''Inter-RPO Consultation Briefing Book;'' appendix 8–12 ''MANE–VU Regional Haze Consultation Report;'' and appendix 8–13 ''National Park Service Letters (April 2018).''

[79] *See* appendix 4–1 ''Federal Land Manager Comments and Delaware Response;'' and document ''7. Response to Comment Memo.''

[80] *See* section 7.1 of the DE Regional Haze SIP submittal.

Delaware included in its SIP comprehensive lists of control measures with their effective dates, pollutants addressed, and corresponding Delaware Administrative Code provisions.[81]

Delaware's consideration of measures to mitigate the impacts of construction activities as required by 40 CFR 51.308(f)(2)(iv)(B) began during the Regional Haze first implementation period. Delaware indicated that it has regulations that mitigate potential impacts of construction on visibility such as the 7 DE Admin Code 1106, which regulates particulate emissions from construction and materials handling in the State. In addition, Delaware stated that based on the 2017 NEI, commercial construction emissions of $PM_{2.5}$ were 135 tons, which makes up only 3% of the $PM_{2.5}$ emissions inventory within the State. Delaware concluded that ''*Because the contribution from construction dust is small, Delaware is determining that no changes in its regulatory program for construction dust is necessary to make reasonable progress.*'' [82]

Pursuant to 40 CFR 51.308(f)(2)(iv)(C), source retirements and replacement schedules are addressed in section 8.8 of Delaware's submission. Source retirements and replacements were considered in developing the 2028 emission projections, with on the books/on the way retirements and replacements included in the 2028 projections, with on the books/on the way retirements and replacements included in the 2028 projections. The EGU point sources included in the inventories used in the MANE–VU contribution assessment and that were subsequently retired are identified in Delaware's SIP submittal as McKee Run and Indian River Generating Stations. No non-EGU point source retirements in Delaware were considered when developing the 2028 emissions projections.

In considering smoke management as required in 40 CFR 51.308(f)(2)(iv)(D), Delaware explained, in section 8.9 of its submission, that emission contribution from prescribed agricultural and forest burning within the State are low; $PM_{2.5}$ statewide emissions from prescribed fires were 36 tons and emissions from agricultural burning were 60 tons (2% of Delaware's overall $PM_{2.5}$ emissions inventory). Delaware therefore concludes that it is unlikely that fires in Delaware for agricultural or forestry management cause impacts on visibility in the MANE–VU and nearby Class I Areas, including the Brigantine Wilderness Class I Area. Delaware states that Smoke Management Plans (SMPs) is a required element of a SIP only if it is required to make reasonable progress, and that Delaware does not need an official SMP since both a speciation trends analysis report [83] and Delaware's 2014 emissions inventory data show that agricultural and forestry management woodsmoke emissions are low. However, Delaware notes that under 7 DE Admin 1113 for Open Burning, during the months of May to September, both prescribed and agricultural burning are prohibited, and even though DNREC does not consider open burning regulation an SMP, the regulation does benefit Class I Areas to some degree.

Delaware considered the anticipated net effect of projected changes in emissions as required by 51.308(f)(2)(iv)(E) by discussing, in section 8.10 of its submission, the photochemical modeling for the 2018–2028 period it conducted in collaboration with MANE–VU. The two modeling cases run were a 2028 base case, which considered only on-the-books controls, and a 2028 control case that considered implementation of the MANE–VU Ask. Delaware presented the differences between the base and control cases on the 20% most impaired and 20% clearest days for each MANE–VU Class I Area.[84]

Because Delaware has reasonably considered each of the five additional factors, EPA proposes to find that Delaware has satisfied the requirements of 40 CFR 51.308(f)(2)(iv).

F. Reasonable Progress Goals

Section 51.308(f)(3) contains the requirements pertaining to RPGs for each Class I Area. Section 51.308(f)(3)(i) requires a State in which a Class I Area is located to establish RPGs—one each for the most impaired and clearest days—reflecting the visibility conditions that will be achieved at the end of the implementation period as a result of the emission limitations, compliance schedules and other measures required under paragraph (f)(2) to be in States' long-term strategies, as well as implementation of other CAA requirements. The long-term strategies as reflected by the RPGs must provide for an improvement in visibility on the most impaired days relative to the baseline period and ensure no degradation on the clearest days relative to the baseline period. Section 51.308(f)(3)(ii) applies in circumstances in which a Class I Area's RPG for the most impaired days represents a slower rate of visibility improvement than the uniform rate of progress calculated under 40 CFR 51.308(f)(1)(vi). Under 40 CFR 51.308(f)(3)(ii)(A), if the State in which a mandatory Class I Area is located establishes an RPG for the most impaired days that provides for a slower rate of visibility improvement than the URP, the State must demonstrate that there are no additional emission reduction measures for anthropogenic sources or groups of sources in the State that would be reasonable to include in its long-term strategy. Section 51.308(f)(3)(ii)(B) requires that if a State contains sources that are reasonably anticipated to contribute to visibility impairment in a Class I Area in *another* State, and the RPG for the most impaired days in that Class I Area is above the URP, the upwind State must provide the same demonstration. Because Delaware has no Class I Areas within its borders, it is subject only to 40 CFR 51.308(f)(3)(ii)(B).

Under 40 CFR 51.308(f)(3)(ii)(B), a State that contains sources that are reasonably anticipated to contribute to visibility impairment in a Class I Area in another State for which a demonstration by the other State is required under 40 CFR 51.308(f)(3)(ii)(B) must demonstrate that there are no additional emission reduction measures that would be reasonable to include in its long-term strategy. Delaware's SIP submittal included MANE–VU's glidepath checks for nearby downwind Class I Areas,[85] such as the Brigantine Wilderness Class I Area,[86] which show that the RPG for the 20 percent most anthropogenically impaired days for the affected downwind Class I Areas (Acadia, Moosehorn, Great Gulf, Lye Brook, Brigantine, Shenandoah, Dolly Sods and James River Face) are not above the URP glidepath, and that the RPG for the 20 percent clearest days shows no degradation. In addition, the modeled MANE–VU 2028 visibility projections at nearby Class I Areas show that the base case 2028 projections for the most impaired days at these areas are below the respective 2028 points on the URPs. Therefore, we propose it is reasonable to assume that the demonstration requirement under 40 CFR

[81] *See* section 8.6. of the DE Regional Haze SIP submittal.

[82] 7 DE Admin Code 1106—Particulate Emissions from Construction and Materials Handling.

[83] *See* appendix 8–8 ''Hopke Report''.

[84] *See* Figure 8–2 of DE Regional Haze SIP submittal at 86.

[85] *See* appendix 8–6 ''Regional Haze Metrics Trends and HYSPLIT Trajectory Analyses''.

[86] *See* Figure 8–2 ''Brigantine Wilderness Area Haze Metrics Trends'' in the DE Regional Haze SIP submittal at 86.

51.308(f)(3)(ii)(B) as it pertains to these areas will not be triggered.

EPA proposes to determine that Delaware has satisfied the applicable requirements of 40 CFR 51.308(f)(3) relating to RPGs.

G. Monitoring Strategy and Other Implementation Plan Requirements

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

Section 51.308(f)(6)(i) requires SIPs to provide for the establishment of any additional monitoring sites or equipment needed to assess whether reasonable progress goals to address regional haze for all mandatory Class I Areas within the State are being achieved. Section 51.308(f)(6)(ii) requires SIPs to provide for procedures by which monitoring data and other information are used in determining the contribution of emissions from within the State to regional haze visibility impairment at mandatory Class I Areas both within and outside the State. Because Delaware does not have any Class I Areas located within its borders, § 51.308(f)(6)(i) and (ii) do not apply.

Section 51.308(f)(6)(iii) requires States with no Class I Areas to include procedures by which monitoring data and other information are used in determining the contribution of emissions from within the State to regional haze visibility impairment at Class I Areas in other States. States with Class I Areas must establish a monitoring program and report data to EPA that is representative of visibility at the Class I Areas. The IMPROVE network meets this requirement. Delaware stated that, it has conducted receptor modeling and emissions inventory analysis to determine source contributions from within the State, and the proportional impacts of those sources to areas outside the State. Even though, Delaware does not have IMPROVE monitors, Delaware agrees that NESCAUM is providing quality technical information by using the IMPROVE program data and the Visibility Information Exchange Web System (VIEWS) site for the regional haze purposes.

Section 51.308(f)(6)(iv) requires the SIP to provide for the reporting of all visibility monitoring data to the Administrator at least annually for each Class I Area in the State. As noted above, Delaware does not have any Class I Areas located within its borders, therefore this requirement does not apply.

Section 51.308(f)(6)(v) requires SIPs to provide for a statewide inventory of emissions of pollutants that are reasonably anticipated to cause or contribute to visibility impairment, including emissions for the most recent year for which data are available and estimates of future projected emissions. It also requires a commitment to update the inventory periodically. Delaware provides for emissions inventories and estimates for future projected emissions by participating in the MANE–VU RPO and complying with EPA's Air Emissions Reporting Rule (AERR). In 40 CFR part 51, subpart A, the AERR requires States to submit updated emissions inventories for criteria pollutants to EPA's Emissions Inventory System (EIS) every three years. The emission inventory data is used to develop the NEI, which provides for, among other things, a triennial statewide inventory of pollutants that are reasonably anticipated to cause or contribute to visibility impairment.

Section 7 of Delaware's submission includes tables of NEI data. The source categories of the emissions inventories included are: (1) point sources, (2) nonpoint sources, (3) non-road mobile sources, and (4) on-road mobile sources. The point source category is further divided into AMPD point sources and non-AMPD point sources.[87] Delaware included NEI emissions inventories for the following years: 2002 (one of the regional haze program baseline years), 2008, 2011, 2014, and 2017;[88] and for the following pollutants: NO_X, PM_{10}, $PM_{2.5}$, SO_2, VOCs, and NH_3. Delaware also provided a summary of SO_2 and NO_X emissions for AMPD sources for the years of 2016, 2017, 2018, and 2019.[89]

Section 51.308(f)(6)(v) also requires States to include estimates of future projected emissions and include a commitment to update the inventory periodically. Delaware relied on the MANE–VU 2028 emissions projections for MANE–VU States. MANE–VU completed two 2028 projected emissions modeling cases—a 2028 base case that considers only on-the-books controls and a 2028 control case that considers implementation of the MANE–VU Asks.[90]

EPA proposes to find that Delaware has met the requirements of 40 CFR 51.308(f)(6) as described above, including through its continued participation in the IMPROVE network and the MANE–VU RPO and its ongoing compliance with the AERR, and that no further elements are necessary at this time for Delaware to assess and report on visibility pursuant to 40 CFR 51.308(f)(6)(vi).

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

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

[87] AMPD sources are facilities that participate in EPA's emission trading programs. The majority of AMPD sources are EGUs.

[88] *See* section 7 of the DE Regional Haze SIP submittal at 29.

[89] *See* sections 7.1.1 and 7.1.4 in the Delaware Regional Haze SIP submittal.

[90] *See* appendix 7–2 ''OTC MANE–VU 2011 Based Modeling Platform Support Document October 2018—Final.''

anthropogenic emissions within or outside the State that have occurred since the period addressed by the first implementation period progress report, including whether such changes were anticipated and whether they have limited or impeded expected progress towards reducing emissions and improving visibility.

Delaware's submission describes the status of measures of the long-term strategy from the first implementation period. As a member of MANE–VU, Delaware considered the MANE–VU Asks and adopted corresponding measures into its long-term strategy for the first implementation period. The MANE–VU Asks were: (1) timely implementation of BART requirements; (2) EGU controls including Controls at 167 Key Sources that most affect MANE–VU Class I Areas; (3) low sulfur fuel oil strategy; and (4) continued evaluation of other control measures. Delaware met all the identified reasonable measures requested during the first implementation period. During the first planning period for regional haze, programs that were put in place focused on reducing SO_2 emissions. The reductions achieved led to vast improvements in visibility at the MANE–VU Class I Areas due to reduced sulfates formed from SO_2 emissions. Delaware describes in section 11 of its submittal control measures put in place during the first implementation period to help reduce the emissions of visibility impairing pollutants, including NO_X and SO_2. This includes a non-trading emissions control regulation [91] for EGUs to aid in the attainment of ozone and PM ambient air quality standards and reduce emissions of neurotoxin mercury. Delaware Stated that the regulation ''*provides for stringent control of EGU NO_X and SO_2 emissions by implementation of unit-specific annual NO_X and SO_2 mass emissions caps and short term (rolling 24-hour) NO_X and SO_2 emission rate limits (lb/MMBTU).*'' Delaware added that implementation of the 7 DE Admin Code 1146, among other measures, like related consent decrees and permit conditions, have served to significantly reduce Delaware's NO_X and SO_2 emissions from the EGUs that were subject to it and demonstrated it in table 10–8 and Figure 10–1 of the DE Regional Haze SIP submittal. The first step change reduction of NO_X and SO_2 emissions happened in 2009, corresponding to the promulgation of 7 DE Admin Code 1146. Based on the data, by 2019, the EGUs that were subject to this State regulation had reduced their SO_2 and NO_X mass emissions by 30,197 tpy and 8,005 tpy, which is approximately 99% and 98% emissions reductions, respectively.

Delaware also described the status of the implementation of primary particulate matter BART for the respective eligible EGUs, how they were able to meet the 90% or greater SO_2 reduction emissions at 167 stacks inside and outside of MANE–VU, their low sulfur fuel oil standards [92] for the State, and the status of other control methods [93] established during and after the first implementation period.

EPA proposes to find that Delaware has met the requirements of 40 CFR 51.308(g)(1) and (2) because its SIP submission describes the measures included in the long-term strategy from the first implementation period, as well as the status of their implementation and the emission reductions achieved through such implementation.

Section 51.308(g)(3) requires States to assess Reasonable Progress Goals, including current visibility conditions and changes, for any Class I Areas within the State. As described above, Delaware does not have any Class I Areas within its borders, therefore § 51.308(g)(3) does not apply.

Pursuant to 40 CFR 51.308(g)(4), in section 7 of their submittal, Delaware provided a summary of emissions of NO_X, PM_{10}, $PM_{2.5}$, SO_2, VOCs, and NH_3 from all sources and activities, including from point, nonpoint, non-road mobile, and on-road mobile sources, for the time period from 2002 to 2017. Delaware also included AMPD data for SO_2 and NO_X emissions for 2016, 2017, 2018 and 2019 in their submission.

The reductions achieved by Delaware emission control measures are seen in the emissions inventory. Based on Delaware's SIP submission, NO_X emissions have continuously declined in Delaware from 2002 through 2017, especially in the point, nonroad and onroad mobile sectors. During that period, onroad sources contributed almost half of the emissions at 41%, followed by area sources at 21%. Nonroad sources contributed 15% and point sources contributed the least at 14%. Table 7–2 of Delaware's SIP submittal also shows additional NO_X emissions data from 2016 to 2019 for Delaware's point sources that report to EPA's AMPD.[94] NO_X emissions are expected to continue to decrease as fleet turnover occurs and the older more polluting vehicles and equipment are replaced by newer, cleaner ones.[95]

Emissions of PM_{10} have generally remained relatively stable and in a downward trend in Delaware from 2002 to 2017, particularly in the point, nonroad and onroad sectors, see section 7.1.2 and table 7–7 of Delaware's SIP submittal. The variations in the onroad are due to changes in emission inventory calculation methodologies, which resulted in higher particulate matter estimates in the other years than in 2002. The large variation in emissions in the nonpoint category is due to changes in calculation methodologies for residential wood burning and fugitive dust categories, which have varied significantly. Similar trends are observed for emissions of $PM_{2.5}$ in Delaware from 2002 to 2017, see section 7.1.3 and table 7–10 of Delaware's SIP submittal. As with PM_{10}, some of the variations could be due to changes in estimation methodologies for categories such as yard waste burning, paved and unpaved road dust and residential wood combustion.

Emissions of SO_2 have shown a steady significant decline in Delaware over the period 2002 to 2017, across all multiple sectors.[96] Delaware stated that these reductions are primarily due to promulgation of 7 DE Admin Code 1146 and 1108.[97] Additionally, some of these decreases are attributable to the MANE–VU low sulfur fuel strategy and the 90% or greater reduction in SO_2 emissions at 167 EGU stacks, both inside and outside of MANE–VU, requested in the ''Non-MANE–VU Ask'' for States within MANE–VU for the first regional haze planning period.[98]

Table 7–21 of Delaware's SIP submittal shows VOC emissions from all NEI data categories for the period 2002 to 2017 in Delaware, which have shown a steady decline. VOC decreases were achieved in all sectors due to Federal and State rules for evaporative sources of VOC emissions such as portable fuel containers; architectural, industrial, and maintenance coatings (AIM); adhesives and sealants, consumer products; and solvent degreasing.[99] The State added

[91] *See* 7 DE Admin Code 1146 ''Electric Generating Unit Multi-Pollutant Regulation.''

[92] *See* DE Regional Haze SIP submittal section 10.3 at 109.

[93] *See* DE Regional Haze SIP submittal section 8.6 at 76.

[94] *See* DE Regional Haze SIP submittal section 7.1.1.

[95] *Id*

[96] *See* section 7.1.4 and table 7–15 of DE Regional Haze SIP submittal.

[97] *Id.*

[98] Statement of the Mid-Atlantic/Northeast Visibility Union (MANE–VU) Concerning a Course of Action within MANE–VU Toward Assuring Reasonable Progress. (*otcair.org/MANEVU/Upload/Publication/Formal%20Actions/Statement%20on%20Controls%20in%20MV_072007.pdf*).

[99] Delaware added that the State has promulgated regulations for portable fuel containers, AIM

that other decreases are due to States' VOC RACT rules and due to State motor vehicle Inspection & Maintenance (I&M) programs and the permeation of more on-board refueling vapor recovery (ORVR) equipped vehicles into the fleet.

Emissions of NH_3 have shown declines in Delaware from 2002 to 2017; see section 7.1.6 and table 7–24 of Delaware's SIP submittal. Ammonia decreases were achieved in the onroad sector due to Federal new engine standards for vehicles and equipment. Nonpoint increases and decreases from 2002 to 2014 are due to reporting, grouping and methodology changes. While ammonia emissions were stable between 2014 and 2017 inventories, there was a slight increase in ammonia emissions from 2011 and 2014. The increase is due to methodology changes and the addition of NH_3 emissions from domestic and wild animals in 2014.

EPA is proposing to find that Delaware has satisfied the requirements of 40 CFR 51.308(g)(4) by providing emissions information for NO_X, PM_{10}, $PM_{2.5}$, SO_2, VOCs, and NH_3 broken down by type of source.

Delaware uses the emissions trend data in the SIP submission [100] and supporting MANE–VU information [101] provided to support the assessment that anthropogenic haze-causing pollutant emissions in Delaware have decreased during the reporting period and that changes in emissions have not limited or impeded progress in reducing pollutant emissions and improving visibility. Delaware's 2017 emission inventories for NO_X, PM_{10}, $PM_{2.5}$, SO_2, VOCs, and NH_3 were lower than their 2014 emission inventories for those same pollutants emissions.[102] EPA is proposing to find that Delaware has met the requirements of 40 CFR 51.308(g)(5).

I. Requirements for State and Federal Land Manager Coordination

Section 169A(d) of the Clean Air Act requires States to consult with FLMs before holding the public hearing on a proposed regional haze SIP, and to include a summary of the FLMs' conclusions and recommendations in the notice to the public. In addition, 40 CFR 51.308(i)(2)'s FLM consultation provision requires a State to provide FLMs with an opportunity for consultation that is early enough in the State's policy analyses of its emission reduction obligation so that information and recommendations provided by the FLMs can meaningfully inform the State's decisions on its long-term strategy. If the consultation has taken place at least 120 days before a public hearing or public comment period, the opportunity for consultation will be deemed early enough. Regardless, the opportunity for consultation must be provided at least sixty days before a public hearing or public comment period at the State level. Section 51.308(i)(2) also provides two substantive topics on which FLMs must be provided an opportunity to discuss with States: assessment of visibility impairment in any Class I Area and recommendations on the development and implementation of strategies to address visibility impairment. Section 51.308(i)(3) requires States, in developing their implementation plans, to include a description of how they addressed FLMs' comments.

The States in the MANE–VU RPO conducted FLM consultation early in the planning process concurrent with the state-to-state consultation that formed the basis of the RPO's decision making process. As part of the consultation, the FLMs were given the opportunity to review and comment on the technical documents developed by MANE–VU. The FLMs were invited to attend the intra- and inter-RPO consultations calls among States and at least one FLM representative was documented to have attended seven intra-RPO meetings and all inter-RPO meetings. Delaware participated in these consultation meetings and calls.[103]

As part of this early engagement with the FLMs, on April 12, 2018, the NPS sent letters to the MANE–VU States requesting that they consider specific individual sources in their long-term strategies.[104] NPS used an analysis of emissions divided by distance (Q/d) to estimate the impact of MANE–VU facilities. To select the facilities, NPS first summed 2014 NEI NO_X, PM_{10}, SO_2, and SO_4 emissions and divided by the distance to a specified NPS mandatory Class I Federal area. NPS summed the Q/d values across all MANE–VU States relative to Acadia, Mammoth Cave and Shenandoah National Parks, ranked the Q/d values relative to each Class I Area, created a running total, and identified those facilities contributing to 80% of the total impact at each NPS Class I Area. NPS applied a similar process to facilities in Maine relative to Acadia National Park. NPS merged the resulting lists of facilities and sorted them by their States. NPS suggested that a State consider those facilities comprising 80% of the Q/d total, not to exceed the 25 top ranked facilities. The NPS identified two facilities in Delaware in this letter.[105] Delaware included the NPS initial letter in their proposed SIP. In a subsequent letter dated October 22, 2018, NPS identified two facilities for which more control information was desired. Delaware detailed the emission controls and updates to the two facilities to address the NPS's request for more information.[106]

On February 11, 2021, Delaware submitted a draft Regional Haze SIP to the U.S. Forest Service, the U.S. Fish and Wildlife Service, and the National Park Service for a 60-day review and comment period pursuant to 40 CFR 51.308(i)(2).[107] Delaware received comments from the Forest Service on March 31, 2021, and from the National Park Service on April 9, 2021. Delaware responded to the FLM comments and included the responses in appendix 4–1 of their submission to EPA, in accordance with 40 CFR 51.308(i)(3). Notices of the proposed SIP, availability and the public hearing were published on DNREC's website and in the Delaware Register, and interested parties were emailed the notice, along with air quality contacts from other States, air quality regional organizations and the EPA. A public hearing on the proposed SIP revision was held on December 29, 2021. Written comments relevant to the proposal were accepted until the close of business January 13, 2022.

For the reasons stated above, EPA proposes to find that Delaware has satisfied the requirements under 40 CFR 51.308(i) to consult with the FLMs on its regional haze SIP for the second implementation period.

Delaware's August 2022 SIP submission includes a commitment to revise and submit a regional haze SIP by July 31, 2028, and every ten years thereafter. The State's commitment includes submitting periodic progress reports in accordance with 40 CFR 51.308(f) and a commitment to evaluate

coatings, adhesives and sealants, consumer products and solvent degreasing. *See* section 8.6.3 of DE's Regional Haze SIP submittal.

[100] *See* section 7 of the DE Regional Haze SIP Submittal.

[101] *See* appendices 7–1 and 7–2, ''Technical Support Document for 2011 for the Northeastern U.S. Gamma Inventory (January 2018)'' and ''Ozone Transport Commission/Mid-Atlantic Northeastern Visibility Union 2011 Based Modeling Platform Support Document—October 2018 Update (October 2018),'' respectively.

[102] *See* section 7 of the DE Regional Haze SIP Submittal.

[103] See appendices 9–1, 9–3 and 9–4 of the DE Regional Haze SIP submittal, ''MANE–VU Intra-Regional Ask,'' ''Inter-RPO Ask,'' and ''MANE–VU FLM Ask,'' respectively.

[104] *Id.*

[105] *See* appendix 8–13 ''National Park Service Letters.''

[106] *See* appendix 4–1 ''Federal Land Manager Comments and Delaware Response.''

[107] *Id.*

progress towards the reasonable progress goal for each mandatory Class I Area located within the State and in each mandatory Class I Area located outside the State that may be affected by emissions from within the State in accordance with 40 CFR 51.308(g).[108]

V. Proposed Action

EPA is proposing to approve Delaware's August 8, 2022, SIP submission, and supplemental SIP submission dated March 7, 2024, as satisfying the regional haze requirements for the second implementation period contained in 40 CFR 51.308(f).

VI. Incorporation by Reference

In accordance with requirements of 1 CFR 51.5, EPA is proposing to incorporate by reference specific provisions of the revised title V permits for Calpine Christiana Energy Center, Calpine Delaware City Energy Center, and Calpine West Energy Center, dated and effective December 19, 2023, between DNREC and Calpine Mid-Atlantic Generation, LLC, which includes emission limits and associated permit conditions for these facilities to comply with Regional Haze requirements for the 2nd Planning Period, as discussed in section IV of this preamble. These permit revisions are contained in DNREC's supplemental SIP submittal dated March 7, 2024, submitted on behalf of the State of Delaware; the portions of these permit revisions that will be incorporated by reference into the SIP are clarified by the DNREC Air Quality Division Director via a letter dated May 28, 2024. EPA has made, and will continue to make, these materials generally available through *www.regulations.gov* and at the EPA Region 3 Office (please contact the person identified in the **FOR FURTHER INFORMATION CONTACT** section of this preamble for more information). Therefore, these materials have been proposed for approval by EPA for inclusion in the SIP, will be incorporated by reference by EPA into that plan, will be fully federally enforceable under sections 110 and 113 of the CAA as of the effective date of the final rule of EPA's approval, and will be incorporated by reference in the next update to the SIP compilation.

VII. Statutory and Executive Order Reviews

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

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

Executive Order 12898 (Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, 59 FR 7629, February 16, 1994) directs Federal agencies to identify and address ''disproportionately high and adverse human health or environmental effects'' of their actions on minority populations and low-income populations to the greatest extent practicable and permitted by law. EPA defines environmental justice (EJ) as ''the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies.'' EPA further defines the term fair treatment to mean that ''no group of people should bear a disproportionate burden of environmental harms and risks, including those resulting from the negative environmental consequences of industrial, governmental, and commercial operations or programs and policies.'' The Delaware Department of Natural Resources and Environmental Control did not evaluate environmental justice considerations as part of its SIP submittal; the CAA and applicable implementing regulations neither prohibit nor require such an evaluation. EPA did not perform an EJ analysis and did not consider EJ in this action. Due to the nature of the action being taken here, this action is expected to have a neutral to positive impact on the air quality of the affected area. Consideration of EJ is not required as part of this action, and there is no information in the record inconsistent with the stated goal of E.O. 12898 of achieving environmental justice for people of color, low-income populations, and Indigenous peoples.

In addition, this proposed rulemaking action, pertaining to Delaware's regional haze SIP submission for the second planning period, is not approved to apply on any Indian reservation land or in any other area where the EPA or an Indian tribe has demonstrated that a tribe has jurisdiction. In those areas of Indian country, the rule does not have Tribal implications and will not impose substantial direct costs on Tribal governments or preempt Tribal law as specified by Executive Order 13175 (65 FR 67249, November 9, 2000).

List of Subjects in 40 CFR Part 52

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

Adam Ortiz,

Regional Administrator, Region III.

[FR Doc. 2024–18174 Filed 8–16–24; 8:45 am]

BILLING CODE 6560–50–P

[108] *See* section 12, ''Determination of the Adequacy of the Existing Plan'' of the DE Regional Haze SIP submittal.

DEPARTMENT OF TRANSPORTATION

Pipeline and Hazardous Materials Safety Administration

49 CFR Part 190

[Docket No. PHMSA–2022–0118]

RIN 2137–AF61

Pipeline Safety: Cost Recovery for Siting Reviews for LNG Facilities

AGENCY: Pipeline and Hazardous Materials Safety Administration