



ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 52

[EPA-R04-OAR-2025-0023; FRL-12899-02-R4]

Air Plan Approval; Kentucky; Emissions Inventory and Nonattainment New Source

Review for the Henderson-Webster Sulfur Dioxide Nonattainment Area

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule.

SUMMARY: The Environmental Protection Agency (EPA) is approving two State Implementation Plan (SIP) revisions submitted by the Commonwealth of Kentucky (Commonwealth), through the Energy and Environment Cabinet, Division of Air Quality (DAQ) on January 26, 2024, and February 15, 2024, to certify two requirements under the Clean Air Act (CAA or Act). These revisions establish that the Kentucky SIP satisfies the nonattainment new source review (NNSR) and base year emissions inventory requirements for the 2010 1-hour sulfur dioxide (SO₂) national ambient air quality standard (NAAQS) for the Henderson-Webster SO₂ nonattainment area (hereinafter “Henderson-Webster SO₂ Nonattainment Area” or “Area”). EPA is approving these revisions pursuant to the CAA.

DATES: This rule is effective [INSERT DATE 30 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: EPA has established a docket for this action under Docket Identification No. EPA-R04-OAR-2025-0023. All documents in the docket are listed on the [regulations.gov](https://www.regulations.gov) web site. Although listed in the index, some information may not be publicly available, i.e., Confidential Business Information 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 through www.regulations.gov or in hard copy at the Air Regulatory

Management Section, Air Planning and Implementation Branch, Air and Radiation Division, U.S. Environmental Protection Agency, Region 4, 61 Forsyth Street, SW, Atlanta, Georgia 30303-8960. EPA requests that if at all possible, you contact the person 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 a.m. to 4:30 p.m., excluding Federal holidays.

FOR FURTHER INFORMATION CONTACT: Pearlene Williams-Miles, Multi-Air Pollutant Coordination Section, Air Planning and Implementation Branch, Air and Radiation Division, U.S. Environmental Protection Agency, Region 4, 61 Forsyth Street, SW, Atlanta, Georgia 30303-8960. The telephone number is (404) 562-9144. Ms. Williams-Miles can also be reached via electronic mail at williamsmiles.pearlene@epa.gov.

SUPPLEMENTARY INFORMATION:

I. Background

On June 2, 2010, EPA revised the primary SO₂ NAAQS. Specifically, EPA established a 1-hour SO₂ standard at a level of 75 parts per billion (ppb), based on the 3-year average of the annual 99th percentile of 1-hour daily maximum concentrations.¹ *See* 75 FR 35520 (June 22, 2010). The 1-hour standard is met at an ambient air quality monitoring site when the 3-year average of the annual 99th percentile of daily maximum 1-hour average concentrations does not exceed 75 ppb, as determined in accordance with appendix T of 40 CFR part 50. *See* 75 FR 35520, codified at 40 CFR 50.17(a)-(b).

Upon promulgation of a new or revised SO₂ NAAQS, section 107(d) of the CAA requires EPA to designate as nonattainment any area that is violating the NAAQS (or that contributes to ambient air quality in a nearby area that is violating the NAAQS). As part of the designation process for the 2010 1-hour SO₂ NAAQS, the Henderson-Webster SO₂ Nonattainment Area was

¹ This rule became effective on August 23, 2010, and also revoked the 24-hour and annual primary SO₂ standards.

designated as a nonattainment area in the fourth round of designations on December 21, 2020.^{2, 3} These area designations became effective on April 30, 2021. *See* 86 FR 16055 (March 26, 2021). States with nonattainment areas for the SO₂ NAAQS must provide nonattainment SIP revisions meeting the applicable requirements of CAA sections 110(a), 172, 191, and 192⁴ for the SO₂ NAAQS. EPA's regulations governing nonattainment SIPs are set forth at 40 CFR part 51, with specific procedural requirements and control strategy requirements residing at subparts F and G, respectively.

For EPA to fully approve a SIP revision as meeting the requirements of CAA sections 110, 172, 191, and 192 and EPA's regulations at 40 CFR part 51, the SIP for the affected area must demonstrate to EPA's satisfaction that each of the requirements have been met. State air agencies with nonattainment areas for the 2010 1-hour primary SO₂ NAAQS are required to submit a SIP revision that addresses these requirements within 18 months after an area is designated nonattainment (no later than October 30, 2022, for the Henderson-Webster SO₂ Nonattainment Area).⁵ Kentucky's January 26, 2024, and February 15, 2024, SIP revisions address the air agency's NNSR permitting and emissions inventory obligations pursuant to section 172(c)(5) and 172(c)(3) of the Act, respectively.

Specifically, Kentucky's January 26, 2024, SIP revision addresses NNSR permitting requirements for the 2010 1-hour SO₂ NAAQS for the Henderson-Webster SO₂ Nonattainment Area by certifying that the version of 401 KAR 51:052 in the SIP satisfies the federal NNSR

² *See* Round 4 SO₂ Designations at <https://www.epa.gov/sulfur-dioxide-designations/epa-completes-fourth-round-sulfur-dioxide-designations>.

³ The Henderson-Webster SO₂ Nonattainment Area is comprised of a portion of Henderson County and a portion of Webster County. EPA designated the Henderson-Webster SO₂ Nonattainment Area in 2020 based on a violating ambient air monitor – the Sebree data requirements rule (DRR) monitor (Air Quality System ID: 21-101-1011) – sited to characterize the maximum 1-hour SO₂ concentrations in the Area. (The DRR may be found at 40 CFR 51.1205). The extent of the partial county Henderson-Webster SO₂ Nonattainment Area was defined based on air dispersion modeling during round 4 SO₂ designations in 2020. *See* 40 CFR 81.318.

⁴ Section 191(a) of the CAA directs states to submit SIPs for areas designated as nonattainment for the SO₂ NAAQS to EPA within 18 months of the effective date of the designation. Under CAA section 192(a) these SIPs are required to demonstrate that their respective areas will attain the NAAQS as expeditiously as practicable, but no later than 5 years from the effective date of designation. In addition, sections 110(a) and 172(c), as well as EPA regulations at 40 CFR part 51, set forth substantive elements each SIP must contain to be approved by EPA.

⁵ *See* CAA section 191(a).

requirements for the Henderson-Webster SO₂ Nonattainment Area at CAA sections 172(c)(5) and 173 and 40 CFR 51.165, and thus, a modification to the Commonwealth's SIP-approved regulations at 401 KAR 51:052 is not necessary.

Additionally, Kentucky's February 15, 2024, SIP revision addresses the base year emissions inventory requirements for the Henderson-Webster SO₂ Nonattainment Area at section 172(c)(3) of the CAA by providing the required accounting of actual SO₂ emissions for the Henderson-Webster SO₂ Nonattainment Area.

On September 5, 2025, EPA published a notice of proposed rulemaking (NPRM) proposing to approve the January 26, 2024, and February 15, 2024, SIP revisions regarding the 2010 1-hour SO₂ NNSR permit program requirements and the emissions inventory for Kentucky for the Henderson-Webster SO₂ Nonattainment Area. *See* 90 FR 42889. The September 5, 2025, NPRM provides additional detail regarding the background and rationale for EPA's action. Comments on the September 5, 2025, NPRM were due on or before October 6, 2025. EPA received one set of adverse comments on the NPRM from a commenter. The comments are posted to the docket for this action. EPA summarizes and responds to the adverse comments below.

II. Response to Comments

Comment 1: The commenter asserts that Kentucky's 2018 point source emissions inventory for the Area is a "non-representative" inventory because it does not account for the conversion from coal to natural gas at the Big Rivers Electric Corporation (BREC) - Robert D. Green Station power plant (BREC-Green Station) that occurred since 2018, and thus, violates the requirement to have a comprehensive, accurate, and current inventory pursuant to section 172(c)(3) of the CAA. Specifically, the commenter claims that the operational changes at BREC Green Station mean the 2018 data does not represent the actual emissions baseline of the Area. Further, the commenter states that because the emissions inventory is the platform for "all future modeling and control strategy development," using this emissions data guarantees that

subsequent SIP elements will be flawed from the outset. The commenter asserts that EPA failed its duty to ensure the SIP is “built on a technically sound foundation” by proposing to approve an inventory based on what the commenter describes as “obsolete” emission data for a major source.

Response 1: EPA disagrees with this comment. Section 172(c)(3) of the CAA states that nonattainment SIPs shall include a comprehensive, accurate, current inventory of actual emissions from all sources of the relevant pollutant or pollutants in the Area. As noted in the September 5, 2025, NPRM, the Commonwealth stated in its February 15, 2024, SIP submission that it selected a 2018 base year emission inventory for the Henderson-Webster SO₂ Nonattainment Area point sources because: 1) 2018 was one of three years (2017, 2018 and 2019) used to designate the Area as nonattainment, and 2) the Commonwealth’s 2018 point source emission data set was more current than the most recent comprehensive triennial inventory in this period, EPA’s 2017 national emissions inventory (NEI) point source data.

The commenter’s claims are unsubstantiated and indicate a misunderstanding of the section 172(c)(3) emissions inventory. Kentucky’s 2018 base year emissions inventory represents emissions in the Henderson-Webster Area at the time it did not meet the 2010 1-hour SO₂ NAAQS. Emission inventories provide emissions data that inform a variety of air quality planning tasks, including establishing baseline emission levels, calculating emission reduction triggers necessary to attain the NAAQS, determining emission inputs for SO₂ air quality modeling analyses, and tracking emissions over time to determine progress toward achieving air quality and emission reduction goal. As noted in EPA’s NPRM, Kentucky has met this requirement to provide a comprehensive, accurate, and current inventory for the Area.

To demonstrate attainment of the NAAQS, the Commonwealth will have to provide an updated emissions inventory that is representative of the emissions in the Area at a time the air quality is attaining the NAAQS. Furthermore, to be redesignated to “attainment,” the Commonwealth would also have to provide a maintenance demonstration. The Commonwealth

would be required to either provide a projected inventory that shows emissions will not increase during a 10-year period in a way that endangers the continued maintenance of the NAAQS or modeling to show that the future mix of sources and emission rates will not cause a violation of the NAAQS. These base year attainment and maintenance inventories serve a different fundamental purpose than the nonattainment base year inventory provided in the February 2024 SIP submittal.

EPA has determined that Kentucky's emission inventory for the Henderson-Webster SO₂ Nonattainment Area, including the 2018 base year inventory for all four point sources, is consistent with the requirements established at section 172(c)(3) of the CAA for a comprehensive, accurate, and current inventory of actual emissions. As such, Kentucky's February 2024 SIP revision satisfies the emissions inventory requirements for nonattainment plans at section 172(c)(3) of the CAA. In addition, pursuant to CAA section 110(k)(3), EPA shall approve a SIP submittal if it meets all the applicable requirements. For these reasons, EPA has not failed its statutory duty.

Comment 2: The commenter asserts that EPA must consider the interdependency of SIP elements and states that approving the NNSR certification based on a flawed emission inventory creates regulatory uncertainty. The commenter goes on to state that the NNSR program applicability and stringency are tied to the accuracy of the emissions inventory data because they determine major source thresholds and significance levels for modifications. The commenter concludes that EPA cannot reasonably determine that the NNSR program is adequate for the 2010 SO₂ NAAQS when the emissions inventory used to calibrate the program is not representative. The commenter alleges that approving a component that is critically dependent on another, unresolved component is an arbitrary segmentation of the SIP process.

Response 2: EPA disagrees with this comment. As discussed in Response 1, nonattainment SIPs must contain an emissions inventory that meets the requirements of CAA section 172(c)(3), and EPA has determined that the Commonwealth's SIP revision satisfies those

requirements. Separately, section 172(c)(5) of the CAA requires that SIPs require permits for the construction and operation of new or modified major stationary source anywhere in a nonattainment area in accordance with section 173 of the CAA. EPA's implementing regulations at 40 CFR 51.165 and Appendix S to part 51 set forth detailed requirements for NNSR programs and define a major stationary source as any stationary source that emits, or has the potential to emit, 100 tons per year (tpy) or more of SO₂. A major modification of an existing major stationary source of SO₂ is defined as a significant emissions increase and significant net emissions increase of SO₂ of 40 tpy. Because these regulations prescribe NNSR requirements, including applicability thresholds, the section 172(c)(3) inventories do not "determine major source thresholds and significance levels for modifications," do not impact the applicability or stringency of NNSR, and are not used to "calibrate" NNSR.

EPA's proposed certification of Kentucky's NNSR program at 401 KAR 51.052 is based on the fact that the SIP is required to contain the permitting criteria established at sections 172(c)(5) and 173 of the CAA and EPA's implementing regulations at 40 CFR 51.165. The NNSR program requirements are not dependent on the base year emission inventory SIP requirements. Both SIP requirements are critical planning elements of the collective nonattainment SIP pursuant to part D of the CAA. Each is independent of the other and serves a unique purpose in addressing air quality that does not attain the NAAQS. Neither the CAA nor its implementing regulations require EPA to deem either a nonattainment plan's NNSR or emissions inventory elements adequate in order to approve the other. Furthermore, the commenter fails to explain how these two elements are interrelated.

Comment 3: The commenter states that the emissions inventory EPA evaluated is outdated and creates a "flawed regulatory framework" that introduces unnecessary risk and uncertainty for Century Aluminum's operations and potential modernization plans. The commenter states that EPA must consider the "'extraordinary circumstance'" of approving a plan that governs a facility of "strategic national importance." The commenter then claims that the

Century Aluminum facility in the Henderson-Webster SO₂ Nonattainment Area produces material that is critical to national defense and infrastructure, and thus, EPA has a responsibility to ensure its actions do not undermine national economic and strategic interests by inadvertently creating a legally unstable and technically unsound permitting environment. The commenter further states that a SIP subject to legal challenges creates regulatory unpredictability that harms investments in critical industries.

Response 3: EPA disagrees with this comment. For the reasons explained in Response 1, EPA disagrees that Kentucky's selection of 2018 for its inventory of point sources in the nonattainment area is outdated. Furthermore, the commenter's assertion that EPA's action approving Kentucky's use of the 2018 base year for point sources as a part of the inventory for the Area somehow undermines the economic viability of an industry the commenter believes produces critical materials is unsupported as is the claim that EPA must consider the "extraordinary circumstance" of approving a plan that governs a facility of "strategic national importance." As discussed in Responses 1 and 2, EPA has evaluated the SIP revisions and determined that they meet the requirements of CAA section 172(c)(3) for the emissions inventory and section 172(c)(5) for NNSR. Pursuant to CAA section 110(k)(3), EPA shall approve a SIP submittal if it meets all the applicable requirements. Therefore, EPA's actions to approve these SIP submittals are consistent with the CAA, and it is therefore unclear how these actions could create regulatory unpredictability that harms investments in critical industries.

Comment 4: The commenter states that "the proposal exhibits significant flaws that require a more rigorous evaluation before a finding of approval can be legally sustained" as summarized in Comments 1 through 3. The commenter concludes that EPA must withdraw the proposal based on the comments summarized above, thoroughly analyze the emission inventory to meet the "current" requirement of CAA 172(c)(3) and require Kentucky to submit a revised inventory, and evaluate the NNSR certification in the context of a "valid" emissions inventory.

Response 4: EPA disagrees with this comment for the reasons discussed in Responses 1 through 3. Therefore, EPA is finalizing approval of these nonattainment planning elements pursuant to CAA sections 172(c)(3), 172(c)(5), and 173 and 40 CFR part 51.

III. Final Actions

For the reasons discussed above, EPA is approving Kentucky's January 26, 2024, and February 15, 2024, SIP revisions containing a certification that its existing SIP-approved NNSR program meets the NNSR requirements for the 2010 SO₂ NAAQS and an emissions inventory, respectively, for the Henderson-Webster SO₂ Nonattainment Area.

IV. Statutory and Executive Order Reviews

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

- Are not significant regulatory actions subject to review by the Office of Management and Budget under Executive Orders 12866 (58 FR 51735, October 4, 1993);
- Are not subject to Executive Order 14192 (90 FR 9065, February 6, 2025) because SIP actions are exempt from review under Executive Order 12866;
- Do not impose an information collection burden under the provisions of the Paperwork Reduction Act (44 U.S.C. 3501 et seq.);
- Are 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.);
- Do not contain any unfunded mandate or significantly or uniquely affect small governments, as described in the Unfunded Mandates Reform Act of 1995 (Pub. L. 104-4);

- Do not have federalism implications as specified in Executive Order 13132 (64 FR 43255, August 10, 1999);
- Are not subject to Executive Order 13045 (62 FR 19885, April 23, 1997) because they approve a state program;
- Are not significant regulatory actions subject to Executive Order 13211 (66 FR 28355, May 22, 2001); and
- Are not subject to requirements of section 12(d) of the National Technology Transfer and Advancement Act of 1995 (15 U.S.C. 272 note) because application of those requirements would be inconsistent with the CAA.

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

These actions are subject to the Congressional Review Act, and EPA will submit a rule report to each House of the Congress and to the Comptroller General of the United States. These actions are not a “major rule” as defined by 5 U.S.C. 804(2).

Under section 307(b)(1) of the CAA, petitions for judicial review of these actions must be filed in the United States Court of Appeals for the appropriate circuit by **[Insert date 60 days after date of publication in the Federal Register]**. Filing a petition for reconsideration by the Administrator of this final rule does not affect the finality of these actions for the purposes of judicial review nor does it extend the time within which a petition for judicial review may be filed, and shall not postpone the effectiveness of such rule or action. These actions may not be challenged later in proceedings to enforce its requirements. *See* section 307(b)(2).

List of Subjects in 40 CFR Part 52

Environmental protection, Air pollution control, Incorporation by reference, Intergovernmental relations, Sulfur oxides.

Dated: December 29, 2025.

Kevin McOmber,
Regional Administrator,
Region 4.

For the reasons stated in the preamble, EPA amends 40 CFR part 52 as follows:

PART 52 – APPROVAL AND PROMULGATION OF IMPLEMENTATION PLANS

1. The authority citation for part 52 continues to read as follows:

Authority: 42 U.S.C. 7401 *et seq.*

Subpart S - Kentucky

2. In § 52.920(e), amend the table by adding new entries for “2010 1-hour

SO₂ NAAQS Nonattainment New Source Review Requirements” and “Emissions Inventory for the 2010 1-hour SO₂ NAAQS” at the end of the table, to read as follows:

§ 52.920 Identification of plan.

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(e) * * *

EPA-Approved Kentucky Non-regulatory Provisions

| Name of non-regulatory SIP provision | Applicable geographic or nonattainment area | State submittal date/effective date | EPA approval date | Explanations |
|--|--|--|--|---------------------|
| ** | ** | * | * | * |
| 2010 1-hour SO ₂ NAAQS Nonattainment New Source Review Requirements | Portions of Henderson and Webster Counties in Kentucky | 1/26/2024 | [Insert date of publication in FEDERAL REGISTER], 90 FR [Insert citation of publication] | |
| Emissions Inventory for the 2010 1-hour SO ₂ NAAQS | Portions of Henderson and Webster Counties in Kentucky | 2/15/2024 | [Insert date of publication in FEDERAL REGISTER], 90 FR [Insert citation of publication] | |