6560-50-P

ENVIRONMENTAL PROTECTION AGENCY
40 CFR Part 52
[EPA-R01-OAR-2009-0919; A-1-FRL- 9651-9]

Approval and Promulgation of Air Quality Implementation Plans; Connecticut; Regional Haze

AGENCY: Environmental Protection Agency (EPA).

ACTION: Proposed rule.

SUMMARY: EPA is proposing approval of a revision to the Connecticut State Implementation Plan (SIP) that addresses regional haze for the first planning period from 2008 through 2018. It was submitted by the Connecticut Department of Environmental Protection (now known as Connecticut Department of Energy and Environmental Protection, CT DEEP) on November 18, 2009, February, 24, 2012 and March 12, 2012. This revision addresses the requirements of the Clean Air Act (CAA) and EPA's rules that require States to prevent any future, and remedy any existing, manmade impairment of visibility in mandatory Class I areas (also referred to as the "regional haze program"). States are required to assure reasonable progress toward the national goal of achieving natural visibility conditions in Class I areas.

DATES: Written comments must be received on or before **[Insert date 30 days after publication in the Federal Register]**.

ADDRESSES: Submit your comments, identified by Docket ID Number EPA-R01-OAR-2009-0919 by one of the following methods:

1. www.regulations.gov : Follow the on-line instructions for submitting comments.
2. E-mail: arnold.anne@epa.gov

3. Fax: (617) 918-0047.
4. Mail: "Docket Identification Number EPA-R01-OAR-2009-0919 Anne Arnold, U.S. Environmental Protection Agency, EPA New England Regional Office, Office of Ecosystem Protection, Air Quality Planning Unit, 5 Post Office Square - Suite 100, (Mail code OEP05-2), Boston, MA 02109 - 3912.
5. Hand Delivery or Courier. Deliver your comments to: Anne Arnold, Manager, Air Quality Planning Unit, U.S. Environmental Protection Agency, EPA New England Regional Office, Office of Ecosystem Protection, Air Quality Planning Unit, 5 Post Office Square - Suite 100, (mail code OEP05-2), Boston, MA 02109 - 3912. Such deliveries are only accepted during the Regional Office's normal hours of operation. The Regional Office's official hours of business are Monday through Friday, 8:30 to 4:30, excluding legal holidays.

Instructions: Direct your comments to Docket ID No. EPA-R01-OAR-2009-0919. EPA's policy is that all comments received will be included in the public docket without change and may be made available online at www.regulations.gov, including any personal information provided, unless the comment includes information claimed to be Confidential Business Information (CBI) or other information whose disclosure is restricted by statute. Do not submit through www.regulations.gov, or e-mail, information that you consider to be CBI or otherwise protected. The www.regulations.gov website is an "anonymous access" system, which means EPA will not know your identity or contact information unless you provide it in the body of your comment. If you send an e-mail comment directly to EPA without going through www.regulations.gov your e-mail address will be automatically captured and included as part of the comment that is placed

in the public docket and made available on the Internet. If you submit an electronic comment, EPA recommends that you include your name and other contact information in the body of your comment and with any disk or CD-ROM you submit. If EPA cannot read your comment due to technical difficulties and cannot contact you for clarification, EPA may not be able to consider your comment. Electronic files should avoid the use of special characters, any form of encryption, and be free of any defects or viruses.

Docket: All documents in the electronic docket are listed in the www.regulations.gov index. Although listed in the index, some information is not publicly available, i.e., CBI or other information whose disclosure is restricted by statute. Certain other material, such as copyrighted material, is not placed on the Internet and will be publicly available only in hard copy form. Publicly available docket materials are available either electronically in www.regulations.gov or in hard copy at Office of Ecosystem Protection, U.S. Environmental Protection Agency, EPA New England Regional Office, Office of Ecosystem Protection, Air Quality Planning Unit, 5 Post Office Square - Suite 100, Boston, MA. EPA requests that if at all possible, you contact the contact listed in the **FOR FURTHER INFORMATION CONTACT** section to schedule your inspection. The Regional Office's official hours of business are Monday through Friday, 8:30 to 4:30, excluding legal holidays.

In addition, copies of the State submittal are also available for public inspection during normal business hours, by appointment at the Bureau of Air Management, Department of Energy and Environmental Protection, State Office Building, 79 Elm Street, Hartford, CT 06106-1630.

FOR FURTHER INFORMATION CONTACT: Anne McWilliams, Air Quality Unit, U.S. Environmental Protection Agency, EPA New England Regional Office, 5 Post Office Square – Suite 100, (Mail Code OEP05-02), Boston, MA 02109-3912, telephone number (617)918-1697, fax number (617)918-0697, e-mail mcwilliams.anne@epa.gov

SUPPLEMENTARY INFORMATION:

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Throughout this document, wherever "we," "us," or "our" is used, we mean the EPA.

I. What is the Background for EPA's Proposed Action?

A. The Regional Haze Problem

Regional haze is visibility impairment that is produced by a multitude of sources and activities which are located across a broad geographic area and emit fine particles and their precursors (e.g., sulfur dioxide, nitrogen oxides, and in some cases, ammonia and volatile organic compounds). Fine particle precursors react in the atmosphere to form fine particulate matter ($PM_{2.5}$) (e.g., sulfates, nitrates, organic carbon, elemental carbon, and soil dust), which also impair visibility by scattering and absorbing light. Visibility impairment reduces the clarity, color, and visible distance that one can see. $PM_{2.5}$ can also cause serious health effects and mortality in humans and contributes to environmental effects such as acid deposition.

Data from the existing visibility monitoring network, the "Interagency Monitoring of Protected Visual Environments" (IMPROVE) monitoring network, show that visibility impairment caused by air pollution occurs virtually all the time at most national park and wilderness areas. The average visual range in many Class I areas (i.e., national parks and memorial parks, wilderness areas, and international parks meeting certain size criteria) in the Western United States is 100-150 kilometers, or about one-half to two-thirds of the visual range that would exist without manmade air pollution. In most of the eastern Class I areas of the United States, the average visual range is less than 30 kilometers, or about one-fifth of the visual range that would exist under estimated natural conditions. See 64 FR 35715 (July 1, 1999).

B. Background Information

In section 169A(a)(1) of the 1977 Amendments to the CAA, Congress created a program for protecting visibility in the nation's national parks and wilderness areas. This section of the CAA establishes as a national goal the "prevention of any future, and the remedying of any existing, impairment of visibility in mandatory Class I Federal areas[1] which impairment results from manmade air pollution." On December 2, 1980, EPA promulgated regulations to address visibility impairment in Class I areas that is "reasonably attributable" to a single source or small group of sources, i.e., "reasonably attributable visibility impairment" (RAVI). See 45 FR 80084 (Dec. 2, 1980). These regulations represented the first phase in addressing visibility impairment. EPA deferred action on regional haze that emanates from a variety of sources until monitoring, modeling and scientific knowledge about the relationships between pollutants and visibility impairment were improved.

Congress added section 169B to the CAA in 1990 to address regional haze issues. EPA promulgated a rule to address regional haze on July 1, 1999 (64 FR 35714), the Regional Haze Rule. The Regional Haze Rule revised the existing visibility regulations to integrate into the regulation provisions addressing regional haze impairment and established a comprehensive visibility protection program for Class I areas. The requirements for regional haze, found at 40

[1] Areas designated as mandatory Class I Federal areas consist of national parks exceeding 6000 acres, wilderness areas and national memorial parks exceeding 5000 acres, and all international parks that were in existence on August 7, 1977 (42 U.S.C. 7472(a)). In accordance with section 169A of the CAA, EPA, in consultation with the Department of Interior, promulgated a list of 156 areas where visibility is identified as an important value (44 FR 69122, November 30, 1979). The extent of a mandatory Class I area includes subsequent changes in boundaries, such as park expansions (42 U.S.C. 7472(a)). Although States and Tribes may designate as Class I additional areas which they consider to have visibility as an important value, the requirements of the visibility program set forth in section 169A of the CAA apply only to ''mandatory Class I Federal areas." Each mandatory Class I Federal area is the responsibility of a ''Federal Land Manager'' (FLM). (42 U.S.C. 7602(i)). When we use the term "Class I area" in this action, we mean a "mandatory Class I Federal area."

CFR 51.308 and 51.309, are included in EPA's visibility protection regulations at 40 CFR 51.300-309. Some of the main elements of the regional haze requirements are summarized in Section II. The requirement to submit a regional haze SIP applies to all 50 States, the District of Columbia and the Virgin Islands. In 40 CFR 51.308(b), States are required to submit the first implementation plan addressing regional haze visibility impairment no later than December 17, 2007. On January 15, 2009, EPA found that 37 States, the District of Columbia and the U.S. Virgin Islands failed to submit this required implementation plan. See 74 FR 2392 (Jan. 15, 2009). In particular, EPA found that Connecticut failed to submit a plan that met the requirements of 40 CFR 51.308. See 74 FR 2393. On November 18, 2009, the Bureau of Air Management of the CT DEEP submitted revisions to the Connecticut State Implementation Plan (SIP) to address regional haze as required by 40 CFR 51.308. EPA has reviewed Connecticut's submittal and is proposing to find that it is consistent with the requirements of 40 CFR 51.308 as outlined in Section II.

C. Roles of Agencies in Addressing Regional Haze

Successful implementation of the regional haze program will require long-term regional coordination among States, tribal governments and various federal agencies. As noted above, pollution affecting the air quality in Class I areas can be transported over long distances, even hundreds of kilometers. Therefore, to effectively address the problem of visibility impairment in Class I areas, States need to develop strategies in coordination with one another, taking into account the effect of emissions from one jurisdiction on the air quality in another.

Because the pollutants that lead to regional haze can originate from sources located across broad geographic areas, EPA has encouraged the States and Tribes across the United States to address visibility impairment from a regional perspective. Five regional planning organizations (RPOs) were developed to address regional haze and related issues. The RPOs first evaluated technical information to better understand how their States and Tribes impact Class I areas across the country, and then pursued the development of regional strategies to reduce emissions of $PM_{2.5}$ and other pollutants leading to regional haze.

The Mid-Atlantic/Northeast Visibility Union (MANE-VU) RPO 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 Northeastern United States. Member State and Tribal governments include: Connecticut, Delaware, the District of Columbia, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Penobscot Indian Nation, Rhode Island, and Vermont.

D. The Relationship of the Clean Air Interstate Rule and the Cross-State Air Pollution Rule to Regional Haze Requirements

The Clean Air Interstate Rule (CAIR) required some states to reduce emissions of SO_2 and NOx that contribute to violations of the 1997 National Ambient Air Quality Standards (NAAQS) for $PM_{2.5}$ and ozone. See 70 FR 25162 (May 12, 2005). CAIR established emissions budgets for SO_2 and NOx. On October 13, 2006, EPA's "Regional Haze Revisions to Provisions Governing Alternative to Source-Specific Best Available Retrofit Technology (BART) Determinations;

Final Rule" (hereinafter known as the "Alternative to BART Rule") was published in the Federal Register. See 71 FR 60612. This rule establishes that states participating in the CAIR program need not require Best Available Retrofit Technology (BART) for SO_2 and NOx at BART-eligible electric generating units (EGUs). Many States relied on CAIR as an alternative to BART for SO_2 and NOx for their subject EGUs.

CAIR was later found to be inconsistent with the requirements of the CAA and the rule was remanded to EPA. See North Carolina v. EPA, 550 F.3d 1176 (D.C. Cir. 2008). The court left CAIR in place until replaced by EPA with a rule consistent with its opinion. See North Carolina v. EPA, 550 F.3d 1176, 1178(D.C. Cir. 2008).

EPA promulgated the Cross-State Air Pollution Rule (CSAPR), to replace CAIR in 2011 (76 FR 48208, August 8, 2011). Connecticut was subject to ozone season NOx controls under the CAIR program, however, the State was not subject to any of the requirements of CSAPR and thus the option to rely on CSAPR as an alternative to BART was not available to the State.

On December 30, 2011, the D.C. Circuit Court issued an order addressing the status of CSAPR and CAIR in response to motions filed by numerous parties seeking a stay of CSAPR pending judicial review. In that order, the D.C. Circuit stayed CSAPR pending the court's resolutions of the petitions for review of that rule in *EME Homer Generation, L.P. v. EPA* (No. 11-1302 and consolidated cases). The court also indicated that EPA is expected to continue to administer CAIR in the interim until the court rules on the petitions for review of CSAPR.

On December 15, 2011, Connecticut held a public hearing on proposed Regulations of Connecticut State Agencies (RCSA) section 22a-174-22d. This regulation, once adopted, will permanently maintain the ozone season NOx emission reductions that were previously required under the CAIR program. Connecticut has requested the parallel processing of RCSA section 22a-174-22d with EPA's action on the Connecticut Regional Haze SIP revision. Under this procedure, EPA prepared this action before the State's final adoption of this regulation. Connecticut has indicated that they plan to have a final adopted regulation by June 2012, prior to our final action on its Regional Haze SIP. After Connecticut submits its final adopted regulation, EPA will review the regulation to determine whether it differs from the proposed regulation. If the final regulation does differ from the proposed regulation, EPA will determine whether these differences are significant. Ordinarily, changes that are limited to issues such as allocation methodology would not be deemed significant for SIP approval purposes, assuming the methodology does not lead to allocations in excess of the total state budget. Based on EPA's determination regarding the significance of any changes in the final regulation, EPA would then decide whether it is appropriate to prepare a final rule and describe the changes in the final rulemaking action, re-propose action based on the Connecticut's final adopted regulation, or other such action as may be appropriate.

RCSA 22a-174-22d is a replacement for RCSA 22a-174-22c, "The Clean Air Interstate Rule (CAIR) Nitrogen Oxides (NOx) Ozone Season Trading Program," which is federally approved by EPA and currently being implemented in Connecticut. Proposed regulation RCSA 22a-174-22d is one component of Connecticut's NOx Alternative BART Program. This alternative program is discussed in detail in Section III.B.5.

II. What Are the Requirements for Regional Haze SIPs?

A. The CAA and the Regional Haze Rule (RHR)

Regional haze SIPs must assure reasonable progress towards the national goal of achieving natural visibility conditions in Class I areas. Section 169A of the CAA and EPA's implementing regulations require States to establish long-term strategies for making reasonable progress toward meeting this goal. Implementation plans must also give specific attention to certain stationary sources that were in existence on August 7, 1977, but were not in operation before August 7, 1962, and require these sources, where appropriate, to install Best Available Retrofit Technology (BART) controls for the purpose of eliminating or reducing visibility impairment. The specific regional haze SIP requirements are discussed in further detail below.

B. Determination of Baseline, Natural, and Current Visibility Conditions

The RHR establishes the deciview (dv) as the principal metric for measuring visibility. This visibility metric expresses uniform changes in haziness in terms of common increments across the entire range of visibility conditions, from pristine to extremely hazy conditions. Visibility is determined by measuring the visual range (or deciview), which is the greatest distance, in kilometers or miles, at which a dark object can be viewed against the sky. The deciview is a useful measure for tracking progress in improving visibility, because each deciview change is an equal incremental change in visibility perceived by the human eye. Most people can detect a change in visibility at one deciview.[2]

[2] The preamble to the RHR provides additional details about the deciview. See 64 FR 35714, 35725 (July 1, 1999).

The deciview is used in expressing Reasonable Progress Goals (RPGs) (which are interim visibility goals towards meeting the national visibility goal), defining baseline, current, and natural conditions, and tracking changes in visibility. The regional haze SIPs must contain measures that ensure "reasonable progress" toward the national goal of preventing and remedying visibility impairment in Class I areas caused by manmade air pollution by reducing anthropogenic emissions that cause regional haze. The national goal is a return to natural conditions, i.e., manmade sources of air pollution would no longer impair visibility in Class I areas.

To track changes in visibility over time at each of the 156 Class I areas covered by the visibility program and as part of the process for determining reasonable progress, States must calculate the degree of existing visibility impairment at each Class I area within the State at the time of each regional haze SIP submittal and periodically review progress every five years midway through each 10-year planning period. To do this, the RHR requires States to determine the degree of impairment (in deciviews) for the average of the 20 percent least impaired ("best") and 20 percent most impaired ("worst") visibility days over a specified time period at each of their Class I areas. In addition, States must also develop an estimate of natural visibility conditions for the purposes of comparing progress toward the national goal. Natural visibility is determined by estimating the natural concentrations of pollutants that cause visibility impairment and then calculating total light extinction based on those estimates. EPA has provided guidance to States regarding how to calculate baseline, natural and current visibility conditions in documents entitled, *Guidance for Estimating Natural Visibility Conditions Under the Regional Haze Rule*, September 2003, (EPA-454/B-03-005) available at

www.epa.gov/ttncaaa1/t1/memoranda/rh_envcurhr_gd.pdf (hereinafter referred to as "EPA's 2003 Natural Visibility Guidance"), and *Guidance for Tracking Progress Under the Regional Haze Rule*, September 2003 (EPA-454/B-03-004), available at www.epa.gov/ttncaaa1/t1/memoranda/rh_tpurhr_gd.pdf (hereinafter referred to as "EPA's 2003 Tracking Progress Guidance").

For the first regional haze SIPs that were due by December 17, 2007, "baseline visibility conditions" were the starting points for assessing "current" visibility impairment. Baseline visibility conditions represent the degree of impairment for the 20 percent least impaired days and 20 percent most impaired days at the time the regional haze program was established. Using monitoring data from 2000 through 2004, States are required to calculate the average degree of visibility impairment for each Class I area within the State, based on the average of annual values over the five year period. The comparison of initial baseline visibility conditions to natural visibility conditions indicates the amount of improvement necessary to attain natural visibility, while the future comparison of baseline conditions to the then current conditions will indicate the amount of progress made. In general, the 2000-2004 baseline period is considered the time from which improvement in visibility is measured.

C. Determination of Reasonable Progress Goals (RPGs)

The vehicle for ensuring continuing progress towards achieving the natural visibility goal is the submission of a series of regional haze SIPs from the States that establish RPGs for Class I areas for each (approximately) 10-year planning period. The RHR does not mandate specific milestones or rates of progress, but instead calls for States to establish goals that provide for

"reasonable progress" toward achieving natural (i.e., "background") visibility conditions for their Class I areas. In setting RPGs, States must provide for an improvement in visibility for the most impaired days over the (approximately) 10-year period of the SIP, and ensure no degradation in visibility for the least impaired days over the same period.

States have significant discretion in establishing RPGs, but are required to consider the following factors established in the CAA and in EPA's RHR: (1) the costs of compliance; (2) the time necessary for compliance; (3) the energy and non-air quality environmental impacts of compliance; and (4) the remaining useful life of any potentially affected sources. States must demonstrate in their SIPs how these factors are considered when selecting the RPGs for the best and worst days for each applicable Class I area. See 40 CFR 51.308(d)(1)(i)(A). States have considerable flexibility in how they take these factors into consideration, as noted in EPA's July 1, 2007 memorandum from William L. Wehrum, Acting Administrator for Air and Radiation, to EPA Regional Administrators, EPA Regions 1-10, entitled *Guidance for Setting Reasonable Progress Goals under the Regional Haze Program* (p. 4-2, 5-1)(EPA's Reasonable Progress Guidance). In setting the RPGs, States must also consider the rate of progress needed to reach natural visibility conditions by 2064 (referred to as the "uniform rate of progress" or the "glide path") and the emission reduction measures needed to achieve that rate of progress over the 10-year period of the SIP. The year 2064 represents a rate of progress which States are to use for analytical comparison to the amount of progress they expect to achieve. In setting RPGs, each State with one or more Class I areas ("Class I State") must also consult with potentially "contributing States," i.e., other nearby States with emission sources that may be contributing to visibility impairment at the Class I State's areas. See 40 CFR 51.308(d)(1)(iv).

D. Best Available Retrofit Technology (BART)

Section 169A of the CAA directs States to evaluate the use of retrofit controls at certain larger, often uncontrolled, older stationary sources in order to address visibility impacts from these sources. Specifically, the CAA requires States to revise their SIPs to contain such measures as may be necessary to make reasonable progress towards the natural visibility goal, including a requirement that certain categories of existing stationary sources built between 1962 and 1977 procure, install, and operate the "Best Available Retrofit Technology" as determined by the State. (CAA 169A(b)(2)a)).[3] States are directed to conduct BART determinations for such sources that may be anticipated to cause or contribute to any visibility impairment in a Class I area. Rather than requiring source-specific BART controls, States also have the flexibility to adopt an emissions trading program or other alternative program as long as the alternative provides greater reasonable progress towards improving visibility than BART.

On July 6, 2005, EPA published the *Guidelines for BART Determinations Under the Regional Haze Rule* at Appendix Y to 40 CFR part 51 (hereinafter referred to as the "BART Guidelines") to assist States in determining which of their sources should be subject to the BART requirements and in determining appropriate emission limits for each applicable source. In making a BART applicability determination for a fossil fuel-fired electric generating plant with a total generating capacity in excess of 750 megawatts (MW), a State must use the approach set forth in the BART Guidelines. A State is encouraged, but not required, to follow the BART Guidelines in making BART determinations for other types of sources.

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[3] The set of "major stationary sources" potentially subject to BART are listed in CAA section 169A(g)(7).

States must address all visibility impairing pollutants emitted by a source in the BART determination process. The most significant visibility impairing pollutants are sulfur dioxide (SO_2), nitrogen oxides (NO_x), and particulate matter (PM). EPA has stated that States should use their best judgment in determining whether volatile organic compounds (VOCs), or ammonia (NH_3) and ammonia compounds impair visibility in Class I areas.

The RPOs provided air quality modeling to the States to help them in determining whether potential BART sources can be reasonably expected to cause or contribute to visibility impairment in a Class I area. Under the BART Guidelines, States may select an exemption threshold value for their BART modeling, below which a BART eligible source would not be expected to cause or contribute to visibility impairment in any Class I area. The State must document this exemption threshold value in the SIP and must state the basis for its selection of that value. Any source with emissions that model above the threshold value would be subject to a BART determination review. The BART Guidelines acknowledge varying circumstances affecting different Class I areas. States should consider the number of emission sources affecting the Class I areas at issue and the magnitude of the individual sources' impacts. Any exemption threshold set by the State should not be higher than 0.5 deciviews. See 70 FR 39161 (July 6, 2005).

In their SIPs, States must identify potential BART sources, described as "BART-eligible sources" in the RHR, and document their BART control determination analyses. The term "BART-eligible source" used in the BART Guidelines means the collection of individual emission units at a facility that together comprises the BART-eligible source. See 70 FR 39161

(July 6, 2005). In making BART determinations, section 169A(g)(2) of the CAA requires that States consider the following factors: (1) the costs of compliance; (2) the energy and non-air quality environmental impacts of compliance; (3) any existing pollution control technology in use at the source; (4) the remaining useful life of the source; and (5) the degree of improvement in visibility which may reasonably be anticipated to result from the use of such technology. States are free to determine the weight and significance to be assigned to each factor. See 70 FR 39170 (July 6, 2005).

A regional haze SIP must include source-specific BART emission limits and compliance schedules for each source subject to BART. Once a State has made its BART determination, the BART controls must be installed and in operation as expeditiously as practicable, but no later than five years after the date of EPA approval of the regional haze SIP, as required by CAA (section 169(g)(4)) and the RHR (40 CFR 51.308(e)(1)(iv)). In addition to what is required by the RHR, general SIP requirements mandate that the SIP must also include all regulatory requirements related to monitoring, recordkeeping, and reporting for the BART controls on the source. States have the flexibility to choose the type of control measures they will use to meet the requirements of BART.

E. Long-Term Strategy (LTS)

In 40 CFR 51.308(d)(3) of the RHR, States are required to include a LTS in their SIPs. The LTS is the compilation of all control measures a State will use to meet any applicable RPGs. The LTS must include "enforceable emissions limitations, compliance schedules, and other

measures as necessary to achieve the reasonable progress goals" for all Class I areas within, or affected by emissions from, the State. See 40 CFR 51.308(d)(3).

When a State's emissions are reasonably anticipated to cause or contribute to visibility impairment in a Class I area located in another State, the RHR requires the impacted State to coordinate with the contributing States in order to develop coordinated emissions management strategies. See 40 CFR 51.308(d)(3)(i). In such cases, the contributing State must demonstrate that it has included in its SIP all measures necessary to obtain its share of the emission reductions needed to meet the RPGs for the Class I area. The RPOs have provided forums for significant interstate consultation, but additional consultations between States may be required to sufficiently address interstate visibility issues. This is especially true where two States belong to different RPOs.

States should consider all types of anthropogenic sources of visibility impairment in developing their LTS, including stationary, minor, mobile, and area sources. At a minimum, States must describe how each of the seven factors listed below is taken into account in developing their LTS: (1) emission reductions due to ongoing air pollution control programs, including measures to address RAVI; (2) measures to mitigate the impacts of construction activities; (3) emissions limitations and schedules for compliance to achieve the RPG; (4) source retirement and replacement schedules; (5) smoke management techniques for agricultural and forestry management purposes including plans as currently exist within the State for these purposes; (6) enforceability of emissions limitations and control measures; (7) the anticipated net

effect on visibility due to projected changes in point, area, and mobile source emissions over the period addressed by the LTS. See 40 CFR 51.308(d)(3)(v).

F. Coordinating Regional Haze and Reasonably Attributable Visibility Impairment (RAVI) LTS

As part of the RHR, EPA revised 40 CFR 51.306(c) regarding the LTS for RAVI to require that the RAVI plan must provide for a periodic review and SIP revision not less frequently than every three years until the date of submission of the State's first plan addressing regional haze visibility impairment, which was due December 17, 2007, in accordance with 40 CFR 51.308(b) and (c). On or before this date, the State must revise its plan to provide for review and revision of a coordinated LTS for addressing reasonably attributable and regional haze visibility impairment, and the State must submit the first such coordinated LTS with its first regional haze SIP. Future coordinated LTS's, and periodic progress reports evaluating progress towards RPGs, must be submitted consistent with the schedule for SIP submission and periodic progress reports set forth in 40 CFR 51.308(f) and 51.308(g), respectively. The periodic reviews of a State's LTS must report on both regional haze and RAVI impairment and must be submitted to EPA as a SIP revision.

G. Monitoring Strategy and Other Implementation Plan Requirements

In 40 CFR 51.308(d)(4), the RHR requires a monitoring strategy for measuring, characterizing, and reporting of regional haze visibility impairment that is representative of all mandatory Class I Federal areas within the State. The strategy must be coordinated with the monitoring strategy required in 40 CFR 51.305 for RAVI. Compliance with this requirement may be met through

participation in the Interagency Monitoring of Protected Visual Environments (IMPROVE) network. The monitoring strategy is due with the first regional haze SIP, and it must be reviewed every five years. The monitoring strategy must also provide for additional monitoring sites if the IMPROVE network is not sufficient to determine whether RPGs will be met.

The SIP must also provide for the following:

- Procedures for using monitoring data and other information in a State with mandatory Class I areas to determine the contribution of emissions from within the State to regional haze visibility impairment at Class I areas both within and outside the State;
- Procedures for using monitoring data and other information in a State with no mandatory Class I areas to determine the contribution of emissions from within the State to regional haze visibility impairment at Class I areas in other States;
- Reporting of all visibility monitoring data to the Administrator at least annually for each Class I area in the State, and where possible, in electronic format;
- Developing 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 a baseline year, emissions for the most recent year for which data are available, and estimates of future projected emissions. A State must also make a commitment to update the inventory periodically; and
- Other elements, including reporting, recordkeeping, and other measures necessary to assess and report on visibility.

Pursuant to 40 CFR 51.308(f) of the RHR, state control strategies must cover an initial implementation period extending to the year 2018, with a comprehensive reassessment and revision of those strategies, as appropriate, every 10 years thereafter. Periodic SIP revisions must meet the core requirements of 40 CFR 51.308(d) with the exception of BART. The BART provisions of 40 CFR 51.308(e), as noted above, apply only to the first implementation period. Periodic SIP revisions will assure that the statutory requirement of reasonable progress will continue to be met.

H. Consultation with States and Federal Land Managers (FLMs)

The RHR requires that States consult with FLMs before adopting and submitting their SIPs. See 40 CFR 51.308(i). States must provide FLMs an opportunity for consultation, in person and at least 60 days prior to holding any public hearing on the SIP. This consultation must include the opportunity for the FLMs to discuss their assessment of impairment of visibility in any Class I area and to offer recommendations on the development of the RPGs and on the development and implementation of strategies to address visibility impairment. Further, a State must include in its SIP a description of how it addressed any comments provided by the FLMs. Finally, a SIP 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.

III. What is EPA's Analysis of Connecticut's Regional Haze SIP Submittal?

On November 18, 2009, February, 24, 2012, and March 12, 2012, CT DEEP's Bureau of Air Management submitted revisions to the Connecticut SIP to address regional haze as required by 40 CFR 51.308. EPA has reviewed Connecticut's submittal and is proposing to find that it is consistent with the requirements of 40 CFR 51.308 as outlined in Section II. A detailed analysis follows.

Connecticut is responsible for developing a regional haze SIP which addresses Connecticut's impact on any nearby Class I areas. As Connecticut has no Class I areas within its borders, Connecticut is not required to address the following Regional Haze SIP elements: a) calculation of baseline and natural visibility conditions; b) establishment of reasonable progress goals; c) monitoring requirements; and d) RAVI requirements.

A. Connecticut's Impact on MANE-VU Class I Areas

Connecticut is a member of the MANE-VU RPO. The MANE-VU RPO contains seven Class I areas in four States: Moosehorn Wilderness Area, Acadia National Park, and Roosevelt/Campobello International Park in Maine; Presidential Range/Dry River Wilderness Area and Great Gulf Wilderness Area in New Hampshire; Brigantine Wilderness Area in New Jersey; and Lye Brook Wilderness Area in Vermont.

Through source apportionment modeling, MANE-VU assisted States in determining their contribution to the visibility impairment of each Class I area in the MANE-VU region. Connecticut and the other MANE-VU States adopted a weight-of-evidence approach which relied on several independent methods for assessing the contribution of different sources and

geographic source regions to regional haze in the northeastern and mid-Atlantic portions of the United States. Details about each technique can be found in the Northeast States for Coordinated Air Use Management (NESCAUM) document *Contributions to Regional Haze in the Northeast and Mid-Atlantic United States*, August 2006 (hereinafter referred to as the "Contribution Report").[4]

The source apportionment modeling demonstrated that the contribution of Connecticut emissions to total sulfate (the main contributor to visibility impairment in the Northeast, see Section III.C.3) was consistently determined to be no more than 0.76% of the total sulfate at any Class I area. This finding was consistently predicted by different assessment techniques that are based on the application of disparate chemical, meteorological and physical principles. The greatest modeled contribution from Connecticut for each of the MANE-VU Class I areas was 0.76% sulfate at Acadia National Park, 0.56% sulfate at Moosehorn Wilderness Area and Roosevelt Campobello International Park, 0.48% sulfate at Great Gulf Wilderness Area and Presidential Range – Dry River Wilderness Area, 0.55% sulfate at Lye Brook Wilderness Area, and 0.53% at Brigantine Wilderness Area. The impact of sulfate on visibility is discussed in greater detail below.

The MANE-VU Class I States determined that any State contributing at least 2.0% of the total sulfate observed on the 20 percent worst visibility days in 2002 were contributors to visibility impairment at the Class I area. Connecticut, Rhode Island, Vermont, and the District of

[4] The August 2006 NESCAUM document *Contributions to Regional Haze in the Northeast and Mid-Atlantic United States* has been provided as part of the docket to this proposed rulemaking.

Columbia were determined to contribute less than 2.0% of sulfate at any of the Class I areas in the Northeast.

EPA is proposing to find that CT DEEP has adequately demonstrated that emissions from Connecticut sources do not cause or contribute to visibility impairment in nearby Class I Areas.

B. Best Available Retrofit Technology (BART)

According to 51.308(e), "The State must submit an implementation plan containing emission limitations representing BART and schedules for compliance with BART for each BART-eligible source that may reasonably be anticipated to cause or contribute to any impairment of visibility in any Class I Federal area, unless the State demonstrates that an emissions trading program or other alternative will achieve greater reasonable progress toward natural visibility conditions." On October 13, 2006, EPA's "Regional Haze Regulations to Provisions Governing Alternative to Source-Specific Best Available Retrofit Technology (BART) Determinations; Final Rule" (hereinafter known as the "Alternative to BART Rule") was published in the Federal Register. See 71 FR 60612. Connecticut chose to demonstrate that programs already developed by the State provide greater progress in visibility improvement than source-by-source BART determinations. A demonstration that the alternative program will achieve greater reasonable progress than would have resulted from the installation and operation of BART at all sources subject to BART in the state must be based on the following:

(1) A list of all BART-eligible sources within the State.

(2) A list of all BART-eligible sources and all BART source categories covered by the alternative program.

(3) Determination of the BART benchmark. If the alternative program has been designed to meet a requirement other than BART, as in the case of Connecticut, the State may determine the best system of continuous emission control technology and associated emission reductions for similar types of sources within a source category based on both source specific and category-wide information, as appropriate.

(4) An analysis of the projected emission reductions achieved through the alternative program.

(5) A determination based on a clear weight of evidence that the alternative program achieves greater reasonable progress than would be achieved through the installation and operation of BART at the covered sources.

1. Identification of All BART Eligible Sources

Determining BART-eligible sources is the first step in the BART process. BART-eligible sources in Connecticut were identified in accordance with the methodology in Appendix Y of the Regional Haze Rule, Guidelines for BART Determinations Under the Regional Haze Rule, Part II, How to Identify BART-Eligible Sources. See 70 FR 39158. This guidance consists of the following criteria:

- the unit falls into one of the listed source categories;
- the unit was constructed or reconstructed between 1962 and 1977; and
- the unit has the potential to emit over 250 tons per year of sulfur dioxide, nitrogen oxides, particulate matter, volatile organic compounds, or ammonia.

The BART Guidelines require States to address SO_2, NO_x, and particulate matter. States are allowed to use their best judgment in deciding whether VOC or ammonia emissions from a

source are likely to have an impact on visibility in the area. The State of Connecticut addressed SO_2, NO_x, and used particulate matter less than 10 microns in diameter (PM_{10}) as an indicator for particulate matter to identify BART eligible units, as the BART Guidelines require. Consistent with the BART Guidelines, the State of Connecticut did not evaluate emissions of VOCs and ammonia in BART determinations due to the lack of impact on visibility in the area due to anthropogenic sources. The majority of VOC emissions in Connecticut are biogenic in nature. Therefore, the ability to further reduce total ambient VOC concentrations at Class I areas is limited. Point, area, and mobile sources of VOCs in Connecticut are already comprehensively controlled as part of an ozone attainment and maintenance strategy. With respect to ammonia, the overall ammonia inventory is very uncertain, but the amount of anthropogenic emissions at sources that were BART-eligible is relatively small, and no additional sources were identified that had greater than 250 tons per year ammonia and required a BART analysis.

The identification of BART sources in Connecticut was undertaken as part of a multi-State analysis conducted by the NESCAUM. NESCAUM worked with CT DEEP licensing engineers to review all sources and determine their BART eligibility. CT DEEP identified ten sources as BART-eligible. Pfizer Inc. Boilers No. 5, No. 8, and the Organic Synthesis Plant 2 (OSP2) were originally included in the list of BART-eligible units. On March 10, 2006, the CT DEEP issued Consent Order No. 8262 to Pfizer Inc. which caps the actual aggregated emissions from the boilers and OSP2 to less than 250 tons per year for each of the air pollutants NOx, SO_2, and PM_{10}. Therefore, Pfizer's facility is no longer considered BART-eligible. The final BART-eligible sources are listed below.

Table 1: BART-Eligible Sources in Connecticut

Source, Unit and Location	Fuel	BART Source Category	2002 Emissions (ton/yr)	Highest 2002 Visibility Impact (dv)[5]
Middletown Power LLC, Unit 3*, Middletown, CT	Residual Oil, Natural Gas	240 MW EGU	SO_2: 269 NOx: 468	0.11
Middletown Power LLC, Unit 4*, Middletown, CT	Residual Oil, Natural Gas	400 MW EGU	SO_2: 308 NOx: 145	0.06
Montville Power LLC, Unit 6, Montville, CT	Residual Oil Distillate Oil	410 MW EGU	SO_2: 794 NOx: 312	0.16
Norwalk Power LLC, Unit 2, Norwalk, CT	Residual Oil	172 MW EGU	SO_2: 322 NOx: 82	0.08
PSEG Power Connecticut LLC, Bridgeport Harbor Station, Unit 3, Bridgeport, CT	Coal Residual Oil	410 MW EGU	SO_2: 4,024 NOx: 1,689	0.84
PSEG Power Connecticut LLC, New Haven Harbor Station, Unit 1, New Haven, CT	Residual Oil Distillate Oil Natural Gas	465 MW EGU	SO_2: 4,010 NOx: 1,143	0.74
Cascades Boxboard Group – CT LLC, PFI Boiler, Versailles, CT	Residual Oil Natural Gas	275 MMbtu/hr Industrial Boiler	SO_2: 0.5 NOx: 215	0.03

*Located at a facility greater than 750 MW

2. Identification of all BART Source Categories Covered By the Alternative Program.

In crafting Connecticut's alternative to BART demonstration, the State relied on SO_2 emission reductions required by Regulations of Connecticut State Agencies (RCSA section 22a-174-19a (Control of Sulfur Dioxide Emissions from Power Plant and Other Large Stationary Sources of Air Pollution). The Connecticut programs to reduce NOx emissions are RCSA Section 22a-174-

[5] Visibility Impact is measured in units of deciviews (dv). A deciview measures the incremental visibility change discernable by the human eye. The deciview values included in Table 1 are from Attachment X of Connecticut's November 18, 2009 SIP submittal.

22 (Control of Nitrogen Oxide Emissions), and proposed RCSA Section 22a-174-22d (Post-2011 Connecticut Ozone Season NOx Budget Program).[6] A complete list of sources addressed can be found in Table 9.4 of Connecticut's November 18, 2009 SIP submittal. All of the identified BART-eligible EGUs are included in Connecticut's alternative to BART demonstration.

3. Determination of the BART Benchmark

According to the Alternative to BART Rule, in developing the BART benchmark, with one exception, States must follow the approach for making BART determinations under section 51.308(e)(1). The one exception to this general approach is where the alternative program has been designed to meet requirements other than BART; in this case, States are not required to make BART determinations under 51.308(e)(1) and may use a simplifying assumption in establishing a BART benchmark based on an analysis of what BART is likely to be for similar types of sources within a source category. Under either approach to establishing a BART benchmark, we believe that the presumptions for EGUs in the BART Guidelines should be used for comparison to a trading program or other alternative program, unless the State determines that such presumptions are not appropriate for a particular EGU. See 71 FR 60619. Even though Connecticut had the option of using the less stringent EPA presumptive limits, the State opted to use the MANE-VU recommended BART emission limits for non-CAIR EGUs and industrial boilers in setting the BART benchmark. These limits are listed in Table 2.

[6] CT RCSA Section 22a-175-22d maintains NOx emission reductions required by the Clean Air Interstate Rule. Connecticut is subject to ozone-season CAIR limits, however, the State was not included in the final Cross State Air Pollution Rule. See 76 FR 48208 (Aug. 8, 2011). Therefore Connecticut has proposed an intra-state trading program for NOx to make permanent these emission reductions.

Table 2: MANE-VU Recommended BART Limits

Category	SO_2 Limits	NOx Limits
Non-CAIR EGUs	Coal- 95% control or 0.15 lb/MMbtu Oil – 95% control or 0.33 lb/MMBtu (0.3% fuel sulfur limit	In NOx SIP call area, extend use of controls to year round 0.1 – 0.25 lb/MMBtu depending on coal and boiler type
Industrial Boilers	90% control, or 0.5% fuel sulfur limit (0.55 lb/MMBtu)	0.1 – 0.4 lb/MMBtu, depending on boiler and fuel type

4. Connecticut's SO_2 Alternative BART Program

RCSA section 22a-174-19a (Control of Sulfur Dioxide Emissions from Power Plant and Other Large Stationary Sources of Air Pollution) was submitted to EPA as part of Connecticut's November 18, 2008 $PM_{2.5}$ attainment demonstration SIP revision. RCSA Section 22a-174-19a became effective December 28, 2000. It includes a two-tiered timeframe for reducing SO_2 emissions from large EGUs and industrial sources (approximately 59 sources). Starting January 1, 2002, all sources subject to Connecticut's Post 2002-NOx Budget Program were required to:

- Combust liquid fuel, gaseous fuel or a combination of each, provided that each fuel possesses a fuel sulfur limit of equal to or less than 0.5% sulfur, by weight;
- Meet an average emission rate of equal to or less than 0.55 pounds of SO_2 per MMBtu for each calendar quarter for an affected unit; or
- Meet an average emission rate of equal to or less than 0.5 pounds of SO_2 per MMBtu calculated for each calendar quarter, if such owner or operator averages the emissions from two or more affected units at the premises.

Starting on January 1, 2003, all sources in Connecticut that are Acid Rain Sources under Title IV of the Clean Air Act and are subject to Connecticut's Post-2002 NOx Budget Program were required to:

- Combust liquid fuel, gaseous fuel or a combination of each, provided that each fuel possesses a fuel sulfur limit of equal to or less than 0.3% sulfur, by weight;
- Meet an average emission rate of equal to or less than 0.33 pounds of SO_2 per MMBtu for each calendar quarter for an affected unit at a premises; or
- Meet an average emission rate of equal to or less than 0.3 pounds of SO_2 per MMBtu calculated from two or more affected units at a premises.

Prior to January 1, 2005, CT DEEP allowed sources subject to the January 1, 2003 emission rates to meet such emission rates by using SO_2 discrete emission reduction credits certified by CT DEEP or EPA's SO_2 Acid Rain Program allowances; also known as emissions credit trading. Connecticut General Statues (CGS) section 22a-198 suspended SO_2 emission credit trading starting January 1, 2005.

The first phase of Connecticut's SO_2 controls plan commenced in January 1, 2002, therefore, CT DEEP selected 2001 as the base year for the alternative to BART demonstration. Likewise, since the second phase of Connecticut's SO_2 plan was fully implemented in 2005, Connecticut chose 2006 for comparison.

Table 3: Annual Potential (allowable at 8760 Hours) Emissions (tons per year)

BART-eligible Unit	2001*	2002*	2006*	MANE-VU BART workgroup presumptive BART 2012	EPA presumptive BART 2012
Middletown Unit 3	5,709**	5,709	3,426	3,426	11,419
Middletown Unit 4	11,284**	11,284	6,770	6,770	22,568
Montville Unit 6	22,442	11,221	6,733	6,733	22,442
Norwalk Unit 2	8,557	4,278	2,567	2,567	8,557
PSEG Bridgeport Harbor Unit 3	18,212	9,877	5,926	2,694	2,694***
PSEG New Haven Harbor Unit 1	20,508	10,282	6,169	6,169	20,508
Cascades Boxboard Group PFI Boiler	1,325	662	662	662	1,325
Total	88,037	53,313	32,253	29,021	89,513

*Based on the lower of RCSA section 22a-174-19a regulatory limits or federally enforceable permit conditions.
**Fuel sulfur limited to 0.5% in Consent Order no. 7024.
***While this level of control is not required by EPA Guidelines, it is recommended that such level of control be considered.

Presumptive BART potential emission levels for 2012 (tons per year) in Table 3 were calculated by multiplying the MANE-VU BART workgroup and EPA recommended BART emission rates in lb/MMBtu by the design capacity of the unit in MMBtu/hr by 8760 hrs/year as follows:

- For Bridgeport Harbor 3, the sole coal-burning unit, 0.15 lb/MMBtu, the MANE-VU BART workgroup's and EPA's recommended SO_2 emission rate for coal-burning units, was used.
- For the five oil-burning EGUs, the MANE-VU BART workgroup's and EPA's recommended BART emission rates of 0.33 lb/MMBtu and 1.1 lb/MMBtu respectively, were used in the calculations.
- MANE-VU BART workgroup post-BART SO_2 potential emissions for Cascades Boxboard Group were assumed not to change after 2002 because the source became

subject to RCSA section 22a-174-19a in 2002 (0.55 lb/MMBtu) and the allowable SO_2 limit did not change after that date so the 2006 potential emissions remain the same.

Table 4 lists the actual 2001, 2002, and 2006 SO_2 emissions from the Connecticut BART-eligible units. It should be noted that, for the most part, the actual emissions are well below the potential emission limits.

Table 4: Actual Annual SO_2 Emissions (tons per year)

BART-eligible Unit	2001	2002	2006
Middletown Unit 3	1,830	269	124
Middletown Unit 4	1,015	308	123
Montville Unit 6	2,182	794	217
Norwalk Unit 2	1,701	322	374
PSEG Bridgeport Harbor Unit 3	10,429	4,024	2,808
PSEG New Haven Harbor Unit 1	9,543	4,010	689
Cascades Boxboard Group PFI Boiler	251	0.5	215
Total	26,951	9,727	4,550

As detailed in Attachment X of Connecticut's SIP submittal, potential emissions from all sources subject to RCSA 22a-174-19a was 89,537 tons in 2002 and 60,304 tons in 2006. As shown in Table 5, by comparing SO_2 potential emission reductions since 2002 from all Post-2002 NO_x Budget Program sources subject to RCSA section 22a-174-19a (89,537 tons minus 60,304 tons equals 29,233 tons) with SO_2 potential post-BART emission reductions from BART-eligible sources since 2002 (53,313 tons minus 29,021 tons equals 24,292), it is apparent that Connecticut's existing SO_2 regulatory requirements achieve approximately 4,841 tons of greater reductions than estimated reductions from BART alone.

Table 5: Comparison of SO_2 Potential Emissions and Reductions since 2002 from all Post-2002 NOx Budget Program Sources vs. BART-eligible Sources Alone (tons per year)

Option	2002	2006	Reduction in potential emissions
SO_2 potential emissions from all Post-2002 NOx Budget Program sources	89,537	60,304	29,233
SO_2 potential emissions from BART-eligible sources alone	53,313	29,021	24,292
Additional reductions beyond BART-eligible sources alone			4,841

In addition, Table 6 shows the reductions in actual SO_2 emissions from all Post-2002 NO_x Budget Program sources and all BART-eligible sources since 2001. Note the significant reduction in actual SO_2 emissions starting in 2002 (effective year of Tier 1 of RCSA section 22a-174-19a) and continuing in 2006 (Tier 2 of RCSA section 22a-174-19a was effective in 2003).

Furthermore, Attachment X of Connecticut's November 18, 2009 Regional Haze SIP submittal contains maps of the facility reductions in actual SO_2 emissions since 2001 from all Post-2002 NO_x Budget Program sources as well as all BART-eligible sources (both Connecticut-specific and as related to Class I areas). These graphics demonstrate that the emission reductions resulting from RCSA section 22a-174-19a are geographically comparable to the locations of the BART-eligible sources.

Table 6: Comparison of SO_2 Actual Emission Reductions since 2001 from all Post-2002 NOx Budget Program Sources vs. BART-Eligible Sources Alone (tons per year)

Option	2001	2002	2006	Reduction in actual emissions since 2001
SO_2 actual emissions from all Post-2002 NO_x Budget Program sources	35,625	13,056	7,146	28,479
SO_2 actual emissions from BART-eligible sources alone	26,951	9,727	4,549	22,402
Additional reductions beyond BART-eligible sources alone				6,077

5. Connecticut's NOx Alternative BART Program

Most of the BART-eligible units in Connecticut installed NO_x reduction technology during the early to mid 1990's in response to Connecticut's ozone reduction strategies, whereby lower NO_x emission limits were promulgated. As described below, CT DEEP has concluded that the NO_x emission limits contained in the existing regulations are at least as stringent as BART. The CT DEEP alternative NOx program is comprised of ozone season emission limits and non-ozone season emission limits.

Pursuant to the ozone reasonably available control technology (RACT) provisions of the 1990 Clean Air Act Amendments, in 1995, CT DEEP adopted NO_x control regulations (RCSA section 22a-174-22) achieving substantial reductions in 24-hour NO_x emission rates from a variety of sources, including the BART-eligible units. The maximum allowable 24-hour NO_x emission rate for cyclone furnaces (including Middletown Unit 3) was reduced by 52%, the maximum allowable 24-hour NO_x emission rate for existing coal-fired boilers (Bridgeport Unit 3) was reduced by 58%, and the maximum allowable 24-hour NO_x emission rate for no. 6 oil-fired boilers (including Middletown Unit 4, Montville Unit 6, Norwalk Unit 2, New Haven Harbor Unit 1 and Cascades Boxboard's PFI boiler) was reduced by 17% when compared to previously adopted NO_x limits. This regulation was approved into the Connecticut SIP on October 6, 1997. See 62 FR 52016.

Since 1999, CT DEEP has adopted several NO_x budget trading programs which progressively reduced allowances allocated to Connecticut's NO_x Budget Program sources (i.e., EGUs 15 MW

and greater and certain large industrial sources) during the summer ozone season. RCSA section 22a-174-22a limited the summer NO_x emissions budget to 5,866 tons beginning in 1999 and RCSA section 22a-174-22b reduced the summer NO_x budget further to 4,466 tons beginning in 2003. All of Connecticut's BART-eligible units are currently subject to the Post-2002 NO_x Budget Program and are also included in the CAIR NO_x Ozone Season Trading Program starting in 2009 pursuant to RCSA section 22a-174-22c. The CAIR NO_x Ozone Season Trading Program includes a NO_x budget for Connecticut sources of 2,691 tons that is not to be exceeded during the ozone season (May 1st through September 30th each year). Implementation of the CAIR Program will result in a 76% reduction from the estimated 11,203 tons of ozone season NO_x emissions from NO_x Budget Program sources in 1990. Each of these sections (i.e., RCSA section 22a-174-22a, RCSA section 22a-174-22b, and RCSA section 22a-174-22c) were previously approved into the Connecticut SIP.[7]

On December 23, 2008, CAIR was remanded without vacatur.[8] On July 6, 2011, EPA promulgated the Cross State Air Pollution Rule (CSAPR) as a replacement to the remanded CAIR Rule. See 76 FR 48208 (Aug. 8, 2011). Connecticut was not included in the final CSAPR. On December 15, 2011, CT DEEP held a public hearing on proposed 22a-174-22d as a replacement to the remanded CAIR ozone season program for Connecticut (i.e., RCSA section 22a-174-22c). On February 24, 2012, CT DEEP submitted a request for parallel processing of this regulation. Under this procedure, EPA prepared this action before the State's final adoption

[7] RCSA section 22a-174-22a was approved by EPA on September 28, 1999. See 64 FR 52233. RCSA section 22a-174-22b was approved by EPA on December 27, 2000. See 65 FR 81743. With the finalization of Connecticut's CAIR rule (RSCA section 22a-174-22c), Connecticut repealed both RCSA section 22a-174-22a (effective September 4, 2007) and 22a-174-22b (effective May 1, 2010). RCSA section 22a-174-22c was approved by EPA on January 24, 2008. See 73 FR 4105.

[8] www.epa.gov/airmarkets/progsregs/cair/docs/CAIRRemandOrder.pdf

of 22a-174-22d. Connecticut has indicated that they plan to have a final adopted regulation by June 2012, prior to our final action on its Regional Haze SIP. EPA will review the finalized version of 22a-174-22d to determine whether it differs from the proposed regulation. If the final regulation does differ from the proposed regulation, EPA will determine whether these differences are significant. Ordinarily, changes that are limited to issues such as allocation methodology would not be deemed significant for SIP approval purposes, assuming the methodology does not lead to allocations in excess of the total state budget. Based on EPA's determination regarding the significance of any changes in the final regulation, EPA would then decide whether it is appropriate to prepare a final rule and describe the changes in the final rulemaking action, re-propose action based on the Connecticut's final adopted regulation, or other such action as may be appropriate.

RCSA section 22a-174-22d limits Connecticut's ozone season NOx budget to 2,691 tons, the same budget as included in the CAIR Ozone Season Trading Program. In addition, RCSA section 22a-174-22d only allows for intra-state trading which will insure that all reductions necessary to meet the ozone season NOx budget will occur in the state.

In addition to the ozone season requirements for NOx Budget Program sources (i.e., EGUs 15 MW and greater and large industrial sources), Connecticut adopted subdivision 22a-174-22(e)(3) on October 30, 2000 which requires that, starting in October 2003, NOx Budget Program sources that are also subject to RCSA section 22a-174-22 meet a non-ozone seasonal NO_x emission rate of 0.15 lb/MMBtu. These revisions to RCSA section 22a-174-22 were submitted to EPA as part

of Connecticut's November 18, 2008 $PM_{2.5}$ attainment demonstration SIP revision.[9] Therefore, all of Connecticut's NO_x Budget Program sources, including all of Connecticut's BART-eligible sources, are subject to year-round NO_x emission restrictions. Pursuant to RCSA section 22a-174-22, CT DEEP allows sources subject to the 24-hour and non-ozone season NO_x emission limits to use NO_x discrete emission reduction credits or NO_x Budget Program allowances to comply with the subject emission limits. Table 7 shows the NOx reductions in potential emissions between 2002 and 2006 from all Post-2002 NOx Budget Program sources as compared with the reduction in NOx potential emissions from BART-eligible sources alone. The "low end" and "high end" numbers referenced in the 2006 column in Table 7 are based on the MANE-VU BART workgroup's recommended emission limit range of 0.1 lb/MMBtu (low end) to 0.25 lb/MMBtu (high end) for Non-CAIR EGUs and 0.1 lb/MMBtu (low end) to 0.4 lb/MMBtu (high end) for industrial boilers, depending on coal and boiler type.

Table 7: Comparison of NOx Potential Emissions and Reductions since 2002 from all Post-2002 NOx Budget Program Sources vs. BART-eligible Sources Alone (tons per year)

Option	2002	2006	Reduction in potential emissions
NOx potential emissions from all Post-2002 NOx Budget Program sources	46,188	34,833	11,355
NOx potential emissions from BART-eligible sources alone	27,554	High End - 24,434 Low End - 9,701	High End - 3,120 Low End -17,853

Connecticut noted that between 1994 and 2006 NOx potential emissions from all Post-2002 NOx Budget Program sources were reduced from 89,812 tons to 34,833 tons (a difference of

[9] On March 12, 2012, CT DEEP submitted a letter to EPA clarifying that the Appendix to the November 18, 2008 Fine Particulate Matter (PM 2.5) Attainment Demonstration should have included the regulatory text of RCSA section 22a-174-22(e)(3). All of the documentation necessary to satisfy the public participation requirements of 40 CFR 51 was included in the Appendix.

54,979 tons), whereas application of BART alone would have resulted in reductions between 19,225 tons (high end) and 33,958 tons (low end).

Connecticut cites three elements of its BART alternative program to support a finding that the clear weight of evidence demonstrates that its NOx BART alternative program achieves better than BART reductions:

- Under RCSA section 22a-174-22 sources that create trading credits must automatically retire 10% of those credits and sources using credits are required to retire 5% more than the need to meet emission obligations.
- Connecticut's budget under CAIR is a conservative allocation of emissions. After the initial budget determination, another source was added to the universe of sources subject to CAIR without increasing the budget. In addition, the CAIR budget was based on an outdated NOx SIP Call budget that did not incorporate changes due to a memorandum of understanding between Connecticut, Rhode Island, and Massachusetts.
- Under its CAIR program, Connecticut changed the methodology for allocating allowances such that it is based on megawatt output instead of heat input. Thus, less efficient EGUs receive substantially fewer allowances than they received under Connecticut's earlier NOx Budget Programs, thereby encouraging further NOx reducing measures such as controls and/or repowering. That same allocation methodology is also included in proposed RCSA section 22a-174-22d.

While CAIR is currently still in place, it is only effective pending review of CSAPR. However, Connecticut has proposed parallel processing of its replacement to CAIR, RCSA section 22a-

174-22d. This regulation as proposed maintains a cap of 2,691 tons per ozone season and allocates emissions credits to EGUs based in part on their megawatt generation.

Furthermore, Attachment X of Connecticut's November 18, 2009 Regional Haze SIP submittal contains maps of the facility reductions in actual NOx emissions since 1994 from all Post-2002 NO_x Budget Program sources as well as all BART-eligible sources (both Connecticut-specific and as related to Class I areas). These graphics demonstrate that the emission reductions resulting from RCSA Section 22a-174-22 including subdivision 22a-174-22(e)(3) and proposed RCSA section 22a-174-22d (the replacement for RCSA section 22a-174-22c) are geographically comparable to the locations of the BART-eligible sources.

6. EPA's Assessment of Connecticut's Alternative to BART Program Demonstration

EPA is proposing to find that Connecticut has adequately demonstrated that the potential and actual SO_2 emission reductions from RCSA section 22a-174-19a provide greater emission reductions than the presumptive BART level. Connecticut has shown via Attachment X of the November 18, 2009 Regional Haze SIP submittal that for both SO_2 and NOx emissions, the geographic area covered by the Post-2002 NOx Budget Program sources is comparable to the geographic area covered by the BART-eligible units, therefore visibility modeling is not required, as noted in the Alternative to BART Rule. See 71 FR 60612. Therefore, EPA is proposing to find that the SO_2 alternative to BART program demonstration meets the requirements of our Alternative to BART Rule.

As part the NOx alternative to BART program demonstration, Connecticut has presented a weight of evidence demonstration. EPA approved of the weight of evidence approach Connecticut has taken in our Alternative to BART Rule. See 71 FR 60621–22 (Oct. 13, 2006). This approach was intended to provide flexibility for States who wished to pursue alternatives to BART but had difficulty directly showing that their alternative program would necessarily result in greater reasonable progress than the application of BART alone. Under the theoretical scenario where Connecticut would require the most stringent of the MANE-VU recommended controls for each and every one of its BART-eligible sources, it may be difficult or time consuming and expensive for Connecticut to show that its alternative program is at least as stringent as BART alone. However, we note that this scenario is not realistic for several reasons. First, unlike many BART-eligible sources, Connecticut's BART-eligible sources have installed a variety of control equipment in order to meet Connecticut's NOx Budget Program. As Connecticut noted, since 1994, Connecticut's NOx programs have resulted in over 55,000 tons per year of reductions from Post-2002 NOx Budget Program sources, well in excess of what application of BART alone would achieve. Moreover, Connecticut has demonstrated that the NOx emissions from the BART-eligible sources have a minimal impact on nearby Class I areas. As summarized in Table 8, the greatest impact that any BART-eligible source has on any Class I area due to NOx emissions in 2002 is PSEG Bridgeport Unit 3 with an impact of only 0.31 dv.

Table 8: Highest Visibility Impact at any Class I Area due to NOx from each BART-Eligible Source in Connecticut

Facility	Highest Deciview Impact[10]
Middletown Unit 3	0.06
Middletown Unit 4	0.03
Montville Unit 6	0.04
Norwalk Unit 2	0.01

[10] The deciview impact of each BART-eligible source, by pollutant, can be found in Attachment X of Connecticut's November 18, 2009 SIP submittal.

PSEG Bridgeport Harbor Unit 3	0.31
PSEG New Haven Harbor Unit 1	0.14
Cascade Boxboard Group PFI Boiler	0.03

Had Connecticut conducted a source-by-source BART analysis, the current controls and the minimal impact from the BART-eligible sources would have been among the individualized factors that Connecticut would have considered. Based on these factors, we do not believe that the most stringent level of controls would have necessarily been appropriate for Connecticut's BART-eligible sources, and therefore do not believe that the low end emission rates from the MANE-VU recommended BART limit reflect a realistic BART baseline.

An additional piece of evidence for Connecticut's alternative to BART program demonstration is that, while Connecticut does not have a firm state-wide, year-round cap on emissions from EGUs, the firm cap during ozone season acts as an impediment to emissions growth during non-ozone season.

In EPA's Alternative to BART Rule, the included scenario was only intended to be demonstrative of those situations where a weight of evidence approach would be appropriate. Connecticut's NOx alternative to BART program demonstration fits comfortably within the intent behind the weight of evidence approach. Given the extent of evidence—the controls already required prior to the baseline year, the minimal visibility impact of the BART-eligible sources, and the impediment of NOx emission growth from new EGUs —we are proposing to find that Connecticut has shown by a clear weight of evidence that their NOx BART alternative which relies on RCSA Section 22a-174-22 including subdivision 22a-174-22(e)(3), and RCSA section 22a-174-22d meets the requirements of our BART alternative rule.

7. Connecticut's PM BART Determinations

EPA's BART Guidelines for 750 MW and greater power plants do not contain presumptive emission limits for PM. The MANE-VU BART workgroup's recommended BART emission limits for $PM_{2.5}$ (measured as particles less than 2.5 microns in diameter, or $PM_{2.5}$) are emission rate ranges of 0.02-0.04 lb/MMBtu for non-CAIR EGUs and 0.02-0.07 lb/MMBtu for industrial boilers.

Existing controls at sources

Table 9 shows the visibility impact and existing PM controls at BART-eligible units in Connecticut. Several units have electrostatic precipitators (ESP) already in place.

Table 9: The Visibility Impact and Existing Controls at the BART-eligible Units

BART-eligible Unit	Highest PM_{10} Impact on 20% best days (deciview)	Existing PM Controls
Middletown Unit 3	0.0000	ESP
Middletown Unit 4	0.0025	None
Montville Unit 6	0.0005	None
Norwalk Unit 2	0.0002	ESP
PSEG Bridgeport Harbor Unit 3	0.0035	ESP, Baghouse
PSEG New Haven Harbor Unit 1	0.0012	ESP
Cascades Boxboard Group PFI Boiler	0.0004	None

Middletown Unit 3, Norwalk Unit 2, PSEG Bridgeport Harbor Unit 3, and PSEG New Haven Harbor Unit 1 have existing ESP control. PSEG Bridgeport Harbor Unit 3 also installed a baghouse for mercury control in July 2008, thereby achieving concomitant PM reduction

benefits.

Visibility improvement reasonably expected from application of controls

MANE-VU's 2002 individual unit modeling shows that none of Connecticut's PM emissions from BART-eligible sources have a significant visibility impact on any Class I area. As can be seen in Table 9, the highest individual PM visibility impact (0.0035 dv) is significantly less than the 0.1 deciview individual impact MANE-VU warrants worthy of consideration of BART controls.[11]

Cost of controls

Table 10 shows the cost of PM controls per year for those BART-eligible units without PM controls as well as actual PM emissions for 2005. Numbers were calculated by using the range of control technologies and cost per actual cubic feet per minute (ACFM) of gas flow values provided in NESCAUM's *Assessment of Control Technology Options for BART-Eligible Sources*[12] and ACFM values provided in the 2005 emission statement.

Table 10: Cost of PM Controls and 2005 Actual Emissions

BART-eligible Unit	Capital Cost Ranges ($)	Fixed & Variable Operation and Maintenance Cost Ranges ($/year)	2005 Actual PM Emissions (tons)
Middletown Unit 4	$20,496,000-$68,320,000	$683,200-$3,416,000	46
Montville Unit 6	$20,220,000-$67,400,000	$674,000-$3,370,000	18
Cascades Boxboard Group PFI Boiler	$120,000-$4,800,000	$48,000-$324,000	42

[11] See Section 4.1 of the MANE-VU Five Factor Analysis of BART-Eligible Sources, Attachment W of Connecticut's November 18, 2009 SIP submittal.
[12] See Attachment Z of the Connecticut November 18, 2009 SIP submittal.

Remaining useful life of the source

The MANE-VU BART workgroup's recommendation for sources which rely on the remaining useful life factor for the determination of BART is that these sources should either control emissions from the BART-eligible sources prior to 2013 or accept a federally enforceable permit limitation or retirement date prior to each state's public notice and hearing processes and FLM review of BART SIP elements. Similar to the other New England States, the Connecticut analysis did not weight this factor.

Energy and non-air quality environmental impacts

No significant energy or non-air quality environmental benefits or dis-benefits associated with PM controls were identified.

Connecticut's determination

Given the very high cost per ton reduced for the remaining BART-eligible units without PM controls along with the lack of PM contribution evidence from MANE-VU's modeling, Connecticut determined that the existing conditions with respect to PM control are equivalent to BART.

EPA's Assessment

EPA is proposing to approve Connecticut's determination that further primary PM control beyond the controls already implemented by Connecticut's BART-eligible units is not warranted at this time as such measures are not cost-effective and the visibility contribution from Connecticut's BART-eligible units with respect to PM is insignificant.

8. BART Enforceability

EPA is proposing to approve RCSA Section 22a-174-19a and revisions to RCSA Section 22a-174-22, including new subdivision 22a-174-22(e)(3), with this rulemaking. In addition, pursuant to CT DEEP's request for parallel processing, EPA is proposing approval of Connecticut's proposed RCSA Section 22a-174-22d. After the State submits the adopted State Regulation RCSA 22a-174-22d (including a response to all public comments raised during the State's public participation process), EPA will prepare a final rulemaking notice. If the State's formal SIP submittal contains changes which occur after EPA's notice of proposed rulemaking, such changes must be described in EPA's final rulemaking action. If the State's changes are significant, then EPA must decide whether it is appropriate to re-propose our action with regard to the State's SIP submittal.

C. Long-Term Strategy

As described in Section II.E of this action, the LTS is a compilation of State-specific control measures relied on by the State to obtain its share of emission reductions to support the RPGs established by Maine, New Hampshire, Vermont, and New Jersey, the nearby Class I area States. Connecticut's LTS for the first implementation period addresses the emissions reductions from federal, State, and local controls that take effect in the State from the baseline period starting in 2002 until 2018. Connecticut participated in the MANE-VU regional strategy development process and supported a regional approach towards deciding which control measures to pursue for regional haze, which was based on technical analyses documented in the following reports: a) the Contribution Report; b) *Assessment of Reasonable Progress for Regional Haze in MANE-*

VU Class I Areas (available at www.marama.org/visibility/RPG/FinalReport/RPGFinalReport_070907.pdf); c) *Five-Factor Analysis of BART-Eligible Sources: Survey of Options for Conducting BART Determinations* (available at www.nescaum.org/documents/bart-final-memo-06-28-07.pdf); and d) *Assessment of Control Technology Options for BART-Eligible Sources: Steam Electric Boilers, Industrial Boilers, Cement Plants and Paper, and Pulp Facilities* (available at www.nescaum.org/documents/bart-control-assessment.pdf).

1. Emissions Inventory for 2018 with Federal and State Control Requirements

The State-wide emissions inventories used by MANE-VU in its regional haze technical analyses were developed by MARAMA for MANE-VU with assistance from Connecticut. The 2018 emissions inventory was developed by projecting 2002 emissions forward based on assumptions regarding emissions growth due to projected increases in economic activity and emissions reductions expected from federal and State regulations. MANE-VU's emissions inventories included estimates of NOx, coarse particulate matter (PM_{10}), $PM_{2.5}$, and SO_2, VOC, and NH_3. The BART guidelines direct States to exercise judgment in deciding whether VOC and NH_3 impair visibility in their Class I area(s). As discussed further in Section III.C.3 below, MANE-VU demonstrated that anthropogenic emissions of sulfates are the major contributor to $PM_{2.5}$ mass and visibility impairment at Class I areas in the Northeast and Mid-Atlantic region. It was also determined that the total ammonia emissions in the MANE-VU region are extremely small.

MANE-VU developed emissions inventories for four inventory source classifications: 1) stationary point sources, 2) stationary area sources, 3) non-road mobile sources, and 4) on-road mobile sources. The New York Department of Environmental Conservation also developed an inventory of biogenic emissions for the entire MANE-VU region. Stationary point sources are those sources that emit greater than a specified tonnage per year, depending on the pollutant, with data provided at the facility level. Stationary area sources are those sources whose individual emissions are relatively small, but due to the large number of these sources, the collective emissions from the source category could be significant. Non-road mobile sources are equipment that can move but do not use the roadways. On-road mobile source emissions are automobiles, trucks, and motorcycles that use the roadway system. The emissions from these sources are estimated by vehicle type and road type. Biogenic sources are natural sources like trees, crops, grasses, and natural decay of plants. Stationary point sources emission data is tracked at the facility level. For all other source types, emissions are summed on the county level.

There are many federal and State control programs being implemented that MANE-VU and Connecticut anticipate will reduce emissions between the baseline period and 2018. Emission reductions from these control programs in the MANE-VU region were projected to achieve substantial visibility improvement by 2018 at all of the MANE-VU Class I areas. To assess emissions reductions from ongoing air pollution control programs, BART, and reasonable progress goals, MANE-VU developed 2018 emissions projections called “Best and Final.” The emissions inventory provided by the State of Connecticut for the Best and Final 2018 projections is based on expected control requirements.

Connecticut relied on emission reductions from the following ongoing and expected air pollution control programs as part of the State's long term strategy. For electrical generating units (EGUs), Connecticut relied on RCSA sections 22a-174-19a which limits SO_2 emissions from all EGUs, proposed RCSA section 22a-174-22d which limits ozone season NOx for all EGUs, RCSA section 22a-174-22 which limits the non-ozone season NOx emissions for all EGUs, and Connecticut General Statues, section 22a-199 which limits mercury emissions for all coal-fired EGUs. Connecticut also relied on the following controls on non-EGU point sources in estimating 2018 emissions inventories: NOx SIP Call Phases I and II; NOx Reasonably Available Control Technology (RACT) in 1-hour Ozone SIP; NOx Ozone Transport Commission (OTC) 2001 Model Rule for Industrial, Commercial, and Institutional (ICI) Boilers; VOC 2-year, 4-year, 7-year and 10-year Maximum Achievable Control Technology (MACT) Standards; Combustion Turbine and Reciprocating Internal Combustion Engine (RICE) MACT; and Industrial Boiler/Process Heater MACT (also known as the Industrial Boiler MACT).

On July 30, 2007, the U.S. Court of Appeals for the District of Columbia vacated and remanded the Industrial Boiler MACT Rule. *NRDC v. EPA,* 489F.3d 1250 (D.C. Cir. 2007). This MACT was vacated since it was directly affected by the vacatur and remand of the Commercial and Industrial Solid Waste Incinerator (CISWI) definition rule. EPA proposed a new Industrial Boiler MACT rule to address the vacatur on June 4, 2010 (75 FR 32006) and issued a final rule on March 21, 2011 (76 FR 15608). On May 18, 2011, EPA stayed the effective date of the Industrial Boiler MACT pending review by the D.C. Circuit or the completion of EPA's reconsideration of the rule. See 76 FR 28662.

On December 2, 2011, EPA issued a proposed reconsideration of the MACT standards for existing and new boilers at major (76 FR 80598) and area (76 FR 80532) source facilities, and for Commercial and Industrial Solid Waste Incinerators (76 FR 80452). On January 9, 2012, the U.S. District Court for the District of Columbia vacated EPA's stay of the effectiveness date of the Industrial Boiler MACT, reinstating the original effective date and therefore requiring compliance with the current rule in 2014. *Sierra Club v. Jackson*, Civ. No. 11-1278, slip op. (D.D.C. Jan. 9, 2012).

Even though Connecticut's modeling is based on the old Industrial Boiler MACT limits, Connecticut's modeling conclusions are unlikely to be affected because the expected reductions in SO_2 and PM resulting from the vacated MACT rule are a relatively small component of the Connecticut inventory and the expected emission reductions from the final MACT rule are comparable to those modeled. In addition, the new MACT rule requires compliance by 2014 and therefore the expected emission reductions will be achieved prior to the end of the first implementation period in 2018. Thus, EPA does not expect that differences between the old and revised Industrial Boiler MACT emission limits would affect the adequacy of the existing Connecticut regional haze SIP. If there is a need to address discrepancies between projected emissions reductions from the old Industrial Boiler MACT and the Industrial Boiler MACT finalized in March 2011, we expect Connecticut to do so in its 5-year progress report.

Controls on area sources expected by 2018 include: the OTC VOC rules for consumer products (RCSA 22a-174-40); VOC control measures for architectural and industrial maintenance

coatings (RCSA 22a-174-41) and solvent cleaning (RCSA 22a-174-20(l)); VOC control measures for adhesive and sealants (RCSA 22a-174-44); VOC control measures for emulsified and cutback asphalt paving (RCSA 22a-174-20(k)); and VOC control measures for portable fuel containers (contained in EPA's Mobile Source Air Toxics rule).

Controls on mobile sources expected by 2018 include: on-board diagnostics testing for 1979 and new vehicles (RCSA 22a-174-27); Federal On-Board Refueling Vapor Recovery (ORVR) Rule; Federal Tier 2 Motor Vehicle Emissions Standards and Gasoline Sulfur Requirements; Federal Heavy-Duty Diesel Engine Emission Standards for Trucks and Buses; and Federal Emission Standards for Large Industrial Spark-Ignition Engines and Recreation Vehicles.

Controls on non-road sources expected by 2018 include the following federal regulations: Control of Air Pollution: Determination of Significance for Nonroad Sources and Emission Standards for New Nonroad Compression Ignition Engines at or above 37 kilowatts (59 FR 31306, June 17, 1994); Control of Emissions of Air Pollution from Nonroad Diesel Engines (63 FR 56967, Oct. 23, 1998); Control of Emissions from Nonroad Large Spark-Ignition Engines and Recreational Engines (67 FR 68241, Nov. 8, 2002); and Control of Emissions of Air Pollution from Nonroad Diesel Engines and Fuels (69 FR 38958, June 29, 2004).

Tables 11 and 12 are summaries of the 2002 baseline and 2018 estimated emissions inventories for Connecticut. The 2018 estimated emissions include emissions growth as well as emission reductions due to ongoing emission control strategies and reasonable progress goals.

Table 11: 2002 Emissions Inventory Summary for Connecticut (tons per year)

Category	VOC	NO_x	$PM_{2.5}$	PM_{10}	NH_3	SO_2
EGU Point	303	6,150	461	627	--	13,550
Non-EGU Point	4,604	6,773	822	990	--	2,438
Area	87,302	12,689	14,247	48,281	5,318	12,418
On-Road Mobile	31,755	68,816	1,042	1,580	3,294	1,667
Non-Road Mobile	33,880	25,460	1,794	1,952	16.6	2,087
Biogenics	64,017	560	--	--	--	--
Total	221,861	120,448	18,366	53,430	8,629	32,160

Table 12: 2018 Emissions Inventory Summary for Connecticut (tons per year)

Category	VOC	NO_x	$PM_{2.5}$	PM_{10}	NH_3	SO_2
EGU Point	145	3,418	927	959	341	6,697
Non-EGU Point	4,227	7,501	937	1,104	--	2,068
Area	68,395	11,795	9,635	20,511	5,061	534
On-Road Mobile	10,768	14,787	500	567	3,872	366
Non-Road Mobile	20,694	16,233	1,135	1,236	20	815
Biogenics	64,017	560	--	--	--	--
Total	168,246	54,294	13,134	24,377	9,294	10,480

2. Modeling to Support the LTS and Determine Visibility Improvement for Uniform Rate of Progress

MANE-VU performed modeling for the regional haze LTS for the 11 Mid-Atlantic and Northeast States and the District of Columbia. The modeling analysis is a complex technical evaluation that began with selection of the modeling system. MANE-VU used the following modeling system:

- Meteorological Model: The Fifth-Generation Pennsylvania State University/National Center for Atmospheric Research (NCAR) Mesoscale Meteorological Model (MM5) version 3.6 is a nonhydrostatic, prognostic meteorological model routinely used for urban- and regional-scale photochemical, $PM_{2.5}$, and regional haze regulatory modeling studies.

- Emissions Model: The Sparse Matrix Operator Kernel Emissions (SMOKE) version 2.1 modeling system is an emissions modeling system that generates hourly gridded speciated emission inputs of mobile, non-road mobile, area, point, fire, and biogenic emission sources for photochemical grid models.
- Air Quality Model: The EPA's Models-3/Community Multiscale Air Quality (CMAQ) version 4.5.1 is a photochemical grid model capable of addressing ozone, PM, visibility and acid deposition at a regional scale.
- Air Quality Model: The Regional Model for Aerosols and Deposition (REMSAD), is a Eulerian grid model that was primarily used to determine the attribution of sulfate species in the Eastern US via the species-tagging scheme.
- Air Quality Model: The California Puff Model (CALPUFF), version 5 is a non-steady-state Lagrangian puff model used to access the contribution of individual States' emissions to sulfate levels at selected Class I receptor sites.

CMAQ modeling of regional haze in the MANE-VU region for 2002 and 2018 was carried out on a grid of 12x12 kilometer (km) cells that covers the 11 MANE-VU States (Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, and Vermont) and the District of Columbia and States adjacent to them. This grid is nested within a larger national CMAQ modeling grid of 36x36 km grid cells that covers the continental United States, portions of Canada and Mexico, and portions of the Atlantic and Pacific Oceans along the east and west coasts. Selection of a representative period of meteorology is crucial for evaluating baseline air quality conditions and projecting future changes in air quality due to changes in emissions of visibility-impairing pollutants. MANE-VU

conducted an in-depth analysis which resulted in the selection of the entire year of 2002 (January 1-December 31) as the best period of meteorology available for conducting the CMAQ modeling. The MANE-VU States' modeling was developed consistent with EPA's *Guidance on the Use of Models and Other Analyses for Demonstrating Attainment of Air Quality Goals for Ozone, $PM_{2.5}$, and Regional Haze,* April 2007 (EPA-454/B-07-002, available at www.epa.gov/scram001/guidance/guide/final-03-pm-rh-guidance.pdf), and EPA document, *Emissions Inventory Guidance for Implementation of Ozone and Particulate Matter National Ambient Air Quality Standards (NAAQS) and Regional Haze Regulations*, August 2005 and updated November 2005 (EPA-454/R-05-001, available at www.epa.gov/ttnchie1/eidocs/eiguid/index.html) (hereinafter referred to as "EPA's Modeling Guidance").

MANE-VU examined the model performance of the regional modeling for the areas of interest before determining whether the CMAQ model results were suitable for use in the regional haze assessment of the LTS and for use in the modeling assessment. The modeling assessment predicts future levels of emissions and visibility impairment used to support the LTS and to compare predicted, modeled visibility levels with those on the uniform rate of progress. In keeping with the objective of the CMAQ modeling platform, the air quality model performance was evaluated using graphical and statistical assessments based on measured ozone, fine particles, and acid deposition from various monitoring networks and databases for the 2002 base year. MANE-VU used a diverse set of statistical parameters from the EPA's Modeling Guidance to stress and examine the model and modeling inputs. Once MANE-VU determined the model performance to be acceptable, MANE-VU used the model to assess the 2018 RPGs using the

current and future year air quality modeling predictions, and compared the RPGs to the uniform rate of progress.

In accordance with 40 CFR 51.308(d)(3), the State of Connecticut provided the appropriate supporting documentation for all required analyses used to determine the State's LTS. The technical analyses and modeling used to develop the glide path and to support the LTS are consistent with EPA's RHR, and interim and final EPA Modeling Guidance. EPA is proposing to find the MANE-VU technical modeling to support the LTS and determine visibility improvement for the uniform rate of progress acceptable because the modeling system was chosen and used according to EPA Modeling Guidance. EPA agrees with the MANE-VU model performance procedures and results, and that CMAQ, REMSAD, and CALPUFF are appropriate tools for the regional haze assessments for the Connecticut LTS and regional haze SIP.

3. Relative Contributions of Pollutants to Visibility Impairment

An important step toward identifying reasonable progress measures is to identify the key pollutants contributing to visibility impairment at each Class I area. To understand the relative benefit of further reducing emissions from different pollutants, MANE-VU developed emission sensitivity model runs using CMAQ to evaluate visibility and air quality impacts from various groups of emissions and pollutant scenarios in the Class I areas on the 20 percent worst visibility days.

Regarding which pollutants are most significantly impacting visibility in the MANE-VU region, MANE-VU's contribution assessment demonstrated that sulfate is the major contributor

to $PM_{2.5}$ mass and visibility impairment at Class I areas in the Northeast and Mid-Atlantic Region. Sulfate particles commonly account for more than 50 percent of particle-related light extinction at northeastern Class I areas on the clearest days and for as much as, or more than, 80 percent on the haziest days. For example, at the Brigantine National Wildlife Refuge Class I area (the MANE-VU Class I area with the greatest visibility impairment), on the 20 percent worst visibility days in 2000 – 2004, sulfate accounted for 66 percent of the particle extinction. After sulfate, organic carbon (OC) consistently accounts for the next largest fraction of light extinction. Organic carbon accounted for 13 percent of light extinction on the 20 percent worst visibility days for Brigantine, followed by nitrate that accounts for 9 percent of light extinction. On the best visibility days, sulfate accounts for 50 percent of the particle related visibility extinction. Organic carbon accounts for the next largest contribution of 40 percent of the visibility impairment on the clearest days. Nitrate, elemental carbon, and fine soil typically contribute less than 10 percent of the visibility impairment mass on the clearest days.

The emissions sensitivity analyses conducted by MANE-VU predict that reductions in SO_2 emissions from EGU and non-EGU industrial point sources will result in the greatest improvements in visibility in the Class I areas in the MANE-VU region, more than any other visibility-impairing pollutant. As a result of the dominant role of sulfate in the formation of regional haze in the Northeast and Mid-Atlantic Region, MANE-VU concluded that an effective emissions management approach would rely heavily on broad-based regional SO_2 control efforts in the eastern United States.

4. Reasonable Progress Goal

Since the State of Connecticut does not have a Class I area, it is not required to establish RPGs. However, as a MANE-VU member State, Connecticut adopted the "Statement of MANE-VU Concerning a Request for a Course of Action by States Within MANE-VU Toward Assuring Reasonable Progress" on June 7, 2007. This document included four emission management strategies that will provide for reasonable progress towards achieving natural visibility at the MANE-VU Class I areas. These emission management strategies are collectively known as the MANE-VU "Ask," and include: (a) timely implementation of BART requirements; (b) a 90 percent reduction in SO_2 emissions from each of the EGU stacks identified by MANE-VU comprising a total of 167 stacks[13]; (c) adoption of a low sulfur fuel oil strategy; and (d) continued evaluation of other control measures to reduce SO_2 and NO_x emissions.

Connecticut will be controlling its BART sources with Connecticut's alternative to BART program. This program is discussed in detail in Section III.B. Connecticut does not have any EGU stacks identified by MANE-VU as a top contributor to visibility impairment in any of the MANE-VU Class I areas.

The MANE-VU low sulfur fuel oil strategy includes: Phase I reduction of distillate oil to 0.05% sulfur by weight (500 parts per million (ppm)) by no later than 2014; Phase II reductions of #4 residual oil to 0.25% sulfur by weight by no later than 2018; #6 residual oil to 0.5% sulfur by weight by no later than 2018; and further reduction of the sulfur content of distillate oil to 15 ppm by 2018.

[13] See Appendix E – "Top Electrical Generating Unit List" of the Connecticut SIP submittal for a complete listing of the 167 stacks.

The expected reduction in SO_2 emissions by 2018 from the MANE-VU "Ask" will yield corresponding reductions in sulfate aerosol, the main culprit in fine-particle pollution and regional haze. For Connecticut, the MANE-VU analysis demonstrates that the reduction of the sulfur content in fuel oil will lead to an average reduction of 0.13 – 0.18 ug/m^3 in the 24 hour $PM_{2.5}$ concentration within the State, improving health and local visibility. In addition, the use of low sulfur fuels will result in cost savings to owners/operators of residential furnaces and boilers due to reduced maintenance costs and extended life of the units.

EPA is today proposing approval of the Connecticut Regional Haze SIP for the first implementation period without Connecticut's implementation of a low sulfur fuel oil strategy.[14] As described in Section III.A of this notice, Connecticut neither causes nor contributes to visibility impairment in the closest Class I areas located in New Jersey, Vermont, New Hampshire, and Maine. For each of these Class I areas, the contribution of Connecticut's emissions to total sulfate is less than the 2% threshold set by the MANE-VU States to determine whether any State contributed to visibility impairment. While the SO_2 reductions being achieved by Connecticut are somewhat less than the statewide reductions that were projected to result from adoption of a low-sulfur fuel oil strategy by 2012, this shortfall is not anticipated to interfere with the ability of other States to meet their respective reasonable progress goals. All emissions from Connecticut contribute no more than 0.76% of total sulfate at any Class I area. In its November 18, 2009 SIP submittal, Connecticut states that it will review the details of its

[14] On January 15, 2009, EPA made a finding that, among other States, Connecticut had failed to submit a Regional Haze SIP by the required deadline. 74 FR 2392. We have proposed a consent decree to resolve a deadline suit regarding this finding as well as the finding of failure for 36 other States, the District of Columbia, and the U.S. Virgin Islands. National Parks Conservation Association v. Jackson, Civ. No. 1:11-cv-1548 (D.D.C. 2011). Because we do not believe a low-sulfur fuel oil strategy is necessary for Connecticut's LTS during this first implementation period, EPA is moving forward with this proposed approval of the State's SIP submittal in order to satisfy our obligations under the Clean Air Act.

long term strategy in five years, coincident with Connecticut's first regional haze SIP progress report. We encourage adoption of a low-sulfur fuel oil strategy by Connecticut and the surrounding States as such a strategy will have local air quality and some, limited visibility benefits. However, we do not believe it is a necessary component of an approvable Regional Haze SIP for Connecticut for the first implementation period.

Despite our conclusion that a low sulfur fuel oil strategy is not a necessary component of its Regional Haze SIP for this first implementation period, Connecticut has adopted a partial low sulfur fuel oil strategy that is contingent on its neighboring states adopting similar policies. Section 16a-21a of the Connecticut General Statutes (CGS) limits sulfur content of heating distillate oil and off road diesel to 500 ppm as of the date on which the last of the States of New York, Massachusetts, and Rhode Island limit the sulfur content of such fuels. Currently, all three States have yet to adopt these measures. Connecticut has submitted CGS Section16a-21a for approval into its SIP.[15] Actual emission reductions from CGS Section 16a-21a are not certain to occur because the neighboring States may never adopt their counterparts. Therefore, we are not relying upon any potential emissions reductions from CGS Section 16a-21a for the purposes of our approval of this revision to Connecticut's SIP. See *Safe Air for Everyone v. EPA*, 475 F.3d 1096, 1108 (9th Cir. 2007). However, the content of a State's implementation plan is generally left to the discretion of the State so long as it meets the requirements of the Clean Air Act. See *Union Electric v. EPA*, 427 U.S. 246 (1976). Therefore, because CGS Section 16a-21a does not

[15] Connecticut submitted Sec. 16a-21a as part of the November 18, 2009 Regional Haze SIP submittal. See Attachment GG. Sec. 16a-21a was subsequently amended, effective July 1, 2011, to include additional sulfur in fuel content reductions for number two home heating oil and number two off road diesel to 15 ppm at such time that New York, Massachusetts, and Rhode Island adopt substantially similar provisions. EPA is not proposing action on this amendment in this rulemaking.

weaken or impede implementation of the rest of the SIP, we are also proposing to approve CGS Section 16a-21a.

5. Additional Considerations for the LTS

In 40 CFR 51.308(d)(3)(v), States are required to consider the following factors in developing the long term strategy:

a. Emission reductions due to ongoing air pollution control programs, including measures to address reasonably attributable visibility impairment;
b. Measures to mitigate the impacts of construction activities;
c. Emission limitations and schedules for compliance to achieve the reasonable progress goal;
d. Source retirement and replacement schedules;
e. Smoke management techniques for agricultural and forestry management purposes including plans as currently exist within the State for these purposes;
f. Enforceability of emissions limitations and control measures; and
g. 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.

a. Emission reductions including RAVI

Since Connecticut does not contain any Class I areas, the State is not required to address RAVI, nor has any Connecticut source been identified as subject to RAVI. A list of Connecticut's ongoing air pollution control programs is included in Section III.B.1.

b. Construction activities

The Regional Haze Rule requires Connecticut to consider measures to mitigate the impacts of construction activities on regional haze. MANE-VU's consideration of control measures for construction activities is documented in *Technical Support Document on Measures to Mitigate the Visibility Impacts of Construction Activities in the MANE-VU Region*, Draft, October 20, 2006.[16]

The construction industry is already subject to requirements for controlling pollutants that contribute to visibility impairment. For example, federal regulations require the reduction of SO_2 emissions from construction vehicles. At the State level, Connecticut's RCSA 22a-174-18, "Control of particulate matter and visible emissions," addresses the control of airborne particulate matter and fugitive particulate matter in subsections (c) and (d). These regulations, which include dust control measures and visible emissions from diesel powered mobile sources, apply to road building and construction activities.[17]

MANE-VU's Contribution Report found that, from a regional haze perspective, crustal material generally does not play a major role. On the 20 percent best-visibility days during the 2000-2004 baseline period, crustal material accounted for 6 to 11 percent of the particle-related light extinction at the MANE-VU Class I Areas. On the 20 percent worst-visibility days, however, the contribution was reduced to 2 to 3 percent. Furthermore, the crustal fraction is largely made up of pollutants of natural origin (e.g., soil or sea salt) that are not targeted under the Regional Haze Rule. Nevertheless, the crustal fraction at any given location can be heavily

[16] This document has been provided as part of the docket to this proposed rulemaking.
[17] The Regulations are available at www.dep.state.ct.us/air2/regs/mainregs.htm

influenced by the proximity of construction activities; and construction activities occurring in the immediate vicinity of MANE-VU Class I area could have a noticeable effect on visibility.

For this regional haze SIP, Connecticut concluded that its current regulations are currently sufficient to mitigate the impacts of construction activities. Any future deliberations on potential control measures for construction activities and the possible implementation will be documented in the first regional haze SIP progress report in 2014. EPA proposes to find that Connecticut has adequately addressed measures to mitigate the impacts of construction activities.

c. Emission limitations and schedules for compliance to achieve the RPG

In addition to the existing CAA control requirements discussed in Section III.C.1, Connecticut has legislation to implement a low sulfur fuel oil strategy consistent with the MANE-VU "Ask" at such time that New York, Massachusetts, and Rhode Island adopt a comparable sulfur in fuel oil limit. As described in Section III.C.4 above, we do not believe inclusion of the low sulfur oil strategy is a necessary component of an approvable Regional Haze SIP for Connecticut. Therefore, EPA is proposing to determine that Connecticut has satisfactorily considered emission limitations and schedules as part of the LTS.

d. Source retirement and replacement schedule

Pursuant to 40 CFR 51.308(d)(3)(v)(D) of the Regional Haze Rule, Connecticut is required to consider source retirement and replacement schedules in developing the long term strategy. Source retirement and replacement were considered in developing the 2018 emissions. The sources in Connecticut that were shut down after the 2002 base year and therefore were not

included in the 2018 inventory are: Devon Unit 7 (109 MW EGU) and Devon Unit 8 (109 MW EGU). The modeling used to develop the 2018 emission inventories, EPA's Integrated Planning Model (IPM), projected that several large EGUs in Connecticut, including five of the six BART-eligible EGUs would retire by 2018 and be replaced by newer units to meet future electric growth. However, Connecticut did not directly rely on the closures of any particular plant in establishing the 2018 inventory upon which the reasonable progress goals were set. EPA is proposing to determine that Connecticut has satisfactorily considered source retirement and replacement schedules as part of the LTS.

e. Smoke management techniques

The Regional Haze Rule requires States to consider smoke management techniques related to agricultural and forestry management in developing the long-term strategy. MANE-VU's analysis of smoke management in the context of regional haze is documented in *Technical Support Document on Agricultural and Smoke Management in the MANE-VU Region*, September 1, 2006, (hereinafter referred to as the "Smoke TSD".) [18]

Connecticut currently regulates outdoor wood burning through a statute at CGS 22a-174(f) and a regulation at RCSA 22a-174-17. The open burning requirements limit the locations and times when open burning can take place. Although CT DEEP does not have a formal smoke management program (SMP), as a smoke management policy, CT DEEP's Division of Forestry can only initiate prescribed burns when such activity has less significant impacts on air quality.[19] SMPs are required only when smoke impacts from fires managed for resources benefits

[18] This document has been included as part of the docket to this proposed rulemaking.
[19] See Attachment FF – Connecticut Smoke Management Policy Documentation

contribute significantly to regional haze. The emissions inventory presented in the Smoke TSD indicates that agricultural, managed, prescribed, and open burning emissions are very minor; the inventory estimates that, in Connecticut, those emissions from those source categories totaled 30.8 tons of PM_{10} and $PM_{2.5}$ in 2002, which constitute 0.06% and 0.17% of the total inventory for these pollutants, respectively.

Source apportionment results show that wood smoke is a moderate contributor to visibility impairment at some Class I areas in the MANE-VU region; however, smoke is not a large contributor to haze in MANE-VU Class I areas on either the 20% best or 20% worst visibility days. Moreover, most of wood smoke is attributable to residential wood combustion. Therefore, it is unlikely that fires for agricultural or forestry management cause large impacts on visibility in any of the Class I areas in the MANE-VU region. On rare occasions, smoke from major fires degrades air quality and visibility in the MANE-VU area. However, these fires are generally unwanted wildfires that are not subject to SMPs. EPA proposes to approve Connecticut's decision that an Agricultural and Forestry Smoke Management Plan to address visibility impairment is not required at this time.

f. Enforceability of emission limitations and control measures.

Connecticut has asked, and we are proposing to process approval of RCSA Section 22a-174-22d in parallel with the approval of Connecticut's Regional Haze SIP. Connecticut indicated that they plan to have a final adopted regulation by June 2012, prior to the finalization of this action. EPA will review the final regulation and determine whether it differs significantly from the proposed regulation. At the same time we take final action on Connecticut's Regional Haze SIP,

we will then take final action on RCSA 22a-174-22d, at which point it will be federally enforceable. Therefore, once today's action is finalized, all emission limitations included as part of Connecticut's Regional Haze SIP will be federally enforceable. EPA is proposing to find that Connecticut has adequately addressed the enforceability of emission limitations and control measures.

g. The anticipated net effect on visibility

MANE-VU used the best and final emission inventory to model progress expected toward the goal of natural visibility conditions for the first regional haze planning period. All of the MANE-VU Class I areas are expected to achieve greater progress toward the natural visibility goal than the uniform rate of progress, or the progress expected by extrapolating a trend line from current visibility conditions to natural visibility conditions.[20]

In summary, EPA is proposing to find that Connecticut has adequately addressed the LTS regional haze requirements.

D. Consultation with States and Federal Land Managers

On May 10, 2006, the MANE-VU State Air Directors adopted the Inter-RPO State/Tribal and FLM Consultation Framework that documented the consultation process within the context of regional phase planning, and was intended to create greater certainty and understanding among RPOs. MANE-VU States held ten consultation meetings and/or conference calls from March 1, 2007 through March 21, 2008. In addition to MANE-VU members attending these meetings and

[20] Projected visibility improvements for each MANE-VU Class I area can be found in the NESCAUM document dated May 13, 2008, "2018 Visibility Projections" (www.nescaum.org/documents/2018-visibility-projections-final-05-13-08.pdf/)

conference calls, participants from the Visibility Improvement State and Tribal Association of the Southeast (VISTAS) RPO, Midwest RPO, and the relevant Federal Land Managers were also in attendance. In addition to the conference calls and meeting, the FLMs were given the opportunity to review and comment on each of the technical documents developed by MANE-VU.

On February 4, 2009, Connecticut submitted a draft Regional Haze SIP to the relevant FLMs for review and comment pursuant to 40 CFR 51.308(i)(2). The FLMs provided comments on the draft Regional Haze SIP in accordance with 40 CFR 51.308(i)(3). The comments received from the FLMs were addressed and incorporated in Connecticut's SIP revision. Most of the comments were requests for additional detail as to various aspects of the SIP. These comments and Connecticut's response to comments can be found in the docket for this proposed rulemaking.

On July 17, 2009, Connecticut proposed its Regional Haze SIP for public hearing. Comments were received from U.S EPA, the National Park Service, the U.S. Department of Agriculture and a private citizen.[21] To address the requirement for continuing consultation procedures with the FLMs under 40 CFR 51.308(i)(4), Connecticut commits in its SIP to ongoing consultation with the FLMs on emission strategies, major new source permits, assessments or rulemaking concerning sources identified as probable contributors to visibility impairment, any changes to the monitoring strategy, work on the periodic revisions to the SIP, and ongoing communications regarding visibility impairment.

[21] The comments and CT DEEP's responses have been included in the docket.

EPA is proposing to find that Connecticut has addressed the requirements for consultation with the Federal Land Managers.

E. Periodic SIP Revisions and Five-Year Progress Reports

Consistent with the requirements of 40 CFR 51.308(g), Connecticut has committed to submitting a report on reasonable progress (in the form of a SIP revision) to the EPA every five years following the initial submittal of its regional haze SIP. The reasonable progress report will evaluate the progress made towards the RPGs for the MANE-VU Class I areas, located in Maine, New Hampshire, Vermont, and New Jersey**.**

Pursuant to 40 CFR 51.308(f), CT DEEP is required to submit periodic revisions to its Regional Haze SIP by July 31, 2018, and every ten years thereafter. CT DEEP acknowledges and agrees to comply with this schedule.

Pursuant to 40 CFR 51.308(d)(4)(v), CT DEEP will also make periodic updates to the Connecticut emissions inventory. CT DEEP proposes to complete these updates to coincide with the progress reports. Actual emissions will be compared to projected modeled emissions in the progress reports.

Lastly, pursuant to 40 CFR 51.308(h), CT DEEP will submit a determination of adequacy of its regional haze SIP revision whenever a progress report is submitted. Connecticut's regional haze SIP states that, depending on the findings of its five-year review, Connecticut will take one or more of the following actions at that time, whichever actions are appropriate or necessary:

• If Connecticut determines that the existing State Implementation Plan requires no further substantive revision in order to achieve established goals for visibility improvement and emissions reductions, CT DEEP will provide to the EPA Administrator a negative declaration that further revision of the existing plan is not needed.

• If CT DEEP determines that its implementation plan is or may be inadequate to ensure reasonable progress as a result of emissions from sources in one or more other State(s) which participated in the regional planning process, Connecticut will provide notification to the EPA Administrator and to those other State(s). Connecticut will also collaborate with the other State(s) through the regional planning process for the purpose of developing additional strategies to address any such deficiencies in Connecticut's plan.

• If Connecticut determines that its implementation plan is or may be inadequate to ensure reasonable progress as a result of emissions from sources in another country, Connecticut will provide notification, along with available information, to the EPA Administrator.

• If Connecticut determines that the implementation plan is or may be inadequate to ensure reasonable progress as a result of emissions from sources within the State, Connecticut will revise its implementation plan to address the plan's deficiencies within one year from this determination.

IV. What Action is EPA Proposing to Take?

EPA is proposing approval of Connecticut's November 18, 2009 SIP revision as meeting the applicable requirements of the Regional Haze Rule found in 40 CFR 51.308. In addition, EPA is proposing approval of Connecticut's RCSA Section 22a-174-19a, "Control of sulfur dioxide emissions from power plants and other large stationary sources of air pollution" and revisions to

RCSA Section 22a-174-22, "Control of Nitrogen Oxides Emissions," including subdivision 22a-174-22(e)(3), and CGS 16a-21a, "Sulfur content of home heating oil and off-road diesel fuel. Suspension of requirements for emergency." Furthermore, pursuant to CT DEEP's request under parallel processing, EPA is proposing approval of Connecticut's proposed RCSA Section 22a-174-22d, "Post-2011 Connecticut Ozone Season NOx Budget Program." Under this procedure, EPA prepared this action before the State's final adoption of this regulation. Connecticut has already held a public hearing on the proposed regulation and received public comment. Connecticut may revise the regulation in response to comments. After Connecticut submits its final adopted regulation, EPA will review this regulation to determine whether it is significantly different from the proposed regulation. EPA will determine whether it is appropriate to approve the final rule with a description of any changes since the proposal, re-propose action based on the final adopted regulations, or take other actions as appropriate.

RCSA 22a-174-22d is a replacement for RCSA 22a-174-22c, "The Clean Air Interstate Rule (CAIR) Nitrogen Oxides (NOx) Ozone Season Trading Program," which is federally approved by EPA and currently being implemented in Connecticut.

V. Statutory and Executive Order Reviews

Under the Clean Air Act, the Administrator is required to approve a SIP submission that complies with the provisions of the Act and applicable Federal regulations. 42 U.S.C. 7410(k); 40 CFR 52.02(a). Thus, in reviewing SIP submissions, EPA's role is to approve State choices, provided that they meet the criteria of the Clean Air Act. Accordingly, this proposed action

merely approves 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 Order 12866 (58 FR 51735, October 4, 1993);
- does not impose an information collection burden under the provisions of the Paperwork Reduction Act (44 U.S.C. 3501 *et seq.*);
- is certified as not having a significant economic impact on a substantial number of small entities under the Regulatory Flexibility Act (5 U.S.C. 601 *et seq*.);
- does not contain any unfunded mandate or significantly or uniquely affect small governments, as described in the Unfunded Mandates Reform Act of 1995 (Public Law 104-4);
- does not have Federalism implications as specified in Executive Order 13132 (64 FR 43255, August 10, 1999);
- is not an economically significant regulatory action based on health or safety risks subject to Executive Order 13045 (62 FR 19885, April 23, 1997);
- is not a significant regulatory action subject to Executive Order 13211 (66 FR 28355, May 22, 2001);
- is not subject to requirements of Section 12(d) of the National Technology Transfer and Advancement Act of 1995 (15 U.S.C. 272 note) because application of those requirements would be inconsistent with the Clean Air Act; and
- does not provide EPA with the discretionary authority to address, as appropriate, disproportionate human health or environmental effects, using practicable and legally permissible methods, under Executive Order 12898 (59 FR 7629, February 16, 1994).

In addition, this rule does not have tribal implications as specified by Executive Order 13175 (65 FR 67249, November 9, 2000), because the SIP is not approved to apply in Indian country located in the State, and EPA notes that it will not impose substantial direct costs on tribal governments or preempt tribal law.

List of Subjects in 40 CFR Part 52

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

AUTHORITY: 42 U.S.C. 7401 et seq.

Dated: March 15, 2012

Signed: Ira W. Leighton

Acting Regional Administrator,
EPA Region 1

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