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ENVIRONMENTAL PROTECTION AGENCY

[EPA-OAR-2016-0596; FRL-9970-36-OAR]

RIN 2060-AT22

Response to December 9, 2013, Clean Air Act Section 176A Petition From Connecticut, Delaware, Maryland, Massachusetts, New Hampshire, New York, Pennsylvania, Rhode Island and Vermont

AGENCY: Environmental Protection Agency (EPA).

ACTION: Notice of final action on petition.

SUMMARY: The Environmental Protection Agency (EPA) is denying a Clean Air Act (CAA) petition filed on December 9, 2013, by the states of Connecticut, Delaware, Maryland, Massachusetts, New Hampshire, New York, Pennsylvania, Rhode Island and Vermont. The petition requested that the EPA expand the Ozone Transport Region (OTR) by adding the states of Illinois, Indiana, Kentucky, Michigan, North Carolina, Ohio, Tennessee, West Virginia and the areas of Virginia not already in the OTR in order to address the interstate transport of air pollution with respect to the 2008 ozone national ambient air quality standards (NAAQS). As a result of this denial, the geographic scope and requirements of the OTR will remain unchanged. However, the EPA and states will continue to implement programs to address interstate transport of ozone pollution with respect to the 2008 ozone.

DATES: This final action is effective on **[INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER]**.

ADDRESSES: The EPA has established a docket for this action under Docket ID No. EPA-HQ-OAR-2016-0596. All documents in the docket are listed and publicly available at *http://www.regulations.gov*. Although listed in the index, some information is not 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 in the docket or in hard copy at the Docket, EPA/DC, EPA West, Room 3334, 1301 Constitution Avenue, NW, Washington, DC. The Public Reading Room is open from 8:30 a.m. to 4:30 p.m., Monday through Friday, excluding legal holidays. The telephone number for the Public Reading Room is (202) 566-1744, and the telephone number for the Office of Air and Radiation Docket and Information Center is (202) 566-1742.

FOR FURTHER INFORMATION CONTACT: Ms. Gobeail McKinley, U.S. Environmental Protection Agency, Office of Air Quality Planning and Standards, Air Quality Policy Division, Mail code C539-01, Research Triangle Park, NC 27711, telephone (919) 541-5246; email at *mckinley.gobeail@epa.gov*.

SUPPLEMENTARY INFORMATION:

I. General Information

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

A. How is this action organized?

The information in this Supplementary Information section of this preamble is organized as follows:

B. Where can I get a copy of this document and other related information?

In addition to being available in the docket, an electronic copy of this action will be posted at *https://www.epa.gov/ozone-pollution/2008-ozone-national-ambient-air-quality-standards-naaqs-section-176a-petitions.*

C. What acronyms, abbreviations and units are used in this preamble?

APA	Administrative Procedure Act
CAA or Act	Clean Air Act
CFR	Code of Federal Regulations
D.C. Circuit	United States Court of Appeals for the District of Columbia Circuit
EGU	Electric Generating Unit
EPA	U.S. Environmental Protection Agency
FIP	Federal Implementation Plan
FR	Federal Register
NAAQS	National Ambient Air Quality Standards
NEI	National Emissions Inventory
NESHAP	National Emission Standards for Hazardous Air Pollutants
NO_X	Nitrogen Oxides
NSPS	New Source Performance Standard
NSR	New Source Review
OMB	Office of Management and Budget

OTAG	Ozone Transport Assessment Group
OTC	Ozone Transport Commission
OTR	Ozone Transport Region
PM	Particulate Matter
RACT	Reasonably Available Control Technology
RTC	Response to Comment
SIP	State Implementation Plan
SO_2	Sulfur Dioxide
VOC	Volatile Organic Compound

II. Executive Summary of the EPA's Decision on the CAA Section 176A Petition

In December 2013, the petitioning states of Connecticut, Delaware, Maryland, Massachusetts, New Hampshire, New York, Pennsylvania, Rhode Island and Vermont (petitioners) submitted a petition under section 176A of the CAA that requests the EPA to expand the OTR by adding nine states to the region.[1] In January 2017, the EPA issued a proposal to deny the CAA section 176A(a) petition. The agency solicited comments on this proposal. The EPA received oral testimony from 17 speakers at a public hearing on the proposal on April 13, 2017. The EPA also received over 100 comments on the proposed denial. This final action addresses the major comments the agency received. The remaining comments are addressed in the Response to Comment (RTC) document available in the docket for this action.

In this final action, the EPA is denying the petition to expand the OTR. In making this decision, the EPA reviewed the incoming petition, the public comments received, the relevant statutory authorities and other relevant materials. Section 176A of the CAA provides the

[1] The nine states are Illinois, Indiana, Kentucky, Michigan, North Carolina, Ohio, Tennessee, West Virginia and Virginia. The parts of northern Virginia included in the Washington, DC Consolidated Metropolitan Statistical Area are already in the OTR. The petition seeks to add the remainder of the state of Virginia to the OTR. *See* Response to December 9, 2013, Clean Air Act Section 176A Petition From Connecticut, Delaware, Maryland, Massachusetts, New Hampshire, New York, Pennsylvania, Rhode Island and Vermont, Notice of Proposed Action on Petition, 82 FR 6509 (January 19, 2017)).

Administrator with discretion to determine whether to expand an existing transport region. In light of existing control requirements both within and outside the OTR, the agency's ongoing implementation of the "good neighbor" provision (CAA section 110(a)(2)(D)(i)(I)) through updates to the Cross State Air Pollution Rule (CSAPR), and the emission reductions achieved pursuant to federal and state programs promulgated pursuant to these and other CAA authorities, which have improved, and will continue to improve, air quality in the OTR and throughout the United States (U.S.), the EPA denies the section 176A petition to add states to the OTR for the purpose of addressing interstate transport of the 2008 ozone NAAQS. The EPA believes that other CAA provisions (e.g., section 110(a)(2)(D)(i)(I)) provide a better pathway for states and the EPA to develop a tailored remedy that is most effective for addressing any remaining air quality problems for the 2008 ozone NAAQS identified by the petitioners. The states and the EPA have historically and effectively reduced ozone and the interstate transport of ozone pollution using these other CAA authorities. For purposes of addressing interstate transport with respect to the 2008 ozone NAAQS, the EPA believes that continuing its longstanding and effective utilization of the existing and expected control programs under the CAA's mandatory good neighbor provision embodied in section 110(a)(2)(D)(i)(I) is a more effective means of addressing regional ozone pollution transport for the areas within the OTR that must attain the NAAQS than expanding the OTR as requested. Furthermore, the EPA believes that reliance on these other CAA authorities is a more appropriate use of the agency's limited resources. In addition, in light of comments asking the agency to look more closely at the technical merits of the petition, the EPA has reassessed the technical information submitted in support of the petition, both by petitioners and commenters on the proposed denial, and finds there to be

sufficient analytical gaps to justify this denial action. Accordingly, the EPA denies the CAA section 176A petition filed by the nine petitioning states.

III. Background and Legal Authority

A. Ozone and Public Health

Ground-level ozone is not emitted directly into the air, but is a secondary air pollutant created by chemical reactions between oxides of nitrogen (NO_X) and volatile organic compounds (VOCs) in the presence of sunlight. For a discussion of ozone-formation chemistry, interstate transport issues, and health effects, *see* 82 FR 6511.

On March 12, 2008, the EPA promulgated a revision to the NAAQS, lowering both the primary and secondary standards to 75 parts per billion (ppb).[2] On October 1, 2015, the EPA strengthened the ground-level ozone NAAQS, based on extensive scientific evidence about ozone's effects on public health and welfare.[3] As stated at proposal, this action does not address any CAA requirements with respect to the 2015 ozone NAAQS.

B. Sections 176A and 184 of the CAA and the OTR Process

Subpart 1 of title I of the CAA includes provisions governing general plan requirements for designated nonattainment areas. This subpart includes provisions providing for the development of transport regions to address the interstate transport of pollutants that contribute to NAAQS violations. In particular, section 176A(a) of the CAA provides that, on the Administrator's own motion or by a petition from the governor of any state, whenever the Administrator has reason to believe that the interstate transport of air pollutants from one or more states contributes significantly to a violation of the NAAQS in one or more other states, the

[2] *See* National Ambient Air Quality Standards for Ozone, Final Rule, 73 FR 16436 (March 27, 2008).
[3] *See* National Ambient Air Quality Standards for Ozone, Final Rule, 80 FR 65292 (October 26, 2015).

Administrator may establish, by rule, a transport region for such pollutant that includes such states. The provision further provides that the Administrator may add any state, or portion of a state, to any transport region whenever the Administrator has reason to believe that the interstate transport of air pollutants from such state significantly contributes to a violation of the standard in the transport region.

Section 176A(b) of the CAA provides that when the Administrator establishes a transport region, the Administrator shall establish an associated transport commission, comprised of (at a minimum) the following: governor or designee of each state, the EPA Administrator or designee, the Regional EPA Administrator and an air pollution control official appointed by the governor of each state. The purpose of the transport commission is to assess the degree of interstate pollution transport throughout the transport region and assess control strategies to mitigate the interstate pollution transport.

Subpart 2 of title I of the CAA includes provisions governing additional plan requirements for designated ozone nonattainment areas, including specific provisions focused on the interstate transport of ozone. In particular, subpart 2 includes section 184(a), which established a single transport region for ozone—the OTR—comprised of the states of Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont and the Consolidated Metropolitan Statistical Area that includes the District of Columbia and certain parts of northern Virginia.

Section 184(b) of the CAA established certain control requirements that each state in the OTR is required to implement within the state and which require certain controls on sources of NO_X and VOC statewide. Section 184(b)(1)(A) of the CAA requires OTR states to include in their state implementation plans (SIPs) enhanced vehicle inspection and maintenance (I/M)

programs.[4] Section 184(b)(2) of the CAA requires OTR-state SIPs to subject major sources of VOC in ozone transport regions to the same requirements that apply to major sources in designated ozone nonattainment areas classified as moderate, regardless of whether the source is located in a nonattainment area. Thus, the state must adopt rules to apply the nonattainment new source review (NNSR) (pursuant to CAA section 173) and reasonably available control technology (RACT) (pursuant to section 182(b)(2)) provisions for major VOC sources statewide. Section 184(b)(2) of the CAA further provides that, for purposes of implementing these requirements, a major stationary source shall be defined as one that emits or has the potential to emit at least 50 tons per year of VOCs. Under CAA section 184(b)(2), states must also implement Stage II vapor recovery programs, incremental to Onboard Refueling Vapor Recovery achievements, or measures that achieve comparable emissions reductions, for both attainment and nonattainment areas.[5]

Section 182(f) requires states to apply the same requirements to major stationary sources of NO_X as are applied to major stationary sources of VOC under subpart 2. Thus, the same NNSR and RACT requirements that apply to major stationary sources of VOC in the OTR also apply to major stationary sources of NO_X.[6] While NO_X emissions are necessary for the formation of ozone in the lower atmosphere, a local decrease in NO_X emissions can, in some cases, increase local ozone concentrations, creating potential "NO_X disbenefits." Accordingly, CAA section

[4] Enhanced vehicle I/M programs are required in metropolitan statistical areas in the OTR with a 1990 Census population of 100,000 or more regardless of ozone attainment status.
[5] *See* May 16, 2012, Air Quality: Widespread Use for Onboard Refueling Vapor Recovery and Stage II Waiver, 72 FR 28772 (May 16, 2012).
[6] *See* Nitrogen Oxides Supplement to the General Preamble, 57 FR 55622 (November 25, 1992).

182(f) may be exempt from certain requirements of the EPA's motor vehicle I/M regulations and from certain federal requirements of general and transportation conformity.[7]

Additionally, under section 184(c) of the CAA, the OTC may, based on a majority vote of the governors on the Commission, recommend additional control measures not specified in the statute to be applied within all or part of the OTR if necessary to bring any areas in the OTR into attainment by the applicable attainment dates. If the EPA approves such a recommendation, under CAA section 184(c)(5), then the Administrator must declare each state's implementation plan inadequate to meet the requirements of CAA section 110(a)(2)(D) and must order the states to include the approved control measures in their revised plans pursuant to CAA section 110(k)(5). If a CAA section 110(k)(5) finding is issued, then states have 1 year to revise their SIPs to include the approved measures.

States included in the OTR by virtue of CAA section 184(b)(1) were required to submit SIPs to the EPA addressing these requirements within 2 years of the 1990 CAA amendments, or by November 15, 1992. Section 184(b)(1) of the CAA further provides that if states are later added to the OTR pursuant to CAA section 176A(a)(1), such states must submit SIPs addressing these requirements within 9 months after inclusion in the OTR. When the ozone NAAQS are updated, as occurred in 2008 and 2015, the OTR states must submit RACT SIPs on the same timeframe as areas designated as nonattainment – classified as Moderate or above. For the 2008

[7] As stated in the EPA's I/M rule (November 5, 1992; 57 FR 52950) and conformity rules (November 14, 1995; 60 FR 57179 for transportation rules and November 30, 1993; 58 FR 63214 for general rules), certain NO_X requirements in those rules do not apply where the EPA grants an areawide exemption under CAA section 182(f).

ozone NAAQS, OTR RACT SIPs were due no later than 2 years following the effective date of area designations (i.e., the SIPs were due on July 20, 2014).[8]

C. Legal Standard for this Action

Section 176A(a)(1) of the CAA states that the Administrator *may* add a state to a transport region if the Administrator has reason to believe that emissions from the state significantly contribute to a violation of the NAAQS within the transport region. For the reasons discussed in this section, the use of the discretionary term "may" in CAA section 176A(a) means that the Administrator should exercise reasonable discretion in implementing the requirements of the CAA with respect to interstate pollution transport when determining whether or not to approve or deny a CAA section 176A petition.

The Administrator's discretion pursuant to CAA section 176A(a) has been affirmed by the U.S. Court of Appeals for the District of Columbia Circuit (D.C. Circuit). In *Michigan v. EPA*, plaintiffs challenged whether the EPA may exercise its authority pursuant to CAA sections 110(k)(5) and 110(a)(2)(D) of the statute to address interstate transport without first forming a transport commission pursuant to CAA section 176A(b). 213 F.3d 663, 672 (2000). The D.C. Circuit held that the agency is only required to establish a transport commission "if the agency exercises its discretion to create a transport region pursuant to section 176A(a)." *Id*. The court explained that "EPA can address interstate transport apart from convening a 176A/184 transport commission as subsection (a) provides that EPA 'may' establish a transport region . . . ." *Id*. Thus, the court held that the discretion to create a transport region rests with the Administrator. So, too, does the discretion to add states to or remove states from a transport commission.

[8] 40 CFR 51.1116. *See also* 2008 Ozone NAAQS Implementation Rule, 80 FR 12264, 12282 (March 6, 2015).

Consistent with the Supreme Court's opinion in *Massachusetts v. EPA*, 549 U.S. 497 (2007), the D.C. Circuit has held that agencies have the discretion to determine how to best allocate resources in order to prioritize regulatory actions in a way that best achieves the objectives of the authorizing statute. In *Defenders of Wildlife v. Gutierrez*, the court rejected a challenge to the National Marine Fisheries Service's (NMFS) denial of a petition for emergency rulemaking to impose speed restrictions to protect the right whale from boating traffic pursuant to section 553(e) of the Endangered Species Act, which requires agencies to "give an interested person the right to petition for the issuance, amendment, or repeal of a rule." 532 F.3d 913 (D.C. Cir 2008). The NMFS denied the petition on the grounds that imposing such restrictions would divert resources from, and delay development of, a more comprehensive strategy for protecting the whale population. *Id.at 916*. The court determined that NMFS's explanation for the denial was a reasonable decision to focus its resources on a comprehensive strategy, which in light of the information before the NMFS at the time, was reasoned and adequately supported by the record. *Id*. Similarly, in *WildEarth Guardians v. EPA*, the court reviewed the EPA's denial of a petition to list coal mines for regulation under CAA section 111(b)(1)(A). 751 F.3d 651 (D.C. Cir. 2014). Section 111(b)(1)(A) of the CAA provides that, as a means of developing standards of performance for new stationary sources, the EPA shall, by a date certain publish "(and *from time to time* thereafter shall revise) a list of categories of stationary sources." (emphasis added) The provision provides that the Administrator "shall include a category of sources in such list if *in his judgment* it causes, or contributes significantly to, air pollution which may reasonably be anticipated to endanger public health and welfare." The EPA denied the petition, explaining that it must prioritize its actions in light of limited resources and ongoing budget uncertainties, and that denial of the petition was not a determination as to whether coal mines should be regulated

as a source of air pollutants. 751 F.3d at 650. The EPA also noted as part of its denial that it might in the future initiate a rulemaking to do so. The D.C. Circuit held that the language in CAA section 111(b)(1)(A) – "from time to time" and "in his judgment" – means that the Administrator may exercise reasonable discretion in determining when to add new sources to the list of source categories, and that such language afforded agency officials discretion to prioritize sources that are the most significant threats to public health to ensure effective administration of the agency's regulatory agenda. *Id*. at 651. In each of these cases previously discussed, the acting agency has been entitled to broad discretion to act on a pending petition so long as the agency provided a reasoned explanation. Notably, as each of these decisions focused on the case-specific circumstances relied upon by the acting agency to deny the pending petition, the courts did not speak to whether the agency might reach a different conclusion under different circumstances. Like the statutory provisions evaluated by the courts in these cases, the term "may" in CAA section 176A(a) means that the Administrator is permitted to exercise reasonable discretion in determining when and whether to add new states to a transport region. While the Administrator must adequately explain the facts and policy concerns he relied on in acting on the petition and conform such reasons with the authorizing statute, review of such a decision is highly deferential. Thus, the agency is entitled to broad discretion when determining whether to grant or deny such a petition.

D. The CAA Section 176A Petition and Related Correspondence

On December 9, 2013, the states of Connecticut, Delaware, Maryland, Massachusetts, New Hampshire, New York, Rhode Island and Vermont submitted a petition under CAA section 176A requesting that the EPA add to the OTR the states of Illinois, Indiana, Kentucky, Michigan, North Carolina, Ohio, Tennessee, West Virginia and the portion of Virginia currently

not within the OTR. On December 17, 2013, the petition was amended to add the state of Pennsylvania as a state petitioner.

The petitioners submitted a technical analysis with their petition, which the petitioners contended demonstrates that the nine named upwind states significantly contribute to violations of the 2008 ozone NAAQS in the OTR. The petitioners acknowledged and included data used to support rulemakings promulgated by the EPA that addressed interstate transport with respect to both the 2008 ozone NAAQS, and prior ozone NAAQS, in order to further support their request to expand the OTR. Moreover, the petitioners identified those areas that are designated nonattainment with respect to the 2008 ozone NAAQS within and outside the OTR and conducted a linear extrapolation with preliminary 2012 design values to the year 2015 to predict that certain areas outside the OTR will continue to be in nonattainment or will have difficulty maintaining attainment of the NAAQS after the EPA's 2008 ozone NAAQS final area designations in 2012. In addition, the petitioners included supplemental modeling, which was used to project ozone design values to the years 2018 and 2020. The petitioners' 2018 modeling purported to show that, with "on-the-way" OTR measures, areas within the OTR and within non-OTR states would continue to have problems attaining the 2008 ozone NAAQS. Lastly, their 2020 modeling purported to show that even with a 58 percent NO_X and 3 percent VOC anthropogenic emissions reduction over the eastern U.S., there would be one area in New Jersey that would continue to have trouble maintaining the NAAQS.

The petitioners further noted that the OTR states have adopted and implemented numerous and increasingly stringent controls on sources of VOCs and NO_X that may not currently be required for similar sources in the upwind states. Petitioners contended that expansion of the OTR to include these upwind states will help the petitioning states attain the

2008 ozone NAAQS. The petitioners included two case studies that identify the types of measures adopted throughout the current OTR, including mobile source and stationary source control measures that have been enacted to reduce emissions of NO_X and VOCs. The petitioners contended that the expansion of the OTR is warranted so that the downwind states and the upwind states can work together to address interstate ozone transport for the 2008 ozone NAAQS. Also, the petitioners asserted that without immediate expansion of the OTR, attainment of the 2008 ozone NAAQS in many areas in the U.S. will remain "elusive."

At the time the petition was submitted, the EPA's then most recent effort to address the interstate transport of ozone pollution (i.e., CSAPR) was subject to litigation in the D.C. Circuit. As discussed in more detail later in this notice, the EPA issued CSAPR pursuant to section 110(a)(2)(D)(i)(I) of the CAA in order to address interstate transport with respect to the 1997 ozone NAAQS, as well as the 1997 and 2006 fine particulate matter ($PM_{2.5}$) NAAQS. 76 FR 48208 (August 8, 2011). On August 21, 2012, the D.C. Circuit issued a decision in *EME Homer City Generation, L.P. v. EPA*, 696 F.3d 7 (D.C. Cir. 2012), vacating CSAPR based on several holdings that would have limited the EPA's authority pursuant to section 110(a)(2)(D)(i)(I). The petitioners submitted the section 176A petition in December 2013. Thereafter, on April 29, 2014, the Supreme Court issued a decision reversing the D.C. Circuit's decision and upholding the EPA's interpretation of its authority pursuant to CAA section 110. *EPA v. EME Homer City Generation, L.P.*, 134 S. Ct. 1584 (2014).

Subsequent to the petition being filed, states and other stakeholders submitted additional information to the agency in support of, or, in opposition to, the petition. In the January 19, 2017, the proposed denial, the EPA summarized the correspondence it had received. These documents can be found in the docket for this action.

IV. The EPA's Decision on the CAA Section 176A Petition

At proposal, the EPA explained its proposed basis for the denial of the CAA section 176A petition. The EPA described other authorities provided by the CAA for addressing the interstate transport of ozone pollution and the flexibilities those provisions provide. The EPA noted its historical use of these authorities to address the interstate transport of ozone pollution and the advantages of those rulemakings for addressing current ozone nonattainment problems for the 2008 ozone NAAQS. The EPA explained that it preferred to use these authorities to address the remaining interstate transport problems with respect to the 2008 ozone NAAQS because it believes these authorities allow the agency to develop a tailored remedy that is most effective for addressing any remaining air quality problems. Additionally, the EPA described other measures that have achieved, and will continue to achieve, significant reductions in emissions of NO_X and VOCs resulting in lower levels of transported ozone pollution that impact attainment and maintenance of the 2008 ozone NAAQS. This section summarizes the major points setting forth the EPA's reasons for denial of the petition. The EPA's basis for denying the petition has not fundamentally changed from the proposal; we continue to believe that other CAA mechanisms are more flexible and effective than expanding the OTR (pursuant to section 176A) for addressing current interstate ozone transport issues with respect to the 2008 ozone NAAQS. In Section V of this notice, and in the RTC document included in the docket for this action, the agency provides additional supporting rationale for its conclusion in light of the public comments.

A. The CAA Good Neighbor Provisions

The CAA provision that states and the EPA have primarily relied on to address interstate pollution transport is section 110(a)(2)(D)(i)(I), often referred to as the "good neighbor"

provision, which requires states to prohibit certain emissions from in-state sources impacting the air quality in other states. Specifically, in keeping with the CAA's structure of shared state and federal regulatory responsibility, CAA section 110(a)(2)(D)(i)(I) requires all states, within 3 years of promulgation of a new or revised NAAQS, to submit SIPs that contain adequate provisions prohibiting any source or other type of emissions activity within the state from emitting any air pollutant in amounts which will contribute significantly to nonattainment in, or interfere with maintenance by, any other state with respect to any NAAQS. Thus, each state is required to submit a SIP that demonstrates the state is adequately controlling sources of emissions that would impact downwind states' air quality relative to the NAAQS in violation of the good neighbor provision.

Once a state submits a good neighbor SIP, the EPA must evaluate the SIP to determine whether it meets the statutory criteria of the good neighbor provision, and then approve or disapprove, in whole or in part, the state's submission in accordance with CAA section 110(k). In the event that a state does not submit a required SIP addressing the good neighbor provision, the EPA is required under the CAA to issue a "finding of failure to submit" that a state has failed to make the required SIP submission. If the EPA disapproves a state's SIP submission or if the EPA finds that a state has failed to submit a required SIP, then the action triggers the EPA's obligations under section 110(c) of the CAA, to promulgate a federal implementation plan (FIP) within 2 years, unless the state corrects the deficiency, and the EPA approves the plan or plan revision before the EPA promulgates a FIP. Thus, in the event that a state does not address the good neighbor provision requirements in a SIP submission, the statute provides that the EPA must address the requirements in the state's stead.

Section 110(k)(5) of the CAA also provides a means for the EPA to require states to revise previously approved SIPs, including good neighbor SIPs, if the EPA determines that an approved SIP is substantially inadequate to attain or maintain the NAAQS, to adequately mitigate interstate pollutant transport, or to otherwise comply with requirements of the CAA. The EPA can use its authority under CAA section 110(k)(5) to call for revision of the SIP by the state to correct the inadequacies under CAA section 110(a)(2)(D)(i)(I), and if the state fails to make the required submission, the EPA can promulgate a FIP under CAA section 110(c) to address the inadequacies.

Finally, section 126 of the CAA provides states with an additional opportunity to bring to the EPA's attention specific instances where a source or a group of sources in a specific state may be emitting in excess of what the good neighbor provision would allow. Section 126(b) of the CAA provides that any state or political subdivision may petition the Administrator of the EPA to find that any major source or group of stationary sources in upwind states emits or would emit any air pollutant in violation of the prohibition of CAA section 110(a)(2)(D)(i).[9] Petitions submitted pursuant to this section are referred to as CAA section 126 petitions. Section 126(c) of the CAA explains the impact of such a finding and establishes the conditions under which continued operation of a source subject to such a finding may be permitted. Specifically, CAA section 126(c) provides that it would be a violation of section 126 of the Act and of the applicable SIP: (1) for any major proposed new or modified source subject to a CAA section 126 finding to be constructed or operate in violation of the good neighbor prohibition of CAA section 110(a)(2)(D)(i); or (2) for any major existing source for which such a finding has been made to

[9] The text of CAA section 126 codified in the U.S. Code cross references CAA section 110(a)(2)(D)(ii) instead of CAA section 110(a)(2)(D)(i). The courts have confirmed that this is a scrivener's error and the correct cross reference is to CAA section 110(a)(2)(D)(i), *See Appalachian Power Co. v. EPA*, 249 F.3d 1032, 1040–44 (D.C. Cir. 2001).

operate more than 3 months after the date of the finding. The statute, however, also gives the Administrator discretion to permit the continued operation of a source beyond 3 months if the source complies with emission limitations and compliance schedules provided by the EPA to bring about compliance with the requirements contained in CAA sections 110(a)(2)(D)(i) and 126 as expeditiously as practicable but no later than 3 years from the date of the finding. Where the EPA provides such limitations and compliance schedules, CAA section 110(a)(2)(D)(ii) further requires that good neighbor SIPs ensure compliance with these limitations and compliance schedules.[10]

The flexibility provided by these statutory provisions is different from that provided by the requirements imposed upon states in the OTR. Generally, states in the OTR must impose a uniform set of requirements on sources within each state that meet the minimum requirements imposed by the statute. The good neighbor provision, by contrast, provides both the states and the EPA with the flexibility to develop a remedy that is tailored to a particular air quality problem, including the flexibility to tailor the remedy to address the particular precursor pollutants and sources that would most effectively address the particular downwind air quality problem. As described in the next section (Section IV.B. of this notice) and in the proposal, the EPA has previously promulgated four interstate transport rulemakings pursuant to these authorities in order to quantify the specific emission reductions required in certain eastern states to comply with the requirements of CAA section 110(a)(2)(D)(i)(I) for downwind nonattainment and maintenance concerns with respect to the NAAQS for ozone and $PM_{2.5}$.

[10] The EPA has received, but not yet acted upon, several CAA section 126 petitions from a number of the petitioning states regarding the contribution of specific electric generating units (EGUs) to interstate ozone transport with respect to the 2008 and 2015 ozone NAAQS. Petitions have been submitted by Connecticut, Delaware, and Maryland. The list of EGUs identified in one or more of these petitions includes EGUs operating in Indiana, Kentucky, Ohio, Pennsylvania and West Virginia.

B. The EPA's Interstate Transport Rulemakings under the Good Neighbor Provision

To address the regional transport of ozone pursuant to the CAA's good neighbor provision under section 110(a)(2)(D)(i)(I), the EPA has promulgated four regional interstate transport rules focusing on the reduction of NO_X emissions, as the primary meaningful precursor to address regional ozone transport across state boundaries, from certain sources located in states in the eastern half of the U.S.[11,12] The four interstate transport rulemakings are the: NO_X SIP Call,[13] Clean Air Interstate Rule (CAIR),[14] CSAPR[15] and the CSAPR Update.[16]

The EPA summarized the history and key provisions of each of these rulemakings in the January 19, 2017, proposed denial. *See* 82 FR 6516, 6517, 6518 and 6519. The CSAPR Update, which directly relates to the 2008 ozone NAAQS, is discussed in the next section. In each of these rulemakings, the EPA identified those sources and pollutants that, based on the available information at that time, were most effective in addressing the particular air quality problem identified by the EPA's analysis. This allowed the EPA to craft tailored remedies that provided efficient and effective means of addressing the particular air quality problem at issue. In each of the regional transport rules, the EPA's analyses demonstrated that NO_X is the ozone precursor that is most effective to reduce when addressing regional transport of ozone in the eastern U.S. The EPA has also focused each rule on those sources that can most cost-effectively reduce emissions of NO_X, such as electric generating units (EGUs) and, in one rule, certain large non-

[11] For purposes of these rulemakings, the western U.S. (or the West) consists of the 11 western contiguous states of Arizona, California, Colorado, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington and Wyoming.
[12] Two of these rulemakings also addressed the reduction of annual NO_X and sulfur dioxide (SO_2) emissions for the purposes of addressing the interstate transport of particulate matter pollution pursuant to the good neighbor provision.
[13] 62 FR 57356 (October 27, 1998).
[14] 70 FR 25162 (May 12, 2005).
[15] 76 FR 48208 (August 8, 2011).
[16] 81 FR 74504 (October 26, 2016).

EGUs. These rulemakings demonstrate that the EPA has used and is continuing to use its authority under CAA section 110(a)(2)(D)(i)(I) to focus on those sources and precursors that most effectively address the particular interstate ozone transport problems in the eastern U.S.

The CSAPR Update to Address the 2008 Ozone NAAQS

On October 26, 2016, the EPA published an update to CSAPR that addresses the good neighbor provision with respect to the 2008 ozone NAAQS. 81 FR 74504 (CSAPR Update). The CSAPR Update requires sources in 22 states to reduce ozone season NO_X emissions that significantly contribute to nonattainment or interfere with maintenance of the 2008 ozone NAAQS in other states. The EPA found that for each state included in the CSAPR Update, the state had failed to submit or the EPA had disapproved a complete SIP revision addressing the good neighbor provision for the 2008 ozone NAAQS. The EPA promulgated FIPs for each of the 22 states covered by the CSAPR Update. To accomplish implementation aligned with the applicable attainment deadline for the 2008 ozone NAAQS, the FIPs require affected EGUs to participate in the regional allowance trading program to achieve emission reductions beginning with the 2017 ozone season (*i.e.*, May-September 2017).

The CSAPR Update analysis found that emissions from eight of the nine states named in the CAA section 176A petition to be added to the OTR, in addition to a number of other states, were linked to downwind projected air quality problems, referred to as nonattainment and/or maintenance receptors, in the eastern U.S. in 2017 with respect to the 2008 ozone NAAQS. 81 FR 74506, 74538 and 74539. For one state named in the CAA section 176A petition, North Carolina, the EPA determined in the CSAPR Update that the state was not linked to any downwind air quality problems and, therefore, will not significantly contribute to nonattainment

or interfere with maintenance of the 2008 ozone NAAQS in any other state pursuant to the good neighbor provision. 81 FR 74506, 74537 and 74538.

For those states linked to downwind air quality problems, the EPA next evaluated timely and cost-effective emissions reductions achievable by sources in each state in order to quantify the amount of emissions constituting each state's significant contribution to nonattainment and interference with maintenance of the standard pursuant to the good neighbor provision. The EPA focused its analysis on: (1) emissions reductions achievable by 2017 in order to assist downwind states with meeting the applicable attainment deadline for the 2008 ozone NAAQS (81 FR 74521); (2) reductions in only NO_X emissions, consistent with past ozone transport rules (81 FR 74514); and (3) cost-effective NO_X emissions reductions from EGUs. The EPA, therefore, calculated emissions budgets for each affected state based on the cost-effective NO_X emissions reductions achievable from EGUs for the 2017 ozone season.

The EPA concluded that the emissions reductions achieved by implementation of the budgets constitute a portion of most affected states' significant contribution to nonattainment or interference with maintenance of the 2008 ozone NAAQS at these downwind receptors. 81 FR 74508, 74522.[17] For most states, the EPA could not determine that it had fully addressed emissions reduction obligations pursuant to the good neighbor provision because certain states were projected to remain linked to downwind air quality problems in 2017 even after implementation of the quantified emissions reductions and because the EPA did not quantify further NO_X reduction potential from EGUs beyond 2017 or any NO_X reduction potential from non-EGUs. In order to determine the level of NO_X control stringency necessary to quantify those

[17] For one state named in the CAA section 176A petition, Tennessee, the EPA determined that the emissions reductions required by the CSAPR Update would fully address the state's significant contribution to nonattainment and interference with maintenance of the 2008 ozone NAAQS in other states.

emissions reductions that fully constitute each state's significant contribution to downwind nonattainment or interference with maintenance, the EPA explained in promulgating the final CSAPR Update that it would likely need to evaluate further emission reductions from EGU and non-EGU control strategies that could be implemented on longer timeframes. The CSAPR Update represented a significant first step by the EPA to quantify states' emission reduction obligations under the good neighbor provision for the 2008 ozone NAAQS. Even though the CSAPR Update did not fully address most upwind states' emission reduction obligation pursuant to the good neighbor provision, the implementation of the emissions budgets quantified in that rule are helping to address or resolve projected air quality problems in the eastern U.S., including the designated nonattainment areas within the OTR.

The EPA is actively continuing the work with states necessary to address any remaining obligations under the good neighbor provision with respect to the 2008 ozone NAAQS. The EPA is performing updated ozone transport air quality modeling and analysis to characterize interstate transport beyond 2017.[18] The results of this analysis will provide updated information on any remaining ozone problems and linkages between states.

[18] In January 2017, the EPA also shared preliminary 2023 interstate transport data and solicited input from states on the EPA's interstate transport assessment for the 2015 ozone NAAQS. 82 FR 1733 (January 6, 2017). The EPA included input and feedback received from the public submitted in response to the Notice of Data Availability in conducting the updated modeling.

C. Additional Rules that Reduce NO_X and VOC Emissions

In addition to the significant efforts to implement the good neighbor provision for the 2008 and prior ozone NAAQS, there are also numerous federal and state emission reduction rules that have already been adopted, which have resulted or will result in the further reduction of ozone precursor emissions, including emissions from states named in the CAA section 176A petition and petitioning states. Many of these rules directly require sources to achieve reductions of NO_X, VOC, or both, and others require actions that will indirectly result in such reductions. As a result of these emissions reductions, the interstate transport of ozone has been and will continue to be reduced over time.

The majority of man-made NO_X and VOC emissions that contribute to ozone formation in the U.S. comes from the following sectors: on-road and nonroad mobile sources, industrial processes (including solvents), consumer and commercial products, and the electric power industry. In 2014, the most recent year for which the National Emissions Inventory (NEI) is available, the largest contributors of annual NO_X emissions nationally are on-road and nonroad mobile sources (accounted for about 56 percent) and the electric power industry (EGUs; accounted for about 13 percent). With respect to VOCs, the largest contributors of annual man-made emissions nationally are industrial processes (including solvents; accounted for about 48 percent) and mobile sources (accounted for about 27 percent).[19, 20]

The EPA establishes emissions standards under various CAA authorities for numerous classes of automobile, truck, bus, motorcycle, earth mover, aircraft, and locomotive engines, and for the fuels used to power these engines. The pollutant reduction benefits from new engine

[19] The VOC percentages are for anthropogenic VOCs only. Emissions from natural sources, such as trees, also comprise around 70 percent of total VOC emissions nationally, with a higher proportion occurring during the ozone season and in areas with more vegetative cover.
[20] For more information, *see* the "2014 NEI Summary Spreadsheet" in the docket.

standards increase each year as older and more-polluting vehicles and engines are replaced with newer, cleaner models. The benefits from fuel programs generally begin as soon as a new fuel is available. Further, the ongoing emission reductions from mobile source federal programs, such as those listed previously, will provide for substantial emissions reductions well into the future, and will complement state and local efforts to attain the 2008 ozone NAAQS.

There are several existing national rules that continue to achieve emission reductions through 2025 and beyond with more protective emission standards for on-road vehicles that include: Control of Air Pollution from Motor Vehicles: Tier 3 Motor Vehicle Emission and Fuel Standards;[21] Control of Air Pollution from New Motor Vehicles: Tier 2 Motor Vehicle Emissions Standards and Gasoline Sulfur Control Requirements;[22] Control of Air Pollution from New Motor Vehicles: Heavy-Duty Engine and Vehicle Standards and Highway Diesel Fuel Sulfur Control Requirements;[23] Model Year 2017 and Later Light-Duty Vehicle Greenhouse Gas Emissions and Corporate Average Fuel Economy Standards;[24] Model Year 2012 - 2016 Light-Duty Vehicle Greenhouse Gas Emission Standards and Corporate Average Fuel Economy Standards;[25] Greenhouse Gas Emissions and Fuel Efficiency Standards for Medium- and Heavy-Duty Engines and Vehicles - Phase 2;[26] Phase 1 Greenhouse Gas Emissions Standards and Fuel Efficiency Standards for Medium- and Heavy-Duty Engines and Vehicles[27] and Control of Hazardous Air Pollutants from Mobile Sources.[28]

[21] 81 FR 23414 (April 28, 2014).
[22] 65 FR 6698 (February 10, 2000).
[23] 66 FR 5002 (January 18, 2001).
[24] 77 FR 62624 (October 15, 2012).
[25] 75 FR 25324 (May 7, 2010).
[26] 81 FR 73478 (October 25, 2016).
[27] 76 FR 57106 (September 15, 2011).
[28] 72 FR 8428 (February 26, 2007).

Similarly, already adopted regulations for non-road engines and equipment that will achieve further reductions include: Control of Emissions of Air Pollution from Nonroad Diesel Engines and Fuel;[29] Republication for Control of Emissions of Air Pollution from Locomotive Engines and Marine Compression-Ignition Engines Less Than 30 Liters per Cylinder;[30] Control of Emissions from New Marine Compression-Ignition Engines at or Above 30 Liters per Cylinder;[31] the International Maritime Organization's Emission Control Area to Reduce Emissions from Ships in the U.S. Caribbean; Control of Air Pollution From Aircraft and Aircraft Engines;[32] Emission Standards and Test Procedures; Control of Emissions from Nonroad Large Spark-Ignition Engines, and Recreational Engines (Marine and Land-Based);[33] and Control of Emissions from Nonroad Spark-Ignition Engines and Equipment.[34]

As a result of the rules and programs listed in this section, various other state programs and efforts, and wider economic trends, ozone levels across the nation and the OTR have been declining−e.g., down by more than 30 percent since 1980 nationwide. Ozone levels across the nation are expected to further decline over the next several years due to emissions controls already in place. The EPA's emissions projections in support of the 2015 ozone NAAQS modeling show declining emissions of NO_X and VOCs between 2017 and 2025. In the states comprising the OTR plus the nine upwind states named in the CAA section 176A petition, total NO_X emissions over the upcoming 7-year period (2017-2025) are expected to decline by almost

[29] 69 FR 38958 (June 29, 2004).
[30] 73 FR 37096 (June 30, 2008).
[31] 75 FR 22896 (April 30, 2010).
[32] 77 FR 36342 (June 18, 2012).
[33] 67 FR 68242 (November 8, 2002).
[34] 73 FR 59034 (October 8, 2008).

20 percent on average and VOC emissions are expected to decline by more than 10 percent on average over the same period.[35]

D. Summary of Rationale for the Decision on the CAA Section 176A Petition

As proposed, the EPA is finalizing its denial of the CAA section 176A petition because we believe that the statute provides other, more effective means of addressing the impact of interstate ozone transport on any remaining air quality problems within the OTR with respect to the 2008 ozone NAAQS. Continuing those existing efforts is a better use of the agency's limited resources. As described at proposal, the statute provides several provisions that allow states and the EPA to address interstate ozone transport with a remedy better tailored to the nature of the particular air quality problem, focusing on those precursor emissions and sources that most directly impact downwind ozone nonattainment and maintenance problems and which can be controlled most cost effectively. The EPA and states are actively using these provisions, and numerous federal and state measures have reduced, and will continue to reduce, the VOC and NO_X emissions that contribute to ozone formation and the interstate transport of ozone pollution. The EPA does not believe that it is necessary to add more states to the OTR at this time in order to effectively address transported pollution in the OTR relative to the 2008 ozone NAAQS.

While the CAA contains several provisions, both mandatory and discretionary, to address interstate pollution transport, the EPA's decision whether to grant or deny a CAA section 176A petition to expand an existing transport region is discretionary. Section 176A of the CAA states that the Administrator *may* add any state or portion of a state to an existing transport region whenever the Administrator has reason to believe that the interstate transport of air pollutants from such state significantly contributes to a violation of the standard in the transport region. The

[35] For more information, see the "2011, 2017 and 2025 NEI Summary Spreadsheet" in the docket.

EPA does not dispute that certain named upwind states in the petition might impact air quality in one or more downwind states that are measuring violations of the 2008 ozone NAAQS. However, the EPA believes that states and the EPA can effectively address the upwind states' impacts on downwind ozone air quality through the good neighbor provision. The EPA has already taken steps to address interstate transport with respect to the 2008 ozone NAAQS through the promulgation of the CSAPR Update, which reduces emissions starting with the 2017 ozone season. The EPA used the authority of CAA sections 110(a)(2)(D)(i)(I) and 110(c) to tailor a remedy focused on the precursor pollutant most likely to improve ozone levels (currently NO_X) in downwind states and those sources that can most cost-effectively reduce emissions within a limited timeframe (i.e., EGUs). The EPA further implemented the remedy through an allowance trading program that achieves emission reductions while providing sources with the flexibility to implement the control strategies of their choice.

We believe that the continued use of the authority provided by the good neighbor provision to address the interstate transport of ozone pollution plus other regulations that are already in place will permit the states and the EPA to achieve any additional mandatory reductions to address the 2008 ozone NAAQS without the need to implement the additional requirements that inclusion in the OTR would entail. As described in the proposal, this approach to address the interstate transport of ozone is a proven, efficient, and cost-effective means of addressing downwind air quality concerns that the agency has employed and refined over nearly two decades. However, the EPA notes that the addition of states to the OTR pursuant to the CAA section 176A authority – and the additional planning requirements that would entail – could be given consideration as an appropriate means to address the interstate transport requirements of the CAA should the agency's approach or other circumstances change in the future.

As described in this action, the CAA provides the agency and states with the authority to mitigate the specific sources that contribute to interstate pollution through implementation plans to satisfy the requirements of the good neighbor provision, CAA section 110(a)(2)(D)(i)(I), and through the related petition process under CAA section 126. This authority gives the EPA and states numerous potential policy approaches to address interstate pollution transport of ozone, and the EPA has consistently and repeatedly used its authority under CAA section 110(a)(2)(D)(i)(I) to approve state plans for reducing ozone transport or to promulgate FIPs to specifically focus on the sources of ozone transport both within and outside the OTR. The NO_X SIP Call, CAIR, CSAPR, CSAPR Update and numerous individual SIP approvals demonstrate that the EPA has a long history of using its CAA section 110 authority to specifically address interstate pollution transport in a tailored way that is specific to a NAAQS and set of pollution sources that are the primary contributors to interstate pollution transport. As described in Section IV.B of this notice, using the authority of the good neighbor provision has allowed the EPA to focus its efforts on pollution sources that are responsible for the largest contributions to ozone transport and that can cost-effectively reduce emissions, and also enables the agency to focus on NO_X as the primary driver of long range ozone transport—an approach the courts have found to be a reasonable means of addressing interstate ozone transport. *Michigan v. EPA*, 213 F.3d at 688 ("EPA reasonably concluded that long-range ozone transport can only be addressed adequately through NO_X reductions"); *see also EPA v. EME Homer City Generation, L.P.*, 134 S. Ct. at 1607 (affirming as "efficient and equitable" the EPA's use of cost to apportion emission reduction responsibility pursuant to the good neighbor provision).

As explained previously, adding states to an OTR under CAA section 176A will not afford the states and EPA with the flexibility to focus on specific sources and ozone precursor

emissions tailored to address the downwind state's current air quality problems and needed remedy to achieve attainment of the 2008 NAAQS. The statute prescribes a specific set of controls for a variety of sources to control emissions of both VOCs and NO_X. CAA section 110(a)(2)(D)(i)(I), on the other hand, permits the EPA and the regulated community the flexibility to focus controls on specific sources and pollutants that most efficiently address the air quality problem being addressed. The EPA determined in the CSAPR Update that regional NO_X emissions reductions are the most effective means for providing ozone benefits for areas in the eastern United States, including the OTR, currently violating the 2008 ozone NAAQS, and that NO_X reductions can be most efficiently achieved by focusing on those sources that can cost-effectively reduce emissions within a limited timeframe. Accordingly, the EPA does not believe that the requirements which would be imposed upon states added to the OTR would be the most effective means of addressing any remaining interstate transport concerns with respect to the 2008 ozone NAAQS.

The implementation of controls within the OTR, when combined with the numerous federal and state emission reduction programs that have already been adopted that have resulted in the reduction of ozone precursor emissions either directly or as a co-benefit of those regulations, have helped to significantly reduce ozone levels. These programs will continue to reduce ozone precursor emissions and ozone concentrations both within and outside of the OTR over many years to come. The EPA believes the most efficient way to address any remaining 2008 ozone NAAQS interstate transport problems is to continue to address any required reductions through a combination of tailored programs, including the implementation of the CSAPR Update, further development of implementation plans pursuant to section 110,

development of local attainment plans, and, if appropriate, consideration of additional emissions limitations resulting from action on CAA section 126 petitions.

The Administrator may exercise reasonable discretion in determining whether or not to approve or deny a CAA section 176A petition. The EPA has reviewed the request of the petitioners to add additional states to the OTR in light of required control strategies for ozone transport regions and the other statutory tools available to the agency and states to address the interstate transport of ozone pollution. The agency believes that continuing its longstanding and effective use of the existing and expected control programs under the CAA's mandatory good neighbor provision embodied in section 110(a)(2)(D)(i)(I), including implementation of the CSAPR Update beginning in 2017 and technical work now underway to fully address the good neighbor provision for the 2008 NAAQS, is a more effective approach for addressing regional interstate ozone transport problems relative to the 2008 ozone standard.

The EPA, therefore, denies the petitioners' request to add at this time additional states to the OTR for the purpose of addressing interstate transport of the 2008 ozone NAAQS. The agency will instead continue to use other authorities available within the CAA in order to address the long-range, interstate transport of ozone pollution. This response only considers the effectiveness of the OTR expansion to achieve appropriate emission reductions to address the 2008 ozone NAAQS. The EPA notes that, under different circumstances, the OTR provisions have been an effective tool for air quality management, and could be similarly effective in the future for addressing interstate transport of ozone pollution. Accordingly, nothing in this document should be read to limit states' ability to file a petition under CAA section 176A in the future or to prejudge the outcome of such a petition, if filed.

V. Major Comments on the Proposed Denial

The EPA solicited comment on the proposed denial of the petition based on the EPA's preference for addressing interstate transport with respect to the 2008 ozone NAAQS pursuant to other CAA authorities. This section addresses significant comments received on the January 19, 2017, proposed denial. Remaining comments are addressed in a separate RTC document found in the docket for this action.

A. Adequacy of the EPA's Rationale

Commenters believed that the EPA's explanation for denial in the proposal was inadequate. Commenters stated that the EPA's explanation for the proposed denial of the petition failed to provide a technical review of the data submitted by the petitioners and instead focused on the availability of other CAA programs. Commenters asserted the EPA "must adequately explain the facts and policy concerns relied on in acting on the petition and conform such reasons with the authorizing statute." For example, they claimed, the EPA offered no analysis of relative costs of other tools and the efficiency of those approaches nor did the EPA propose to find the petition technically inadequate with respect to the air quality data presented in the technical support document (TSD) for the petition.[36] Commenters stated that the agency failed to provide empirical evidence to support the basis for the proposed denial. Some commenters believed empirical data are required in order for the agency to respond to a CAA section 176A petition. Some commenters believed that the EPA's supporting technical data for the CAIR and CSAPR rules technically justify expansion of the OTR, pointing in particular to the Petition TSD. Commenters in support of the proposed denial claimed there are errors with the petitioners' supporting data. In addition, some commenters acknowledged that recent air quality

[36] Technical Support Document for the Petition to the United States Environmental Protection Agency for the Addition of Illinois, Indiana, Kentucky, Michigan, North Carolina, Ohio, Tennessee, Virginia and West Virginia to the Ozone Transport Region (December 9, 2013) (EPA-HQ-OAR-2016-0596-0002 docket number) (hereinafter "Petition TSD").

measurements and emission reductions of ozone precursor pollutants show that air quality has improved. In contrast, some commenters opposed to the proposed denial encouraged the EPA to grant the petition in part based on data provided by petitioners that showed that some of the states outside the OTR were violating the NAAQS and believed the OTR requirements would also help those areas meet the NAAQS.

Response: The EPA disagrees that it bears the burden of conducting extensive air quality or other empirical analysis in response to a CAA section 176A petition. Petitioners for administrative action generally should establish the merits of their petition in the first instance. *See, e.g., Radio-Television News Dirs. Ass'n v. FCC*, 184 F.3d 872, 881 (D.C. Cir. 1999). While the agency has reviewed the technical information supplied in support of the petition, there have been significant changes to emissions levels, regulatory requirements, and ambient air quality that have occurred in the interim since the petition was submitted in December 2013. The EPA has taken into account this additional supporting air quality information, including current air quality conditions, some recent on-the-books control strategies, and significant changes in emissions inventories that have occurred over the past several years. In general, commenters did not call into question the EPA's view at proposal that ozone levels across the nation and the OTR have been declining and are expected to further decline over the next several years (82 FR 6520). As a separate matter, neither petitioners nor commenters provided information supporting the reasonableness of imposing the suite of section 184 of the CAA control strategies as a whole to address any remaining interstate air quality impact that states named in the petition would have with respect to the 2008 ozone NAAQS. In its proposed denial, the agency emphasized its preference for continuing the more tailored, flexible, and cost-effective approach of addressing interstate transport of ozone under CAA section 110(a)(2)(D)(i)(I). In response to comments

asserting that the agency failed to more fully address the technical information underlying the petition, the agency will respond briefly regarding why it believes the information presented in support of the petition is insufficient given the totality of information the agency considered, including more recent air quality information.

The air quality information relied upon, in part, by petitioners included the EPA's CAIR modeling from 2005, which is now over 10 years old, and the CSAPR *base case* modeling from 2011.[37] These two sets of modeling do not capture the reductions in ozone precursors that have occurred as a result of the implementation of either the CSAPR, which went into effect in 2015, or the CSAPR Update, which went into effect for the 2017 ozone season and was specifically designed to address the 2008 ozone NAAQS at issue in this petition. Petitioners' data also do not capture other changes in the emissions inventory and pollution control requirements that have occurred since that time. As the EPA noted in the proposal, 82 FR 6519, the modeling for the final CSAPR Update in 2016, the modeling currently underway to address states' remaining interstate transport obligations for the 2008 ozone NAAQS, and recent air quality monitor design values provide a more current picture of air quality issues and projections.

The EPA acknowledges that the petitioners originally may have submitted information reflective of air quality prior to December 2013, but the EPA believes it is appropriate to consider all relevant information available at the time it takes action on the petition, not only the information provided in the petition, but more current information reflecting additional developments in federal regulations and changes in air quality. The EPA believes it would be unreasonable for the agency to consider OTR expansion and subject states to OTR requirements without considering the most recent information that is directly relevant to the 2008 ozone

[37] Petition TSD 4-14.

NAAQS air quality problems intended to be addressed by the petitioners. The EPA notes that at the time the petitioners submitted the petition in December 2013, the CSAPR implementation requirements had been vacated by the D.C. Circuit, and there was uncertainty regarding if and when the rule's emissions reductions would take effect. However, subsequent to the petitioners filing the petition, on April 29, 2014, the Supreme Court issued a decision reversing the D.C. Circuit's decision on the CSAPR and on October 23, 2014, the lower court granted the EPA's request to lift the stay on the CSAPR. In addition to the emissions reductions as a result of CSAPR, the EPA has issued the CSAPR Update which further reduces NO_X emission during the ozone season for a number of eastern states. Because the data used by the petitioners are now dated, they do not reflect the sustained trend of declining emissions and improved air quality. As noted in the proposal, since 2013 when the petition was submitted, there has been a long-term trend of improving air quality in the eastern U.S. For instance, petitioners identified 2012 preliminary design values showing that the designated nonattainment areas of Charlotte-Rock Hill, NC-SC; Chicago-Naperville, IL-IN-WI; Cincinnati, IN-KY-OH; Cleveland-Akron-Lorain, OH; Columbus, OH; Knoxville, TN; Memphis, AR-MS-TN; and St. Louis-St. Charles-Farmington, IL-MO would be in violation of the 2008 ozone NAAQS. Further the petitioners extrapolated the 2012 design values to 2015 to project that the designated nonattainment areas of Chicago-Naperville, IL-IN-WI; Cincinnati, IN-KY-OH; Cleveland-Akron-Lorain, OH; and Columbus, OH would continue to violate the NAAQS. However, most of these areas are now measuring attainment of the NAAQS.[38] Thus, the nature of the remaining 2008 ozone NAAQS nonattainment issues in the non-OTR states is not as severe in terms of the number of

[38] Status of Designated Areas for the Ozone-8Hr (2008) NAAQS, *https://www3.epa.gov/airquality/urbanair/sipstatus/reports/ozone-8hr__2008__areabynaaqs.html* (last visited September 20, 2017).

nonattainment areas as it appeared to be in the past.[39] These improvements have been driven in part by CSAPR and other air pollution control programs and rules, see Section IV.C of this notice, as well as a well-documented, long-term trend of transition toward sources of electricity generation in the power sector that have lowered NO_X emissions.[40]

The EPA also observes an analytical gap in the information submitted in support of this petition as to the reasonableness of the remedy that would be imposed by application of the suite of requirements under CAA section 184 to address the air quality problems at issue. The EPA need not dispute now (nor did it at proposal) that the states named in the petition may impact air quality at downwind areas in states within the OTR, at least as of the time of the CSAPR Update modeling. *See* 82 FR 6518. In the agency's view, however, the air quality information submitted here, standing alone, does not automatically warrant expanding the OTR to this group of states at this time. Under the approach the EPA has historically taken to identify control measures to address regional interstate transport (in the NO_X SIP Call, CAIR, CSAPR, and CSAPR Update), a linkage to a downwind air quality problem would not automatically result in imposition of mandatory controls, such as those that would be required under CAA section 184 if this petition were granted. Rather, the EPA has also historically considered the reasonableness of application of control strategies available within a linked state, usually by examining which precursors to ozone formation it would be most effective to control, as well as the costeffectiveness of those controls. Neither petitioners nor commenters in support of the petition supply an analysis regarding the reasonableness of applying the controls that would be required under CAA section

[39] Further, the statutory basis for granting a CAA section 176A petition is tied to *interstate* transport of air pollutants. *See* 42 U.S.C. 7506a(a). Intrastate air quality problems, in and of themselves, would not be a basis for granting this petition.

[40] Power Plant Emission Trends (NO_X Tab), *https://www3.epa.gov/airmarkets/progress/datatrends/index.html (*last visited September 20, 2017).

184 if the petition were granted, such as providing an analysis of their effectiveness in addressing the interstate transport problem at issue or the costs associated with those mandatory controls. As the EPA emphasized at proposal, 82 FR 6520 and 6521, application of appropriate controls through an examination of which precursors and sources to address and the cost effectiveness of available control strategies has been an integral principle of its efforts to address interstate transport of air pollution in federal regional transport rules.[41] As discussed in Section V.B. of this notice, there are good grounds to question the reasonableness of application of at least some CAA section 184 requirements in the non-OTR states in this petition. The agency is, therefore, well-justified in continuing to rely primarily on its CAA section 110(a)(2)(D)(i)(I) authority in transport rules to focus on the pollutants and the sources in a manner that most effectively and efficiently addresses long range ozone transport.

B. Effectiveness of Ozone Precursor Emissions Reductions

Some commenters highlighted the benefits of the OTC, as well as the benefits of RACT, I/M, and NSR. Commenters believed the EPA's reliance on other CAA tools to justify denial is inadequate because the EPA has not analyzed the costs of those tools or acknowledged that the cost per ton of emission reduced is lower in the non-OTR states than in the OTR states. They asserted that the EPA is overestimating control cost and underselling the ability of sources to meet more stringent limits.

Other commenters that support denial of the petition questioned the effectiveness of VOC emission reductions on air quality in areas within the OTR. The commenters claimed that VOC emissions from the states outside of the current OTR states are not effective and would not

[41] *See, e.g., EPA v. EME Homer City Generation, L.P.*, 134 S. Ct. 1584, 1606–07 (2014).

improve air quality or reduce the ozone concentrations in the Baltimore, Philadelphia, New York and Connecticut areas.

Response: While the EPA acknowledges that the OTR has been an effective tool for addressing widespread and persistent ozone transport problems in the East, petitioners have not demonstrated that the suite of mandatory controls that would apply to new states added to the OTR would be a more effective means than its current approach under the good neighbor provision for addressing any remaining ozone transport problems with respect to the 2008 ozone NAAQS. These existing efforts represent a better use of limited EPA and state resources. The EPA appreciates that the process provided by the OTR regulations, via the OTC, has fostered a collaborative process for current OTR states to address ozone transport issues. However, at this time, we do not believe that the benefits of this process outweigh the concerns that the mandatory requirements imposed in the OTR are not the measures best suited to addressing any remaining downwind air quality problems in the most reasonable manner, i.e. by focusing on those sources and precursor emissions most likely to lead to cost-effective downwind air quality benefits.

For instance, the EPA has previously explained that "authoritative assessments of ozone control approaches" have concluded that VOC reductions are generally most effective for addressing ozone locally, including in dense urbanized areas and "immediately downwind." *See* CSAPR Final Rule, 76 FR 48222; *see also* 82 FR 6517 (citing 63 FR 57381). Yet granting this petition would require mandatory VOC controls pursuant to section 184(b) over a vast region that would not be local to or nearby the remaining ozone problems in the OTR that the petition aims to address. Petitioners have not connected these types of VOC reductions over such a wide region with specific air quality benefits within the existing OTR. The EPA continues to believe

that NO_X emission reductions strategies are more effective than VOC reductions in lowering ozone concentrations over longer distances. The EPA believes that regional ozone formation is primarily due to NO_X, but VOCs are also important because VOCs influence how efficiently ozone is produced by NO_X, particularly in dense urban areas. Reductions in anthropogenic VOC emissions will typically have less of an impact on the long-range transport of ozone, although these emission reductions can be effective in reducing ozone in nearby urban areas where ozone production may be limited by the availability of VOCs. Therefore, a combination of localized VOC reductions in urban areas with additional NO_X reductions across a larger region will help to reduce ozone and precursors in nonattainment areas, as well as downwind transport across the eastern U.S. Further, NO_X reductions will reduce peak ozone concentrations in nonattainment areas. As noted in the proposal, model assessments have looked at impacts on peak ozone concentrations after potential emission reduction scenarios for NO_X and VOCs for NO_X-limited and VOC-limited areas. Specifically, one study[42] concluded that NO_X emission reductions strategies would be effective in lowering ozone mixing ratios in urban areas and another study showed NO_X reductions would reduce peak ozone concentrations in nonattainment areas in the Mid-Atlantic (i.e., a 10 percent reduction in EGU and non-EGU NO_X emissions would result in approximately a 6 ppb reduction in peak ozone concentrations in Washington, DC).[43]

C. Efficiency in Addressing Statutory Interstate Transport Requirements

Commenters in support of granting the petition believed expansion of OTR is an efficient method to address interstate transport of pollution that could satisfy the intent of the good

[42] Jiang, G.; Fast, J.D. (2004) Modeling the effects of VOC and NO_X emission sources on ozone formation in Houston during the TexAQS 2000 field campaign. Atmospheric Environment 38: 5071-5085.

[43] Liao, K. et. al. (2013) Impacts of interstate transport of pollutants on high ozone events over the Mid-Atlantic United States. Atmospheric Environment 84, 100-112.

neighbor provision and give upwind states a successful coordination process for addressing ozone pollution. Some commenters believed the collaborative process inherent in the OTC's mission is efficient and uniquely suited to address transport and achieve timely attainment of the ozone NAAQS and clean air. They believed there are two important mechanisms in the OTR process that would reduce ozone levels: (1) the establishment of a minimum baseline for emissions control in the area, and (2) a framework for states to collaborate in the development and implementation of additional measures if necessary to solve the ozone problem. They also believed OTR expansion would obviate the need for future good neighbor FIPs and CAA section 126 petitions. They argue that the EPA has a history of "inaction, delay, and failure" to adequately address interstate transport under CAA sections 110(a)(2)(D)(i)(I) and 126. One commenter claimed that states have not taken the initiative to address interstate transport requirements until required by the EPA. In addition the commenter believes that they have to force EPA to fulfill its statutory obligations by litigation. They believed the CSAPR Update is inadequate because it addresses only a part of most states' interstate transport obligations. They further noted the EPA's delayed action on CAA section 126 petitions. The commenter asserted that these statutory tools are resource intensive and time-consuming. They believed the EPA should expand the OTR to include all the states that contribute materially to regional ozone levels because it will facilitate the development of a more efficient state-led response to address interstate ozone transport. Another commenter believed that the EPA cannot selectively choose not to use CAA section 176A as a tool because it prefers other provisions, and that this ignores the statutory goal that states attain the standard as expeditiously as practicable.

Response: The EPA appreciates the time and resources needed for the agency and states to take action to address interstate transport obligations. However, the agency disagrees that

expansion of the OTR would necessarily be a faster or more efficient method to address interstate ozone transport than continuing to work within the well-established framework of the EPA's historical approach to addressing interstate transport pursuant to the good neighbor provision. Because addressing the good neighbor obligation is required of all states following NAAQS promulgation, and not just those areas that are eventually designated nonattainment, states are required to submit their plans for addressing their CAA section 110(a)(2)(D) obligations 3 years after the promulgation of a NAAQS. 42 U.S.C. 7410(a). Thus, the CAA section 110(a)(2)(D)(i)(I) process on its face provides a faster timeframe for implementation of interstate transport requirements for a new NAAQS than application of OTR requirements, which run from the effective date of designations and are set under CAA section 182 through a separate rulemaking process.

In any case, both the OTR SIP process and the good neighbor process are state-driven in the first instance. States are expected to submit approvable implementation plans by the deadlines required in the statute and states can choose to submit plans – under either the good neighbor or OTR process – that achieve greater emission reductions faster than required by the CAA. Even though the EPA has sometimes been required to apply FIPs to address good neighbor obligations, which have in turn been litigated, the good neighbor provision process has proven to be successful historically. Moreover, given increasing experience applying the EPA's prior interstate transport rules and the fact that many interstate transport issues have already been addressed through litigation, the states and the EPA are increasingly positioned to implement this provision in a timelier fashion. Lastly, it is important to note that, notwithstanding the fact that OTR states do have OTR control requirements, the EPA has generally (most recently via the CSAPR Update) had to seek additional emission reductions from OTR states through the good

neighbor process to address interstate transport and help areas within and outside the OTR reduce ozone concentrations.

Some commenters alleged that the EPA has delayed or failed to act on CAA section 126 petitions from states. All of the CAA section 126 petitions submitted by the states in the OTR (i.e., Connecticut, Delaware and Maryland) for the 2008 ozone NAAQS were submitted in 2016, and the agency is continuing to review these petitions. Action on these petitions is beyond the scope of this action. However, the EPA observes that four of the six petitions the EPA has received from OTR states since 2016 concern sources within another OTR state, which tends to demonstrate limitations in some respects to the efficacy of the OTR process.

D. Equity Among States

Commenters stated that the "disparity" between environmental performance of sources within the OTR and those outside the OTR has grown. One commenter estimated that the difference in cost of controls for further reductions from OTR sources could be in the range of $10,000 to $40,000 per ton, while in the non-OTR states it could be as low as $500 to $1,200 per ton. Commenters further stated that denial of the petition will continue to leave OTR states at a competitive disadvantage, as the control requirements within the OTR increase the costs to business and industry, while the non-OTR states are allowed to emit at far higher levels.

Other commenters asserted in contrast that OTR control requirements are costly and burdensome. They claimed the mandatory requirements would impose a substantial cost burden upon both the permitting authorities and the regulated communities. One commenter asserted that the petitioners' notion of economic fairness as a basis for the petition is inappropriate and states that the EPA has no authority to require controls on that basis. This commenter suggested that OTR states should be required to address their requirements first before seeking an

expansion. The commenter contended that OTR states are not fully implementing required OTR and other ozone controls, and, if they were, it may sufficiently control ozone to obviate the need for expansion of the OTR.

Response: As an initial matter, the statutory basis for granting a CAA section 176A petition is tied to the *interstate* transport of air pollutants. *See* 42 U.S.C. 7506a(a). The EPA recognizes, however, that equity, or fairness, can play a role in apportioning responsibility for addressing air quality problems to which multiple states are contributing. These concerns have played a role in the legal analysis of the EPA's past rulemakings under CAA section 110(a)(2)(D)(i)(I). In *EPA v. EME Homer City*, the Supreme Court upheld the agency's approach in the CSAPR of eliminating amounts of air pollution that can cost effectively be reduced as an efficient and equitable solution to the allocation problem of the good neighbor provision. 134 S. Ct. 1584, 1607 (2014). The Court noted that the EPA's approach was "[e]quitable because, by imposing uniform cost thresholds on regulated states, EPA's rule subjects to stricter regulation those States that have done relatively less in the past to control their pollution." *Id.* Thus, the agency's approach to implementing the good neighbor provision explicitly considers the equity concerns raised by commenters when apportioning emission reduction responsibility among multiple upwind states. However, the agency does not believe Congress intended for it to exercise its discretion under CAA section 176A to resolve an alleged economic disparity or competitive disadvantage that is inherent in the creation of the OTR under CAA section 184 in a manner that is unrelated to the primary purpose of addressing interstate transport. Nor have petitioners provided meaningful information to substantiate that alleged disparity. Commenters' passing reference to the potential for obtaining reductions at costs-per-ton of $500 to $1,200 in the non-OTR states, rather than $10,000 to $40,000 per ton in the OTR states, was not submitted

with supporting evidence. In any case, even if we assumed those numbers were true for *some* types of control measures, it is by no means clear (and is in fact highly doubtful) that all of the mandatory control requirements that would be required of a new OTR state under CAA section 184 would be at that level of cost effectiveness. By contrast, the EPA's approach under the good neighbor provision, as recognized by the Supreme Court, operates fairly by establishing control levels and apportioning responsibility among states based on a *uniform* level of control, represented by cost.

E. Statutory Intent of CAA Section 176A (or 184)

Some commenters believe that the current geography of the OTR no longer reflects the region most relevant to the nature of interstate ozone pollution in the East as it is now understood; they point out that New England states (e.g., New Hampshire, Maine and Massachusetts) no longer exceed the NAAQS, and their sources contribute less at downwind receptors than the states requested to be added to the OTR. They asserted that Congress created CAA section 176A to address changes in the geographical distribution of the ozone problem by providing a process for adding or removing states from the OTR. Therefore, they claimed that the EPA must set the boundaries of the transport region based on the scientific evidence presented and its own related analyses to provide the proper forum for states to address their obligations with respect to ozone transport. The commenters concluded that each iteration of the EPA's own transport rules have identified a larger area.

Response: As an initial matter, the agency does not have before it a petition to remove any states from the OTR. In addition, the EPA already adjusts good neighbor remedies in transport rules to capture the geographical distribution of states that are most effective in addressing each specific NAAQS ozone pollution issue. For example, states like Massachusetts,

Rhode Island, and Connecticut were included in the NO_X SIP Call to address the 1979 ozone NAAQS. In contrast, those three states were not included in the CSAPR, which addressed the 1997 ozone NAAQS. Furthermore, states like Texas and Oklahoma are included in the CSAPR Update that addresses the 2008 ozone NAAQS but were not included in the NO_X SIP Call or CAIR to address prior ozone NAAQS issues.

F. Comments on the 2015 Ozone NAAQS

A number of commenters raised concerns relating to the 2015 ozone NAAQS stating that: (1) the EPA should not limit the petition response to 2008 ozone NAAQS interstate transport issues, (2) if the EPA were to grant the petition, the OTR requirements would help states attain the 2015 ozone NAAQS, and (3) the petition response should apply to any and all future ozone NAAQS. One commenter suggested that the EPA's response should be limited to the 2008 ozone NAAQS because the petitioners' data focuses on the 2008 NAAQS, interstate transport SIPs for the 2015 ozone NAAQS are not due yet, and designations have not yet occurred for the 2015 ozone NAAQS.

Response: Comments regarding the 2015 ozone NAAQS are outside the scope of this action. The petition requested the EPA to expand the OTR on the basis of alleged air quality problems associated with attaining and maintaining the 2008 ozone NAAQS. The December 2013 petition was submitted prior to the EPA strengthening the ozone NAAQS in 2015. Consequently, the EPA's proposal focused on the appropriate mechanism to address interstate transport issues relative to the 2008 ozone NAAQS - not the 2015 ozone NAAQS. The EPA is, therefore, limiting this final action to the 2008 ozone NAAQS. Comments on any determinations made in prior rulemaking actions to identify downwind air quality problems relative to the 2015 ozone NAAQS or to quantify upwind state emission reduction obligations relative to those air

quality problems, including the EPA's decision to focus on certain precursor emissions or sources, are not within the scope of this action.

VI. Final Action to Deny the CAA Section 176A Petition

Based on the considerations outlined at proposal, after considering all comments, and for the reasons described in this action, the EPA is denying the CAA section 176A petition submitted by nine petitioning states in December 2013. The EPA continues to believe an expansion of the OTR is unnecessary at this time and would not be the most efficient or effective way to address the remaining interstate transport issues for the 2008 ozone NAAQS in states currently included in the OTR. Additional local and regional ozone precursor emissions reductions are expected in the coming years from already on-the-books rules. The EPA believes its authority and the states' authority under other CAA provisions (including CAA section 110(a)(2)(D)(i)(I)) will allow the agency and states to develop a more effective remedy for addressing any remaining air quality problems for the 2008 ozone NAAQS identified by the petitioners.

VII. Judicial Review and Determinations Under Section 307(b)(1) of the CAA

Section 307(b)(1) of the CAA indicates which Federal Courts of Appeal have venue for petitions of review of final actions by the EPA. This section provides, in part, that petitions for review must be filed in the Court of Appeals for the District of Columbia Circuit if (i) the agency action consists of "nationally applicable regulations promulgated, or final action taken, by the Administrator," or (ii) such action is locally or regionally applicable, if "such action is based on a determination of nationwide scope or effect and if in taking such action the Administrator finds and publishes that such action is based on such a determination."

This final action is "nationally applicable." Additionally, the EPA finds that this action is based on a determination of "nationwide scope and effect." This action makes a determination on a petition from nine states in the Northeast, which would impact another nine states in the Mid-Atlantic, Southern, and Midwestern areas of the U.S. These 18 states span five regional federal judicial circuits as well as the District of Columbia. The determinations on which this action is based rest in part on the scope and effect of certain other nationally applicable rulemakings under the CAA, including the CSAPR and the CSAPR Update. For these reasons, this final action is "nationally applicable," and the Administrator also finds that this action is based on a determination of nationwide scope and effect for purposes of CAA section 307(b)(1).

Pursuant to CAA section 307(b)(1), any petitions for review of this final action should be filed in the Court of Appeals for the District of Columbia Circuit within 60 days from the date this action is published in the *Federal Register*.

VIII. Statutory Authority

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

Dated: October 27, 2017.

E. Scott Pruitt,
Administrator.

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