2015 Ozone NAAQS Interstate Transport SIP Disapprovals – Response to Comment (RTC) Document

This Response to Comments (RTC) document, together with the notice of final action titled Air Plan Disapprovals; Interstate Transport of Air Pollution for the 2015 8-hour Ozone National Ambient Air Quality Standards (NAAQS), presents the Environmental Protection Agency's (EPA) responses to public comments received on the EPA's proposal of 21 state implementation plan (SIP) actions included in this final action.

The EPA has addressed all significant issues raised in timely public comments. The EPA received 84 individual written comment submissions during the public comment periods. Table 1 provides the commenter name, the commenter abbreviated name which may also be used within this document, and links to the commenter's submission in the docket for this action. This document, together with the notice of final action, should be considered collectively as the EPA's response to all significant comments pertaining to the states included in this action.

Table 1: Commentor Acronyms & IDs

Commentor Name	Acronym	ID
Air Pollution Control Program, Missouri Department of Natural Resources	MDNR	01
Alabama Department of Environmental Management	ADEM	02
Alabama Power Company	APC	03
Alabama Power Company, Southern Power Company, and PowerSouth Energy Cooperative	APC et al.	04
Ameren Missouri		05
Anonymous		06
Arkansas Department of Energy and Environment, Division of Environmental Quality	ADEQ	07
Arkansas Electric Cooperative Corporation	AECC	08
Arkansas Environmental Federation	AEF	09
Arkansas Forest & Paper Council	AF&PC	10
Association of Electric Companies of Texas, BCCA Appeal Group, Texas Chemical Council and Texas Oil & Gas Association	AECT et al.	11
California Air Resources Board	CARB	12
City Utilities of Springfield, Missouri	CU	13
Cleco Corporate Holdings LLC	Cleco	14
Ducote, Samuel		15
Eagle Materials Inc.	Eagle	16
Emley, Margaret		17
Energy Security Partners	ESP	18
Entergy Services, LLC	ESL	19
Environmental Federation of Oklahoma	EFO	20
Evergy, Inc.		21
Hagerty, Logan		22
Idaho Power Company	IPC	23
Kaw Nation		24
Kentucky Division for Air Quality	KDAQ	25
Louisiana Chemical Association	LCA	26

Louisiana Department of Environmental Quality	LDEQ	27
Louisiana Electric Utility Environmental Group	LEUEG	28
Maryland Department of the Environment	MDE	29
Midwest Ozone Group	MOG	30
Minnesota Pollution Control Agency	MPCA	31
Mississippi Department of Environmental Quality	MDEQ	32
Nevada Division of Environmental Protection	NDEP	33
New Jersey Department of Environmental Protection	NJDEP	34
NRG Texas Power LLC	NRG	35
Ohio Utilities and Generators Group	OUG	36
Oklahoma Department of Environmental Quality	ODEQ	37
PacifiCorp		38
Sierra Club		39
Southwestern Electric Power Company	SEPC	40
Tennessee Department of Environment and Conservation	TDEC	41
Texas Commission on Environmental Quality	TCEQ	42
Texas Transport Working Group		43
The Luminant Companies		44
United States Steel Corporation	U.S. Steel	45
Utah Associated Municipal Power System	UAMPS	46
Utah Division of Air Quality	UDAQ	47
Utah Petroleum Association and the Utah Mining Association	UPA & UMA	48
West Virginia Department of Environmental Protection	WVDEP	49
WildEarth Guardians	WEG	50
Wisconsin Department of Natural Resources	WDNR	51
Xcel Energy		52

The responses presented in this document supplement the responses to comments that appear in the notice of final action and addresses comments not discussed in the notice of final action. The EPA took great care in presenting comment excerpts accurately in this document (either verbatim or paraphrased), though did make some formatting adjustments for the ease of use of this document. Complete and original copies of the comment letters, including some footnotes, tables, charts, etc. which were not reproduced in this document are available in the dockets listed in the memo "Regional Dockets Containing Additional Supporting Materials for Final Action on 2015 Ozone NAAQS Good Neighbor SIP Submissions" found in the docket for this action. Although portions of the notice of final action are paraphrased in this response to comment (RTC) document, to the extent such paraphrasing introduces any confusion or apparent inconsistency, the notice of final action itself remains the definitive statement of the rationale for the final action. This document, together with the notice of final action, should be considered collectively as the EPA's response to all significant comments submitted on the EPA's proposed disapprovals of SIPs addressing Clean Air Act (CAA) section 110(a)(2)(D)(i)(I) for the 2015 ozone NAAQS.

As stated in the preamble, the EPA is not taking final action on Tennessee's SIP submission, and the SIP submission from Alabama which EPA proposed to disapprove on February 22, 2022 has since been

withdrawn by the state. However, the docket that included the EPA's proposed action on Alabama and Tennessee's submissions also included action on other states' SIP submissions (Mississippi and Kentucky) that are being finalized in this action. In an effort to be responsive to all comments that may have broader relevance to this action, EPA has considered all comments submitted in this docket and responded as appropriate. However, where comments address EPA's proposal with respect to issues specific to Tennessee, the Agency defers responding to those comments and has made note of this in this document where appropriate. EPA has included and responds to the comments received on the EPA's proposal of Alabama's June 21, 2022 submission, proposed on October 25, 2022.

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Table 2: Abbreviations and Acronyms

ADEM	Alabama Department of Environmental Management
ADEQ	Arkansas Department of Energy and Environment, Division of Environmental Quality
AECC	Arkansas Electric Cooperative Corporation
AECT	Association of Electric Companies of Texas
AEF	Arkansas Environmental Federation
AEO	Annual Energy Outlook
AF&PC	Arkansas Forest & Paper Council
AL	Alabama
APA	Administrative Procedures Act
APC	Alabama Power Company
APCA	Anthropogenic Precursor Culpability Assessment
AQAT	Air Quality Assessment Tool
AQM TSD	Air Quality Modeling Technical Support Document
ASC	Air Stewardship Coalition
ASTM	American Society of Testing and Materials
AZ	Arizona
BACM	Best Available Control Measures
BACM	Best Available Control Measures
BACT	Best Available Control Technology
BARCT	Best Available Retrofit Control Technology
CA	California
CAA	Clean Air Act
CAIR	Clean Air Interstate Rule
CAMx	Comprehensive Air Quality Model with Extensions
CARB	California's Air Resources Board
CDPHE	Colorado Department of Public Health and Environment
CenSARA	Central States Air Resources Agencies
CH4	Methane
CO	Colorado
COMAR	Code of Maryland Regulations
CSAPR	Cross-State Air Pollution Rule
CT	Connecticut
CU	City Utilities of Springfield, Missouri
D.C.	District of Columbia
DE	Delaware
DFW	Dallas-Fort Worth
DM/NFR	Denver Metro / North Front Range
DV	Design value
ECHO	Enforcement and Compliance History Online
EFO	Environmental Federation of Oklahoma
EGUs	Electric Generating Units

EMP	Emissions Modeling Platform
EO	Executive Order
EPA	Environmental Protection Agency
ERTAC	Eastern Regional Technical Advisory Committee
ESL	Entergy Services, LLC
ESP	Energy Security Partners
FIP	Federal Implementation Plan
FR	Federal Register
GHG	Greenhouse gases
HEED	Electric generating unit
HQ	Headquarters
hr	Hour
HYSPLIT	Hybrid Single-Particle Lagrangian Integrated Trajectory
IL	Illinois
IN	Indiana
IPC	Idaho Power Company
IPM	Integrated Planning Model
iSIP	Infrastructure State Implementation Plan (SIP)
KDAQ	Kentucky Division for Air Quality
Km	Kilometer
LADCO	Lake Michigan Air Directors Consortium
LCA	Louisiana Chemical Association
LDEQ	Louisiana Department of Environmental Quality
LEUEG	Louisiana Electric Utility Environmental Group
LEV	Low-Emissions Vehicle
LMOS	Lake Michigan Ozone Study
MACT	Maximum achievable control technology
MARAMA	Mid-Atlantic Regional Air Management Association, Inc.
MDA8	Maximum daily 8-h average
MDE	Maryland Department of the Environment
MDEQ	Mississippi Department of Environmental Quality
MDNR	Missouri Department of Natural Resources
MI	Michigan
MO	Missouri
MOG	Midwest Ozone Group
MOVES	Motor Vehicle Emissions Simulator
MPCA	Minnesota Pollution Control Agency
MPE	Model Performance Evaluation
MW	Megawatt
MWe	Megawatts electric
NAAQS	National Ambient Air Quality Standards
Nbias	Normalized bias
NDEP	Nevada Division of Environmental Protection

NEEDS	National Electric Energy Data System
NEI	National Emissions Inventory
NJ	New Jersey
NNSR	Nonattainment New Source Review
NO_2	Nitrogen dioxide
NODA	Notice of Data Availability
NOX	Nitrogen oxides
NPRM	Notice of proposed rulemaking
NRG	NRG Texas Power LLC
NSR	New Source Review
NV	Nevada
NW	Northwest
NWF	Northern Wasatch Front
NYMA	New York Metropolitan Area
NYS DEC	New York State Department of Conservation
O_3	Ozone
OAQPS	Office of Air Quality Planning and Standards
OAR	Office of Air and Radiation
ODEQ	Oklahoma Department of Environmental Quality
OH	Ohio
OK	Oklahoma
OTC	Ozone Transport Commission
OUG	Ohio Utilities and Generators Group
PA	Pennsylvania
PM	Particulate matter
PM2.5	PM with a diameter of 2.5 micrometers or less; fine particulate
ppb	Parts per billion
PSD	Prevention of Significant Deterioration
RACT	Reasonably available control technology
RCF	Relative Contribution Factor
RCU	Revised CSAPR Update
RFF	Relative Response Factors
RFG	Reformulated gasoline
RTC	Response to Comments
SAFETEA	Safe, Accountable, Flexible, Efficient Transportation Equity Act
SCCT	Simple cycle and regenerative combustion turbines
SCR	Selective catalytic reduction
SEPC	Southwestern Electric Power Company
SIP	State Implementation Plan
SNCR	Selective Non-Catalytic Reduction
SSM	Startup, shutdown, and malfunction
TCEQ	Texas Commission on Environmental Quality
TDEC	Tennessee Department of Environmental Conservation

TIP	Tribal Implementation Plan
TN	Tennessee
tpy	Tons per year
TSD	Technical Support Document
TX	Texas
U.S.	United States
U.S.C.	United States Code
UAMPS	Utah Associated Municipal Power System
UDAQ	Utah Division of Air Quality
UMA	Utah Mining Association
UPA	Utah Petroleum Association
UT	Utah
VOC	Volatile organic compounds
WDNR	Wisconsin Department of Natural Resources
WEG	WildEarth Guardians
WESTAR	Western States Air Resources Council
WI	Wisconsin
WRAP	Western Regional Air Partnership
WVDEP	West Virginia Department of Environmental Protection
yr	Year
ZEV	Zero-Emissions Vehicle

1 Comments Related to Rulemaking Procedure

1.1 Timing of SIP Actions

Comments

Commenter: Air Pollution Control Program, Missouri Department of Natural Resources

Commenter ID: 01

Docket ID: EPA-R07-OAR-2021-0851

Comment:

Further, EPA's proposed disapproval of Missouri's SIP and the imposition of a proposed FIP gives Missouri no real opportunity to address EPA's concerns and revise our SIP at step-3.

Commenter: Arkansas Environmental Federation

Commenter ID: 09

Docket ID: EPA-R06-OAR-2021-0801

Comment:

DEQ should be permitted time to analyze, address and/or correct any deficiencies identified by EPA before finalizing a FIP. Although EPA might generally have the authority under Section 7410(c)(1)(B) to issue a FIP at any time prior to the 2-year deadline after disapproval, nevertheless, CAA Section 7410(c)(1) contemplates that a state would be provided time to correct any deficiency and that EPA has the discretion to allow up to two years for correction of any deficiency. EPA's determination about whether a FIP should be promulgated immediately as to a specific state should be based on a state-specific analysis since a State may bring a particularized, as-applied challenge to a nationwide or regional transport rule.

II. EPA's Proposed SIP Disapproval and FIP Proposal is Out of Sequence.

EPA's approach to taking action to disapprove the DEQ SIP and simultaneously promulgate a FIP, instead of allowing DEQ to submit revisions to its SIP, effectively impairs ADEQ's ability to make a state-specific over-control analysis. EPA does not have the authority to impose requirements that result in over-control, nor does it have the authority to mandate a particular control for a state. In fact, EPA seeks comment on its proposed FIP as to whether its FIP results in over-control with respect to Arkansas. EPA has the process backwards. Under EPA's analysis based on the 2016 modeling platform, the single Michigan maintenance receptor that Arkansas analyzed in its SIP submission is no longer an issue. Yet now, EPA has identified receptors in Texas that it claims are adversely impacted by Arkansas emissions and has imposed control requirements without allowing Arkansas the opportunity to evaluate EPA's newly-purported linkages to Texas and determine the appropriate emissions reductions, if any,

necessary from Arkansas sources to address these purported linkages. Consequently, EPA's SIP disapproval and its proposed FIP are linked, and EPA should not finalize its FIP with respect to Arkansas until DEQ has been given a reasonable amount of time to respond.

Commenter: Arkansas Department of Energy and Environment, Division of Environmental Quality

Commenter ID: 07

Docket ID: EPA-R06-OAR-2021-0801

Comment:

Timing of EPA's Proposed Rule

Under the Clean Air Act §110(k), EPA has six months to determine whether or not a state's SIP submittal is complete once it is received from the state. From the time of the completeness determination, EPA has twelve months to finalize an approval or disapproval of the state's submission. For the Arkansas Transport SIP, the deadline for EPA final action was November 7, 2020. EPA failed to meet its statutory deadline for acting on the Arkansas Transport SIP. Not until EPA was sued by environmental organizations and EPA conducted new analyses to effectively supersede analyses provided by the previous EPA administration for use by states in SIP development did EPA issue a proposed action on the Arkansas Transport SIP.

EPA failed to meet its statutory deadline for acting on the Arkansas Transport SIP. Not until EPA was sued by environmental organizations and EPA conducted new analyses to effectively supersede analyses provided by the previous EPA administration for use by states in SIP development did EPA issue a proposed action on the Arkansas Transport SIP.

EPA had all of the information necessary based on the best available science to approve the interstate component of the Arkansas Transport SIP submittal when its action was due on November 7, 2020.

[…]

Simply put, EPA did not act on 2015 Ozone Transport SIPs in a timely manner. As EPA notes in the proposed disapproval, decision points are made based on information available at the time. Had EPA reviewed the SIP in the timeframe required by federal law, the information available at the time—the same information that states used to inform their decisions—would have ensured that states did not waste time on robust analyses of available data for the purposes of making sound, evidence-based decisions. EPA stalled an evaluative action until the perceived "facts" of the situation changed such that timely state analyses were rendered outdated. Because EPA did not act on SIP submissions in a timely manner as required by the Clean Air Act, and instead intended their assessment of Transport SIPs to be "forward looking," states have been put at a clear disadvantage in the final stages of the SIP process.

The Arkansas Transport SIP submittal clearly demonstrated, based on the information available at the time, that the Arkansas SIP contains adequate provisions to ensure that in-state emissions activities do not "significantly" contribute to nonattainment or interfere with maintenance of the 2015 ozone NAAQS in any other state. DEQ requests that EPA withdraw its proposed disapproval and instead fully approve

the Arkansas Transport SIP. In the alternative, EPA should allow DEQ the customary two years post-disapproval to address identified deficiencies in the Arkansas Transport SIP and to resubmit to EPA, prior to issuing a federal implementation plan.

[…]

States must undertake SIP development with limited technical resources, so the states rely heavily on EPA data and EPA guidance in their decision-making. The threshold decision is fundamental to further steps in the Interstate Transport Framework analysis. Therefore, this late-stage decision by EPA is unreasonable. DEQ finds that this decision effectively forces states to fail in meeting EPA's vacillating interpretation of what is necessary for SIPs to meet interstate transport obligations.

[…]

DEQ does not believe that EPA has the information necessary to broad-stroke disapprove the Arkansas Transport SIP. DEQ requests that EPA take pause on final SIP and FIP actions for the state until DEQ (or EPA) has completed further analysis of linkages from emission sources and activities in the state to determine if there are sources or emissions activities in the state that significantly contribute to the newly identified nonattainment receptor or interfere with maintenance of the NAAQS in Texas, and if so, to adopt appropriate control strategies to prohibit the significant contribution(s).

Commenter: Association of Electric Companies of Texas, BCCA Appeal Group, Texas Chemical Council and Texas Oil & Gas Association

Commenter ID: 11

Docket ID: EPA-R06-OAR-2021-0801

Comment:

If EPA proceeds with disapproval on the basis of its new analysis, EPA should allow Texas to revise its SIP submission.

EPA did not act on Texas's SIP submission within the CAA's statutory timeframe. Due to EPA's own delay in acting, EPA has deviated from its long-standing practice of giving states an opportunity to address new information or analysis and, potentially, develop and submit revisions to EPA before the Agency issues a FIP. In proposing a FIP and announcing that it intends to finalize the FIP concurrently with or soon after it finalizes disapprovals of Transport SIPs, it is clear that EPA is not affording states and other commentors a meaningful opportunity to integrate their concerns into the final action.

The CAA requires that, once a SIP is deemed complete, EPA must act on the SIP within 12 months. TCEQ submitted its SIP on August 17, 2018. To comply with the CAA, EPA should have proposed to approve or disapprove the SIP by February 2020. EPA, however, did not propose to disapprove Texas's SIP submission until February 22, 2022, as the result of a consent decree. Due to EPA's own delay and the accelerated timeline required by the consent decree, EPA is proposing to deny commentors the opportunity to respond to the new data and analysis. Moreover, EPA has previously allowed states to revise disapproved SIPs, consistent with CAA Section 110(c)(1), prior to issuing a FIP. EPA's accelerated

timeline for issuing a FIP, which resulted from EPA's own delay, effectively penalizes Texas for timely submitting its SIP.

Commenter: City Utilities of Springfield, Missouri

Commenter ID: 13

Docket ID: EPA-R07-OAR-2021-0851

Comment:

EPA decision to disapprove seems arbitrary and capacious in terms of timing, implementation schedule, and level of reductions. Missouri has not been given time to redress EPA disapproval concerns within their current plans to either enhance or supplement the record. EPA changed the modeled receptors in upwind states attributed to Missouri's contribution. Changes at this point in time will unduly burden MDNR's ability to implement rule changes outside the normal review and oversight process. Missouri will be forced to absorb the Federal Plan allocation methodology without appropriate consent, comment and justification.

Commenter: Eagle Materials Inc.

Commenter ID: 16

Docket ID: EPA-R09-OAR-2022-0138

Comment:

Under CAA § 110, states retain primary authority to address their ozone transport obligations until EPA has taken *final* action on a SIP submission. If a state submits a SIP that does not adequately fulfill these obligations, EPA is required to disapprove the SIP within 18 months. Because a disapproval is a substantive rule "affecting individual rights and obligations," EPA is required to go through notice-and-comment rulemaking in finalizing its decision. Only after such disapproval is finalized, can EPA promulgate a FIP in its place, which must similarly go through notice-and-comment. Here, however, EPA issued a Proposed FIP *before* issuing its Proposed Disapproval of Nevada's SIP, based on EPA's "anticipate[d]" determination that pending SIP submissions "may not have adequate provisions… to address [the states'] interstate transport obligations for the 2015 ozone NAAQS."

For EPA to issue its Proposed FIP before fulfilling it mandatory duty to timely act on the proposed Nevada SIP is the very hallmark of unreasonable agency action. CAA § 110(k) requires EPA to take final action to approve or disapprove a state's SIP, once submitted, within 18 months. However, EPA exceeded this deadline by over 2 years. Nevada submitted a revised SIP addressing interstate transport obligations under the 2015 Ozone NAAQS on October 1, 2018. Under Section 110(k) of the CAA, EPA was required to act on this submission by April 1, 2020—instead, EPA did not issue its Proposed Disapproval until May 24, 2022.

Commenter: Environmental Federation of Oklahoma

Commenter ID: 20

Docket ID: EPA-R06-OAR-2021-0801

Comment:

In particular, EFO supports DEQ's assessment that EPA has overstepped its authority by circumventing the normal SIP development and approval process in a number of ways, including but not limited to: […] proposing a replacement Federal Implementation Plan (FIP) before the state even has a chance to review the proposed SIP disapproval.

Commenter: Idaho Power Company

Commenter ID: 23

Docket ID: EPA-R09-OAR-2022-0138

Comment:

The Proposed Disapproval circumvents notice-and-comment requirements.

EPA exceeded its authority under the CAA in proposing a FIP prior taking final action on the Proposed Disapproval. The CAA allows EPA to promulgate a FIP only "after the Administrator finds that a State failed to make a require submission . . . or disapproves a state implementation plan submission."

As discussed above, under the CAA, states retain primary authority to address their ozone transport obligations until EPA has taken final action on a SIP submission. If a state submits a SIP that does not adequately fulfill these obligations, EPA is required to disapprove the SIP within 18 months. Because a disapproval is a substantive rule "affecting individual rights and obligations," EPA is required to go through notice-and-comment rulemaking in finalizing its decision.[29] Only after such disapproval is finalized can EPA promulgate a FIP in its place,[30] which must similarly go through notice-and-comment.

Here, EPA proposed a FIP more than two years after it was statutorily obligated to respond to Nevada's SIP submission and more than a month before publishing the Proposed Disapproval—which is largely based on modeling and data *unavailable to Nevada at the time it developed its SIP*. In other words, Nevada held up its side of the cooperative federalism bargain struck by the Clean Air Act, but EPA did not. This is the very hallmark of unreasonable agency action. Nevada submitted a revised SIP addressing interstate transport obligations under the 2015 Ozone NAAQS on October 1, 2018. Under CAA Section 110(k), EPA was required to act on this submission by April 1, 2020, 18 months after Nevada submitted its SIP. EPA published its Proposed Disapproval more than two years after this deadline had passed, on May 24, 2022.

[29] *See, e.g.*, Chrysler Corp. v. Brown, 441 U.S. 281, 302 (1979).
[30] *See* 42 U.S.C. § 7410(c)(1) (requiring Administrator to promulgate FIP "at any time within 2 years after" disapproving a SIP). While the Supreme Court held in *EPA v. EME Homer City Generation* that, under this provision,

"EPA is not obliged to wait two years or postpone its action even a single day," the Court noted that this authority applies "[*a]fter* EPA has disapproved a SIP." 572 U.S. 489, 509 (2014) (emphasis added)

Commenter: Kentucky Division for Air Quality

Commenter ID: 25

Docket ID: EPA-R04-OAR-2021-0841

Comment:

Lack of Timeliness of EPA Action

Kentucky disagrees with EPA's proposed disapproval of its State Implementation Plan (SIP) regarding the interstate transport requirements for the 2015 8-hour ozone national ambient air quality standards (NAAQS) because EPA's inaction prohibited Kentucky from addressing any deficiencies identified or submitting a revised SIP for approval. Kentucky's final 2015 8-hour Ozone NAAQS Infrastructure SIP (I-SIP) was transmitted to EPA on January 9, 2019, and included the interstate transport requirements. EPA did not make a completeness determination within 60 days, and the SIP was deemed complete by operation of law under 42 U.S.C. § 7410(k)(1)(B) six months later, on July 9, 2019. Once a completeness determination occurs by operation of law, EPA has 12 months to take action on the SIP submittal. EPA was required to act on Kentucky's entire I-SIP by July 9, 2020. EPA approved the majority of the SIP requirements on July 1, 2020, and approved sections addressing Clean Air Act (CAA) sections 110(a)(2)(C), 110(a)(2)(D)(i) Prong 3, 110(a)(2)(J), and 110(a)(2)(K) via a second approval on October 2, 2020. However, EPA took no action on the requirements for Interstate Transport, specifically prongs 1 and 2, until February 22, 2022, over 12 months past the statutorily required date for action.

EPA's delayed disapproval of Kentucky's I-SIP regarding prongs 1 and 2 of CAA section 110(a)(2)(D)(i)(1) prevented Kentucky from addressing deficiencies or submitting SIP revisions. Kentucky would appreciate the opportunity to address these identified deficiencies through a revised SIP submission, which may eliminate the need for a Federal Implementation Plan.

Commenter: Louisiana Department of Environmental Quality

Commenter ID: 27

Docket ID: EPA-R06-OAR-2021-0801

Comment:

Louisiana submitted the Interstate Transport of Air Pollution for the 2015 8-Hour Ozone National Ambient Air Quality Standards SIP on November 12, 2019, and EPA issued a "completeness finding" on November 14, 2019. According to Federal Clean Air Act (FCAA) §110(k)(2), "within 12 months of a determination ... the [EPA] Administrator shall act on the submission in accordance with paragraph (3)." Paragraph three (3) addresses full and partial approval and disapproval. The FCAA is silent on the state's recourse if EPA fails to act, which leads us to the current proposal. In this proposed disapproval, EPA presents modeling results that change the predicted impacts on downwind states. It is important to

note that these modeling results were not available to states prior to the initial submittal. If the disapproval of the proposed SIP is finalized, EPA has a two-year timeframe to develop a Federal Implementation Plan (FIP) to address the relevant interstate transport requirements. Alternatively, EPA could approve a subsequent SIP submittal that meets these requirements. EPA proposed the FIP on April 6, 2022 some 43 days later.

Commenter: Midwest Ozone Group

Commenter ID: 30

Docket ID: EPA-R02-OAR-2021-0673, EPA-R03-OAR-2021-0872, EPA-R03-OAR-2021-0873, EPA-R04-OAR-2021-0841, EPA-R05-OAR-2022-0006, EPA-R06-OAR-2021-0801, EPA-R07-OAR-2021-0851, EPA-R08-OAR-2022-0315, EPA-R09-OAR-2022-0394, EPA-R09-OAR-2022-0138

Comment:

EPA's accelerated approach to denial of these plans is inconsistent with the CAA

As evidenced by these several proposals for disapproval of Good Neighbor SIPs that accompanied this, EPA has begun an accelerated denial of the efforts of upwind states' and to implement a new transport rule and in doing so has taken an approach that is inconsistent with applicable law and appropriate science. This accelerated effort disenfranchises not only meaningful technical analysis of the agency's proposals but also curtails meaningful participation by all stakeholders.

Section 110(c) of the CAA states that "The [EPA] Administrator shall promulgate a Federal implementation plan at any time within 2 years after the Administrator" if he: (1) finds that a state has failed to make a required submission or that the state plan submitted "does not satisfy" the minimum criteria in Section 110(k)(1)(A), or (2) "disapproves a State implementation plan submission in whole or in part," unless the State corrects the deficiency and the Administrator approves the correction before the Administrator promulgates the plan.

In the event of a justified disapproval, EPA then is required to promulgate a Federal Implementation Plan ("FIP") within two years unless the State corrects the deficiency before promulgation of the FIP. At issue in connection with the subject proposed SIP disapprovals are two initial considerations. First, EPA must offer adequate justification for the proposed disapprovals. As will be discussed extensively in these comments, EPA has not adequately demonstrated the basis for its actions.

[…]

Again, these comments will illustrate EPA is improperly advancing implementation plan denials, while threatening with an imminent FIP proposal published in the Federal Register on April 6, 2022.

[…]

The Clean Air Act does not mandate promulgation of a FIP in such an abbreviated time frame. The CAA allows FIP action any time within 2 years after the Administrator finds that a State has failed to make a required submission or finds that the plan or plan revision submitted by the State does not satisfy the

minimum criteria or disapproves a state implementation plan submission in whole or in part. The CAA also specifically provides for the State to be allowed the opportunity to correct any deficiencies. We urge EPA to revise its proposals to allow States an appropriate opportunity to respond to EPS's findings of deficiency.

Commenter: Mississippi Department of Environmental Quality

Commenter ID: 32

Docket ID: EPA-R04-OAR-2021-0841

Comment:

However, EPA did not act on [Mississippi's] submittal for nearly two and a half years. Now, within one week of proposing to disapprove the "good neighbor" portion of Mississippi's 2015 O_3 NAAQS iSIP, the EPA administrator has signed a proposed Federal Implementation Plan (FIP) to impose on the state. The imposition of the FIP is premature and unnecessary as MDEQ has demonstrated its commitment to develop and submit an approvable iSIP and has historically strived to meet and exceed its obligations.

[…]

[T]he proposed FIP should not be imposed until MDEQ is given a reasonable opportunity to address the alleged deficiencies in the iSIP and to resolve the modeling errors referenced herein.

[…]

MDEQ respectfully requests that EPA work collaboratively with MDEQ, allowing appropriate time for the development and submittal of a revised iSIP, and not impose the proposed FIP on Mississippi, which would be unnecessarily burdensome to Mississippians.

Commenter: Nevada Division of Environmental Protection

Commenter ID: 33

Docket ID: EPA-R09-OAR-2022-0138

Comment:

EPA failed to act on the Nevada's iSIP by the 2020 statutory deadline. As of late 2021, despite the long-standing process for review and prioritization of the SIP backlog (namely the SIP Management Plan) EPA provided zero communication to NDEP on any significant aspect of the Nevada iSIP review and approval process nor did EPA provide any substantive feedback on Nevada's 2018 iSIP submission.

[…]

In contrast to its repeated failure for over 3 years to collaborate with NDEP on review of Nevada's 2018 iSIP, in less than 6 months:

- EPA ran and used results from a new modeling platform unavailable to NDEP at the time of the 2018 iSIP;
- Proposed a new ozone FIP; and
- Proposed to disapprove Nevada's iSIP.

EPA has taken these actions over a very short period without providing meaningful state consultation, nor providing Nevada the time and resources to consider the new modeling results in the context of the originally required 2018 iSIP submission.

[…]

NDEP requests that EPA withdraw the Proposed Regulation to provide the opportunity for NDEP to meaningfully collaborate with EPA on this important effort and to evaluate, and if appropriate, propose a revision to Nevada's ISIP to meet our interstate transport obligations for the 2015 ozone NAAQS given EPA's decision to primarily rely on the new emissions platform.

NDEP stands by its commitment to continuing to review new air quality monitoring information as it becomes available to ensure that NDEP's negative declaration in the 2018 ISIP is still supported, if given a reasonable opportunity and resources. NDEP request a reasonable opportunity to consider a) the new information about downwind contribution that is available based on the new modeling platform; b) potentially consider a demonstration of the appropriateness of a different threshold [EPA recognizes that NDEP may not have considered analyzing the reasonableness and appropriateness of a larger threshold of 1% (namely 1 ppb) in the iSIP submittal, because at the time the "State did not contribute above 1 percent of the NAAQS to a projected downwind non-attainment or maintenance receptor" (Section III.A of the proposed rule)]; and c) permanent and federally enforceable control strategies to achieve the emissions reductions determined to be necessary to eliminate downwind contribution.

Commenter: Oklahoma Department of Environmental Quality

Commenter ID: 37

Docket ID: EPA-R06-OAR-2021-0801

Comment:

EPA Should Allow States to Submit Revised SIPs Before Issuing a FIP

Oklahoma maintains its SIP is approvable as submitted. However, EPA should afford states the opportunity to address aspects of their SIPs that EPA has identified as deficient. EPA states on page 9801 of the proposed disapproval, "Where states submitted SIPs that rely on any such potential 'flexibilities' as may have been identified or suggested in the past, the EPA will evaluate whether the state adequately justified the technical and legal basis for doing so." Oklahoma notes that few, if any, of the flexibilities offered by EPA in the 2018 Tsirigotis Memos have been approved when states have developed SIPs relying on those flexibilities. EPA's proposed decision to disapprove states' approaches in their SIPs warrants the opportunity for states to revise their SIPs to address deficiencies identified by EPA. Further, where EPA has decided states have failed to meet "the technical and legal basis" for the

flexibilities, the burden shifts and it is incumbent on EPA to more clearly articulate the justification, both technical and legal, that EPA would find acceptable. Alternatively, it may be the case that EPA finds no justification that satisfies these criteria. If that is the case, then EPA needs to say so. In any event, states should be afforded the opportunity to revise their SIPs, ideally before the proposed disapproval is noticed, but certainly before the disapproval is finalized. Now it appears that EPA is moving forward on a FIP without providing the states the opportunity to modify their SIPs to accommodate the actual policies by which EPA will review those SIPs. This is bad policy and undermines the cooperative and collaborative relationship between states and EPA.

[…]

EPA Failed to Adequately Include State Participation

Oklahoma takes issue with EPA's "wait and then hurry-up" approach to interstate air pollution transport rulemaking. The delay in EPA's evaluation of Oklahoma's ozone transport SIP in combination with the extended wait for EPA to develop the FIP, predictably ended up with EPA responding to a court order to issue a rule in a short time frame with a process that fails to adequately include state participation. To begin with, the development of the modeling platform should have concluded before EPA used the platform for this rulemaking. ODEQ and other air quality agencies worked together to develop a letter from Michael Vince (the Executive Director of the Central States Air Quality Agencies or CenSARA) to Peter Tsirigotis, dated July 29, 2021 (included as Attachment C hereto). The letter makes the point that, if air agencies are to be given the opportunity to provide meaningful feedback on the emissions inputs used by EPA in rulemaking, they should have the opportunity to review and comment on the Emissions Modeling Platform (EMP) before it is used in federal rulemaking. EPA did allow agencies the opportunity to review an updated version of the EMP, but the version that was ultimately used to develop the proposed disapproval of Oklahoma's ozone transport SIP (and to develop the proposed FIP) had not been released and did not undergo state review in advance of its deployment in support of EPA's rule development.

It should also be noted that EPA's delay shortens the lead time available to address ongoing nonattainment and maintenance problems due to upwind contributions.

[…]

Furthermore, it should be noted that the proposed disapproval was considerably late, as Section 110(k)(2) of the CAA states that EPA must take action within 12 months of a "complete" SIP submission. The maximum amount of time EPA can take to deem a SIP submittal complete is 6 months, therefore, even accounting for this timeline, EPA's action falls way behind the statutory requirement. Had EPA reviewed and approved Oklahoma's SIP submittal during its statutorily required timeframe, EPA would have been measuring Oklahoma's SIP submittal against comparable data. Because EPA took so long to act on SIP submittals, EPA created a situation where the standard under which states developed their SIPs was no longer the standard against which those SIPs were judged.

Commenter: PacifiCorp

Commenter ID: 38

Docket ID: EPA-R08-OAR-2022-0315

Comment:

EPA's Proposed Disapproval, and the already-published Proposed FIP, interfere with Utah's right to remedy any problems with its SIP.

In failing to observe the appropriate process, EPA has undermined the cooperative federalism underpinning Section 110 of the CAA. EPA attempts to paper over this role reversal by saying that states can always prepare a SIP later to replace the Proposed FIP. However, EPA will not approve any proposed replacement SIP prior to finalizing the Proposed FIP, and the Proposed FIP sets insurmountable standards for any subsequent SIP revision. The Proposed Disapproval will force Utah sources to begin compliance efforts almost immediately due to the incredibly tight timeframes in the Proposed FIP. The tight deadlines for compliance in the Proposed FIP essentially eliminate any reasonable opportunity for Utah to develop, and EPA to approve, a revised SIP in accordance with EPA's new approach to interstate transport, which goes beyond CAA standards.

As long as Utah can submit evidence to show that emission reductions from sources in its boundaries will not significantly impact the downwind monitors, its SIP satisfies the requirements of the good neighbor provision, and EPA must approve it. However, in the past, EPA has provided states sufficient time to make corrections or submit additional clarifications if necessary to achieve the good neighbor provision via their own SIPs.[22] PacifiCorp asks EPA to do the same in this instance. EPA should acknowledge Utah's authority and, if necessary, allow Utah time to provide additional evidence for Step 2 and, if necessary, to re-evaluate Steps 3 and 4 of EPA's four-step methodology. Utah is uniquely positioned to identify the right mix of requirements for the unique emission sources in its jurisdiction and to determine how best to align those requirements with other regional regulatory efforts that target some of the same units and pollutants, like regional haze. EPA's extended delay in issuing the Proposed Disapproval should not serve as a pretext for preventing Utah from finalizing an approvable SIP.

[22] *See, e.g.,* 84 FR 3,389, 3,390 (Feb. 12, 2019) (approving Wyoming's good neighbor SIP after Wyoming submitted supplemental information requested by EPA).

Commenter: PacifiCorp (Attachment - Berkshire Hathaway Energy (BHE) Company Comments on Proposed Ozone Transport Rule)

Commenter ID: 38

Docket ID: EPA-R08-OAR-2022-0315

Comment:

EPA Should Work with Western States to Prepare SIPs that Achieve Necessary Ozone Reductions as Part of a Just and Orderly Transition.

The western states where BHE operates affected EGUs (Nevada, Wyoming, and Utah) submitted their good neighbor SIPs to EPA between October 2018 and October 2019, years in advance of EPA's Proposed Rule. Each of these SIPs, in reliance upon EPA guidance and modeling, demonstrated that there were no significant impacts on ozone nonattainment and maintenance in downwind states. Yet EPA took no action on these SIP submissions for two and a half to three and a half years. It was not until February 2022, when EPA signed the Proposed Rule imposing a FIP on these states (later publishing it for public notice and comment on April 6), that these states learned that EPA did not intend to approve their good neighbor SIPs. EPA did not even propose disapproval for these SIPs until May 23, 2022, a full month and a half after proposing its FIP. And EPA has yet to finalize disapproval (the proper legal predicate for a FIP). What's more, EPA's disapproval of these SIPs is based on a shift in its thinking in the years since the SIPs were originally submitted.

[…]

EPA attempts to paper over the role reversal of the Proposed Rule by saying that states can always prepare a SIP later for EPA approval. However, EPA has not yet finalized disapproval of the Nevada, Utah, and Wyoming SIPs. In the past, EPA has provided states sufficient time to implement the good neighbor provision via their own SIPs, even when supplemental information and analysis may have been required. BHE asks EPA to do the same in this instance. Provisions in the Proposed Rule impose SIP requirements not found in the CAA and essentially eliminate any reasonable opportunity for states to make a future SIP submission. BHE encourages EPA to respect the cooperative federalism principles in the CAA as the right way to achieve the best path forward.

[…]

EPA has now disavowed its prior guidance without allowing states an opportunity to react. In doing so, EPA has claimed for itself the authority Congress granted to states, not to EPA. EPA attempts to paper over this role reversal by saying that states can always prepare a SIP later for EPA approval. BHE supports the opportunity for states to submit their own SIP to replace the proposed FIP, but unless EPA can approve the SIP prior to finalizing the Proposed Rule, the Proposed Rule will nevertheless force covered sources to begin compliance efforts almost immediately due to the incredibly tight timeframes in the rule. The tight deadlines for compliance in the Proposed Rule will essentially eliminate any reasonable opportunity for states to develop and EPA to approve a SIP in accordance with EPA's new approach to interstate transport unless EPA can commit to a more rapid review and approval process than it has conducted in the past.

For EPA's recognition of the states' authority to submit a replacement SIP to have any real meaning, EPA would need to move at least as quickly in reviewing and approving replacement SIPs as it has moved in imposing the federal plan contained in the Proposed Rule. In addition, states would need sufficient time to develop a replacement SIP, which would require the same kinds of complex analyses EPA conducted to develop the Proposed Rule. In the past, EPA has provided states sufficient time to implement the good neighbor provision via their own SIPs, and BHE asks EPA to do the same in this instance.

Regardless of timing, EPA should also acknowledge state authority to re-evaluate steps 3 and 4 of EPA's four-step methodology by identifying and implementing the measures needed to eliminate what EPA has defined to be a significant contribution to downwind receptors, rather than requiring states to

demonstrate that their measures, along with federal measures, will achieve reductions commensurate with installation of SCR on coal-fired EGUs by the 2026 ozone season. States are uniquely positioned to identify the right mix of requirements for the unique emission sources in their jurisdictions and to determine how best to align those requirements with other regulatory efforts that target some of the same units and pollutants, like regional haze. As long as a state can submit modeling to show that emission reductions from sources in its state will eliminate the downwind impact that EPA has defined as significant, its SIP should satisfy the requirements of the good neighbor provision and EPA must approve it.

Commenter: Tennessee Department of Environment and Conservation

Commenter ID: 41

Docket ID: EPA-R04-OAR-2021-0841

Comment:

EPA has put states in an impossible position by waiting to take action on SIP submittals that occurred in 2018 and basing such actions on modeling that has been consistently changing since 2018 and is still undergoing public comment. EPA quickly followed its proposed iSIP Disapproval with the proposed Federal Implementation Plan EPA will put in place as it is highly unlikely that states will have the time to revise their SIPs and resubmit them to EPA for consideration before the final Federal Implementation Plan will take effect. EPA must respect states' role in creating a compliant SIP.

Commenter: Texas Commission on Environmental Quality

Commenter ID: 42

Docket ID: EPA-R06-OAR-2021-0801

Comment:

The EPA prematurely prepared a proposed FIP before finalizing action on Texas' timely submitted SIP revision to address 2015 eight-hour ozone standard interstate transport requirements. Texas submitted its 2015 Ozone NAAQS Transport SIP Revision to the EPA on August 17, 2018. The EPA had over three years to review the SIP revision prior to proposing the February 22, 2022, disapproval of the FCAA, §110(a)(2)(D)(i)(I) interstate transport elements. Further, the EPA has developed a proposed FIP before the proposed disapproval is final. Under FCAA §110(c)(1), the Administrator shall promulgate a FIP at any time within two years *after* the Administrator "disapproves a State Implementation Plan in whole or in part, unless the State corrects the deficiency, and the Administrator approves the plan or plan revisions, before the Administrator promulgates such a Federal Implementation Plan." EPA has not yet disapproved the Texas transport SIP, and yet has clearly signaled that it intends to include Texas in such a FIP directly upon finalizing the disapproval action. Although the Supreme Court has recognized that "disapproval of a SIP, without more, triggers EPA's obligation to issue a FIP" and this action can occur "at any time" within those two years (*EPA v. EME Homer City Generation LP, et. al.*, 572 US 489, 490 (2014)),

in this instance EPA has not disapproved Texas' SIP. And unlike the fact pattern in EME Homer, Texas has not had an opportunity to challenge the EPA's disapproval of that SIP. Although EPA is under no obligation to wait two years to issue a FIP, it does have to comply with the congressional scheme. The disapproval of the SIP triggers EPA's authority to issue the FIP. In this case, EPA is indeed "altering Congress' SIP and FIP schedule." *Id.* at 491.

The EPA has conducted extensive work to include Texas in a proposed FIP to address interstate transport for Texas under the 2015 eight-hour ozone standard before disapproval of Texas SIP. Although the EPA proposed disapproving the Texas SIP submittal one month prior to the proposed FIP, there has been no final action on that proposal. Additionally, there was no indication from EPA during the years of work that went into the development of this FIP that the Texas SIP was inadequate, nor was Texas afforded any opportunity to correct the deficiencies that EPA believes are present in the SIP. Had the EPA reviewed the 2015 Ozone NAAQS Transport SIP Revision before developing a proposed FIP, the purpose of which is to correct deficiencies in such a SIP, Texas would have had the opportunity contemplated by the FCAA to correct any problems with its SIP in a timely fashion and avoid the imposition of the FIP.

This is clearly distinguishable from the argument in *EME Homer City* that was dismissed by the Supreme Court. The Court said that EPA did not have to give states an opportunity to correct a SIP before issuing the FIP. Instead, in the present case EPA is stating that they not only can, but "must necessarily be able to" propose a FIP before taking final action to disapprove a SIP. That was not the holding in *EME Homer City* and is inconsistent with the Congress' SIP and FIP schedule in the FCAA.

[…]

If the EPA had acted on the TCEQ's SIP submission in a timely manner, the only available data would have been the EPA's 2011-base modeling. Therefore, it is arbitrary and unreasonable for the EPA to evaluate the TCEQ's submission based upon data that was unavailable to the TCEQ during the development and submittal of its SIP revision.

Commenter: The Luminant Companies

Commenter ID: 44

Docket ID: EPA-R06-OAR-2021-0801

Comment:

In satisfaction of its obligation under Section 110(a)(2)(D), TCEQ submitted a timely SIP revision addressing its good neighbor obligation for the 2015 ozone NAAQS on August 17, 2018. A SIP submittal is deemed complete by operation of law if EPA has not otherwise found the submittal to be insufficient within six months. Then, EPA has twelve months following a completeness determination to act on that SIP. Therefore, the Clean Air Act required EPA to approve or disapprove Texas's SIP no later than February 17, 2020. Rather than review Texas's submittal in a timely manner, EPA delayed its action beyond the statutorily prescribed deadline and developed non-statutory, post-hoc modeling and analyses by which it now proposes to judge Texas's submittal.

Commenter: United States Steel Corporation

Commenter ID: 45

Docket ID: EPA-R05-OAR-2022-0006

Comment:

U. S. Steel respectfully notes that in its proposed disapproval, U.S. EPA made some critical errors and, therefore, we believe that in the spirit of cooperative federalism, that U.S. EPA reconsider the State submittals and approve the SIP submittals; or if U.S. EPA still finds deficiencies with the SIPs, that the states be given the opportunity to correct any asserted deficiencies before U.S. EPA proceeds with promulgating a final rule disapproving the SIPs and issuing a Federal Implementation Plan (FIP). It is significant to note that Congress contemplated States be given an opportunity to correct deficiencies with SIPs (before U. S. EPA proceeds with a FIP) when enacting the Clean Air Act. The actions in disapproving the SIP and proceeding with issuing a FIP (even before the SIP is disapproved) runs afoul of the process afforded to States and federal cooperative federalism.

[…]

Even if the SIPs Did Not Satisfy EPA Approval Criteria, States Should be Given the Opportunity to Supplement the SIP Submittal or Otherwise Correct the Asserted Deficiencies Before U.S. EPA finalizes Disapproval of the SIP and Proceeds with a Federal Implementation Plan

U. S. Steel notes that U.S. EPA's action in disapproving SIPs that were submitted to U.S. EPA years ago and now years later is proposing to disapprove the SIPs and not giving the State an opportunity to supplement the SIP submittal or otherwise correct the asserted deficiencies is inconsistent with Congress' intent for the Federal government and States to work collaboratively on ensuring the NAAQS are maintained.

Commenter: United States Steel Corporation

Commenter ID: 45

Docket ID: EPA-R06-OAR-2021-0801

Comment:

EPA's Proposal to disapprove Arkansas's SIP while also promulgating a FIP is not the proper timing of rulemaking on this issue. EPA not allowing DEQ to submit revisions to the SIP, this action impairs the state's ability to make state specific analyses regarding over-reach on controls by EPA. DEQ should be permitted time to analyze, address and/or correct any deficiencies identified by EPA before finalizing a FIP. Although EPA might generally have the authority under Section 7410(c)(1)(B) to issue a FIP at any time prior to the 2-year deadline after disapproval (EME Homer S.Ct., 134 S.Ct. 1584 (2014)), nevertheless, CAA Section 7410(c)(1) contemplates that a state would be provided time to correct any deficiency and that EPA has the discretion to allow up to two years for correction of any deficiency.

EPA's determination about whether a FIP should be promulgated immediately as to a specific state should be based on a state-specific analysis since a State may bring a particularized, as-applied challenge to a nationwide or regional transport rule (EME Homer on remand, 795 F.3d 118 (D.C. Cir. 2015). EPA should not move to finalize the proposed FIP with respect to Arkansas until DEQ has been provided adequate time to review and respond.

Commenter: Utah Petroleum Association and the Utah Mining Association

Commenter ID: 48

Docket ID: EPA-R08-OAR-2022-0315

Comment:

Utah relied on the guidance in good faith and EPA should honor that in good faith. If EPA persists on disavowing its still intact guidance, it should at a minimum offer Utah an opportunity to make corrections and updates to its IT SIP before imposing a FIP.

Commenter: Xcel Energy

Commenter ID: 52

Docket IDs: EPA-R05-OAR-2022-0006

Comment:

Timeframe allowed for state response to SIP Disapproval:

While the Clean Air Act (CAA) allows states up to 2 years from SIP disapproval to issue a response to EPA, the proposed FIP, with a scheduled final date of December 15, 2022, does not allow for that two-year commitment period to take place. We believe that Congress provided for that timeline for a reason. There are cases, such as this one, where is appears there are reasonable technical disagreements that should be fully evaluated and resolved before EPA moves on to the next step in the process.

Commenter: Xcel Energy

Commenter ID: 52

Docket IDs: EPA-R06-OAR-2021-0801

Comment:

Timeframe allowed for state response to SIP Disapproval:

While the Clean Air Act (CAA) allows states up to 2 years from SIP disapproval to issue a response to EPA, the proposed FIP, with a scheduled final date of December 15, 2022, does not allow for that two-

year commitment period to take place. Xcel Energy believes that Congress provided for that timeline for a reason. There are cases, like here, where is appears there are reasonable technical disagreements that should be fully evaluated and resolved before EPA moves on to the next step in the process.

Response

As a general matter, the EPA disagrees that the EPA is forgoing the process required by statute, or that the EPA is taking "accelerated action" on interstate transport state implementation plans (SIPs) for the 2015 ozone NAAQS. See Section V.A.1. of the preamble for responses to comments related to the relationship between timing of proposals to disapprove SIPs and promulgate federal implementation plans (FIPs), Section V.A.2. of the preamble for responses to comments related to requests for more time to revise SIP submissions, and Section V.A.3. of the preamble for responses to comments related to alleged harms to states caused by time between SIP submission and the EPA's action.

Some commenters argue that the EPA should approve the SIP submissions. However, the EPA disagrees that the SIP submissions for any state included in this final rule provided an approvable interstate transport analysis or adequate provisions to eliminate significant contribution or interference with maintenance. Rather, following review of comments received on the proposed notices and in consideration of all additional data made available through the notice and comment process, the EPA finds the SIP submissions covered by this action are deficient to address the statutory requirements of the Clean Air Act (CAA), as detailed in the proposals and reiterated in this final action. See generally preamble Section IV.

In response to PacifiCorp's claim that EPA has historically "provided states sufficient time to make corrections or submit additional clarifications if necessary to achieve the good neighbor provision via their own SIPs" which points to the EPA's approval of Wyoming's prong 2 good neighbor SIP for the 20188 ozone NAAQS, the EPA notes that the EPA initially disapproved prong 2 of Wyoming's 2008 ozone NAAQS good neighbor SIP submission. 82 FR 9153 (February 3, 2017). EPA later approved a subsequent submission from Wyoming addressing prong 2, which the state submitted on October 17, 2018. 84 FR 3389 (February 12, 2019, signed February 6, 2019). CAA section 110(c)(1) requires EPA to promulgate a federal implementation plan (FIP) "at any time within 2 years" after disapproving a SIP submission, unless the State corrects the deficiency, and the EPA approves the plan. In the case of Wyoming for the 2008 ozone NAAQS, the state submitted, and the EPA approved, a SIP, so the EPA did not promulgate a FIP. While EPA generally seeks to work with states on the development of approvable SIPs, the timing depends on each situation and is always subject to the procedural requirements and deadlines of CAA section 110 as well as ensuring the substantive requirements of the Act will be met.

The EPA notes in response to PacifiCorp's comment that the Agency is not taking final action on Wyoming's good neighbor SIP submission for the 2015 ozone NAAQS in this action and also that the EPA is not using the proposed FIP (87 FR 20036; April 6, 2022) as a benchmark for any state in this final action.

The EPA notes in response to Xcel's comment that no consent decree established a deadline for the EPA to finalize a 2015 ozone NAAQS good neighbor FIP for any state by December 15, 2022.

Other issues raised by these comments are addressed in Sections II.C, III, and V.A.4 of the preamble and in the following sections: Sections 1.3 (Attachment A to the March 2018 Memorandum), 1.4 (Use of Updated Modeling), 1.6 (EPA Input During SIP Submission Development), 1.7 (Length of Comment Period), 4 (Air Quality Modeling), 5 (Updates to Modeling and Changes in Linkages), 9.2 (Over-Control), 10.3 (Cooperative Federalism and the EPA's Authority), 10.6 (Allegation that Disapprovals of Western State SIP Submissions was Predetermined), 11.6 (Economic Impacts), and 11.12 (Consent Decrees).

1.2 Guidance for SIP Submissions

Comments

Commenter: Air Pollution Control Program, Missouri Department of Natural Resources

Commenter ID: 01

Docket ID: EPA-R07-OAR-2021-0851

Comment:

[T]he Air Program notes that EPA has not ever provided any guidance on what an appropriate step-3 analysis would entail, which makes any decision where it rejects a step-3 analysis arbitrary and capricious.

[…]

EPA has offered no guidance to states on developing step-3 demonstrations in their good neighbor SIPs.

Commenter: Arkansas Department of Energy and Environment, Division of Environmental Quality

Commenter ID: 07

Docket ID: EPA-R06-OAR-2021-0801

Comment:

In the Proposed Rule, EPA seeks comment on rescinding recommendations presented to states in EPA's March 2018 Memorandum upon which many states relied in their analyses. By changing the rules so late in the game, EPA has left its partner states with no room for participation in the implementation process. Ultimately, a state that was unresponsive to obligations set in motion by the 2015 ozone NAAQS would be in the same position as any other state that submitted a well supported Transport Plan.

Commenter: Maryland Department of the Environment

Commenter ID: 29

Docket ID: EPA-R03-OAR-2021-0872

Comment:

EPA has not developed any official guidance on the necessary elements or analysis that a state is required to submit as part of an approvable Good Neighbor SIP. It is unreasonable for EPA to propose to disapprove Maryland's 2015 Good Neighbor SIP, in part, on the basis that Maryland did not submit a "sufficient technical evaluation" that is not defined, mandated, or required.

The Good Neighbor SIP has been a required SIP element since the implementation of the 1997 8- hour ozone standard. In the intervening 24 years, EPA has issued no official guidance for states to use in developing an approvable Good Neighbor SIP. It is unclear what standard or criteria EPA uses to determine approvability. The lack of guidance allows EPA broad latitude to disapprove SIPs for a variety of reasons and disincentivizes states from submitting a required CAA element. Inevitably, the lack of guidance creates an uneven playing field between the states.

The only direction EPA has supplied is a March 2018 memorandum entitled *Information on the Interstate Transport Implementation Plan Submissions for the 2015 Ozone National Ambient Air Quality Standards under Clean Air Act Section 110(a)(2)(D)(i)(I)*. This memo included an extended discussion on potential flexibilities in analytical approaches that states *could* use in developing their Good Neighbor SIPs. EPA stated:

> …*EPA is open to alternative frameworks to address good neighbor obligations or considerations outside the four-step process. The purpose of this attachment [Attachment A] is to identify potential flexibilities to inform SIP development and seek feedback on these concepts*. EPA is not at this time making any determination that the ideas considered below are consistent with the requirements of the CAA, nor are we specifically recommending states use these approaches. Determinations regarding states' obligations under the good neighbor provision would be made through notice-and-comment rulemaking.

The potential flexibilities included nearly 20 alternate analytical approaches for states to use in their Good Neighbor SIPs. However, as EPA made clear, the document and accompanying flexibilities was not a final determination on an approvable Good Neighbor SIP structure, and final determinations on any flexibilities in a state's SIP would be made through notice-and-comment rulemaking on that submittal.

[…]

The only thing states have to rely on is the four-step framework that EPA uses to assess interstate transport. EPA has never expounded upon what elements are required to ensure an approvable SIP in each of the four steps. States are thus left to address each of the four steps as best they can.

Commenter: Midwest Ozone Group

Commenter ID: 30

Docket ID: EPA-R02-OAR-2021-0673, EPA-R03-OAR-2021-0872, EPA-R03-OAR-2021-0873, EPA-R04-OAR-2021-0841, EPA-R05-OAR-2022-0006, EPA-R06-OAR-2021-0801, EPA-R07-OAR-2021-0851

Comment:

EPA improperly asserts that its three 2015 ozone NAAQS Good Neighbor SIP flexibility guidance memoranda should no longer be considered applicable to development of the SIPs that are the subject of its proposed disapprovals.

In 2018, EPA published three guidance documents describing the process by which states could incorporate various "flexibilities" into their Good Neighbor SIPs. All of the documents were issued by the USEPA, Director of Office of Air Quality Planning and Standards Peter Tsirigotis.

The March 27, 2018, Tsirigotis memo, styled "Information on Interstate Transport State Implementation Plan Submissions for the 2015 Ozone National Ambient Air Quality Standards Under Clean Air Act Section 110(a)(2)(D)(i)(I)," was addressed to EPA Regional Air Directors in all EPA Regions. The memo states,

> [t]he purpose of this memorandum is to provide information to states and the Environmental Protection Agency Regional offices as they develop or review state implementation plans (SIPs) that address section 110(a)(2)(D)(i)(I) of Clean Air Act (CAA), also called the "good neighbor" provision, as it pertains to the 2015 ozone National Ambient Air Quality Standards (NAAQS). Specifically, this memorandum includes EPA's air quality modeling data for ozone for the year 2023, including newly available contribution modeling results, and a discussion of elements previously used to address interstate transport. In addition, the memorandum is accompanied by Attachment A, which provides a preliminary list of potential flexibilities in analytical approaches for developing a good neighbor SIP that may warrant further discussion between EPA and states.

The August 13, 2018, Tsirigotis guidance memo, styled "Analysis of Contribution Thresholds for Use in Clean Air Act Section 110(a)(2)(D)(i)(I) Interstate Transport State Implementation Plan Submissions for the 2015 Ozone National Ambient Air Quality Standards," also was addressed to EPA Regional Air Directors in all EPA Regions. The memo states,

> "[t]he purpose of this memorandum is to provide analytical information regarding the degree to which certain air quality threshold amounts capture the collective amount of upwind contribution from upwind states to downwind receptors for the 2015 ozone National Ambient Air Quality Standards (NAAQS). It also interprets that information to make recommendations about what thresholds may be appropriate for use in state implementation plan (SIP) revisions addressing the good neighbor provision for that NAAQS . . . [t]his document does not substitute for provisions or regulations of the Clean Air Act (CAA), nor is it a regulation itself. Rather, it provides recommendations for states using the included analytical information in developing SIP submissions, and for the Environmental Protection Agency (EPA) Regional offices in acting on them. Thus, it does not impose binding, enforceable requirements on any party. State air agencies retain the discretion to develop good neighbor SIP revisions that differ from this guidance.

The October 19, 2018, Tsirigotis guidance memo is titled "Considerations for Identifying Maintenance Receptors for Use in Clean Air Act Section 11 0(a)(2)(D)(i)(I) Interstate Transport State Implementation Plan Submissions for the 2015 Ozone National Ambient Air Quality Standards," also was addressed to EPA Regional Air Directors in all EPA Regions. As in the first two memoranda, the memo stated,

> [t]he purpose of this memorandum is to present information that states may consider as they evaluate the status of monitoring sites that the Environmental Protection Agency (EPA) identified as potential maintenance receptors with respect to the 2015 ozone national Ambient Air Quality Standards (NAAQS) based on EPA' s 2023 modeling. States may use this information when developing state implementation plans (SIPs) for the 2015 ozone AAQS addressing the good neighbor provision in Clean Air Act (CAA) section 110(a)(2)(D)(i)(I). In brief this document discusses (1) using alternative technical methods for projecting whether future air quality warrants identifying monitors as maintenance receptors and (2) considering current monitoring data when identifying monitoring sites that although projected to be in attainment as described below, should be identified as maintenance receptors because of the risk that they could exceed the NAAQS due to yearto-year (i.e., inter-annual) variability in meteorological conditions.(emphasis added).

In the ensuing two years and six months since the last guidance document was published, EPA has known that states might be incorporating the 2018 guidance into Good Neighbor SIP submittals and has made no public statement saying that it would not honor its guidance. Moreover, all of the subject 19 Good Neighbor SIPs have been pending before the Agency between two and one-half and almost four years with only one proposed action by EPA – the proposed approval of Iowa's Good Neighbor SIP that incorporated the 2018 guidance in a March 2, 2020, proposal at 85 Fed. Reg. 12,232. Now, nearly three years after the first Tsirigotis memo was published and two and a half years after the last was published, EPA is attempting to assert that these documents are archival in nature and trying to walk back the proposed Iowa approval (*See* 87 Fed. Reg. 9,477, February 22, 2022).

As EPA states in the proposed disapproval notices for Illinois, Indiana, Michigan, Minnesota, Ohio, and Wisconsin (87 Fed. Reg. 9,838 at 9,841)):

> In the March, August, and October 2018 memoranda, the EPA recognized that states may be able to establish alternative approaches to addressing their interstate transport obligations for the 2015 8-hour ozone NAAQS that vary from a nationally uniform framework. The EPA emphasized in these memoranda, however, that such alternative approaches must be technically justified and appropriate considering the facts and circumstances of each state's submittal. In general, the EPA continues to believe that deviation from a nationally consistent approach to ozone transport must be substantially justified and have a well-documented technical basis that is consistent with relevant case law. Where states submitted SIPs that rely on any such potential "flexibilities" as may have been identified or suggested in the past, the EPA will evaluate whether the state adequately justified the technical and legal basis for doing so.
>
> EPA notes that certain concepts included in an attachment to the March 2018 memorandum require unique consideration, and these ideas do not constitute Agency guidance with respect to transport obligations for the 2015 ozone NAAQS. Attachment A to the March 2018

> memorandum identified a "Preliminary List of Potential Flexibilities" that could potentially inform SIP development. However, EPA made clear in that Attachment that the list of ideas were not suggestions endorsed by the Agency but rather "comments provided in various forums" on which the EPA sought "feedback from interested stakeholders." Further, Attachment A stated, "EPA is not at this time making any determination that the ideas discussed below are consistent with the requirements of the CAA, nor are we specifically recommending that states use these approaches." Attachment A to the March 2018 memorandum, therefore, does not constitute Agency guidance, but was intended to generate further discussion around potential approaches to addressing ozone transport among interested stakeholders. To the extent states sought to develop or rely on these ideas in support of their SIP submittals, EPA will thoroughly review the technical and legal justifications for doing so.

This disavowal of EPA's guidance this late SIP development process is an arbitrary abuse of authority. The Administrative Procedures Act allows federal agencies such as EPA to issue guidance without following rulemaking procedures. 5 U.S.C. § 553. Although Agency guidance is not binding on regulated parties, such parties are permitted to rely on Agency guidance as the Agency's public statement of how it intends to construe the statutes and rules it governs. *Perez v. Mortg. Bankers Ass'n*, 575 U.S. 92, 96–97 (2015). Indeed, Tsirigotis expressly notes in his 2018 memos that states could rely on the information provided in the memos, including the "alternative technical methods" authorized by the memos, when developing their SIPs in compliance with CAA Good Neighbor Provisions.

Once an agency issues guidance to regulated parties, the agency cannot "simply disregard" the substance of its guidance and rely on "post hoc justifications" when deciding whether regulated parties have acted in accordance with such guidance. *Hoosier Env't Council v. Nat. Prairie Indiana Farmland Holdings, LLC*, No. 4:19-CV-71 DRL-JEM, 2021 WL 4477152, at **13, 16 (N.D. Ind. Sept. 29, 2021). Doing so constitutes an arbitrary and capricious action by the agency. Id. at *17. By waiting for years and until after states complied with EPA's 2018 guidance to backtrack on the guidance, add a new requirement, not in the guidance, that alternative methods used by states in their SIPs must be "substantially justified and have a well-documented technical basis," and disapprove SIPs on that basis, EPA is engaging in arbitrary and capricious actions. EPA should alter its position and encourage states to take advantage of these flexibilities, as appropriate, and to incorporate these guidance flexibilities into their Good Neighbor SIPs.

Commenter: Midwest Ozone Group

Commenter ID: 30

Docket ID: EPA-R08-OAR-2022-0315, EPA-R09-OAR-2022-0394, EPA-R09-OAR-2022-0138

Comment:

In the ensuing period of time since the last guidance document was published, EPA has known that states might be incorporating the 2018 guidance into Good Neighbor SIP submittals and has made no public statement saying that it would not honor its guidance.

Commenter: Ohio Utilities and Generators Group

Commenter ID: 36

Docket ID: EPA-R05-OAR-2022-0006

Comment:

US EPA's proposed disapproval is inconsistent with its own guidance.

Commenter: Oklahoma Department of Environmental Quality

Commenter ID: 37

Docket ID: EPA-R06-OAR-2021-0801

Comment:

Oklahoma objects to the proposed disapproval. This objection is based on many reasons, generally including the unfair outcomes for states created by EPA's refusal to acknowledge and apply in good faith legitimate guidance memoranda issued by EPA in 2018.

[…]

In 2018, EPA's Office of Air Quality Planning and Standards Director, Peter Tsirigotis, issued three memoranda regarding SIP development for interstate transport for the 2015 ozone NAAQS. These memoranda were held out to states as providing possible guidance for development of ozone transport SIPs, and states relied on these memos accordingly. Notably, states' infrastructure SIPs for the 2015 ozone NAAQS, including the transport portion of the SIP, were due to EPA on October 1, 2018. Yet, EPA issued these memos in March, August, and October of 2018. The October EPA memo was issued *after* the deadline for SIP submittal.

[…]

EPA's failure to recognize its own guidance, and the predicament it has now put states in that face a SIP disapproval and subsequent FIP, undermines the cooperative nature of the EPA-state relationship.

[…]

EPA has, without explanation, arbitrarily and capriciously changed its policy position through its refusal to acknowledge the legitimacy of states' good faith reliance on EPA guidance memoranda.

[…]

During the preparation of its SIP, a state agency cannot move forward unless the flexibilities, design values, and general guidance offered in the memos may be relied upon

Commenter: PacifiCorp

Commenter ID: 38

Docket ID: EPA-R08-OAR-2022-0315

Comment:

EPA's rejection of flexibilities identified by its own Guidance is arbitrary and not well founded.

States have wide discretion in determining how to achieve the NAAQS, including their interstate transport obligations, and EPA cannot force the states to adopt approaches reflecting the Agency's policy preferences. A "SIP basically embodies a set of choices . . . that the state must make for itself in attempting to reach the NAAQS with minimum dislocation."[65] EPA also cannot substitute its own judgment or a one-size-fits-all approach for that of the states when crafting a SIP, as the courts have recognized over and over. This is especially true when a state's SIP relied on guidance put forth by EPA.

[65] *Concerned Citizens of Bridesburg v. EPA*, 836 F.2d 777, 780–81 (3rd Cir. 1987); *see also Com. of Virginia.*, 108 F.3d at 1410 (CAA Section 110 "does not enable EPA to force particular control measures on the states.").

Commenter: Texas Commission on Environmental Quality

Commenter ID: 42

Docket ID: EPA-R06-OAR-2021-0801

Comment:

The EPA failed to issue guidance in a timely manner for states to use in developing transport SIP revisions for the 2015 eight-hour ozone NAAQS. It is unreasonable and arbitrary for the EPA to require state SIP revisions to include recommendations from memoranda and/or guidance issued after states have submitted their revisions.

Developing a SIP revision is a years long process that requires complex technical analysis and compliance with lengthy procedural requirements. Texas timely submitted its 2015 Ozone NAAQS Transport SIP Revision on August 17, 2018, to meet the October 1, 2018, statutory deadline for states to submit infrastructure and transport SIP revisions for the 2015 eight-hour ozone NAAQS. Thirty-one days before the SIP revisions were statutorily required to be submitted, the EPA issued its Analysis of Contribution Thresholds Memo on August 31, 2018. Eighteen days after this statutory deadline, the EPA further issued its Considerations for Identifying Maintenance Receptors Memo (Maintenance Receptor Guidance) on October 18, 2018. It is unreasonable and arbitrary for the EPA to expect, much less require, that states comply with the recommendations in these guidance documents that were issued either mere days before the deadline or after the deadline considering that SIP revisions are complex and time consuming endeavors.

Texas' transport SIP revision was developed prior to these late issued EPA memos. Texas reasonably relied on EPA's September 13, 2013, guidance on development and submission of infrastructure SIPs

since that was the only formal guidance available at the time to assist Texas in development of its SIP revision in order to meet the statutory deadline for submittal.

In order to meet statutory deadlines, states do not have the option of waiting for the EPA to provide updated guidance before proceeding with SIP development, review, and submittal; states must proceed to develop submittals based on information available at the time. It is unreasonable to expect states to review and/or incorporate recommendations after a SIP revision has been submitted. As a result of the EPA's lack of timely updated transport guidance for the 2015 eight-hour ozone standard, Texas was forced to expend effort and resources to develop its SIP revision without fully knowing how the EPA would evaluate Texas' transport obligation.

The EPA has previously taken the position that failure to timely submit a SIP revision is sufficient reason for the EPA to issue a FIP. Therefore, states must diligently develop SIP revisions to meet those statutory deadlines. The EPA's failure to update its guidance in a timely manner for the development of transport SIP revisions was arbitrary and unreasonable because states cannot delay and must develop these revisions with guidance currently available. The EPA's actions put states in the untenable position of developing SIP revisions without knowing what the EPA might expect, or simply accepting that EPA will impose its own requirements in a potential FIP. This is an absurd result of the EPA's failure to issue timely guidance.

Finally, guidance documents are non-binding recommendations that have not gone through formal rulemaking. The EPA has consistently failed to promulgate a rule that would instruct states in how, exactly, they should evaluate and meet potential transport actions, much less provide such a rule in a timely fashion that would allow states to meet the statutory requirement to demonstrate they have met their transport obligations within three years of promulgation of a new standard. For example, the EPA could have included criteria for evaluating transport obligations in the promulgation of the 2015 ozone NAAQS itself, and yet made no mention of how states should consider or meet transport obligations. In the absence of either such a rule, or even timely guidance, states such as Texas have tried to meet a target that the EPA has not defined. Furthermore, if the EPA had proposed and finalized a rule that specified requirements for transport at the same time that it proposed or even when it finalized the 2015 ozone NAAQS, states would have been able to evaluate such requirements and provide appropriate feedback to the EPA on any such rule. That is the purpose of the rulemaking process. The EPA's failure to provide states this opportunity through the rulemaking process without the threat of an already proposed FIP continues to circumvent the cooperative federalism structure that Congress developed in the FCAA.

Commenter: West Virginia Department of Environmental Protection

Commenter ID: 49

Docket ID: EPA-R03-OAR-2021-0873

Comment:

During the three years following DAQ's SIP submittal and EPA's failure to timely review it, which culminated in this proposed disapproval, EPA reevaluated and modified without communication to states what it considers as acceptable "necessary provisions" to meet the requirements of the 2015 Ozone Good Neighbor SIP. DAQ contends it is impossible for states to predict, much less meet, SIP requirements which are in constant fluctuation, poorly or not defined, and never acted upon by EPA.

Historically DAQ prepared and assembled state implementation plans per a generally standardized acceptable structure that included the four-step interstate framework. DAQ utilized this format when it assembled the WV 2015 Ozone Good Neighbor SIP per the 2018 SIP Interstate Transport Information Memorandum. EPA's apparent abandonment of the standard in this disapproval perplexes DAQ and further underscores EPA's inability to timely communicate required shifting SIP structure to the states. This disfunction violates cooperative federalism and lends uncertainty to the states and the regulated community.

Response

See Section V.A.6. of the preamble for the EPA's general responses to these comments.

In response to Arkansas Department of Environmental Quality, the EPA clarifies that the EPA took comment on rescinding the August 2018 Memorandum, and that all states must comply with CAA section 110(a)(2)(D)(i)(I) for the 2015 ozone NAAQS.

In response to Midwest Ozone Group, the EPA did in fact formally rescind the first proposed approval of Iowa's good neighbor SIP submission. 87 FR 9477 (February 22, 2022). The EPA re-proposed and finalized an approval of Iowa's good neighbor SIP on an entirely different basis. 87 FR 9477 (February 22, 2022); 87 FR 22463 (April 15, 2022). This was explained at proposal. *See, e.g.*, 87 FR 9498, 9509 (February 22, 2022). Midwest Ozone Group is incorrect about the number of actions the EPA has taken through April 2022 on good neighbor SIP submissions for the 2015 ozone NAAQS; the EPA also approved 23 good neighbor SIP submissions through that time, which is detailed in Section V.A.1 of the preamble.

Other issues raised by these comments are addressed in Sections II.D., V.B.2., V.B.3. and V.B.7. of the preamble and the following sections: Sections 1.4 (Use of Updated Modeling), 5 (Updates to Modeling and Changes in Linkages), 6.4 (October 2018 Memorandum), 7.4 (August 2018 Memorandum), 8.1 (Determination of Significant Contribution), 10.2 (SIP Call), and 10.3 (Cooperative Federalism and the EPA's Authority).

1.3 Attachment A to the March 2018 Memorandum

Comments

Commenter: Eagle Materials Inc.

Commenter ID: 16

Docket ID: EPA-R09-OAR-2022-0138

Comment:

States Have Significant Discretion to Determine Measures Needed to Fulfill Their Interstate Transport Obligations.

Section 110(a)(2)(D)(i)(I) of the CAA requires states to address interstate transport by preparing 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 such national primary or secondary ambient air quality standard." This language leaves substantial discretion to the states in determining both their significant contributions and the reduction measures necessary to eliminate them.

EPA has recognized, in guidance, that states have discretion to apply their own analyses to both assess and address their interstate transport obligations—in its March 2018 Guidance, EPA explicitly noted that "in developing their own rules, states have flexibility to follow the familiar four-step transport framework (using EPA's analytical approach or somewhat different analytical approaches within these steps) or alternative frameworks, so long as their chosen approach has adequate technical justification and is consistent with the requirements of the CAA." EPA also evaluated certain flexibilities proposed by states and other stakeholders, consistent with EPA's "guiding principle" of "supporting states' position as 'first actors' in developing SIPs that address section 110(a)(2)(D) of the CAA." While EPA emphasized that it was not concluding that the particular flexibilities assessed were consistent with the requirements of the CAA, these flexibilities demonstrate the broad range of analyses states can conduct that can fulfill interstate transport obligations. Further, EPA recognized broad state flexibility in its Proposed Disapproval, noting that "EPA has not prescribed to states any specific methodology for developing SIP submissions."

In performing its limited oversight role under the CAA, EPA cannot substitute its own judgment for that of the states, and in particular, cannot "force particular control measures on the states."

Commenter: Hagerty, Logan

Commenter ID: 22

Docket ID: EPA-R05-OAR-2022-0006

Comment:

One common issue prevented several of the five states from drafting an adequate SIP. The states sharing this common issue were Illinois, Michigan, and Ohio. The issue was a document titled "Attachment A to the March 2018 Memorandum." The states erroneously used this EPA-provided memorandum as justification for how their SIPs met the EPA standards. The modeling data within that memorandum was only intended to "generate further discussion around potential approaches to addressing ozone transport among interested stakeholders." The proposed rule also states the

memorandum included a provision that the memorandum was not intended to be a formal determination in meeting required components of an SIP.

If Attachment A to the March 2018 Memorandum is easily understood to not be agency guidance in drafting an SIP, there are two explanations as to why Illinois, Michigan, and Ohio committed this large error. Either (1) state environmental offices recognized this Memorandum was not agency guidance and intentionally used it to create an invalid SIP, or (2) the state agencies unintentionally used the Memorandum as guidance owed to a lack of clarity of the part of the EPA. The latter explanation seems more likely, because all the states who misused the 2018 Memorandum are in EPA Region 5.

Commenter: Idaho Power Company

Commenter ID: 23

Docket ID: EPA-R09-OAR-2022-0138

Comment:

EPA has recognized in guidance that states have discretion to apply their own analyses to both assess and address their interstate transport obligations—in its March 2018 Guidance, EPA explicitly noted that "in developing their own rules, states have flexibility to follow the familiar four-step transport framework (using EPA's analytical approach or somewhat different analytical approaches within these steps) or alternative frameworks, so long as their chosen approach has adequate technical justification and is consistent with the requirements of the CAA."

EPA also evaluated and approved certain flexibilities proposed by states and other stakeholders, consistent with EPA's "guiding principle" of "supporting states' position as 'first actors' in developing SIPs that address section 110(a)(2)(D) of the CAA." While EPA emphasized that it was not concluding that the particular flexibilities assessed were consistent with the requirements of the CAA, these flexibilities demonstrate the broad range of analyses states can conduct that can fulfill interstate transport obligations. Further, EPA recognized broad state flexibility in its Proposed Disapproval, noting that "EPA has not prescribed to states any specific methodology for developing SIP submissions."

Commenter: Oklahoma Department of Environmental Quality

Commenter ID: 37

Docket ID: EPA-R06-OAR-2021-0801

Comment:

As EPA stated in the March 2018 Tsirigotis Memo, the memo was intended to be used not only by states, but as guidance for the EPA regions, as well. Generally, staff from the states and regions work together in developing SIP submittals and, accordingly, states provide EPA regional staff with periodic updates on progress toward SIP submittals. During the development process of Oklahoma's ozone transport SIP, Oklahoma discussed with EPA Region 6 its intent to use the flexibilities offered in the

Tsirigotis memos. Therefore, during the final stages of SIP development in 2018, EPA Region 6 was on notice of Oklahoma's intent to use the flexibilities offered in the Tsirigotis memos.

Commenter: PacifiCorp

Commenter ID: 38

Docket ID: EPA-R08-OAR-2022-0315

Comment:

EPA published the Flexibility Guidance in 2018 to assist the states with developing their SIPs, and again, Utah relied on that guidance. The Guidance emphasized that flexibility is allowed when developing a good neighbor SIP:

> states have flexibility to follow the familiar four-step transport framework (using EPA's analytical approach or somewhat different analytical approaches within these steps) or alternative frameworks, so long as their chosen approach has adequate technical justification and is consistent with the requirements of the CAA. . . . Over the next few months, EPA will be working with states to evaluate potential additional flexibilities for states to consider as they develop their good neighbor SIPs for the 2015 ozone NAAQS. Attachment A provides a preliminary list of potential flexibilities that may warrant additional discussion. *EPA looks forward to discussing these and other potential flexibilities with states over the next few months, which will help inform states' development of their good neighbor SIP submittals*. [(emphasis added)]

The list of potential flexibilities included "identify[ing] the emissions reductions (if any)" from a downwind state that could "prevent an identified upwind state from contributing significantly to those downwind air quality problems" in the Step 3 analysis. The Attachment A flexibilities also included analyzing the impact of international emissions on the downwind state.

Again, Utah (and numerous other states) followed EPA's suggestions in the Flexibility Guidance to consider "the relatively large impact of so-called 'uncontrollable' emissions (i.e., international and non-anthropogenic emissions) and home state emissions at the Colorado receptors, as well as emissions reductions already achieved as a result of other regulatory programs." EPA agrees that these factors were identified in Attachment A to the Flexibility Guidance, and EPA has recognized the flexibility afforded to states in developing good neighbor provisions in this and other guidance documents.

Nonetheless, EPA rejected Utah's analysis of each of the flexibilities without informing any of the states that it had changed course and would not accept the considerations listed in Attachment A. And this rejection came too late for Utah to make adjustments or provide additional information in response. For example, Attachment A recommended considering international emissions and "the role of background ozone levels [to] appropriately account for international transport." Attachment A also suggested that "air quality, cost, or emission reduction factors **should be weighed differently** in areas where international contributions are relatively high." Utah analyzed this factor, reasonably determining that international emissions contributed in excess of 50% of ozone at the subject monitors and that such "relatively high" international contributions should be considered in Step 3.

But EPA now says the "flexibilities could not be considered by the states," and specifically states that international emissions and "other non-anthropogenic" emissions are "*irrelevant*." After informing the states that they could, even should, consider international emissions, EPA now, without warning or notice, says its guidance is "irrelevant". Such actions are arbitrary and capricious.

In the Proposed Disapproval, EPA treated the other considerations Utah relied on in the Step 3 analysis in a similar fashion. Utah considered another "flexibility" from the Flexibility Guidance – the "current and projected local emissions and whether downwind areas have considered and/or used available mechanisms for regulatory relief," and determined that this factor impacted Utah's good neighbor SIP analysis. Again, EPA now finds these in-state emissions are not "relevant" for the Denver area nonattainment receptors. This about face was all the more shocking to Utah because it had worked closely with EPA throughout developing and submitting what it had been assured was an approvable SIP. EPA has rejected the use of these "flexibilities" in numerous SIP disapproval actions across the country, catching state after state by surprise.

Commenter: Utah Division of Air Quality

Commenter ID: 47

Docket ID: EPA-R08-OAR-2022-0315

Comment:

The UDAQ disagrees with EPA's disapproval of the SIP for the following reasons. First, through coordination with EPA Region 8, UDAQ developed and submitted what the agency thought to be a fully approvable SIP that met EPA's guidance and requirements at the time. The EPA's change of position at these late stages of the SIP process wastes the state's resources and time devoted to this rulemaking.

Commenter: West Virginia Department of Environmental Protection

Commenter ID: 49

Docket ID: EPA-R03-OAR-2021-0873

Comment:

DAQ contends that at the time of submittal the WV 2015 Ozone Good Neighbor SIP contained all "necessary provisions" as were then currently required by EPA to constitute an approvable SIP. DAQ utilized the March 27, 2018 EPA memorandum guidance from Office of Air Quality Planning and Standards ("OAQPS") Director Peter Tsirigotis titled *Information on the Interstate Transport State Implementation Plan Submissions for the 2015 Ozone National Ambient Air Quality Standards under Clean Air Act Section 110(a)(2)(D)(i)(I)* ("2018 Interstate Transport SIP Information Memorandum" and included as Appendix C of the SIP) during preparation of the SIP. During the three years following DAQ's SIP submittal and EPA's failure to timely review it, which culminated in this proposed disapproval, EPA

reevaluated and modified without communication to states what it considers as acceptable "necessary provisions" to meet the requirements of the 2015 Ozone Good Neighbor SIP.

Response

Attachment A to the March 2018 Memorandum is not Agency guidance. See Sections II.D and V.B.2 of the preamble for the EPA's general response to these comments.

In response to comments from West Virginia Department of Environmental Protection, the EPA's explanation of the deficiencies in West Virginia's SIP submission were explained at proposal. See 87 FR 9524-9532 (February 22, 2022). In response to PacifiCorp, the EPA's explanation of the deficiencies in Nevada's SIP submission were explained at proposal. See 87 FR 31492-31494 (May 24, 2022).

Other issues raised by these comments are addressed in Section V.C.2. of the preamble and in Sections 1.6 (EPA Input During SIP Submission Development), 4.2 (Model Performance), 5 (Updates to Modeling and Changes in Linkages), 10.3 (Cooperative Federalism and the EPA's Authority), and 11.4 (Transport Policy – Western State Ozone Regulation).

1.4 Use of Updated Modeling

Comments

Commenter: Air Pollution Control Program, Missouri Department of Natural Resources

Commenter ID: 01

Docket ID: EPA-R07-OAR-2021-0851

Comment:

The Air Program notes that EPA's proposed disapproval goes on to point out that the updated modeling has identified four additional receptors (all in the Lake Michigan area) that Missouri is now linked to. These receptors were not identified as linked receptors in the previous modeling relied upon in our SIP submission. EPA uses this as further evidence to justify their proposed disapproval. This sleight-of-hand move by EPA is a direct attack on Missouri's right to develop its own SIP. If EPA is going to move the target more than two years after the submission is made and use that tactic to justify its action, then a proposed disapproval cannot be the appropriate action. […] Such action would instead favor stripping states of their rights and imposing hundreds of millions of dollars in compliance costs without adequate justification or the opportunity for states to update and retain control over their SIP. For these reasons, EPA must withdraw the proposed disapproval and take action to approve Missouri's submission.

Commenter: Alabama Department of Environmental Management

Commenter ID: 02

Docket ID: EPA-R04-OAR-2021-0841

Comment:

ADEM submitted its 8-hr Ozone iSIP in August 2018, and after that date several rounds of additional modeling were performed evaluating the impacts of upwind States on predicted future nonattainment and maintenance monitors, including modeling in both 2021 and 2022 for the 2023 and 2026 future years. This modeling was based on data that EPA collected, analyzed and published years after Alabama's submittal. In an effort to quickly provide a SIP based on the newer modeling (February 2022), ADEM rescinded the 2018 SIP, and presented EPA with a revised SIP, including a Weight of Evidence (WOE) argument based on the readily available data.

[…]

The revised SIP package was submitted largely because of the impossible task of evaluating the revised modeling, given the time and resources involved. EPA cannot expect States to evaluate future scenarios when submitting SIPs, especially when the modeling is performed years after the original SIP submission is made.

Additionally, it should be noted that the purpose of an iSIP is to verify that the State has the authority to address the regulations of the Clean Air Act (CAA), not to determine if, and by how much, an upwind State may impact a downwind monitor. If EPA intended to use updated modeling to assess impacts at future nonattaining and maintenance receptors, a call for plan revisions should have occurred, allowing EPA to incorporate and rely on modeling and monitoring data, while providing States the opportunity to review the data and incorporate any changes, if needed, without the need for a FIP call.

Further, based on the timeline after submittal of the 2018 SIP, EPA did not meet its statutory review time to determine completeness, which should have taken place in February 2020. Given that the modeling, which EPA is basing the disapproval on, was not available until February 2022, EPA cannot hold States to an impossible standard when developing SIPS.

Commenter: Alabama Power Company

Commenter ID: 03

Docket ID: EPA-R04-OAR-2021-0841

Comment:

Notably, EPA's proposal to rely on recent analysis and data not available to the state either at the time of its SIP submission or during EPA's statutory review period is unfair to the state. Just as "[a]gency actions must be assessed according to the statutes and regulations in effect at the time of the relevant activity," EPA's approval or disapproval of a SIP should adhere to the guidance, data, and evidence available and on the record at the time of EPA's timely review of the SIP.[18] Under Section 110 of the Act, EPA has 12 months after its completeness determination to fully or partially approve, disapprove, or

conditionally approve the SIP.[19] Taking into account the time EPA is afforded to determine "completeness" of a SIP submittal, EPA had at most until the end of February 2020 to act on ADEM's SIP. The recent modelling EPA has decided to rely on in its current review of Alabama's 2018 SIP submittal was not available in February 2020. Nor has it been available for thorough and complete review and analysis by Alabama. EPA should not disapprove a SIP based on extra-record data not available either to the state during its development of the SIP nor to EPA during the period statutorily allotted for EPA to take final action on SIP submissions.[20]

[18] *Texas v. EPA*, 829 F.3d 405, 430 (5th Cir. 2016) (citing *Caring Hearts Pers. Home Servs., Inc. v. Burwell*, No. 14-3243, 2016 WL 3064870 (10th Cir. May 31, 2016)); *see also Wisconsin v. EPA*, 938 F.3d 303, 336 (D.C. Cir. 2019) (suggesting in dicta that the state may attack EPA's "reliance on data compiled after the SIP action deadline" in challenging EPA's disapproval of a SIP (but not if challenging the subsequent FIP)).
[19] 42 U.S.C. § 7410(k)(2)
[20] *See Sierra Club v. EPA*, 356 F.3d 296, 308 (D.C. Cir. 2004) ("To require states to revise completed plans every time a new model is announced would lead to significant costs and potentially endless delays in the approval process."). Where new information arises, and if the criteria applicable to the provision are satisfied, EPA can exercise its authority under section 7410(k)(5) to ensure SIPs satisfy the Act. This procedure guarantees states the opportunity to draft SIPs in light of any such new data or analysis, which would not be available if EPA could act on post-record material to disapprove a SIP.

Commenter: Ameren Missouri

Commenter ID: 05

Docket ID: EPA-R07-OAR-2021-0851

Comment:

USEPA has improperly proposed to disapprove of Missouri's good neighbor SIP based on modeling which was not in the SIP submittal and was unavailable to Missouri or the public during the development of the Missouri Good Neighbor SIP.

Commenter: Arkansas Department of Energy and Environment, Division of Environmental Quality

Commenter ID: 07

Docket ID: EPA-R06-OAR-2021-0801

Comment:

Timing of EPA's Proposed Rule.

EPA had all of the information necessary based on the best available science to approve the interstate component of the Arkansas Transport SIP submittal when its action was due on November 7, 2020. Yet, EPA Headquarters "red-lighted" work by the EPA regions on these submittals unless EPA's 2017 modeling results indicated that a state's overall contribution to identified nonattainment and maintenance areas was less than the threshold EPA had previously used to identify linkages for its Cross-State Air Pollution Rule FIP for the 1997 ozone NAAQS. It is DEQ's understanding that EPA regions did

not begin drafting actions on other submittals until after Downwinders at Risk, et al., sued EPA for failure to act within Clean Air Act time frames.

Had EPA reviewed the SIP in the timeframe required by federal law, the information available at the time—the same information that states used to inform their decisions—would have ensured that states did not waste time on robust analyses of available data for the purposes of making sound, evidence-based decisions. EPA stalled an evaluative action until the perceived "facts" of the situation changed such that timely state analyses were rendered outdated.

EPA released two "updates" for modeling that were not made available to states in a timeframe reasonable for inclusion in national program goals or state plans. 2016v1 was made available two years after state plans were due to EPA, but EPA contends this data is useful for determining design values and linkages to downwind areas (Step 1 of EPA's recommended four-step framework for evaluating interstate transport). EPA's 2016v2 modeling—which EPA now purports is the measuring rod by which state plans should be evaluated—was released by EPA to the states at the same time EPA was writing its proposed disapproval and proposed FIP. EPA thus moved the target on what should be evaluated for transport SIPs one and one-half years after the AR Transport SIP was deemed complete by EPA and four years after the SIPs were due.

[…]

EPA proposes to primarily rely on a different modeling platform (EPA's 2016 v2 modeling12) for its evaluation of Arkansas's SIP submittal instead of the modeling data that EPA made available to the states for development of the Transport SIPs for the 2015 ozone NAAQS (EPA's March 2018 Memorandum). The EPA's 2016v2 modeling platform was developed as an update to EPA's 2016v1 modeling platform. A 2011 modeling platform was used to generate the data provided to states for SIP development in the March 2018 Memorandum. Among other updates to 2016v2, this platform incorporated updated emissions data, which represent emissions for the 2016 base year, as well as projected emissions for the 2023, 2026, and 2032 future years. As ADEQ pointed out in its SIP submittal, different modeling platforms and inventory assumptions can yield different results. It is no surprise then that changing the modeling platform may yield different ozone source apportionment results. ADEQ finds that it is not reasonable for EPA to provide states with modeling data for use in SIP development only to perform new modeling years later and then tell states that their decision-making, which was based on the data available to them at the time is flawed.

[…]

If EPA believes insists that it must consider newer data in its review of state Transport SIPs, then DEQ requests that EPA correct its emissions inventories, rerun the model using the updated 2016v2 platform, and issue a Notice of Data Availability based on its updated modeling prior to finalizing action on the Arkansas Transport SIP.

[…]

DEQ expended hundreds of hours of staff time and other resources to perform a robust analysis and scientifically-based evaluation of the information that was available at the time of SIP development. EPA's disapproval moves the target on nonattainment and maintenance receptors that must be

evaluated by primarily relying on data that was not available to the state at the time of SIP development and was not available when EPA was statutorily required to act on the Arkansas Transport SIP. This conduct is inconsistent with the cooperative federalism framework for air quality protection under the Clean Air Act.

Commenter: Association of Electric Companies of Texas, BCCA Appeal Group, Texas Chemical Council and Texas Oil & Gas Association

Commenter ID: 11

Docket ID: EPA-R06-OAR-2021-0801

Comment:

In the Proposed Disapproval, EPA relied on a new modeling platform that was released years after Texas's timely SIP submittal and mere months before EPA proposed to deny Texas's SIP. Texas and the public had no notice of the post-statutory period analysis EPA intended to apply to determine whether to approve the SIP and now has no opportunity to evaluate EPA's new platform and associated analytical framework. In fact, the modeling files supporting EPA's new analysis were provided just days before the comment deadline on this action.

EPA's new modeling, which EPA used in an attempt to quantify Texas's "significant contribution," is not a lawful basis for disapproving Texas's SIP. Before finalizing its disapproval, EPA should provide Texas stakeholders an opportunity to evaluate the new modeling platform. The CAA grants states the primary authority to implement the NAAQS and allows EPA to step in only where the state has failed in its duty. Here, Texas did not fail in its duty. TCEQ relied on the most current information available to it at the time the SIP was drafted and timely submitted a complete SIP meeting the CAA's requirements and EPA should judge the SIP solely on that basis.

Commenter: Cleco Corporate Holdings LLC

Commenter ID: 14

Docket ID: EPA-R06-OAR-2021-0801

Comment:

The Agency reviewed the Louisiana SIP, for which LDEQ relied on modeling data found in the March 27, 2018 guidance memorandum (March 27, 2018, *Information on the Interstate Transport State Implementation Plan Submissions for the 2015 Ozone National Ambient Air Quality Standards under Clean Air Act Section (D)(i)(I)*), and used the 2016v2 emissions platform to evaluate the Louisiana SIP. The Technical Support Document for 2016v2 was not made available until 2022 which was after the Louisiana SIP submittal. In addition, EPA relied on the air quality modeling performed using CAMx version 7.10, which was released in January 2021. This release also took place after the Louisiana SIP was submitted.

Although EPA is issuing an invitation in the Proposal for public comment on the updated 2023 modeling, which uses the 2016v2 emissions platform, EPA should not rely on modeling and data that was not available at the time of the SIP submittal deadline and has not been updated based on public comment. Instead, EPA should evaluate the Louisiana SIP based on the modeling data referred to in the March 27, 2018 memorandum (March 27, 2018, *Information on the Interstate Transport State Implementation Plan Submissions for the 2015 Ozone National Ambient Air Quality Standards under Clean Air Act Section (D)(i)(I)*) and subsequent 2018 guidance documents. At least, EPA should incorporate needed revisions to the 2016v2 modeling platform based on comments provided by the states and other stakeholders as provided in this docket and then re-analyze the Louisiana SIP based on the updated/corrected modeling platform before issuing a final rule on the Louisiana SIP.

Commenter: Eagle Materials Inc.

Commenter ID: 16

Docket ID: EPA-R09-OAR-2022-0138

Comment:

Nevada adopted a broad and intentionally overinclusive approach to assessing its interstate transport obligations, using EPA's latest contribution modeling, released just months prior in March 2018, "to identify and quantify contributions greater than 0.5 percent of the 2015 ozone NAAQS resulting from Nevada's anthropogenic emissions" for further analysis. [. . .] Nevada relied on EPA's modeling, emphasizing that "[a]lthough models can always be refined and there may be differences in certain approaches to technical issues as the NDEP has commented, it is the NDEP's position that the USEPA's modeling is state-of-the-science given the USEPA's constraints."

Nevada reviewed its contributions to receptors in California and Colorado under this framework, considering relative intrastate contributions and overall interstate contributions. Based on this extensive analysis, Nevada determined that "the contribution of 2023 base case anthropogenic NOx and VOC emissions from sources within Nevada to any projected 2023 nonattainment or maintenance receptor at greater than 0.5 percent of the NAAQS is limited to two states, California and Colorado." However, for each of these receptors, "Nevada's contribution… [was] less than one percent of the 2015 ozone NAAQS," meaning that under EPA's own analytical approach, Nevada was not linked to downwind air quality problems and that no further reductions measures were necessary.

Despite Nevada's highly conservative assessment of its interstate transport obligations, EPA's Proposed Disapproval nevertheless concludes, based on new air quality modeling using the 2016v2 emissions platform, that Nevada is now linked to 2 receptors in Utah. Nevada's contribution to these receptors is between 0.86 ppb and 0.89 ppb, which falls below the 1 ppb linkage threshold determined by Nevada to be more appropriate for Western states, where "interstate contributions… are relatively small, especially given the large contributions from background and intrastate emissions." EPA unreasonably imposes its own analysis in evaluating Nevada's SIP, rather than determining whether Nevada's analysis was reasonable.

Further, EPA's analysis relies on modeling that was not available until 3 years after Nevada was required to submit its SIP revision in response to EPA's revision to the ozone NAAQS on October 1, 2015. Under the CAA, states are required to submit revised SIPs within 3 years after EPA revises the NAAQS. Nevada met this 3-year deadline by submitting its revised SIP on October 1, 2018, relying on modeling that EPA released just 6 months prior. Nevada specifically determined that EPA's data represented the "best available data with which to conduct Nevada's transport analysis," which EPA does not dispute in its Proposed Disapproval. Rather, EPA asserts that "[b]y using the updated modeling results, the EPA is using the most current and technically appropriate information for this proposed rulemaking." However, EPA fails to consider whether Nevada's analysis using the best available data at the time was reasonable and fails to even acknowledge the substantial change imposed by EPA's new modeling, increasing Nevada's contribution to Utah receptors from under 0.5% of the NAAQS to above EPA's 1% threshold.

Commenter: Environmental Federation of Oklahoma

Commenter ID: 20

Docket ID: EPA-R06-OAR-2021-0801

Comment:

In particular, EFO supports DEQ's assessment that EPA has overstepped its authority by circumventing the normal SIP development and approval process in a number of ways, including but not limited to: … fourth, relying on data not available to the state for either review or use.

Commenter: Evergy, Inc.

Commenter ID: 21

Docket ID: EPA-R07-OAR-2021-0851

Comment:

EPA's updated modeling for Missouri identified four new receptors near Lake Michigan. This comes two years after the Missouri Department of Natural Resources (MDNR) Public submitted the Missouri SIP.

Commenter: Kentucky Division for Air Quality

Commenter ID: 25

Docket ID: EPA-R04-OAR-2021-0841

Comment:

EPA's Use of Revised Modeling Data Not Available to States prior to Deadline for 2015 Infrastructure Submittal

At the time of Kentucky's final 2015 Ozone I-SIP submittal, there were several guidance documents from EPA as well as modeling data available to review and use for the Interstate Transport demonstration. Specifically, two memos from EPA's Office of Air Quality Planning and Standards (OAQPS), dated March 27, 2018, and August 31, 2018, were available. Additionally, EPA provided updated modeling information with the March 27, 2018 memo for states to consider in developing their Interstate Transport SIPs. Kentucky used the information provided in EPA's March 27, 2018 memo and associated modeling, and the recommended 1 part per billion (ppb) threshold from the August 31, 2018 memo to evaluate the impacts that Kentucky emissions may have on downwind monitors.

In the current action, EPA has proposed disapproval of Kentucky's Interstate Transport requirements of the I-SIP submittal based on a second version of newly modeled data that was not made available to Kentucky until well past the statutory deadline for Kentucky's I-SIP submittal and EPA's action regarding that submittal. Specifically, EPA states, "EPA must act on SIP submittals using the information available at the time it takes such action." In the spirit of cooperative federalism, Kentucky would appreciate and expect the opportunity to submit a revised SIP in accordance with the revised data and modeling, rather than having the SIP disapproved after the fact.

Identification of newly impacted monitors without opportunity for States to review and develop an appropriate SIP submittal

EPA is taking action to disapprove the remaining Interstate Transport portion of Kentucky's SIP submittal using newly updated data, specifically the 2016v2 platform, which was not available at the time of Kentucky's I-SIP submittal. Additionally, the monitors previously linked as being impacted by Kentucky have changed with the newly available data. Kentucky was not afforded the opportunity to evaluate the potential linkages or provide additional information regarding these potential linkages. Specifically, using the 2016v2 platform, EPA has identified the Bucks County, PA monitor and the New Haven, CT monitor as linked to Kentucky in using the newly updated data. The Bucks County, MD monitor was not listed as either a nonattainment or maintenance monitor in the modeling data provided with the March 2018 memo. As such, Kentucky was not afforded the opportunity to evaluate the potential impact of emissions for either area prior to submitting the 2015 Ozone I-SIP. An opportunity to submit a revised SIP would provide Kentucky with the ability to review the 2016v2 platform, as well as the data and modeling associated with the platform.

Commenter: Louisiana Chemical Association

Commenter ID: 26

Docket ID: EPA-R06-OAR-2021-0801

Comment:

EPA failed to act on the Louisiana Transport SIP timely, which led to LDEQ and the EPA performing the required analysis under differing modeling data sets.

Pursuant to CAA §110(k), SIP submissions are deemed complete by operation of law six months after receipt by EPA. Thus, the Louisiana Transport SIP was deemed complete by operation of law on May 19,

2020. EPA must approve or disapprove, in whole or in a part, SIP submissions within 12 months of the SIP submissions being deemed complete. CAA §110(k)(2). Thus EPA was required to act on the Louisiana Transport SIP by May 19, 2021. EPA did not publish its proposed disapproval of the Louisiana Transport SIP until February 22, 2022, nearly a year after it was due. [footnote: EPA entered into a consent decree in the case of *Downwinders at Risk et al. v. Regan*, No. 21-cv-03551 (N.D. Cal), which required EPA to issue proposed rules to act on a number of pending 2015 ozone NAAQS interstate transport SIP submissions, including Louisiana's, by April 30, 2022. Under that consent decree, EPA agreed to take final action by December 15, 2022. The Consent Decree became effective upon by the Court on January 12, 2022.]. The deadlines in the CAA were purposefully enacted by Congress to prevent the exact situation that has arisen here – state reliance on current data and guidance being reviewed by an EPA that later has changed information, guidance, or methods.

The Louisiana Transport SIP relies on the 2023 modeling data released in the October 2017 Guidance and presented in the March 27, 2018 guidance document entitled: *Information on the Interstate Transport State Implementation Plan Submissions for the 2015 Ozone National Ambient Air Quality Standards under Clean Air Act Section (D)(i)(I)* ("2015 Ozone NAAQS Memo"). The EPA issued two more guidance documents, the August 2018 and October 2018 Guidance, which provide additional information to states developing interstate transport SIP submissions for the 2015 Ozone NAAQS.

One month before LDEQ submitted the Louisiana Transport SIP, EPA released an updated modeling platform using 2016-based emissions. The platform was developed by the National Emissions Inventory Collaborative. The EPA used the 2016v1 emissions inventory in its subsequent modeling to project ozone design values and contributions for 2023. Thereafter, the platform was updated as 2016v2. In addition to reviewing the Louisiana Transport SIP under the March 2018 Guidance, EPA used the 2016v2 emissions platform to evaluate the Louisiana Transport SIP. The Technical Support Document for 2016v2 was not available until 2022. The EPA also relied on the air quality modeling performed using Comprehensive Air-quality Model with extensions (CAMx) version 7.10, which was released in January 2021, long after the Louisiana Transport SIP was submitted.

LCA supports the use of the most current and technically appropriate information in developing and reviewing SIP submissions. However, EPA is only now accepting comments on the updated 2023 modeling, which uses the 2016v2 emissions inventory platform. It is not reasonable for EPA to rely on modeling and data that (i) was not available at the time of the SIP submittal deadline and (ii) has not been updated based on public comment. EPA must evaluate the Louisiana Transport SIP based on the modeling data referred to in the *2015 Ozone NAAQS Memo* and subsequent guidance documents. At a minimum, EPA must incorporate needed revisions to the 2016v2 modeling platform based on comments provided by the states and other stakeholders as provided in this docket and then re-analyze the Louisiana Transport SIP based on the updated/corrected modeling platform before issuing a final rule on the Louisiana Transport SIP.

Commenter: Louisiana Department of Environmental Quality

Commenter ID: 27

Docket ID: EPA-R06-OAR-2021-0801

Comment:

LDEQ submitted the mandatory 2015 ozone transport SIP on Nov. 12, 2019, based on EPA's Model 2016v1. However, EPA unjustly and prejudicially based the disapproval on the updated version, 2016v2, which includes refinements that have not been peer reviewed. Furthermore, this modeling was performed after the SIP deadline.

Significant differences are present in EPA's modeling used for LDEQ's 2019 submittal and the modeling used to theorize the disapproval proposal. This points to substantial alterations to model inputs parameters. States were not allowed to review or comment on the newer model and or inputs prior to use in the disapproval process.

Commenter: Midwest Ozone Group

Commenter ID: 30

Docket ID: EPA-R02-OAR-2021-0673, EPA-R03-OAR-2021-0872, EPA-R03-OAR-2021-0873, EPA-R04-OAR-2021-0841, EPA-R05-OAR-2022-0006, EPA-R06-OAR-2021-0801, EPA-R07-OAR-2021-0851, EPA-R08-OAR-2022-0315, EPA-R09-OAR-2022-0394, EPA-R09-OAR-2022-0138

Comment:

EPA's intention to revise its emission inventory and to conduct new air quality modeling without allowing an appropriate opportunity for stakeholder review and comment is inappropriate

EPA notes in the proposed disapprovals that, after the modeling it conducted in support of earlier transport rules, e.g., CAIR, CSAPR, CSAPR Update, CSAPR Closeout, and Revised CSAPR Update, the agency revised the emission inventory used in the modeling to assess the efficacy of prior transport rules. EPA conducted new modeling using the revised inventory. The agency describes the process as follows:

> Following the Revised CSAPR Update final rule, the EPA made further updates to the 2016 emissions platform to include mobile emissions from the EPA's Motor Vehicle Emission Simulator MOVES3 model 17 and updated emissions projections for electric generating units (EGUs) that reflect the emissions reductions from the Revised CSAPR Update, recent information on plant closures, and other sector trends. The construct of the updated emissions platform, 2016v2, is described in the emissions modeling technical support document (TSD) for this proposed rule. (emphasis added).

In December 2021, MOG and other stakeholders submitted detailed comments on the 2016v2 emission inventory platform in an effort to correct errors that existed in that platform. EPA's efforts to revise this emission inventory platform at this time raises the question about whether EPA intends to update the modeling that has been used as the basis for the SIP disapprovals and the proposed FIP - but only in support of the final rule.

While MOG urges EPA to rely on modeling that accurately reflects current on-the-books regulatory requirements and up-to-date emission inventories, we strenuously object to the possibility that EPA

would conduct any such additional modeling to support a final rule and not provide the opportunity for that data to be reviewed, analyzed and commented on in advance of any final decision on the subject SIP disapproval (or for that matter the related proposed FIP). These concerns were also expressed earlier, in July 2021, by several MJOs (Westar, LADCO, SESARM, MARAMA, and CENSARA).

Commenter: Minnesota Pollution Control Agency

Commenter ID: 31

Docket ID: EPA-R05-OAR-2022-0006

Comment:

EPA's proposed disapproval of Minnesota's 2015 Ozone Transport SIP does not assess the quality of Minnesota's original submittal. Minnesota was identified as a non-significant contributor (below 0.7 parts per billion) to any ozone monitors in the 2018 modeling performed by both EPA and Lake Michigan Air Directors Consortium (LADCO). Minnesota did not complete steps three or four of the 2015 Ozone Transport SIP based on that information. Minnesota's original submittal should have been approved based on contribution information available from both EPA and LADCO at that time.

EPA is now proposing to use a revised 2016 modeling platform, EPA 2016 version 2 emissions modeling platform (2016v2 EMP) to support a remedy for the Interstate Transport Rule for the 2015 Ozone National Ambient Air Quality Standard (NAAQS).

Commenter: Maryland Department of the Environment

Commenter ID: 29

Docket ID: EPA-R03-OAR-2021-0872

Comment:

Additionally, MDE has been disadvantaged by EPA's delay in acting to approve or disapprove its 2015 Good Neighbor SIP, which was submitted to EPA on October 16, 2019. EPA published its proposed disapproval on February 22, 2022, and relied in part on "newer, updated modeling performed by the EPA which was not available when MDE submitted its supplemental SIP." By delaying its decision on Maryland's submittal for nearly 2.5 years, EPA moved the goal post for Maryland—an act the DC Circuit admonished in *New York v. EPA*, 964 F.3d 1214, 1223 (D.C. Cir. 2020). While MDE agrees that EPA should use current data and look toward the next applicable attainment date when approving SIPs or issuing FIPs, an over 2-year gap between submittal and approval allows for newer technology to be developed and relied upon, with no notice to states. If EPA were to review and approve or disapprove SIPs within the timeframes required by the CAA, EPA would likely conduct its review based on the same modeling and data that is available at the time SIPs are submitted by states. This would not only provide clear parameters to both EPA and states, but could also result in timely emissions reductions and attainment of the 2015 ozone NAAQS.

Commenter: Nevada Division of Environmental Protection

Commenter ID: 33

Docket ID: EPA-R09-OAR-2022-0138

Comment:

EPA then suddenly released a new modeling platform for ozone interstate transport in October 2021, and then failed to provide or allow states such as Nevada adequate time, resources, and technical support to critically review the model. Instead, EPA abruptly announced that is expected "to use this information in upcoming rulemaking actions, including ozone transport actions" and did not provide NDEP time to check critical model inputs, such as background contributions and emissions from the transportation sector.

Commenter: Oklahoma Department of Environmental Quality

Commenter ID: 37

Docket ID: EPA-R06-OAR-2021-0801

Comment:

EPA Has Unpredictably Changed the Rules Mid-Process

The proposed disapproval dismisses ODEQ's analysis regarding the six monitors that established the initial linkage between Oklahoma and downwind nonattainment and maintenance problems. 87 Fed. Reg. 9818. In accord with the flexibilities offered in the 2018 Tsirigotis memos, the Oklahoma SIP demonstrated that Oklahoma emissions had impacts below the significance threshold at three of the monitors. Oklahoma's SIP included a weight-of-evidence prediction that the remaining three receptors would be in attainment in 2023. In fact, EPA's more recent modeling confirms the accuracy of that prediction for two of these receptors. However, in the proposed disapproval EPA now argues Oklahoma's emissions are linked to only two monitors, one of which is completely different than any originally identified.

Notably, ODEQ relied on EPA's modeling released with its March 2018 Memo to identify the initial six impacted receptors in step 1 of the 4-step framework. Yet, in a surprising development, EPA moved the goal posts by using completely different modeling for its decision to disapprove Oklahoma's SIP and thereby identified a new receptor supposedly impacted by Oklahoma. It stands to reason that, were Oklahoma to address impacts to those monitors in a SIP modification, it is entirely possible that EPA would find one or more different monitors to establish the linkage in a future rulemaking. This type of whiplash decision-making by EPA leaves states unable to predict the outcomes of their efforts— or even where to aim. There should be some basic measure of predictability for where the goal posts stand.

Furthermore, it should be noted that the proposed disapproval was considerably late, as Section 110(k)(2) of the CAA states that EPA must take action within 12 months of a "complete" SIP submission.

The maximum amount of time EPA can take to deem a SIP submittal complete is 6 months, therefore, even accounting for this timeline, EPA's action falls way behind the statutory requirement. Had EPA reviewed and approved Oklahoma's SIP submittal during its statutorily required timeframe, EPA would have been measuring Oklahoma's SIP submittal against comparable data. Because EPA took so long to act on SIP submittals, EPA created a situation where the standard under which states developed their SIPs was no longer the standard against which those SIPs were judged.

[…]

EPA failed to Adequately Include State Participation

[…] To begin with, the development of the modeling platform should have concluded before EPA used the platform for this rulemaking. ODEQ and other air quality agencies worked together to develop a letter from Michael Vince (the Executive Director of the Central States Air Quality Agencies or CenSARA) to Peter Tsirigotis, dated July 29, 2021 (included as Attachment C hereto). The letter makes the point that, if air agencies are to be given the opportunity to provide meaningful feedback on the emissions inputs used by EPA in rulemaking, they should have the opportunity to review and comment on the Emissions Modeling Platform (EMP) before it is used in federal rulemaking. EPA did allow agencies the opportunity to review an updated version of the EMP, but the version that was ultimately used to develop the proposed disapproval of Oklahoma's ozone transport SIP (and to develop the proposed FIP) had not been released and did not undergo state review in advance of its deployment in support of EPA's rule development.

Commenter: Tennessee Department of Environment and Conservation

Commenter ID: 41

Docket ID: EPA-R04-OAR-2021-0841

Comment:

Comment #1: EPA's Poorly Timed Model Releases Undermine States' Abilities to Demonstrate Compliance with CAA §110(a)(2)(D)

The proposed disapproval discusses EPA's modeling efforts at some length, and that discussion is informative regarding the frequency of model updates and the total amount of time required for EPA to finish its own modeling work—modeling that EPA now indicates states should have been using to develop their iSIPs.

1. January 2017- EPA Notice of Data Availability- EPA requested comment on preliminary interstate ozone transport data including projected ozone design values and interstate contributions for 2023 using a 2011 base year platform.
2. October 2017- EPA issued a memorandum containing updated modeling data "which incorporated changes made in response to comments on the [January 2017] NODA."

3. March 2018 – EPA issued a new memorandum including newly available contribution modeling data for 2023 to assist states in evaluating their impact on potential downwind air quality problems for the 2015 8-hour ozone NAAQS

EPA then states that since the release of all the modeling information noted above, and subsequent to the 2018 submittal of Tennessee's iSIP, EPA performed updated modeling using a 2016-based emissions modeling platform (2016v1) to project ozone design values and contributions for 2023. Specifically, on October 30, 2020, the Notice of Proposed Rulemaking for the Revised CSAPR Update included updated 2023 modeling that used the 2016v1 emissions platform. Following the revised CSAPR update final rule, EPA states it continued to make updates to the 2016 emission platform, updated emissions projections, etc. and performed air quality modeling of the 2016v2 emissions using the most recent version of the Comprehensive Air Quality Modeling with Extensions (CAMx) photochemical modeling version 7.10.

EPA proposes to primarily rely on modeling based on "the updated and newly available" 2016v2 emissions platform in evaluating the state iSIP submission and is, in fact, accepting public comment on this updated 2023 modeling using the 2016v2 emissions platform at the very same time EPA proposes to disapprove Tennessee's ISIP. EPA has spent the greater part of five years revising and updating the modeling that it now relies upon to disapprove Tennessee's iSIP. This approach establishes an impossible standard for states and leaves open the very real possibility that no state will be successful in developing an iSIP under future standards.

[…]

Comment #3: EPA may not disapprove Tennessee's Infrastructure SIP based on Prong 2 of CAA §110(a)(2)(D)(i)(I) because Tennessee satisfied its Good Neighbor obligations in its 2018 iSIP submission.

EPA now proposes to disapprove Tennessee's SIP submission, based on data EPA published in 2021 and 2022 finding that Tennessee is "linked" to a single maintenance receptor in Denton County, Texas. EPA is suggesting that Tennessee's 2018 technical analysis was flawed because it failed to consider future data that were not collected until years after the original submission was made, which would have required Tennessee to perform Steps 3 and 4. As EPA puts it: "Because the entire technical basis for Tennessee's submittal is that the State is not linked at Step 2, EPA proposes to disapprove Tennessee's SIP submission based on EPA's finding that a linkage does exist."

Nonetheless, EPA now proposes to disapprove Tennessee's SIP submission, based on data EPA published in 2021 and 2022 finding that Tennessee is "linked" to a single maintenance receptor in Denton County, Texas. EPA is suggesting that Tennessee's 2018 technical analysis was flawed because it failed to consider ***future*** data that were not collected until years after the original submission was made, which would have required Tennessee to perform Steps 3 and 4. As EPA puts it: "Because the entire technical basis for Tennessee's submittal is that the State is not linked at Step 2, EPA proposes to disapprove Tennessee's SIP submission based on EPA's finding that a linkage does exist."

As we noted in Comment #1, EPA's entire approach and rationale in this proposed disapproval makes it impossible for any SIPs a state might submit under the 2015 ozone standard or any future NAAQS to demonstrate compliance with CAA §110(a)(2)(D) because not only must a state consider the evidence available at the time of submission, but a state must also possess the ability to consider ***future*** evidence that might demonstrate significant contributions to downwind nonattainment or interference with

maintenance in a downwind state. The proposed disapproval of Delaware's iSIP in the *Federal Implementation Plan Addressing Regional Ozone Transport for the 2015 Ozone National Ambient Air Quality Standard* perfectly illustrates this point. In Section IV.C.1 of the preamble to the proposed rule ("Correction of EPA's Determination Regarding Delaware's SIP Submission and Its Impact on EPA's FIP Authority for Delaware"), EPA addresses Delaware's Good Neighbor obligations as follows:

> In 2020, the EPA approved an infrastructure SIP submission from Delaware for the 2015 ozone NAAQS, which in part addressed the good neighbor provision at CAA section 110(a)(2)(D)(i)(I). The EPA concluded that, based on the modeling results presented in a 2018 March memorandum and using a 2023 analytic year, Delaware's largest impact on any potential downwind nonattainment or maintenance receptor was less than 1 percent of the NAAQS. As a result, the EPA found that Delaware would not significantly contribute to nonattainment or interfere with maintenance in any other state. Therefore, ***the EPA approved the portion of Delaware's infrastructure SIP that addressed CAA section 110(a)(2)(D)(i)(I) for the 2015 ozone NAAQS*** . . . .
>
> Subsequent to the release of the modeling data shared in the March 2018 memorandum and EPA's approval of Delaware's 2015 ozone NAAQS good neighbor SIP submission, the EPA performed updated modeling, as described in Section V of this action. The data from this updated air quality modeling now show that Delaware is projected to contribute more than 1 percent of the NAAQS to downwind receptors in Bristol, Pennsylvania, in the 2023 analytic year. Therefore, in light of the modeling data, ***EPA is proposing to find that its approval of Delaware's 2015 ozone NAAQS infrastructure SIP submission, with regard only to the portion addressing the good neighbor provision at CAA section 110(a)(2)(D)(i)(I), was in error. Section 110(k)(6) of the CAA gives the Administrator authority, without any further submission from a state, to revise certain prior actions, including actions to approve SIPs, upon determining that those actions were in error***. The modeling data demonstrate that EPA's prior conclusion that Delaware will not significantly contribute to nonattainment or interfere with maintenance in any other state in the 2023 analytic year was incorrect, which means that EPA's approval of Delaware's good neighbor SIP submission was in error. . . .
>
> As discussed in greater detail in the sections that follow, the EPA is proposing to determine that there are additional emissions reductions that are required for Delaware to satisfy its good neighbor obligations for the 2015 ozone NAAQS. The analysis on which the EPA proposes this conclusion for Delaware is the same, regionally consistent analytical framework25 on which the Agency proposes FIP action for the other states included in this proposal. The Agency recognizes that it is possible, based on updated information for the final rule—as applied within a regionally consistent analytical framework—that Delaware (or other states for which the EPA proposes FIPs in this action) may be found to have no further interstate transport obligation for the 2015 ozone NAAQS. If such a circumstance were to occur, the EPA anticipates that it would not finalize this proposed error correction or may modify the error correction such that the approval of Delaware's portion of the SIP as it relates to its good neighbor obligations may be affirmed.

This structure runs contrary to the principle articulated by the Supreme Court in *EPA v. EME Homer City Generation, L.P.* that EPA must work toward an "efficient and equitable solution to the allocation

problem the Good Neighbor Provision requires the Agency to address." Instead, EPA's imposition of such an unworkable approach is a textbook failure to comply with EPA's obligation to "select from among reasonable options" under the *Chevron* framework [footnote: 572 U.S. at 492 (citing *United States v. Mead Corp.*, 533 U.S. 218, 229 (2001))] and imposes an entirely arbitrary and capricious standard that states are effectively incapable of following.

The Clean Air Act does not envision nor suggest that states be held to an impossible standard when developing SIPs. Because EPA has provided no evidence that Tennessee was "linked" to any downwind states when it submitted its 2018 SIP revision, EPA may not disapprove Tennessee's Infrastructure SIP based on Prong 2 of CAA §110(a)(2)(D)(i)(I) and therefore should withdraw its proposed disapproval.

[…]

EPA has put states in an impossible position by waiting to take action on SIP submittals that occurred in 2018 and basing such actions on modeling that has been consistently changing since 2018 and is still undergoing public comment.

Commenter: The Luminant Companies

Commenter ID: 44

Docket ID: EPA-R06-OAR-2021-0801

Comment:

Rather than review Texas's submittal in a timely manner, EPA delayed its action beyond the statutorily prescribed deadline and developed non-statutory, post-hoc modeling and analyses by which it now proposes to judge Texas's submittal.

[…]

And EPA cannot consider its post-hoc modeling and analyses that were not available as of its statutory deadline to act to justify its action.[41] Accordingly, EPA must approve Texas's SIP based on the data available by the statutory deadline so long as it satisfies the statutory requirements, which it does, as discussed below.[42]

[…]

In support of Texas's SIP, consistent with its expertise, TCEQ conducted modeling to discharge its statutory duty to ensure its SIP contains adequate provisions to ensure that emissions from Texas will not "contribute significantly" to downwind nonattainment or maintenance receptors for purposes of the 2015 ozone NAAQS. It was not until after TCEQ developed and proposed its SIP revision, including its modeling, that EPA issued guidance to states on their development of interstate transport SIP revisions for the 2015 ozone NAAQS. Nonetheless Texas's SIP revision was consistent with the guidance EPA had provided at the time of TCEQ's submittal. EPA points to modeling it released in 2022, nearly four years after TCEQ submitted its SIP, to support its proposed disapproval. EPA's post hoc modeling is not a lawful ground for disapproval.

[…]

[41] *See Wisconsin v. EPA*, 938 F.3d 303, 336 (D.C. Cir. 2019) (suggesting that a state may challenge EPA's "reliance on data compiled after the SIP action deadline"); *see also Sierra Club v. EPA*, 356 F.3d 296, 308 (D.C. Cir. 2004) ("To require states to revise completed plans every time a new model is announced would lead to significant costs and potentially endless delays in the approval process.").
[42] If necessary in light of new data, EPA may later issue a SIP call requiring a state to amend its SIP.

Commenter: PacifiCorp

Commenter ID: 38

Docket ID: EPA-R08-OAR-2022-0315

Comment:

When formulating its Interstate Transport Ozone SIP, Utah properly relied on the modeling data provided by EPA to the states in 2017-18 and the Modeling Guidance[1]. However, rather than judge Utah's SIP by using the same 2017-18 modeling data it had provided, EPA instead chose to analyze a newer data set that was unavailable to Utah at the time it developed its SIP. Notably, instead of the 2018 Modeling Guidance data, EPA relied on "the Agency's most recently available modeling (2016v2) to identify upwind contributions and linkages to downwind air quality problems in 2023." This is the same modeling EPA relied on for the Proposed FIP. This reliance is arbitrary because Utah has not been afforded a meaningful opportunity to review and incorporate the same modeling upon which EPA bases its decisions.

[…]

EPA should not evaluate Utah by newer modeling data not available when the Utah SIP was submitted.

Notably, EPA's reliance on recent analysis and data not available to the state at the time of Utah's SIP submission and never provided during EPA's statutory review period is unfair to the state, resulting in an arbitrary and capricious action. Just as "[a]gency actions must be assessed according to the statutes and regulations in effect at the time of the relevant activity,"[29] EPA's approval or disapproval of a SIP should adhere to the guidance, data, and evidence available and on the record at the time of a state's required submission of the SIP.

In relation to the Proposed Disapproval, Utah submitted the Utah Ozone Transport SIP to EPA on January 29, 2020. The SIP submission was determined complete by operation of law. Rather than rely on the same data and information available to Utah at the time it drafted its SIP, EPA primarily relies "on modeling based on the updated and newly available 2016v2 emissions platform in evaluating these submissions with respect to Steps 1 and 2 of the 4-step interstate transport framework." EPA's "updated" modeling wasn't even released until 2021, a year after Utah submitted its SIP. EPA should not disapprove a SIP based on extra-record data not available to the State during its development of the SIP.

[1] U.S. Environmental Protection Agency, 2018. Modeling Guidance for Demonstrating Attainment of Air Quality Goals for Ozone, PM2.5, and Regional Haze, Research Triangle Park, NC. https://www3.epa.gov/ttn/scram/guidance/guide/O3-PM-RH-Modeling_Guidance-2018.pdf

[29] *See Texas v. EPA*, 829 F.3d 405, 430 (5th Cir. 2016).

Commenter: Utah Division of Air Quality

Commenter ID: 47

Docket ID: EPA-R08-OAR-2022-0315

Comment:

[T]he proposed disapproval relies heavily on modeling results that were unavailable to the state during the development of the SIP.

EPA's Proposed Disapproval Relies on the Modeling Results That Were Unavailable During the SIP Development

The EPA indicates that its proposed decision to disapprove Utah's SIP relies heavily on using the updated modeling platform 2016v2. The EPA explains that "by using the updated modeling results, the EPA is using the most current and technically appropriate information for this proposed rulemaking." However, as EPA knows, these results were not available to the states during the development and submittal of the interstate transport SIPs. Because SIP planning is a lengthy process, it is unacceptable for EPA to use modeling results for their rulemaking that were developed after state SIP preparation. As with all planning, SIP revisions are a representation of the best available data and modeling at that time. Using results from a modeling effort that post-dated the states' SIP development period is an additional example of EPA changing expectations without issuing appropriate and timely guidance. By relying on modeling results not available during the time of state SIP development, EPA is setting a precedent that creates significant uncertainty for any planning effort, further eroding the trust required for effective state and federal cooperation. This is clearly inconsistent with the cooperative federalism structure of the CAA.

Commenter: West Virginia Department of Environmental Protection

Commenter ID: 49

Docket ID: EPA-R03-OAR-2021-0873

Comment:

In the WV 2015 Ozone Good Neighbor SIP, DAQ applied independent modeling performed by Alpine Geophysics utilizing 2023 projected emissions. Alpine modeled at a finer 4-km grid within the maintenance and nonattainment receptor areas rather than the 12-km grid utilized by EPA. Also, at this time, the Lake Michigan Air Directors Consortium ("LADCO") regional planning organization ("RPO") performed similar modeling. All three of these efforts modeled remarkably comparable impacts at the downwind monitor locations. As such, DAQ is further puzzled by EPA's abandonment of its own modeling results by this proposed disapproval action.

Response

See Section V.A.4. of the preamble for our general response to comments on the use of updated modeling to support the EPA's action. The EPA notes that the EPA is not disapproving any SIP submission for its choice of modeling. The EPA's evaluations of each SIP submission were explained at proposal. *See, e.g.,* 87 FR 9867-9869 (February 22, 2022) (Minnesota); 87 FR 9818-9824 (February 22, 2022) (Oklahoma); 87 FR 31492-31493 (May 24, 2022) (Nevada); and 87 FR 31477-31483 (May 24, 2022) (Utah). We respond to several additional specific comments here.

One commenter claimed, "By delaying its decision on Maryland's submittal for nearly 2.5 years, the EPA moved the goal post for Maryland—an act the DC Circuit admonished in *New York v. EPA*, 964 F.3d 1214, 1223 (D.C. Cir. 2020)." First, as explained in the preamble, the timing of the EPA's action is not moving the goal posts, nor does availing ourselves of the most recent 2015 ozone transport modeling and monitoring information do so. Second, *New York* is inapposite. The court there found fault with the EPA's denial of a CAA section 126(b) petition from New York, which had identified many upwind-state sources with relatively large NO_X emissions that the state alleged significantly contributed in violation of the good neighbor provision. The court found the EPA's explanation for why the state had not made out at least a facially plausible showing of significant contribution to be arbitrary and capricious. The court noted that downwind petitioning states may lack the ability to conduct the kinds of analysis the Agency's denial suggested may be required and also found internal inconsistencies in the Agency's position during litigation. None of that is relevant here. First, this holding was not about air quality determinations, but rather Step 3 analysis of source emissions reduction potential. Second, upwind states are charged by the Act with evaluating, defining, and prohibiting their sources' significant contribution. Unlike a downwind jurisdiction, they possess all requisite authority to undertake an analysis of emissions and emissions reduction potential within their borders. *See generally* CAA section 110(a)(2). Nor is the Agency obligated to define "significant contribution" for upwind states before acting on these SIP submissions. *See EPA v. EME Homer City*, 572 U.S. 489, 508-09 (2014).

APC and PacifiCorp both cite *Texas v. EPA*, 829 F.3d 405 (5th Cir. 2016) to argue that "EPA's approval or disapproval of a SIP should adhere to the guidance, data, and evidence available and on the record at the time of EPA's timely review of the SIP." In *Texas*, the 5th Circuit granted a preliminary stay of the EPA's disapproval of Oklahoma's and Texas' regional haze SIP submissions and promulgation of FIPs and did not reach the merits of either the EPA's assessment of the SIP submissions' compliance with the requirements of the CAA or the FIPs.[2] Although the court noted that the EPA proposed amendments to the regional haze rule subsequent to Texas and Oklahoma submitting regional haze SIP submissions, that proposal was not relevant to the submissions before the court.[3] Moreover, the EPA has not promulgated any regulations to implement CAA section 110(a)(2)(D)(i)(I). Rather, EPA is applying its

[2] *Texas v. EPA*, 829 F.3d 405 (5th. Cir. 2016)

[3] *See, e.g.*, Protection of Visibility: Amendments to Requirements for State Plans; Proposed Rule, 81 Fed. Reg. 26941, 26944 (May 4, 2016) (explaining that the proposed "changes would apply to periodic comprehensive state implementation plans developed for the second and subsequent implementation periods and for progress reports submitted subsequent to those plans." And that EPA "[did] not intend for the proposed changes to affect the development of state plans for the first implementation period or the first progress reports due under the existing Regional Haze Rule.")

longstanding framework for implementing CAA section 110(a)(2)(D)(i)(I) while recognizing and considering any alternative approaches states presented. EPA further notes that to the extent APC objects to EPA's consideration of 2016v2 modeling or the updated 2016v3 modeling (adjusted in response to public comment on this action), Alabama's June 21, 2022, SIP submission was submitted after the EPA made the 2016v2 modeling available and included arguments with respect to that modeling, which the EPA has evaluated in this final action.

APC, The Luminant Companies, and PacifiCorp quote *Sierra Club v. EPA*, 356 F.3d 296, 308 (D.C. Cir. 2004): "To require states to revise completed plans every time a new model is announced would lead to significant costs and potentially endless delays in the approval process." In that case, Sierra Club challenged EPA's conditional approval of Maryland, Virginia, and Washington, D.C.'s attainment plans to address the Washington, D.C. Metropolitan Area's "Severe" classification for several reasons. 356 F.3d at 300. One reason was that the rate-of-progress plans relied on an older emissions model (MOBILE5 as opposed to the more recent MOBILE6). *Id*. EPA regulation specifically required states to use the latest emission model available during the development their rate-of-progress plans for the purposes of meeting Severe requirements, CAA section 172(c)(3); 40 CFR 51.112(a)(1), but because MOBILE6 became available one month before these SIP submissions were submitted, the EPA accepted the rate-of-progress plan based on MOBILE5. 356 F.3d at 308. The court agreed it was reasonable for EPA to not require Maryland, Virginia, and Washington, D.C. to revise their rate-of-progress plans using MOBILE6. *Id*. The EPA notes the timing consideration quoted by commenters related to attainment planning in a Serious nonattainment area. Here, however, the EPA has no regulations that require any state to use any particular type of model to address statutory requirements under CAA section 110(a)(2)(D)(i)(I), nor is the EPA disapproving any SIP submission on the basis of its choice of modeling (as compared to EPA's evaluation of the *results* of the modeling). Further, the *Sierra Club* case does not stand for the proposition that EPA is prevented from considering the most up-to-date data in assessing whether upwind states may be potentially significantly contributing to downwind nonattainment or maintenance.

APC and The Luminant Companies cite *Wisconsin v. EPA*, 938 F.3d 303, 336 (D.C. Cir. 2019) for the premise that the EPA's disapproval of a SIP submission on the basis of "reliance on data compiled after the SIP action deadline" may be challenged. The EPA acknowledges that *Wisconsin* noted such was the States' argument, but the D.C. Circuit did not opine on the validity of the assertion since it was not relevant to the court's evaluation of the CSPAR Update FIP.

A comment specifically pointed to the EPA's proposed error correction of its approval of Delaware's SIP submission (which is a component of the proposed FIP rulemaking published April 6, 2022) to suggest the EPA had created an unworkable standard for states. The commenter went on to argue that the EPA must approve Tennessee's SIP submission based on the information available at the time Tennessee submitted it to the EPA. However, this argument is illogical. If the EPA were to do that, it would be treating Delaware and Tennessee dissimilarly. In fact, the proposed error correction for Delaware only illustrates the futility of commenters' arguments for using outdated information to approve their SIP submissions. Had the EPA done that, then just as it proposed for Delaware, the Agency would likely have simply conducted error corrections of those approvals in light of the updated projections of air quality and contributions in 2023 that are now available.

Finally, it bears observance that if the EPA's evaluation of information regarding 2023 projections was arrested at the time of some deadline in the past or with the issuance of some older set of modeling results, then the purpose of notice and comment rulemaking would itself be frustrated, because no matter what arguments commenters could make about more recent or current real-world conditions or updated projections regarding 2023, the Agency would be forced to ignore them. As an example, the EPA would be obligated to ignore many of the comments on these proposals providing updates to the EPA's emissions inventories, which we have considered in developing the 2016v3 modeling of 2023.

In response to Louisiana Chemical Association, the EPA clarifies that the Agency found Louisiana's SIP submission complete on November 15, 2019. In response to Tennessee Department of Environment and Conservation, the EPA notes that the Agency is deferring final action on Tennessee's good neighbor SIP submission at this time. In response to Midwest Ozone Group, the EPA notes that the Agency met with Multi-Jurisdictional Organizations such as Central States Air Resource Agencies and others in Summer 2021 to discuss the concerns outlined in the July 2021 letter cited in the comment.[4] The EPA subsequently made emissions data available on September 20, 2021, as discussed in more detail in the preamble in Sections II.C and III.A.1.

Other issues raised by these comments are addressed in the preamble in Sections II.C, II.D, III.A.1., V.A., and V.B.2, and V.A.6 , as well as in Section 1.2 (Guidance for SIP Submissions), Section 5 (Updates to Modeling and Changes in Linkages), 6.1.2 (Step 1 Receptors Linked to Texas), 7.4 (August 2018 Memorandum), 8.1 (Determination of Significant Contribution), 10.2 (SIP Call), and 10.3 (Cooperative Federalism and the EPA's Authority).

1.5 States' Step 3 Analysis

Comments

Commenter: Air Pollution Control Program, Missouri Department of Natural Resources

Commenter ID: 01

Docket ID: EPA-R07-OAR-2021-0851

Comment:

[T]he Air Program notes that EPA has not ever provided any guidance on what an appropriate step-3 analysis would entail, which makes any decision where it rejects a step-3 analysis arbitrary and capricious. The following paragraphs explain the flaws of EPA's step-3 analysis that it has proposed in the FIPs for 26 states, including Missouri.

[…] Further, EPA's step 3 process completely ignores the real question at hand with the enabling statute, which ties contribution to an amount which contributes significantly to downwind maintenance or

[4] See "Meeting With States and MJOs on 8-18-2021" in the docket for this action.

nonattainment problems. Instead, EPA completely ignores the statutory contribution issue and instead is imposing controls that suit federal policy choices regardless of their impact on the downwind receptors that EPA used as justification for disapproving the SIPs to begin with.

[…]

The mere fact that it appears extremely unreasonable, if not impossible, for many states to attempt to address their good neighbor obligations through application of step-3 magnifies the overreach of the federal executive branch in these actions. EPA has offered no guidance to states on developing step-3 demonstrations in their good neighbor SIPs Not a single state has successfully made a step-3 demonstration to avoid a FIP. Every single state that is contributing above the 1 percent threshold (except for Oregon, as noted previously) is having their SIP disapproved, and the proposed FIP will control and impose unnegotiable costs on citizens and sources in those states. This shows again that EPA's action will strip state energy choices from the states and place them into the hands of EPA if these disapprovals are held to stand.

Commenter: Arkansas Environmental Federation

Commenter ID: 09

Docket ID: EPA-R06-OAR-2021-0801

Comment:

EPA also cannot substitute its own judgement for that of the state's in crafting a SIP, as the courts have recognized.).[15] Accordingly, the fact that EPA has consistently applied Step 3 of its 4-Step framework to identify "significant" emissions contributions for its ozone transport Federal Implementation Plans ("FIPs") and "this interpretation of the statute has been upheld by the Supreme Court," has no bearing on whether a state's different choices for its own SIP are approvable under the CAA. In determining whether a state's emissions significantly contribute to nonattainment or interfere with maintenance, EPA explains that "states must complete an analysis similar to the EPA's. Yet there is no requirement in the CAA that states must complete an analysis similar to EPA's nor has EPA attempted to adopt regulatory standards that purport to define the regulatory requirements for interstate transport SIPS. The very cases cited by EPA, the Supreme Court and the D.C. Circuit Court of Appeals have ruled that such plans may not result in controls that reduce emission by more than the amount necessary to achieve attainment.[18]

[15] *Bridesburg*, 836 F.2d at 781 (quoting *Train v. Natural Res. Def. Council, Inc.*, 421 U.S. 60, 79 (1975)) (internal citations and quotations omitted) ("EPA has limited authority to reject a SIP . . . . The [CAA] gives the Agency no authority to question the wisdom of a State's choices of emission limitations if they are part of a plan which satisfies the standards of [Section 110(a)(2)], and the Agency may devise and promulgate a specific plan of its own only if a State fails to submit an implementation plan which satisfies those standards.").

[18] EPA acknowledges that pursuant to *EME Homer City* decision, it cannot "require [] an upwind state to reduce emissions by more than the amount necessary to achieve attainment in every downwind state to which it is linked" for to do so would be "over-control". 87 Fed. Reg. 200098-99. It further admits that its current modeling demonstrates weakness in its conclusions regarding Arkansas' linkages, and calls into question inclusion of non - EGUs in the state plan. *Id.* One tenet of EPA proposed disapproval is that Arkansas' analysis did not include non -

EGUs (87 Fed. Reg. 9810), yet EPA's own modeling seems to indicate that the opposite - that to go beyond is in fact over control. Id. Either way - and without waiver - this confusion regarding modeled results, ever-changing linkages, and phantom necessity of control, particularly in Arkansas, highlights the unfairness and inefficiency of EPA's chosen process for this rule making, its numerous dockets, and the companion rule making proposing to institute a FIP for Arkansas on the heels of this ill-conceived proposed disapproval.

Commenter: Louisiana Electric Utility Environmental Group

Commenter ID: 28

Docket ID: EPA-R06-OAR-2021-0801

Comment:

EPA also cannot substitute its own judgment for that of the state's in crafting a SIP, as the courts have recognized.[11] Accordingly, the fact that EPA has consistently applied Step 3 of its 4- Step framework to identify "significant" emissions contributions for its ozone transport Federal Implementation Plans ("FIPs") and "this interpretation of the statute has been upheld by the Supreme Court," has no bearing on whether a state's different choices for its own SIP are approvable under the CAA. In determining whether a state's emissions significantly contribute to nonattainment or interfere with maintenance, EPA explains that "states must complete an analysis similar to the EPA's (or an alternative approach to defining "significance" that comports with CAA requirements.)" Yet, there is no requirement in the CAA that states must complete an analysis similar to EPA's and EPA has not attempted to adopt regulatory standards that purport to define the regulatory requirements for interstate transport SIPs.

[11] *Bridesburg*, 836 F.2d at 781 (quoting *Train v. Natural Res. Def. Council, Inc.*, 421 U.S. 60, 79 (1975)) (internal citations and quotations omitted) ("EPA has limited authority to reject a SIP . . . . The [CAA] gives the Agency no authority to question the wisdom of a State's choices of emission limitations if they are part of a plan which satisfies the standards of [Section 110(a)(2)], and the Agency may devise and promulgate a specific plan of its own only if a State fails to submit an implementation plan which satisfies those standards.").

Commenter: The Luminant Companies

Commenter ID: 44

Docket ID: EPA-R06-OAR-2021-0801

Comment:

EPA proposes to go beyond the actual requirements of the Clean Air Act and evaluate Texas's SIP according to new, non-statutory standards. Specifically, EPA proposes to reject TCEQ's expert modeling projections of future design values and TCEQ's quantification and assessment of Texas's "significant contribution" in favor of its own modeling. However, EPA's quantification and assessment of a State's "significant contribution" to downwind nonattainment or maintenance issues is *not* a requirement of the Act.[30] The Clean Air Act does not provide EPA the authority to second-guess TCEQ and disapprove its SIP simply because TCEQ's modeling does not match EPA's modeling or because EPA believes TCEQ's modeling "*may* understate" projected design values or there is "*potential* underestimation."[31] The

standard that EPA applies to Texas's SIP and its supporting technical analysis in the Proposed Disapproval has no basis in the Clean Air Act. EPA has announced its preference for a "nationally consistent approach," but this preference cannot override the clear and settled intent of Congress that states be permitted to implement different and varying approaches if they choose. Nor can EPA's policy goal heighten or alter the standard set out in the Clean Air Act for a state's SIP submittal such that a "deviation" from EPA's preferred approach "must be substantially justified," as EPA claims. Plainly put, EPA does not write SIPs. EPA's competing view of Texas's contribution or its potential to interfere with maintenance in downwind States, and EPA's overconservative methodology for determining these things, are not requirements of the Act, nor has EPA promulgated regulations addressing this. In fact, EPA has recognized that it "has not directed states that they must conduct [their] analysis in precisely the manner the EPA has done in its prior regional transport rulemakings[.]" In fact, EPA has taken inconsistent approaches (none of which are grounded in the statute), previously stating that states must only use an assessment of significant contribution that is "comparable" to EPA's preferred approach in order to have its SIP approved.[34]

[30] [*EME Homer City Generation, L.P. v. EPA*, 696 F.3d 7 (D.C. Cir. 2012)] at 47 (Id. at 47 ("Nowhere does the [Clean Air Act] place a requirement on EPA to quantify each State's amount of 'significant contribution' to be eliminated pursuant to the 'good neighbor' provision[.]").
[31] EPA Region 6, 2015 8-Hour Ozone Transport SIP Proposal, Technical Support Document, Docket No. EPAR06-OAR-2021-0801-0002, at 39, 66 (Feb. 2022) ("Proposed TSD") (emphasis added).
[34] *See* [Guidance for State Implementation Plan (SIP) Submissions to Meet Current Outstanding Obligations Under Section 110(a)(2)(D)(i) for the 8-Hour Ozone and PM2.5 National Ambient Air Quality Standards (Aug. 15, 2006)] at 5.

Commenter: Oklahoma Department of Environmental Quality

Commenter ID: 37

Docket ID: EPA-R06-OAR-2021-0801

Comment:

EPA's Proposal is a Fundamental Change in Policy and is Not in Line With Previous CSAPR Policy-Making

As mentioned previously, under current EPA policy it is not possible for a state to be certain that any quantity of NOx emissions reductions will comply with the good neighbor requirements without waiting for the completion of Step 3 of the CSAPR framework. Because Step 3 is to be undertaken during the development of the FIP, the approach adopted by EPA in its proposed FIP represents a substantive change in policy, rather than an extension of the current approach. EPA's CSAPR approach was challenged in the courts and survived those challenges, giving EPA confidence in the fundamental appropriateness of actions taken previously. However, the previous CSAPR remedies constitute a different policy approach than the present EPA proposed action, which has metamorphosed into a form substantively different from its previous versions

Commenter: Midwest Ozone Group

Commenter ID: 30

Docket ID: EPA-R02-OAR-2021-0673, EPA-R03-OAR-2021-0872, EPA-R03-OAR-2021-0873, EPA-R04-OAR-2021-0841, EPA-R05-OAR-2022-0006, EPA-R06-OAR-2021-0801, EPA-R07-OAR-2021-0851

Comment:

In the absence of any guidance from EPA related to the assessment of Step 3 control measures, EPA should defer to state plans which evaluate such control measures.

While EPA's proposed disapprovals criticize states for failing to conduct an appropriate Step 3 analysis, EPA makes it clear that it has not established guidelines for how states should conduct that analysis. EPA's treatment of this issues is illustrated by the following statement made by EPA in addressing the Tennessee SIP:

> While the EPA has not directed states that they must conduct a Step 3 analysis in precisely the manner the EPA has done in its prior regional transport rulemakings, state implementation plans addressing the obligations in CAA section 110(a)(2)(D)(i)(I) must prohibit "any source or other type of emissions activity within the State" from emitting air pollutants which will contribute significantly to downwind air quality problems. Thus, states must complete something like the EPA's analysis (or an alternative approach to defining "significance" that comports with the statute's objectives) to determine whether and to what degree emissions from a state should be "prohibited" to eliminate emissions that will "contribute significantly to nonattainment in or interfere with maintenance of" the NAAQS in any other state. Tennessee did not conduct such an analysis in its SIP submission.

It is apparent that most states did little or no Step 3 analysis because, with many incorporating the 2018 flexibilities that EPA advised could be used in 2015 NAAQS Good Neighbor SIPs, they concluded in either Step 1 or 2 that no controls were required. The proposed Good Neighbor SIP disapprovals should therefore not impose a FIP without first allowing the states, working with their respective MJOs for a regional approach, an opportunity to conduct a Step 3 analysis better tailored to their state and/or region.

Rather than a wholesale disapproval of 19 state Good Neighbor SIPs, EPA should propose an 18-month period for states to proceed with Steps 3 and 4, especially since the EGU-only approach is insufficient and the other source contributions provide even more opportunity for the development of state- and region-specific control strategies that would likely be more cost effective and avoid the over-control that occurs with a generic FIP approach.

Commenter: Midwest Ozone Group

Commenter ID: 30

Docket ID: EPA-R08-OAR-2022-0315, EPA-R09-OAR-2022-0394, EPA-R09-OAR-2022-0138

Comment:

Rather than a wholesale disapproval of state Good Neighbor SIPs, EPA should propose an 18-month period for states to proceed with Steps 3 and 4, especially since the EGU-only approach is insufficient and the other source contributions provide even more opportunity for the development of state- and region-specific control strategies that would likely be more cost effective and avoid the over-control that occurs with a generic FIP approach.

Commenter: PacifiCorp

Commenter ID: 38

Docket ID: EPA-R08-OAR-2022-0315

Comment:

The CAA does not require states to address their Good Neighbor obligations in a specific manner, nor does it "enable EPA to force particular control measures on the states." EPA has not adopted any nationwide regulatory standards that purport to define the requirements for interstate transport SIPs with respect to the 2015 ozone NAAQS. Specifically, EPA has previously explained that "[t]he precise nature and contents of such a submission is not stipulated in the statute. [Therefore,] EPA believes that the contents of the SIP submission required by section 110(a)(2)(D)(i) may vary depending upon the facts and circumstances related to the specific NAAQS." This is one of the reasons the CAA assigns development of implementation plans to the states – they are able to use their local knowledge and familiarity with regional conditions to best design the right type of plan for their location and citizens' values and priorities.

EPA claims it "has not directed states that they must conduct a Step 3 analysis in precisely the manner the EPA has done in its prior regional transport rulemakings." But EPA rejects the flexibilities it previously provided to the states and instead insists on a one-size-fits-all approach when assessing significant contribution to NAAQS. In fact, EPA's disapprovals force Utah and other states to "complete something similar to EPA's analysis" or "an alternative approach" that meets EPA's policy choices and preferred methods.

The Proposed Disapproval fails to recognize EPA's limited role and obligation: "the Administrator shall approve [a SIP or SIP revision] as a whole if it meets all of the applicable requirements of this chapter." EPA has long recognized its limited role, as stated in a recent SIP approval: [T]he Administrator is required to approve a SIP submission that complies with the provisions of the CAA and applicable Federal regulations. 42 U.S.C. 7410(k); 40 CFR 52.02(a). Thus, in reviewing SIP submissions, EPA's role is to approve state choices, provided that they meet the criteria of the CAA.

Response

The EPA did not define "significant contribution" for any state in this action, nor is the EPA required to do so. *EPA v. EME Homer City*, 572 U.S. 489, 508-09 (2014). See Section V.B.8. of the preamble for the EPA's general response to these comments.

A comment cites a notice in the *Federal Register* as "87 Fed. Reg. 200098-99" regarding the EPA's interpretation of the *EME Homer City* decision related to over control. Based on context, the EPA assumes the comment was referring to the proposed good neighbor FIPs for Arkansas and other states for the 2015 ozone NAAQS. *See* 87 FR 20098-99 (April 6, 2022). In that proposal the EPA stated, "Although the court described over control as going beyond what is needed to address nonattainment, EPA interprets the holding as not impacting its approach to defining and addressing both nonattainment and maintenance receptors."

In any case, this comment is inapposite as it relates to the EPA's non-final analysis of potential emissions controls in the proposed FIP rather than to the EPA's evaluation of Arkansas's SIP submission. In the proposed SIP submission disapproval, the EPA explained that Arkansas' reliance on air quality information or factors was generally not sufficient at Step 3 to establish that no further emissions controls would be appropriate in Arkansas. *See* 87 FR at 9808-10 (February 22, 2022). The EPA further explained that Arkansas' analysis was deficient for failing to fully analyze both additional electric generating unit (EGU)and non-EGU controls. *See id.* at 9810-11. While in the proposed FIP the EPA acknowledged that there was a potential for overcontrol if the full suite of the non-EGU controls as proposed were included in the FIP's control strategy for Arkansas, the EPA ultimately proposed to determine that such over-control was not sufficiently established to justify not proposing the full suite of non-EGU controls for Arkansas sources. *See* 87 FR 20099. Thus, there is no inconsistency between the two proposals: the EPA's evaluation of the SIP submission established that the state had not conducted a proper Step 3 analysis of either EGU or non-EGU control opportunities; and in the proposed FIP, the EPA proposed to apply both the EGU and non-EGU control strategies in Arkansas and proposed to find there was insufficient evidence of overcontrol. Even if the EPA were to determine in a final FIP rulemaking that no further emissions controls are warranted for some sub-set of these sources, that would not change the fact that the Arkansas SIP submission's Step 3 analysis is deficient and not approvable.

The EPA explained the deficiencies of Texas's SIP submission at proposal. *See* 87 FR 9826-9834 (February 22, 2022) and in the technical support document (TSD) titled "Region 6 2015 8-Hour Ozone Transport SIP Proposal TSD", in Docket ID No. EPA-R06-OAR-2021-0801 (hereinafter Evaluation of Texas Commission on Environmental Quality (TCEQ) Modeling TSD). The EPA is not taking final action on Tennessee's Good Neighbor SIP submission for the 2015 ozone NAAQS in this action.

Other issues raised by these comments are addressed in Sections III, V.A.2., V.A.6., V.B.2., V.B.3., and V.B.7. of the preamble and the following Sections: 4.2 (Model Performance), 6.4 (October 2018 Memorandum), 6.5 (Certain Monitoring Sites in California at Step 1) 10.2 (SIP Call), 10.3 (Cooperative Federalism and the EPA's Authority), 11.6 (Economic Impacts).

1.6 EPA Input During SIP Submission Development

Comments

Commenter: Air Pollution Control Program, Missouri Department of Natural Resources

Commenter ID: 01

Docket ID: EPA-R07-OAR-2021-0851

Comment:

EPA shared no information as to its basis for the SIP disapproval prior to promulgating it, and the FIP, as proposed, will impose hundreds of millions of dollars in compliance costs per year on all Missouri citizens who purchase electricity, and potentially, on any citizen of the state that may depend on power plants and other manufacturing industries in the state for their work and their livelihood. Prior to the proposed FIP, EPA has offered no indication as to what might be acceptable under a step-3 analysis. This puts states in an impossible position to submit an approvable SIP if they are unable to avoid obligations under steps 1 and 2. However, EPA's proposed FIPs shows that it is willing and eager to impose crippling costs on states to pursue federal policy choices over state-protected decisions with no regard for the impact that such costly controls have on the upwind states where EPA imposes the FIPs.

[…]

EPA should be required to submit comments on SIPs if it thinks the proposed SIPs have the potential for controversial action and explain the issues EPA has with any proposed SIP submission. It is unreasonable for EPA to sit on SIP submittals for years with no communication to states as to its intentions for disapprovals and proposed FIPs that will impose hundreds of millions of dollars in annual compliance costs that will be passed down to citizens in their state. EPA's current action with the proposed FIP shows that it intends to invoke its power from the Homer City case to impose whatever costs it determines to be reasonable on any state where it can produce modeling showing that the state hits the low and arbitrary 1 percent threshold.

Commenter: Arkansas Department of Energy and Environment, Division of Environmental Quality

Commenter ID: 07

Docket ID: EPA-R06-OAR-2021-0801

Comment:

Arkansas DEQ discussed methodology, modeling, and rationale with EPA early in the process and throughout SIP development. EPA offered suggestions for refinement based on initial drafts, and provided additional input during the public comment period for the 2015 Ozone Transport SIP draft and associated rulemaking. There was at no point during this process any indication from EPA that this plan or DEQ's rationale was not approvable as DEQ was developing it, as long as the state provided rational, science-based justification for the state's decisions. DEQ did so.

In addition, EPA provided input on DEQ's HYSPLIT modeling analysis during the comment period for the SIP and DEQ made adjustments to its modeling in response to EPA's comments. If EPA contends that HYSPLIT modeling is not informative for the purposes of SIP decision-making, this should have been

stated in early conversations between the agency and DEQ, before DEQ performed HYSPLIT modeling, or during the public comment period (rather than suggesting modifications to DEQ's methodology, resulting in additional state resources invested in HYSPLIT modeling to bolster the SIP submittal in response to EPA comments). See EPA comments and DEQ responses to comments on 2015 Ozone Transport SIP, included here as Appendix A.

Commenter: Arkansas Environmental Federation

Commenter ID: 09

Docket ID: EPA-R06-OAR-2021-0801

Comment:

[Arkansas] DEQ has worked diligently to meet the NAAQS requirements for the 2015 ozone standard, as outlined below. Significant work was required to develop the information necessary to formulate the SIP based on EPA guidance at the time as shown by the following chronology, which involved interaction with local stakeholders including AEF. Once that information was developed and a proposed plan prepared, DEQ undertook the required state-rulemaking and legislative action. DEQ worked collaboratively with EPA Region 6 throughout the process. Numerous discussions were held by DEQ and EPA Region 6 to inform DEQ's development of an appropriate SIP. DEQ responded to questions and comments from EPA Region 6 to develop the SIP. Additionally, DEQ developed additional information in response to EPA Region 6's comments in a collaborative effort that EPA has now abandoned. In spite of these efforts, EPA missed the statutorily mandated deadline to act on DEQ's SIP submission even though the SIP was approvable.

Commenter: Association of Electric Companies of Texas, BCCA Appeal Group, Texas Chemical Council and Texas Oil & Gas Association

Commenter ID: 11

Docket ID: EPA-R06-OAR-2021-0801

Comment:

Due to EPA's own delay and the accelerated timeline required by the consent decree, EPA is proposing to deny commentors the opportunity to respond to the new data and analysis.[29]

[29] This is further compounded by the fact that EPA did not submit comments on Texas's proposed SIP during TCEQ's public comment period. If EPA had concerns about TCEQ's SIP submission, EPA should have raised concerns during TCEQ's public comment period for the draft SIP. This would have allowed TCEQ to revise the SIP submission to address EPA's concerns prior to finalizing it and submitting it to the Agency. *See* EPA, SIP PROCESSING MANUAL, WHAT IS A SIP?, https://cfpub.epa.gov/oarwebadmin/sipman/sipman/mContent.cfm?chap=1&filePos=4 (last visited Apr. 25, 2022) ("EPA should prepare comments on the proposed revisions and either testify at the hearing and submit comments, or submit comments during the state's public comment period. States are required by law to provide the public and EPA 30 days to review and comment on proposed revisions to the SIP.").

Commenter: Environmental Federation of Oklahoma

Commenter ID: 20

Docket ID: EPA-R06-OAR-2021-0801

Comment:

In particular, EFO supports DEQ's assessment that EPA has overstepped its authority by circumventing the normal SIP development and approval process in a number of ways, including but not limited to: […]providing no indication of the upcoming SIP disapproval[.]

Commenter: Evergy, Inc.

Commenter ID: 21

Docket ID: EPA-R07-OAR-2021-0851

Comment:

MDNR claims that EPA did not reach out to discuss new modeling results nor identify any issues with Missouri's SIP during the course of those two years prior to proposing to disapprove the SIP and to implement a Federal Implementation Plan (FIP).

Commenter: Maryland Department of the Environment

Commenter ID: 29

Docket ID: EPA-R03-OAR-2021-0872

Comment:

Maryland did adopt the CSAPR Update into its SIP. Maryland submitted its CSAPR Update Incorporation by Reference ("IBR") SIP #20-03 in response to direction from EPA Region 3 that Maryland could not continue to be subject to the CSAPR Update and also submit a Good Neighbor SIP. In order for the Good Neighbor SIP for the 2008 Ozone NAAQS to be approved, EPA Region 3 directed that CSAPR and the CSAPR Update must be incorporated into Maryland's regulations if MDE wanted to cite the rule(s) when addressing the state's Good Neighbor obligations.[3]

MDE committed to including the CSAPR Update in Maryland's SIP in August 2019. The regulation was proposed in December 2019, and was finalized into Maryland's regulations at COMAR 26.11.28 on March 23, 2020. Maryland's Good Neighbor SIP for the 2015 Ozone NAAQS states:

> On October 26, 2016, the EPA finalized an update to CSAPR for the 2008 ozone NAAQS by issuing the CSAPR Close-Out [text error - "CSAPR Update"]. Maryland has been complying with the CSAPR Update limits and has committed to incorporating the Federal regulation into state

regulations and a State SIP. This will resolve any outstanding issues related to replacement of the CSAPR Update and FIP in Maryland or additional analysis of Maryland's regulations.[4]

On October 16, 2019, Maryland submitted its 2015 Good Neighbor SIP, which committed to the CSAPR Update IBR. The incorporation was finalized within 6 months and effective for over a year and a half after Maryland's 2015 Good Neighbor SIP was submitted to EPA. It was therefore reasonable to cite it and rely on it (in part) in Maryland's 2015 Good Neighbor SIP.

On March 15, 2021, EPA finalized the Revised CSAPR Update ("RCU") in order to resolve 21 states' transport obligations for the 2008 Ozone NAAQS. EPA made a procedural error[5] by finalizing the RCU as the FIP solution prior to disapproving Good Neighbor SIPs submitted by the states. EPA realized this error and to remedy it, EPA Region 3 asked Maryland to withdraw both the Good Neighbor SIP for the 2008 Ozone NAAQS and Maryland's IBR of the CSAPR Update into the state SIP. EPA stated that Maryland's transport obligations for the 2008 Ozone NAAQS were met by the RCU and that withdrawing the SIP would not affect any other Maryland actions.

It is unreasonable for EPA to use Maryland's compliance with EPA's directive against it now. EPA is estopped from such action because Maryland reasonably relied on EPA's direction that withdrawal of the 2008 Good Neighbor SIP and IBR would not affect its pending 2015 Good Neighbor SIP submittal. At least, in the spirit of public transparency and consistent with the concept of cooperative federalism upon which the CAA is based, EPA should have acknowledged in the proposed disapproval that the IBR SIP was withdrawn at EPA's request to correct EPA's procedural error. The federal/state relationship is built on trust and that trust is jeopardized when EPA regional offices are not fully transparent with their state counterparts.

[3] See August 2019 letter from MDE to Mr. Cosmo Servidio: "EPA has informed MDE that Maryland cannot continue to be subject to the CSAPR Update and the Federal Implementation Plan (FIP) and also submit a good neighbor SIP… In an effort to expedite EPA's approval process [for SIP #18-05 - Good Neighbor SIP for the 2008 ozone NAAQS] and based on guidance of EPA Region 3 staff, MDE is currently working to incorporate by reference the federal CSAPR Update into the Code of Maryland Regulations. This should resolve any outstanding issues that were related to replacement of the CSAPR Update and the FIP in Maryland or additional analysis of Maryland's regulations."

[4] Maryland SIP #19-02: *Implementation, Maintenance, and Enforcement of the 0.070 ppm 8-hour Ozone National Ambient Air Quality Standard State Implementation Plan §110(a)(2)(D) MD 70 ppb Ozone Transport SIP*. Pg. 10

[5] See discussion related to submission of CSAPR IBR SIP #20-03 and message from C. Servidio

Commenter: Mississippi Department of Environmental Quality

Commenter ID: 32

Docket ID: EPA-R04-OAR-2021-0841

Comment:

MDEQ worked collaboratively with EPA Region 4 to properly respond to interstate transport, or "good neighbor," requirements and submitted what we believed EPA considered an approvable iSIP in September 2019.

Commenter: Nevada Division of Environmental Protection

Commenter ID: 33

Docket ID: EPA-R09-OAR-2022-0138

Comment:

EPA has repeatedly failed to meaningfully collaborate with NDEP on how to best address Nevada's interstate ozone transport obligations.

After EPA revised the ozone NAAQS in 2015, NDEP spent its limited resources to prepare and submit Nevada's iSIP by the required deadline of October 1, 2018, relying on EPA's March 2018 modeling results to establish that no out-of-state downwind receptors were impacted by Nevada sources.

EPA failed to act on Nevada's iSIP by the 2020 statutory deadline. As of late 2021, despite the long-standing process for review and prioritization of the SIP backlog (namely the SIP Management Plan) EPA provided zero communication to NDEP on any significant aspect of the Nevada iSIP review and approval process nor did EPA provide any substantive feedback on Nevada's 2018 iSIP submission.

Commenter: Oklahoma Department of Environmental Quality

Commenter ID: 37

Docket ID: EPA-R06-OAR-2021-0801

Comment:

EPA Comments on Oklahoma's SIP Submittal Did Not Reflect Its Intent to Disapprove, Indicating Implied Consent for Use of 1 ppb Significance Threshold

As EPA stated in the March 2018 Tsirigotis Memo, the memo was intended to be used not only by states, but as guidance for the EPA regions, as well. Generally, staff from the states and regions work together in developing SIP submittals and, accordingly, states provide EPA regional staff with periodic updates on progress toward SIP submittals. During the development process of Oklahoma's ozone transport SIP, Oklahoma discussed with EPA Region 6 its intent to use the flexibilities offered in the Tsirigotis memos. Therefore, during the final stages of SIP development in 2018, EPA Region 6 was on notice of Oklahoma's intent to use the flexibilities offered in the Tsirigotis memos.

On August 14, 2018, Oklahoma published for public comment Oklahoma's I-SIP Submittal, which included the ozone transport SIP. On September 17, 2018 (the final day of the comment period), Oklahoma received a letter containing comments on said SIP submittal from EPA Region 6 (Attachment B). In its comments, EPA Region 6 suggested that ODEQ incorporate information from the August 2018 Tsirigotis Memo into the SIP submittal, stating:

> We suggest you factor in information from the EPA memo of August 31, 2018, "Analysis of Contribution Thresholds for Use in Clean Air Act Section 110(a)(2)(D)(i)(I) Interstate Transport

State Implementation Plan Submissions for the 2015 Ozone National Ambient Air Quality Standards." The results of the analysis found in this memo would be a better justification for use of 1 parts per billion (ppb) threshold than the current narrative on a 1 ppb threshold.

Thus, not only is there an absence of comment on the record from EPA that Oklahoma should not rely on the 2018 Tsirigotis Memos or use the 1 ppb threshold, but EPA actually encouraged ODEQ to rely further on said memos to support the use of a 1 ppb threshold in the final SIP, which amounts to implied consent from EPA for the reasonableness of the 1 ppb threshold and reliance on the 2018 Tsirigotis Memos in demonstrating that reasonableness. Thus, EPA's position in the proposed SIP disapproval contradicts the 2018 Tsirigotis Memos and the comment letter from Region 6.

Commenter: Texas Commission on Environmental Quality

Commenter ID: 42

Docket ID: EPA-R06-OAR-2021-0801

Comment:

The EPA failed to provide Texas with formal comments on the adequacy of its analysis during the public comment period for the SIP revision.

The EPA did not comment on the adequacy of the TCEQ's analysis during the public comment period for the 2015 Ozone Transport SIP Revision. The TCEQ and EPA Region 6 participated in discussions regarding the proposed SIP revision, and the TCEQ answered questions from the EPA on the planned SIP submittal and provided additional data to the EPA. The EPA did not indicate that the information provided failed to address its concerns. The lack of EPA comment did not allow the TCEQ to address the issues outlined in the EPA's proposed disapproval in the adopted 2015 Ozone Transport SIP revision.

Commenter: United States Steel Corporation

Commenter ID: 45

Docket ID: EPA-R06-OAR-2021-0801

Comment:

[Arkansas] DEQ has expended an enormous amount of time and worked diligently to meet the NAAQS for ozone. DEQ worked to develop the information necessary to formulate the SIP, developed a proposed plan, and undertook the required state-rulemaking and legislative action. DEQ also worked collaboratively with EPA Region 6. Numerous discussions were held by DEQ and EPA Region 6 to inform DEQ's development of an appropriate SIP. DEQ responded to questions and comments from EPA Region 6 to develop the SIP. Additionally, DEQ developed additional information in response to EPA Region 6's comments as a part of a collaborative process that EPA has now abandoned.

Commenter: Utah Division of Air Quality

Commenter ID: 47

Docket ID: EPA-R08-OAR-2022-0315

Comment:

The benefit of cooperative federalism is having the autonomy to do what's best for the state, but do so in partnership with EPA to ensure that the CAA intent and requirements are met.

In this same spirit, UDAQ engaged early and often with our counterparts at Region 8 in the development of our interstate transport SIP. Through this collaboration and EPA's guidance, Utah selected the alternative threshold of 1 ppb. […] Thus, UDAQ was surprised when EPA proposed to include Utah in the proposed FIP, and subsequently disapproved the state's SIP based in large part on the selection of the 1 ppb over the 1% of the NAAQS threshold. If the 1 ppb threshold was in fact inappropriate for the development of this SIP, EPA should have communicated that view to UDAQ during the early engagement and development process or during the state's public comment period. Additionally, EPA released no new guidance directing states to use a 1% threshold either prior to or after SIP submittal deadlines.

Response

Some commenters assert that the EPA did not provide sufficient input to states during the development of the SIP submissions, while others allege that the EPA led the states astray or implied to states that the SIP submissions were approvable. The EPA is required under CAA section 110 to review a SIP submission revision that has been formally submitted; based on the EPA's determination of whether that submission meets applicable CAA requirements, the EPA must then approve or disapprove the SIP submission. There is no CAA requirement that the EPA must review, evaluate, and comment on a state's draft SIP submission revision during the state rulemaking process, and no legal basis for states to assume that the EPA's silence during a state public comment period constitutes the Agency's endorsement of such SIP submission revision. Where the EPA did communicate views to these states on draft SIP submission revisions, the EPA disagrees that such preliminary feedback should now bind the Agency, and the EPA disagrees that we could in any way lawfully provide "implied consent" to states regarding their draft SIP submissions before they have completed the required rulemaking processes at both the state and federal level. After all, EPA cannot assure any state in advance of the EPA's public notice and comment process what the EPA's final action on a SIP submission will be. *Catawba County v. EPA*, 571 F.3d 20, 34 (D.C. Cir. 2009) ("[a]n agency pronouncement is not deemed a binding regulation merely because it may have some substantive impact, as long as it leave[s] the administrator free to exercise his informed discretion.") citing *Panhandle Producers & Royalty Owners Ass'n v. Econ. Regulatory Admin.*, 822 F.2d 1105, 1110 (D.C. Cir. 1987) (quoting *Brock v. Cathedral Bluffs Shale Oil Co.*, 796 F.2d 533, 537 (D.C. Cir. 1986) (internal quotation marks omitted))).

The EPA encourages state air agencies to engage as early as possible with the Agency on the development of any SIP submission revisions in an effort to address all technical and policy approvability issues prior to submitting a final SIP submission package and appreciates states' willingness to involve

regional offices at the initial SIP submission development stage. Further, the EPA makes its best efforts to work closely with states, but EPA cannot be expected to provide states definitive guidance on what will ultimately be approvable. Nonetheless, the suggestions we made to states on their SIP submissions in this instance are not inconsistent with the final action we are now taking.

Other issues raised by these comments are addressed in Section V.A.3., V.A.6., and V.B.7. of the preamble and the following sections: 1.1 (Timing of SIP Actions), 1.2 (Guidance for SIP Submissions), 7.4 (August 2018 Memorandum), 10.3 (Cooperative Federalism and the EPA's Authority), 11.6 (Economic Impacts), and 11.12 (Consent Decrees).

We now address specific concerns about the EPA input during the SIP development process of specific states.

Arkansas

Regarding Arkansas, the EPA specifically commented on Arkansas' draft SIP submission that "EPA disagrees with ADEQ on the applicability of the prevention of significant deterioration (PSD) significant impact level (SIL) to a one parts per billion (ppb) threshold for assessing linkages to downwind receptors because EPA's analysis for the SIL did not contain information that could be used to evaluate the collective contribution from upwind states at downwind receptors, a key element for consideration given the regional nature of ozone transport." This is consistent with the EPA's position on this topic in this action. Further, in response to this comment, ADEQ made no changes to its final SIP submission. This is one example (of many) where the EPA provided feedback to a state during the SIP submission development process that the state chose not to include or act upon. It is inauthentic to characterize the disapproval of Arkansas' SIP submission as being an abandonment of collaborative process when there were specific EPA comments that went unaddressed by the state SIP submission, which contributed to the final SIP submission being deficient.

The EPA noted in our comments to ADEQ on their draft SIP submissions, the state's back trajectory analysis "would give additional perspective on the representativeness of EPA's modeling to examine the yearly frequency" and that "[c]omparing the frequency in 2011 to the other years analyzed would help determine if the frequency for 2011 was anomalous."[5] The EPA noted a number of concerns with the analysis. *Id.* The EPA's review found that Arkansas' analysis did not suggest that the modeled base year of 2011 used in EPA's 2011-based modeling was anomalous compared with other years. 87 FR 9809. We address additional comments related to the EPA's technical concerns and conclusions from ADEQ's HYSPLIT analysis in Section 8.8.

Maryland

EPA's proposed disapproval of Maryland's SIP submission made the point that "relying on a FIP at Step 3 is per se not approvable if the state has not adopted that program into its SIP . . ." 87 FR 9463, 9471 (Feb. 22, 2022). This point was made in the context of addressing Maryland's argument that the Cross-State Air Pollution Rule (CSAPR) Update FIP (which the EPA promulgated to partially address good neighbor obligations for the 2008 ozone NAAQS) satisfied the state's good neighbor obligations for the

[5] The EPA's comment letter on ADEQ's draft SIP submission was attached to their SIP submission and is available in Docket ID. No. EPA-R06-OAR-2021-0801 (Document ID No. EPA-R06-2021-00801-0003).

2015 ozone NAAQS The statement that the EPA made at proposal is a correct statement of the EPA's interpretation of CAA section 110(a)(2), which is that FIP provisions cannot be relied upon to meet SIP obligations unless the FIP provisions are incorporated into the SIP. (This aspect of Maryland Department of the Environment (MDE's) comment is further responded to in Section V.B.9 of the preamble regarding reliance on FIP measures. MDE complains, however, that EPA itself encouraged the state to withdraw its August 2018 SIP submission, which would have incorporated the CSAPR Update into its SIP and replaced the CSAPR Update FIP. MDE claims the EPA's change in advice to the state leading to the withdrawal of that submission was due to our own "procedural error," and that the EPA cannot now use the lack of incorporation into its SIP submission of the CSAPR Update as a basis for disapproval. These comments reflect a misunderstanding of the procedural history and omit certain key facts.

First, to review the series of actions we took to address Maryland's good neighbor obligations for the 2008 ozone NAAQS: On December 31, 2012, Maryland submitted a SIP submission to address the requirements of CAA section 110(a)(2)(D)(i)(I) with respect to the 2008 ozone NAAQS. On April 20, 2016, Maryland withdrew its good neighbor SIP submission. On July 20, 2016, the EPA published a finding of failure to submit a complete good neighbor SIP submission to address the requirements of CAA section 110(a)(2)(D)(i)(I) with respect to the 2008 ozone NAAQS for Maryland (81 FR 47040). On October 26, 2016, the EPA published a FIP for Maryland in the CSAPR Update addressing the requirements of CAA section 110(a)(2)(D)(i)(I) with respect to the 2008 ozone NAAQS. However, the EPA did not determine that the CSAPR Update FIP fully addressed the requirements of CAA section 110(a)(2)(D)(i)(I). On August 8, 2018, Maryland submitted a new SIP submission intended to fully address good neighbor requirements for the 2008 ozone NAAQS by adopting the CSAPR Update emissions trading program into its SIP. On December 21, 2018, the EPA published a determination in the CSAPR Close-Out that the CSAPR Update FIP for Maryland fully addressed the requirements of CAA section 110(a)(2)(D)(i)(I) for the 2008 ozone NAAQS (83 FR 65878, effective February 19, 2019).

However, following the D.C. Circuit decisions in 2019 in *Wisconsin v. EPA*, 938 F.3d 303 (D.C. Cir. 2019) and *New York v. EPA*, 781 Fed. App'x 4, 7 (D.C. Cir. 2019), to remand the CSAPR Update and vacate the CSAPR Close-Out, the CSAPR Update FIP could no longer be said to fully correct the CAA section 110(a)(2)(D)(i)(I) deficiency identified in the July 20, 2016 finding of failure to submit. EPA promulgated an updated FIP for Maryland and several other states in the Revised CSAPR Update, and this FIP established a new emissions budget for Maryland's EGUs as well as a new Group 3 emissions trading program, which entirely replaced the Group 2 program that had been promulgated in the CSAPR Update. 86 FR 23054 (April 30, 2021).

At that point, Maryland's August 2018 submission adopting the CSAPR Update program was no longer approvable as a remedy to its "significant contribution" under the 2008 ozone NAAQS, because the CSAPR Update FIP for Maryland was replaced by a new, more stringent emissions control program. It was at that point that the EPA encouraged Maryland to withdraw its August 2018 submission. The withdraw of the submission saved resources for all parties as it avoided the EPA having to go through a rulemaking process to disapprove that submission. Maryland remained free to adopt the Revised CSAPR Update FIP requirements into its SIP should it have chosen to do so.

In any case, the EPA's disapproval of Maryland's 2015 ozone NAAQS good neighbor SIP submission was not based solely upon non-incorporation of the CSAPR Update requirements into Maryland's SIP. Even if

the CSAPR Update—or even the Revised CSAPR Update—had been incorporated into the SIP, it wouldn't have even *partially* satisfied an appropriate Step 3 and Step 4 analysis. This is because the EPA has already included the emissions-reducing effects of both the CSAPR Update and the Revised CSAPR Update in its baseline air quality modeling at Steps 1 and 2 (in both the 2016v2 and 2016v3 modeling), and so pointing to either of those rules as measures that would eliminate significant contribution at Step 3, for purposes of the 2015 ozone NAAQS, would be impermissible double-counting. Further, the CSAPR Update only partially addressed interstate transport obligations for the less protective 2008 ozone NAAQS. Maryland offered no explanation why those requirements would be sufficient to satisfy Maryland's good neighbor obligations for the more protective 2015 ozone NAAQS. And there are yet additional reasons cited in the EPA's proposed disapproval that this comment does not address, such as Maryland's failure to evaluate other nitrogen oxides (NOx) emitting sources at Step 3 and to analyze potential NOx emission controls, costs, and effect on downwind receptors. These were independently sufficient bases to disapprove Maryland's 2015 ozone NAAQS good neighbor SIP submission. *See* 87 FR 9463 (Feb. 22, 2022).

Mississippi

The EPA agrees with the commenter's (MDEQ) statement about the collaborative efforts from both MDEQ and EPA Region 4 (as well as headquarters) to support the state's development of their 2015 ozone NAAQS transport SIP submission in 2019. The EPA worked with MDEQ to develop their 2015 ozone NAAQS transport SIP submissions based on information available at the time that Mississippi initiated their SIP development process through the final SIP submission. At that time, it was believed based on the 2011-based modeling that Mississippi would not be linked above 1 percent of the NAAQS to any out of state receptors in 2023. However, as discussed in the proposal and elsewhere in this final action, the EPA's updated modeling now shows the state is projected to be linked.

Oklahoma

During the development of Oklahoma's SIP submission, the EPA did suggest to Oklahoma that it "factor in information" from the August 2018 memorandum in their rationale for using a 1 ppb contribution threshold at Step 2, as that would be a "better justification" than arguments the state had drafted.[6] This suggestion, standing alone, cannot reasonably be understood as a final endorsement of the appropriateness of a 1 ppb contribution threshold for Oklahoma. The EPA did not indicate that the August 2018 memorandum pre-approved the use of a 1 ppb contribution threshold. Rather, it suggested Oklahoma improve the draft rationale. The topics of the August 2018 memorandum and Oklahoma's arguments related to the appropriateness of an alternative contribution threshold for the state are addressed in more detail in the preamble in Section V.B.7 and in Section 7.4 (August 2018 Memorandum).

Texas

Commenters (AECT et al., TCEQ) claim the EPA gave no indication that TCEQ's submission may not be approvable, additionally citing the EPA's SIP Processing Manual, available on EPA's website, to support

[6] A copy of the EPA's comments on Oklahoma's draft SIP submission are included in Docket ID No. EPA-HQ-OAR-2021-0663.

their argument that EPA should have done so.[7] However, as TCEQ acknowledges, the EPA staff did in fact meet with TCEQ staff to discuss the submission. As explained elsewhere in this response, there is no obligation or requirement that EPA needed to have done so. Further, given the technical complexity of TCEQ's submittal (which included its own modeling efforts), it is understandable that EPA staff would not have been able to offer views at that point as to how the Agency may ultimately act on the submission.

1.7 Length of Comment Period

Comments

Commenter: Alabama Power Company, Southern Power Company, and PowerSouth Energy Cooperative

Commenter ID: 04

Docket ID: EPA-R04-OAR-2021-0841

Comment:

Further, commenters note that EPA did not provide affected stakeholders sufficient time to analyze and comment on EPA's proposed disapproval. EPA provided only 30 days for comments, which ended on the Friday within the Thanksgiving holiday. The State of Alabama made a reasonable request for additional time to provide comments on this highly technical and data-intensive issue, but EPA refused to grant that or any extension. EPA offered no rationale or explanation as to why additional time could not be afforded, only claiming it was "unnecessary." But EPA should defer to the State of Alabama to determine whether additional time to prepare its comments is necessary and only deny such a request for compelling reasons. EPA offered no such reasons and none exist. By denying the State's request for an extension to the notice and comment period, EPA failed to provide stakeholders with adequate time to evaluate the proposed requirements and failed to acknowledge that this is the only opportunity for stakeholders to identify and comment on the flaws in EPA's analysis. Allowing adequate time for comments is also significant because stakeholders provide comments to EPA in order to preserve their opportunity to bring errors to the attention of a reviewing court.

Commenter: Ameren Missouri

Commenter ID: 05

[7] EPA SIP Manual, available at https://cfpub.epa.gov/oarwebadmin/sipman/sipman/mIntro.cfm?chap=0&i=1. Though cited by commenters for the proposition that the EPA must provide comments to states on draft SIP submissions, the page cited by commenters notes that "Drafts are not required but can benefit the State if the submittal is controversial or if the State anticipates requesting parallel processing by resolving the majority of issues up front."

Docket ID: EPA-R07-OAR-2021-0851

Comment:

USEPA needs to provide additional time to comment on the Missouri SIP disapproval for post processing of model data review and comment per APA.

Commenter: Arkansas Department of Energy and Environment, Divison of Environmental Quality

Commenter ID: 07

Docket ID: EPA-R06-OAR-2021-0801

Comment:

[A]DEQ has performed a preliminary review of whether additional control measures for Arkansas are necessary to fulfill its interstate obligations for the 2015 ozone NAAQS based on the new EPA identified linkages. The length of the comment period does not provide adequate time to perform HYSPLIT modeling, which based on EPA's proposal, would be dismissed without adequate consideration, or photochemical modeling.

Commenter: Cleco Corporate Holdings LLC

Commenter ID: 14

Docket ID: EPA-R06-OAR-2021-0801

Comment:

Cleco requests a 60-day extension of the comment period for the Proposal.

Cleco again requests a 60-day extension of the comment deadline for the Proposal. Due to the great volume of information in which EPA based its SIP disapprovals, additional time is necessary for review of the material which includes the state-specific 4-Step Interstate Transport results, the EPA's Ozone Transp01i Modeling under the 2016v2 platform, and the EPA's after-the-fact change from the EPA 2018 memorandum (2011 base year) to the 20 l 6v2 modeling (2016 base year).

Any of these reasons should be sufficient justification to extend the comment deadline. Taken together, these reasons should convince EPA to grant Cleco' s request for a 60-day extension. Cleco asks EPA to reconsider this request.

Commenter: Eagle Materials Inc.

Commenter ID: 16

Docket ID: EPA-R09-OAR-2022-0138

Comment:

EPA has unlawfully circumvented notice-and-comment requirements for its Proposed SIP Disapproval.

[…]

In addition, EPA is effectively depriving members of the public from meaningfully engaging with its Proposed Disapproval by issuing it after its Proposed FIP. The comment period for this Proposed Disapproval did not open until over a month after EPA published its Proposed FIP—the comment period for the Proposed FIP closed before *any* commenters had a chance to submit comments on the Proposed SIP Disapproval. This puts commenters in the untenable position of having to provide feedback on EPA's comprehensive and complex Proposed FIP without first understanding Nevada's obligations under the CAA.

Commenter: Idaho Power Company

Commenter ID: 23

Docket ID: EPA-R09-OAR-2022-0138

Comment:

Additionally, by proposing the FIP first, EPA has made clear that the finalization of the Proposed Disapproval was a foregone conclusion, effectively circumventing required rulemaking procedures by treating the Proposed Disapproval as final before giving any consideration to public comments. The Administrative Procedure Act's ("APA's") notice-and-comment procedures require EPA to "give interested persons an opportunity to participate in the rule making" before a rule is finalized.[32] Soliciting public comment "allow[s] the agency to benefit from the expertise and input of the parties who file comments with regard to the proposed rule" and "see[s] to it that the agency maintains a flexible and open-minded attitude towards its own rules," creating important safeguards against arbitrary or unreasonable agency action.[33] EPA cannot remain flexible and open-minded in its consideration of the Proposed Disapproval where the Proposed FIP depends on this disapproval being finalized. EPA has effectively finalized the Proposed Disapproval in a manner that circumvents its responsibility to respond to public comments.[34] Such a procedural shortcut is anathema to the APA's carefully crafted rulemaking structure.[35]

Finally, the CAA gives EPA up to *two years* after the disapproval of a SIP to promulgate a FIP. Because of EPA's own failure to act on SIP submissions in a timely manner and the resulting consent decree, the Agency has accelerated the process, issuing a proposed FIP prior to issuing proposed SIP disapprovals. The comment period for EPA's Proposed Disapproval did not open until ***over a month after*** EPA published its proposed FIP, meaning that the comment period for the proposed FIP closed before many commenters had a chance to submit comments on the Proposed Disapproval. This put commenters in the untenable position of having to provide feedback on EPA's comprehensive and complex Good Neighbor Plan without first understanding Nevada's obligations under the CAA. Such an accelerated timeline, with multiple overlapping comment periods out-of-sync with the CAA, significantly limited the public's ability to fully assess EPA's action and provide meaningful comment.

[29] *See, e.g.*, Chrysler Corp. v. Brown, 441 U.S. 281, 302 (1979).
[30] *See* 42 U.S.C. § 7410(c)(1) (requiring Administrator to promulgate FIP "at any time within 2 years after" disapproving a SIP). While the Supreme Court held in *EPA v. EME Homer City Generation* that, under this provision, "EPA is not obliged to wait two years or postpone its action even a single day," the Court noted that this authority applies "[*a]fter* EPA has disapproved a SIP." 572 U.S. 489, 509 (2014) (emphasis added)
[32] 5 U.S.C. § 553(c).
[33] *See McLouth Steel Prod. Corp. v. Thomas*, 838 F.2d 1317, 1325 (D.C. Cir. 1988) (internal citations omitted).
[34] *See City of Portland, Oregon v. EPA*, 507 F.3d 706, 715 (D.C. Cir. 2007) (emphasizing that an agency must respond to comments that "raise points relevant to the agency's decision and ... if adopted, would require a change in an agency's proposed rule").
[35] *See Metcalf v. Daley*, 214 F.3d 1135, 1142 (9th Cir. 2000) (emphasizing that agency action "must be timely, and it must be taken objectively and in good faith, not as an exercise in form over substance, and not as a subterfuge designed to rationalize a decision already made").

Commenter: Louisiana Electric Utility Environmental Group

Commenter ID: 28

Docket ID: EPA-R06-OAR-2021-0801

Comment:

As a part of these comments, LEUEG also requests a 60-day extension of the comment deadline for EPA's Proposed SIP Disapproval relating to Louisiana. LEUEG is aware of numerous requests for extensions by industry stakeholders and believes EPA's rejections of these requests to date is unreasonable and unwarranted under the circumstances. As noted in other requests, more time is plainly necessary for review of the 4-step Interstate Transport results, EPA's Ozone Transport Modeling under the 2016v2 platform, and EPA's after-the-fact change from its 2018 memorandum (2011 base year) to the 2016v2 modeling (2016 base year) by the state agencies and stakeholders.

Commenter: Midwest Ozone Group

Commenter ID: 30

Docket ID: EPA-R02-OAR-2021-0673, EPA-R03-OAR-2021-0872, EPA-R03-OAR-2021-0873, EPA-R04-OAR-2021-0841, EPA-R05-OAR-2022-0006, EPA-R06-OAR-2021-0801, EPA-R07-OAR-2021-0851

Comment:

This accelerated effort disenfranchises not only meaningful technical analysis of the agency's proposals but also curtails meaningful participation by all stakeholders.

[…]

Second, EPA has not provided adequate public notice and comment as required by law.

[…]

The 60-day comment period is too short to allow review and analysis of the proposed denials for multiple states.

EPA eight proposed Good Neighbor SIP disapprovals would result in disapproval of Good Neighbor SIPs submitted by 19 states regarding interstate transport for the 2015 8-hour ozone national ambient air quality standard. Significantly, EPA established a comment period of only 63 days that applies to all eight proposals for all 19 states. The sheer number of EPA proposed actions regarding these Good Neighbor SIPs alone is evidence that the comment period allowed by EPA is grossly insufficient. Compounding the challenge for stakeholders of the inadequate comment period on these eight proposed disapprovals, EPA also proposed a 181-page transport rule on April 6, 2022, during the pendency of the comment period on these eight proposed disapprovals. The comment period on the transport rule is also 60 days, ending June 6, 2022.

MOG has been an active participant in transport rule development since the 1997 NOx SIP Call and continues to be keenly interested in the development of air pollution regulations that are based on sound science. MOG has undertaken independent modeling and verification of EPA modeling in the past and offered comments on how to improve the accuracy and completeness of those efforts in prior comments on various transport rules.

As a result of its continued interest in the transport issue, MOG has developed technical capabilities that allow it to analyze and verify the science behind both Good Neighbor SIPs proposed by states and EPA actions to approve or disapprove them. MOG is acutely aware that preparation of proper technical analyses of Good Neighbor SIPs involves the use of complicated dispersion models that take substantial execution time. MOG's significant experience in these matters also makes clear that simultaneous analysis of eight proposed rulemakings in addition to analyzing a 181-page transport rule that involves the same ozone NAAQS as the Good Neighbor SIPs dramatically complicates the analysis process.

The totality of these now nine pending rulemakings necessitates a period substantially longer than the allowed 63 days to allow stakeholders, including MOG, to analyze the proposed rules in parallel and prepare comprehensive comments that will better inform the rulemaking process, and EPA has utterly failed to allow sufficient time for that to happen.

Commenter: Midwest Ozone Group

Commenter ID: 30

Docket ID: EPA-R08-OAR-2022-0315, EPA-R09-OAR-2022-0394, EPA-R09-OAR-2022-0138

Comment:

The 60-day comment period is too short to allow review and analysis of the proposed denials for multiple states. EPA proposed Good Neighbor SIP disapprovals would result in disapproval of Good Neighbor SIPs submitted by states regarding interstate transport for the 2015 8-hour ozone national ambient air quality standard. Significantly, EPA established a comment period of only 60 days that applies to all proposals.

[…]

The totality of these pending rulemakings necessitates a period substantially longer than the allowed 63 days to allow stakeholders, including MOG, to analyze the proposed rules in parallel and prepare comprehensive comments that will better inform the rulemaking process, and EPA has utterly failed to allow sufficient time for that to happen.

Commenter: Utah Petroleum Association and the Utah Mining Association

Commenter ID: 48

Docket ID: EPA-R08-OAR-2022-0315

Comment:

Even though EPA jumped the gun, it must consider comments on this action fairly and completely.

[…]

EPA jumped the gun. The timing of this Proposed Disapproval, six weeks after proposing a FIP as part of the GNR, is out of order and contrary to the requirements of the CAA, which requires that a Disapproval ***be finalized*** before EPA promulgates a FIP such as the GNR.

The timeline suggests that EPA has no intention of paying heed to the comments on the Proposed Disapproval. Such disregard for comments would be a violation of required administrative procedures. EPA must fairly and completely consider all comments submitted.

Furthermore, with both actions in the proposal phase, comments on the Proposed Disapproval and the Proposed GNR are inextricably linked.

Response

The EPA disagrees that it provided insufficient time for public comment. The EPA has provided more than adequate time for the public to review the technical bases underlying this action. Congress' presumptive minimum period for public comment on CAA regulations is 30 days. *See* CAA section 307(h). The comment period of at least 60 days for each of the proposed disapprovals is twice that amount of time. (Due to time constraints, EPA was only able to provide a 30-day comment period on its proposed disapproval of Alabama's June 21, 2022 SIP submission—although there were 60 days to comment on the February 24, 2022 proposed disapproval of its earlier submission, which the state withdrew during the comment period). Some commenters state that that the EPA failed to provide sufficient public process, however the commenters here actually participated in this public notice and comment process, in many cases submitting detailed and lengthy comments.

Furthermore, the 2016-based meteorology and boundary conditions used in the modeling have been available through the 2016v1 platform, which was used for the Revised CSAPR Update (proposed in October of 2020, 85 FR 68964; October 30, 2020). The updated emissions inventory files used in the current modeling were publicly released September 21, 2021, for stakeholder feedback, and have been

available on our website since that time.[8] The Comprehensive Air Quality Modeling with Extensions (CAMx) modeling software that EPA used has likewise been publicly available for some time: CAMx version 7.10 was released by the model developer, Ramboll, in December 2020. And on January 19, 2022, we released on our website and notified a wide range of stakeholders of the availability of both the modeling results for 2023 and 2026 (including contribution data) along with many key underlying input files.[9]

By providing the 2016 meteorology and boundary conditions (used in the 2016v1 version) in fall of 2020, and by releasing updated emissions inventory information used in 2016v2 in September of 2021 we gave states and other interested parties multiple opportunities prior to our February 2022 proposals to consider how our modeling updates could affect their status for purposes of evaluating potential linkages for the 2015 ozone NAAQS. We also supplied the full suite of modeling files (roughly 15 terabytes) to those who requested them; while the EPA acknowledges the process of delivering such large files can take time, we do not believe having all of those files is necessary for the public to be able to comment meaningfully on the proposals here.

In any case, for those who wished to comment on the EPA's modeling through reviewing all of those files and/or through running their own modeling, we note that the EPA used the same 2016v2 modeling of 2023 for all of its proposed SIP submission actions and the proposed FIP. Commenters could comment (and did comment) through any of those public comment periods on the modeling, and the EPA has an obligation to consider such comments to the extent in-scope in taking this final action. Given the overlapping timing of most of the EPA's proposals, there was at least one public comment period open at all times on the proposals using that modeling from Feb. 22, 2022, when the first set of disapprovals were issued, through July 25, 2022 (the close of the public comment period on the proposed disapprovals of several western states). That is effectively a combined comment period of 153 days, and is more than sufficient, in the EPA's view, to allow for meaningful comment.[10]

Finally, it is true that the EPA has consent decree deadlines to take final action on most SIP submissions covered by this action by January 31, 2023 (extended by stipulation of the parties from December 15, 2022).[11] But the amount of time the EPA could provide for public comment was also informed by our substantive obligation to see that interstate transport obligations for the 2015 ozone NAAQS are addressed as expeditiously as practicable and no later than the next attainment date. *See Wisconsin*, 938 F.3d at 313-20.

[8] *See* https://www.epa.gov/air-emissions-modeling/2016v2-platform.

[9] *See* https://www.epa.gov/scram/photochemical-modeling-applications.

[10] Further, because EPA is acting on a new SIP submission from Alabama using the 2016v2 modeling, we note that yet another comment period was open with respect to the application of the 2016v2 modeling in assessing good neighbor obligations for the 2015 ozone NAAQS from the date of that proposal, October 25, 2022, through November 25, 2022. *See* 87 FR 64412.

[11] *New York et al. v. Regan, et al.*, No. 1:21-CV-00252 (S.D.N.Y.) (IN, KY, MI, OH, TX, WV); *Our Children's Earth Foundation v. EPA*, No. 20-8232 (S.D.N.Y.) (NY); *Downwinders at Risk et al. v. Regan*, No. 21-cv-03551 (N.D. Cal.) (AR, CA, IL, IN, KY, LA, MD, MI, MN, MS, MO, NV, NJ, NY, OH, OK, TX, WV, WI).

Under these circumstances, and mindful of the legal and procedural obligations applicable to the EPA, as established by Congress and the courts, the comment period length was appropriate and consistent with the requirements of the CAA and the Administrative Procedure Act (APA).[12]

The EPA disagrees with Arkansas Division of Environmental Quality's characterization of EPA's analysis of Arkansas's good neighbor SIP submission for the 2015 ozone NAAQS. 87 FR 9798, 9806-9811 (February 22, 2022).

Other issues raised by these comments are addressed in Section V.A.1. of the preamble and in the following sections: Sections 1.2 (Guidance for SIP Submissions), 1.5 (State's Step 3 Analysis), 1.8 (Docket Document Availability), and 10.6 (Allegation that Disapprovals of Western State SIP Submissions was Predetermined).

1.8 Docket Document Availability

Comment

Commenter: Ameren Missouri

Commenter ID: 05

Docket ID: EPA-R07-OAR-2021-0851

Comment:

USEPA has not made available post processing of model data from the revised modeling in the Docket for the proposed disapproval of the Missouri Good Neighbor SIP and only references the files in another docket[9] which wasn't posted until 40 days after the proposed Missouri GNS disapproval. Making matters worse, interested parties were required to request the files from USEPA directly because the files were not in the posted public docket decreasing the available review time even more. Requiring interested parties to search two dockets and then request USEPA's data and analysis underlying this action and wait for a response from USEPA fails to meet the transparency in government standard set by this administration. USEPA needs to provide additional time to comment on the Missouri SIP disapproval so that the post processing of model data can be reviewed and commented on in accordance with the intent of the Administrative Procedures Act.

[9] The modeling relied upon as further proof of Missouri being linked to nonattainment in another state was included as part of USEPA's proposed CSAPR FIP for the 2015 Ozone Standard published in the Federal Register on April 6, 2022 under a separate docket. The public docket available on the internet for the proposed FIP did not contain any of the model post processing files with modeled contribution data for Missouri so that it could be reviewed. That data had to be requested separately (after searching both dockets).

[12] Section 553 of the Administrative Procedure Act requires that federal agencies provide general notice of proposed rulemaking by publication in the Federal Register and to "give interested persons an opportunity to participate in the rule making through submission of written data, views, or arguments with or without opportunity for oral presentation." 5 U.S.C. 553(b), (c).

Response

All information supporting the proposed disapproval of Missouri's SIP submission, including the data to which the commenter refers, was publicly docketed on or before February 22, 2022. Because of their size (around 15 terabytes), the full modeling files could not be posted online and so were held on data drives at EPA's Docket Center, as is routine for extremely large files, where it could be requested by interested parties. See 87 FR 9534 (February 22, 2022). Comments on the length of the comment period are addressed in Section 1.7 (Length of Comment Period).

Comment

Commenter: Louisiana Department of Environmental Quality

Commenter ID: 27

Docket ID: EPA-R06-OAR-2021-0801

Comment:

EPA formulated part of their proposed disapproval on results from the journal article "Improved estimation of trends in U.S. ozone concentrations adjusted for interannual variability in meteorological conditions," authored by several EPA members/employees and one external author. This article was not peer reviewed, neither is it available without purchase. The article should be made available in the Docket with other supplementary materials. "Although this article has been reviewed by the U.S. EPA and approved for publication, it does not necessarily reflect the U.S. EPA's policies or views." Atypically, the subject matter of the article is accounted for in tweaks to the 2016v2 modeling.

Response

The EPA does not place certain docket materials, such as copyrighted material or documents protected as Confidential Business Information on the Internet (*i.e.*, regulations.gov), but such docket materials are available for public review in person in the EPA Regional office or at the EPA Docket Center Reading Room in Washington, D.C., as applicable.[13] The article cited by the EPA to which the Louisiana Department of Environmental Quality (LDEQ) is referring is protected by copyright, so the article's title was listed in the online Docket (EPA-R06-OAR-2021-0801), while the hard copy of the article is available for public viewing in person at the EPA Region 6 office. Further, the preamble to the proposed rulemaking directed the public to https://www.epa.gov/dockets for further information on the EPA Docket Center Services, which include assisting the public with accessing particular documents in the docket.

[13] Access EPA Dockets, *available at* https://www.epa.gov/dockets/access-epa-dockets (last accessed January 31, 2023).

Regarding the comment about peer review, the article was published in the *Atmospheric Environment* journal, [14] which requires peer review. The peer review requirement for the journal is listed in their author's guide:

> This journal operates a single anonymized review process. All contributions will be initially assessed by the editor for suitability for the journal. Papers deemed suitable are then typically sent to a minimum of two independent expert reviewers to assess the scientific quality of the paper.[15]

The article in question was reviewed by three independent experts and accepted for publication with minor revisions.

[14] Atmospheric Environment, *available at* https://www.sciencedirect.com/journal/atmospheric-environment (last accessed January 31, 2023).
[15] Atmospheric Environment, Author Information Pack at 9, *available at* https://www.elsevier.com/wps/find/journaldescription.cws_home/246?generatepdf=true. (Last accessed January 13, 2023).

2 Analytic Year of 2023

Comments

Commenter: Midwest Ozone Group

Commenter ID: 30

Docket ID: EPA-R04-OAR-2021-0841

Comment:

These comments highlight the agency's failure to align the responsibilities of upwind and downwind states as it selected the analytical year for evaluating the Good Neighbor Provisions of the CAA. In the case on the Kentucky plan, this failure is even more significant because Kentucky specifically noted the disparity that exists between upwind states and those downwind states that significantly delayed the imposition of nonattainment controls on sources within their own nonattainment areas. 87 Fed. Reg. at 9505. Kentucky demonstrated emissions from local sources in nonattainment areas were not properly regulated resulting in on-going nonattainment impermissibly shifting the burden of emission controls to upwind states. EPA response to the Kentucky plan fails to address the alignment issue and defaults to the selection of 2023 as the appropriate analytic year. EPA did not assess the extent of delay of downwind states emissions reductions programs on nonattainment. *Id.* at 9512.

Commenter: Midwest Ozone Group

Commenter ID: 30

Docket ID: EPA-R07-OAR-2021-0851

Comment:

These comments also highlight the agency's failure to align the responsibilities of upwind and downwind states as it selected the analytical year for evaluating the Good Neighbor Provisions of the CAA. EPA's response to the Missouri plan failed to address the alignment issue defaulting to the selection of 2023 as the appropriate analytic year. EPA failed to assess the extent of delay of downwind states emissions reductions programs on nonattainment.

Commenter: Midwest Ozone Group

Commenter ID: 30

Docket ID: EPA-R02-OAR-2021-0673, EPA-R03-OAR-2021-0872, EPA-R03-OAR-2021-0873, EPA-R04-OAR-2021-0841, EPA-R05-OAR-2022-0006, EPA-R06-OAR-2021-0801, EPA-R07-OAR-2021-0851, EPA-R08-OAR-2022-0315, EPA-R09-OAR-2022-0394, EPA-R09-OAR-2022-0138

Comment:

EPA's selection of 2023 as the analytical year for its assessments of the state plans fails to align the obligation of upwind states with downwind states inasmuch as certain nonattainment areas have delayed implementation of nonattainment controls until 2025 and beyond

Comment: EPA's statutory duty is to harmonize the Good Neighbor Provision of CAA §110(a)(2)(D)(i) with nonattainment and maintenance requirements of CAA §172 so that compliance burdens are aligned among upwind and downwind states. MOG is not critical of the downwind state plans to the extent those plans are designed and demonstrated to achieve attainment within the attainment deadlines. MOG is, however, critical of EPA for disapproving upwind state Good Neighbor Plans without consideration of the timing of the implementation of nonattainment controls by downwind states - effectively shifting the burden of additional controls to the upwind states.

The Wisconsin remand concluded that EPA exceeded its statutory authority under the Good Neighbor Provision "by issuing a Rule that does not call for upwind States to eliminate their substantial contributions to downwind nonattainment in concert with the attainment deadlines."

Wisconsin, 938 F.3d at 318. The Wisconsin remand directed EPA to address the downwind state "deadline" in such a manner as to "harmonize" the deadlines of upwind and downwind states and to apply "parallel timeframes." Id. at 312, 314. The D.C. Circuit repeatedly has explained the CAA directive to "harmonize" and manage the relationship described as parallel between the Good Neighbor obligations for upwind states and statutory attainment deadlines for downwind areas. That relationship is one of "par," using the Court's term, meaning to be judged on a common level with the other. With this proposed disapproval, EPA ignores the obvious relationship between the downwind states' obligation to implement controls to attain the standard relative to the obligation of an upwind state to not significantly contribute to the nonattainment at issue.

This Court in North Carolina v. EPA, 531 F.3d 896 (D.C. Cir. 2008), found that EPA did not explain why it did not coordinate the Good Neighbor Provision with the Clean Air Interstate Rule to provide a sufficient level of protection to downwind states.

Despite CAA §110(a)(2)(D)(i)'s requirement that upwind contributions to downwind nonattainment be "consistent with the provisions of [Title I]," EPA did not make any effort to harmonize CAIR's Phase Two deadline for upwind contributors to eliminate their significant contribution with the attainment deadlines for downwind areas... As a result, downwind nonattainment areas must attain NAAQS for ozone and PM2.5 without the elimination of upwind states' significant contribution to downwind nonattainment, forcing downwind areas to make greater reductions than CAA §110(a)(2)(D)(i)(I) requires. Id. (emphasis added). The D.C. Circuit described its North Carolina ruling in the Wisconsin remand as follows:

> We explained that EPA needed to "harmonize" the "Phase Two deadline for upwind contributors to eliminate their significant contribution with the attainment deadlines for

> downwind areas." ... . Otherwise, downwind areas would need to attain the NAAQS "without the elimination of upwind states' significant contribution."

Wisconsin, 938 F.3d at 314 (emphasis added). The Wisconsin remand explained, "In sum, under our decision in North Carolina, the Good Neighbor Provision calls for elimination of upwind States' significant contributions on par with the relevant downwind attainment deadlines." Id. at 315 (emphasis added). The Wisconsin opinion explains further:

> The Good Neighbor Provision, as North Carolina emphasized, requires upwind States to eliminate their significant contributions to downwind pollution "consistent with the provisions of this subchapter," i.e., Title I of the Clean Air Act. 42 U.S.C. §7410(a)(2). One of the "provisions of this subchapter" is §7511(a)(1), which in turn requires downwind areas in moderate non-attainment to attain the NAAQS by July 20, 2018.

Id. at 315-16. The Wisconsin remand summarizes that "it is the statutorily designed relationship between the Good Neighbor Provision's obligations for upwind states and the statutory attainment deadlines for downwind areas that generally calls for parallel timeframes." Id. at 316.

EPA, however, takes the following actions. It interprets the court's holding in Maryland v. EPA, 958 F. 3d 1185 (D.C. Cir. 2020) as requiring the states and the Agency, under the good neighbor provision, to assess downwind air quality as expeditiously as practicable and no later than the next applicable attainment date, which is now the Moderate area attainment date under CAA §181 for ozone nonattainment. The Moderate area attainment date for the 2015 8-hour ozone NAAQS is August 3, 2024. The EPA provides that it believes that 2023 is now the appropriate year for analysis of interstate transport obligations for the 2015 8-hour ozone NAAQS because the 2023 ozone season is the last relevant ozone season during which achieved emissions reductions in linked upwind states could assist downwind states with meeting the August 3, 2024, Moderate area attainment date for the 2015 8-hour ozone NAAQS." 87 Fed. Reg. 9,487-8. EPA is inappropriately shifting the burden to the transport states.

For New York's disapproved transport plan, EPA offers the following criticism, "under the Wisconsin decision, states and the EPA may not delay implementation of measures necessary to address good neighbor requirements beyond the next applicable attainment date without a showing of impossibility or necessity. *See* 938 F.3d at 320. In those cases where the measures identified by the State had implementation timeframes beyond the next relevant attainment dates the submission did not offer a demonstration of impossibility of earlier implementation of those control measures. Similarly, the State's submittal is insufficient to the extent the implementation timeframes for identified control measures were left unidentified, unexplained, or too uncertain to permit the EPA to form a judgment as to whether the timing requirements for good neighbor obligations have been met. 87 Fed. Reg. 9,494. This narrative illustrates the disconnect between standards to which downwind plans are held versus the standards to which upwind plans are held. Both plans must be aligned with the same timeframes.

Within the Clean Air Act, Subchapter 1, Part D titled "Plan Requirements for Nonattainment Areas" is found Subpart 1 titled "Nonattainment Areas in General." Subpart 1 includes Section 177 addressing new motor vehicle emissions standards in state plans for nonattainment areas. It is apparent that the CAA contemplated the option of developing nonattainment plans per Section 172 to address certain new motor vehicles or new motor vehicle emissions. For those approved downwind nonattainment

plans that include motor vehicle emissions reduction strategies for achieving attainment, delay in implementation beyond the attainment date is unacceptable under CAA §179. Delay in implementation of committed controls by a downwind state shifts the emissions reduction burdens onto upwind states if EPA fails to engage in alignment of the dates upon which each of the states must satisfy nonattainment strategy performance.

This issue of imbalance was specifically addressed by D.C. Circuit in the Wisconsin remand as an appropriate basis for extending the compliance deadline for upwind states. In that case the Court stated that: "if a modified attainment deadline applies to downwind States, EPA may be able, if justified, to make a corresponding extension for an upwind State's good neighbor obligations." Wisconsin, 938 F.3d at 317.

Nowhere in its discussion of the regulatory framework underlying these proposals does EPA recognize the alignment obligation as articulated in the Wisconsin remand.

Response

Although the commenter criticizes the EPA's selection of 2023 as an appropriate analytic year, they do not identify their preferred alternative, nor are their arguments against 2023 compelling. The EPA maintains its position that 2023 is an appropriate analytic year and comports with the relevant caselaw.

The commenter misreads the *North Carolina v. EPA*, 550 F.3d 1176 (D.C. 2008), *Wisconsin v. EPA*, 938 F.3d 303 (D.C. Cir. 2019), and *Maryland v. EPA*, 958 F.3d 1185 (D.C. Cir. 2020) decisions as calling for good neighbor emissions controls to be aligned with the timing of the *implementation* of nonattainment controls by downwind states. However, the D.C. Circuit has never held that, and such a requirement is both untethered to the statute and almost certainly unworkable in practice. It would necessitate coordinating the activities of multiple states with the EPA regional and headquarters offices to a level of fine-tuning that effectively could preclude the implementation of good neighbor obligations altogether. Indeed, the commenter offers no explanation how the EPA or upwind states should coordinate upwind emissions control obligations for states linked to multiple downwind receptors whose states may be implementing their requirements on different timetables. Far less drastic mechanisms than subjecting people living in downwind receptor areas to continuing high levels of air pollution caused in part by upwind-state pollution are available if the actual implementation of mandatory CAA requirements in the downwind areas is delayed: CAA section 304(a)(2) provides for judicial recourse where there is an alleged failure by the Agency to perform a nondiscretionary duty, and that recourse is for the Agency to be placed on a court-ordered deadline to address the relevant obligations. *Accord Oklahoma v. U.S. EPA*, 723 F.3d 1201, 1223-24 (10th Cir. 2013); *Montana Sulphur and Chemical Co. v. U.S. EPA*, 666 F.3d 1174, 1190-91 (9th Cir. 2012).

What in fact the D.C. Circuit has repeatedly emphasized is that the *statutory attainment dates* are the relevant downwind deadlines the EPA must align with in implementing the good neighbor provision. In *Wisconsin*, the court held, "In sum, under our decision in *North Carolina*, the Good Neighbor Provision calls for elimination of upwind States' significant contributions on par with the relevant downwind attainment deadlines." *Wisconsin*, 938 F.3d. at 321. After that decision, the EPA interpreted *Wisconsin* as limited to the attainment dates for Moderate or higher classifications under CAA section 181 on the

basis that Marginal nonattainment areas have reduced planning requirements and other considerations. *See, e.g.,* 85 FR 29882, 29888–89 (May 19, 2020) (proposed approval of South Dakota's 2015 ozone NAAQS good neighbor SIP). However, on May 19, 2020, the D.C. Circuit in *Maryland v. EPA*, 958 F.3d 1185 (D.C. Cir. 2020), applying the *Wisconsin* decision, held that the EPA must assess air quality at the next downwind attainment date, including Marginal area attainment dates under CAA section 181, in evaluating the basis for the EPA's denial of a petition under CAA section 126(b). 958 F.3d at 1203-04. After *Maryland*, the EPA acknowledged that the Marginal attainment date is the first attainment date to consider in evaluating good neighbor obligations. *See, e.g*., 85 FR 67653, 67654 (Oct. 26, 2020) (final approval of South Dakota's 2015 ozone NAAQS good neighbor SIP).

The relevance of CAA sections 172, 177, and 179 to the selection of the analytic year in this action is not clear. The commenter cites these provisions to conclude that EPA did not appropriately consider downwind attainment deadlines and the timing of upwind good neighbor obligations. These provisions are found in subpart I, and while they may have continuing relevance or applicability to aspects of ozone nonattainment planning requirements, the nonattainment dates for the 2015 ozone NAAQS flow from subpart 2 of title I of the CAA, and specifically CAA section 181(a). Applying that statutory schedule to the designations for the 2015 ozone NAAQS, the EPA has promulgated the applicable attainment dates in its regulations at 40 CFR 51.1303. The effective date of the initial designations for the 2015 ozone NAAQS was August 3, 2018 (83 FR 25776, June 4, 2018, effective August 3, 2018).[16] Thus, the first deadline for attainment planning under the 2015 ozone NAAQS was the Marginal attainment date of August 3, 2021, and the second deadline for attainment planning is the Moderate attainment date of August 3, 2024. If a Marginal area fails to attain by the attainment date it is reclassified, or "bumped up," to Moderate. Indeed, the EPA has just completed a rulemaking action reclassifying many areas of the country from Marginal to Moderate nonattainment, including all of the areas where downwind receptors have been identified in our 2023 modeling as well as many other areas of the country. 87 FR 60897, 60899 (Oct. 7, 2022).

Other than under the narrow circumstances of CAA section 181(a)(5) (discussed further below), the EPA is not permitted under the CAA to extend the attainment dates for areas under a given classification; that is, no matter when the EPA finalizes a determination that an area failed to attain by its attainment date and reclassifies that area, the attainment date remains fixed, based on the number of years from the area's initial designation. *See, e.g.,* CAA section 182(i) (authorizing the EPA to adjust any applicable deadlines for newly reclassified areas "other than attainment dates"). As the D.C. Circuit has repeatedly made clear, the statutory attainment schedule of the downwind nonattainment areas under subpart 2 is rigorously enforced and is not subject to change based on policy considerations of the EPA or the states.

> [T]he attainment deadlines, the Supreme Court has said, are "the heart" of the Act. *Train v. Nat. Res. Def. Council*, 421 U.S. 60, 66, 95 S. Ct. 1470, 43 L.Ed.2d 731 (1975); *see Sierra Club v. EPA*, 294 F.3d 155, 161 (D.C. Cir. 2002) ("the attainment deadlines are central to the regulatory scheme") (alteration and internal quotation marks omitted). The Act's central object is the "attain[ment] [of] air quality of specified standards [within] a specified period of time." *Train*, 421 U.S. at 64–65, 95 S. Ct. 1470.

[16] September 24, 2018, for the San Antonio area. 83 FR 35136 (July 25, 2018).

Wisconsin, 938 F.3d at 316. *See also Natural Resources Defense Council v. EPA*, 777 F.3d 456, 466-68 (D.C. Cir. 2014) (*NRDC*) (holding the EPA cannot adjust the section 181 attainment schedule to run from any other date than from the date of designation). *See also id.* at 468 ("EPA identifies no statutory provision giving it free-form discretion to set Subpart 2 compliance deadlines based on its own policy assessment concerning the number of ozone seasons within which a nonattainment area should be expected to achieve compliance.") (citing and quoting *Whitman v. American Trucking Ass'ns*, 531 U.S. 457, 484, (2001)) ("The principal distinction between Subpart 1 and Subpart 2 is that the latter eliminates regulatory discretion that the former allowed."). Furthermore, as the court in *NRDC* noted, "[T]he 'attainment deadlines ... leave no room for claims of technological or economic infeasibility.'" 777 F.3d at 488 (quoting *Sierra Club,* 294 F.3d at 161) (internal quotation marks and brackets omitted).

With the exception of the Uinta Basin, which does not have an identified receptor in this action, no Marginal nonattainment area met the conditions of CAA section 181(a)(5) to obtain a one-year extension of the Moderate area attainment date. 87 FR 60899. Thus, all Marginal areas (other than Uinta) that failed to attain have been reclassified to Moderate. *Id.* (And the New York City Metropolitan nonattainment area was initially classified as Moderate (see below for further details).). Even if the EPA had extended the attainment date for any of the downwind areas, it is not clear that it would necessarily follow that the EPA must correspondingly extend or delay the implementation of good neighbor obligations. While the *Wisconsin* court recognized extensions under CAA section 181(a)(5) as a possible source of timing flexibility in implementing the good neighbor provision, 938 F.3d at 320, the EPA and the states are still obligated to implement good neighbor reductions as expeditiously as practicable and are also obligated under the good neighbor provision to address "interference with maintenance." Areas that have obtained an extension under section 181(a)(5) or which are not designated as in nonattainment could still be identified as struggling to maintain the NAAQS, and the EPA is obligated under the good neighbor provision to eliminate upwind emissions interfering with the ability to maintain the NAAQS as well. *North Carolina*, 531 F.3d at 908-11. Thus, while an extension under CAA 181(a)(5) may be a source of *flexibility* in the timing of implementation of good neighbor obligations, as *Wisconsin* recognized, it is not the case that the EPA *must* delay or defer good neighbor obligations for that reason, and neither the D.C. Circuit nor any other court has so held.

The commenter is therefore incorrect to the extent that they argue the selection of 2023 as an analytic year for upwind obligations results in the misalignment of downwind and upwind state obligations. To the contrary, both downwind and upwind state obligations are driven by the statutory attainment date of August 3, 2024, for Moderate areas, and the last year that air quality data may impact whether nonattainment areas are found to have attained by the attainment date is 2023. That is why, in the recent final rulemaking determinations that certain Marginal areas failed to attain by the attainment date, bumping those areas up to Moderate, and giving them SIP submission deadlines and reasonably available control measures (RACM) and reasonably available control technology (RACT) implementation deadlines, the EPA set the attainment SIP submission deadlines for the bumped up Moderate areas to be January 1, 2023. *See* 87 FR 60897, 60900 (Oct. 7, 2022). The implementation deadline for RACM and RACT is also January 1, 2023. *Id.* This was in large part driven by the EPA's ozone implementation regulations, 40 CFR 51.1312(a)(3)(i), which previously established a RACT implementation deadline for initially classified Moderate as no later than January 1, 2023, and the modeling and attainment demonstration requirements in 40 CFR 51.1308(d), which requires a state to provide for implementation

of all control measures needed for attainment no later than the beginning of the attainment year ozone season (i.e., 2023). Given this regulatory history, the EPA can hardly be accused of letting states with nonattainment areas for the 2015 ozone NAAQS avoid or delay their mandatory CAA obligations.

The commenter focuses on the EPA's evaluation of New York's good neighbor SIP submission to argue the EPA is treating upwind and downwind states dissimilarly. The argument conflates New York's role as both a downwind and an upwind state. In evaluating the Good Neighbor SIP submission that New York submitted, the EPA identified as a basis for disapproval that the state emissions control programs New York cited included implementation timeframes to achieve the reductions, let alone ensure they were achieved by 2023. 87 FR 9484, 9494 (Feb. 22, 2022). The EPA conducted the same inquiry into other states' claims regarding their existing or proposed state laws or other emissions reductions claimed in their SIP submissions. *See, e.g.,* 87 FR at 9472-73 (evaluating claims regarding emissions reductions anticipated under Maryland's state law); 87 FR at 9854 (evaluating claims regarding emissions reductions anticipated under Illinois' state law). Consistent with its treatment of the other upwind states included in this action, the EPA is disapproving New York's good neighbor SIP submission for the 2015 ozone NAAQS because its arguments did not demonstrate that it had fully prohibited emissions significantly contributing to out of state nonattainment or maintenance problems.

The commenter attempts to contrast this evaluation with what it believes is the EPA's permissive attitude toward delays by downwind states, specifically claiming that "certain nonattainment areas have delayed implementation of nonattainment controls until 2025 and beyond." This apparently references New York's simple cycle and regenerative combustion turbines (SCCT) controls, which the commenter cited elsewhere in its comments. New York's SCCT controls were not included by New York in the submission under the EPA review in this action, nor was the prior approval of the SCCT controls reexamined by the EPA or reopened for consideration by the Agency in this action. Although not part of this rulemaking, the EPA notes that the SCCT controls were approved by the EPA as a SIP strengthening measure and not to satisfy any specific planning requirements for the 2015 ozone NAAQS under CAA section 182. 86 FR 43956, 43958 (Aug. 11, 2021). The SCCT controls submitted to the EPA were already a state rule, and the only effect under the CAA of the EPA approving them into New York's SIP was to make them federally enforceable. 86 FR 43956, 43959 (Aug. 11, 2021). In other words, approval of the SCCT controls did not relieve New York of its nonattainment planning obligations for the 2015 ozone NAAQS.

The EPA notes that the New York-Northern New Jersey-Long Island, NY-NJ-CT nonattainment area was initially designated as in Moderate nonattainment. 83 FR 25776 (June 4, 2018). Pursuant to this designation, New York was required to submit a RACT SIP submission and an attainment demonstration no later than 24 months and 36 months, respectively, after the effective date of the Moderate designation. CAA section 182; 40 CFR 51.1308(a), 51.1312(a)(2). NY submitted a RACT SIP plan for the 2015 ozone standards on January 29, 2021,[17] and the EPA is currently evaluating that submission. New York has not yet submitted its attainment demonstration, which was due August 3, 2021. Further, the New York-Northern New Jersey-Long Island, NY-NJ-CT nonattainment area remains subject to the Moderate nonattainment area date of August 3, 2024; if it fails to attain the 2015 ozone NAAQS by

[17] See https://edap.epa.gov/public/extensions/S4S_Public_Dashboard_2/S4S_Public_Dashboard_2.html.

August 3, 2024, it will be reclassified to Serious nonattainment, resulting in additional requirements on the New York nonattainment area.

In any case, regardless of the status of New York's and the EPA's efforts in relation to the New York-Northern New Jersey-Long Island, NY-NJ-CT nonattainment area (which are outside the scope of this action), the EPA's evaluation of 2023 as the relevant analytic year in assessing New York's and other states' good neighbor obligations is entirely consistent with the statutory framework and court decisions calling on the agency to align these obligations with the downwind areas' statutory attainment schedule. That principle holds regardless of the specific timing of the implementation of downwind states' emissions controls.

3 Emissions Inventories

3.1 Emissions Inventory - General

Comment

Commenter: Arkansas Department of Energy and Environment, Division of Environmental Quality

Commenter ID: 07

Docket ID: EPA-R06-OAR-2021-0801

Comment:

Arkansas and more than 20 other states and regional groups submitted comments, suggestions, and corrections to EPA for the emissions inventories datasets for the 2016v2 modeling platform.[14] However, the modeling data that EPA proposes to primarily rely upon in its disapproval of the Arkansas Transport Plan does not reflect corrections to the modeling platform in response to state comments. EPA should understand that failing to incorporate state-provided corrections to that data while moving forward with issuing proposed actions essentially bars states from performing their role under the CAA.

[…]

In response to comments from the MJOs and states, EPA partially updated the 2016v2 platform emissions inventories datasets for future modeling runs.[15] However, the modeling that EPA is primarily relying upon in its disapproval was performed before states could offer feedback and still contains all the errors that states previously identified. Although DEQ disagrees with EPA's choice to substitute new modeling data for the data that was available when the state was developing its plan, EPA should understand that failing to incorporate state-provided corrections to that data while moving forward with issuing proposed actions essentially bars states from performing their role under the Clean Air Act.

[14] Index of /Air/emismod/2016/v2/reports/comments at https://gaftp.epa.gov/Air/emismod/2016/v2/reports/comments/
[15] https://gaftp.epa.gov/Air/emismod/2016/v3/preliminary_updates/

Response:

The EPA has incorporated updates as appropriate into its 2016v3 modeling platform based on pre-proposal feedback and information provided in public comments on the 2016v2 platform.

3.2 Emissions Inventory – Non-EGUs

Comment

Commenter: Arkansas Department of Energy and Environment, Division of Environmental Quality

Commenter ID: 07

Docket ID: EPA-R06-OAR-2021-0801

Comment:

For point sources (ptnonipm) DEQ suggests that EPA consider examining the use of 2017 NEI data and adjusting the dataset to create a 2016 base year. The 2017 data is more recent and if a backward base year projection is necessary, then it would be a one year projection (2017 to 2016) and not two years (2014 to 2016).

According to EPA's 2016v2 TSD, for sources outside of the Mid-Atlantic Regional Air Management Association (MARAMA) region, the maximum future year projection factor was capped at 1.25. Also the future year projection factor was capped at a maximum of 2.5 if SCC/NAICS combinations with criteria pollutant emissions >100 tons/year for the ptnonipm sector. However, the ptnonipm includes future year projection factors that are greater than 1.25 for various facilities outside of MARAMA region where the total annual emissions are less than 100 tons, including a future year projection factor as high as 1.468. DEQ does not know the origin of these greater than 1.25 exceptions to the TSD language and whether they are possibly a result of state-submitted refinement data, which would be reliable sources.

The future year projection factor for NOx emissions from "Honeywell International Inc. – Hopewell" (unit# 20375813) in Virginia is 6.79 for 2026 in the 2016v2 platform and was 0.63 for 2028 in 2016v1 platform. DEQ conducted trend analyses to evaluate some future year projection factors and DEQ's analysis for this source does not appear to support a future year projection factor of 6.79 and may support a future year projection factor of 0.62; however, Virginia may have suggested the 6.79 as the appropriate value and, if so, would likely be the best source of this data. DEQ suggests that EPA verify the above example, possibly with Virginia if data was not already provided by Virginia, and other similar examples. [Figure 1 available in full comment]

Response

The EPA concurs with the suggestion by the commenter to use 2017 National Emissions Inventory (NEI) data to represent 2016 instead of data projected from 2014. The EPA implemented this approach into the 2016v3 platform where a matching source could be identified in the 2017 NEI, however, data submitted specifically for the year 2016 are used, where available. The EPA also updated the approach for developing 2023 non-EGU point source emissions in the 2016v3 platform to make use of 2019 NEI point source data as the basis for 2023 non-EGU point source emissions for source not related to oil and gas production. Thus, the maximum projection factor of 1.25 is no longer relevant in the 2016v3 inventory for 2023. This approach applies to Honeywell International Inc. – Hopewell for 2023 emissions. As the analytic year for this action is 2023, projections for years later than 2023 are not relevant for the identification of receptors and linkages at Steps 1 and 2 of the 4-step interstate transport framework.

Comment

Commenter: Cleco Corporate Holdings LLC

Commenter ID: 14

Docket ID: EPA-R06-OAR-2021-0801

Comment:

EPA should incorporate needed revisions to the 2016v2 modeling platform based on comments provided by the states and other stakeholders as provided in this docket and then re-analyze the Louisiana SIP based on the updated/corrected modeling platform before issuing a final rule on the Louisiana SIP.

Response

In response to the commenter's requests that the EPA reanalyze its modeling based on comments received, the EPA has re-evaluated its emissions inventories to create the 2016v3 emissions modeling platform and re-run the air quality models and related analyses using the 2016v3 inventories. Specifically, with regards to Louisiana, the state continues to have a linkage to one or more downwind receptors as indicated in the preamble in Sections III.C and IV.G.

Comment

Commenter: Eagle Materials Inc.

Commenter ID: 16

Docket ID: EPA-R09-OAR-2022-0138

Comment:

EPA's new modeling fails to account for significant emissions reductions that have occurred since 2016.

The Proposed SIP Disapproval is based on updated air quality modeling, using EPA's newly released 2016v2 Model. This modeling platform relies on emissions inventory data from the base year of 2016 to develop future year emissions inventories using sector-specific methods. The 2016v2 update "draws on data from the 2017 National Emissions Inventory," incorporating "2016-specific state and local data along with adjustment methods appropriate for each sector." Based on projected future emissions inventories from this model for 2023, 2026, and 2032, EPA assessed nonattainment and maintenance-only receptors, as well as linked states, for purposes of evaluating state SIP submittals. While EPA's updated modeling accounts for certain updates between 2014 and 2016 in developing its baseline emissions inventory for 2016, 2016v2 does not capture enforceable emissions limits and emissions reductions from 2016 to present in modeling emissions in 2023 and 2026. These emissions reductions significantly impact EPA's assessment of nonattainment and maintenance-only receptors in these future years, and call into question EPA's determination that Nevada remains linked to downwind air quality problems.

Since 2016, at least fifteen Nevada facilities, identified in Table 1, have entered consent decrees requiring enforceable NOx emissions reduction totaling at least 1,676 tpy, apart from additional reductions that EPA has not quantified. EPA's determination that Nevada is linked to downwind air quality problems fails to account for these enforceable emission reductions because they fall outside EPA's 2016v2 modeling update.

Eagle believes that the marginal link between Nevada and downwind receptors has been eliminated by these additional enforceable emission reductions. In its Proposed SIP Disapproval, EPA determined that Nevada was linked to downwind air quality problems based on air quality projections and state contributions identified in Table 2 [(table in full comment)], below. Nevada's maximum contribution to these receptors is 0.19 ppb above EPA's 0.70 ppb linkage threshold. Because Nevada's modeled contribution to downwind receptors is so low, even a small reduction in projected emissions could reduce Nevada's level of contribution to these receptors below the 0.70 ppb threshold. Accordingly, Eagle urges EPA account for these additional NOx reductions in evaluating Nevada's interstate transport obligations in its SIP submittal.

Table 1: Enforceable Consent Decrees Impacting Nevada NOx Emissions, 2016 – Present

EPA Case No.	Facility Name	Date of Final Order	Estimated NO_X Emissions Reductions
NVCCHA200162193	Lhoist North America of Arizona – Apex Plant	7/5/2016	Unknown
NVCCHA200162109	Titanium Metals Corp. Henderson Facility	5/17/2017	Unknown
09-2011-0506	Fernley Plant	10/30/2018	1676 tpy
NVCCHA200171077	Republic Services Renewable Energy LLC	1/29/2019	Unknown
NVCCHA200172874	Caesars Entertainment Corp.	3/28/2019	Unknown
NVCCHA200172890	Robertsons Ready Mix	3/28/2019	Unknown
NVCCHA200172891	Wells Cargo Inc.	3/28/2019	Unknown
NVCCHA200179749	Nevada Ready Mix	9/26/2019	Unknown
NVCCHA200191116	Aggregate Industries Sloan Quarry	7/22/2020	Unknown
NVCCHA200192550	Blue Diamond Hill Gypsum	09/24/2020	Unknown
NVCCHA200192633	Titanium Metals Corp. Henderson Facility	11/30/2020	Unknown
NVCCHA200196170	Pabco Building Products, LLC	5/26/2021	Unknown
NVCCHA200199608	Robertsons Ready Mix	08/02/2021	Unknown
NVCCHA200199945	EMD Acquisition LLC	9/23/2021	Unknown
NVCCHA200199607	Blue Diamond Hill Gypsum	10/1/2021	Unknown

Response

In response to commenter's claims that the EPA's emissions inventories did not include emissions reductions from the facilities identified in the comment, the EPA has evaluated the information provided by the commenter regarding these consent decrees.

Regarding commenter's statement that the EPA has not quantified Nevada facilities subject to enforcement related consent decree for NO_X emissions reductions, the commenter tabulated names of these facilities and their estimated NO_X emissions reductions in Table 1 of the comment letter that is duplicated above. For each row of the table, the comment document provides footnotes with web links to the EPA's database Enforcement and Compliance History Online (ECHO). However, with the exception of the Fernley Plant, the estimated NO_X emissions reductions for 14 of the 15 sources in the table are reported as "Unknown". To develop the 2023 non-EGU emissions in the 2016v3 platform, the EPA started with the 2019 NEI point source inventory, as it was the latest complete point source inventory at the time of the modeling. The EPA was able to identify some of the sources in the commenter's table in the NEI, although four facilities could not be found in the NEI with NO_X, volatile organic compound (VOC), or particulate matter (PM) emissions. The facilities that could not be found and the civil penalty from ECHO listed in parentheses were Caesars Entertainment Corp. ($9,125), Robertsons Ready Mix ($7,250 and $3,120), Nevada Ready Mix (case not found in ECHO), and EMD Acquisition LLC ($12,640). The penalties were modest with a maximum of $12,640. For the facilities that were found in the NEI, the actual annual NO_X emissions in tons from the 2016 inventory in the 2016v3 platform and the 2019 NEI point inventory plus the modeled emissions in the modeled 2016v3 2023 inventory are shown in Table 3-1. The emissions in Table 3-1 were derived from facility and unit-level summaries of 2016v3 point source emissions provided in the docket for this action.

Table 3-1 Recent and Projected Emissions for Nevada Facilities in Table 1

Facility Name	2016 NOx (tons)	2019 NOx (tons)	2023 NOx (tons)
Lhoist North America of Arizona – Apex Plant	1,219	1,108	1,151
Titanium Metals Corp. Henderson Facility	10	24	24
Fernley Plant	1,090	1,796	1,796
Republic Services Renewable Energy LLC	43	14	14
Wells Cargo Inc.	20	7	7
Aggregate Industries Sloan Quarry	7	19	19
Blue Diamond Hill Gypsum	N/A	66	66
Titanium Metals Corp. Henderson Facility	10	24	24
Pabco Building Products, LLC	218	198	198

The only facilities in Table 3-1 with more than 70 tons of NO_X emissions in 2019 are: Lhoist North America of Arizona – Apex Plant, Fernley Plant, and Pabco Building Products, LLC. In ECHO[18], the Lhoist case is marked as resolved as of 2/1/2017, with a civil penalty of $7,500. We presume that any resulting

[18] *https://echo.epa.gov/enforcement-case-report?activity_id=3601452966*

emission reductions would have been implemented in time to be reflected in the 2019 NEI. The Pabco Building Products consent decree was from 2021, so any impacts would not be reflected in the 2019 NEI. The ECHO status for Pabco[19] is listed as resolved as of 6/8/2021 and the civil penalty was $7,600. Given the actual NO_X emissions in the 2019 NEI, the likely reduction in 2023 that could have been achieved even if all emissions were eliminated in 2023 is about 200 tons per year (tpy) of NO_X, while the total annual modeled anthropogenic NO_X in Nevada in 2023 is projected at 42,260 tons.
Thus, even a reduction of that level would not impact Nevada's contribution to other states.

The summary for the Fernley case in ECHO[20] is, "U.S. Environmental Protection Agency reached a settlement with the Nevada Cement Company to install new air pollution control technology at its Fernley, Nev. facility and replace a heavy-duty diesel truck and a diesel railcar mover at the facility with clean emissions vehicles to address alleged violations of federal CAA regulations. The pollution controls and clean emissions vehicles will reduce NOx emissions by approximately 1,140 tpy. Nevada Cement Company also paid a civil penalty of $550,000 as part of the settlement."

The EPA located the consent decree in *United States* v. *Nevada Cement Company, Inc.,* Civil Action No. 17-302 (D. Nev.), which was amended in 2018. As amended, Section V.A of the consent decree requires installation and operation either of Selective Non-Catalytic Reduction (SNCR) or catalytic filter bags with ammonia injection and provides that EPA may require installation of low NOx burners. A copy of these documents are available in the docket for this action.

A review of a June 19, 2020 issuance of two minor revisions to the operating permit for the Nevada Cement Company shows an allowance of discharge of NO_X to the atmosphere that will not exceed 475.84 pounds per hour, nor more than 2,084.20 tons per 12-month rolling period from the #1 Kiln, and an allowance of discharge of NO_X to the atmosphere that will not exceed 475.84 pounds per hour, nor more than 2,084.20 tons per 12-month rolling period from the #2 Kiln. The EPA contacted the Permitting Branch, Bureau of Air Pollution Control Nevada Division of Environmental Protection, Department of Conservation and Natural Resources seeking the status of installation and operation of SNCR at the Nevada Cement Company's Fernley Plant. The supervisor promptly responded that she has confirmed with the facility that the SNCR has been installed and is operational on the kilns prior to October 2022. A copy of this document is made available in docket for this action. We note that the actual 2019 emissions and the modeled 2023 emissions listed in Table 3-1 are about 1,800 tons, which is significantly less than the total of the modified operating permit level of 4,168 tpy total for the two kilns and is therefore a reasonable representation of the NO_X emissions from this facility for 2023.

In summary, for all facilities except the Fernley Plant, the commenter has not provided adequate information regarding NO_X decreases for the EPA to fully evaluate commenter's dispute of the linkage results for these sources. Following the EPA's analysis, the civil penalties for the cases other than Fernley in the ECHO database were modest, indicating that the level of reductions would have been minimal. Furthermore, an examination of the EPA-approved Regulations at 40 CFR 52.1470(c), and the EPA-approved state source-specific permits at 40 CFR 52.1470(d) for Nevada did not show any of these sources to have made these reductions pursuant to enforceable and permanent requirements of the

[19] *https://echo.epa.gov/enforcement-case-report?activity_id=3602495139*
[20] *https://echo.epa.gov/enforcement-case-report?activity_id=2600059825*

state's SIP. For Fernley, the modeled emissions are substantially less than the permitted emissions, so while the installation of the SNCR will reduce emissions once they are fully installed and operating, the EPA modeled the emissions in 2023 at only 43% of the modified level in the permit and therefore was at a reasonable level to support the contribution analysis.

Given the detailed review of the consent decrees listed in Table 1 and their expected impacts all being too small to make a difference, except potentially for Fernley (which we have otherwise accounted for per above), we have sufficiently accounted for these comments in the final rule emissions inventory. Our analysis projects Nevada to contribute more than 1 percent of the NAAQS to downwind receptors, as noted in the preamble in Section III.C. and Section IV.M.

Comment

Commenter: Louisiana Chemical Association

Commenter ID: 26

Docket ID: EPA-R06-OAR-2021-0801

Comment:

EPA failed to take into account population decreases based on the 2020 census.

In addition to the inventory issues discussed above, EPA did not take into account the population decrease in Louisiana based on the 2020 census. This affects various source emission calculations, including many nonpoint source emissions. For Louisiana (and other states outside of the MARAMA), the EPA used historical census populations to project nonpoint sources. A ratio of 2016 population to 2014 population was used to create a growth factor that was applied to certain sources. This analysis was then used to calculate census-based growth for certain sectors and certain activities, including: industrial solvent maintenance coatings, industrial adhesive applications, residential and commercial portable gas cans, wastewater treatment recovery, etc.

In performing this analysis, EPA did not consider the 2020 census which showed that Louisiana's population growth from 2010-2020 was only 2.7 percent overall.[53] The majority of parishes in Louisiana experienced decreases in population. For example, Cameron Parish, which shares a border with southeast Texas experienced a -17.9% population change from 2010 to 2020 and Caddo Parish, which shares a border with Texas near Dallas experienced a -6.7% population change over the same time period. In fact, of the seven parishes that share a border with Texas, four experienced a negative change in population and two experienced an increase less than 3%.

At a minimum, EPA must incorporate needed revisions to the 2016v2 inventory based on the population changes shown in the 2020 Census and then re-analyze the Louisiana Transport SIP based on the updated/corrected modeling platform before issuing a final rule on the Louisiana Transport SIP.

[53] *See Louisiana State Profile, 2020 Census, available at: https://www.census.gov/library/stories/state-bystate/louisiana-population-change-between-census-decade.html; see also Louisiana's population continues to shrink: Stats show nearly 13K decline between 2019, 2020*, The Advocate, January 29, 2020 (available at: https://www.theadvocate.com/baton_rouge/news/business/article_3833634c-5cdc-11eb-951d-

b39a30651d28.html); *Population declines in most Louisiana parishes, except for the suburbs, new estimates show*, Nola.com, March 25, 2022 (available at: https://www.nola.com/news/politics/article_fc5ff816-aba5-11ec-b605-234640609e50.html) ("The vast majority of Louisiana's parishes continued to shrink in the year after the 2020 census, drops that represented a continuation of a long-term trend that was exacerbated and sped up – in some cases dramatically – by the impacts of the pandemic and the devastation of Hurricane Laura, according to new estimates.").

Response

The EPA disagrees with the Louisiana Chemical Association's (LCA's) claim that EPA's emissions inventory projections are flawed because the EPA failed to consider that the population in Louisiana is projected to decrease, impacting the growth factor used to project non-point source emissions in the state. The population-based growth method from 2014 to 2016 for the base year was used in the 2016v2 platform used at proposal. For the final rule modeling with 2016v3, data from 2017 NEI were used instead of using population-based factors to grow from 2014 to 2016, as 2017 NEI is a more recent inventory than 2014 NEI. Based on U.S. Census data,[21] the population of Louisiana increased by 2% from 2010 to 2021. The commenter seems to contradict their own claim that Louisiana's population is decreasing by identifying that between 2010 and 2020, Louisiana's population increased overall by 2.7 percent. Further, and as the commenter notes, population data are only used to project emissions for a few Source Classifications Codes (SCCs) that impact NO_X in the EPA's 2016v2 and 2016v3 platforms. A spreadsheet listing the SCCs that are projected based on human population is available in the docket for this action. These factors increased Louisiana's NO_X emissions in 2023 by only 2 tons statewide in 2016v2. A spreadsheet showing state total emissions by SCC is available with the 2016v3 state total summaries in the docket for this action. Human population change is also used to project solvent VOC emissions. In the 2016v3 platform, the solvent emissions were projected to grow by 3.7% from 2016 to 2023. This is equivalent to 1,400 tons additional VOC out of 231,000 tons of anthropogenic VOC and 1.6M tons of VOC including biogenic and fire emissions. A change in VOC emissions of this magnitude would not have a noticeable result in ozone concentrations or contributions. Overall, the limited use of human population changes in projecting emissions from 2016 to 2023 does not have a significant impact on ozone precursor emissions in Louisiana.

Comment

Commenter: Louisiana Chemical Association

Commenter ID: 26

Docket ID: EPA-R06-OAR-2021-0801

Comment:

The 2016v2 inventory contains sources that are permanently closed and fails to include emissions reduction projects in Louisiana.

[21] *https://www.census.gov/quickfacts/fact/table/LA/PST045221.*

Some of the discrepancies may be explained by issues with the inventory used. According to the Technical Support Document for the 2016v2 platform ("2016v2 TSD"), the platform "draws on data from the 2017 National Emissions Inventory (NEI), although the inventory was updated to represent the year 2016 through the incorporation of 2016-specific state and local data along with adjustment methods appropriate for each sector."

For instance, the non-EGU point source sector emissions in the 2016v2 platform have been updated from the 2016 NEI point inventory and 2016v1 with certain changes. However, LCA believes that EPA has failed to include a number of federally enforceable consent decrees for non-EGUs in its model, which has served to overestimate emissions from Louisiana. In addition to the Cabot Facility consent decree referenced in the 2016v2 TSD, the following consent decrees were also entered since 2016:

[See pages 12-14 of comment letter for specific list of consent decrees and facility information identified by commenter.].

Response

In response to LCA's claims that the EPA's emissions inventories include emissions from sources in Louisiana that have permanently shut down, the EPA has evaluated the information provided by the commenter regarding these reductions and the status of the emissions at the facilities listed as planned closures is as follows:

> Sterlington Power is not in the 2016v3 inventories for 2023 and is therefore modeled as closed.
>
> US Convent Refinery has 234 tons NO_X in 2016 and 290 tons NO_X in 2023 in the 2016v3 platform and is not closed. The commenter claims this facility closed in 2019, although LA DEQ reported 290 tons of NO_X in the preliminary 2020 NEI. In addition, on February 24, 2022, *The Baton Rouge Advocate* reported that Shell confirmed the refinery will be revived as an alternative fuel complex,[22] and therefore it is not appropriate to remove the emissions in the 2023 modeling.
>
> Phillips 66 Alliance Refinery NO_X emissions in the 2016v3 platform are approximately the same in 2016 at 813 tons as the modeled emissions in 2023 at 872 tons. The commenter states that this will be converting to a terminal facility, but no details are provided on the timing for this conversion or the expected impact to the emissions and thus the emissions are retained in the 2016v3 platform.

Emissions for point sources used in the modeling by facility and unit are included in the docket for this action. Regarding reductions in emissions due to consent decrees or other enforceable measures: The installation of controls at Firestone Polymers by August 15, 2022, was too late to be reflected in the 2023 emissions used for modeling, although the 2023 NOx emissions are a minimal 44 tpy and a reduction would have virtually no impact on the contribution analysis.

The general approach used by the EPA to develop the 2016v3 platform point source emissions for 2023 was to start with the 2019 NEI point source inventory, as the most recent complete point inventory at

[22] *See* https://www.theadvocate.com/baton_rouge/news/business/shell-confirms-shuttered-convent-facility-will-become-an-alternative-fuels-complex/article_ad522d06-95ad-11ec-9457-bb64f61e4803.html.

the time the modeling was performed. Next, known closures were applied, and growth was reflected for some industries based on Annual Energy Outlook (AEO) 2022 industrial projections. Finally, controls from known control programs were applied.

To review the specific reductions listed in this comment, the EPA used the agency interest and document numbers provided by the commenter to download permit information from EDMS[23] for the identified facilities and specified dates. The status of the 2016v3 emissions for facilities noted as having decrees or other enforceable measures to reduce permitted emissions more than 100 tons for NO_X or VOC are as follows:

> The Dow Company consent decree[24] effective January 19, 2021, calls for 5,689 tpy of VOC reduction and 127 tpy of NO_X reductions at Dow and Union Carbide facilities in Freeport Texas, Hahnville Louisiana, Plaquemine Louisiana, and Orange Texas. Union Carbide is a wholly owned subsidiary of Dow Chemical Co. Dow is required to install controls on covered flares to reduce emissions. The compliance deadlines in Hahnville are 12/31/2023 and 12/31/2024 for Olefins 1 and 2, respectively. The compliance deadline for Plaquemine is 10/1/2021 for the first control system, and 12/31/2025 for the second and larger control system. The distribution in the targeted reduction between the facilities and between the states of Louisiana and Texas is not clear from the consent decree. As a result, it was not possible to implement specific reductions in the 2016v3 platform. In the 2016v3 platform, non-EGU NOx emissions from The Dow Company facilities in Louisiana in 2023 are modeled as 2,763 tpy while 2019 NEI emissions are 2,703 tpy. The VOC emissions from The Dow Company facilities in the 2019 NEI are 1,294 tpy and are modeled as 1,294 tons in 2023 inventories in the 2016v3 platform.
>
> Columbia chemicals company (aka Birla Carbon) has a consent decree effective June 1, 2018, with a targeted permit reduction of 661 tons of NO_X. Documentation for a permit modification provided August 26, 2022 (EDMS #13452282) shows that the permit is in the process of being updated to a total of 106 tpy, and that the current permitted value for NO_X is 803 tpy. The 803 tpy permitted value was enacted March 27, 2017 (EDMS #10551099) and as of January 22, 2023 is still the most recent final permit for the facility. The emissions in 2023 in the 2016v3 platform were modeled at 632 tpy, thus the modeled emissions are within the permitted level as of January 22, 2023
>
> The Arcosa Lightweight Aggregates – Erwinville has a permit modification effective March 24, 2020 (EDMS #12122066) with a reduction in NO_X emissions of 106 tons for a final permitted level of 896 tons of NO_X. The emissions in 2023 for the 2016v3 platform are modeled as 363 tpy, the same as 2019 emissions and are within the permitted value.
>
> As of August 26, 2021, Cabot Corporation at the Villa Platte Plant has permitted NOx emissions of 1565 tpy (EDMS #12874234). The emissions for this plant for 2023 in the 2016 v3 modeling platform are 1,101 tpy and are therefore within the permitted level.

[23] https://edms.deq.louisiana.gov/edmsv2/quick-search

[24] https://www.epa.gov/sites/default/files/2021-01/documents/thedowchemicalcompany.pdf

As of March 20, 2019, Orion Engineered Carbon at the Ivanhoe plant has a permitted level of 204tpy (EDMS #11574517), a reduction in permitted emissions of 1,156 tons. The permitted NOx emissions were later updated on July 28, 2022 to 272 tpy (EDMS #13406525). The actual emissions in 2016 were 797 tons, and the modeled emissions for 2023 in the 2016v3 platform were held constant at the 2019 level of 733 tpy. The NOx emissions were thus potentially overstated by about 460 tpy as compared to the permitted level for 2023. The total anthropogenic point source NOx from Louisiana modeled in 2016v3 for 2023 is 126,100 tons and the total anthropogenic NOx is 247,700 tons. Thus, even a 460 tpy overstatement of NO_X from this facility would have virtually no impact on the contribution analysis.

Union Carbide Corp. has a planned reduction in permitted NO_X at its Olefin 1 and Olefin 2 plants of 122 tons effective March 9, 2021. Based on the Louisiana EDMS system document ID #12642791, the first plant would realize the emissions reduction by fourth quarter of 2023 an the second by fourth quarter of 2024. As of January 22, 2023, the most recent permit for the facility (EDMS #13192411) allows for 2,031 tpy of NO_X. The amount modeled for 2023 in the 2016v3 platform is 1,655 tons, which is well within the permitted level.

The permit issued for Morehouse Bioenergy as of 10/6/2021 (EDMS #12918003) allows for 183 tons of NO_X and 218 tons of VOC. The NO_X modeled in 2023 for the 2016v3 platform is 114 tpy, which is within the stated value of the permit. The VOC modeled for the facility in 2023 for the 2016v3 platform is equal to the 2019 emissions level of 1,046 tons. The preliminary 2020 NEI emissions are higher than the 2019 emissions at 1,169 tons and had not yet shown the planned reduction in VOC to be effective in late 2021. The total point source VOC included in the 2016v3 platform 2023 inventory is 64,700 tpy and the total of all anthropogenic VOC from Louisiana is 231,600 tpy. Thus, the potential overstatement of 930 tons from this facility would have virtually no impact on the contribution analysis.

The permits referenced above have been downloaded from EDMS and are available in the docket for this action. The changes for the remaining sources were under 100 tons of NO_X or VOC and are not reviewed in detail above, but the modeled point source emissions levels by unit as compared to 2019 and other recent-year levels are available in a unit-level comparison workbook in the docket for this action. The total annual anthropogenic NO_X emissions modeled in 2023 for Louisiana is 247,700 tons and the total annual anthropogenic VOC emissions modeled is 231,600 tons. Reviewing many of the above examples shows that the permitted emissions are often substantially higher than the actual emissions. Thus, a reduction in permitted emissions does not necessarily correlate to a similar reduction in actual emissions. It is not appropriate to simply subtract the change in permit emissions from actual emissions, except in situations when the actual emissions are very close to the permitted level.

Other issues raised by this comment related to EGUs in Louisiana are addressed in Section 3.3 (Emissions Inventory—EGUs).

Comment

Commenter: Minnesota Pollution Control Agency

Commenter ID: 31

Docket ID: EPA-R05-OAR-2022-0006

Comment:

EPA is now proposing to use a revised 2016 modeling platform, EPA 2016 version 2 emissions modeling platform (2016v2 EMP) to support a remedy for the Interstate Transport Rule for the 2015 Ozone National Ambient Air Quality Standard (NAAQS). EPA requested comments on the platform by December 17, 2021, and MPCA provided comments to Alison Eyth and the EmissionsModeling@epa.gov mailbox on December 15, 2021. In those comments, MPCA stated that the 2016v2 EMP and derivative modeling platforms will likely also be used by EPA for subsequent rule-making and technical evaluations for the next few years, as it is now being used in EPA's proposed disapproval of Minnesota's 2015 Ozone Transport SIP.

MPCA would like to reiterate our comments on the 2016v2 EMP for EPA's consideration based on issues identified by Minnesota and LADCO and other member states. Our comments identify three areas for improvement in the 2016v2 EMP:

1. Non-electricity generation stationary (non-EGU) point source emissions controls

2. Future year emissions projections for various point and non-point inventory sectors

[...]

Non-EGU point source emissions controls

LADCO worked with member states to identify the highest-emitting sources and applicable control technology information for non-EGU stationary point sources in the region. We generated a spreadsheet with the highest-emitting non-EGU sources in 2016 for each LADCO state. The spreadsheet includes columns for state input on emissions control information for each of the sources. The LADCO Emissions Workgroup worked to identify base year emissions controls and potential emissions controls for nonEGU point sources in the region. Given that EPA has included non-EGU point sources in the remedy for the states' obligations under the 2015 Ozone NAAQS Transport Rule, Minnesota reviewed the control information for this sector and provided information to EPA on actual, existing controls at the largest sources in the region.

The attached spreadsheet, nonegu_control_factors_survey_10252021 (MN Sources).xlsx, identifies control information and future emission rate changes for several Minnesota sources in columns S through V. The control information identified accounts for the installation of low NOX burners at the taconite facilities in Minnesota as part of the Regional Haze Taconite Federal Implementation Plan (FIP). Based on our estimates, we're expecting just under 11,000 tons per year (TPY) in NOX reductions due to the controls required by the Taconite FIP. MPCA first commented that we believed it was important to have these significant reductions included in the 2016v2 inventory for non-EGUs, and again request that EPA do so. See below for the summary of approximate emission reductions.

- 2,100 TPY at Minorca Mine
- 2,300 TPY at Hibbing Taconite
- 700 TPY at United Taconite

- 3,600 TPY at US Steel Keetac
- 2,100 TPY at US Steel Minntac

Future year emissions projections for various point and non-point inventory sectors

LADCO used EPA-generated emissions projection reports and identified a list of Source Classification Codes (SCCs) that we believe have incorrect future year projection rates. The 2016v2 EMP projection rates are not consistent either with real-world emissions trends or regional emissions projection information. We request that EPA replace the 2016v2 EMP projections for these sources with the updated rates provided by LADCO.

The attached spreadsheet, LADCO_EPA2016v2_Projections_Comments.xlsx, includes the list of the SCCs with alternative projection information and LADCO comments on the sources of the alternative information.

Response

In response to commenter's (Minnesota Pollution Control Agency Association (MPCA)) statement that the EPA should consider the comments it submitted on EPA's 2016v2 emissions inventories in December 2021, the EPA acknowledges receipt of MPCA's comments regarding updated emissions inventory data on point-source non-EGU sources in Minnesota, as well as data on point and non-point sources submitted in comments in the proposed action on Minnesota's SIP submission. The EPA thanks MPCA for this information and has considered, and incorporated as appropriate, this information in the 2016v3 emissions inventories.

In regard to the reflection of implemented and expected controls in the 2023 inventory, in the 2016v3 platform, the EPA started with the 2019 NEI point source inventory as the most recently available complete inventory at the time the 2016v3 platform modeling was performed, and then reflected impacts of known closures and controls in the intervening years. Specifically for the Taconite-related sources mentioned by the commenter, the EPA incorporated draft year 2021 emissions into the 2023 inventory, as these were the latest available for those sources. In the provided spreadsheet on non-EGU control factors, implementation dates for controls range from dates in 2018 through 2020 and would therefore be included in the 2021 emissions values used in the 2016v3 platform emissions for 2023.

These emissions estimates are reflective of the current status of efforts to implement best available retrofit technology (BART) FIP requirements for these sources. In particular, a revised emissions limit for the Minntac facility was finalized in March 2021, (86 FR 12095; March 2, 2021), and the emissions projections used for Minntac based on 2021 data are reflective of that limit. The EPA is still in the process of reconsidering and setting BART emissions limits for the remaining taconite facilities in Minnesota.[25] Using 2021 emissions data for these units provides the best emissions data at this time and until final BART emissions limits are set. As noted already, the EPA only considers emissions reductions

[25] Petitions for review and petitions for reconsideration of EPA's 2016 BART FIP, 81 FR 21672 (Apr. 12, 2016), remain pending and settlement discussions with the taconite facilities are ongoing. *See* Petition for Judicial Review, *U.S. Steel Corp. v. U.S. EPA*, No. 18-1249 (8th Cir. Feb. 2, 2018).

from rules that are final. To the extent the commenter is referencing any emissions reductions from the second planning period of the Regional Haze Program, the EPA notes that it has not yet taken final action on the second planning period Regional Haze SIP submission from the MPCA.[26] Although the EPA acknowledges the efforts the state has made to develop a SIP submission, the EPA cannot incorporate non-final or uncertain emissions reductions into its transport modeling platform.

For airports, nonroad, and oil and gas-related natural gas engines, the EPA reviewed these factors and did not accept the revised projection factors as the provided rationales were not found to be credible when the EPA explored available data sources for these source categories. The EPA did accept the revised factor of 1.0 for nonpoint distillate as we found that industrial distillate sales are flat or declining since 2016.[27] More information is available in the 2016v3 Emissions Modeling TSD (the EPA notes that the 2016v3 Emissions Modeling TSD contains information for the years 2016, 2023, and 2026; however, years after 2023 are not relevant to this action, which is focused on the 2023 analytic year).

With regard to provided alternative projection rates for commercial aircraft (a uniform factor of 1.15), and factors equal to 1.0 (i.e., constant emissions) for two-stroke pleasure craft on waterways, two-stroke snowmobiles, and industrial natural gas usage in the point oil and gas sector, the EPA disagrees with some of the provided factors following a review of the listed data sources and the emissions data. For aircraft, because it is not appropriate to use a single projection factor for all airports the EPA instead used airport-specific projection factors based on the 2021 Terminal Area Forecast released in June 2022 as the basis for the projection factors in the 2016v3 platform. With the EPA's method, projection factors are based on expected changes to traffic at major airports and expected state-level changes in traffic at smaller airports. For pleasure craft, the EPA found data from the National Marine Manufacturers Association that indicated that pleasure craft sales were not on the decline in the early 2020s and therefore retained the emissions estimates from EPA's Motor Vehicle Emission Simulator version 3 (MOVES3). The EPA agrees that snowmobile usage is flattening, but because the ozone season snowmobile emissions are minimal, the EPA retained the emissions estimates from MOVES3. The EPA disagrees that employment levels were a good surrogate for emissions from natural gas engines on pipelines and instead uses information related to expected trends in natural gas usage based on factors in the AEO 2022. The EPA agrees that the use of distillate oil is flat or declining and accepted the proposed projection factor of 1.0 for those sources. More details on the EPA projection methods and updates in the 2016v3 platform are described in the 2016v3 Emissions Modeling TSD.

A response to the portion of the comment related to the Eastern Regional Technical Advisory Committee (ERTAC) versus IPM is included in Section 3.3.2 (EPA's Integrated Planning Model (IPM)of this RTC document.

[26] 87 FR 52856, August 30, 2022. Minnesota was one of 15 states named in a Finding of Failure to Submit a SIP which satisfies the visibility protection requirements of the Clean Air Act (CAA), as described in implementing regulations, for the regional haze second planning period. Minnesota submitted a second planning period Regional Haze SIP submission to the EPA on December 22, 2022.

[27] https://www.eia.gov/dnav/pet/hist/LeafHandler.ashx?n=PET&s=KD0VISNUS1&f=A

Comment

Commenter: United States Steel Corporation

Commenter ID: 45

Docket ID: EPA-R05-OAR-2022-0006

Comment:

<u>The Proposed Disapproval is not based upon Accurate Projected Emission Estimates and the Model Over-Predicts Impacts</u>

The emission estimates from sources that would be affected by the rule are incorrect; and do not reflect the actual projected emissions. These emission estimates do not include reductions that have been and will be implemented under other actions.

For example, it does not appear that U.S. EPA has considered current and projected emission reductions that have resulted from years of effort by both U.S. EPA and the taconite industry in revising the Federal Implementation Plan (FIP) for regional haze in Minnesota. In addition, undoing or redoing the evaluations and productive efforts that have occurred for over 10 years that have resulted in significant NOx reductions that have been shown to be technologically and economically feasible is inefficient and inappropriate. In sum, these efforts, and most importantly, these reductions must be considered in U. S. EPA's evaluation.

While U. S. Steel disagrees with EPA's proposed threshold of 1 percent, if the data are corrected and incorporated into modeling for Minnesota, it would show that Minnesota's contribution impact is less than EPA's 1 percent proposed "interference" threshold as previously demonstrated by LADCO and U. S. EPA.

Response

In response to commenter's claim that emissions from sources in Minnesota are overestimated, because the EPA failed to consider emissions reductions from programs such as Regional Haze, in the 2016v3 emissions for 2023, EPA used actual 2021 emissions provided by the MPCA that accounted for reductions implemented as of that year. As noted already, the EPA only considers emissions reductions from rules that are final.

Comment

Commenter: Oklahoma Department of Environmental Quality

Commenter ID: 37

Docket ID: EPA-R06-OAR-2021-0801

Comment:

Non-EGU Point Sources – Oklahoma respectfully requests that EPA use 2017 National Emissions Inventory (NEI) data for all non-EGU point sources rather than the data currently in the 2016v2 EMP. The temporal profile for these facilities is not weather dependent as is the case for the EGU sector, and ODEQ does not think that will raise any concerns regarding the coupling of emissions data and weather that may be likely to lead to ozone formation at sites experiencing difficulties attaining or maintaining attainment of the NAAQS. In addition, a number of errors were noted during ODEQ's review of the 2016v2 EMP and the 2017 NEI data corrects those errors. For non-EGU point sources, some of the problems ODEQ observed may be associated with PM-2.5 augmentation performed by EPA on data submitted to the 2016 Emissions Inventory System (EIS). In some cases, it appears that there was an assumption that ODEQ's primary PM2.5 represented only the filterable component, but that was not the case.[12]

Oil & Gas Sector – For the facilities whose emissions ODEQ submitted as oil and gas sector point sources in the 2017 NEI, Oklahoma requests that EPA use the 2017 NEI data rather than the data in the 2016v2 EMP. As was the case for other non-EGU point sources, ODEQ believes that the 2017 NEI data are more representative of actual facility emissions. With regard to area oil and gas emissions, ODEQ recommends use of the 2017 NEI data for the production segment.

[12] Primary fine particulate matter with an aerodynamic diameter less than or equal to 2.5 micrometers (PM-2.5) is composed of filterable and condensable components. If a state agency supplies only the filterable component in its submission to the EIS, EPA will augment those data to yield total PM-2.5. In Oklahoma's case, ODEQ submitted total PM-2.5 and no augmentation should have been performed.

Response

In response to commenter's request that the EPA use 2017 NEI data for all non-EGU point sources instead of 2016v2 EMP data, the EPA has updated the point source inventories to use 2017 NEI for emissions projected from 2014, although the 2016 point source emissions were retained where they reflected year 2016-specific data. Similarly, the EPA has accepted the Oklahoma Department of Environmental Quality's (DEQ's) request to use 2017 NEI for emissions from point source oil and gas sources. In response to commenter's claims that issues with inventory data may be associated with PM2.5 augmentation completed by EPA, the EPA notes that PM augmentation is not relevant for ozone-focused modeling. Finally, the EPA accepted the comment to use 2017 data for production-related area (i.e., nonpoint) oil and gas emissions in Oklahoma in the 2016v3 platform.

Comment

Commenter: PacifiCorp (Attachment – Ramboll Evaluation)

Commenter ID: 38

Docket ID: EPA-R08-OAR-2022-0315

Comment:

Missing Anthropogenic Emission Controls in the DM/NFR NAA Will Result in Reductions in Future Year Ozone Design Values

EPA used the MOVES3 mobile source emissions model to define mobile source emissions for the 2016, 2023 and 2026 emission scenarios. MOVES3 uses vehicle sales through 2020 to define the level of Electric Vehicle (EV) sales penetration for each year. However, MOVES3 assumes zero EV sales in Colorado for year 2021 and newer years, presumably because EV sales are not a federally enforceable control measure. This is clearly an incorrect assumption as EV sales in 2021 were greater than previous years.

On January 17, 2019, the Governor of Colorado issued Executive Order B 2019 00221 to support a transition to zero emission vehicles. The Colorado Electric Vehicle Plan 2020 lays out the blueprint for increasing sales of EVs stablishing a target of almost a million EVs in the state by 2030, which is approximately half of how many vehicles are currently in Colorado. Thus, increased EV sales are a reality in Colorado and assuming no EV sales from 2021 on in MOVES3 will overstate future year NOX and VOC emissions in the DM/NFR NAA and other areas in Colorado resulting in EPA overstating the 2023 and 2026 ozone design values in their Proposed Transport Rule.

The Clean Air Act (CAA) allows California to set its own motor vehicle emission emissions standards provided they are no less stringent than the Federal standards. Under Section 177 of the CAA (42 U.S.C. 7507), states are allowed to opt-in to California's Low-Emissions Vehicle (LEV) criteria pollutants and greenhouse gas (GHG) emissions regulations and Zero Emissions Vehicle (ZEV) regulations. Colorado is one of 14 Section 177 states that have adopted the California motor vehicle emission standards, which includes a ZEV mandate that is mainly EVs. Thus, EV sales in Colorado from 2021 are a reality and legally binding under Section 177 of the CAA and assuming there are none, as in the Proposed Transport Rule, is incorrect and will overstate Colorado VOC and NOX emissions in 2023 and 2026 resulting in overstating 2023 and 2026 ozone design values at nonattainment/maintenance receptors in the DM/NFR NAA.

On April 13, 2022, EPA proposed to redesignate the DM/NFR ozone NAA from Serious to Severe under the 2008 ozone NAAQS due to failure to attain by the July 20, 2021 attainment date for a Serious ozone NAA. As a Severe ozone NAA, the DM/NFR NAA will be subject to additional requirements that will reduce NOX and VOC emissions. One such mandatory requirement for a Severe ozone NAA is the implementation of reformulated gasoline (RFG) in the NAA that will reduce NOX and VOC emissions resulting in reduced ozone concentrations. The Proposed Transport Rule 2026 ozone design value projections did not account for the fact that RFG will be mandatory in the DM/NFR NAA resulting in an overstatement of 2026 emissions and 2026 ozone design values.

Response

The commenter mentions the impact of the California's CAA waiver on other states like Colorado and noted that those emissions must be accounted for accurately. Any state that had adopted California's Low-Emissions Vehicle LEV criteria pollutant and Zero-Emissions Vehicle (ZEV) regulations at the time the EPA was building its 2016v2 emission profiles and projections would have seen those emissions changes included in the modeling. Specifically, because Colorado adopted the LEV rule prior to 2019,

this is reflected in the modeling. Because Colorado did not adopt its ZEV regulations until after 2019, these programs are not accounted for in the 2016v2 modeling.

The Colorado Electric Vehicle Plan 2020[28] says that by "achieving its goal of 940,000 EVs by 2030, the state could see significant environmental benefits that include emission reductions. As noted in the 2018 Colorado Electric Vehicle Plan, Colorado could experience an annual reduction of ozone forming pollutants estimated at 800 tons of NOx, 800 tons of volatile organic compounds (VOC)." If these numbers are correct, the ozone season ozone-precursor emissions would be reduced by approximately 600 tons, which is only 0.6 percent of the total ozone-precursor emissions projected for Colorado, and only by 2030, well after the 2023 analytic year. These changes, alone, are unlikely to bring the state of Colorado back into attainment for the 2015 ozone NAAQS. Emission reductions that will come from forthcoming reformulated gasoline (RFG) requirements will most likely be too small on their own, or in combination with other planned vehicle programs in the state, to change the attainment status of Denver. We note that the emission rates included in MOVES3 reflect the national Tier 3 program, which harmonizes emission rates for NO_X and VOC with the California LEV program starting with model year 2017 and are applied in all states.

For the 2016v3 modeling platform, the EPA used actual vehicle populations by fuel type (e.g., gasoline, diesel, electric) and by county for all states, not the assumptions of these populations in MOVES3. For the proposal modeling, the populations based on registration data from the calendar year 2017 and for the final rule modeling the starting populations for future years were initially populated from actual registration data for the year 2020 and were then projected to the modeling year 2023 using fuel-specific trends based on the AEO 2022.

Comment

Commenter: United States Steel Corporation

Commenter ID: 45

Docket ID: EPA-R05-OAR-2022-0006

Comment:

The emission estimates from other sources, including those in Illinois, Indiana, Ohio and Michigan – and in particular, emissions from the iron and steel sources in those states, are overstated and are inconsistent with prior state submittals.

Response

The EPA disagrees with the commenter that iron and steel emissions have been overstated in its modeling. Further, the commenter has not provided data suggesting why it believes emissions from iron and steel sources in Illinois, Indiana, Ohio, and Michigan are overstated, nor has the commenter

[28] The Colorado Electric Vehicle Plan 2020 can be accessed via *https://energyoffice.colorado.gov/zero-emission-vehicles/colorado-ev-plan-2020.*

explained how the EPA's modeling overstates these emissions. In the 2016v3 platform, EPA based 2023 non-EGU point emissions for facilities other than Taconite facilities on actual 2019 emissions as these are state-submitted data for the NEI and are consistent with operations in recent years. Any closures known to take effect by 2023 were applied along with the impacts of known control programs.

Comment

Commenter: Utah Petroleum Association and the Utah Mining Association

Commenter ID: 48

Docket ID: EPA-R08-OAR-2022-0315

Comment:

The 2011 base emissions year in the modeling provided by EPA to use in IT SIPs is out of date and not predictive of current downwind influences.

In its IT SIP, Utah documented its substantial emission reductions occurring after the baseline model year, a 30% reduction in VOC emissions and a 37% reduction in NOx by 2017 based on the latest triennial emission inventory at the time of IT SIP submittal. These reductions came about at least in part due to controls implemented on sources for the PM2.5 Serious nonattainment SIP and controls implemented on oil and gas sources operating in the Uinta Basin. Some reductions resulted from ongoing motor vehicle fleet turnover and implementation of Tier 3 fuels.

Without modeling the substantial emission reductions, we cannot know how much these reductions would reduce the downwind influence. We can only consider these reductions as weight of evidence and to demonstrate that Utah has already implemented the types of controls that might be required in an IT SIP, as Utah has done in its IT SIP.

EPA should take these substantial reductions into account when it considers whether Utah has more than a threshold contribution to a downwind State.

Response

In response to the commenter's criticism of the EPA's 2011 base year emissions being out of date for use to support the EPA action on interstate transport, we first note that the EPA's 2016v2 modeling relied on in part at proposal, does not use 2011 as its base year, but instead uses 2016. This is for the exact reason the commenter states; 2016 provides more up-to-date data. With the collaborative development of the 2016-based inventories, the EPA believes this modeling provides up-to-date air quality projections. That said, no SIP submission is being disapproved on the grounds that the state relied on older versions of EPA or non-EPA modeling. The EPA has more recent data than the 2011 base year emissions included in the 2016v2 and 2016v3 emissions platform modeling. The EPA explained at proposal why Utah's reference to Best Available Control Technology (BACT) and Best Available Control Measures (BACM) for the Salt Lake City $PM_{2.5}$ nonattainment area, implementing controls on oil and gas sources in the Uinta Basin, and implementation of Tier 3 gasoline was insufficient to support a

conclusion that the state has no outstanding good neighbor obligations for the 2015 ozone NAAQS. See 87 FR 31477-31483 (May 24, 2022).

Comment

Commenter: WildEarth Guardians

Commenter ID: 50

Docket ID: EPA-R06-OAR-2021-0801-0042

Comment:

Thank you for the opportunity to offer public comments regarding EPA's proposed disapproval of Texas's 2015 Ozone Interstate Transport State Implementation Plan (SIP). WildEarth Guardians supports EPA's ultimate decision to disapprove the Texas SIP proposal. However, because neither Texas's nor EPA's ozone modeling results appear to accurately reflect the true impact of emissions from Texas on ozone pollution levels in New Mexico, we request that EPA take a closer look at this issue as it finalizes its SIP disapproval and formulates a Federal Implementation Plan (FIP) for Texas. In particular, we request that EPA ensure that ozone precursor emissions from Texas's oil and gas industry, including in the Permian Basin straddling the Texas-New Mexico border, are fully accounted for in EPA's modeling, and that EPA's FIP ensures that these emissions do not significantly contribute to future exceedances of the ozone NAAQS at monitoring sites in southeastern New Mexico. Guardians requests that EPA revisit its assumptions regarding emissions from the oil and gas industry – particularly in the booming Permian Basin – to ensure that its modeling efforts provide a realistic projection of ozone pollution levels at sites significantly impacted by such emissions.

TCEQ Modeled 2023 Design Values in New Mexico

With oil and gas development and production booming in the Permian Basin, it is critical that EPA fully evaluate the impact of oil and gas sector emissions on ozone pollution levels in New Mexico. With monitored design values in southern and southeastern New Mexico currently well in exceedance of the 2015 NAAQS, it is highly unlikely that these receptors will achieve attainment by 2023. As EPA explained in the Technical Support Document ("TSD") for the EPA Region 6 2015 8-Hour Ozone Transport SIP Proposal that it would not expect ozone design values to decrease by more than 0-1 ppb per year. As such, the 2020 and 2021 design values in southern and southeastern New Mexico suggest that monitors in these areas will likely see 2023 ozone design values that continue to significantly exceed the 2015 ozone NAAQS, thus warranting future year modeling and state contribution analysis to determine whether upwind states are inappropriately causing or contributing to ozone violations.

[table in full comment]

In light of the well-documented ozone pollution problem documented at monitoring sites in southern and southeastern New Mexico, we request EPA apply the analysis described in Sections 1 and 2 of the Technical Support Document (TSD) for the EPA Region 6 2015 8-Hour Ozone Transport SIP Proposal to TCEQ's modeled 2023 design values for Eddy County and Dona Ana County monitors in New Mexico, identified below.

[table in full comment]

Specifically, we request EPA evaluate recent design value monitored trends in Dona Ana and Eddy Counties to determine what potential design value declines – if any – could be expected by 2023. Using this information, we request EPA compare the TCEQ modeled 2023 design values for the monitors in these counties to the 2020 monitored design value and preliminary 2021 design value and determine whether TCEQ's modeling is underestimating future ozone design values in this region of New Mexico. Accurately determining whether monitors in Southern and Southeast New Mexico qualify as nonattainment or maintenance receptors is essential because TCEQ identified Texas anthropogenic emission sources as contributing well in excess of 1% of the NAAQS, or 0.70 ppb, to the vast majority of monitors in New Mexico – a potentially significant contribution to nonattainment or interference with maintenance. Accordingly, given the likelihood that these monitoring sites are likely to remain in exceedance of the 2015 NAAQS by the 2023 attainment deadline, it is critical that EPA's analysis take into account Texas's significant contribution to ozone pollution in southern and southeastern New Mexico. Understanding Texas's contribution is an essential first step towards ensuring that a Good Neighbor FIP for Texas take the steps needed to ensure that emissions from Texas – including those from the oil and gas industry – do not significantly contribute to non-attainment in New Mexico.

Response

In response to commenter's request that the EPA revisit its emissions inventories and projections of the oil and gas sector in the Permian Basin, the EPA notes that since the release of the 2016v2 inventories, the EPA has continued to work with the states to further refine these inventories for the 2016v3 platform. In particular, the EPA worked with New Mexico Environment Department to improve the characterization of oil and gas emissions in New Mexico in the 2016v3 platform. As a result, the EPA modified the base year inventories for New Mexico submitted by the Western Regional Air Partnership (WRAP), as well as projections for New Mexico and Texas to better reflect the emissions for the Permian Basin. Details of these changes can be found in the Emissions Modeling TSD, in the docket for this action (docket ID No. EPA-HQ-OAR-2021-0663).

The EPA addresses comments related to model performance and design in Section 4 (Air Quality Modeling) of the RTC.

Comments

Commenter: Wisconsin Department of Natural Resources

Commenter ID: 51

Docket ID: EPA-R05-OAR-2022-0006

Comment:

<u>EPA should review Wisconsin's December 2021 comments on the 2016v2 emissions modeling platform and incorporate this information in future versions of the platform.</u>

On December 15, 2021, the WDNR provided comments on EPA's draft 2016v2 emissions modeling platform. EPA has indicated that states should use this notice and comment opportunity to resubmit

these comments to EPA to ensure they are in the record. The WDNR is therefore providing those comments again as an enclosure to this letter. EPA should evaluate WDNR's comments and incorporate the suggested changes when it revises its 2016 platform for use in future regulatory actions, such as a final 2015 ozone NAAQS transport rule.

Commenter: Wisconsin Department of Natural Resources (Attachment – 2021 comments)

Commenter ID: 51

Docket ID: EPA-R05-OAR-2022-0006

Comment:

Control and Growth Assumptions for Industrial Point Sources

4. There are several industrial point source retirements and committed controls in Wisconsin that are not included in EPA's projected 2023, 2026 and 2032 emissions (see Table 2). The EPA should integrate these retirements and controls into its projected emissions.

5. The petroleum coke growth factor of 1.98 for A-M Kaukauna paper mill (Agency FID 445031180) unit B11 process #5 and unit B09 process #3 is inappropriate. The EPA should instead use a growth factor equivalent to the growth factor of coal of 0.88 for this facility. Petroleum coke throughput at this facility is expected to be proportional to coal throughput or less.

Table 2 – Wisconsin Industrial Point Source Post-2016 Retirements and Controls [available in full comment]

Control and Growth Assumptions for Mobile Sources

6. Commercial Marine Vessels. The EPA's Technical Support Document for the draft 2016v2 Platform (dated September 2021) states that the commercial marine emissions in 2016v2 are the same as those in 2016v1 (see pages 57 and 61). However, the draft 2016v1 Platform provides two sets of commercial marine emissions:

- One nationwide, with the files dated during January and February 2020. The data for these emissions can be accessed at the following links:

  https://gaftp.epa.gov/Air/emismod/2016/v1/2016emissions/
  https://gaftp.epa.gov/Air/emismod/2016/v1/2023emissions/
  https://gaftp.epa.gov/Air/emismod/2016/v1/2028emissions/

- A second focused on the Great Lakes area, with the files dated later, during May 2020. These files cover two modeling domains:

  - o DO3: Parts of four states[6] surrounding Lake Michigan
  - o DO2: A larger domain surrounding the Great Lakes, including all or parts of 16 states[7] and part of Canada

The data for these emissions can be accessed at the following link: https://gaftp.epa.gov/Air/emismod/2016/v1/2016emissions/cmv_other_grids/

The commercial marine emissions in the draft 2016v2 Platform match those in the first (nationwide) set cited above. The emissions within the states covered in the second (Great Lakes) set are not updated to match the emissions in that set. The EPA should either update the commercial marine emissions within the DO2 and DO3 modeling domains to match the May 2020 data or document why the earlier nationwide emissions estimates are preferable.

[6] These four states are: Illinois, Indiana, Michigan, and Wisconsin.
[7] These 16 states are: Arkansas, Illinois, Indiana, Iowa, Kansas, Kentucky, Michigan, Minnesota, Missouri, New York, Ohio, Oklahoma, Pennsylvania, Tennessee, West Virginia, and Wisconsin.

Response

The EPA acknowledges receipt of the commenter's comments on the 2016v2 emissions inventories in December 2021, which were also attached to their comment on the proposal. In the 2016v3 inventories used for the final rule modeling, the EPA has taken these comments into consideration. The EPA ensured that three units at Georgia-Pacific Consumer Products LP and specific units at Green Bay Packaging Inc. Mill Division were not included in the 2023 projected inventories in the 2016v3 platform due to unit retirements. The EPA confirmed that the specified control devices were associated with the Cardinal FG and ND Paper units in the inventories used to model 2023 in the 2016v3 platform. Regarding the units at the A-M Kaukauna paper mill, the EPA updated its projection methods for the 2016v3 platform. The emissions in 2023 are now projected to be 91% and 92% of the 2016 emissions at the two units as opposed to having higher emissions in 2023 as was projected in the 2016v2 platform. The emissions at these units are projected to decrease further by 2026 in the 2016v3 platform, although the 2026 emissions numbers are not relevant to this action.

Regarding the comment on the Commercial Marine Vessel (CMV) inventories, there were multiple sets of inventories in the 2016v2 platform because the EPA provided CMV emissions on finer than 12 kilometer (km) grids (D02 and D03) at the request of the Lake Michigan Air Directors Consortium (LADCO) to support air quality modeling on fine grids in their region. The D03 and D02 emissions are out of scope with respect to this action as these data were not used in the EPA modeling and were only used in LADCO modeling. However, the EPA did respond to a request by LADCO to provide emissions compatible with the 2016v3 platform on those grids.

Comment

Commenter: Xcel Energy

Commenter ID: 52

Docket ID: EPA-R05-OAR-2022-0006

Comment:

EPA's disapproval of the MN SIP is based on revised EPA modeling that the MPCA, in their comments, has identified flaws with (including the failure to consider substantial planned NOC emissions reductions).

Response

The EPA received comments from MPCA as commenter suggests and has responded to those comments in this final action. The EPA has updated its emissions inventories for Minnesota sources to reflect input MPCA provided in its comment letter, and these updates are included in the 2016v3 modeling.

3.3 Emissions Inventory – EGUs

3.3.1 Unit Corrections

Comments

Commenter: Louisiana Chemical Association

Commenter ID: 26

Docket ID: EPA-R06-OAR-2021-0801

Comment:

Finally, the following EGU sources have converted or retired coal-fired units and/or installed emissions controls to reduce emissions in Louisiana:

- Big Cajun II, Unit 2 was converted from coal to natural gas in 2015 and generates 540 megawatts. The conversion sharply reduced emissions of sulfur, mercury, nitrogen oxide and particulate matter. Other technologies installed to reduce nitrogen oxide emissions include Selective Non-Catalytic Reduction ("SNCR") technology in May 2014
- At Big Cajun II, Unit 1 and Unit 3, Selective Non-Catalytic Reduction ("SNCR") technology was installed to reduce nitrogen oxide emissions in May 2014
- Big Cajun II, Unit 1, a coal-fired unit, will retire or be refueled to natural gas by December 2025 as part of a consent decree agreement
- Planned retirement or conversion of Rodemacher Unit 2 at Brame Energy Center, which is a 523-megawatt generating unit predominately powered by coal which will retire or cease burning coal in 2028 through EPA approval of the CCR Part A Demonstration-submittal and/or Brame Energy Center's ELG Notice of Plan Participation
- Retirement of Dolet Hills Power Station, a 642-megawatt coal-fired generating unit, took place in December 2021.

Thus, the EPA inventory used for the modeling does not account for all relevant emission reductions. As discussed above, at a minimum, EPA must incorporate needed revisions to the 2016v2 inventory and then re-analyze the Louisiana Transport SIP based on the updated/corrected modeling platform before issuing a final rule on the Louisiana Transport SIP.

Commenter: Mississippi Department of Environmental Quality

Commenter ID: 32

Docket ID: EPA-R04-OAR-2021-0841

Comment:

EMISSION SOURCES The air quality modeling results from the 2016v2 Emissions Modeling Platform indicate that by 2026, emissions occurring in Mississippi will no longer contribute to nonattainment nor significantly contribute/interfere with maintenance at any downwind receptor, even without actions to reduce emissions from Mississippi sources. However, it is important to note that many emissions reductions are scheduled or have taken place at Mississippi facilities since 2016, which is the emissions year the 2016v2 platform is based on. These include:

- Mississippi Power Company's plan to shut down Plant Watson Unit 4, a 2,760 MMBtu natural gas fired boiler, in December 2023 and to retire all coal units at Plant Daniel no later than December 2027.
- Cooperative Energy Plant RD Morrow's retirement of all coal units in 2018 and replacement with natural gas combined cycle units.
- Entergy Mississippi Plant Baxter Wilson's retirement of Unit 2, a 6,680 MMBtu natural gas fired boiler with fuel oil backup, in 2018 and plans to shut down the remaining Unit 1, a 4,790 MMBtu natural gas fired boiler with fuel oil backup, in May 2023.
- Entergy Mississippi Plant Rex Brown's retirement of Unit 4, a 2,130 MMBtu natural gas fired boiler with fuel oil backup, in 2018 and the remaining Unit 5, a fuel oil fired combustion turbine, in 2019. Plant Rex Brown is now completely shut down.

These significant emissions reductions from Mississippi sources alone should be adequate to allow EPA to approve a revised Mississippi iSIP.

Commenter: Oklahoma Department of Environmental Quality

Commenter ID: 37

Docket ID: EPA-R06-OAR-2021-0801

Comment:

ODEQ has provided informal feedback to the EPA concerning the 2016 v2 EMP and those comments are also provided below.

EGU Sector - ODEQ has identified a few minor updates that should be made to Version 6 of the National Electric Energy Data System (NEEDS) and those updates are included in Attachment D.

[Attachment D is available in its entirety in the original comment letter.]

Commenter: PacifiCorp (Attachment - Berkshire Hathaway Energy (BHE) Company Comments on Proposed Ozone Transport Rule)

Commenter ID: 38

Docket ID: EPA-R08-OAR-2022-0315

Comment:

BHE has identified significant NO_X emission reductions in Wyoming that are not taken into account by EPA's analysis. There are a number of required and planned control projects and retirements scheduled at PacifiCorp units in the coming years that will accomplish significant emission reductions that EPA should consider when determining whether it is warranted to include Wyoming in the scope of the Proposed Rule. In particular, PacifiCorp will be converting Jim Bridger Units 1 and 2 to natural gas by 2024 and has committed to retire or cease burning coal at five other units: Naughton Units 1 and 2 prior to 2026, and Dave Johnston Unit 3 by the end of 2027, and Dave Johnston Units 1 and 2 by 2028. The cessation of coal combustion on Naughton Units 1 and 2 and Dave Johnston Units 1, 2 and 3 will provide NOx reductions of 2,945 tons compared to 2021 ozone season emissions. As with Utah, EPA's underlying analysis for the Proposed Rule includes major errors in the emissions attributable to PacifiCorp's, which resulted in NOx emissions in Wyoming that are several times larger than the NOx emission estimates used in Steps 1 and 2.

[…]

1. Potential Technical Errors in Proposal – Appendix A Proposed Rule State Emissions Budget Calculations and Engineering Analytics

[…]Some 2023 allocations appear to result from the assumption that LNB/OFA have not been installed for Hunter Unit 3 and Naughton Unit 1. Both units currently utilize LNB/OFA. Additional corrections are also requested for the Jim Bridger Units 1 and 2 and the Dave Johnston Unit 1.

[…]

iv. Wyoming Dave Johnston Unit 1 should be rated at a capacity of 93 MW

EPA lists Dave Johnston Unit 1 with a capacity greater than 100 MW. However, the most recent data indicates the correct capacity during ozone season is 93 MW. BHE asks EPA to correct the capacity of Dave Johnston Unit 1 and adjust the associated allocations for Wyoming accordingly.

Commenter: Wisconsin Department of Natural Resources (Attachment – 2021 comments)

Commenter ID: 51

Docket ID: EPA-R05-OAR-2022-0006

Comment:

The EPA should include the most recent information on utilities' publicly available retirement or fuel-switching plans for EGUs in the updated 2016v2 Platform. Wisconsin utilities have publicly announced shutdown dates by 2025 at three power plants (see Table 1), and EPA should ensure these shutdowns are reflected in the Power Sector Modeling Platform v6 forecasts (EPA currently forecasts these EGUs to operate through 2032). In addition, EPA should ensure its EGU model forecasts do not shut down EGUs that have not yet announced plans for retirement, including Wisconsin's Manitowoc Public Utilities (ORIS ID 4125). The WDNR is also providing this list of upcoming retirements, or continued operation, within the Clean Air Markets Power Sector Modeling Contact Form, as requested by EPA.

[…]

Table 1 – Wisconsin EGU Scheduled Retirements

Facility	Unit ID	ORIS	Retirement Date
South Oak Creek	5	4041	1/1/2024
South Oak Creek	6	4041	1/1/2024
South Oak Creek	7	4041	1/1/2025
South Oak Creek	8	4041	1/1/2025
Weston	2	4078	1/1/2024
Columbia	1	8023	1/1/2024
Columbia	2	8023	1/1/2025

Response

The EPA has incorporated information from these comments and additional feedback from power sector stakeholders and others into the power sector emissions projections that are used in the final photochemical grid modeling (2016v3) where the EPA has reviewed and determined that information to be sufficiently reliable and appropriate for use. We do not include in our baseline modeling projections at Steps 1 and 2 emissions changes at power plants or other emissions sources that are not sufficiently certain to occur, for example, if such projected emissions changes are only anticipated under proposed but not finalized state or federal rules, or where the potential retirement or conversion of units is not sufficiently committed to be considered reliable. A table with the units included in these comments, along with the changes, reflected in the National Electric Energy Data System (NEEDS) is included in a file titled "SIP Approval Comments – EGU Units.xls" contained in the docket for this action. We note that action on Wyoming's SIP submittal is not included in this action, and comments regarding allowance allocations or any other elements of other proposed rules are likewise outside the scope of this action.

3.3.2 EPA's Integrated Planning Model (IPM)

Comments

Commenter: Arkansas Department of Energy and Environment, Division of Environmental Quality

Commenter ID: 07

Docket ID: EPA-R06-OAR-2021-0801

Comment:

For the ptegu sector:

1. For regional haze purposes, DEQ previously compared future year projections in EPA's 2016v1 platform and the v16.1 future year projections developed by the Eastern Regional Technical Advisory Committee (ERTAC), deciding ERTAC's v16.1 future year projections were more appropriate than EPA's Integrated Planning Model (IPM) future year projections that informed EPA's 2016v1 platform. So it may be informative to conduct a thorough comparison of ERTAC's v16.1(or a future update) and EPA's 2016v2 (or a future update) to evaluate future year projections if EPA continues to choose to use IPM instead of ERTAC.
2. If EPA choses to continue to use IPM instead of ERTAC, then DEQ suggests that EPA communicate with states to seek any updates and/or corrections prior to conducting IPM modeling as is done by ERTAC.
3. For some sectors (e.g., solvents, nonpt, nonroad), EPA's 2016v2 platform future year projections utilized Energy Information Agency's (EIA) Annual Energy Outlook (AEO) 2021 data. However, according to the TSD, the ptegu IPM modeling used AEO 2020 data (e.g., demand, gas and coal market assumptions, cost and performance of fossil generation technologies, among others). The latest AEO 2021 was released on February 3, 2021 and DEQ suggests that EPA update the 2016v2 using the latest AEO data in all sectors. Table 4.2 of EPA's 2016v2 TSD reported total 2026 NOx emission for Arkansas as 9,258 tons; however, summing the three files (summer, winter, and wintershld) for both cems and noncems data for the ptegu sector indicates the total 2026 NOx emissions for Arkansas as being 9,273 tons. DEQ did not make this comparison for others states. DEQ suggests that EPA identify the source of the discrepancy in the above example and conduct the same comparison for other states.
4. IPM modeling for the 2032 future year includes emissions for the Entergy Arkansas White Bluff plant. However, a state and federally enforceable administrative order requires the cessation of coal-fired operations by no later than December 31, 2028 and any possible operation beyond 2028 is unknown and would require future permitting action if ambient air emissions are to be emitted. DEQ suggests that EPA zero out emissions beyond 2028 for Entergy Arkansas White Bluff.
5. IPM modeling for the 2032 future year includes emissions for the Entergy Arkansas White Bluff plant. However, a state and federally enforceable administrative order requires the cessation of coal-fired operations by no later than December 31, 2028 and any possible operation beyond

2028 is unknown and would require future permitting actions if ambient air emissions are to be emitted. DEQ suggests that EPA zero out emissions beyond 2028 for this facility.

6. IPM 2032 projections show zero NOx emissions for the winter shoulder months (March, April, October, and November) for the Flint Creek, Plum Point, Arkansas Electric Thomas B Fitzhugh Corp, and Harry D. Mattison Power plants in Arkansas. Also, IPM projected zero SO2 emissions for Plum Point, Flint Creek, Union Power Station, and others in 2032 for the winter shoulder months. IPM projected zero NOx and SO2 emissions for Independence plant in 2026 for the same shoulder moths. Historical data consistently shows both NOx and SO2 emissions for all of these facilities in these months. DEQ suggests that EPA re-examine this data and potentially other IPM projections in Arkansas and in other states as DEQ did not evaluate this beyond the above examples.
7. IPM did not project 2026 emissions for the Flint Creek Power Plant, but did project 2032 emissions. We suggest EPA re-examining including 2026 emissions for this facility.
8. IPM did not project 2026 and 2032 ptegu sector emissions for the John W. Turk Power Plant. However, IPM did project 2026 and 2032 ptnonipm sector emissions for this facility of NOx at less than 1 ton and SO2 at less than 1 ton. Historical NOx and SO2 emissions for the John W. Turk Power Plant are presented in Figure 2. EPA should include appropriate 2026 and 2032 ptegu sector emissions and verify the 2026 and 2032 ptnonipm sector emissions for the John W. Turk Power Plant. [Figure 2 available in full comment]
9. IPM did not project 2026 ptegu sector emissions for the Plum Point Energy Station. However, IPM did project 2026 ptnonipm sector for this facility of NOx at 1.96 tons and SO2 at 0.07 ton. Historical emissions for the Plum Point Energy Station are presented in Figure 3. In addition, IPM did project 2032 ptegu emissions, although the 2032 ptegu future year projection was a 62% reduction for SO2 emissions from a 2021 baseline. For the Plum Point Energy Station, EPA should include appropriate 2026 ptegu sector emissions, verify the 2026 ptnonipm sector emissions, and verify the reasonableness of the 2032 ptegu SO2 emissions. [Figure 3 available in full comment]
10. PM 2026 projected NOx emissions from the ARK Elec Co-Op-Oswald Generating Station are Unit G7: 172 tons, Unit G6: 115 tons, and Unit G5: 115 tons. IPM 2032 projected NOx emissions are Unit G7: 160 tons, Unit G6: 107 tons, and Unit G5: 107 tons. Table 1 provides gross load from IPM future year projections and a 5-year average of historical data (2017-2021) for these units. The 2011-2021 historical NOx emissions for these units are provided in Figure 4. EPA should verify the reasonableness of projected 2026 and 2032 NOx emissions for all of this facility's units and potentially for IPM-projected emissions at other facilities. [Table 1 and Figure 4 available in full comment]

Commenter: Minnesota Pollution Control Agency

Commenter ID: 31

Docket ID: EPA-R05-OAR-2022-0006

Comment:

Stationary point EGU growth rate differences between the ERTAC vs IPM models

LADCO recognizes that EPA uses the IPM to estimate future year EGU emissions, and that the IPM projection methodology differs from the ERTAC EGU model that is endorsed by the Multi-Jurisdictional Organizations and the majority of the states in the eastern half of the country. Minnesota would also like to indicate our support for the use of ERTAC EGU projections in the 2016v2 EMP and ask EPA to consider replacing IPM projections with ERTAC EGU projections for sources in the LADCO region in subsequent modeling platforms.

Commenter: Oklahoma Department of Environmental Quality

Commenter ID: 37

Docket ID: EPA-R06-OAR-2021-0801

Comment:

In addition, ODEQ suggests that EPA model future year emissions from the EGU sector using the Eastern Regional Technical Advisory Committee's (ERTAC) EGU Projections Tool rather than the Integrated Planning Model (IPM). This request is a departure for Oklahoma from our previous request when ODEQ submitted comments on the modeling platform in advance of the CSAPR Update. However, ODEQ has worked more closely with the ERTAC development team and we believe that, at this time, the ERTAC EGU Forecasting Tool does a superior job forecasting hourly emissions, especially on high electricity demand days and better meets Oklahoma's needs as well as those of our sister agencies.

Commenter: Texas Commission on Environmental Quality

Commenter ID: 42

Docket ID: EPA-R06-OAR-2021-0801

Comment:

The EPA did not consider all of the information provided to it by the TCEQ.

The TCEQ disagrees with the potential concerns that the EPA raises with regards to the TCEQ's modeling of electric generating units and boundary conditions. The EPA in the "*EPA Region 6 2015 8-Hour Ozone Transport SIP Proposal Technical Support Document*" discusses potential concerns about the electric generating unit (EGU) emissions and boundary conditions in TCEQ's modeling. The EPA fails to acknowledge the additional analysis provided to the EPA via email on June 6, 2016, detailing the differences in 2023 EGU emissions by state in the TCEQ modeling with the various EGU emissions projections available at the time TCEQ's SIP was developed. The comparison showed that the EGU emissions included in TCEQ's modeling were comparable to emissions in EPA's Engineering Analysis and the latest emissions available in the Air Market's Program Database.

Commenter: Wisconsin Department of Natural Resources (Attachment – 2021 comments)

Commenter ID: 51

Docket ID: EPA-R05-OAR-2022-0006

Comment:

The EPA should integrate the Eastern Region Technical Advisory Committee (ERTAC) EGU model forecasts into the updated 2016v2 Platform. The WDNR recognizes that EPA uses the Integrated Planning Model (IPM) to estimate future year EGU emissions, and that the IPM projection methodology differs from the ERTAC EGU model that is endorsed by the multi-jurisdictional organizations (MJOs) and the majority of the states in the eastern half of the country. States are using the ERTAC EGU model to consolidate and update technical information for the current State EGU fleets and to forecast the best understanding of how those fleets will change into the future in regard to planned retirements of specific units (e.g., the Wisconsin EGU retirements listed in Table 1), changes in fuels by specific units, responses to existing air emissions related regulations (State and Federal), and any planned new installations of retrofit emission control devices.

[(Table 1 is available in the full comment, as well as in WDNR's comment excerpt above.)]

Response

The EPA disagrees with commenters who suggest the Integrated Planning Model (IPM) is an inadequate or unreliable modeling tool to analyze the power sector. We conducted the air quality modeling for the final rule incorporating updated EGU emissions projections (available at: https://www.epa.gov/power-sector-modeling/supporting-documentation-2015-ozone-naaqs-actions) reflecting fleet and other input updates as of Summer 2022, which also includes updates from commenters and through the pre-proposal request for input on our emissions inventories.

Several commentors suggested EPA replace its use of the Integrated Planning Model (IPM) with ERTAC. One commentor also suggested that ERTAC is more transparent compared to IPM. IPM, developed by ICF Consulting, is a state-of-the-art, peer-reviewed,[29] multi-regional, dynamic, deterministic linear programming model of the contiguous U.S. electric power sector. It provides forecasts of least cost capacity expansion, electricity dispatch, and emission control strategies while meeting energy demand and environmental, transmission, dispatch, and reliability constraints. The EPA has used IPM for almost three decades to better understand power sector behavior under future business-as-usual conditions and to evaluate the economic and emission impacts of prospective environmental policies. The model is designed to reflect electricity markets as accurately as possible. The EPA uses the best available information from utilities, industry experts, gas and coal market experts, financial institutions, and government statistics as the basis for the detailed power sector modeling in IPM. For the modeling used

[29] IPM has been peer reviewed periodically evaluating transparency of inputs and documentation, adequacy of modeling capabilities, and appropriateness of the modeling platform use for regulatory and strategic power sector analysis. The modeling platform and its documentation has consistently been found appropriate and adequate for regulatory analysis by the independent peer reviewers with a lot to commend. The IPM Peer Review of v6 and the Response to Peer Review can be found at: https://www.epa.gov/power-sector-modeling/ipm-peer-reviews

in support of the proposed disapprovals, the EPA has provided extensive documentation[30] of the input assumptions and methodology that go into the EPA's use of IPM. For this action, the EPA used an updated version of power sector modeling.[31]

Additionally, EPA staff routinely meets with stakeholders to discuss IPM inputs and results, including comparisons to ERTAC. Therefore, EPA believes IPM, including the versions of IPM projections used at proposal and final, is both transparent and well-suited to analyze EGU emissions while reflecting the impacts of changes to the EGU fleet, projected changes to electricity demand, changes in fuel prices, and state and federal policies as of Summer 2022.

One commenter mentioned that the state's projections of the EGU emissions for 2023 are comparable to the EGU emissions from EPA's engineering analytics tool for 2023. We agree in general that ERTAC is similar to the "engineering analysis" approach that we have used for some transport applications, such as in the Revised CSAPR Update, in that both are designed to be more rooted in recent operating behavior. However, we observe that IPM is capturing much of this behavior while also accounting for additional economic-based operational changes that may be expected in the future. Indeed, at proposal, the EPA reviewed LADCO modeling using ERTAC, which was relied on by some SIP submissions addressed in this action, particularly the Great Lakes states in Region 5, and that modeling supports the same conclusions regarding those states' linkages as our CAMx modeling using IPM. *See* 87 FR 9838.

Thus, there do not seem to be any apparent differences in the ultimate regulatory results for purposes of this action as between some states' ERTAC-based power sector modeling and the use of IPM, nor have commenters here established such a difference. This is not surprising. In EPA's Revised Cross-State Air Pollution Rule Update for the 2008 Ozone NAAQS (86 FR 23054), EPA reaffirmed its Step 1 and Step 2 findings using an EGU emissions inventory from EPA's engineering analytics tool in conjunction with its air quality assessment tool (AQAT) to estimate air quality impacts and upwind state contributions. The emissions inventory derived through the engineering analytics and subsequent AQAT sensitivity analysis led to the same Step 1 and Step 2 findings as the IPM-based EGU emissions inventory and related CAMx modeling results.

The EPA's documentation includes all the detailed assumptions and data sources that are included as input that is underlying in the version of IPM that is used to help inform power plant air regulatory and legislative efforts for more than two decades. The model has been tailored to meet the unique environmental considerations important to the EPA - including various national (legislative), federal, and state level measures - while also fully capturing the detailed and complex economic and electric dispatch dynamics of power plants across the country. The EPA's goal is to explain and document the Agency's use of the model in a transparent and publicly accessible manner, while also providing for concurrent channels for improving the model's assumptions and representation by soliciting constructive feedback to improve the model. In addition to soliciting feedback, the EPA has also commissioned peer reviews, including of the latest version IPM v6. The recommendations from these peer reviews and the EPA's

[30] https://www.epa.gov/power-sector-modeling/documentation-epas-power-sector-modeling-platform-v6-summer-2021-reference

[31] The updated Power Sector Modeling input data, results, and corresponding documentation used for this final action are available at https://www.epa.gov/power-sector-modeling/supporting-documentation-2015-ozone-naaqs-actions.

response are available on the EPA's website (https://www.epa.gov/power-sector-modeling/ipm-peer-reviews). These efforts include making all inputs and assumptions to the model, as well as output files from the model, publicly available on EPA's website and in the regulatory docket.

The EPA has and will continue to discuss modeling inputs and outputs of the IPM and ERTAC projections with any interested parties. We note some differences here. The EGU emissions from IPM are projected at the seasonal level based on economic dispatch, rather than historic behavior. These seasonal values are then temporally allocated (i.e., post-processing IPM outputs based on historical emission patterns) to create hourly emissions for use in the air quality modeling. The ERTAC tool assigns the hourly emissions utilizing historical emissions patterns based on different methods and makes different assumptions about which units will increase/decrease operation in individual hours based on historical operation. Consequently, even if the seasonal emission estimates are identical between IPM and ERTAC on a state, regional, or even unit basis, the final hourly projected emissions will be different and have corresponding different effects on projected air quality. Consequently, when commenters state that ERTAC should be used rather than IPM, they may be preferring the hourly emissions utilized in ERTAC rather than that used by EPA based on the seasonal IPM outputs and EPA's hourly temporal allocation methodology that is independent of IPM. These comments are not specific enough for EPA to make changes to the current temporalization methodology, which we continue to find sufficiently reliable to inform this action.

IPM creates a consistent nationwide projection and can account for effects of regulatory programs that may have differential effects on different units throughout the domain. For example, in IPM, emission budgets reflect the recently finalized Revised CSAPR Update, and account for the changes in unit dispatch relative to units that are not included in the program. The ERTAC tool, while well-refined and consistently updated for particular states or even regions (e.g., LADCO)—and may be appropriately used for air quality modeling by those entities for those areas—is not necessarily appropriate for a nationwide assessment where consistent emissions projections and air quality modeling are necessary.

Arkansas provided several comments regarding the projection of EGU emissions for 2026 and later years. In the proposed action, EPA relied on the same modeling data to support the proposed FIP for the 2015 ozone NAAQS. However, the projections of 2026 and 2032 data are not applicable and were not used for this final action. EPA did incorporate into NEEDS any changes that addressed regulatory, enforcement, permitting, or other operational data affecting EGU units. If those changes occur after 2023, they are not relevant to our action here on state SIP submissions.

ADEQ also provided comments regarding emission values included in the emissions modeling TSD. There are minor differences that transpire when emissions are processed into hourly values input to the air quality model and then summed back up again to provide the summary values in the emissions modeling TSD. This level of difference is negligible and has no impact on the final air quality modeling results.

In response to TCEQ's comment, the EPA searched for the email identified in the comment. The EPA located an email matching the description in the comment provided to EPA on June 6, 2018 (not June 6,

2016 as TCEQ commented), which was after TCEQ and EPA had verbally discussed EPA's review comments and concerns on TCEQ's proposed SIP submission.[32]

In the Evaluation of TCEQ Modeling TSD [33] for the proposed disapproval EPA indicated "TCEQ did not use latest EGU emissions available at the time they proposed the SIP that incorporated reductions from CSAPR Update/latest ERTAC projections in their modeling. It was unclear if this made any substantial changes in the modeling analysis without updating the EGU emissions and redoing the modeling."

One of the attachments to the June 6, 2018 email was a spreadsheet file showing EGU ozone season NOx emissions totals for each state for purposes of TCEQ's modeled years of 2012 and 2023. TCEQ also included in the attachment similar state-wide total EGU NOx ozone season summaries that used a newer version of ERTAC (v 2.7 that was available at the time) for 2011 and 2016; an EPA engineering analysis summary for 2016, CSAPR II Cap[34]; and 2017 Ozone season emissions summary. TCEQ's 2012 modeled emissions for Texas EGUs that used ERTAC v2.6 is about 10% (5,563 tpy) lower than what TCEQ provided as the CSAPR Update ozone season NOx.[35] There is also a difference between the 2023 TCEQ modeled emission rates and the 2017 ozone season emission rate-data in EPA's AMPD database, as well as EPA's engineering analysis for 2016, which are both higher than what TCEQ modeled for 2023. It appears that TCEQ subtracted emissions for some coal-fired EGUs that shut down in 2018 in Texas but did not reassess if other facilities would increase emissions due to the shutdowns. We note that there are also changes in the other state emissions totals that could also result in changes in modeled values.

Thus, there are important and unexplained differences in the modeled inventories (both base period and future) that Texas sent compared to the data available in EPA's comprehensive EGU databases. Overall, the EPA's assessment is that the data in the June 6, 2018 email does not change EPA's concerns and conclusions in the Evaluation of TCEQ Modeling TSD related to TCEQ's EGU emissions estimates for 2012 and 2023 in their modeling.

3.3.3 Other EGU Inventory-Related Comments

Comment

Commenter: Midwest Ozone Group

[32] Email from TCEQ to EPA June 6, 2018 and attachments have been added to this Docket ID No. EPA–HQ–OAR–2021–0663.
[33] Evaluation of TCEQ Modeling TSD at 71, (EPA-R06-OAR-2021-0801-0002) in Docket ID No. EPA-R06-OAR-2021-0801.
[34] TCEQ labeled as CSAPR II CAP. It is unclear if this was the CSAPR Update CAP but the values match with information in the CSAPR Update "Allowance Allocation Final Rule TSD"; August 2016 in EPA Docket ID No. EPA-HQ-OAR-2015-0500. TCEQ did not indicate if this represented a specific year emission inventory so it is unclear what year the inventory represented.
[35] Excel Spreadsheet with EPA's review notes is added as a separate document in the docket EPA–HQ–OAR–2021–0663.

Commenter ID: 30

Docket ID: EPA-R02-OAR-2021-0673, EPA-R03-OAR-2021-0872, EPA-R03-OAR-2021-0873, EPA-R04-OAR-2021-0841, EPA-R05-OAR-2022-0006, EPA-R06-OAR-2021-0801, EPA-R07-OAR-2021-0851, EPA-R08-OAR-2022-0315*, EPA-R09-OAR-2022-0394*, EPA-R09-OAR-2022-0138*

*A condensed version of MOG's comment appears in these dockets

Comment:

EPA's modeling and emission inventories must include the control programs and related permitted emission limits on ozone precursors that significantly impact air quality design values in 2023 and beyond.

Downwind states and regulated entities are on an ever-changing path to manage the complex implementation of emissions reductions programs to address local and regional impacts on ambient air quality. EPA's modeling of applicable emission control programs to assess attainment strategies supports the iterative nature of these programs. 87 Fed. Reg. 9,484, 9,494 (February 22, 2022). Private sector and government investments in emission reduction strategies are considerable. As EPA engages in proposed denials of the 2015 Ozone NAAQS Good Neighbor State Implementation Plans, the agency has the burden and obligation to assess both upwind and downwind emissions reductions programs. The modeling relied upon for these proposals; however, EPA fails to provide a wholistic assessment of these emission control requirements.

The following examples are illustrative of the types of emission control programs that EPA must include in the emission inventory that is being modeled to support the proposal disapprovals:

- The Illinois Environmental Protection Agency, as reflected on its website, is currently promulgating several new and older Cook County (ozone nonattainment) pending permit applications (Title V and Federally Enforceable State Operating Permits) to address gas-fired generators, to include emergency generators that had previously not been permitted or recently had been replaced. In certain instances, enforcement actions were initiated to bring the emergency and demand response generators within the regulatory program. EPA does not explain its assessment methodology for these types of emissions reductions relative to Good Neighbor SIP review and assessment. In addition, it appears that EPA did not take into account "The Illinois Energy Law, AKA, Climate and Equitable Jobs Act (CEJA) "as an applicable control program. This new law became effective in September 2021 and significantly limits the emissions of NOx from all existing gas fired EGUs in Illinois. Each unit >25 MW cannot exceed its 3-year (2018-2020) baseline actual emissions on a 12-month rolling basis beginning Oct. 1, 2021. Significantly, the law also requires all coal fired plants to retire no later than 2030.
- The New York State Department of Environmental Conservation ("NYDEC") has developed recent controls for simple cycle and regenerative combustion turbines ("SCCT") or "peaking units" noted by the agency as being inefficient and approaching 50 years of age. Yet, while the agency has estimated controls will result in a 4.8 ppb significant air quality improvement to nonattainment monitors within the New York Metropolitan Nonattainment Area (NYMA), implementation is delayed until 2025 and beyond. NYDEC also recently has imposed NOx

controls on distributed generation units, which as with peaking units, has been structured to delay implementation of controls beyond the applicable attainment date as part of the attainment plan proposed for approval by EPA. 87 Fed. Reg. 4,530 (Jan. 28, 2022).

- The Wisconsin Department of Natural Resources, Air Management Program has initiated a number of permitting actions in response to designation of Kenosha County as serious nonattainment. Many of those actions have been implemented as recently as the last 24 months imposing new NOx and VOC emission reductions. It is also noteworthy that some regulated facilities are seeking relief from additional non-attainment reductions in advance of EPA approval of a partial redesignation of Kenosha County as attainment for the 2008 ozone standard. EPA does not explain its methodology for assessing these types of downwind emissions reduction strategies relative to review of Good Neighbor SIP.

EPA's attention also is directed to examples of state and federal air program elements that warrant review by EPA for impact on the efficacy of attainment strategies. The Wisconsin Department of Natural Resources regulations include Chapter NR 436 titled, "Emission Prohibition, Exceptions, Delayed Compliance Orders and Variances." NR 436.03(2)(c) provides,

> Emissions in excess of the emission limitation set in chs. NR 400 to 499 may be allowed in the following circumstances:
>
> (c) The use of emergency or reserve equipment needed for meeting high peak loads, testing of the equipment or other uses approved by the department. Such equipment must be specified in writing as emergency or reserve equipment by the department. Upon startup of this equipment notification must be given to the department which may or may not give approval for continued equipment use.

The Wisconsin regulation is just one example of an exemption that could impact attainment strategies. It is likely there are several other similar provisions in other state programs that warrant careful assessment by EPA.

Consideration of these upwind and downwind state control programs are critical not only to assure the correct modeling results in the future analytical year, but also to allow an assessment of the alignment of the emission reduction burdens of the upwind and downwind states, as will be discussed in the next comment.

Response

In response to the commenter's claim that the EPA should incorporate emissions reductions from Illinois's pending permitting actions, it is the EPA's standard practice to only consider emissions reductions from rulemakings or permitting actions that have been finalized. With regards to "The Illinois Energy Law, or the Climate and Equitable Jobs Act", the EPA's 2016v2 modeling used for the Notice of Proposed Rulemaking (NPRM) does not take emissions reductions from this state rule into consideration. However, we have accounted for this law in the 2016v3 modeling. The EPA also notes that the rule's requirement for all coal-fired plants to retire by 2030 would not force emissions reductions by the 2023 ozone season.

In regard to commenter's insinuation that the NYDEC's recent rule requiring controls on certain SCCT units are inappropriately misaligned with the attainment schedule of the NYMA nonattainment area, this is not a relevant comment on the inventory for 2023. However, the EPA notes that the prior approval of the SCCT controls (approved by the EPA as a SIP strengthening measure) is not reopened for consideration by the Agency in this action. The EPA previously responded to the Midwest Ozone Group's (MOG's) comments on the SCCT controls in the notice for that separate final action. *See* 86 FR 43956, 43957-43958 (August 11, 2021). We further respond to MOG's comments on this topic in Section 2 of this document.

In response to commenter's claim that the EPA should incorporate emissions reductions from Wisconsin's pending permitting actions to address the Kenosha County's nonattainment status for the 2008 ozone standard, it is the EPA's standard practice to only consider emissions reductions from rulemakings that have been finalized.

With respect to state and federal regulations that impact the efficacy of attainment strategies, the commentor provided an example of an exemption program in Wisconsin that could potentially be used under emergency or sporadic events. The commentor included text from the regulation but did not provide any examples or data on how it may have been used and its impact on ozone precursor emissions. In addition, the regulation allows for state officials to approve or deny the request. The EPA cannot determine how state officials will react or address this during these emergency or sporadic events. The EPA has incorporated any applicable EGU control programs developed by the states, including for the state of Wisconsin, into its projections and modeling. A listing and discussion of these regulations and control programs can be found in chapter three of the EPA's documentation for IPM. This can be viewed at https://www.epa.gov/system/files/documents/2021-09/table-3-30-state-power-sector-regulations-included-in-epa-platform-v6-summer-2021-refe.pdf. For non-EGUs, the point source inventory includes state-submitted routine emissions data for calendar year 2019 is used as the basis for the projected 2023 emissions along with impacts of unit closures and control programs in the intervening years. Emissions in excess of permitted limits could occur during specific, typically short-term, periods of time and those emissions would be included in the inventories provided by the state if they were reported as routine emissions.

Comment

Commenter: Midwest Ozone Group

Commenter ID: 30

Docket ID: EPA-R08-OAR-2022-0315

Comment:

EPA's intention to revise its emission inventory and to conduct new air quality modeling without allowing an appropriate opportunity for stakeholder review and comment is inappropriate

EPA notes in the proposed disapprovals that, after the modeling it conducted in support of earlier transport rules, e.g., CAIR, CSAPR, CSAPR Update, CSAPR Closeout, and Revised CSAPR Update, the agency revised the emission inventory used in the modeling to assess the efficacy of prior transport rules. EPA conducted new modeling using the revised inventory. The agency describes the process as follows:

> Following the Revised CSAPR Update final rule, the EPA made further updates to the 2016 emissions platform to include mobile emissions from the EPA's Motor Vehicle Emission Simulator MOVES3 model 17 and updated emissions projections for electric generating units (EGUs) that reflect the emissions reductions from the Revised CSAPR Update, recent information on plant closures, and other sector trends. The construct of the updated emissions platform, 2016v2, is described in the emissions modeling technical support document (TSD) for this proposed rule. (emphasis added).

In December 2021, MOG and other stakeholders submitted detailed comments on the 2016v2 emission inventory platform in an effort to correct errors that existed in that platform. EPA's efforts to revise this emission inventory platform at this time raises the question about whether EPA intends to update the modeling that has been used as the basis for the SIP disapprovals and the proposed FIP -but only in support of the final rule.

While MOG urges EPA to rely on modeling that accurately reflects current on-the-books regulatory requirements and up-to-date emission inventories, we strenuously object to the possibility that EPA would conduct any such additional modeling to support a final rule and not provide the opportunity for that data to be reviewed, analyzed and commented on in advance of any final decision on the subject SIP disapproval (or for that matter the related proposed FIP). These concerns were also expressed earlier, in July 2021, by several MJOs (Westar, LADCO, SESARM, MARAMA, and CENSARA).

Response

In response to commenters' assertion that it is inappropriate for EPA to conduct new air quality modeling without allowing for an additional opportunity for stakeholder review and comment, EPA disagrees with this in a number of ways. First, as explained in Sections III.A.1. and V.A.4. of the preamble, EPA solicited comment on its inventories and modeling in a number of venues stretching from September 2021 to the close of the comment period of four disapproval actions in July 2022. EPA has, in response to the updated information received, developed an updated modeling run based on the 2016v3 emissions modeling platform, to take this updated information into consideration to inform EPA's final actions. Where EPA has felt it warranted, EPA has incorporated the updated information into its emissions inventories to best project future air quality conditions and take informed final action on the SIPs.

Other issues raised by this comment are addressed in the following sections in this RTC document: Sections 1.7 (Length of the Comment Period).

4 Air Quality Modeling

4.1 Modeling Design - General

Comment

Commenter: Texas Commission on Environmental Quality

Commenter ID: 42

Docket ID: EPA-R06-OAR-2021-0801

Comment:

The EPA also fails to acknowledge that the TCEQ provided additional information summarizing the change in modeled ozone contribution at monitors attributable to boundary conditions when boundary conditions accounted for changes in future year emissions. The EPA did not request additional analyses or express concerns with TCEQ's modeling after the additional information was provided in June 2018.

Response

TCEQ commented that an email and two spreadsheets (one discussing statewide EGU emissions and another spreadsheet documenting 2012 and 2023 boundary conditions contributions to receptors that Texas identified in their modeling) were provided to EPA on June 6, 2016. EPA searched and found the email was actually sent June 6, 2018 after TCEQ and EPA had verbally discussed EPA's review comments and concerns on TCEQ's proposed SIP. This information was provided before the final SIP was submitted. The EPA has reviewed these files and found this information does not result in a change in EPA's overall review of TCEQ's SIP nor does it resolve the other issues the EPA identified that make TCEQ's SIP not approvable. TCEQ's EGU emissions spreadsheet is addressed in Section 3.3.3.

Regarding boundary conditions, we had noted in the Evaluation of TCEQ Modeling TSD[36] that TCEQ had used 2023 emissions from a modeling scenario that included some estimated changes based on climate modeling. Our analysis indicated the actual impact could not be quantified based on the information provided by TCEQ but that the actual impact of using these modified boundary conditions were expected to be a relatively small contribution to the total modeled concentrations in TCEQ's transport SIP modeling and would not be expected to significantly change the total model concentrations.

One of the attachments to the June 6, 2018 email was a spreadsheet file showing boundary condition contributions to receptors that TCEQ identified as having a greater than 0.7 ppb contribution from Texas emissions in their 2023 modeling. The boundary conditions source apportionment results provided by TCEQ to the EPA included the 2012 and 2023 average boundary conditions at each receptor identified by TCEQ in Colorado, California, and Arizona in their SIP. The 10 days modeled for the future design value calculations were used by TCEQ. The 10-day average change in contributions from boundary conditions

[36] Evaluation of TCEQ Modeling TSD at 76.

in 2012 compared to 2023 ranged from a 0.08 ppb decrease to a 1.11 ppb increase at these receptors.[37] The percent change (i.e., 2023 values compared to 2012 values) in boundary condition contributions on average for these 10 days ranges from a slight decrease of 0.4% to a maximum increase of 3.9%. While for most receptors the contribution from boundary conditions increased, overall, the increase in 2023 is relatively small compared to the total contribution from boundary conditions. These would be even smaller changes compared to the total modeled concentration taking into account all contribution sources. Thus, our assessment of these values comports with our view in the Evaluation of TCEQ Modeling TSD that we did not expect this information to result in large changes to total ozone modeled concentrations. Overall, the EPA's current assessment (Changes in total boundary conditions contribution were -0.4% to 3.9%) is that the data in the June 6, 2018 email does not change the EPA's overall assessment of TCEQ's SIP.

4.1.1 Modeling Design - Lake Michigan

Comments

Commenter: Air Pollution Control Program, Missouri Department of Natural Resources

Commenter ID: 01

Docket ID: EPA-R07-OAR-2021-0851

Comment:

The Air Program notes that recent studies aimed at improving the understanding of the cause of high ozone concentrations near Lake Michigan have been conducted in recent years. EPA must incorporate the knowledge learned in these studies into updated modeling before such modeling could be used for such significant regulatory determinations as the proposed disapproval of Missouri's SIP, or the proposed FIP. The Lake Michigan Ozone Study released in May of 2019, is likely the most comprehensive and current study about ozone concentrations in this region of the country. In the study, there are recommendations for a finer grid resolution in the modeling to better characterize and predict ozone concentrations in this area of the county. With the low model performance and the significant costs of the regulatory outcomes that are based on the modeling, EPA must follow this recommendation and seek to re-model this region using a finer grid than the 12 km grid currently included in EPA's updated modeling. At a minimum, EPA should use a 4 km grid and preferably a 1.33 km grid around all maintenance and nonattainment receptors in order to help improve model performance in this region of the country.

Other findings of the Lake Michigan Ozone Study reveal that NOx emissions, particularly from upwind states like Missouri, may have little to no impact on ground-level ozone concentrations in the region where the receptors that Missouri is linked to are located. This is because on high ozone days, ozone

[37] Excel Spreadsheet "BCAPCA-Attribution Change between Base-and-Future EPA R6 notes.xlsx" in Docket EPA–HQ–OAR–2021–0663.

levels in these areas are sensitive to changes in emissions of volatile organic compounds (VOC) and not NOx. Regions where this is the case are often referred to as being VOC-limited areas. Figure 2, from the study shows that the areas where the monitors that Missouri is linked to in the updated modeling are VOC-limited on high ozone days. This means that reductions in NOx emissions will have little-to-no impact on reducing ozone concentrations at these problem monitors. Therefore, it follows that NOx emissions from Missouri are not the cause and cannot be the basis for EPA's proposed disapproval of our SIP nor the foundations for the imposition of new NOx controls in a FIP to address Missouri's good neighbor obligations.

This technical information was available during EPA's updated modeling efforts, and calls into question EPA's typical modeling practices for this SIP disapproval action. EPA must reform the model for this region of the country before the modeling can be used to justify disapproving Missouri's SIP. Further, the proposed "fix" in the federal plan takes none of this information into account. If the receptors where Missouri is linked to are VOC-limited, as this study indicates, any assertion that NOx emissions in Missouri are significantly contributing to nonattainment or interfering with maintenance at these downwind receptors is flawed on a technical and foundational level.

Commenter: Ameren Missouri

Commenter ID: 05

Docket ID: EPA-R07-OAR-2021-0851

Comment:

In order to capture the inland penetration of the lake breeze (WRF-CHEM) needs accurate Lake Michigan water temps and correct model physics options. EPA's use of the Pleim-Xiu Land Service Model (LSM) (EPA, 2022) does not adequately capture the lake breeze inland penetration (Abdioskouei & et al, 2019). Use of NOAH LSM does a much better job at capturing the lake breeze inland penetration.

USEPA's proposed disapproval of the Missouri Good Neighbor SIP for the 2015 Ozone Standard errs by not evaluating and including most recent scientific studies on ozone formation along Lake Michigan (2017 Lake Michigan Ozone Study (LMOS 2017)).

[…]

Nowhere in USEPA's proposed disapproval of the Missouri Good Neighbor SIP does USEPA analyze or even mention the LMOS 2017 study or the resulting data. USEPA ignores the wealth of information collected during the LMOS 2017 study and the resulting peer reviewed research published as a result. Nowhere in the docket for the proposed disapproval of the Missouri Good Neighbor SIP (Docket ID: EPA-R07-OAR-2021-0851) does EPA mention LMOS 2017. Nowhere in the Technical Support Document for the updated modeling EPA now references as an independent basis for asserting that Missouri emissions are now linked to two nonattainment and one maintenance monitor(s) near Lake Michigan in Wisconsin and one maintenance monitor on the Chicago, IL Lakeshore does EPA discuss the implications and findings of LMOS 2017 study on the ability of the regional modeling conducted by EPA to reproduce the chemistry of ozone production at the Lake Michigan Land/Water interface.

[…]

USEPA fails to mention the LMOS 2017 study or its relevance to the modeling underlying this action. This failure to evaluate the results of LMOS 2017 and incorporate the scientific improvements identified by the peer reviewed and published research resulting from that study is a critical error. EPA has an obligation to evaluate LMOS 2017 as it pertains to the proposed disapproval of the Missouri Good Neighbor SIP.

USEPA's proposed disapproval of the Missouri Good Neighbor SIP for the 2015 Ozone Standard is arbitrary and capricious because it relies on Ozone Modeling inconsistent with the scientific findings from the LMOS 2017.

[…] Because the model as used by USEPA is not properly set up to handle the complex chemistry and meteorology at the shores of Lake Michigan, it cannot accurately characterize ozone concentrations at the monitors to which USEPA tries to link to Missouri emissions.

In order to capture the inland penetration of the lake breeze (WRF-CHEM) needs accurate Lake Michigan water temps and correct model physics options. EPA's use of the Pleim-Xiu Land Service Model (LSM) (EPA, 2022) does not adequately capture the lake breeze inland penetration (Abdioskouei & et al, 2019). Use of NOAH LSM does a much better job at capturing the lake breeze inland penetration.

[…]

Modeling performed by USEPA (EPA, 2022) and the LMOS 2017 study (Abdioskouei & et al, 2019) both showed a significant negative bias in predicted ozone concentrations along the Lake Michigan shoreline. LMOS 2017 study researchers/scientists have experimented with increasing anthropogenic VOC emissions and decreasing anthropogenic NOx emissions. These changes to the model emission inventory inputs improved air quality model performance reducing the negative bias. VOC speciation and spatio-temporal release patterns should also be reviewed. This evaluation by the LMOS 2017 participants indicates that the USEPA model choices result in the model being unable to properly reproduce the chemistry of ozone production and the VOC/NOx ratios at the monitors along the Lake Michigan shoreline. These are the same monitors that USEPA now proposes to determine are linked to Missouri emissions in this proposed SIP disapproval.

USEPA's failure to assess and incorporate the peer reviewed studies and scientific data resulting from the LMOS 2017 and utilize the findings from that study to properly model ozone source apportionment is arbitrary and capricious.

[…]

Peer reviewed research conducted utilizing the data collected during the LMOS study in 2017 indicates that Lake Michigan ozone episodes have a significant VOC limited component. In contrast, USEPA claims the 2016v2 air quality modeling conducted for the newly proposed FIP shows that ozone pollution is "largely NOx limited".

Commenter: Midwest Ozone Group

Commenter ID: 30

Docket ID: EPA-R02-OAR-2021-0673, EPA-R03-OAR-2021-0872, EPA-R03-OAR-2021-0873, EPA-R04-OAR-2021-0841, EPA-R05-OAR-2022-0006, EPA-R06-OAR-2021-0801, EPA-R07-OAR-2021-0851

Comment:

Furthermore, to adequately capture the inland penetration of the lake breeze, the LMOS report also cites the need for accurate Lake Michigan water temperatures and correct model physics options. EPA's use of the Pleim-Xiu Land Service Model (LSM) 15 does not adequately capture the lake breeze inland penetration. A review of wind vector observations (from the Meteorological Assimilation Data Ingest System (MADIS) network16) compared to modeled wind vectors on RRF and significantly contributing days at nonattainment monitors highlights the differences in wind direction and speed during many hours of these predicted high ozone episodes.

Response

The EPA disagrees with these comments. While the Lake Michigan Ozone (LMOS) 2019 preliminary report,[38] which describes the analyses of data from the LMOS 2017 field campaign, provides valuable scientific insights into some of the fine-scale meteorological conditions and chemistry that affect the formation and advection of high ozone concentrations onshore from over Lake Michigan, the study was not designed to quantify or evaluate the impacts on ozone exceedances at monitors along the lake from more distant sources in upwind states. For instance, during the 2017 LMOS field campaign there were no upwind aircraft or land-based measurements of ozone and precursor concentrations aloft to quantify transport of pollutants into the Lake Michigan area. Also, the April 2019 report is characterized by the authors as "preliminary", and the report notes that meteorological modeling sensitivity tests are on-going. Regarding the use of the Pleim-Xiu Land Surface Model, there is no quantitative information in the report that compares the performance of this method to the NOAH LSM.[39] In view of the exploratory nature of the on-going analyses of the LMOS field campaign measurements and modeling, it would be inappropriate and impractical for the EPA to change course and change how we develop meteorology for air quality modeling for this final action based on the preliminary information in this report.

Responses to comments on the relevance of local-scale chemical regimes, fine-scale modeling, and model performance for this final action can be found in section 4.2.

Comment

Commenter: City Utilities of Springfield, Missouri

Commenter ID: 13

[38] 2017 Lake Michigan Ozone Study (LMOS) Preliminary Finding Report, April 22, 2019. https://www.ladco.org/wp-content/uploads/Research/LMOS2017/LMOS_LADCO_report_revision_apr2019_v8.pdf

[39] National Centers for Environmental Prediction, Oregon State University, Air Force, Hydrology Lab-NWS (Noah) Land-Surface Model (LSM) User's Guide (May 2011). https://www.jsg.utexas.edu/noah-mp/files/Users_Guide_v0.pdf

Docket ID: EPA-R07-OAR-2021-0851

Comment:

Modeled inputs for Missouri sources should be reviewed and adequately scrutinized.

Response

The EPA has reviewed the base year and projected emissions from Missouri as part of our response to comments on the emissions data the EPA used as input to the air quality modeling at for the proposed SIP disapprovals. As a result of this review, the EPA has made numerous updates to the emissions inventories used as input to the final rule air quality modeling. Information on these updated emissions can be found in the 2016v3 Emissions Modeling TSD, which is in the docket for this final rule, as well as in Section 3 of this RTC and in Section III of the preamble.

Comment

Commenter: City Utilities of Springfield, Missouri

Commenter ID: 09

Docket ID: EPA-R07-OAR-2021-0851

Comment:

EPA's selection of four (4) new modeled receptor sites along the Lakeshore area should have been thoroughly vetted with the MDNR Air Program.

Response

See Section V.A.4. of the preamble for our general response on the use of updated modeling and responses to additional comments on the topic in Section 1.4.

Comment

Commenter: City Utilities of Springfield, Missouri

Commenter ID: 09

Docket ID: EPA-R07-OAR-2021-0851

Comment:

The SIP disapproval, and by extension the EPA's proposed FIP, overestimates MO's "good neighbor" contributions while diminishing localized anthropogenic NOx sources. Recent LADCO studies indicate problems with EPA model "over prediction" which need to be investigated and resolved.

Response

The commenter does not identify or provide any information to support the claim that the EPA "overestimates" Missouri's contribution while diminishing localized anthropogenic NO_X sources. Although this comment did not provide any specific information to identify the "recent LADCO studies," the EPA's response to comments that rely upon the preliminary findings from the 2017 Lake Michigan Ozone Study are provided elsewhere in Section 4.1.1. Comments regarding the substance of the EPA's proposed 2015 ozone Good Neighbor Rule are beyond the scope of this action.

Comment

Commenter: City Utilities of Springfield, Missouri

Commenter ID: 09

Docket ID: EPA-R07-OAR-2021-0851

Comment:

Additional NOx reductions in Missouri and particularly southwest Missouri will not result in improved ambient concentrations in updated model runs at receptors in Wisconsin or along Lake Michigan north of Chicago, Illinois.

Response

We first note that this action does not impose any emissions reduction for sources in Missouri. To the extent that commenters imply that a lack of air quality impacts on downwind receptors from reduced upwind emissions in Missouri is reason to approve the State's SIP, we disagree.

The EPA disagrees that NO_X emissions from Missouri are not impacting receptors along Lake Michigan or that reductions of those emissions in Missouri would not reduce ozone concentrations at those receptors. We first note that this rule does not impose any emissions reduction for sources in Missouri. To the extent that commenters imply that a lack of air quality impacts on downwind receptors from reduced upwind emissions in Missouri is reason to approve the State's SIP, we disagree. To illustrate, the EPA points to the source apportionment modeling to quantify the contributions from EGU emissions in each state in 2026, as described in the air quality modeling TSD used to support the EPA's April 2022 proposed 2015 ozone Good Neighbor Rule. Because emissions are generally projected to be higher in 2023 than 2026, and this analysis is only focused on EGU emissions (rather than all anthropogenic ozone-precursor emissions in Missouri), this analysis provides a helpful indicator of the extent of impact of NO_X emissions from Missouri on other states, including receptors around Lake Michigan. Figure 4-1 shows the spatial field of average contributions from EGUs in Missouri calculated using the contributions on the top-10 ozone concentrations days in each 12x12 km model grid cell. The figure shows that emissions from EGUs in Missouri have widespread regional impacts including locations along Lake Michigan in Wisconsin and Michigan in the areas north of Chicago, Illinois, where receptors have been identified in the EPA's 2011, 2016v2, and 2016v3 based modeling. Based on this analysis, controls on

Missouri EGUs would lower the contribution from these sources and thereby improve ozone concentrations in these areas.

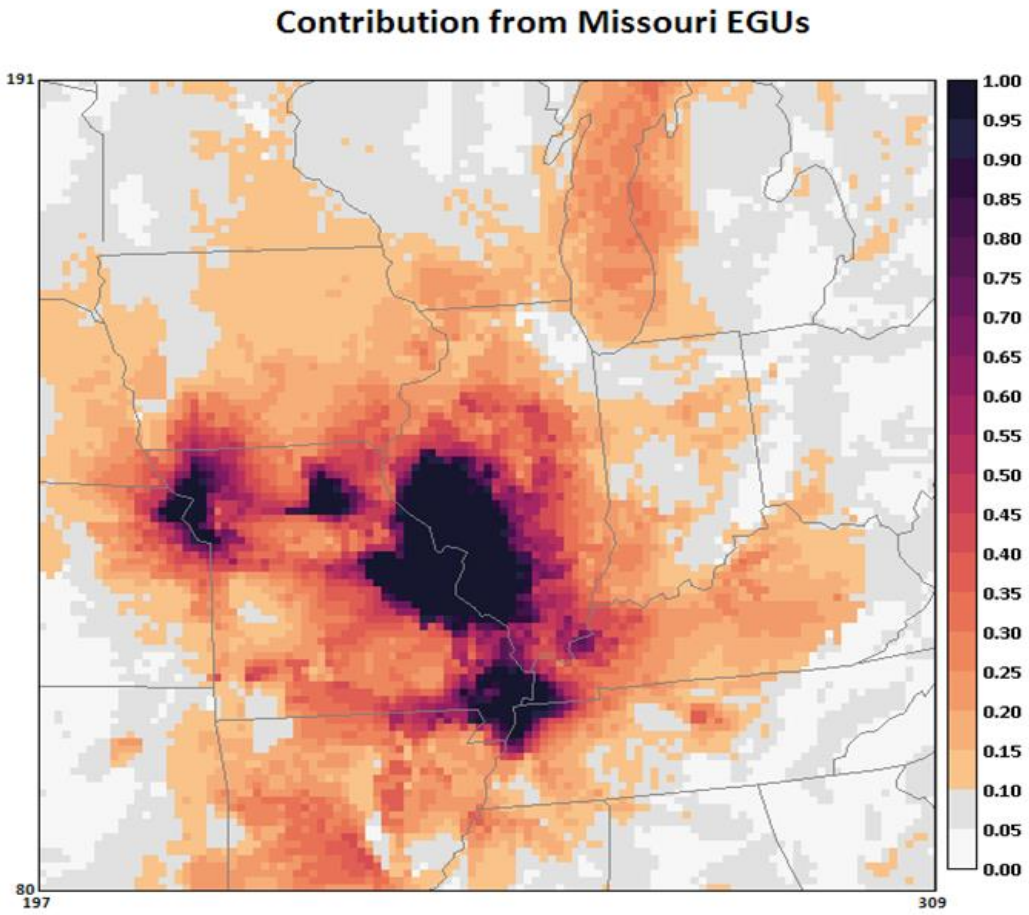

Figure 4-1 Contribution from EGU emissions in Missouri on average for the top-10 ozone concentrations days in 2026

Comment

Commenter: City Utilities of Springfield, Missouri

Commenter ID: 09

Docket ID: EPA-R07-OAR-2021-0851

Comment:

The current model runs show that Missouri's contribution to ground level ozone at these receptors is approximately 1 ppb, which is within the margin of error of the model. Assessment of significance contribution from Missouri that is tied to 1% or 0.7 ppb is beyond the model's capability.

Response

The response to comments on the EPA's use of a 1 percent of the 2015 Ozone NAAQS contribution screening threshold at Step 2 of the 4-step interstate transport framework can be found in Section V of the preamble for this final action and in section 4.3 of the RTC.

Comment

Commenter: City Utilities of Springfield, Missouri

Commenter ID: 09

Docket ID: EPA-R07-OAR-2021-0851

Comment:

Upon further inspection, the design value at each receptor indicates a downward trend (especially during the last two years), even as Missouri utility ozone season NOx emissions increased in 2020 and 2021. This is inconsistent with EPA's presumption that Missouri utilities contribute significantly to nonattainment or interfere with maintenance of the standard. The following table summarizes the most recent available trends.

Monitor Receptors	2016-2018 DV	2017-2019 DV	2018-2020 DV
Kenosha - Water Tower	77	74	74
Chiwaukee Prairie Stateline	79	75	74
Racine - Payne & Dolan	78	74	73
Evanston Water Plant	77	75	75

Response

Firstly, the EPA has not found in this action that Missouri has significant contributions to downwind receptors, rather the EPA identified that Missouri is "linked" above the Step 2 contribution threshold to downwind receptors and thereby is potentially significantly contributing to nonattainment or interference with maintenance, but the state failed to properly analyze emissions reduction opportunities despite its linkage. The EPA's evaluation of Missouri's SIP submission was explained at proposal. 87 FR 9533, 9540-9544 (February 22, 2022). Second, the commenter did not provide Missouri EGU ozone season NO_X emissions in 2020, 2021 or any prior years to support this comment's claim. In response to this comment the EPA analyzed the ozone season EGU NO_X emissions for Missouri available from the EPA Power Sector Programs Progress Report web site.[40] The ozone season EGU NO_X emissions for 2000, 2010, 2020, and 2021 are provided in Table 4-1. These data show that EGU NO_X emissions in Missouri exhibit a long-term downward trend, however that trend has flattened since 2010, with only slightly lower emissions in the 2020 ozone season compared to 2021.

[40] https://www3.epa.gov/airmarkets/progress/reports/index.html

Table 4-1 Ozone Season NOx Emissions from EGUs in Missouri

2000	2010	2020	2021
65,569	25,467	21,234	20,080

This trend alone does rebut the conclusion of the EPA's analysis at Steps 1 and 2 that Missouri is linked to one or more downwind receptors and that additional emissions reductions may be warranted to eliminate "significant contribution." Additional comments on air quality factors are addressed in Section 8.5 (Air Quality Factors).

Comment

Commenter: Midwest Ozone Group

Commenter ID: 30

Docket ID: EPA-R02-OAR-2021-0673, EPA-R03-OAR-2021-0872, EPA-R03-OAR-2021-0873, EPA-R04-OAR-2021-0841, EPA-R05-OAR-2022-0006, EPA-R06-OAR-2021-0801, EPA-R07-OAR-2021-0851

Comment:

EPA's modeling fails to recognize the inadequacy of EPA's approach to addressing downwind nonattainment with the 2015 ozone NAAQS.

Review of historic emission changes and observed design values at linked downwind nonattainment monitors in Connecticut and Wisconsin indicates that controls associated with recently applied regulation and strategies to reduce NOx emissions from upwind EGU sources has nominal impact on ozone formation. As seen in the Figure 1 below, the relative design values at key receptors in 2020 is about the same (ratio near 1.0) compared to 2011. In contrast, EGU NOx emissions (yellow bar) from upwind CSAPR states have been reduced by over 65 percent in this same period and onroad NOx emissions (blue bar) from these states have been reduced by over 60 percent. All other anthropogenic categories (red bar) show a NOx emission reduction of only 27 percent over this period.

[(bar chart in full comment)]
Figure 1. Relative ozone season NOx emission reduction from CSAPR identified upwind states and ozone design values at downwind receptors in Wisconsin and Connecticut between 2011 and 2020.

These data demonstrate that recent control strategies, directed toward regional EGU NOx emissions are not having the intended impact on downwind ozone concentrations. In support of this observation, recent ozone source apportionment modeling of state-source sector contribution by Alpine Geophysics shows small ozone contribution from NOx emissions from EGUs. Given the relatively small contribution of EGU NOx and even smaller contribution of non-EGU NOx to ozone concentrations at relevant monitors predicted by USEPA's modeling platform, additional control of emissions from either sector will have little, if any, impact on ozone concentrations at these downwind receptors.

Several downwind nonattainment monitors in urban areas around Lake Michigan have recently been shown to be largely unresponsive to ozone reduction strategies consisting of regional interstate NOx

control and that high ozone days in the region were predominantly VOC-limited in nature. This was demonstrated in multiple ozone episodes extensively evaluated in the Lake Michigan Air Directors Consortium (LADCO) Lake Michigan Ozone Study (LMOS) 2017 study where ozone precursor measurements indicated relative increases in VOC concentrations with increases in ozone and where biogenic VOC increases outpaced those of anthropogenic VOC.

In contrast to the peer reviewed research resulting from the 2017 LMOS data collection effort, EPA recently documented its support for additional NOx controls in stating that its "review of the portion of the ozone contribution attributable to anthropogenic NOX emissions versus VOC emissions from each linked upwind state leads the Agency to conclude that the vast majority of the downwind air quality areas addressed by the proposed rule under are primarily NOX-limited, rather than VOC-limited." [footnote: 87 Fed. Reg. 20,076 [Proposed FIP]] However, the current situation is that the modeling as conducted does not accurately characterize ozone levels on high ozone days, underpredicting by 10 + ppb, which is a huge error. Other studies indicate that, in order to better match actual conditions, the model needs less NOx and higher windspeeds at lower levels. The model is therefore telling us that *less* NOx means *more* ozone. That also means that, proportionally, the attribution of ozone to out of state NOx predicts a higher impact than is actually occurring.

The modeled VOC and NOx emission tracers in EPA's Anthropogenic Precursor Culpability Assessment (APCA) modeling can give a general indication of the VOC/NOx sensitivity, but EPA assigning definitive numerical values to that sensitivity provides inaccurate projections, especially using APCA that is known to have a bias toward attributing ozone to NOx emitting anthropogenic sources under VOC sensitive conditions. As documented in the CAMx v 7.10 User's Guide, "when ozone formation is due to biogenic VOC and anthropogenic NOx under VOC-limited conditions (a situation where OSAT would attribute ozone production to biogenic VOC), APCA attributes ozone production to the anthropogenic NOx present. Using APCA instead of OSAT results in more ozone formation attributed to anthropogenic NOx sources and less ozone formation attributed to biogenic VOC sources." Here, it is believed that as applied in this case (with biogenic emissions as an uncontrollable source group), EPA has overestimated the efficacy of NOx controls on these receptors as modeled results have a bias toward attributing more ozone formed to NOx emissions than VOC emissions.

Response

The commenter asserts that ozone concentrations at downwind monitoring sites in Wisconsin and Connecticut are not trending downward despite concomitant NO_X emissions reductions in upwind states. In response, the EPA analyzed the ozone trends over the past 10 years (i.e., 2012 to 2021) at 8 downwind monitoring sites located along or near coastal Connecticut and 11 downwind monitoring sites along or near the shoreline of Lake Michigan, including 8 sites in Wisconsin and 3 sites in Michigan. The monitoring sites included in this analysis are identified in Table 4-2. Each of these sites had a 2012 measured design values exceeding the 2015 ozone NAAQS. Table 4-2 also provides the percent *reduction* in ozone design values by site from 2012 to 2021. Contrary to the claim by the commenter, the reductions are not near zero. Overall, the average reductions from 2012 to 2021 at the sites in Connecticut, Wisconsin, and Michigan are 7.3 percent, 13.1 percent, and 11.3 percent, respectively.

Each of these monitoring sites has seen a downward trend in design values over the most recent 10-year period, as illustrated in Figure 4-2, 4-3, and 4-4.

Table 4-2 Percent reduction in design values from 2012 to 2021 at monitoring sites in coastal areas of Connecticut, Wisconsin, and Michigan

Connecticut Monitoring Sites	Percent Reduction in Design Value
090010017 Greenwich	4%
090011123 Danbury	16%
090013007 Stratford	5%
090019003 Westport	6%
090079007 Middlesex	8%
090090027 New Haven	5%
090099002 Madison	6%
090110124 Groton	10%
Average	7%

Wisconsin Monitoring Sites	Percent Reduction in Design Value
550290004 Door Co	10%
550590019 Chiwaukee	12%
550710007 Manitowoc Co	15%
550790010 Milwaukee - S Health Center	15%
550790085 Milwaukee - Bayside	15%
550890008 Milwaukee - Grafton	11%
550890009 Milwaukee - Harrington	9%
551170006 Sheboygan - Kohler Andrae	17%
Average	13%

Michigan Monitoring Sites	Percent Reduction in Design Value
260050003 Allegan Co	11%
260210014 Berrien Co	13%
261210039 Muskegon Co	10%
Average	11%

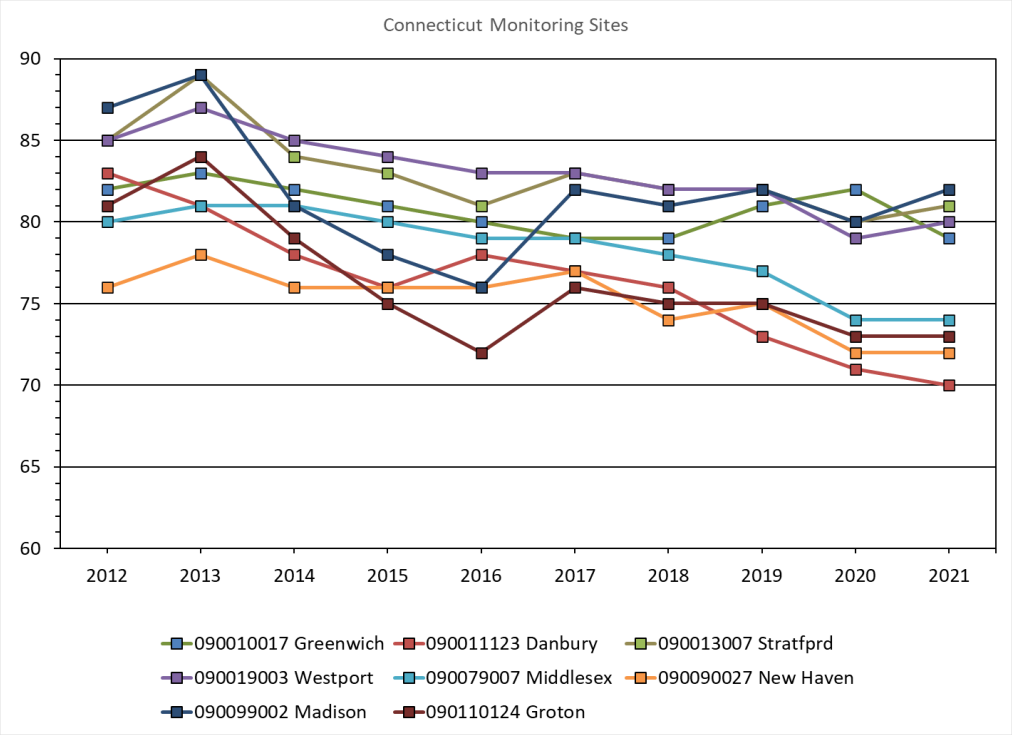

Figure 4-2 Ozone design value trends (ppb) at monitoring sites near coastal Connecticut

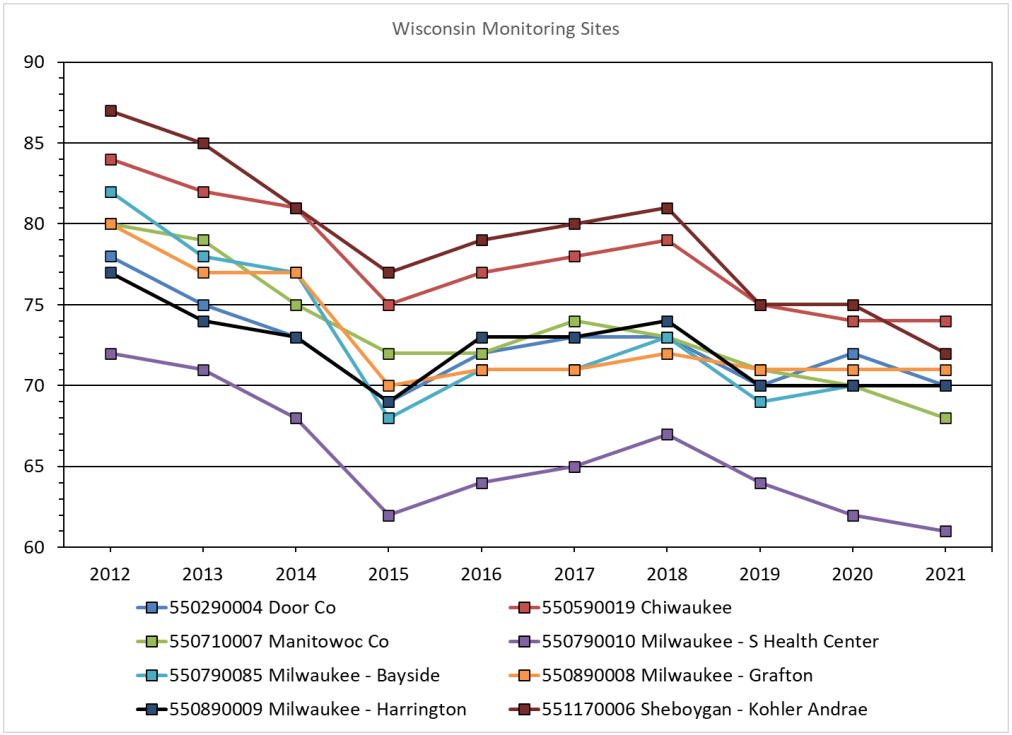

Figure 4-3 Ozone design value trends (ppb) at monitoring sites near the shoreline of Lake Michigan in Wisconsin

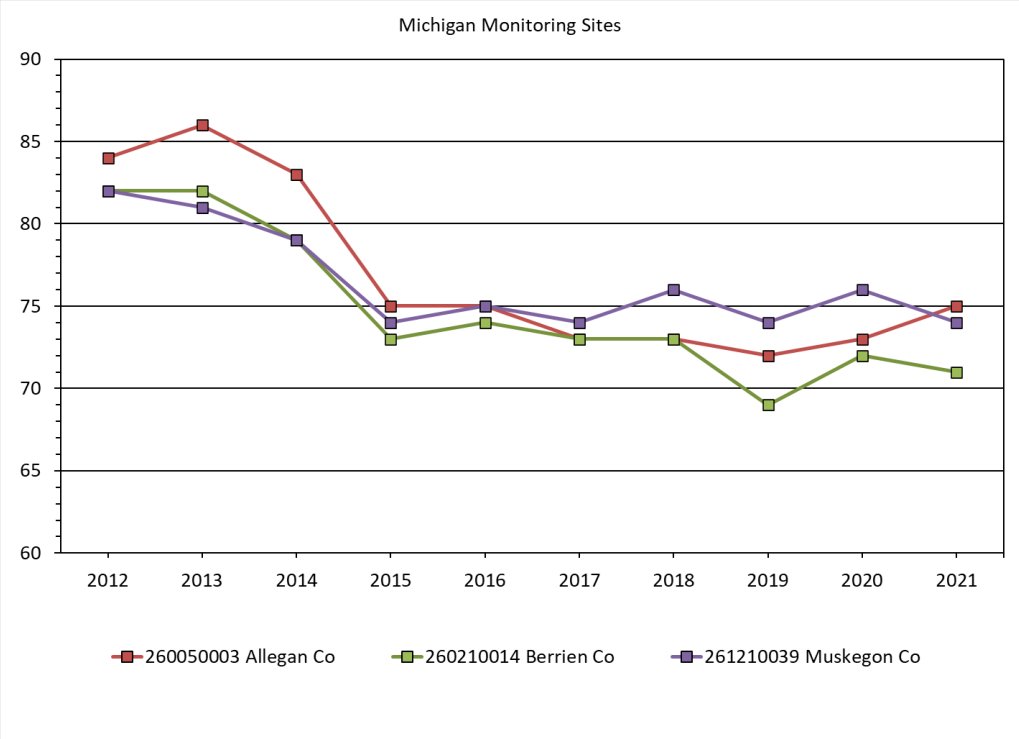

Figure 4-4 Ozone design value trends (ppb) at monitoring sites near the shoreline of Lake Michigan in Michigan

It is important to recognize that trends in ozone design values reflect the combined effects of changes in ozone precursor emissions (i.e., NO_X and VOC) and interannual variability in ozone conducive meteorology. In this regard, we considered the effects of meteorology on ozone concentrations in order to reveal the response of ozone to changes in precursor emissions. A recent published analysis describes a technique to analyze trends in ozone concentrations adjusted for interannual variability in meteorological conditions (Wells, et al.).[41] This technique adjusts monitored maximum daily average 8-hour (MDA8) ozone concentrations for meteorological effects using various statistical and mathematical methods, further explained in the Well, et al. analysis, to enable the analysis of the long-term trends in ozone concentrations due to changes in precursor emissions. Specifically, the technique provides meteorological adjusted MDA8 ozone values (mean, median, 90th percentile, and 98th percentile) for monitors in the continental U.S. Of particular interest is the 98th percentile values as they generally align with 4th High MDA8 monitored ozone concentrations that are used in calculating design values.

The EPA analyzed the "met-adjusted" 98th percentile MDA8 ozone concentrations for the monitoring sites in Table 4-2 for the years 2010 through 2021. In addition, we separately analyzed the met-adjusted 98th percentile data for the 3 nonattainment receptors in Coastal Connecticut (i.e., Greenwich, Madison, Stratford, and Westport). For each of these four areas we calculate the multi-monitoring site average

[41] Wells, B., Dolwick, P., Eder, B., Evangelista, M., Foley, K., Mannshardt, E., et al. (2021). Improved estimation of trends in U.S. ozone concentrations adjusted for interannual variability in meteorological conditions. *Atmospheric Environment*, *248*, 118234.

measured and met-adjusted 98th percentile MDA8 ozone concentrations for each of the years from 2010 through 2021. We then used the resulting yearly average 98th percentile concentrations to calculate three-year running average measured and met-adjusted concentrations. The resulting area-wide average measured and met-adjusted 98th percentile MDA8 ozone concentrations are illustrated in Figures 4-5, 4-6, 4-7, and 4-8. The average 98th percentile trends show that the met-adjusted concentrations have much less interannual variability and exhibit a more consistent downward trend in each of the three areas. Considering that the trends in met-adjusted data provides a clear indication of the decrease in ozone concentrations from reductions in emissions, we disagree with the commenter's contention that recently applied regulation and strategies to reduce NO_X emissions from upwind EGU sources has had a nominal impact on ozone formation.

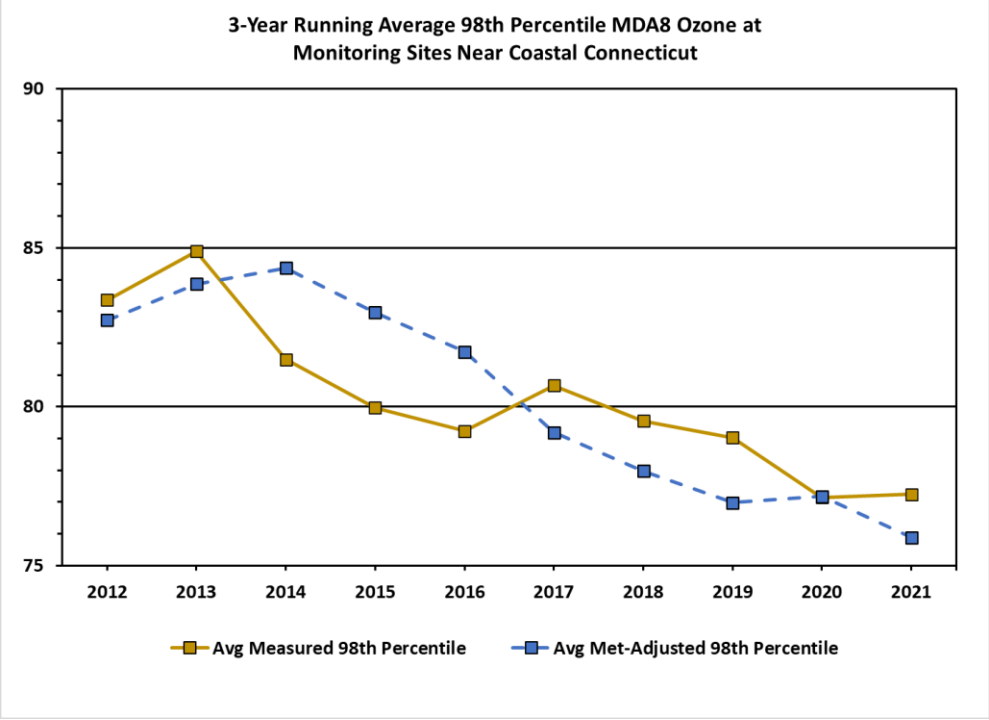

Figure 4-5 Trends in 3-year running average measured and met-adjusted 98th percentile ozone concentrations aggregated for 8 monitoring sites near the shoreline of coastal Connecticut

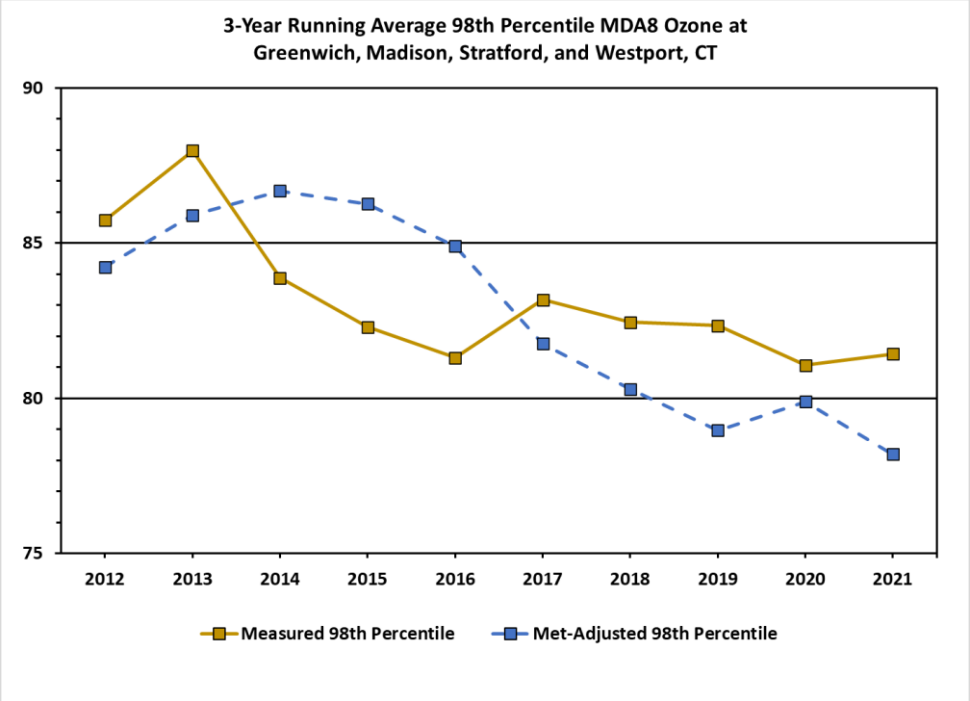

Figure 4-6 Trends in 3-year running average measured and met-adjusted 98th percentile ozone concentrations aggregated for 4 receptor sites along coastal Connecticut

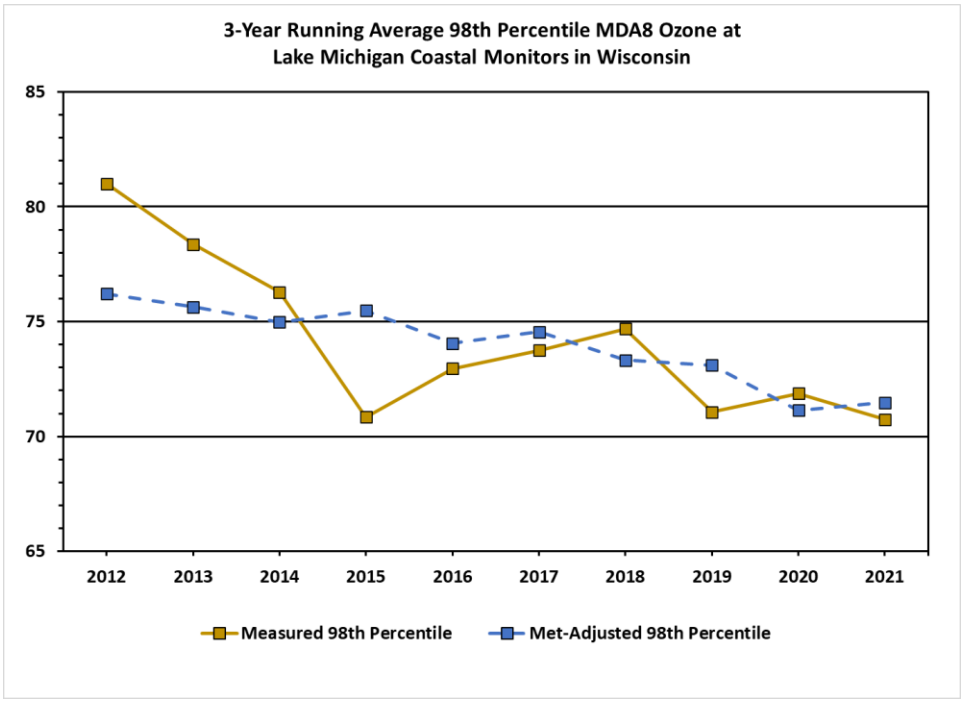

Figure 4-7 Trends in 3-year running average measured and met-adjusted 98th percentile ozone concentrations aggregated for 8 monitoring near the shoreline of Lake Michigan in Wisconsin

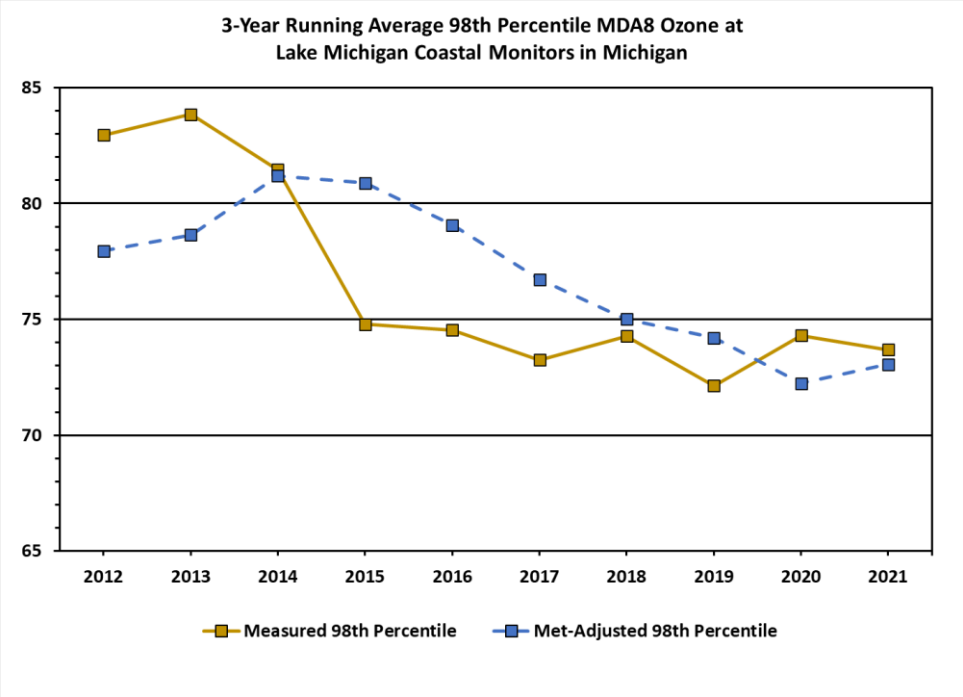

Figure 4-8 Trends in 3-year running average measured and met-adjusted 98th percentile ozone concentrations aggregated for 3 monitoring sites near the shoreline of Lake Michigan in Michigan

The EPA is not requiring any emissions reductions in this action, and comments on the substance of the proposed 2015 ozone Good Neighbor Rule, such as proposed NO_X controls, are beyond the scope of this rulemaking. However, to the extent the commenter is making these arguments to dispute this final action, the EPA disagrees with the commenter's claims that ozone contributions from EGU and non-EGU NO_X emissions are relatively small and that additional controls from either sector would have little, if any, impact on ozone concentrations at downwind receptors in Connecticut and Wisconsin. To illustrate, the EPA points to the source apportionment modeling for EGUs and for non-EGUs by state using the projected emissions for 2026 in 2016v2 (before accounting for proposed controls in the FIP), as described in the Air Quality Modeling Technical Support Document (AQM TSD) for the proposed 2015 ozone Good Neighbor Rule. Tables 4-3 and 4-4 provide the percent of anthropogenic contribution from EGU plus non-EGU emissions for each of the 13 upwind states linked to receptors in Connecticut and Wisconsin, based on the proposed 2015 ozone Good Neighbor Rule air quality modeling for 2026. The data indicate that contributions from EGUs and non-EGUs are 20 to 50 percent of the state total anthropogenic contribution for all but 3 of these states (i.e., Maryland, New Jersey, New York). Since contributions from EGUs and non-EGUs represent a non-trivial portion of the overall state total contribution, we would expect that EGU and non-EGU emissions reductions would provide meaningful improvements in ozone concentrations at downwind receptors. Nonetheless, the EPA reiterates that the proposed 2015 ozone Good Neighbor Rule is not being used as a benchmark for assessing SIP submissions in this action.

Table 4-3 Percent Contributions from Upwind States Linked to Connecticut Receptors

Connecticut	**IN**	**KY**	**MD**	**MI**	**NJ**	**NY**	**OH**	**PA**	**VA**	**WV**
090010017 Greenwich	-	-	-	37%	10%	14%	36%	31%	-	-
090013007 Stratford	36%	50%	18%	37%	11%	15%	37%	32%	21%	39%
090019003 Westport	53%	50%	19%	29%	11%	18%	32%	23%	20%	36%
090099002 Madison	34%	48%	18%	33%	13%	13%	36%	33%	22%	37%

Table 4-4 Percent Contributions from Upwind States Linked to Wisconsin Receptors

Wisconsin	**IL**	**IN**	**MI**	**MO**	**OH**	**TX**
550590019 Chiwaukee Prairie	24%	33%	32%	37%	35%	22%
550590025 Kenosha	15%	55%	29%	26%	36%	21%
551010020 Racine	16%	54%	30%	36%	35%	21%

The commenter refers to the 2019 preliminary report on the Lake Michigan Ozone Study (LMOS) 2017 field campaign which was conducted "to address persistent violations of the ozone NAAQS in the coastal communities along the western shore of Lake Michigan" and claim that downwind nonattainment monitors in urban areas around Lake Michigan have recently been shown to be largely unresponsive to ozone reduction strategies consisting of regional interstate NO_X control and that high ozone days in the region were predominantly VOC-limited in nature.

The EPA disagrees with this comment. First, the 2017 LMOS field study supporting the LMOS 2019 preliminary report focused on local ozone production and photochemical plume transport over the lake and along the shoreline, not the effects of regional transport. While the report concluded that local ozone production at the Zion measurement site near Chicago was VOC limited, ozone production at the measurement site in Sheboygan was NO_X-limited on half of the days with high ozone measurements. Second, the analysis in the report identified the presence of two different *local* photochemical regimens driving ozone production at the Sheboygan LMOS site which indicates the potential for different causes of high observed ozone. The LMOS 2019 preliminary report also states, "On high ozone days, the lowest lakeshore ozone concentrations are typically found in the areas with high emissions of nitrogen oxides (NOx), such as in central Chicago and northwestern Indiana. The highest concentrations are found downwind of the high NOx sources in rural and suburban coastal areas." Third, the LMOS 2019 preliminary report notes that "regional background is characterized by elevated H_2O_2/HNO_3 ratios (used to infer NOx vs VOC-limited conditions), suggestive of NOx-limited ozone production." Thus, the results of the LMOS 2017 field study, as described in the report, field study actually *support* a conclusion that upwind regional NO_X reductions combined with local NO_X and VOC reductions would be an effective approach for reducing high ozone concentrations in this area.

Regarding the comment about "the modeling" underpredicting ozone concentrations by 10+ ppb on high ozone days, it is not clear whether the commenter is referring to modeling performed as part of the LMOS 2017 field campaign or the EPA's 2016v1 or 2016v2 modeling. The EPA has made substantial updates to its 2016-based modeling platform in response to public comments. These updates have significantly improved model performance. The EPA's response to comments on the EPA's model performance can be found in Section III of the preamble, and in Section 4.2 (Model Performance).

The commenter also refers to "[o]ther studies" that the commenter claims indicate that, in order to better match actual conditions (i.e., improve model performance), the model needs less NO_X and higher windspeeds at lower levels. However, the commenter fails to identify these other studies. The commenter concludes from these other studies that "the model is therefore telling us that less NOx means more ozone. That also means that, proportionally, the attribution of ozone to out of state NOx predicts a higher impact than is actually occurring."

Assuming the commenter may be referring to the LMOS preliminary report, the EPA recognizes that this report does describe emissions perturbation air quality model runs which show improved model performance on the June 2, 2017 high ozone day at both the Zion field study site and a monitoring site in Chicago by reducing baseline NO_X emissions by 50 percent and increasing hydrocarbon (HC) emissions by a factor of 5. However, the applicability of these results is very limited and must be viewed with the understanding that the baseline emissions for the LMOS modeling were derived from emissions for 2011, not 2017 - which was when the field study was conducted. As described in the LMOS 2019 preliminary report, the 2011 NEI NO_X emissions were uniformly reduced by 28 percent in an attempt to account for changes in emissions between 2011 and 2017, while VOC emissions from 2011 were used without any adjustment. A comparison of 2011 vs 2017 NEI NO_X and VOC emissions for the three states within the field study modeling domain (i.e., Illinois, Indiana, and Wisconsin) indicates that 2017 NO_X emissions were 38 percent lower, and VOC emissions were 18 percent lower in 2017 compared to 2011. In addition, the relative change in emissions between 2011 and 2017 varied by sector such that a uniform scaling factor applied to 2011 would not necessarily provide a representative estimate of the spatial distribution of emissions in 2017. Thus, the results of the LMOS emissions sensitivity runs are not immediately or inherently relevant to other air quality model applications, and these results, which are dependent on the emissions assumptions for the LMOS modeling and applicable to photochemistry within the local area, do not provide information to judge the attribution or impacts of upwind state NO_X emissions on ozone concentrations at receptors within the Lake Michigan area.

The commenter also claims that the Anthropogenic Precursor Culpability Assessment tool (APCA) in the CAMx model, which the EPA used to quantify upwind state contributions to downwind receptors at Step 2 of the 4-step interstate framework, is biased toward attributing more ozone to NO_X emissions and, as a result, EPA has overestimated the potential efficacy of NO_X controls on these (Lake Michigan area) receptors. The EPA notes that the Agency is not defining "significant contribution" at Step 3 for any state covered by this action. To clarify the issue raised by the commenter, however, the EPA notes that the CAMx Ozone Source Apportionment Tool (OSAT) and APCA use the ratio of the production rates of hydrogen peroxide and nitric acid as the indicator to classify ozone formation as being limited by NO_X or VOC. This ratio is used in OSAT to assign ozone production to sources of NO_X versus sources of VOC depending on the magnitude of this ratio. Ozone formation is classified as being NO_X-limited when the

ratio is less than the 0.35 and VOC limited when the ratio is above this threshold.[42] As stated in the CAMx User's Guide, the APCA tool operates similar to OSAT, except that

> APCA recognizes that certain emissions categories are not controllable (e.g., biogenic emissions) and that apportioning ozone production to these categories does not provide information that is relevant to development of control strategies. To address this, in situations where OSAT would attribute ozone production to non-controllable emissions, APCA re-allocates that ozone production to the controllable precursors that participated in ozone formation with the non-controllable precursor. For example, when ozone formation is due to biogenic VOC and anthropogenic NOx under VOC-limited conditions (a situation where OSAT would attribute ozone production to biogenic VOC), APCA attributes ozone production to the anthropogenic NOx present. Using APCA instead of OSAT results in more ozone formation attributed to anthropogenic NOx sources and less ozone formation attributed to biogenic VOC sources.[43]

Considering the construct and purpose of APCA, as stated by the model developers, EPA does not agree with the comment that using APCA overstates the efficacy of NO_X controls. *See also Wisconsin*, 938 F.3d at 323-24 (upholding use of APCA approach to apportionment).

The EPA's response to comments on model performance and fine scale modeling can be found in Section 4.2 (Model Performance).

4.1.2 Modeling Design - Western States

Comment

Commenter: PacifiCorp (Attachment – Ramboll Evaluation)

Commenter ID: 38

Docket ID: EPA-R08-OAR-2022-0315

Comment:

Missing Emissions in Proposed Transport Modeling Results in Overstating Utah's and Wyoming's Ozone Contribution to Receptors in the DM/NFR NAA

The Proposed [FIP] Transport Rule CAMx modeling failed to include NO_X emissions from lightning (LNOx). This is particularly important in the Front Range area of Colorado where summer thunderstorms regularly occur. Emissions from lightning can be a significant source of NO_X concentrations and resultant ozone formation. Zhang and co-workers (2003) estimate that 5% of the annual and 14% of the summer NO_X emissions in the U.S. comes from lightning. Kang and co-workers (2020) analyzed the effects of

[42] Ramboll Environment and Health, January 2021, *http://www.camx.com*.

[43] Ramboll Environ, 2021. User's Guide Comprehensive Air Quality Model with Extensions version 7.1, www.camx.com. Ramboll Environ International Corporation, Novato, CA.

including LNOx emissions and found they were particularly important for simulating ozone in the U.S. Mountain West States (MWS), which include Colorado, Utah and Wyoming, and found LNOx emissions could increase MDA8 ozone concentrations by up to 17 ppb and concluded "summertime surface-level O3 levels in the MWS region could be significantly influenced by lightning NO_X." (Kang et al., 2020). If naturally occurring LNOx emissions were included in the Proposed [FIP] Transport Rule CAMx modeling that would increase the total MDA8 ozone concentrations at the DM/NFR NAA receptors resulting in a reduced Utah and Wyoming Contributions Factors and lower Utah and Wyoming ozone contributions to 2023 and 2026 ozone design values at the DM/NFR NAA receptors.

Response

Although this comment is directly about the proposed 2015 ozone Good Neighbor Rule, the EPA sees it as relevant for 2016v3 modeling generally. As described in Section III.A.2 of the preamble, the EPA included NO_X emissions from lightning strikes in the 2016v3 emissions inventory used for the air quality modeling of this final action. The method for including these emissions in the modeling is described in the 2016v3 Emissions Modeling TSD which can be found in the docket for this final action.

Comment

Commenter: PacifiCorp (Attachment – Ramboll Evaluation)

Commenter ID: 38

Docket ID: EPA-R08-OAR-2022-0315

Comment:

EPA developed the 2016v2 modeling platform 2016, 2023, 2026 and 2032 model-ready emissions for the CMAQ model and converted them to the CAMx format using a CMAQ2CAMx emissions converter. In doing the CMAQ to CAMx emissions conversion for the Proposed [FIP] Transport Rule CAMx modeling, EPA dropped methane (CH4) emissions and some secondary organic aerosol (SOA) precursor species. The SOA precursors probably have minimal effect on ozone formation but methane acts like a low reactive VOC in ozone formation so in higher concentrations can affect and increase ozone concentrations. Since methane is not classified as a VOC it is not included in many criteria pollutant emissions inventories. Methane is treated two ways in CAMx. First, there is a global background value of 1.75 ppm was used in CAMx v7.1, which was the version in the Proposed [FIP] Transport Rule. Note that the global background methane in CAMx was recently updated to 1.85 ppm in the April 2022 release of CAMx v7.2. Second, there is an excess methane species (ECH4) in the CAMx model that is added to the global background methane in the photochemical mechanism. When running a CMAQ2CAMx converter, the CMAQ methane species is typically mapped to the CAMx ECH4 species, but EPA failed to do this and dropped the CMAQ methane emissions. The Denver-Julesburg (D-J) Basin is a large oil and gas (O&G) development and production area that partly resides in the DM/NFR ozone NAA. The D-J basin O&G sources emit methane emissions that should have been included in the Proposed Transport Rule CAMx modeling. If EPA had included ECH4 emissions in the Proposed Transport Rule CAMx modeling that would have increased the 2023 and 2026 total MDA8 ozone concentrations at receptors in the DM/NFR

NAA thereby reducing the CF and Utah's and Wyoming's ozone contributions to 2023 and 2026 ozone design values at the three nonattainment/maintenance receptors in the DM/NFR NAA.

Response

The EPA disagrees with this comment. First, the comment is speculative. The commenter provided no analyses, data, or references to support their hypothesis that including a higher amount of global background methane or adding methane emissions in EPA's modeling would have increased model predicted ozone concentrations in the Denver area or decreased ozone contributions from Utah or Wyoming to those receptors. Moreover, the commenter fails to acknowledge that the ozone source apportionment tools in the latest version of CAMx are not designed to include methane emissions. Thus, it is not possible to quantify the impact of methane emissions using this model. Furthermore, the commenter is focused on the contribution to local ozone production of methane emissions from oil and gas production in Colorado but fails to consider the contributions from methane emissions from oil and gas production in both Utah and Wyoming. Following the commenter's logic, adding methane emissions in the EPA's modeling would *increase*, not decrease the contributions from these two states to receptors in Denver.

4.2 Model Performance

4.2.1 Model Performance at Lake Michigan

Comments

Commenter: Air Pollution Control Program, Missouri Department of Natural Resources

Commenter ID: 01

Docket ID: EPA-R07-OAR-2021-0851

Comment:

<u>The updated modeling to identify the newly linked receptors is performing outside the acceptable range for model performance and cannot be used as the basis for disapproving Missouri's SIP</u>

Complex photochemical modeling applications must be high-performing and technically sound to make determinations at Step 1 and Step 2 of EPA's framework, where the results are used to justify billions of dollars of new regulatory costs. Without a well-performing model, the technical foundation and basis does not exist for determining: first the need for new control requirements (Steps 1 and 2), and second the stringency level of the new control requirements (Step 3).

[…]

While the updated modeling has resolved all of the linkages that Missouri was required to analyze at step 2 in our SIP submission, the updated modeling also identified four new receptors to which Missouri

is linked at Step 2. Figure 1, displays these four newly identified receptors that Missouri is linked to in the updated modeling. While EPA's model is not performing within one percent in any region of the country, as may very well be needed to justify the use of a one percent threshold at Step 2, the model is not even performing within well-establish acceptable ranges in the only region of the country (Upper Midwest) where Missouri is still linked to problem receptors in the updated modeling. All four of the newly identified receptors are located near the shoreline of Lake Michigan (one in Chicago, IL and three in Wisconsin). While EPA's model performance evaluation shows that on a nationwide basis, it meets the established acceptable criteria for model performance, in Missouri's case there is only one region of the country where there are linked receptors at Step 2, and the model performs the worst in this region and outside the acceptable range, as discussed below.

[…]

The acceptable ranges for photochemical model performance are outlined in the 2017 document titled *Recommendations on statistics and benchmarks to assess photochemical model performance*. The document includes the following recommended benchmarks for model performance statistics for MDA8 levels for ozone:

• Normal mean bias (NMB) goal: less than or equal to ±5 percent;

• NMB criteria: less than or equal to ±15 percent;

• Normal mean error (NME) goal: less than or equal to ±15 percent; and

• NME criteria: less than or equal to ±25 percent.

In January of 2022, EPA released a document to accompany the updated modeling titled *Air Quality Modeling for the 2016v2 Emissions Platform Technical Support Document*. Table A-1 of this document [available in full comment] provides the NBE and the NME associated with the updated modeling for all the climate regions of the country. In the Upper Midwest, the NMB for all days with MDA8 above 60 ppb is -19.1 percent and the NME for these days is 19.5 percent. This shows that for this region of the country the model is performing outside the both the goal and acceptable criteria for NMB and outside the goal but within the acceptable criteria for NME. In addition, in EPA's document titled *CAMx 2016v2 MDA8 O3 Model Performance Stats by Site*, it shows that the model is also severely underperforming for the four specific receptors linked to Missouri in the updated modeling. The NMB at the Cook County, IL receptor is -14.50 percent with an NME of 15.20 percent. The NMBs at the two Kenosha County, WI receptors are -24.36 percent and -18.94 percent with NMEs of 25.29 percent and 18.94 percent. The NMB for the Racine County, WI receptor is -23.49 percent with an NME of 24.16 percent. These values are all outside established model performance goals, and the model is performing outside the acceptable range at each receptor with respect to NMB (except for the Illinois receptor where the NMB is within 0.5 percent of the acceptable criteria limit). With a model that is so severely underperforming at the only receptors where Missouri is linked, it cannot be acceptable to use the modeling results as the technical foundation to establish linkages at Step 2, which will result in the imposition of billions of dollars of control costs for Missouri sources.

Commenter: Ameren Missouri

Commenter ID: 05

Docket ID: EPA-R07-OAR-2021-0851

Comment:

5. The modeling used to determine Missouri's "significant contribution" to nonattainment in USEPA's step 2 is shown by USEPA's own data that it cannot accurately predict ozone concentrations at the monitors critical to the Missouri SIP. This inaccuracy is significant enough that use of the model without changes to link Missouri emissions to nonattainment is arbitrary and capricious.

[Paraphrase: Modeling is too inaccurate to reliably establish a link based on an evaluation of the model outputs for the monitors critical to the MO SIP on days used to establish the relative contribution factor.

The performance of USEPA's modeling at the Lake Michigan monitors is so poor, that USEPA cannot rely on the results based on an Alpine assessment of modeling files.]9. USEPA's use of the RCF and RRF to determine MO's significant contribution compounds the modeling inaccuracies

The USEPA's post processing of model data to estimate future year design values as well as state contributions to those future years utilizes two values calculated based on model outputs for various future modeled days. The first is the Relative Reduction Factor (RRF) which the modeling TSD for the FIP describes as the fractional change in the modeled MDA8 ozone between the base and future year. The RRF is calculated as the average of the ratios of the future year modeled MDA8 ozone concentrations to the modeled top 10 base year (2016) MDA8 ozone concentrations. As detailed earlier, at monitor locations along land water interfaces like the Lake Michigan shoreline, the USEPA CTM has difficulty reproducing observed ozone concentration in the base year (2016). The inability to reproduce the actual observed concentrations in the base year is an error that is caried forward in the models calculation future year MDA8 ozone concentrations. The error can be estimated based on the normalized mean error of the base year modeled MDA8 ozone concentrations of the days used to calculate the RRF. The RRF which is the average ratio of the two modeled concentrations on the top 10 modeled base year concentrations has the same relative error. The RRF is then multiplied by the actual observed ozone design value for the base year (2016) to estimate the future year design value for that monitor location. The error in the design value calculation is equal to the normalized mean error for the RRF calculation.

Similarly, the Relative Contribution Factor (RCF) for a state is the average of the ratio of the modeled future year Ozone Source Apportionment Tool (OSAT) output for a state by the total modeled concentration for the top 10 future year modeled days. The error in the RCF calculation is similar to the RRF error. The RCF error can be estimated based on the normalized mean error of the base year modeled MDA8 ozone concentrations of the days used to calculate the RCF.

When USEPA then multiplies the RCF by the future year design value (which is based on the RRF calculation) it is compounding (multiplying) the error in the RCF by the error in the RRF. The result is that the error in the estimate of a state's contribution is larger than the sum of the errors for the RCF and the RRF.

Commenter: Association of Electric Companies of Texas, BCCA Appeal Group, Texas Chemical Council and Texas Oil & Gas Association

Commenter ID: 11

Docket ID: EPA-R06-OAR-2021-0801

Comment:

EPA's modeling underlying its assessment of TCEQ'S modeling is erroneous, arbitrary and capricious.

EPA's 2016v2 modeling platform demonstrates systematic bias and error in predicting ozone in the Chicago and Lake Michigan areas and is not an adequate tool to establish the purported linkage between Texas and the Chicago areas that EPA identified. EPA's 2016v2 modeling does not pass well-accepted performance standards in air quality planning, and cannot be the basis for a reasoned decision on Texas's SIP. The performance of EPA's 2016v2 modeling in the upper Midwest disqualifies it as a predictor of future design values and contributions at these sites. As noted in the attached analysis prepared by Sonoma Technology, EPA's modeling platform has dramatic bias and errors as a predictor of ozone in the Midwest. Such inaccuracies affect EPA's Relative Response Factor ("RRF"), which is then used to project future year design values, and can result in the model mistaking the response to emissions changes. In other words, a model with this level of bias and error tends to portray more controls as being needed to demonstrate modeled attainment than are actually necessary to attain or maintain the NAAQS. This is just one potential consequence of relying on a model with these performance problems. The directionality of the effects cannot be known, and thus regulatory decisions cannot reliably be based on results from such modeling. Because the model is performing so poorly, it is unreliable to determine whether any controls are necessary to address interstate transport between Texas and the upper Midwest. As the CAA only requires that a Good Neighbor SIP contain "adequate provisions" to prohibit significant contributions to nonattainment or interference with maintenance of the NAAQS, such inaccuracies in EPA's model point to overcontrol of upwind sources. Such a result is contrary to the CAA and cannot support disapproval of Texas's SIP.

Commenter: Association of Electric Companies of Texas, BCCA Appeal Group, Texas Chemical Council and Texas Oil & Gas Association (Attachment – Sonoma Technology)

Commenter ID: 11

Docket ID: EPA-R06-OAR-2021-0801

Comment:

The Water Tower Site in Kenosha shows that the model is not capturing the highest observed MDA8 through most of the ozone season. For example, the second-highest ozone day of the season is underestimated by approximately 30 ppb, and the model entirely missed the early season multi-day ozone episode in late-May. The Chicago-Alsip site shows a similar inability of the model to capture high ozone, but mostly in the months of May and June when a large number of the highest MDA8 ozone occur. Additionally, the model fails to capture the highest observed MDA8 concentration of the ozone

season and underestimates this August day by approximately 20 ppb. At the Chicago-Evanston site, the model also inaccurately predicts high ozone episodes in May and June.

The inaccuracies at these key sites in EPA's 2016v2 modeling demonstrate a systematic performance problem with the 2016v2 platform at these sites in the Chicago and Lake Michigan areas, especially during the spring. This is an important issue given that these monitors are linked to emissions from up to 6 upwind states in the proposed rulemaking. EPA concludes that the "days with high modeled concentrations are generally also days with high measured concentrations…", but this conclusion is less meaningful if the model is inaccurately predicting the MDA8 ozone on those days at these sites. The average of the top 10 MDA8 modeled ozone days is used to calculate the Relative Response Factor (RRF), which is used to project base design values to the future year. But days with modeled MDA8 ozone ≤ 60 ppb, which could be erroneously missed due to the substantial bias in EPA's model, would be excluded. Thus, for example, the ozone event at Kenosha – Water Tower in late May would be missed in the RRF calculations. As emphasized in EPA's attainment modeling guidance, the use of the model in a relative sense helps to mitigate the effect of model biases on individual days. However, negative bias in the model's ozone performance can still contribute to a bias in the RRF (Hu et al., 2021). If the RRF is biased high, the model will underpredict the response to emissions changes, and thus more emission controls would be needed to demonstrate modeled attainment. This is just one potential consequence of relying on a model with these performance problems. The magnitude and directionality of biases in the RRF (and thus the predicted future-year design values) were not evaluated for this modeling platform, but regulatory decisions cannot reliably be based on modeling results from sites in the upper Midwest that are demonstrating a systematic performance problem. Hu et al. (2021) also emphasize the importance of good model performance (particularly having a low bias) in air quality management.

In attainment planning, performance "benchmarks" are used to provide an appropriate and consistent context to assess general confidence in the modeling results and for judging the suitability of a model for a particular application. EPA does not recommend using these benchmarks as a "pass/fail" indicator, but statistical results that are outside the range of the benchmarks often indicate performance issues that call into question the suitability of the model and thus should be addressed. According to EPA, about two-thirds of other recent peer-reviewed and regulatory air quality modeling applications had NMB less than ±15% and NME less than 25% for ozone. This defines a benchmark of reasonable ozone model performance. At several upper Midwest ozone monitoring sites, the bias (NMB) is substantially greater than ±15% (and as large as -24.4%) and the error (NME) approaches 25%. In terms of ozone concentrations, the mean bias is as large as -17.1 ppb at the Kenosha Water Tower Site, which is substantial given that the mean observed ozone was 70.1 on days when MDA8 ozone was 60 ppb or greater.

In summary, EPA's 2016v2 modeling platform performs poorly at sites in the upper Midwest that are linked to Texas in the proposed disapproval. The 2016v2 platform, as presented in the proposal documentation, does not reliably predict ozone formation at these upper Midwest monitors.

Figure 1. [available in full comment]

High ozone episodes in the Great Lakes region are strongly tied to the complex lake-land breeze circulation patterns that influence the formation and transport of ozone in the region, especially at monitoring sites within a few kilometers of the lakeshore. As a result, photochemical grid models have

difficulties reproducing high ozone events in this region (Qin et al., 2019). A further complexity is that the Chicago area is one of the few regions in the United States where ozone is still characterized at times by "VOC-limited" chemistry, which can dampen the responsiveness of ozone to NOx emission controls (Koplitz et al., 2021). EPA's 2016v2 modeling for the proposed Transport Rule was conducted using a 12 km by 12 km spatial grid resolution. Spatial resolution of the underlying model may be one reason why EPA's 2016v2 platform performed poorly on high ozone days in the Great Lakes region. A finer resolution grid would be needed to fully resolve the atmospheric features in these complex regions (LADCO, 2017).

Other modeling platforms [such as TCEQ's 2012 based modeling] show better model performance than EPA's 2016v2 modeling.

Other attainment modeling platforms have outperformed EPA's 2016v2 platform in the Lake Michigan region. As an example, Table 4 shows the model performance of MDA8 ozone ≥ 60 ppb for TCEQ's 2012-based platform, used in TCEQ's Transport SIP, at the sites in the region that EPA linked to Texas using its 2016 platform. The TCEQ platform predictions show better model performance across the sites that EPA linked to Texas. NMB for these sites using the TCEQ platform ranges from -4.59 to 2.78% and NME ranges from 10.22% to 14.48%. At the Kenosha – Water Tower site specifically, the TCEQ platform shows less NMB by almost a factor of 5 (-4.59% TCEQ vs. -24.36% EPA) and less NME by a factor of 2 (11.22% TCEQ vs. 25.29% EPA).

Table 4. [available in full comment]

Commenter: Evergy, Inc.

Commenter ID: 21

Docket ID: EPA-R07-OAR-2021-0851

Comment:

Another major concern is underperformance of the updated modeling that links Missouri to the newly identified receptors. This model is not sufficiently accurate for the Upper Midwest when compared to the goal and acceptable criteria for the normal mean bias. Similarly, the model exceeds the goal for normal mean error outlined in the acceptable ranges for photochemical model performance in the 2017 document titled *Recommendations on statistics and benchmarks to assess photochemical model performance*. This underperformance has immense consequence when considering that a small shift in the model to move above or below the 1 percent of the 2015 ozone standard has an impact equivalent to millions of dollars on Missouri residents.

Commenter: Oklahoma Department of Environmental Quality

Commenter ID: 37

Docket ID: EPA-R06-OAR-2021-0801

Comment:

The table below further exemplifies the problem of modeling sensitivities. It contains data for the ozone monitors located in the Illinois portion of the Chicago, Illinois-Indiana-Wisconsin Nonattainment Area. Note that of the 12 ozone monitors, only one Site 170310032 exceeds the 1% NAAQS threshold of 0.7 ppb. This site barely exceeded the contribution threshold, measuring at 0.75 ppb. This measurement could be misleading since Site 170310032 is located less than 0.2 miles from Lake Michigan. This calls into question the accuracy of the contribution as the location could be greatly influencing the results as models often have difficulties near water-land boundaries. Furthermore, the average of the Oklahoma impact for the 12 monitors equates to 0.41 ppb, well under the 1% limit.

[Table is available in full comment]

Commenter: The Luminant Companies

Commenter ID: 44

Docket ID: EPA-R06-OAR-2021-0801

Comment:

Specifically, as explained in the analysis prepared by Sonoma Technology that is attached to the comments submitted by the Association of Electric Companies of Texas, BCCA Appeal Group, Texas Chemical Council, and Texas Oil & Gas Association, EPA's 2016v2 modeling has a significant bias for receptors in the Ohio Valley and Midwest, including Illinois and Wisconsin, which makes it unreliable for purposes of projecting future design values in these areas. This bias would in turn impact EPA's Relative Response Factor ("RRF") and can cause the model to underpredict impacts from changes in emissions. Essentially, as applied to Texas, EPA's model would require emission reductions beyond those necessary to achieve attainment in downwind states because the biased RRF makes it appear that additional controls are needed when, in fact, they are not.

This constitutes unlawful overcontrol with respect to Texas and cannot form the basis for disapproval of Texas's SIP. In contrast, the modeling platform used by TCEQ has been shown to have better model performance and be more accurate for receptors in the Ohio Valley and Midwest and particularly the Lake Michigan region. Accordingly, EPA provides no technically justified basis to second-guess TCEQ's model in favor of its own flawed modeling.

Commenter: Midwest Ozone Group

Commenter ID: 30

Docket ID: EPA-R02-OAR-2021-0673, EPA-R03-OAR-2021-0872, EPA-R03-OAR-2021-0873, EPA-R04-OAR-2021-0841, EPA-R05-OAR-2022-0006, EPA-R06-OAR-2021-0801, EPA-R07-OAR-2021-0851

Comment:

The problem monitors in Connecticut, Wisconsin, and Illinois are not properly characterized by EPA's modeling since they are located at the interface between land and water.

EPA's ozone attainment modeling guidance states that:

> "[t]he most important factor to consider when establishing grid cell size is model response to emissions controls. Analysis of ambient data, sensitivity modeling, and past modeling results can be used to evaluate the expected response to emissions controls at various horizontal resolutions for both ozone and PM2.5 and regional haze. If model response is expected to be different (and presumably more accurate) at higher resolution, then higher resolution modeling should be considered. If model response is expected to be similar at both high and low(er) resolution, then high resolution modeling may not be necessary. *The use of grid resolution finer than 12 km would generally be more appropriate for areas with a combination of complex meteorology, strong gradients in emissions sources, and/or land-water interfaces in or near the nonattainment area(s)*" (emphasis added)

EPA's modeling in support of the proposed disapprovals simulated a national domain using a 12km grid resolution domain wide. While this makes running a national, regional simulation easier from a technical perspective, it neglects the important issue of the complex meteorology and/or land-water interfaces in or near the nonattainment or maintenance monitors of interest. Indeed, EPA's choice of a 12 km grid is an arbitrary choice in contravention of its own guidance when modeling Illinois, Wisconsin, and Connecticut monitors because these monitors are at landwater interfaces.

Photochemical modeling along coastlines is complex for two reasons. First, the temperature gradients along land/water interfaces can lead to localized on-shore/off-shore flows; and secondly, the photochemical model formulation spreads the emissions in a grid cell throughout the full grid volume of the cell.

Figures 4 and 5 present two unique areas in the eastern U.S. that is challenged by these complex meteorologic issues at land-water interfaces. For each monitor associated with this proposed rule and located in Connecticut along the Long Island Sound (Figure 4) and in Wisconsin and Illinois along the shore of Lake Michigan (Figure 5), EPA's published model performance evaluation (MPE) metrics for ozone have been reviewed on a day specific basis.

[image in full comment]

Figure 4. Long Island Sound shoreline monitors located on land/water interface.

[image in full comment]

Figure 5. Lake Michigan shoreline monitors located on land/water interface.

Studies indicate that air quality forecast models typically predict large summertime ozone abundances over water relative to land and that meteorology around Lake Michigan and the Long Island Sound is distinctly unique; both shortcomings warrant individualized attention and a finer grid resolution to best explore actual conditions.

The 3x3 neighborhood of grid cells used in determining the design values of the relative response factor (RRF) at land-water interface monitors extends into the noted water bodies. Under current guidance, the top ten modeled days within this 3x3 matrix are used in determining this RRF for each monitor with any cell identified as 50 percent or more water, except for cells including monitors, which are omitted from the calculations.

When the individual days selected for RRF calculation are reviewed at many of these monitors, it is seen that the performance of the model to replicate observed concentrations are outside of comparable acceptable ranges. Table 1 below provides a list of top 10 days at the Kenosha monitor in Wisconsin and comparisons of daily modeled maximum daily average 8-hour ozone concentrations (highlighted in green) and observations on the same date in 2016. These are the dates selected in EPA's modeling to represent highest modeled days used in estimating future year design values.

As can be seen in these Tables, several days selected for RRF calculation have modeled ozone concentrations that fall outside of normally acceptable normalized bias (NBias) boundaries (±15%), either because of over (positive bias) or under (negative bias) predictions compared to observed concentrations on those days. In fact, at the Kenosha monitor example below, four of the ten selected days fall outside of the ±15% bias metric (highlighted in orange in the Table below).

[Table 1 available in full comment]

The LMOS 2017 study also shows that for Lake Michigan coastal monitors the air quality model even at a 4 km resolution does not simulate the proper timing and structure of the land/lake breeze or the inland penetration of elevated ozone concentrations. A review of this LMOS study states "To reproduce the timing and magnitude of the ozone time series at coastal monitors, ozone production over the lake must be correctly simulated; furthermore, details of the lake breeze must be accurate—–timing, horizontal extent, and vertical structure." Based on recommendations from the LMOS 2017 study research team, a horizontal resolution of at most 1.3 km is required to reasonably resolve the complex meteorology of the air/water interface for the great lakes and coastal ocean areas. The LMOS 2017 Study researchers believe that a 1.3 km grid spacing will assist in the resolution of the large ozone concentration gradients that often occur along the shoreline as well as the inland penetration of the lake breeze circulation.

Similar results are seen at the example Fairfield, Connecticut nonattainment monitor (Table 2) where again four of the ten days are outside of the ±15% normalized bias range; including the top modeled day at the receptor (modeled value of 91.64 ppb and an observed value of 67.13 ppb).

[Table 2 available in full comment]

As these examples show, days where modeled ozone was predicted at concentrations differing up to ± 24 ppb are being used to estimate future year ozone concentrations and to make determinations of nonattainment, maintenance, and significant contribution from upwind sources.

[…]

On many days with relatively simple meteorology, EPA-developed wind fields using the Weather Research and Forecasting (WRF) Model agree with the MADIS observed winds. However, the modeled winds have strong disagreement with the observed meteorology on June 15, July 7, July 27 and August

4, 2016, the four days when the CAMx model predicted the highest ozone concentrations and are thus used in estimating RRFs and future year ozone design values. The following presents an example on August 4, 2016, the day with the highest model estimated MDA8 ozone concentrations at the Kenosha, Wisconsin monitor.

In Figures 6 through 8 below, the black wind vectors are the wind fields used in the CAMx model. For clarity only every third grid cell is presented. The red vectors are the hourly observed wind vectors from the MADIS archive. The hourly results from 1200 CDT through 1600 CDT are presented in these Figures. The observations clearly show a broad persistent land to lake flow long the Wisconsin shoreline while the model shows a persistent lake to land flow in this same region during this same period. For this timeframe, when the model is estimating the highest ozone for the ozone season at this receptor, the model has the winds flowing from the lake to the shore while the observations are winds flowing from the shore to the lake.

[Figures 6-10 available in full comment]

In addition to grid size resolution and complex meteorology issues, modeling performed by EPA17 and the LMOS 2017 study both showed a negative bias in predicted ozone concentrations in the Lake Michigan region. LMOS 2017 study researchers have experimented with increasing anthropogenic VOC emissions and decreasing anthropogenic NOx emissions. These emission changes improved air quality model performance reducing the negative bias. VOC speciation and spatio-temporal release patterns should also be reviewed. This evaluation by the LMOS 2017 research scientists indicates there are significant errors in the quantity and speciation of the VOC/NOx emissions used in the EPA's air quality modeling platform to characterize state contribution to ozone in Step 2 of EPA's analyses linking these states to critical nonattainment monitors.

For these reasons, EPA must consider finer grid resolution modeling over the Lake Michigan domain to adequately capture ozone formation and significant contribution at receptors located on complex land-water interfaces because model evaluation shows that the model fails to adequately characterize ozone production at these monitors. Absent a wholesale revision of EPA's modeling protocol, MOG believes that EPA's use of modeling with poor performance at critical monitors amounts to an arbitrary and capricious decision when used to establish linkages under Step 2.

Commenter: Xcel Energy

Commenter ID: 52

Docket ID: EPA-R05-OAR-2022-0006

Comment:

Minnesota Pollution Control Agency (MPCA) 2015 Ozone NAAQS State Disapproval Comments:

Xcel Energy endorses the comments filed by the Minnesota Pollution Control Agency (MPCA) in response to EPA's SIP disapproval for Minnesota. In addition to EPA not including all the NOx emission reductions taking place within the state, the EPA erred in the approach taken modeling the influence

Lake Michigan has on receptor sites located near the air/water shoreline boundaries, which was factored into the modeling performed by Lake Michigan Air Directors Consortium (LADCO) supporting Minnesota's SIP submittal. We understand that other parties, such as Midwest Ozone Group (MOG), will provide more detail on this matter in their comments.

Commenter: Xcel Energy

Commenter ID: 52

Docket ID: EPA-R06-OAR-2021-0801

Comment:

Texas Commission on Environmental Quality (TCEQ) 2015 Ozone NAAQS State Disapproval Comments:

Xcel Energy endorses the comments filed by the Texas Commission on Environmental Quality (TCEQ) in response to EPA's SIP disapproval for Texas. The EPA erred in the approach taken to modeling the influence Lake Michigan has on the receptor sites located near the air/water shoreline boundaries in Cook County Illinois, Kenosha, and Racine Wisconsin, which was factored into the modeling performed by both TCEQ, further supported by comments filed by the Association of Electric Companies of Texas (AECT) and the associated modeling analysis performed by Sonoma Technology.

Response

The EPA responds to comments regarding model performance in both Section 4.2.1 and Section 4.2.2.

Comments included here in Section 4.2.1. raise issues besides model performance. Comments on the proposed FIP are out of the scope of this action. The EPA is not requiring any controls in this action. Other topics raised by these comments are addressed in the following sections of this RTC document: 1.4 (Use of Updated Modeling), 4.1.1 (Modeling Design – Lake Michigan), 5 (Updates to Modeling and Changes in Linkages), 9.2 (Over-Control), 10.3 (Cooperative Federalism and the EPA's Authority), and 11.6 (Economic Impacts).

4.2.2 Model Performance at Western States

Comments

Commenter: Nevada Division of Environmental Protection

Commenter ID: 33

Docket ID: EPA-R09-OAR-2022-0138

Comment:

As stated in NDEP's June 21, 2022 comment letter (attached) on the Proposed Federal Implementation Plan for Regional Ozone Transport for the 2015 Ozone NAAQS EPA-HQ-OAR-2021-0668 (Proposed FIP), the Proposed FIP fails to consider Nevada's (and Western States) uniqueness, including local industry, topography (including high elevations and variations), geography, population, meteorology, vast open range landscapes, and wildfires.

Commenter: PacifiCorp

Commenter ID: 38

Docket ID: EPA-R08-OAR-2022-0315

Comment:

The Colorado ozone SIP modeling provides more reliable and accurate 2023 and 2026 ozone projections than the new and problematic modeling EPA relied on to disapprove Utah's SIP for several reasons:

1. The Colorado SIP CAMx modeling was tailored to simulate ozone in the relevant Denver Metro area. EPA's modeling, on the other hand, was national modeling not optimized to simulate ozone in the relevant, western mountain area.

2. The Colorado SIP CAMx modeling used a higher grid resolution (4-km) while EPA's modeling relies on a national-scale coarse 12-km grid resolution that is not as effective at replicating the complicated meteorology in the Rocky Mountain region due, in part, to poor representation of terrain features that impact ozone formation and transport.

3. The Colorado SIP CAMx modeling was a better match for observed ozone. EPA's CAMx modeling has an ozone underestimation bias that falls short of EPA's own requirements.

4. The higher resolution grid size and meteorology of the Colorado ozone SIP CAMx modeling produces higher ozone due to local emissions. This also results in more ozone reductions from the local emission controls (e.g., mobile sources) and thus lower projected future-year ozone levels at the affected monitors than EPA's CAMx modeling.

Commenter: PacifiCorp (Attachment – Ramboll Evaluation)

Commenter ID: 38

Docket ID: EPA-R08-OAR-2022-0315

Comment:

4.5.1 Effects of Higher Resolution 4-km Grid in DM/NFR SIP Modeling

[…] In order to properly simulate ozone formation in the DM/NFR NAA, a high resolution grid cell size needs to be used. All of the Denver ozone SIPs in the past have used a 4-km grid resolution to simulate the correct meteorology and chemistry and resolve the urban plumes so that the model has a chance to

reproduce the highest observed ozone concentrations. Use of a coarse 12-km grid will instantaneously disperse emissions across a grid cell volume that is almost an order of magnitude larger than when a 4-km grid size is used making it difficult for the model to reproduce the high observed ozone peaks due to overdiluting the ozone concentrations and its precursors.

Note that use of a coarse 12-km grid resolution will also reduce ozone peaks due to local sources in the Upwind State due to failure to resolve urban and other highly concentrated ozone precursor emission sources (e.g., industrial facilities, O&G, etc.) and their resultant ozone plumes. However, by the time the ozone and precursor concentrations from the Upwind State travel 100s of miles to the receptor in the downwind state the "plumes" will be many 12-km grid cells across so that the effects of the coarse resolution on underestimating ozone concentrations at the receptor in the downwind state due to emissions in the Upwind State is less important.

[…]

4.5.2 Effects of Higher Resolved Meteorological Inputs on Ozone Concentrations in the DM/NFR Ozone SIP Modeling

Obtaining the correct depiction of meteorology is critically important for simulating ozone formation in the complex terrain conditions of the DM/NFR NAA. […]

4.5.2.1 Conceptual Model of Ozone Formation in the DM/NFR NAA

The DM/NFR 2020 Serious ozone SIP for the 2008 ozone NAAQS (RAQC and CDPHE, 2020) included a report "Conceptual Model of High Ozone for the Denver Metro/North Front Range" (Ramboll, 2020). The highest ozone concentrations in the DM/NFR NAA are due to a combination of ozone transport and locally generated ozone under specific meteorological regimes that favor ozone photochemistry and limited dispersion. Reddy and Pfister (2016) explored the relationships between meteorology and ozone in the Rocky Mountain states and concluded that increases in upper-level high pressure strength "lead to high July ozone in much of the western U.S., particularly in areas of elevated terrain near urban sources with high emissions of NO2 and other ozone precursors." In addition to bringing warmer temperatures, upper-level ridges in this region reduce westerly winds at the surface and aloft to allow cyclic terrain-driven circulations that reduces transport away from sources. This includes the formation of thermally driven upslope flows along the Front Range in the Denver NAA where ozone and ozone precursors are transported up the slopes during the day and can return at night to lower elevations in large scale basin drainage (downslope) flows. Upper-level ridges can also increase background ozone concentrations within the ridge. Ozone and NO_X concentrations build locally, and deeper vertical mixing in this region provides a potential mechanism for recapture of ozone in layers aloft (e.g., from transport or remnants of the previous days ozone) that are mixed down to the surface.

The three key elements of a conceptual model for high-concentration ozone episodes along Colorado's Front Range are:

1. The presence of an upper-level high pressure system or ridge.

2. Reduced westerly winds, especially during the day.

3. Thermally-driven upslope flow towards the Continental Divide during the day and downslope drainage flows into the Platte Valley at night. This diurnal cycle of winds enhances the potential for the accumulation of ozone precursors and ozone within the region, especially when this cyclic pattern recurs over a period of several days.

4.5.2.2 Requirements for WRF Meteorological Model to Reproduce DM/NFR NAA Ozone Conceptual Model

In order for the Weather Research and Forecasting (WRF) meteorological model to reproduce the meteorological conditions that lead to the highest ozone concentrations in the Denver NAA it needs to be able to simulate the high pressure system/ridge and the thermally driven slope flows. Getting the high pressure system or ridge correctly requires using analysis fields as inputs into WRF that reflects their presence that are used in the WRF initial and boundary conditions (IC/BC) and four-dimensional data assimilation (FDDA) inputs. Such analysis fields that contain the presence of the high pressure/ridges include the North American Mesoscale Forecast System (NAM_{29}) analysis fields that were used in the WRF simulations to develop the CAMx 2016 meteorological inputs for both the DM/NFR 2023 Severe/Moderate ozone SIP and Proposed Transport Rule CAMx 2016 modeling platforms.

For WRF to obtain an accurate depiction of the thermally driven slope flows requires the terrain inputs for the model to be representative of actual terrain. Use of a 12-km grid resolution smooths the terrain and greatly reduces the terrain heights and the elevation differences of the “slopes” of the terrain along the Front Range. The slope between western Denver County to the continental divide spans approximately 7,800 feet in elevation using a 4-km grid resolution but only approximately 4,500 feet in elevation change using the 12-km grid resolution. Thus, WRF’s ability to reproduce the thermally driven daytime upslope and nighttime downslope flows will be severely compromised using a 12-km grid resolution and simulated much more accurately using a 4-km grid resolution because a 12-km grid resolution fails to resolve the terrain in the region.

The higher resolution complex terrain in the 4-km data, and in reality, will also affect transport of ozone and precursors from Wyoming to the Denver NAA differently than if a 12-km grid resolution is used. The higher variable wind fields from more highly resolved terrain features will disperse ozone and precursors from Wyoming as they are transported to the Denver NAA than if a 12-km grid resolution is used that smooths the actual terrain features.

[…]

4.5.3 Comparison of CAMx Ozone Model Performance and Its Implications

[Ramboll] conducted an ozone model performance of the CAMx 2016 base case simulation used in the Proposed Transport Rule and compared it to the ozone performance of the DM/NFR 2023 Severe/Moderate ozone SIP CAMx S17 2016 base case simulation. At this time, only limited publicly available information is available on ozone model performance for the DM/NFR ozone SIP CAMx S17 2016 base case from presentations given at the May 18, 2022 RAQC Ozone Modeling Forum.

Ozone model performance goals and criteria have been established by Emery and co-workers (2016) for the Normalized Mean Bias (NMB) and Normalized Mean Error (NME) model performance metrics. The

NMB ozone model performance goal is ≤±5% and the NMB ozone performance criterion is ≤±15%. The NME ozone model performance goal and criterion are ≤15% and ≤25%, respectively.

[…]

The DM/NFR ozone SIP CAMx 2016 base case ozone performance is clearly performing better than the EPA Proposed Transport Rule CAMx 2016 base case at all four sites in the DM/NFR NAA. The EPA CAMx 2016 base case exhibits an ozone underestimation bias, which was expected given the coarse 12-km grid resolution used. At CHAT, the Proposed Transport Rule CAMx 2016 base case has an NMB underestimation of -7.6% while the DM/NFR 2023 Severe/Moderate ozone SIP has essentially zero bias (0.1%). The underestimation bias in the Proposed Transport Rule CAMx 2016 base case is even greater at the RFNO (-8.1%), NREL (-8.4%) and FTCW (-12.5%) sites while the DM/NFR ozone SIP CAMx 2016 base case bias achieves the bias performance goal by a wide margin.

[…]

Ozone attainment/nonattainment is determined by the ozone design value (DV) that is defined as the three-year average of the fourth highest maximum daily average 8-hour (MDA8) ozone concentrations. Thus, how well the model simulates the four highest observed MDA8 ozone concentrations is an important model performance attribute. The highest observed MDA8 ozone concentration at Chatfield during 2016 was 86.6 ppb that was underestimated by the Proposed Transport Rule CAMx 2016 base case (74.9 ppb) by 11.7 ppb (-13.5%). Whereas, the DM/NFR ozone SIP CAMx 2016 base case highest estimated ozone concentration at Chatfield (86.4) matched the observed value (86.6 ppb) almost exactly (within 0.2 ppb or 0.0% difference). The fourth highest observed MDA8 ozone concentration at Chatfield (78.0 ppb) is underestimated by the Proposed Transport Rule CAMx 2016 base case (71.9 ppb) by 6.1 ppb (-7.8%), while the DM/NFR ozone SIP CAMx base case fourth highest ozone at Chatfield (78.1 ppb) matches the observed fourth highest ozone very well (0.1 ppb and 0.0% difference).[…] The ozone under-prediction bias of the Proposed Transport Rule CAMx 2016 base case at RFNO is even greater than at CHAT with the four highest observed ozone concentrations underestimated by -11% to -19%. The DM/NFR ozone SIP CAMx 2016 base case also underestimates the four highest observed MDA8 ozone concentrations at RFNO but the underestimation bias (-4% to -10%) is approximately half of the Proposed Transport Rule underestimation bias. For example, the observed fourth highest MDA8 ozone at RFNO (79.5%) is underestimated by the Proposed Transport Rule by -11% (70.9 ppb) but is only underestimated by the DM/NFR ozone SIP CAMx 2016 base case by -4% (76.3 ppb), which achieves the ≤±5% ozone performance goal.

[…]

4.6 Conclusions On Future Year Projected Ozone Design Values at DM/NFR Nonattainment/Maintenance Receptors

Based on scientific technical arguments, the coarse 12-km grid resolution used in the Proposed Transport Rule CAMx modeling will likely overstate future year design value projections. This was confirmed by the DM/NFR 2023 Severe/Moderate ozone SIP CAMx 4-km grid resolution modeling that produced lower future year projected design values resulting in Chatfield and Rocky Flats North no longer being nonattainment/maintenance receptors in 2026.

[…]

Utah was linked to three receptors in the DM/NFR NAA (CHAT, RFNO and NREL). Two of these receptors (CHAT and RFNO) become attainment receptors based on the refined DM/NFR Severe/Moderate ozone SIP CAMx modeling, although NREL receptor remained a nonattainment receptor in the DM/NFR ozone SIP CAMx modeling (see Table 4-5 [available in full comment]). However, Utah has a 0.90 ppb ozone contribution to the NREL receptor in 2026 and, as discussed in Chapter 7, this contribution is not a statistically significant contribution to an ozone design value. This argues that Utah should also not be subject to the 2026 EGU and non-EGU controls in the Proposed Transport Rule.

5.2 Coarse Grid Resolution Will Understate Ozone Contributions due to Local Sources Resulting in Overstating Utah's and Wyoming's Ozone Contribution at DM/NFR NAA Receptors

For all the reasons presented in Chapter 4 of this report, the use of the coarse 12-km grid resolution in in the Proposed Transport Rule CAMx modeling will dilute the ozone and precursor concentrations in the DM/NFR ozone NAA resulting in an understatement of modeled ozone concentrations due to local sources than if a finer grid cell size was used (e.g., 4-km). With higher modeled ozone concentrations due to local sources at receptors in the DM/NFR NAA that would increase the total MDA8 ozone concentrations and reduce the Utah and Wyoming CF resulting in reductions in Utah's and Wyoming's contribution to 2023 and 2026 ozone design values at DM/NFR NAA receptors.

Commenter: Utah Division of Air Quality

Commenter ID: 47

Docket ID: EPA-R08-OAR-2022-0315

Comment:

The UDAQ has provided extensive comments on the substantial limitations and problems with the modeling used to justify the inclusion of Utah in the proposed FIP. These limitations are significant and include inappropriate modeling resolution, inadequate modeling of atmospheric transport, significant negative modeling bias, and a likely misrepresentation of the atmospheric chemical regime as a result of issues with the inventories used.

Response

Commenters describe the "conceptual model" of local scale meteorological conditions that are typically associated with high ozone concentrations measured in areas around Lake Michigan and in western states where the EPA has identified nonattainment and/or maintenance-only receptors in 2023. Commenters claim that the EPA's projected design values and contributions for receptors in these areas are flawed because the horizontal resolution of the EPA's modeling (i.e., 12 km) is too coarse to properly resolve the emissions and meteorological conditions that lead to locally high ozone concentrations associated with the land/water interface in coastal areas and in complex terrain. In this regard, commenters argue that EPA must use "fine scale modeling" (i.e., 4 km resolution or 1 km resolution) to

properly simulate ozone concentrations and the response to emissions changes, and thus provide credible projections of design values and contributions for such areas. Commenters support their claim by pointing to model performance statistics from the EPA's modeling for 2016, which commenters say is biased low compared to the corresponding measured ozone concentrations at receptors in Coastal Connecticut, the Lake Michigan area, and in Colorado and Utah. Commenters then allege that the modeled response to emissions reductions (i.e., Relative Response Factors - RRFs) is correlated with base year model bias. That is, the commenters contend that the low-bias in the 2016 base year modeling implies that the model's response to the emissions reductions between 2016 and 2023 is also underpredicted. The commenters state that underpredicting model response results in design values in 2023 that are too high and, therefore, the projected design values *overstate* the magnitude and extent of the ozone problem in 2023. Commenters support these claims by noting that fine scale modeling performed for Colorado and the Lake Michigan area has less bias and error and produces lower projected design values compared to the EPA's 12 km modeling. The commenters then allege that the error associated with underprediction in the base year is compounded in the calculation of future year contributions such that the contribution metric values calculated by the EPA overstate the magnitude of contributions from upwind states. Finally, noting that projected design values and contributions are calculated based on the top 10 modeled concentrations days, commenters say that the EPA must discard from these calculations any days that do not meet certain model performance benchmarks.

The EPA agrees that fine-scale meteorological conditions associated with the land water interface coupled with the spatial distribution of ozone precursor emissions presents a challenge for modeling ozone formation and urban scale transport that affect monitoring sites in Coastal Connecticut and near the shoreline of Lake Michigan. The EPA also agrees that modeling for areas located in complex terrain, such as Denver and Salt Lake City present a similar challenge.

As described below, the EPA disagrees with commenter's assertion that fine scale modeling is required in order to provide scientifically sound projections of ozone design values and contributions to assess interstate ozone transport for this action. In addition, the EPA disagrees that model performance benchmarks cited by commenters should be applied when identifying which days to use when calculating projected design values and contributions. The EPA also disagrees with the notion that the magnitude of model response is correlated with base year model bias and error such that modeling that underpredicted measured concentrations also underpredicts model response.

Regarding comments on the use of fine scale modeling with respect to model performance, as stated in the EPA's modeling guidance, the use of fine scale modeling should be considered for the purpose of identifying local control strategies that will provide for attainment of the NAAQS in such areas. The guidance goes on to say "If model response is expected to be different (and presumably more accurate) at higher resolution, then higher resolution modeling should be considered. If model response is expected to be similar at both high and low(er) resolution, then high resolution modeling may not be necessary."

To gauge the adequacy of model performance for regulatory applications, the EPA's modeling guidance recommends comparing model performance statistics from the base year model run (e.g., 2016) to model performance from other recent state-of-the-science model applications. Specifically, the EPA guidance recommends that "air agencies compare their evaluation results against similar modeling

exercises to ensure that the model performance approximates the quality of other applications. Recent literature reviews (Simon et al, 2012; Emery et al., 2017)[44,45] summarize photochemical model performance for applications published in the peer-reviewed literature between 2006 and 2015. These reviews may serve as a resource for identifying typical model performance for state of the science modeling applications." The EPA has followed this guidance in evaluating the adequacy of model performance for the air quality modeling performed for the proposal and final transport actions.

The model performance criteria for MDA8 ozone concentrations recommended by Emery et al., are in the table below.

Table 4-5 Model Performance Criteria for MDA8 Ozone Concentrations

Metric	Criteria
Normalized Mean Bias (NMB)	≤ ± 15%
Normalized Mean Error (NME)	< 25%
Correlation Coefficient (r)	> 0.5

The EPA notes that the commenter's complaints were based on model performance for the 2016v2 modeling that EPA used for the proposed disapprovals. As described in the 2016v3 Emissions Modeling TSD and the Final Action AQM TSD, for this final action the EPA is using the 2016v3 platform which includes numerous updates made in response to comments on the proposal. Model performance for ozone with the 2016v3 platform is substantially improved compared to model performance with 2016v2 (see the Final Action AQM TSD for details on modeling performance for 2016v3).

In this RTC we present a comparison of model performance and projected design values at receptors in 2023 based on the EPA's 2016v3 modeling to the corresponding model performance and projected design values from fine scale modeling covering the Lake Michigan area, Coastal Connecticut, and Denver.

The tables below provide model performance statistics based on CAMx modeling performed by LADCO,[46] the New York State Department of Conservation (NYS DEC)[47] and Ramboll for the Denver

[44] Simon et al Simon, H., Baker, K. R., Phillips, S, (2012), Compilation and interpretation of photochemical model performance statistics published between 2006 and 2012, *Atmos Environ*, 61, 124-139.

[45] Emery, C., Liu, z., Russell, A.G., Odman, M.T., Yarwood, G., Kumar, N., (2017), Recommendations on Statistics and Benchmarks to Assess Photochemical Model Performance, Journal of the Air and Waste Management Association, 67:5, 582-598*,* doi:/10.1080/10962247.2016.1265027.

[46] Attainment Demonstration Modeling for the 2015 Ozone National Ambient Air Quality Standard Technical Support Document. Lake Michigan Air Directors Consortium. September 21, 2022.

[47] Yum, J., E. Zalewsky, Y. Tian, and K. Civerolo. Comparison of the CAMx performance of 2016 based modeling platforms at 12 km and 4 km resolution. 20th Annual CMAS Conference, November 01-05, 2021.

Northern Front Range ozone implementation plan[48] along with performance statistics based on the EPA's 2016v3 modeling.[49] Normalized mean bias and normalized mean error statistics are used to compare model performance from the EPA's 12 km modeling to 4 km modeling from these other model applications.[50] Note that data from LADCO and Ramboll are based on "two-way nested" modeling in which a fine-scale grid is embedded within a coarse scale regional domain during the model simulation. With this configuration, there are no independent predictions at 12 km. The NYS DEC performed independent modeling at 4 km and at 12 km. Note also that each group calculated statistics for different time periods during the ozone season. The LADCO statistics are based on days with measured ozone concentrations above 60 ppb, whereas the Ramboll statistics are based on data for all days. Both sets of statistics (i.e., with and without using a cut-off of 60 ppb) are available for the NYS DEC modeling. In all cases, the EPA 2016v3 model performance statistics were calculated for the same days that were used by LADCO, NYS DEC, and Ramboll for their applications. Finally, the differences in model performance and projected design values between the EPA's 12 km modeling and the 4 km modeling from LADCO, NYS DEC, and Ramboll cannot be solely attributable to differences in grid resolution. Other factors, such as differences in 2016 and 2023 emissions used in each model application also have some effects on the results. In this respect, the NYS DEC modeling may provide the most consistent comparison between 4 km and 12 km modeling since both sets of modeling relied on similar emissions inputs.

Table 4-6 Model Performance Statistics Based on LADCO's Modeling and EPA's 2016v3 Modeling

			Statistics for April – September (Percent)			
			Normalized Mean Bias ***Days Above 60 ppb***		**Normalized Mean Error** ***Days Above 60 ppb***	
Site ID	**State**	**Receptor**	**LADCO 4 km**	**EPA 12 km**	**LADCO 4 km**	**EPA 12 km**
170310001	IL	Alsip	-12.0	0.2	12.0	10.9
170314201	IL	Northbrook	-14.5	-3.9	14.5	10.5
170317002	IL	Evanston	-1.8	-0.9	13.8	9.6
550590019	WI	Chiwaukee	-11.1	-12.9	15.5	16.9
551010020	WI	Racine	-7.9	-10.9	14.1	15.2
551170006	WI	Sheboygan	-11.4	-11.6	11.4	13.2

[48] Morris, R., T. Shah, M. Rodriguez, C-J Chien, and P. Vennam. Air Quality Technical Support Document (AQTSD) for the Denver Metro/North Front Range 2023 Severe/Moderate Ozone State Implementation Plan. Ramboll. August 2022.

[49] For this analysis, the EPA leveraged existing, readily available, model performance statistics based on modeling by LADCO, the NYS DEC, and Ramboll for these receptors. In this regard, the data from these organizations may, in some cases, reflect preliminary modeling.

[50] The normalized mean bias is calculated by first subtracting the modeled values from the corresponding observed values paired in space and time. Then, the sum of these differences is divided by the sum of the observed concentrations. The normalized mean error is calculated in a similar manner except that the sum of the absolute value of the differences is divided by the sum of the observations. Both normalized mean bias and normalized mean error are expressed as a percent.

Table 4-7 Model Performance Statistics Based on NYS DEC's Modeling and EPA's 2016v3 Modeling (Percent)

			Statistics for May – June (Percent)					
			Normalized Mean Bias *Days Above 60 ppb*			Normalized Mean Error *Days Above 60 ppb*		
Site ID	**State**	**Receptor**	**NYS DEC 4 km**	**NYS DEC 12 km**	**EPA 12 km**	**NYS DEC 4 km**	**NYS DEC 12 km**	**EPA 12 km**
90010017	CT	Greenwich	-12.8	-6.5	-7.3	14.7	12.7	8.3
90013007	CT	Stratford	-7.5	-8.9	-1.9	9.7	15.7	13.1
90019003	CT	Westport	-12.0	-10.0	-3.8	12.2	10.7	7.9
90099002	CT	Madison	-5.0	-7.1	-3.3	7.2	8.7	7.3

Table 4-8 Model Performance Statistics Based on NYS DEC's Modeling and EPA's 2016v3 Modeling (July-August)

			Statistics for July - August					
			Normalized Mean Bias *Days Above 60 ppb*			Normalized Mean Error *Days Above 60 ppb*		
Site ID	**State**	**Receptor**	**NYS DEC 4 km**	**NYS DEC 12 km**	**EPA 12 km**	**NYS DEC 4 km**	**NYS DEC 12 km**	**EPA 12 km**
90010017	CT	Greenwich	-8.1	-3.3	-9.8	11.8	12.8	11.9
90013007	CT	Stratford	-9.7	-5.2	-0.3	15.6	12.2	12.4
90019003	CT	Westport	-13.0	-3.5	-0.1	17.1	13.2	12.7
90099002	CT	Madison	-7.2	-3.5	0.4	14.4	10.8	9.8

Table 4-9 Model Performance Statistics Based on NYS DEC's Modeling and EPA's 2016v3 Modeling (May-June)

			Statistics for May - June					
			Normalized Mean Bias *All Days (no "ppb" cut-off)*			Normalized Mean Error *All Days (no "ppb" cut-off)*		
Site ID	**State**	**Receptor**	**NYS DEC 4 km**	**NYS DEC 12 km**	**EPA 12 km**	**NYS DEC 4 km**	**NYS DEC 12 km**	**EPA 12 km**
90010017	CT	Greenwich	-5.8	0.0	-0.5	12.4	13.6	12.7
90013007	CT	Stratford	-10.4	-9.2	-5.5	14.9	17.3	15.4
90019003	CT	Westport	-13.0	-5.8	-2.9	17.2	15.3	12.2
90099002	CT	Madison	-5.0	-4.2	-1.2	9.7	10.8	9.4

Table 4-10 Model Performance Statistics Based on Ramboll's Modeling and EPA's 2016v3 Modeling

			Statistics for June 1 - August 20			
			Normalized Mean Bias *All Days (no "ppb" cut-off)*		Normalized Mean Error *All Days (no "ppb" cut-off)*	
Site ID	**State**	**Name**	**Denver 4 km**	**EPA 12 km**	**Denver 4 km**	**EPA 12 km**
80350004	CO	Chatfield	0.1	3.8	9.2	10.1
80590006	CO	Rocky Flats	-0.4	2.1	8.8	9.4
80590011	CO	NREL	-2.0	1.8	8.6	10.7
80690011	CO	Ft Collins	-2.5	-3.0	7.8	9.2

Comparing model performance using 12 km versus 4 km modeling does not support the commenter's contention that model performance using fine scale, 4 km modeling results in model performance superior to what is obtained with 12 km modeling, even at receptors where the magnitude of ozone concentrations are highly affected by complex meteorological conditions. The data in the above tables show that normalized mean bias and normalized mean error statistics for both the 4 km and 12 km modeling are well within the range of the performance criteria recommended by Emery et al., and endorsed by the commenters at nearly all of these receptors. At some of the receptors in Coastal Connecticut and near the shoreline of Lake Michigan there is notably less bias in the EPA's 12 km modeling compared to 4 km modeling at the same receptor. At the NREL and Ft Collins receptors in Denver, the bias with 12 km modeling and 4 km modeling are similar. At the other two receptors in Denver, model bias is less at 4 km. The results of this analysis indicate that model bias and error in the EPA's 2016v3 12 km modeling is comparable, overall, to model performance using 4 km modeling.

Regarding comments on the use of fine scale modeling with respect to projected design values, the EPA compared projected design values for 2023 from the 4 km modeling performed by LADCO, the NYS DEC, and Ramboll to the EPA's projections for 2023 based on the 2016v3 modeling. These data are provided in the tables below. The data from LADCO and Ramboll are based on the application of the "3 x 3" approach for projecting design values. The NYS DEC provided two sets of projected design values; one set based on the "3 x 3" approach and a second set based on the "no water, except monitor grid cell" approach. To maintain consistency in this analysis, all the design values in the tables below, including the EPA's 12 km modeling, are based on the "3 x 3" approach.

The comparison of design values based on 12 km modeling to the corresponding design values based on 4 km modeling indicates that projected average DVs from the EPA 12km modeling are similar to those from the LADCO 4 km modeling and that both the LADCO and the EPA modeling identify the same set of monitors that have projected average design values that exceed the NAAQS (i.e., Chiwaukee and Sheboygan). A comparison of 12 km and 4 km design values for receptors in Coastal Connecticut shows that 3 of the 4 Connecticut receptors have lower projected 2023 average DVs in the NYC DEC 12km modeling compared to 4 km resolution. At these receptors the EPA 12 km 2023 average design values are lower than both the 4 km and 12km based NYS DEC projected average DVs at all the Connecticut

receptors. Finally, comparing the 4 km Ramboll modeling to the 12 km EPA modeling for receptors in Colorado indicates that the projected average design values are very similar (within 1 ppb at 3 of the 4 receptors). The data show here refute the claims by commenters that 12 km modeling will lead to systematically higher projected DVs compared to modeling simulations conducted at 4 km resolution which could result in a greater potential for overcontrol using 12 km modeling.

Table 4-11 Comparison of Design Values for 2023 from LADCO's 4 km Modeling and EPA's 2016v3 Modeling

					LADCO 4 km	EPA 12 km	
Site ID	**State**	**Receptor**	**2021 DV**	**Preliminary 2022 DV**	**2023 Average DV**	**2023 Average DV**	**2023 Maximum DV**
170310001	IL	Alsip	71	72	67.5	68.2	71.9
170314201	IL	Northbrook	74	74	68.0	68.4	71.8
170317002	IL	Evanston	73	74	68.9	69.1	71.9
550590019	WI	Chiwaukee	74	75	71.6	72.0	73.0
551010020	WI	Racine	73	75	69.5	70.0	71.8
551170006	WI	Sheboygan	72	75	75.1	73.0	73.9

Table 4-12 Comparison of Design Values for 2023 from NYS DEC's 4 km Modeling and EPA's 2016v3 Modeling

					NYS DEC 4 km	NYS DEC 12 km	EPA 12 km	
Site ID	**State**	**Receptor**	**2021 DV**	**Preliminary 2022 DV**	**2023 Average DV**	**2023 Average DV**	**2023 Average DV**	**2023 Maximum DV**
090010017	CT	Greenwich	79	77	75.2	73.9	72.0	72.6
090013007	CT	Stratford	81	81	77.1	76.0	73.3	74.2
090019003	CT	Westport	80	80	77.9	78.6	74.3	74.5
090099002	CT	Madison	82	79	73.7	72.0	71.2	73.3

Table 4-13 Comparison of Design Values for 2023 from Ramboll's 4 km Modeling and EPA's 2016v3 Modeling

					Ramboll 4 km	EPA 12 km	
Site ID	**State**	**Receptor**	**2021 DV**	**Preliminary 2022 DV[51]**	**2023 Average DV**	**2023 Average DV**	**2023 Maximum DV**
80350004	CO	Chatfield	83	83	70.6	71.3	71.9
80590006	CO	Rocky Flats	81	83	70.3	72.8	73.5
80590011	CO	NREL	83	84	73.4	73.5	74.1
80690011	CO	Ft Collins	77	77	70.4	70.9	72.1

Regarding commenter's assertion that days with model performance outside the range of the performance criteria recommended by Emery, et al., should be removed from the data set used to calculate projected design values and contributions, the EPA finds this approach to be inconsistent with the intended use of these criteria. These benchmarks are based on model performance aggregated across multiple monitors and many days. In this respect, it is expected that even in model applications that meet these benchmarks there would be some monitor/days with model bias and error that is outside the range of the benchmarks. It is therefore not appropriate to use these benchmarks to screen individual sites or days. Specifically, in Emery, et al., the authors "do not make recommendations for model performance benchmarks for individual monitors, recognizing that the importance of model performance at a specific site is application-specific." In addition, the authors state "For ozone, we recommend calculating statistics over temporal scales of roughly 1 week (an episode), not to exceed 1 month."

Even though the EPA disagrees with commenter's assertion to "throw out" specific days at individual monitors for which model performance does not meet the criteria, out of an abundance of caution, the EPA performed a sensitivity analysis for selected receptors in which the projected 2023 design values and contributions were recalculated after removing individual days that fell outside the Emery et al., criteria for normalized mean bias and/or normalized mean error. The EPA chose receptors in Coastal Connecticut, the Lake Michigan area, Dallas, and Denver for this analysis. The specific receptors included in this sensitivity analysis are Stratford, Connecticut, Chicago/Evanston, Illinois, Dallas/Denton, Texas, and Denver/Rocky Flats, Colorado.

In this sensitivity analysis the EPA first examined the normalized bias and normalized error on each day to determine if model performance on the days used to project design values and/or calculations fell outside the range of the criteria. Days with performance outside the range of the criteria were removed from the calculation of project design values and contributions. Next, using data for the remaining days, the EPA recalculated Relative Response Factors (RRFs) which were then applied to the 2016-centered base period average and maximum design value to re-projected the 2023 design values. The EPA then recalculated the Relative Contribution Factor for each upwind state to downwind receptor combination.

[51] It should be noted that both EPA and Ramboll modeling of 2023 project ozone levels substantially lower than recent measured ozone levels at the four Colorado receptors, which are all well above the 2015 ozone NAAQS for both certified 2021 DVs and preliminary 2022 DVs.

The recalculated RCFs were then applied to the recalculated 2023 average design values to calculate a new set of contribution metric values. The number of top 10 days at each receptor that were replaced with data from other days when recalculating projected design values and contributions is given in the table below. For example, at the Stratford receptor, model performance on 4 of the top 10 days used to calculate RRFs was outside the range of the criteria. The data for these days were removed. Then the concentrations on days with performance within the range of the criteria were re-ranked to identify a new set of top 10 days. In the calculation of the average contribution metric, 5 of the original top 10 days at this receptor were replaced with data from other days.

Table 4-14 Top 10 Days Replaced After Recalculating Projected Design Values and Contributions

		Number of Original Top 10 Days Replaced in this Sensitivity Analysis	
Site ID	**Receptor**	**Recalculated Design Values**	**Recalculated Contributions**
090013007	Stratford	4	5
170317002	Evanston	7	7
481210034	Denton	0	1
080590006	Rocky Flats	0	1

The table below provides the projected 2023 average and maximum design values without the removal of any days (i.e., Final Action design values) and the recalculated 2023 design values after removing days with model performance outside the range of the criteria (i.e., days commenters claim have "poor performance"). The data in the table below indicates that there is less than a ppb difference between the two sets of design values at Stratford and Evanston even though data on nearly half (Stratford) and more than half (Evanston) of the days used to project design values were replaced with data from other days.

Table 4-15 Final Action Design Values Versus Sensitivity Scenario Design Values

			Projected 2023 Design Values (ppb)			
			Final Action		**Sensitivity**	
Site ID	**State**	**Receptor**	**Average DV**	**Maximum DV**	**Average DV**	**Maximum DV**
090013007	CT	Stratford	72.9	73.8	72.1	73.0
170317002	IL	Evanston	68.5	71.3	69.2	72.0
481210034	TX	Denton Airport	69.8	71.6	69.8	71.6
080590006	CO	Rocky Flats	72.8	73.5	72.8	73.5

The following tables provide the contribution metric values for upwind states linked to the Stratford, Connecticut, Chicago/Evanston, Illinois, Dallas/Denton, Texas, and Denver/Rocky Flats, Colorado receptors for this final action (i.e., no days removed) and the sensitivity scenario (i.e., days removed based on model performance). The highlighted contributions in these tables identify contributions that exceed the 1 percent of the NAAQS screening threshold. The data indicate that removing days with "poor performance" does not appear to result in any systematic bias in the magnitude of contributions. That is, contributions increase for some states linked to a particular receptor while contributions from other upwind states linked to that same receptor decrease. For example, at Evanston the contribution from Wisconsin dropped by 50 percent, whereas the contribution from Arkansas nearly doubled to a level above the screening threshold. In addition, after removing days with "poor performance" the contribution from Louisiana increased to above the threshold. Although the contribution from Michigan to Stratford dropped to below the screening threshold after removing days with "poor performance", the contribution from this state to Evanston more than doubled. Also, although Illinois contributes below the threshold to Stratford after removing days with "poor performance", Illinois contributes well above the threshold to receptors in Wisconsin. The results of this sensitivity analysis indicate that the EPA's findings in this final action are robust with respect to consideration of daily model performance at individual monitoring sites.

Table 4-16 Sensitivity Analysis - Stratford, CT Receptor

Upwind State	Stratford, CT (090013007)	
	2023 Contribution (ppb)	
	Final Action	Sensitivity
IL	**0.72**	0.50
IN	**1.18**	**0.74**
KY	**0.80**	**0.84**
MD	**0.96**	**1.12**
MI	**1.38**	0.48
NJ	**7.22**	**7.94**
NY	**12.70**	**12.66**
OH	**2.04**	**1.79**
PA	**5.43**	**6.62**
VA	**1.15**	**1.25**
WV	**1.35**	**1.68**

Table 4-17 Sensitivity Analysis - Evanston, IL Receptor

Upwind State	Evanston, IL (170317002)	
	2023 Contribution (ppb)	
	Final Action	Sensitivity
AR	0.46	**0.88**
IN	**6.40**	**7.01**
LA	0.14	**0.70**
MI	**1.11**	**2.50**
MO	**1.18**	**1.04**
OH	**0.96**	**1.49**
TX	**1.85**	**0.86**
WI	**2.32**	**1.17**

Table 4-18 Sensitivity Analysis - Denton Airport, TX Receptor

Upwind State	Denton Airport, TX (481210034)	
	2023 Contribution (ppb)	
	Final Action	Sensitivity
AR	**0.92**	**0.89**
LA	**2.87**	**2.68**
MS	**0.91**	**0.85**
OK	**1.01**	**1.09**

Table 4-19 Sensitivity Analysis - Rocky Flats, CO Receptor

Upwind State	Rocky Flats, CO (080590006)	
	2023 Contribution (ppb)	
	Final Action	Sensitivity
CA	**1.44**	**1.15**
UT	**1.17**	**1.12**

Finally, in response to comments that claim at the EPA's projected design values used to identify receptors are too high as a result of base year model underprediction, the EPA conducted an analysis to determine if there is any clear relationship between base year (i.e., 2016) model bias and the response of the EPA's CAMx modeling to emissions changes between 2016 and 2023. The figures below show model bias on individual days as a function of model response on the days at the Chicago/Evanston, Denver/Rocky Flats, and Dallas/Denton receptors. The plots are based on days with modeled MDA8 ozone concentrations greater than or equal to 60 ppb in the set of grid cells used to project 2023 design values. As evident from these plots, there is no discernable relationship between model bias and model response. Thus, base year model under prediction of measured data does not translate into an under prediction of model response and an over prediction of projected design values.

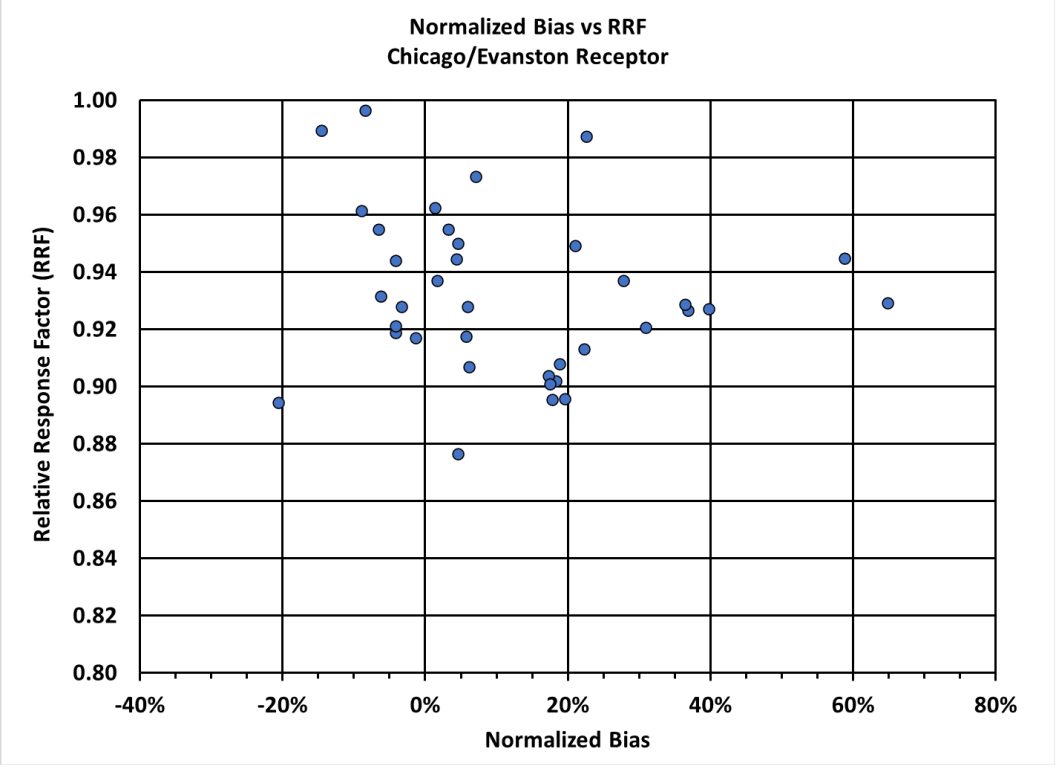

Figure 4-9

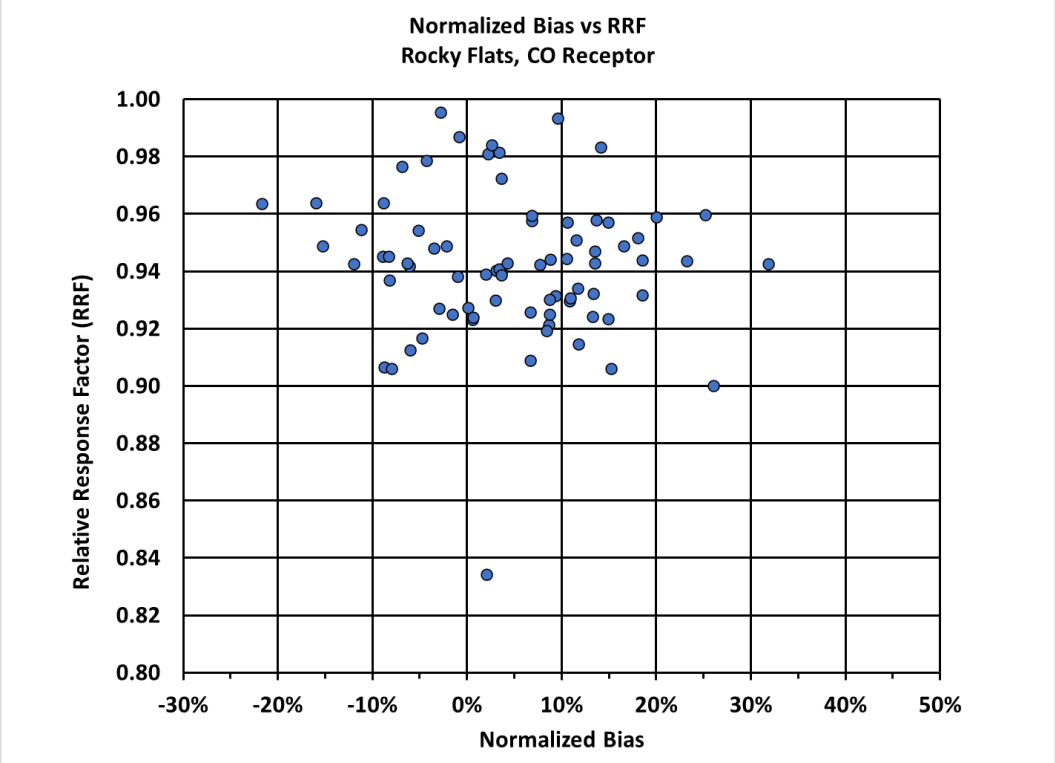

Figure 4-10

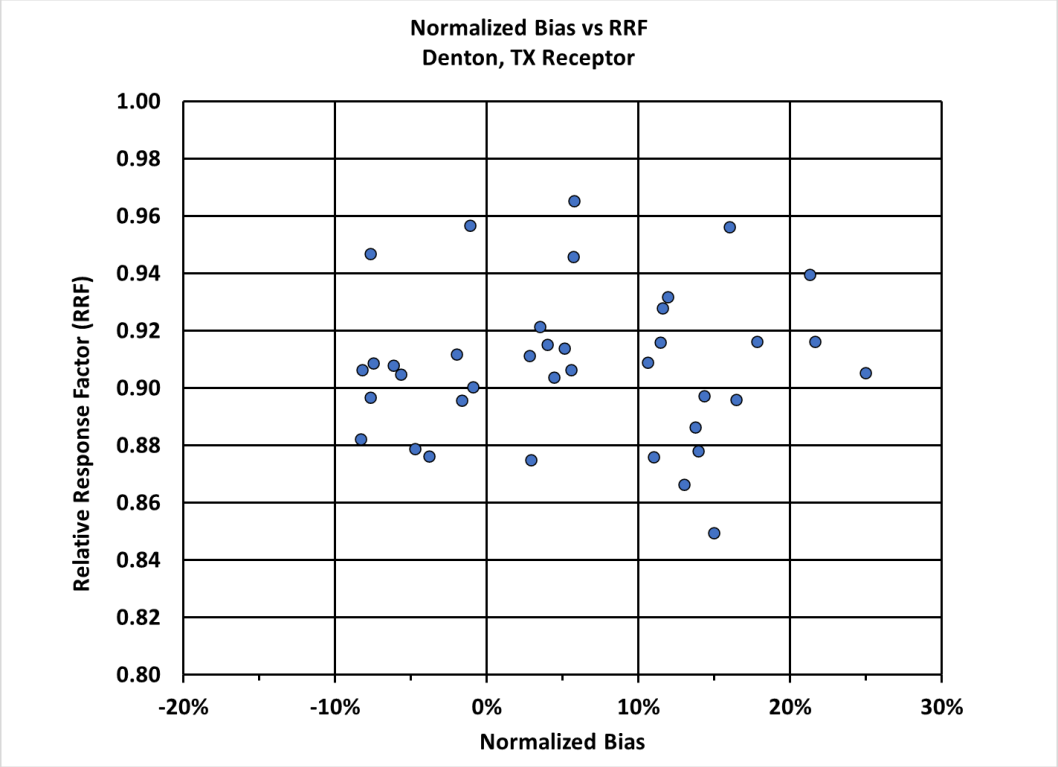

Figure 4-11

Comments on the proposed FIP are out of the scope of this action. Other topics raised by these comments are addressed in the following sections: 11.4 (Transport Policy – Western State Ozone Regulation).

4.3 Model Error vs Contribution Threshold

Comments

Commenter: Alabama Department of Environmental Management

Commenter ID: 02

Docket ID: EPA-R04-OAR-2021-0841

Comment:

In EPA's proposed disapproval of the revised SIP, comments were made on the model performance statistics included in the WOE analysis. The purpose of pointing out the statistics was not to evaluate the numbers themselves, but to look at the magnitude of the numbers that would be considered as acceptable performance. The idea was that performance statistics are often acceptable at 10, 20 even 30%, yet 1% (0.71) is sufficient enough to identify an upwind State as culpable to a predicted

nonattainment or maintenance receptor. This is a disconnect, and ADEM contends that the model cannot accurately estimate impacts at such small numbers.

Commenter: Alabama Power Company, Southern Power Company, and PowerSouth Energy Cooperative

Commenter ID: 04

Docket ID: EPA-R04-OAR-2021-0841

Comment:

ADEM's third factor suggests that EPA's models cannot accurately replicate monitor concentrations, given the small concentrations at issue, and, as commenters set out, the modeled contributions are less than the acceptable modeling error range.

[…]

Even when considering Alabama's SIP in the context of EPA's FIP framework, EPA's rationale for proposing to disapprove Alabama's SIP proves inadequate. Under Step 2, EPA gives little or no credence to the evidence in the record calling into question its model performance …

In evaluating EPA's model performance and contribution threshold of 0.70 ppb, levels assigned to Alabama fall within the noise of EPA's model. In the proposed disapproval, EPA discounts the modeling error and bias identified by ADEM, claiming that "base year model performance statistics that are derived from measured and modeled data strictly paired in space and time are not useful as the sole measure for gauging the ability of the model to adequately estimate future year average contributions on the order of 0.70 ppb on high ozone days representative of the magnitude of measured concentrations at the receptor." However, EPA claims the opposite in its Air Quality Modeling Technical Support Document. Specifically, EPA admits that the agency relies on the error and bias analysis, which indicates errors of 20-25% in some circumstances, to justify its "projections of expected future year ozone concentrations and contributions." Moreover, to the extent EPA was mistaken and this modeling error does not address errors in contributions, then EPA's model fails the basic bulwark against inappropriate reliance on modeling by failing to assess the potential for and rate of error.

While the 20% error in EPA's modeling may be defensible for some purposes, it is not defensible with respect to the assessment of Alabama's SIP submittal. For example, Alabama's modeled contribution to the Texas receptors lies within the modeling error range EPA identifies as acceptable. In other words, Alabama has been modeled to contribute to downwind monitors above the 1% "screening metric" by an amount that is less than the level of error that EPA has asserted is acceptable. This weighs heavily in favor of approving Alabama's SIP.

Commenter: Mississippi Department of Environmental Quality

Commenter ID: 32

Docket ID: EPA-R04-OAR-2021-0841

Comment:

[technical support document] shows significant levels of bias and error (+/-7.8 to 9.1 ppb) in the South region, the region which both Mississippi and Texas are considered a part of for the purpose of this model. The imperceivable contributions from Mississippi sources (i.e., ≤ 1.14 ppb) on modeled concentrations at any monitor in Texas fall well within the error range and should be further scrutinized to evaluate whether Mississippi's contribution is, in fact, significant.

Commenter: Utah Petroleum Association and the Utah Mining Association

Commenter ID: 48

Docket ID: EPA-R08-OAR-2022-0315

Comment:

Photochemical modeling, especially for the western United States, lacks the level of accuracy needed to reliably differentiate a contribution of 0.7 ppb hundreds of miles downwind. Utah described this in their comments on EPA's March 27, 2018, guidance memo regarding Interstate Transport SIPs for the 2015 Ozone NAAQS: Due to the complex terrain, meteorology, distance between sources and receptors, and somewhat coarse-grained modeling inputs the margin of error in the transport modeling in the Intermountain West is about 15%. If we applied this margin of error to determine those States that contribute significantly to ozone in downwind States, 15% of the 70-ppb ozone NAAQS suggests that controls would only be required in States contributing 10 ppb or more to downwind ozone. This is more in line with the contributions to downwind States in the northeastern part of the United States.

Response

EPA generally responds to these comments in Section V.B.4 of the preamble, and further addresses these commenters here.

Commenters indicate that when the amount of contributions calculated is within the EPA's margin of error, the EPA should apply additional scrutiny to evaluate whether the upwind contribution is deemed significant.

The EPA does consider additional factors beyond whether the state is linked at step 2 before determining what emissions, if any, are deemed significant and require emissions reductions. The EPA performs this determination at Step 3 of the 4-step interstate transport framework, where the EPA considers additional factors, such as cost and the impact of emissions reductions to identify what emissions have a significant impact on nonattainment or interference with maintenance of the NAAQS at a downwind receptor.

To the extent that commenters suggest the EPA consider a less stringent threshold as a result of modeling uncertainty at Step 2, the EPA disagrees with this notion. The Agency uses the CAMx model to evaluate contributions from upwind states to downwind areas. The Agency has used CAMx in previous notice and comment rulemakings to evaluate contributions relative to the 1 percent threshold for both

ozone and PM2.5. In fact, in the original CSAPR, the EPA found that "[t]here was wide support from commenters for the use of CAMx as an appropriate, state-of-the science air quality tool for use in the [Cross-State Air Pollution] Rule. There were no comments that suggested that EPA should use an alternative model for quantifying interstate transport." 75 FR 48229 (August 8, 2011).

The comments related to the EPA's action on Alabama's SIP submission do not provide any additional technical analysis that would prevent the Agency from reasonably determining that Alabama contributes above 1 percent of the NAAQS at one nonattainment receptor based on the updated 2016v3 modeling platform for 2023. Moreover, comments misunderstand the ozone model performance evaluation and how the Agency assess linkages.

As discussed in the proposal, the EPA evaluates linkages using the multi-day average contribution from each upwind state to each downwind receptor based on daily contributions from the state to the receptor for the days with the highest model-predicted future year concentrations. 87 FR 64412 at 64423, (October 25, 2022). The modeled data are intended to represent future year ozone concentrations and contributions associated with ozone conducive meteorological conditions and transport patterns typical for high ozone episodes at the receptor. In this regard, base year model performance statistics that are derived from measured and modeled data strictly paired in space and time are not useful as the sole measure for gauging the ability of the model to adequately estimate future year average contributions on the order of 0.70 ppb on high ozone days representative of the magnitude of measured concentrations at the receptor. As explained in EPA's Final Action AQM TSD in the docket for this action, the performance of our modeling is within the generally accepted performance parameters for modeling of this type.

The EPA concedes that its modeling cannot perfectly project air quality levels and contributions in a future year; however, that is not the relevant standard. *See Appalachian Power Co. v. EPA*, 135 F.3d 791, 805-6 (D.C. Cir. 1998) (explaining that a model need not perfectly fit every data point). The EPA has successfully applied its CAMx modeling platform across many CAA regulatory actions. The EPA continues to find the modeling reliable for purposes of the Step 1 and Step 2 analyses of the 4-step interstate transport framework. The EPA further responds to these and related comments in sections V.B.4-6 of the preamble.

5 Updates to Modeling and Changes in Linkages

Comments

Commenter: Air Pollution Control Program, Missouri Department of Natural Resources

Commenter ID: 01

Docket ID: EPA-R07-OAR-2021-0851

Comment:

Missouri is no longer linked to any of the receptors that EPA used to evaluate Missouri's good neighbor SIP submission. The downwind receptors evaluated in Missouri's good neighbor SIP submission include –

- receptor ID 260050003, Allegan, MI;
- receptor ID 261630019, Wayne, MI;
- receptor ID 480391004, Brazoria, TX;
- receptor ID 482011039, Harris, TX;
- receptor ID 550790085 Milwaukee, WI; and
- receptor ID 551170006, Sheboygan, WI.

In EPA's updated modeling used to support the disapproval of Missouri's SIP and the proposed FIP for 26 states, none of these receptors are linked to Missouri. The following paragraphs explain how this change in the technical basis for Missouri's good neighbor obligations affect the submission with respect to each of the receptors analyzed and included in Missouri's good neighbor SIP for the 2015 ozone standard that the Air Program submitted in 2019.

In Missouri's good neighbor SIP submission in 2019, the Air Program demonstrated that the Allegan, MI monitor met the conditions included in EPA's October 2018 memorandum to not be considered a maintenance receptor because the site would not be a receptor in 2023. In the proposed disapproval, EPA rejected the argument stating that the summer of 2011 was an unusually cool summer in the upper Midwest despite updated information added to the SIP to support this assertion in response to EPA comment on Missouri's SIP submission. However, as demonstrated in EPA's updated modeling, the Allegan monitor has indeed dropped off as a maintenance receptor. The maximum 2023 projected design value for that monitor in the updated modeling is 68.4 ppb, well below the threshold of 70.9 needed to escape the label of a maintenance receptor under EPA's 4-step framework. For this reason, it is clear that Missouri's analysis and demonstration held true, and EPA's denial of it in the proposed disapproval is disproved by EPA's own modeling. Therefore, EPA must accept the demonstration included in Missouri's good neighbor SIP submission for this monitor. Failure to do so would constitute arbitrary and capricious action that would ignore EPA's own data.

For the Wayne, MI monitor, EPA's updated modeling shows this receptor as no longer being a maintenance receptor. The maximum 2023 projected design value for that monitor in the updated modeling is 66.6 ppb. In Missouri's good neighbor SIP submission, this was a maintenance receptor with

a maximum 2023 design value of 71.0 ppb, which is the lowest possible maximum design value that would cause it to receive the label of a maintenance receptor. In Missouri's SIP submission, the Air Program utilized the flexibility in EPA's August memo, to avoid linkage with this receptor because Missouri's projected contribution was below 1 ppb. EPA rejected that assessment in the proposed disapproval stating that Missouri failed to provide sufficient technical justification for use of the flexibility offered in the August memo. Obviously, the fact that the maximum design value was equal to the minimum value needed to be labeled a maintenance receptor, it follows that any improvement at all would have taken care of this receptor, which is clearly supportive of a 1 ppb threshold. Nonetheless, as shown in EPA's own updated modeling, this monitor is cleared of additional analysis at Step 1. For all of these reasons, EPA's determination to not accept Missouri's demonstration for this monitor is clearly flawed, and constitutes arbitrary and capricious action by EPA since it ignores its own data that argues for approving the state's determination for this monitor.

For the Brazoria, TX monitor, EPA's updated modeling shows that Missouri is no longer linked to this monitor because Missouri's contribution is 0.55 ppb, which is below 1 percent of the 2015 ozone standard. In our SIP submission, the Air Program utilized the flexibility in EPA's August memo, to avoid linkage with this receptor because Missouri's projected contribution was below 1 ppb. In the previous modeling, Missouri's contribution to this receptor was 0.88 ppb. Our SIP submission demonstrated that this monitor was not significantly impacted by upwind state contributions, and instead the receptor status was largely the result of contribution from local sources and international (Mexico) emissions. This is substantially similar to EPA's own determination in their latest actions associated with the proposed disapproval and the proposed FIP with respect to linkages between Oregon and California, where Oregon is absolved of their linkages to California for this very reason. However, EPA treats Missouri differently by denying this same basis for the determination that a 1 ppb threshold was appropriate as stated in our SIP submission. Further, the updated modeling provides even more proof that the analysis in our SIP was appropriate for this monitor, as Missouri's upwind contribution has now fallen below the significant contribution threshold (even without the 1 ppb flexibility provided for in EPA's August memo). For all of these reasons, EPA's determination to not accept Missouri's demonstration for this monitor is clearly flawed, and constitutes arbitrary and capricious action by EPA since it ignores its own data that argues for approving the state's determination for this monitor.

For the Harris, TX monitor, EPA's updated modeling shows this receptor as no longer being a maintenance receptor. The maximum 2023 projected design value for that monitor in the updated modeling is 68.5 ppb. In Missouri's good neighbor SIP submission, this was a nonattainment receptor with a maximum 2023 design value of 73.5 ppb. Missouri's contribution to this monitor was 0.88 ppb, thus qualifying it for the use of the flexibility offered in EPA's August memo. Similarly to the Brazoria monitor, Missouri's SIP submission explained that this monitor was not significantly impacted by upwind state contributions, and instead the receptor status was largely the result of contribution from local sources and international (Mexico) emissions. While EPA uses this same basis for approving Oregon's SIP using the updated modeling when it comes to 15 separate linkages in California that are at or above the 1 percent threshold and two receptors with contributions above 1 ppb, EPA denies this basis as included in Missouri's SIP submission for justifying the removal of the Harris, TX monitor linkage with Missouri at Step 2. Further, the updated modeling does not even include upwind state contributions for this monitor because there were fewer than five days where the modeled predicted maximum daily 8-hour

average (MDA8) was above 60 ppb. This provides even further evidence that this is no longer a linked problem receptor for Missouri. For all of these reasons, EPA's determination to not accept Missouri's demonstration for this monitor is clearly flawed, and constitutes arbitrary and capricious action by EPA since it ignores its own data that argues for approving the state's determination for this monitor.

For the Milwaukee, WI monitor, EPA's updated modeling shows this receptor as no longer being a maintenance receptor. The maximum 2023 projected design value for that monitor in the updated modeling is 68.4 ppb. In Missouri's good neighbor SIP submission, this was a nonattainment receptor with a maximum 2023 design value of 73.0 ppb. Missouri's contribution to this monitor was 0.93 ppb, thus qualifying it for the use of the flexibility offered in EPA's August memo. Similarly to the Wayne, MI monitor, Missouri's SIP submission explained that this monitor should qualify for the flexibility afforded in EPA's August memo, because Missouri's contribution was below 1 ppb and that the use of a 1 ppb threshold for this receptor would capture 79.4 percent of the total contribution from upwind states and 83 percent of the upwind state contributions captured through the use of a 0.7 ppb threshold. These values are higher than the nationwide average values included in the August memo that were the basis for EPA stating the use of a one ppb threshold may be appropriate. However, in the proposed disapproval, EPA denied this rationale claiming that insufficient technical justification was provided for use of the 1 ppb flexibility. Now, EPA ignores their own updated modeling when evaluating Missouri's SIP, which not only no longer predicts this receptor as a nonattainment or maintenance receptor, but does not even calculate upwind state contributions for the receptor because there were fewer than five days where the modeled-predicted MDA8 was above 60 ppb. This provides even further evidence that this is no longer a linked problem receptor for Missouri. For all of these reasons, EPA's determination to not accept Missouri's demonstration for this monitor is clearly flawed, and constitutes arbitrary and capricious action by EPA since it ignores its own data that argues for approving the state's determination for this monitor.

For the Sheboygan, WI monitor, EPA's updated modeling still projects this receptor to be a nonattainment receptor, but the modeling does not include any upwind state contributions because there were fewer than five days where the model-predicted MDA8 was above 60 ppb. Clearly, the model is underperforming with respect to this receptor in the updated modeling. However, in using the rationale in Missouri's SIP submission with the previous modeling, this monitor was impacted so heavily by in-state and neighboring state emissions that the use of a threshold even higher than 1 ppb was appropriate. Where in-state and two neighboring state emissions contributed 31.9 ppb of the design value in the previous modeling, it belittles any case or justification for bringing in Missouri as a linked state to this monitor. The Air Program notes that EPA submitted no comments with regard to the use of a 2 ppb significant contribution threshold for this monitor, which implies EPA was satisfied with the rationale included in the SIP at the time of submittal, and only now, after years of sitting on the submission does EPA reverse course and explain in highly generic terms that it will not accept Missouri's demonstration for this monitor. With the low model performance at this receptor, and the substantially unique position of the level of contribution coming from the states bordering Lake Michigan, there is certainly insufficient information to conclude that this receptor should cause Missouri's SIP to be disapproved. For all of these reasons, EPA's determination to not accept Missouri's demonstration for this monitor is clearly flawed, and constitutes arbitrary and capricious action by EPA since it ignores its own data that argues for approving the state's determination for this monitor.

The fact that Missouri is no longer linked to any of the receptors analyzed in our SIP submission provides adequate cause and justification to conclude that EPA's proposed disapproval is inappropriate. EPA's updated modeling is proof that the SIP Missouri submitted adequately evaluated and demonstrated that Missouri had addressed its good neighbor SIP obligations at Step 2 for every receptor evaluated in the submission. However, EPA ignores these facts in its proposed disapproval, not even giving them lip service. This arbitrary and capricious action shows that EPA cherry-picked information to make its case, and ignored relevant, inconvenient facts in the record that do not support EPA's conclusion.

The Air Program notes that EPA's proposed disapproval goes on to point out that the updated modeling has identified four additional receptors (all in the Lake Michigan area) that Missouri is now linked to. These receptors were not identified as linked receptors in the previous modeling relied upon in our SIP submission. EPA uses this as further evidence to justify their proposed disapproval. This sleight-of-hand move by EPA is a direct attack on Missouri's right to develop its own SIP. If EPA is going to move the target more than two years after the submission is made and use that tactic to justify its action, then a proposed disapproval cannot be the appropriate action. If EPA desires to make a formal finding that Missouri's SIP is inadequate because of these newly identified receptors, it must approve our original SIP and then issue a SIP call to provide Missouri a chance to address the receptors that have been newly identified in the updated modeling. Failure to do so, would circumvent EPA's obligation to put forth any effort for cooperative federalism as envisioned in the Clean Air Act. Such action would instead favor stripping states of their rights and imposing hundreds of millions of dollars in compliance costs without adequate justification or the opportunity for states to update and retain control over their SIP. For these reasons, EPA must withdraw the proposed disapproval and take action to approve Missouri's submission.

[…]

The Air Program notes again that none of the monitors that Missouri is linked to in the updated modeling were linked monitors in the previous modeling that Missouri had evaluated and demonstrated against at step 2 in our previous SIP submission. Therefore, the Air Program objects to the use of these monitors as a basis for the SIP disapproval and the proposed imposition of a FIP.

Commenter: Arkansas Department of Energy and Environment, Division of Environmental Quality

Commenter ID: 07

Docket ID: EPA-R06-OAR-2021-0801

Comment:

<u>Interstate Transport Framework Step 1: Identification of Downwind Air Quality Problems</u>

As a result of EPA's choice to substitute new modeling for the modeling data provided to states for development of SIP submittals, the attainment and maintenance receptors identified for Step 1 of the Interstate Transport Framework differ. As specified by EPA, DEQ used 2023 future year results provided in EPA's March 2018 Memorandum to identify nonattainment and maintenance receptors. In the Proposed Rule, EPA proposes to rely primarily upon 2023 and 2026 future year results from the 2016v2

modeling platform. Based on this new modeling data, the only receptor that DEQ identified as having a potential linkage to Arkansas at Step 2 of the framework (Allegan County, MI) is no longer among the areas identified as nonattainment and maintenance receptors in Step 1. EPA's choice to primarily rely on new information instead of the demonstrations that the state made using data provided by EPA at the time of SIP development degrades ADEQ's confidence that it can rely upon technical information provided by EPA for decision-making in any future iterations. The proposed reliance by EPA on new information effectively renders the extensive analyses performed by DEQ during the development of the Arkansas Transport SIP as irrelevant. DEQ believes this erodes the cooperative federalism framework and degrades the working relationship between DEQ and EPA Region 6 and EPA Headquarters.

EPA maintains that "differing results [do not] mean that the modeling or the EPA methodology for identifying receptors or linkages is inherently unreliable," and goes on to say that "Arkansas was linked to **some set** of these receptors, even if […] Arkansas was linked to **different receptors** in one modeling run versus another) [emphasis added]. EPA's argument is contradictory; something cannot be "inherently reliable" (i.e., "dependable") if it does not produce the same results with consistency. The inconsistency in results in EPA modeling gives further weight of support to the state utilizing resources at its disposal (including HYSPLIT modeling) to augment and ground-truth information provided by EPA to determine **which set** of receptors to evaluate for linkages in Step 2 and "significant contribution" in Step 3 of the interstate transport framework recommended by EPA for this type of analysis.

[…]

Interstate Transport Framework Step 2: Identifying Linkages

[…]

Substituting the data that Arkansas relied upon in its SIP development and the threshold that Arkansas chose to identify linkages results in a different set of linkages than DEQ identified in its SIP. In its 2019 submittal, DEQ identified one maintenance receptor, Allegan County (Arkansas projected contribution = 1.64 ppb), based on modeling results from EPA's March 2018 Memorandum. In EPA's 2022 disapproval of DEQ's 2019 submittal, based on EPA's 2016v2 modeling platform, EPA identified four maintenance receptors—481210034, Denton, TX (Arkansas projected contribution = 0.76 ppb); 480391004, Brazoria, TX (Arkansas projected contribution = 1.39 ppb,); 482011034, Harris, TX (Arkansas projected contribution = 1.38 ppb); and 482011035, Harris, TX (Arkansas projected contribution = 1.34 ppb)—and one nonattainment receptor—482010055, Harris, TX (Arkansas projected contribution = 1.00 ppb)—as linked to Arkansas. Had this updated modeling information been available at the time of SIP development, DEQ would have focused its analysis of potential linkages in Texas instead of the receptor in Michigan.

To give perspective from a state's standpoint, EPA's 2016v2 modeling indicates that one Texas monitor linked to Arkansas emissions (Brazoria County, 480391004), and projected by EPA 2016v1 modeling to be in nonattainment in 2023, is now projected to achieve attainment without further controls. DEQ did not perform an analysis for the Brazoria County monitor because Arkansas's contribution was below DEQ's analytical threshold of 1 ppb. Three Texas monitors (Denton County, 481210034; Harris County, 482011034; and Harris County, 482011035) are projected by both the 2016v1 and 2016v2 modeling to be maintenance-only in 2023. One Arkansas-linked Texas monitor (Harris County, 482010055),

previously projected by the 2016v1 modeling to be in attainment in 2023 is now projected by the updated modeling to be in nonattainment in 2023. Essentially, EPA provided states with one set of data and "linkages" upon which states based their SIP submittals, then proposed to disapprove the same SIPs based on a completely different set of data. DEQ finds that this decision is arbitrary and capricious, and amounts to a bait and switch, allowing the EPA to usurp the states.

In summary, EPA's 2016v2 modeling in support of EPA's SIP disapproval identified three receptors with "linkages" to Arkansas that were not originally identified at the time of SIP development. Of the top five linked receptors listed in the 2016v2 modeling and disapproval, only two were also listed in EPA's March 2018 Memorandum (i.e., the state was only made aware of three supposed "linkages" to downwind receptors in EPA's 2022 proposed disapproval of the state's SIP submission). The contributions for these two receptors ranked third and fifth in EPA's March 2018 Memorandum (both receptors were below DEQ's threshold), and ranked first and fifth in EPA's 2016v2 modeling, with an increase of 0.49 ppb and 0.18 ppb, respectively. This caused a receptor that was originally modeled to show a contribution that was below DEQ's threshold (0.90 ppb contribution) to sharply increase past the threshold in the updated modeling (1.39 ppb contribution). The receptor with the second-highest contribution identified in EPA's 2016v2 modeling and disapproval ranked sixth in modeling results from EPA's March 2018 Memorandum; again, a downwind receptor that was well below the threshold at the time DEQ was developing the SIP (0.54 ppb contribution) modeled with more than one and one-half times the contribution in EPA's 2016v2 modeling results (1.38 ppb contribution). At the time of SIP development, DEQ could not predict that modeling conducted four years after the SIP submittal was due to EPA would produce such varied results on the receptors the state was analyzing in its submission; nor could DEQ appropriately focus limited state resources on the receptors with which EPA is now concerned in their disapproval. The state submitted a robust and well-justified SIP, based on information available to DEQ at the time. EPA disregards this fact.

[…]

DEQ agrees that some of the newly identified linkages now meet the state's threshold for further analysis of emissions sources in the state, and while EPA did not undertake this analysis before proposing a FIP with costly emissions reductions across broad sectors, Arkansas, now aware of a different set of linkages, is working on a new analysis based on the updated modeling results provided by EPA in the proposed disapproval.

Commenter: Eagle Materials Inc.

Commenter ID: 16

Docket ID: EPA-R09-OAR-2022-0138

Comment:

Nevada adopted a broad and intentionally overinclusive approach to assessing its interstate transport obligations, using EPA's latest contribution modeling, released just months prior in March 2018, "to identify and quantify contributions greater than 0.5 percent of the 2015 ozone NAAQS resulting from

Nevada's anthropogenic emissions" for further analysis. Despite its belief that EPA's 1% linkage threshold was inappropriate for "use in the western United States," the state applied this threshold in order to take a "very conservative approach" to determining whether Nevada was linked to any downwind air quality problems. Nevada relied on EPA's modeling, emphasizing that "[a]lthough models can always be refined and there may be differences in certain approaches to technical issues as the NDEP has commented, it is the NDEP's position that the USEPA's modeling is state-of-the-science given the USEPA's constraints."

Nevada reviewed its contributions to receptors in California and Colorado under this framework, considering relative intrastate contributions and overall interstate contributions. Based on this extensive analysis, Nevada determined that "the contribution of 2023 base case anthropogenic NOx and VOC emissions from sources within Nevada to any projected 2023 nonattainment or maintenance receptor at greater than 0.5 percent of the NAAQS is limited to two states, California and Colorado." However, for each of these receptors, "Nevada's contribution… [was] less than one percent of the 2015 ozone NAAQS," meaning that under EPA's own analytical approach, Nevada was not linked to downwind air quality problems and that no further reductions measures were necessary.

Despite Nevada's highly conservative assessment of its interstate transport obligations, EPA's Proposed Disapproval nevertheless concludes, based on new air quality modeling using the 2016v2 emissions platform, that Nevada is now linked to 2 receptors in Utah. Nevada's contribution to these receptors is between 0.86 ppb and 0.89 ppb, which falls below the 1 ppb linkage threshold determined by Nevada to be more appropriate for Western states, where "interstate contributions… are relatively small, especially given the large contributions from background and intrastate emissions." EPA unreasonably imposes its own analysis in evaluating Nevada's SIP, rather than determining whether Nevada's analysis was reasonable.

[…]

During the 2 year period in which EPA failed to perform its statutory duty to act on Nevada's SIP submission, EPA completed significant new modeling using its newly released 2016v2 Model, finalized in 2022. Based on this new model, released more than 3 years after Nevada submitted its revised SIP and nearly 2 years after EPA was required to act on this SIP submission, EPA substantially altered its analysis of downwind air quality problems and state linkages. Nevada relied on EPA's previous modeling in assessing its interstate transport obligations, concluding based on this modeling that it "would contribute below 1 percent of the NAAQS to receptors in 2023 and was therefore not 'linked' to any other state." However, EPA's new modeling completely altered this analysis, finding that Nevada is linked to two receptors in Utah, in Salt Lake County and Davis County. EPA's use of entirely new modeling moved the goal Nevada attempted to meet in good faith, well after EPA was required to take final action on the state's SIP submission.

Commenter: Evergy, Inc.

Commenter ID: 21

Docket ID: EPA-R07-OAR-2021-0851

Comment:

Six receptors were identified in the original modeling relied upon for the Missouri SIP submission. EPA then updated the modeling and determined that all six of these receptors are no longer linked to Missouri. The lack of any linkage with the updated modeling should be adequate to justify EPA approving the SIP. EPA's updated modeling for Missouri identified four new receptors near Lake Michigan.

Commenter: Idaho Power Company

Commenter ID: 23

Docket ID: EPA-R09-OAR-2022-0138

Comment:

Nevada's SIP fulfills the state's Good Neighbor obligations.

Nevada reasonably concluded that it is not linked to significant downwind air quality problems. Nevada adopted a broad and intentionally overinclusive approach to assessing its interstate transport obligations, using EPA's latest contribution modeling, released just months prior in March 2018, "to identify and quantify contributions greater than 0.5 percent of the 2015 ozone NAAQS resulting from Nevada's anthropogenic emissions" for further analysis. Despite its belief that EPA's 1% linkage threshold was inappropriate for "use in the western United States," the state applied this threshold in order to take a "very conservative approach" to determining whether Nevada was linked to any downwind air quality problems. Nevada relied on EPA's modeling, emphasizing that "[a]lthough models can always be refined and there may be differences in certain approaches to technical issues as the NDEP has commented, it is the NDEP's position that the USEPA's modeling is state-of-the-science given the USEPA's constraints."

Nevada reviewed its contributions to receptors in California and Colorado under this framework, considering relative intrastate contributions and overall interstate contributions. Based on this extensive analysis, Nevada determined that "the contribution of 2023 base case anthropogenic NOx and VOC emissions from sources within Nevada to any projected 2023 nonattainment or maintenance receptor at greater than 0.5 percent of the NAAQS is limited to two states, California and Colorado." However, for each of these receptors, "Nevada's contribution… [was] less than one percent of the 2015 ozone NAAQS," meaning that under EPA's own analytical approach, Nevada was not linked to downwind air quality problems and that no further reductions measures were necessary.

[…]

Despite Nevada's highly conservative assessment of its interstate transport obligations, EPA's Proposed Disapproval nevertheless concludes, based on new air quality modeling using the 2016v2 emissions platform—which was not available to Nevada when developing its SIP—that Nevada is now linked to 2 receptors in Utah. Nevada's contribution to these receptors is between 0.86 ppb and 0.89 ppb, which falls below the 1 ppb linkage threshold determined by Nevada to be more appropriate for Western

states, where “interstate contributions…are relatively small, especially given the large contributions from background and intrastate emissions.” Yet, EPA arbitrarily deems these contributions “significant” for the purposes of assessing the adequacy of Nevada’s SIP.

Importantly, EPA’s analysis relies on modeling that was not available until 3 years after Nevada timely submitted its revised SIP. Under the CAA, states are required to submit revised SIPs within 3 years after EPA revises the NAAQS. EPA’s revision of the ozone NAAQS on October 1, 2015 triggered this obligation. Nevada submitted its revised SIP to EPA on October 1, 2018, relying on modeling that EPA released just 6 months prior. Nevada specifically determined that EPA’s data represented the “best available data with which to conduct Nevada’s transport analysis,” which EPA does not dispute in its Proposed Disapproval. Rather, EPA asserts that “[b]y using the updated modeling results, the EPA is using the most current and technically appropriate information for this proposed rulemaking.” However, EPA fails to consider whether Nevada’s analysis using the best available data at the time was reasonable and fails to even acknowledge the substantial change imposed by EPA’s new modeling, increasing Nevada’s contribution to Utah receptors from under 0.5% of the NAAQS to above EPA’s 1% threshold.

Commenter: Minnesota Pollution Control Agency

Commenter ID: 31

Docket ID: EPA-R05-OAR-2022-0006

Comment:

The MPCA supports EPA’s goal of reducing ozone precursors and their transport to protect the environment and human health across states. However, EPA’s proposed disapproval of Minnesota’s 2015 Ozone Transport SIP does not assess the quality of Minnesota’s original submittal. Minnesota was identified as a non-significant contributor (below 0.7 parts per billion) to any ozone monitors in the 2018 modeling performed by both EPA and Lake Michigan Air Directors Consortium (LADCO). Minnesota did not complete steps three or four of the 2015 Ozone Transport SIP based on that information. Minnesota’s original submittal should have been approved based on contribution information available from both EPA and LADCO at that time.

EPA is now proposing to use a revised 2016 modeling platform, EPA 2016 version 2 emissions modeling platform (2016v2 EMP) to support a remedy for the Interstate Transport Rule for the 2015 Ozone National Ambient Air Quality Standard (NAAQS).

Commenter: Nevada Division of Environmental Protection

Commenter ID: 33

Docket ID: EPA-R09-OAR-2022-0138

Comment:

EPA has provided an unsupportable and illogical basis for disapproval of Nevada's 2018 iSIP. EPA states: "However, as mentioned above, the EPA has newly available information that indicates that sources in Nevada are linked to downwind air quality problems for the 2015 ozone standards. We therefore propose that Nevada was required to assess additional emissions control opportunities, and we propose to disapprove its submission because Nevada did not so." [(emphasis added)] EPA's basis for disapproval is rooted in a condition that would have been impossible for NDEP to meet, essentially reasoning that NDEP should have known the results of EPA's most recent modeling completed in 2021 when Nevada was preparing the 2018 iSIP.

Commenter: Oklahoma Department of Environmental Quality

Commenter ID: 37

Docket ID: EPA-R06-OAR-2021-0801

Comment:

Results of the EPA's Step 1 and Step 2 Modeling and Findings for Oklahoma (Modeling Sensitivities)

As stated in Section III, above, EPA identified different receptors in the proposed disapproval than were identified in the original modeling on which Oklahoma relied in its SIP. EPA states in the proposed disapproval:

> We recognize that the results of the EPA (2011 and 2016 base year) modeling indicated different receptors and linkages at Steps 1 and 2 of the 4-Step interstate transport framework. These differing results regarding receptors and linkages can be affected by the varying meteorology from year to year, but we do not think the differing results mean that the modeling or the EPA methodology for identifying receptors or linkages is inherently unreliable. 87 Fed. Reg. 9823.

It should also be specifically noted that the number of receptors EPA linked to Oklahoma decreased from six to just two. Furthermore, only one receptor remained consistent between the two modeling runs, and the expected contribution regarding that receptor decreased. This information demonstrates how sensitive the models can be to changes over time. More specifically, it exemplifies how, as time progresses and the model does not have to project as far into the future, the results change. The differences in the modeling results have skewed heavily towards a decrease in the number of (and contribution to) receptors linked to Oklahoma. Therefore, due to the discrepancies in the modeling, ODEQ argues that Oklahoma is not clearly linked to any receptors that EPA has linked to Oklahoma.

The table below further exemplifies the problem of modeling sensitivities. It contains data for the ozone monitors located in the Illinois portion of the Chicago, Illinois-Indiana-Wisconsin Nonattainment Area. Note that of the 12 monitors, only Site 170310032 exceeds the 1% NAAQS threshold of 0.7 ppb. This site barely exceeded the limit, measuring at 0.75 ppb. However, this measurement could be misleading since Site 170310032 is located less than 0.2 miles from Lake Michigan. This location could be greatly influencing the results as models often have difficulties near water-land boundaries. Furthermore, the average of the Oklahoma impact for the 12 monitors equates to 0.41 ppb, well under the 1% limit.

Site ID	State	County	2016-Centered Avg	2016-Centered Max	2020 DV	2023 Avg No Water	2023 Max No Water	OK 2023
170310001	Illinois	Cook	73.0	77	75	69.6	73.4	0.55
170310032	Illinois	Cook	72.3	75	74	69.8	72.4	0.75
170310076	Illinois	Cook	72.0	75	69	69.3	72.1	0.35
170311003	Illinois	Cook	68.3	69	73	65.6	66.3	0.45
170311601	Illinois	Cook	69.3	70	71	65.2	65.8	0.15
170313103	Illinois	Cook	62.7	64	65	59.5	60.8	0.24
170314002	Illinois	Cook	68.7	72	71	66.5	69.7	0.33
170314007	Illinois	Cook	72.0	74	71	68.7	70.6	0.35
170314201	Illinois	Cook	73.3	77	77	69.9	73.4	0.36
170317002	Illinois	Cook	74.0	77	75	70.1	73.0	0.52
170436001	Illinois	DuPage	69.7	71	71	65.8	67.0	0.45
170971007	Illinois	Lake	73.7	75	72	68.6	69.9	0.57

After a monumental effort to understand ozone and precursor transport by EPA, State, and Local Air Quality Agencies, the Ozone Transport Assessment Group, published an Executive Report in 1997. In the Recommendations Section under Major Modeling/Air Quality Conclusions, it states “Regional NOx reductions are effective in producing ozone benefits, the more NOx reduced the greater the benefit. Ozone benefits are greatest where emission reductions are made and diminish with distance.”

The modeling and assessment efforts for the Clean Air Interstate Rule (CAIR) and the CSAPR demonstrate that how the state of Oklahoma impacts a downwind state depends as much on the meteorology of the chosen modeling time-period as it does the emissions.

In the modeling process, measured data is input into a meteorological model, and then a combination of some measured data—but mostly calculated data—is input into an emissions model. These outputs are then input into an air quality model. Considering the variable flow and conversion of data in the process, the results become more estimation than reality.

Commenter: Tennessee Department of Environment and Conservation

Commenter ID: 41

Docket ID: EPA-R04-OAR-2021-0841

Comment:

EPA may not disapprove Tennessee’s Infrastructure SIP based on Prong 2 of CAA §110(a)(2)(D)(i)(I) because Tennessee satisfied its Good Neighbor obligations in its 2018 iSIP submission.

As discussed in Comment #2, once an upwind state has determined that it is not “linked” to a downwind state under Framework Step 2, there is no reason to continue to Steps 3 and 4. This is precisely the conclusion that Tennessee reached in its 2018 iSIP submission to EPA, and EPA understands exactly why Tennessee did so. As EPA itself notes in the iSIP Disapproval: “the most recently available EPA modeling at the time Tennessee submitted its SIP submittal indicated the State did not contribute above 1 percent

of the NAAQS to a projected downwind nonattainment or maintenance receptor." In other words, EPA acknowledges that Tennessee was not "linked" to any downwind states in 2018 based on then-available data and modelling, and therefore would not have been required to complete Steps 3 and 4 of the interstate transport framework analysis.

Nonetheless, EPA now proposes to disapprove Tennessee's SIP submission, based on data EPA published in 2021 and 2022 finding that Tennessee is "linked" to a single maintenance receptor in Denton County, Texas. EPA is suggesting that Tennessee's 2018 technical analysis was flawed because it failed to consider *future* data that were not collected until years after the original submission was made, which would have required Tennessee to perform Steps 3 and 4. As EPA puts it: "Because the entire technical basis for Tennessee's submittal is that the State is not linked at Step 2, EPA proposes to disapprove Tennessee's SIP submission based on EPA's finding that a linkage does exist."

As we noted in Comment #1, EPA's entire approach and rationale in this proposed disapproval makes it impossible for any SIPs a state might submit under the 2015 ozone standard or any future NAAQS to demonstrate compliance with CAA §110(a)(2)(D) because not only must a state consider the evidence available at the time of submission, but a state must also possess the ability to consider *future* evidence that might demonstrate significant contributions to downwind nonattainment or interference with maintenance in a downwind state. The proposed disapproval of Delaware's iSIP in the *Federal Implementation Plan Addressing Regional Ozone Transport for the 2015 Ozone National Ambient Air Quality Standard* perfectly illustrates this point. In Section IV.C.1 of the preamble to the proposed rule ("Correction of EPA's Determination Regarding Delaware's SIP Submission and Its Impact on EPA's FIP Authority for Delaware"), EPA addresses Delaware's Good Neighbor obligations as follows:

[see full comment for comment's excerpt of 87 FR 20036 (April 6, 2022)]

This structure runs contrary to the principle articulated by the Supreme Court in *EPA v. EME Homer City Generation, L.P.* that EPA must work toward an "efficient and equitable solution to the allocation problem the Good Neighbor Provision requires the Agency to address." Instead, EPA's imposition of such an unworkable approach is a textbook failure to comply with EPA's obligation to "select from among reasonable options" under the *Chevron* framework and imposes an entirely arbitrary and capricious standard that states are effectively incapable of following.

The Clean Air Act does not envision nor suggest that states be held to an impossible standard when developing SIPs. Because EPA has provided no evidence that Tennessee was "linked" to any downwind states when it submitted its 2018 SIP revision, EPA may not disapprove Tennessee's Infrastructure SIP based on Prong 2 of CAA §110(a)(2)(D)(i)(I) and therefore should withdraw its proposed disapproval.

Response

The EPA explained at proposal that the EPA's proposed disapprovals relied both on an evaluation of the information supplied by the states in their submissions and on the updated version of modeling available at the time of proposal (2016v2) *see, e.g.*, 87 FR 9801, a point reiterated in the final preamble in Section V.A. EPA responds generally to comments related to the use of updated modeling in Section V.A.4 of the preamble.

In recent years, the EPA has continually leveraged public input to improve the modeling used to support its assessment of good neighbor transport obligations for the 2008 ozone NAAQS and 2015 ozone NAAQS, a process starting with the release of a notice of data availability in January 2017 and continuing through the comment period of this action, as detailed in the preamble in Sections II.C. and III.A. The 2016v2 emissions modeling files have been available for comment since September 2021,[52] and the meteorological data has been available as used in the 2016v1 platform since October of 2020 (with the release of the proposed Revised CSAPR Update) By providing the modeling platform on September 20, 2021, and requesting that comments be provided to EPA's emissions modeling group by December 17, 2021, and also providing ample time for comment on the proposals throughout 2022, the EPA gave stakeholders and interested parties sufficient opportunity to review and comment on the data used to develop the 2016v2 modeling.

The EPA incorporated public comments received on proposals related to 2015 ozone NAAQS interstate transport to update its emissions inventories and other model inputs, some examples of which are detailed in the EPA's response to comments in Section 3 (Emissions Inventories). The final rule modeling using the 2016v3 platform was performed using updated emissions projections, such as additional emissions reductions for electric generating units (EGUs) that reflect the emissions reductions following promulgation of the Revised CSAPR Update for the 2008 ozone NAAQS, more recent information on plant closures and fuel switches, and other sector trends. The construct of the updated emissions platform is described in the 2016v3 Emissions Modeling technical support document (TSD) contained in the docket of this rulemaking. The final rule modeling additionally took into consideration feedback from commenters to improve overall model performance. Thus, by using the updated modeling results based on the new 2016v3 platform, the EPA appropriately took commenter feedback into consideration when finalizing this rulemaking and used the most current and technically appropriate information to do so.

These commenters raise two distinct, but related, circumstances associated with EPA's use of updated modeling to inform its action on the SIP submittals. Commenters referring to the Arkansas, Missouri, and Oklahoma submissions generally acknowledge that these states were linked above 1 percent of the NAAQS (and also 1 ppb) to a set of receptors in the 2011-based modeling of 2023 released in the March 2018 memorandum. They complain, however, that the EPA's new modeling resulted in a new set of linkages, which the states were unable to address since these linkages were unknown at the time of SIP submission. Commenters on the Minnesota, Nevada, and Tennessee disapprovals assert that the states were not linked to any receptors above 1 percent of the NAAQS in the EPA's 2011-based modeling released in the March 2018 memorandum and so these states did not have an opportunity to address any linkages now identified in the updated EPA modeling.

The EPA will take these two sets of comments in turn, noting that the EPA responds to general claims regarding the timing of the EPA's action on SIPs and its use of updated modeling in Section V.A of the Preamble. Other issues raised by these comments are addressed in Sections V.A and V.B of the preamble and in the following sections of this RTC document: 1.1 (Timing of SIP Actions), 1.4 (Use of Updated Modeling), 4.2.1 (Model Performance at Lake Michigan), 7.1 (Methodology for Determining Future Year Contributions), 7.4 (August 2018 Memorandum), 10.2 (SIP Call),10.3 (Cooperative

[52] https://www.epa.gov/air-emissions-modeling/2016v2-platform.

Federalism and the EPA's Authority), 11.3 (Transport Policy), 11.4 (Transport Policy-Western State Ozone Regulation), 11.6 (Economic Impacts), and 11.15. (Out of Scope – Comments on the Proposed FIP).

Different Linkages

With regard to ADEQ's claims, we recognize that the results of the EPA's 2011-based modeling released in the March 2018 memorandum and the 2016v2 modeling (2016 base year) identified different linkages for Arkansas at Steps 1 and 2 of the 4-step framework. In Arkansas's SIP submission, based on a 1 ppb contribution threshold and relying primarily on EPA's 2011-based modeling, ADEQ identified only one projected maintenance receptor, Allegan County, MI, and no projected nonattainment receptors linked to Arkansas in 2023. The EPA summarized Arkansas's analysis of this linkage at proposal. 87 FR at 9803-05. The EPA evaluated ADEQ's analysis and identified substantial technical concerns with the basis for ADEQ's conclusions that it should not be considered linked to that receptor. 87 FR at 9808-09. In other words, the EPA finds Arkansas's submission deficient on its own terms.

ADEQ also argues that changes in linkages between modeling iterations suggests that the EPA's modeling is unreliable. Here, the EPA disagrees. When multiple rounds of modeling, each more up-to-date than the last, continue to confirm certain upwind states are linked, it actually *reinforces* the EPA's conclusion that the upwind state is contributing to receptors at Step 2 of the 4-step framework. A change in modeling output from the 2011-based modeling to the 2016-based modeling results in part from the shift to a more recent meteorological year and other updates. It is completely reasonable and acceptable for the Agency to update its modeling platform periodically, and it is imminently reasonable to do so before taking final rulemaking action.

ADEQ explains that it would have spent a greater effort examining linkages to Texas receptors if it had known the 2016v2 modeling results when it was preparing its SIP submission. The EPA responds that the 2011-based modeling, 2016v2 modeling, and 2016v3 modeling all identify that Arkansas contributes more than 1 percent of the NAAQS to the Brazoria County, Texas receptor (AQS Site ID 480391004), but Arkansas chose to apply a 1 ppb contribution threshold and did not closely examine that linkage in its submission.

We do not think the differing results between the 2011-based and 2016-based modeling of 2023 mean that the modeling or the EPA methodology for identifying Arkansas's receptors or linkages is inherently unreliable. Rather, these separate modeling runs indicated (1) that there were receptors that would struggle with nonattainment or maintenance in the future, and (2) that Arkansas was linked to some set of these receptors, even if the receptors and linkages differed from one another in their specifics (e.g., a different set of receptors were identified to have nonattainment or maintenance problems, or Arkansas was linked to different receptors in one modeling run versus another). We think this common result indicates that Arkansas's emissions were substantial enough to generate linkages at Steps 1 and 2 to some set of downwind receptors, under varying assumptions and meteorological conditions, even if the precise set of linkages changed between modeling runs. Under these circumstances, we think it would have been appropriate for the state to proceed to a Step 3 analysis to determine what portion of Arkansas's emissions should be deemed "significant." In making this observation, we do not now consider the earlier modeling results included in the EPA's March 2018 memorandum to be of equal reliability relative to the more recent EPA 2016v2 or 2016v3 modeling. However, where alternative or

older modeling generated linkages, even if those linkages differ from linkages in the EPA 2016v2 modeling, that information provides further evidence, not less, in support of a conclusion that the state is required to proceed to Step 3 to further evaluate its emissions.

Commenters on the proposal as to Missouri similarly argue that the set of receptors to which Missouri is linked changed from the 2011-based to the 2016-based modeling of 2023. But the same response applies. Missouri Department of Natural Resources (MDNR) and Evergy argue that because the 2016v2 modeling projects that Missouri does not have any of the same linkages that were identified in the 2011-based modeling, that EPA must approve Missouri's SIP submission. The EPA disagrees that the 2016v2 modeling validates the assessment of receptors Missouri made in its SIP submission. The EPA summarized Missouri's analysis of these linkages based on the EPA's 2011-based modeling at proposal. 87 FR at 9539-9540. The EPA evaluated MDNR's analysis, including its rationale for applying a 1 ppb contribution threshold, and identified substantial legal and technical concerns with the basis for MDNR's conclusions that it should not be considered linked to any receptors or that Missouri has no outstanding good neighbor obligations for the 2015 ozone NAAQS. 87 FR at 9540-9544. In other words, the EPA finds Missouri's submission deficient on its own terms. The EPA also notes that the difference between a 1 percent of the NAAQS threshold and a 1 ppb threshold is not meaningful to the conclusion that Missouri is linked at Step 2, because Missouri contributes more than 1 ppb to a downwind receptor in 2023 both in the modeling relied on by the state and in the additional modeling developed by EPA to inform both the proposed and final actions (2016v2 and 2016v3). At proposal, the EPA analyzed MDNR's arguments attempting to establish that in spite of the EPA's modeling it was not linked to the receptors as the EPA had found in the March 2018 memorandum. The EPA found for multiple reasons that those arguments were not approvable. *See* 87 FR at 9540-43. Thus, even accepting an argument that the EPA should not consider information beyond that available to a state in the development of its SIP submission (a position we do not agree with but adopt for the sake of argument), the SIP submission would have been disapproved based on that analysis and even if there was no additional modeling for the EPA to rely on. In short, the commenter has not established that the EPA's review of the arguments advanced by MDNR, as explained in our proposal, was in error in terms of the specific reasoning that MDNR had advanced. Nonetheless, the EPA then went on to find that different linkages existed between Missouri and out of state receptors based on the updated, 2016v2 modeling, *see* 87 FR at 9543-44, which is again confirmed by the 2016v3 modeling. Commenter has not established that these modeled linkages are in error.

In response to ODEQ, the EPA agrees that both changes in emission inputs and meteorology can impact modeling results. However, the EPA does not agree that the trend in the number of linkages or levels of contribution from Oklahoma in iterations of the EPA's modeling relieves Oklahoma of further obligations, or that changes in linkages amount to "discrepancies" that support a conclusion that Oklahoma is "not clearly linked" to receptors. We also disagree that the EPA methodology for identifying receptors or linkages is unreliable. Rather, the EPA's separate modeling runs continued to show (1) that there were receptors that would struggle to attain or maintain the NAAQS in the future, and (2) that Oklahoma was linked to some set of these receptors, even if the receptors and linkages differed from one model run to the next. This common result indicates that Oklahoma's emissions are substantial enough for EPA's contribution assessment to generate linkages at Steps 1 and 2 to some set of downwind receptors, under varying assumptions and meteorological conditions, even if the precise

set of linkages changed between modeling runs. In sum, the continued identification of Oklahoma linkages with updated modeling reinforces the conclusion that the state is potentially significantly contributing to nonattainment or interfering with maintenance in another state.

The EPA cannot accept the arguments advanced by ADEQ, Evergy, MDNR, and ODEQ that Arkansas, Missouri, and Oklahoma should not be considered linked to downwind receptors when the record as a whole establishes: both in the 2011 and 2016-based modeling of 2023, such linkages do exist, and the EPA explained in proposing this action why the states' arguments, taken on their own merits and without regard to the updated modeling, were still not approvable. This is no "sleight of hand" but simply an evaluation of the totality of the information before the Agency.

Unlinked to Linked

In response to comments related to states that were not considered linked to a downwind receptor (i.e., maximum contribution to a downwind receptor was less than 0.7 ppb) in the 2011-based modeling but were linked in EPA's 2016v2-based modeling, the EPA first notes that the Agency is not taking final action on its proposed disapproval of Tennessee's 2015 ozone NAAQS good neighbor SIP submission in this action, but does recognize that the comments made by Tennessee Department of Environment and Conservation regarding Tennessee are similar to those made by Eagle Materials, Idaho Power Company, Minnesota Pollution Control Agency, and Nevada Division of Environmental Protection related to Minnesota and Nevada.

Commenters particularly took issue with the EPA's discussion of the deficiencies in Minnesota and Nevada's Step 3 analyses, interpreting the language in the proposal as EPA expecting these states to predict the future. The EPA is not holding any state to such a standard. The EPA acknowledges that identified linkages and levels of contribution from Minnesota and Nevada changed between the 2011-based modeling and the 2016v2 modeling. However, given that the later iteration of modeling is more up-to-date than the 2011-based modeling, the best conclusion to derive from these differences is that Minnesota and Nevada are potentially significantly contributing to nonattainment and/or interference with maintenance receptors and, as a result, the analyses presented in the SIP submissions cannot support the states' conclusions. (It bears repeating that EPA never indicated when it released the March 2018 Memorandum providing the 2011-based modeling results for 2023 that those results would guarantee any state a SIP approval. To the contrary, the memorandum advised that EPA would evaluate and act on SIP submissions through a future rulemaking action.)

Minnesota's good neighbor SIP submission concluded based on LADCO and EPA 2011-based modeling that the state would not be linked to any other state in 2023 and that ozone trends and existing limits and controls made it "reasonably certain" that the state will not significantly contribute to nonattainment or interference with maintenance in any other state.[53] The EPA cannot agree with this conclusion on the rationale presented in the SIP submission. EPA's 2016v1 modeling, using a 2016 base year and accounting for Minnesota limits and controls, was released in 2020 and identified that

[53] Infrastructure/110(a) requirements for the 2015 Ozone National Ambient Air Quality Standard (October 1, 2018) at 13.

Minnesota was linked to one or more downwind receptors.[54] LADCO was an integral part of the collaborative process to develop the 2016v1 emissions inventories, and Minnesota provided input as well (for example, onroad vehicle miles traveled and populations for 2016)[55]. Minnesota's comments on the 2016v2 modeling were incorporated into 2016v3 modeling as described in Section 3 of the RTC document; both also identify that Minnesota is linked. Additional details about the development of the 2016v3 emission inventories are available in the 2016v3 Emissions Modeling TSD. The EPA described its assessment of Minnesota's SIP submission at proposal, 87 FR 9868-9869, and responds to comments in the RTC document on the topic of air quality factors in Section 8.5 and the topic of existing and future controls in Section 8.3. The EPA explains its assessment of the 2016v3 modeling in relation to Minnesota in the preamble in Section IV.J. The 2016v3 Emissions Modeling TSD contains information about the changes to the emissions inventories between the 2016v2 and 2016v3 platforms.

NDEP's good neighbor SIP submission for Nevada said that

> [a]lthough models can always be refined and there may be differences in certain approaches to technical issues as the NDEP as commented, it is the NDEP's position that the USEPA's modeling is state-of-the-science given the USEPA's constraints. It is also the NDEP's position that the USEPA's contribution modeling is the best available data with which to conduct Nevada's transport analysis.[56]

The submission examined Nevada's contribution to receptors in California and Colorado based on the EPA's 2011-based modeling at Step 2.[57] Based on the EPA's 2011-based modeling, NDEP concluded at Step 3 that Nevada was not linked and so determined, on that reason alone, that no emissions reductions were necessary for the state to resolve its good neighbor obligations for the 2015 ozone NAAQS.[58] NDEP offered no other explanation for why Nevada's SIP submissions satisfied the requirements of CAA section 110(a)(2)(D)(i)(I) .[59] NDEP also stated in its iSIP submission on the topic of CAA section 110(a)(2)(D)(i)(I) that

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[54] 87 FR 9868 at n.94 ("These modeling results are consistent with the results of a prior round of 2023 modeling using the 2016v1 emissions platform which became available to the public in the fall of 2020 in the Revised CSAPR Update, as noted in Section I. That modeling showed that Minnesota had a maximum contribution greater than 0.70 ppb to at least one nonattainment or maintenance-only receptor in 2023. These modeling results are included in the file 'Ozone Design Values And Contributions Revised CSAPR Update.xlsx' in docket EPA–HQ– OAR–2021–0663.").

[55] See the "Emissions Modeling Technical Support Document for the 2016v1 Emissions Modeling Platform" available in the Revised CSAPR Update docket as item EPA-HQ-OAR-2020-0272-0187.

[56]The Nevada Division of Environmental Protection Portion of the Nevada State Implementation Plan for the 2015 Ozone NAAQS: Demonstration of Adequacy (October 1, 2018), Appendix E at E-5. The Clark County and Washoe County portions of Nevada's good neighbor SIP submission for the 2015 ozone NAAQS were identical to NDEP's. Clark County Portion of the Nevada State Implementation Plan to Meet the Ozone Infrastructure SIP Requirements of Clean Air Act Section 110(a)(2) (August 2018), Appendix E; The Washoe County Portion of the Nevada State Implementation Plan to Meet the Ozone Infrastructure SIP Requirements of Clean Air Act Section 110(a)(2) (July 26, 2018), Appendix E.

[57] The Nevada Division of Environmental Protection Portion of the Nevada State Implementation Plan for the 2015 Ozone NAAQS: Demonstration of Adequacy (October 1, 2018), Appendix E at at E-5 – E-10.

[58] *Id.* at E-11.

[59] *Id.*

> Nevada commits to continue to review new air quality information as it becomes available to ensure that this negative declaration is still supported by such information.[60]

As explained previously in this response and in Section V.B.4 of the preamble, the EPA's 2011-based modeling is no longer state-of-the-science, and updated modeling no longer supports NDEP's conclusion, and so the EPA cannot approve NDEP's SIP submission on the rationale provided. As for NDEP's commitment to review new air quality modeling to ensure its conclusions related to good neighbor obligations remain "supported," the EPA observes that NDEP has not submitted a subsequent SIP submission even though the EPA's updated 2016v1 modeling, released in 2020, identified Nevada was linked to one or more receptors,[61] and the 2016v2 modeling, released in February 2022, indicated the same. The EPA's incorporation of comments related to emissions inventories in Nevada for the 2016v3 modeling platform is described in Section 3 (Emissions Inventories).

Given the information available to the EPA on the record before the Agency, the EPA cannot find that Minnesota or Nevada's SIP submissions contain adequate measures sufficient to eliminate significant contribution to nonattainment (Nevada) or interference with maintenance (Minnesota and Nevada) in any other state. The basis for these disapprovals is not intended to fault state agencies for developing SIP submissions using the modeling available to them at the time the SIP submissions were developed. A SIP disapproval is not punitive in any case, and states are free to develop an approvable SIP submission following a disapproval. The disapproval is simply a determination that the submissions before the EPA do not meet the CAA's requirements, based on the record of information before it at the time it acts.

In response to the comment regarding the EPA's proposed error correction of the prior approval of Delaware's good neighbor SIP submission for the 2015 ozone NAAQS, comments on the proposed FIP are beyond the scope of this rulemaking; however, the EPA notes that an error correction under CAA section 110(k)(6) is a revision of an EPA action due to a determination that the EPA's action was in error, not that a state failed to "consider *future* evidence." *See, e.g.*, 86 FR 23056, 23067-68 (April 30, 2021) (error correcting EPA's previous approval of Kentucky's 2008 ozone NAAQS good neighbor SIP in response to the holdings of *Wisconsin* and *New York*).

[60] *Id.* at 9.

[61] 87 FR 31492 n. 55 ("These modeling results are consistent with the results of a prior round of 2023 modeling using the 2016v1 emissions platform which became available to the public in the fall of 2020 in the Revised CSAPR Update, as noted in Section I. That modeling showed that Nevada had a maximum contribution greater than 0.70 ppb to at least one nonattainment or maintenance-only receptor in 2023. These modeling results are included in the file 'Ozone Design Values and Contributions Revised CSAPR Update.xlsx' in docket EPA–HQ–OAR–2021–0663.").

6 Step 1

6.1 Projected Air Quality Problems

6.1.1 Western Receptors

Comment

Commenter: WildEarth Guardians

Commenter ID: 50

Docket ID: EPA-R06-OAR-2021-0801

Comment:

While EPA's latest ozone modeling appears to more accurately project future year ozone design values than past EPA ozone modeling iterations, EPA's modeling continues to project unusually and unrealistically high declines in ozone design values ("DVs") by 2023, particularly at monitors in states with significant oil and gas activity, such as Colorado and Texas. WEG is concerned that EPA's modeled 2023 design values underestimate future 2023 design values and, as a result, fail to properly identify nonattainment and maintenance receptors.

[…]

EPA compared recent monitoring values and reasonably anticipated decreases in ozone design values on the order of approximately 0-1 ppb/yr (i.e., at most 3-4 ppb from 2020-2023) both within Texas and in other parts of the country. Based on this and other analysis, EPA determined that monitors with 2020 design values 4 to 7 ppb above the NAAQS and preliminary 2021 design values 1 to 5 ppb above the NAAQS are unlikely to attain the NAAQS and would likely need even more ozone DV decreases to not be considered a maintenance receptor. Drops in 8-hour ozone DVs on average of 7 ppb or more in three years at multiple monitors in this Colorado Front Range area and drops in 8-hour ozone DVs on average of 7.56 ppb or more in three years at many monitors in the Texas area would not typically be expected to occur unless there is an unexpectedly large change in emissions and/or large change in meteorological conduciveness for ozone generation. And yet, EPA's own modeling continues to forecast 2023 design values that would require ozone to decline by levels well beyond 3 to 4 ppb without identifying any corresponding large emission reductions not already accounted for in the modeling to be implemented in the 2021-2023 timeframe. In particular, EPA's modeled 2023 design values in Colorado and Texas in many cases projects even greater design value declines than forecast by the Texas Council of Environmental Quality in its 2015 Ozone Interstate Transport SIP.

[…]

The significant design value reductions EPA anticipates in 2023 resulted in EPA's failure to identify (and/or correctly identify) monitors as nonattainment or maintenance receptors for purposes of ozone transport analysis.

[…]

We request EPA explain the basis for why it is reasonable to expect ozone design value declines of these magnitudes at these and other monitoring sites that recorded 2020 or 2021 design values greater than or equal to 74 ppb.

We also request EPA incorporate modeling parameters into its ozone model that appropriately cap the amount by which ozone design values decline per year, according to EPA's analysis in its TSD for the EPA Region 6 2015 8-Hour Ozone Transport SIP Proposal.8 After incorporating these modeling parameters, we request EPA re-run its ozone transport model to identify more representative and realistic future year design values. If EPA declines this request, we request EPA explain the basis for its decision.

Lastly, we request EPA conduct a comparative analysis of past EPA ozone modeling projections and the actual observed design values to determine whether EPA ozone modeling tends to overestimate or underestimate future year design values. If EPA finds that the agency's models tend to underestimate future year design values, we request EPA re-run its ozone modeling, incorporating parameters that account for this tendency. If EPA declines this request, we further request EPA explain the basis for its decision.

Response

The response to this comment can be found in Section III of the preamble for this final action.

Comments

Commenter: WildEarth Guardians

Commenter ID: 50

Docket ID: EPA-R06-OAR-2021-0801

Comment:

In New Mexico: WEG states that EPA either chose not to model or not to report modeled results for future year design values for some monitors in New Mexico, including the monitors in Eddy and Lea Counties. Our understanding is that this may be because EPA modeling of the 2016 base year did not result in greater than or equal to five modeled maximum daily average 8-hour ("MDA8") ozone concentrations in excess of 60 parts per billion (ppb) at these monitor sites. The 2020 and 2021 design values in southern and southeastern New Mexico suggest that monitors in these areas will likely see 2023 ozone design values that continue to significantly exceed the 2015 ozone NAAQS, thus warranting future year modeling and state contribution analysis to determine whether upwind states are inappropriately causing or contributing to ozone violations. We request that EPA confirm exactly why it chose not to model future year design values for the monitors in Eddy and Lea Counties. In doing so, we request EPA provide the MDA8 ozone concentrations it modeled for the 2016 base year for the Eddy County and Lea County monitors in New Mexico.

WEG states that if EPA's modeled 2016 base year did not produce greater than or equal to five MDA8 ozone concentration greater than 60 ppb at certain New Mexico monitors, such as those in Carlsbad and Hobbs, they ask that EPA explain why it considers this modeling accurate or representative of ozone conditions in these areas. Given actual monitoring data, any model that fails to produce at least five MDA8 ozone concentrations in Eddy and Lea Counties in 2016 likely contains significant flaws. For the past seven years, the monitors in Eddy County and Lea County have consistently recorded 8-hour ozone concentrations well above 60 ppb. Moreover, for the 2016 base year, EPA's excel file at Docket ID: EPA-HQ-OAR-2021-0663- 0013 identified 10 observed days exceeding 60 ppb at the City of Carlsbad monitor, 23 observed days exceeding 60 ppb at the Carlsbad Caverns National Park monitor, and 13 observed days exceeding 60 ppb at the City of Hobbs monitor. We request EPA help us fully understand its rationale for not modeling future year emissions at these monitors and conducting the associated state contribution analysis. If it is the case that EPA's model does not generate greater than or equal to five MDA8 ozone concentrations at these monitors, we further request EPA evaluate why its modeling protocol is generating such divergent results compared to actual monitoring data. We further ask that EPA explain its rationale for not modeling future year emissions at these monitors given the dramatic increase in ozone design values since 2016.

As we discuss further below, EPA explained in the Technical Support Document ("TSD") for the EPA Region 6 2015 8-Hour Ozone Transport SIP Proposal that it would not expect ozone design values to decrease by more than 0-1 ppb per year. As such, the 2020 and 2021 design values in Southeast New Mexico suggest that monitors in this area will likely see 2023 ozone design values that exceed the 2015 ozone NAAQS and, thus, warrant future year modeling and state contribution analysis to determine whether upwind states are inappropriately causing or contributing to ozone violations.

WEG also requests that EPA explain what legal, regulatory, or guidance provisions – if any – prohibit EPA from including Southeast New Mexico monitors from its ozone transport modeling and analysis. Absent future year modeling, EPA effectively has identified the monitors in Southeast New Mexico as attainment rather than as nonattainment or maintenance receptors. This constructive determination plainly contradicts the current ozone concentrations and design values and trends, and violates the Clean Air Act.

Commenter: WildEarth Guardians

Commenter ID: 50

Docket ID: EPA-R06-OAR-2021-0801

Comment:

In light of the well-documented ozone pollution problem documented at monitoring sites in southern and southeastern New Mexico, WEG requests that EPA apply the analysis described in Sections 1 and 2 of the Technical Support Document (TSD) for the EPA Region 6 2015 8-Hour Ozone Transport SIP Proposal to TCEQ's modeled 2023 design values for Eddy County and Dona Ana County monitors in New Mexico, identified below. Specifically, they request EPA evaluate recent design value monitored trends in Dona Ana and Eddy Counties to determine what potential design value declines – if any – could be

expected by 2023. Using this information, we request EPA compare the TCEQ modeled 2023 design values for the monitors in these counties to the 2020 monitored design value and preliminary 2021 design values and determine whether TCEQ's modeling is underestimating future ozone design values in this region of New Mexico. Accurately determining whether monitors in Southern and Southeast New Mexico qualify as nonattainment or maintenance receptors is essential because TCEQ identified Texas anthropogenic emission sources as contributing well in excess of 1% of the NAAQS, or 0.70 ppb, to the vast majority of monitors in New Mexico – a potentially significant contribution to nonattainment or interference with maintenance. Accordingly, given the likelihood that these monitoring sites are likely to remain in exceedance of the 2015 NAAQS by the 2023 attainment deadline, it is critical that EPA's analysis take into account Texas's significant contribution to ozone pollution in southern and southeastern New Mexico. Understanding Texas's contribution is an essential first step towards ensuring that a Good Neighbor FIP for Texas take the steps needed to ensure that emissions from Texas – including those from the oil and gas industry – do not significantly contribute to non-attainment in New Mexico.

Response

As described in the preamble for this final action, the EPA is relying upon projected 2023 design values and contributions based on the 2016v3 modeling platform. This platform reflects updates made in response to comments on the 2016v2 platform used for the proposed disapprovals. The final action modeling's projected 2023 average and maximum design values and the contributions from Texas to monitors in Dona Ana and Eddy counties are provided in the table below. The data in the table show that the monitors in Dona Ana and Eddy counties each have projected 2023 average design values below the NAAQS but projected maximum design values above the NAAQS. As described in the preamble, the EPA identifies such monitors as maintenance-only receptors. In addition, based on the EPA's 2016v3 modeling, emissions from Texas contribute well above the 1 percent of the NAAQS screening threshold to projected 2023 ozone design values at these four monitoring sites.

Table 6-1 2023 Average/Maximum Design Values and Texas Contributions to Monitors in Dona Ana and Eddy Counties

County	AQS ID	2023 Average/ Maximum Design Values (ppb)	2021 Measured Design Value (ppb)	Texas Contributions (ppb)
Dona Ana	350130021	70.8/72.1	80	4.74
Dona Ana	350130022	69.7/72.4	75	3.59
Eddy	350151005	69.7/74.1	77	1.91
Lea	350250008	69.8/72.2	66	2.17

6.1.2 Receptors Linked to Texas

Comments

Commenter: Association of Electric Companies of Texas, BCCA Appeal Group, Texas Chemical Council and Texas Oil & Gas Association

Commenter ID: 11

Docket ID: EPA-R06-OAR-2021-0801

Comment:

EPA's assessment of TCEQ's 2023 future year projections was arbitrary and capricious. EPA inappropriately relied on its own "ballpark" estimates of future ozone observations to assess the reliability of TCEQ's modeling of those future conditions. A non-modeled "ballpark" evaluation of future design values against estimated future year observations is not a valid technical basis to conclude that TCEQ's 2012 platform was less reliable than EPA's 2016v2 platform at predicting Chicago-region ozone.

[From Sonoma Technology Attachment:] EPA's use of estimated future ozone observations that are yet to occur is not an appropriate basis to analyze a model's reliability to project future design values. The projected 2023 design values from TCEQ's modeling (with a 2012 base year) are similar to projected 2023 design values that were estimated from two other credible air quality modeling platforms with a 2011 base year. As part of EPA's rationale for the proposed disapproval of TCEQ's Transport SIP, EPA compared TCEQ's 2023 ozone design value projections to estimated future year observations of ozone at downwind receptors in Illinois, Wisconsin, and Michigan. EPA also compared TCEQ's 2023 ozone design values at these receptors with 2023 ozone design values calculated from EPA's 2016v2 modeling. EPA concluded that TCEQ's projections likely underestimated future ozone levels and likely prevented TCEQ from identifying nonattainment/maintenance receptors in those states. While there may be some challenges to evaluating modeled estimates of future air quality concentrations, EPA's use of estimated future ozone observations that are yet to occur is not an appropriate or robust approach for such an evaluation. In assessing TCEQ's 2023 future design values, EPA analyzed observed ozone design value trends between 2011 and 2020 and used the ozone trend between those years to estimate the range of ozone design values that might be anticipated in 2023. EPA acknowledged that this approach for estimating future observed DVs is only a "ballpark" estimate, is not as exact as developing new modeling, and does not reflect any legal or policy judgements. EPA uses this estimate to conclude that ozone DVs will decrease at most by 3-4 ppb between 2020 and the 2023 future year. EPA then compares the resulting "estimated" 2023 monitor DV to the TCEQ modeled 2023 future DV. For the subset of monitors in Illinois, Wisconsin, and Michigan with 2020 DVs ≥ 74 ppb, EPA calculates the average amount of decrease in DVs needed to match TCEQ's 2023 projection is around 9 ppb, which is more than 3-4 ppb average decrease over three years that EPA estimates using its "ballpark" approach. EPA concludes that decreases in the ozone DV of 9 ppb in three years do not typically occur but for large changes in emissions and/or meteorology, and therefore proposes to find that TCEQ's model underestimates future DVs. However, long-term (10 year) trends in the ozone DV are not always indicative of how the actual DV will change in a shorter (3 year) time period. Even within EPA's 10-year analysis period, the DVs at Chicago area monitors have changed by 9 ppb or more over a three-year period (see Table 5 [available in full comment]). EPA's modeling guidance recommends a model

performance evaluation of the base year to establish whether an air quality model is performing acceptably and can be considered reliable for estimating future design values. EPA found that TCEQ's base year model performance evaluation was reasonable. A non-modeled "ballpark" evaluation of future design values against estimated future year observations is not a valid technical basis to conclude that TCEQ's 2012 platform was less reliable than EPA's 2016v2 platform at predicting Chicago-region ozone. Evaluations of modeled future year DVs and the air quality model's response to emissions changes are more robust and reliable when they are based on actual observed air quality data, as done by Pegues et al. (2012), Foley et al. (2015). EPA's substitution of a "ballpark" estimate of future observations departs from accepted norms for evaluating modeled future-year ozone concentrations.

EPA concluded that TCEQ's 2023 projected design values were understated, but TCEQ's projected design values were comparable to future design values projected by two other modeling platforms with a 2011 base year that were both released in 2018: one from EPA, and one from the Lake Michigan Air Directors Consortium (LADCO). Both platforms were developed in support of the Interstate Transport "Good Neighbor" Provision for the 2015 8-hour ozone NAAQS. The projected 2023 design values from these modeling platforms are compared to the 2023 projected design value from TCEQ's modeling in Table 9 [available in full comment]. The Illinois Environmental Protection Agency used the modeling results from both EPA's and LADCO's 2011-based platforms to support its maintenance plan for the Illinois portion of the Chicago ozone nonattainment areas for the 2008 NAAQS, which EPA recently proposed to approve. In its proposed approval of the maintenance plan and redesignation, EPA noted that both sets of 2023 modeling results provided evidence that ozone concentrations will continue to decrease across the Chicago nonattainment area, consistent with TCEQ's justification.

Commenter: The Luminant Companies

Commenter ID: 44

Docket ID: EPA-R06-OAR-2021-0801

Comment:

In an effort to manufacture errors in TCEQ's future modeling projections, EPA points not to real world data or even to competing multi-grid modeling, but to its own back of the envelope guesses about the future. Drawing conclusions about one model by comparing its results to those of another model cannot be definitive and is only a surrogate for a comparisons of the models themselves. Even worse, here, EPA uses what it admits is only "a ballpark estimate" to evaluate TCEQ's modeling. But in no way can EPA's "ballparking" be considered more reliable than TCEQ's sophisticated photochemical modeling. EPA's rationale is not only unlawful, but it is dangerous precedent for future SIP submissions and review.

Regardless, even using its unfounded comparison, the best EPA can say is that TCEQ's modeling is "likely underestimating future ozone levels, which "may have prevented TCEQ from identifying nonattainment/maintenance receptors." Ultimately, EPA can only conclude that TCEQ's projections "may understate anticipated ozone levels" in certain downwind areas, which is not a valid basis for disapproval. Moreover, EPA disregards the fact that TCEQ's modeling, in fact, is conservative, as it includes NOX emissions from eight EGUs that have since shut down, totaling approximately 4,885 tons

of NOX for the 2023 ozone season. EPA's "ballpark estimate" approach is too flawed in its premise and too insufficient in its conclusions to discredit the highly sophisticated modeling performed by TCEQ and does not show that TCEQ has failed to satisfy any statutory standard. Rather, TCEQ's projections of future design values appropriately identify downwind nonattainment/maintenance receptors.

Commenter: The Luminant Companies

Commenter ID: 44

Docket ID: EPA-R06-OAR-2021-0801

Comment:

TCEQ's projected design values, which EPA criticizes for not matching its "ballpark estimates," nevertheless align with the projections of other modeling platforms that EPA has recently endorsed. Specifically, a modeling platform developed by EPA itself that was released in 2018 and a modeling platform from the Lake Michigan Air Directors Consortium ("LADCO") produce design values comparable to that of TCEQ's. EPA has approved both of these other models for purposes of the 2015 ozone NAAQS. Therefore, it is apparent that EPA's second-guessing of TCEQ's approach by feigning concern about the results of TCEQ's modeling projections is disingenuous. EPA's inconsistent treatment of the various models is arbitrary and capricious and cannot support EPA's disapproval.

Commenter: Texas Commission on Environmental Quality

Commenter ID: 42

Docket ID: EPA-R06-OAR-2021-0801

Comment:

TCEQ disagrees with the EPA's use of updated 2016 base year modeling to evaluate TCEQ's Transport SIP submittal since the modeling data was unavailable at the time TCEQ developed its SIP revision. The EPA's use of modeling platform and monitoring data that was unavailable at the time TCEQ developed its Transport SIP revision is arbitrary and unreasonable. The TCEQ submitted its 2015 Ozone NAAQS Transport SIP Revision to the EPA on August 17, 2018. EPA did not issue the modeling platform it uses in this proposed disapproval until September 2021 (which included the 2016 base year), nearly three years after the statutory deadline for SIP revisions submissions. Obviously, TCEQ did not have access to this modeling platform and data when it developed its SIP revision. However, the TCEQ did use the latest modeling data it had available and made significant improvements on EPA's method. Additionally, the EPA has issued no rules regarding the use of EPA's modeling and monitoring data in the development of Transport SIP revisions.

The only other modeling data available at the time the TCEQ started developing its Transport SIP revision was the EPA's 2011-base year modeling. For monitors identified by EPA as nonattainment or maintenance and linked to Texas in 2023, the TCEQ modeled 2023 design values are similar to the

preliminary modeling EPA conducted for the 2015 Ozone NAAQS Preliminary Interstate Transport Assessment, as seen in Table 1, EPA and TCEQ Modeled Design Values in 2023 from EPA 2016, EPA 2011, and TCEQ 2012 Modeling. This 2011-base modeling by the EPA is similar to the TCEQ's modeling and also shows attainment with the 2015 NAAQS for the monitors EPA identifies as maintenance or nonattainment linkages in its 2016v2 modeling. In fact, for four of the five monitors for which comparable 2010-2012 monitoring data exist, the TCEQ modeled 2023 design values are higher than the EPA 2011-base modeled design values. The TCEQ contends that the difference in base year and increased projection time may explain the lower TCEQ 2023 design values compared with EPA 2023 design values based on 2016 base year modeling. In Table 1 below, the EPA nonattainment design value is based on the average of the three design values in the five-year base year period and the maintenance design value is based on the maximum of these three design values.

Table 1: EPA and TCEQ Modeled Design Values in 2023 from EPA 2016, EPA 2011, and TCEQ 2012 Modeling.

Receptor (Site ID, County, State)	**Nonattainment / Maintenance (EPA 2016v2 2023)**	**EPA 2016v2: 2023 Nonattainment/ Maintenance Design Value (ppb)**	**EPA 2011v6.3: 2023[3] Nonattainment/ Maintenance Design Value (ppb)**	**TCEQ 2012: 2023 Nonattainment/ Maintenance Design Value (ppb)**
170310001, Cook County, IL	Maintenance	69.6/73.4	63.3/65.1	60/58
170310032, Cook County, IL	Maintenance	69.6/73.4	57.6/60.0	68/66
170314201, Cook County, IL	Maintenance	69.9/73.4	56.6/58.4	64/62
170317002, Cook County, IL	Maintenance	70.1/73.0	54.1/57.0	66/65
550590019, Kenosha County, WI	Nonattainment	72.8/73.7	59.7/61.9	67/66
550590025, Kenosha County, WI	Maintenance	69.2/72.3	No 2010-2012 monitoring data	No 2010-2012 monitoring data
551010020, Racine County, WI	Nonattainment	71.3/73.2	No 2010-2012 monitoring data	No 2010-2012 monitoring data

Based on this information, if the EPA had relied on modeling conducted for 2023 using emission information available when the TCEQ was required to submit its SIP revision, such as the 2011v6.3 platform, it would not have identified the monitors listed above as nonattainment or maintenance monitors because modeled 2023 design values were below 71 ppb.

Analysis of the EPA and TCEQ modeling also shows greater difference between the predicted 2023 design values and the observed 2020 design values as the prediction time lengthens. Figure 2, Difference in Design Value Predicted in 2023 versus Observed in 2020. Predictions are from the EPA 2011 modeling (upper left), TCEQ 2012 modeling (upper right), and EPA 2016 modeling (lower) shows that the mean difference across common monitors decreases from -6.20 ppb for a 12-year prediction time, to -6.08 for

an 11-year prediction, to -4.34 for a seven-year prediction time. The shaded interquartile range of the distribution also tightens with decreasing prediction time, indicating uniformly better prediction. Note that the TCEQ 2012 modeling shows a similar design value difference to the EPA 2011 modeling indicating similar performance. The difference in design values is largely explained by the shorter prediction time, as seen in Figure 2, Difference in Design Value Predicted in 2023 versus Observed in 2020 versus Length of Prediction, where the TCEQ 2012 modeling is shown as the eleven-year prediction length roughly on the linear trend of the three models. The TCEQ chose to use a 2012 base year since it was the most comprehensive, non-anomalous, and best modeling platform available when the modeling needed to commence to meet the SIP development and submittal deadlines.

Commenter: Xcel Energy

Commenter ID: 52

Docket ID: EPA-R06-OAR-2021-0801

Comment:

The EPA erred in the approach taken to modeling the influence Lake Michigan has on the receptor sites located near the air/water shoreline boundaries in Cook County Illinois, Kenosha, and Racine Wisconsin, which was factored into the modeling performed by TCEQ and others, further supported by comments filed by the Association of Electric Companies of Texas (AECT) and the associated modeling analysis performed by Sonoma Technology.

[…]

3. EPA's Air Plan Proposed Approval finding Illinois Portion of the Chicago-Naperville, Illinois Indiana-Wisconsin Area to Attainment of the 2008 Ozone Standard

On March 10th, 2022 EPA proposed to designate that the Illinois portion of the Chicago Naperville, IL-IN-WI area (Chicago area) in attainment for the 2008 ozone National Ambient Air Quality Standards. Cook County, the receptor area linked to Texas's designation as exceeding the contribution threshold, makes up a large portion of the Chicago area. The approval goes on to state:

"While modeling is not required, Illinois cited photochemical modeling performed by EPA and LADCO in support of the interstate transport ''Good Neighbor'' provision of the CAA for the 2015 ozone NAAQS. These modeling results project the highest 2023 average design values to be 0.0662 and 0.0668, well below the 2008 ozone NAAQS. Compared to actual monitored 2009-2013 average design values, both sets of 2023 modeling results show large decreases in ozone concentrations, especially in the heart of the urban area and at the critical monitors at the north of the nonattainment area along the shore of Lake Michigan. These results provide evidence that ozone will continue to decrease across the entire nonattainment area."

The region's ozone design values from both the LADCO and EPA's modeling results show the region below the 2008 standard, below the 2015 threshold of 0.070 ppb, and that ozone concentrations are expected to continue to decrease across the area. This result conflicts with the finding that Texas is

linked to contributing above the impact threshold in Illinois/Chicago in evaluating its SIP for the 2015 Ozone NAAQS. At a minimum, it raises the question as to why EPA found the 2016v2 modeling platform to be superior to the TCEQ photochemical analysis in determining Texas's contribution in modeling efforts performed for the 2015 Ozone NAAQS.

Given the adverse effects this proposed FIP has on grid reliability, and a states' economy, EPA should utilize appropriate modeling techniques, collaborative engagement with impacted states and allow states whose SIPs are disapproved adequate opportunity to respond and provide updated SIP submissions.

Response

In response to comments regarding projected design values for 2023 at monitoring sites in the Lake Michigan areas, as provided in Table 1 from TCEQ's comment document, the EPA compared these model-projected average and maximum design values to projected design values based on EPA's 2016v3 modeling as well as to 2021 final design values. The modeling-based design values for 2023 from TCEQ's comment document (i.e, EPA 2016v2, EPA 2011v6.3, and TCEQ 2012) along with projected average and maximum design values based on EPA's 2016v3 modeling and the 2021 design values are shown in the table below (Table 6-2). Comparing the projected maximum design values from TCEQ's 2012-based modeling to the 2021 measurement-based design values indicates that TCEQ's projections are likely to largely understate 2023 design values. The EPA's older 2011-based design values also appears to be low-biased. In contrast, the EPA's 2016-based projected maximum design values provide a more credible projection of what design values may be in 2023 at these monitoring sites. The fact that the EPA's 2016-based projections more closely align with recent measured data serves to underscore the importance of the EPA's move to this new platform to provide the most credible data for evaluating interstate contributions in this action.

Table 6-2 Comparison of Modeling-based Design Values to 2021 Measured Design Values

Receptor (Site ID, County, state)	Nonattainment / Maintenance (EPA 2016v2 2023)	EPA 2016v2: 2023 Nonattainment/ Maintenance Design Value (ppb)	EPA 2011v6.3: 2023[3] Nonattainment/ Maintenance Design Value (ppb)	TCEQ 2012: 2023 Nonattainment/ Maintenance Design Value (ppb)	EPA 2016v3: 2023 Nonattainment/ Maintenance Design Value (ppb)	2021 Measured Design Value (ppb)
170310001, Cook County, IL	Maintenance	69.6/73.4	63.3/65.1	60/58	68.2/71.9	71
170310032, Cook County, IL	Maintenance	69.6/73.4	57.6/60.0	68/66	67.3/69.8	75
170314201, Cook County, IL	Maintenance	69.9/73.4	56.6/58.4	64/62	68.0/71.5	74
170317002, Cook County, IL	Maintenance	70.1/73.0	54.1/57.0	66/65	68.5/71.3	73
550590019, Kenosha County, WI	Nonattainment	72.8/73.7	59.7/61.9	67/66	70.8/71.7	74
550590025, Kenosha County, WI	Maintenance	69.2/72.3	No 2010-2012 monitoring data	No 2010-2012 monitoring data	67.6/70.7	72
551010020, Racine County, WI	Nonattainment	71.3/73.2	No 2010-2012 monitoring data	No 2010-2012 monitoring data	69.7/71.5	73

Comments related to EPA's use of updated modeling can be found in Sections III and V.B.4 of the preamble and in Sections 1.4 (Use of Updated Modeling) and 5 (Updates to Modeling and Changes in Linkages). Comments related to the timing of EPA's action can be found in Section V.A of the preamble and Section 1.1 (Timing of SIP Actions).

6.1.3 Meteorologically Adjusted Ozone Trends

Comment

Commenter: Louisiana Department of Environmental Quality

Commenter ID: 27

Docket ID: EPA-R06-OAR-2021-0801

Comment:

EPA used variable selection and quantile regression, an unproven technique that the states were not afforded the opportunity to review and provide comment.

Response

The EPA disagrees with this comment. The variable selection and quantile regression technique that the EPA is using to analyze ozone trends after adjusting for the influence of interannual variability in meteorology was published in a peer-reviewed journal, Atmospheric Environment, in March 2021.[62] States and stakeholders had an opportunity to review this article during the proposal comment period of this action. The EPA responds to other comments about this document from LDEQ in Section 1.8 (Docket Document Availability).

6.2 EPA Methodology for Determining Maintenance Receptors

Comment

Commenter: Alabama Department of Environmental Management

Commenter ID: 02

Docket ID: EPA-R04-OAR-2021-0841

Comment:

Alabama suggests the Denton County receptor is not actually a future maintenance receptor. Had EPA followed the TSD, Alabama could not have contributed significantly at the Denton County, Texas receptor because the model results would not have identified the receptor as a future nonattainment or maintenance area, given EPA did not have ten days of "high-ozone" for the receptor.

There is some question whether the Denton County, Texas receptor (481210034) is actually a future maintenance receptor at all. When looking at EPA's modeling technical support document (TSD), the basic approach for calculating the average contribution metric includes averaging the Maximum Daily Average 8-hr concentration (MDA8) in 2023 using the following steps:

1. For the model grid cells containing an ozone monitoring site, calculate the 8-hour average contribution from each source tag to each monitoring site for the time period of the 2023 modeled MDA8 ozone concentration on each day;

2. Average the MDA8 concentrations for the top 10 modeled ozone concentration days in 2023 and average the 8-hour contributions for each of these same days for each tag (Alabama);

[62] Wells, B., Dolwick, P., Eder, B., Evangelista, M., Foley, K., Mannshardt, E., et al. (2021). Improved estimation of trends in U.S. ozone concentrations adjusted for interannual variability in meteorological conditions. *Atmospheric Environment*, *248*, 118234.

3. Divide the 10-day average contribution for each tag by the corresponding 10-day average concentration to obtain a Relative Contribution Factor (RCF) for each tag at each monitor; and

4. Multiply the 2023 average design values by the corresponding RCF to produce the average contribution metric value for each tag at each monitoring site in 2023.

To avoid including contributions on days that are well below the NAAQS, EPA applied a criterion that five or more of the top 10 model-predicted concentration days must have MDA8 concentrations ≥ 60 ppb in order to calculate a valid contribution metric**.** The Denton County monitor used to calculate Alabama's contribution meets this minimum criterion, but only barely– monitor ID 481210034 had only six modeled days above 60 ppb and only one day above 70 ppb (Table 5 [available in full comment]). Those six days (not 10) were used to calculate an average contribution of 0.71 ppb for Alabama. Interpreting the language in the technical support document suggests that EPA should have calculated Alabama's average contribution using all ten days. If all ten days are used, Alabama's contribution clearly falls below EPA's established 0.71 ppb threshold, with a tenth-highest value of 57.39 ppb. It is also important to note that, of 153 modeled days, only one day (September 21) exceeded 70 ppb at all.

Response

This comment confuses the distinct analytical steps and data sources for making determinations at Step 1 and at Step 2. As explained at proposal, at Step 1, the EPA applied the same approach used in the CSAPR Update and the Revised CSAPR Update (86 FR 23078–79) to identify nonattainment and maintenance receptors for the 2008 ozone NAAQS. *See, e.g.*, 87 FR 64416-64417 (October 25, 2022). This method at Step 1, using the 2016v2 modeling, identified the Denton receptor. Commenter does not explain why that method is improper, e.g., why the use of a relative response factor to ground future projections to historical data is not appropriate. Commenter takes issue more specifically with the Step 2 methodology for calculating contribution, which is different from Step 1. However, the EPA's approach for calculating the future year average contribution metric provides a technically reliable estimate of contributions. In calculating the average contribution metric, the EPA typically uses modeled contributions on the 10 days in the future year with the highest model-predicted concentrations. In part because the formation of ozone from precursor emissions can be nonlinear and dependent on meteorological conditions, the response of ozone to emission reductions can vary from day to day. For cases in which the base year model simulation does not have 10 days with ozone values greater than or equal to 60 ppb at a site, we use all days with ozone greater than or equal to 60 ppb, as long as there were at least 5 days that meet this criterion. At monitor locations with less than 5 days with modeled 2016 base year ozone greater than or equal to 60 ppb, no RRF or DVF is calculated for the site and the monitor in question was not included in this analysis.

Consistent with EPA's modeling guidance, when calculating the contribution metric values, EPA applied a criterion that 5 or more of the top 10 model-predicted concentration days must have MDA8 concentrations greater than or equal to 60 ppb in the future year to calculate a valid contribution metric. The criterion of having at least 5 days with MDA8 ozone concentrations greater than or equal to 60 ppb was chosen to avoid including contributions on days that are well below the NAAQS in the calculation of the contribution metric. Using 5 days with MDA8 ozone greater than or equal to 60 ppb

aligns with recommendations in the EPA's air quality modeling guidance for projecting future year design values.

Thus, the EPA disagrees with the comment that the contributions to the receptor in Denton, Texas should be based on all of the top 10 days even though there were only 6 days with modeled ozone greater than or equal to 60 ppb. The EPA's response to comments on the methodology can be found in Section 7.1 (Methodology for Determining Future Year Contributions).

Comment

Commenter: Alabama Power Company, Southern Power Company, and PowerSouth Energy Cooperative

Commenter ID: 04

Docket ID: EPA-R04-OAR-2021-0841

Comment:

In criticizing Alabama's SIP as providing "limited supporting information to show that the Denton County, Texas, maintenance receptor is unlikely to violate the NAAQS in 2023," EPA points to its October 2018 memorandum providing guidance for use in evaluating maintenance receptors. In the October 2018 memorandum, EPA stated that "[m]eteorological conditions including temperature, humidity, winds, solar radiation, and vertical mixing affect the formation and transport of ambient ozone condition." Attachment A to these comments supplements the modeling provided by ADEM in its 2022 SIP and includes model runs on June 19, 2021, for the Denton County receptor that include pressure, ambient air temperature, solar radiation flux, relative humidity, mix layer depth, and rainfall.

EPA also criticized ADEM for only including a centerline; however, what ADEM provided is all that can be produced using the NOAA HYSPLIT Model. EPA suggested no potential alternatives that could be used for analysis. Instead, the back trajectories were run for each hour on June 19, 2021, from 0000 to 1800 UTC for 10, 250, and 500 meters to provide a swath of the state that air packets could have moved over.

The October 2018 Memorandum also provides the basis for using this data for analysis, stating that, "[i]n general, below average temperatures are an indication that meteorological conditions are unconducive for ozone formation, whereas above average temperatures are an indication that meteorology is conducive to ozone formation." The model shows that ambient air temperatures warmed as the air moved towards Texas from 30^{o}F, 65^{o}F, and 80^{o}F to 80^{o}F, 80^{o}F, and 100^{o}F for the 500m, 250m, and 10m trajectories, respectively. This model also shows the air stalling over southwest Texas before moving north to Denton County, especially for the 10m trajectory where the air spent nearly two and a half days in Texas. This model shows that meteorological conditions were not conducive for ozone formation in Alabama, but rather ozone was formed locally.

Again, air normally does not move westward from Alabama into Texas on high ozone days, and when it does, "significant" amounts of ozone precursors are not produced by EGUs nor is ozone formation conducive in Alabama. By removing Alabama's contribution to the Denton County, Texas monitor, such monitor would no longer be a maintenance monitor in accordance with the October 2018 Memorandum.

Response

In the October 2018 memorandum on page 4 the EPA states that a "state could justify exclusion of a monitoring site as a maintenance receptor, notwithstanding modeling projections showing a maximum design value exceeding the 2015 ozone NAAQS." The memorandum describes technical analyses and information that the EPA expects states to include with their SIP submission to justify excluding specific monitoring states that would otherwise be identified as maintenance receptors. As stated in the memorandum, one element of the justification should be a showing that "meteorological conditions in the area of the monitoring site were conducive to ozone formation during the period of clean data or during the alternative base period design value used for projections." Appendix A to the October 2018 Memorandum states that "Ozone is more readily formed on warm, sunny days when the air is stagnant and/or when the winds are favorable for transport from upwind source areas." Appendix A includes information that states could use to support an analysis of ozone conducive meteorological conditions.

The commenter's argument for justifying that Alabama should not be linked to the Denton County receptor was not based on an analysis of meteorological conditions *in the area of the monitoring site* in terms of whether the temperatures in the area were warmer of cooler than normal, as stated in the October 2018 memorandum. Rather, the commenter chose to examine temperatures along the path of trajectory on a particular day. The commenter used these data to claim that the air warmed along the trajectory path from Alabama to the Denton County receptor. The commenter then argued that the meteorology was unconducive to ozone formation over Alabama. This argument is technically flawed. Simply because the air parcel temperature warmed between Alabama and Denton, or that there was unconducive meteorology over Alabama, does not provide a technically sound justification that the meteorology was unconducive to ozone formation over Denton. Furthermore, it appears that the commenter made a typographical error when reporting that the air temperature was 30^{o} F (i.e, below freezing) at 500m given that the trajectory was created for a day in June and the temperatures were 65^{o}F and 80^{o}F at 250m and 10m, respectively.

The EPA's response to the portion of the comment related to interpreting the centerline of the trajectory can be found in Section 8.8 (Hybrid Single-Particle Lagrangian Integrated Trajectory (HYSPLIT) Model).

6.3 TCEQ's Alternative Methodology for Determining Maintenance Receptors

Comments

Commenter: Association of Electric Companies of Texas, BCCA Appeal Group, Texas Chemical Council and Texas Oil & Gas Association

Commenter ID: 11

Docket ID: EPA-R06-OAR-2021-0801

Comment:

TCEQ's methodology for selecting maintenance monitors was appropriate and justified in accordance with an EPA October 2018 guidance memo that provided certain flexibilities including the use of a DV from the base period that is not the maximum design value.

TCEQ's choice to use the latest measured DV over the relevant base period instead of the maximum measured DV was reasonable given the history of ozone design values since 2012, the meteorology during the 2012-2014 period, and emissions trends from 2010-2019

The data does not support EPA's conclusion that the 2012-2014 period was "not particularly conducive to ozone formation, at least for many receptors" compared to the 2010-2012 and 2011-2013 periods (TCEQ's alternative approach for selecting maintenance receptors involved selecting the 2012-2014 DV). Nationally, 2012 was among the highest ozone years since 2005-2007 even when statistically adjusting for meteorological variability (Figure 2). Any ozone design value that included 2012 would have included at least one year with exceptionally conducive meteorology for high ozone.

Direct text: "…TCEQ's methodology for selecting maintenance monitors was appropriate and justified. As noted above, the CAA does not require a specific process for the selection of maintenance monitors. EPA's preferred approach for selecting maintenance receptors involves determining the maximum future design value ("DV") at each receptor based on a projection of the maximum measured DVs over the relevant base period. However, states are not required to utilize EPA's approach. EPA issued a memorandum in October 2018 providing guidance on potential flexibilities and alternative methods that states may use with technical justification to identify maintenance receptors, including the use of a DV from the base period that is not the maximum design value. TCEQ's choice to use the latest measured DV over the relevant base period instead of the maximum measured DV was technically justified and reasonable given the history of ozone design values since 2012, the meteorology during the 2012–2014 period, and emissions trends from 2010– 2019. TCEQ sufficiently explained these expert choices in its SIP submittal. EPA's approach for selecting maintenance monitors necessitates an overly conservative estimate of the maximum projected future-year design values and overly conservative selection of receptors.

Likewise, EPA's assessment of TCEQ's 2023 future year projections was arbitrary and capricious. EPA inappropriately relied on its own "ballpark" estimates of future ozone observations to assess the reliability of TCEQ's modeling of those future conditions. EPA cannot substitute its own simplified guesses about future conditions for TCEQ's robust modeling. EPA's "ballpark" estimate is not an objective measure of the reliability of TCEQ's modeling nor is it a valid technical or legal basis for evaluating future ozone. Such a method fails to demonstrate that TCEQ's SIP does not comply with the Act. As outlined by the Sonoma Technology analysis, sound air quality planning is based on valid and accurate modeled predictions grounded on actual observed ozone levels. Relying on its own flawed future year ozone estimates, EPA asserts that TCEQ's modeling underestimates future (2023) ozone levels and that the TCEQ method is flawed. According to EPA, these underestimations likely prevented TCEQ from identifying nonattainment and/or maintenance receptors. However, TCEQ's projected design values are comparable to future DVs projected by two other modeling platforms released in 2018 and recently embraced by EPA: one from EPA itself, and one from the Lake Michigan Air Directors Consortium ("LADCO"). Both platforms were developed and approved in support of air quality planning for interstate transport under the 2015 ozone NAAQS. The Illinois Environmental Protection Agency

used the modeling results from both the EPA and LADCO platforms to support its maintenance plan for the Illinois portion of the Chicago ozone nonattainment areas for the 2008 NAAQS. In its proposed approval of the maintenance plan and redesignation, EPA noted that both sets of 2023 ozone predictions provided evidence that ozone concentrations will continue to decrease across the Chicago region."

(From Attachment: Sonoma Technology) - In response to comments received through stakeholder outreach, EPA issued a memorandum in October 2018 ("October 2018 Memorandum" 16) providing guidance on potential flexibilities and alternative methods that states may use with technical justification to identify maintenance receptors, including the use of a DV from the base period that is not the maximum design value. TCEQ's Transport SIP used an appropriate and well-supported alternative approach for selecting maintenance receptors. Whereas EPA's approach for selecting maintenance receptors involves projecting the maximum measured DVs over the relevant base period, TCEQ's alternative approach involves projecting the latest measured DV over the relevant base period, regardless of whether that most recent DV was the highest of the three. TCEQ's analysis did not identify the monitors in Illinois and Wisconsin as maintenance (or nonattainment) receptors, in contrast to EPA's analysis based on its 2016v2 modeling platform. TCEQ's alternative approach for selecting maintenance receptors was technically credible and justified by the data. TCEQ's choice to use the latest measured DV over the relevant base period instead of the maximum measured DV was reasonable given the history of ozone design values since 2012, the meteorology during the 2012-2014 period, and emissions trends from 2010-2019.

Table 6 [available in full comment] shows the monitored ozone design values at 7 receptors in Illinois and Wisconsin that were linked to Texas by EPA's 2016v2 modeling. In EPA's approach, the maximum future DV would have been projected from the maximum of the three design values that encompassed the 2012 base year (the base period is shaded in grey; the maximum DVs are italicized). In TCEQ's approach, the most recent DV during the base period was selected (i.e., 2012-2014 DV, shown in bold). At three of the sites (Cook – South, Cook – Evanston, and Kenosha – Chiwaukee), the 2012-2014 DV was the highest DV observed in any year since. The future-year design values projected from the 2012-2014 DVs calculated by TCEQ for these sites would have adequately captured any future high ozone years that have occurred since then in light of local and regional NOx emissions reductions that have occurred since 2010 and are expected into the future. The maximum DVs during the 2012-2014 period that would have been selected using EPA's methodology are also shown in Table 5 [available in full comment]. At the same three sites (Cook – South, Cook – Evanston, and Kenosha – Chiwaukee) the maximum DVs during this period were also the highest DV observed in any year dating back to at least 2007 (Table 6). For these three sites, using EPA's approach for selecting maintenance receptors would not be reasonable because the future DVs would be projected from a baseline DV that was historically high and unlikely to be repeated in the future regardless of meteorological conditions.

Analyzing emissions trends is important when considering whether a maintenance monitor is likely to violate the NAAQS in the future analytic year. Table 7 [available in full comment] shows the emissions in the Chicago ozone nonattainment area in 2010 and 2019, showing a substantial decrease (almost 40%) in NOx emissions in the region. Additional reductions are expected through 2035 (Table 8 [available in full comment]). In its maintenance plan for the 2008 ozone NAAQS, Illinois successfully demonstrated that the improvement in ozone air quality in the Chicago area was caused by actual emission reductions,

not by unusually favorable meteorological conditions, and that those air quality improvements were due to permanent and enforceable emissions reductions that will keep the region in attainment of the 2008 ozone NAAQS.

Finally, in its proposed disapproval of TCEQ's Transport SIP, EPA concluded that the 2012-2014 period was "not particularly conducive to ozone formation, at least for many receptors" compared to the 2010-2012 and 2011-2013 periods (TCEQ's alternative approach for selecting maintenance receptors involved selecting the 2012-2014 DV). The data does not support EPA's conclusion. Nationally, 2012 was among the highest ozone years since 2005-2007 even when statistically adjusting for meteorological variability (Figure 2). Any ozone design value that included 2012 would have included at least one year with exceptionally conducive meteorology for high ozone. As EPA notes (and as also seen in Figure 2), the meteorology in 2011 was also conducive to high ozone. However, based on the observed ozone data, the recent and future projected emissions trends in the Chicago nonattainment area, and the Illinois maintenance plan for the area that EPA is proposing to approve, it is unlikely a recurrence of exceptionally conducive meteorological conditions (even for two consecutive years) would result in a recurrence of the high ozone DVs observed in the Chicago area in 2010-2012 (the 2012 DV) and 2011-2013 (the 2013 DV).

Commenter: Association of Electric Companies of Texas, BCCA Appeal Group, Texas Chemical Council and Texas Oil & Gas Association

Commenter ID: 11

Docket ID: EPA-R06-OAR-2021-0801

Comment:

EPA's approach to selecting maintenance monitors is overly conservative when based on DVs that are at their historical high. When local and regional NOx emissions are declining rapidly over time, there can be circumstances when the maximum DV from the base period is no longer an appropriate basis to identify receptors that may be at risk of exceeding the NAAQS in the future, even considering inter-annual variability in meteorological conditions.

From Sonoma Technology Attachment: EPA's Approach to Selecting Maintenance Monitors is Not Supported - EPA's approach for selecting maintenance receptors involves determining the maximum future DV at each receptor based on a projection of the maximum measured DVs over the relevant base period. As it pertains to the August 17, 2018, TCEQ Transport SIP that EPA is proposing to disapprove as part of this rulemaking, the base modeling year was 2012, and thus the relevant base period for TCEQ's Transport SIP was 2012-2014.

According to EPA, the projected maximum future DV is intended to yield a reasonable projection of future air quality under a scenario in which meteorological conditions conducive to producing high ozone concentrations may reoccur. However, as discussed in more detail below, when local and regional NOx emissions are declining rapidly over time, there can be circumstances when the maximum DV from the base period is no longer an appropriate basis to identify receptors that may be at risk of exceeding

the NAAQS in the future, even considering inter-annual variability in meteorological conditions. In these circumstances, EPA's approach to selecting maintenance monitors is overly conservative when based on DVs that are at their historical high.

Commenter: Texas Commission on Environmental Quality

Commenter ID: 42

Docket ID: EPA-R06-OAR-2021-0801

Comment:

[T]he EPA fails to adequately justify its claim that the TCEQ did not provide sufficient technical basis for its use of an alternative methodology to identify maintenance receptors.

[…]

The TCEQ has provided a sufficient technical basis for its use of an alternative methodology to identify maintenance monitors.

The EPA claims that the TCEQ did not provide sufficient technical justification for its approach and that the TCEQ's use of the latest monitored design value did not account for inter-annual variability in ozone conducive conditions. The EPA observes that the TCEQ's maintenance monitor identification methodology accounts for variations in meteorological conditions only over a three-year period compared to the five-year period accounted for in the EPA's method. The EPA does not provide sufficient justification for why five years of meteorological conditions adequately capture interannual variability while three years cannot. The latest three years best describe the ozone conditions closest to the future year. The EPA also does not address the fact that the modeled future design values are based on a single base year that is explicitly modeled and are therefore most impacted by the meteorological conditions in that single base year. It should be noted that both the TCEQ's method and the EPA's method use a single base year. The TCEQ's method used the latest three-year design value to reflect the most recent atmospheric conditions of each area, considering meteorology and emissions information.

The EPA states that since the EPA method identifies more monitors as maintenance monitors it is the more rigorous method. However, the "Good Neighbor" provision is not intended to be an exercise to find the greatest number of monitors likely to have air quality issues but to find the monitors mostly likely to have air quality issues due to significant contribution from upwind states.

The EPA further analyzed 21 monitors that had contributions greater than 0.7 ppb in either TCEQ or EPA modeling. The EPA claims that the TCEQ's methodology was flawed because the future year nonattainment design value (determined based on the use of average of three monitored design values as base design value, DVB) is less than the future year maintenance design value (determined based on the use of the latest of three monitored design values as DVB). The EPA discusses in detail how the difference between the nonattainment and maintenance design value in TCEQ's methodology is smaller than the difference in EPA's methodology. However, the EPA fails to discuss that of the 21 monitors, 15 monitors that were identified as maintenance monitors by the EPA's methodology were also identified

as maintenance monitors by TCEQ's methodology. In addition, the EPA fails to provide justification on why maintenance design values being lower than nonattainment design values is troubling. For a monitor to have maintenance issues, the future year design value only needs to exceed the standard of 70 ppb not the nonattainment design value.

The EPA further states that the TCEQ's methodology identified a monitor that would be nonattainment but not maintenance as proof that the TCEQ methodology is flawed. However, the EPA does not provide any justification for why every monitor that is modeled nonattainment should also be a maintenance monitor. If, as the EPA contends, monitors face maintenance issues solely due to inter-annual variability of meteorological conditions, it is also possible that the monitors could attain the standard due to favorable meteorology. In practice, a maintenance monitor should only have a transport linkage if it is in an area redesignated as attainment and a subsequent exceedance was shown to be caused by a transport issue, despite local controls and contingency measures. Otherwise, any reductions that might be required from upwind states to help that particular monitor maintain the standard would be overcontrol on the part of EPA.

The EPA should not disapprove the TCEQ's Transport SIP Revision based on the TCEQ's use of an alternative methodology for identifying maintenance monitors. The TCEQ's method for identifying maintenance monitors aligns with criteria regarding monitored design value trends specified in the EPA's Maintenance Receptor Guidance Memo and is scientifically defensible.

Despite the EPA issuing the Maintenance Receptor Guidance until after the statutory SIP revision submission deadline has passed and thus, depriving the TCEQ of this information during the preparation of Texas' SIP revision, the TCEQ did show that ozone concentrations have been trending downward since 2011 at monitoring sites for which the TCEQ modeling showed linkages. Such a trend is a condition in the Maintenance Receptor Guidance for states to choose an alternative maintenance monitor selection method. The EPA's disapproval conflates instances in which a design value is greater than the previous year with lack of a downward trend. The TCEQ contends that a downward trend of design values since 2011 can have individual design values that are higher than design values in the previous year and still comprise a downward trend over a longer period. The EPA appears to have misunderstood the TCEQ's reasons for choosing the 2014 regulatory design value as the DVB when estimating modeled future year maintenance design values. The TCEQ chose the 2014 regulatory design value because it was the latest design value and best represented current conditions and not because it is the lowest.

Further, for the monitors the EPA linked to Texas based on its 2016v2 modeling, only five of the seven monitors have valid design values in 2014. Out of those five, three had their highest design values in 2014. Emissions trends from the EPA's National Emissions Inventory (NEI) in Illinois and Wisconsin, where the seven monitors are located, show consistent decreases from 2010 through 2020. The EPA's meteorologically-adjusted ozone trends show that ozone values in the Central and East North Central United States, where the linked monitors are located, are much higher in 2012 due to meteorology, which was represented explicitly in the TCEQ's modeling. However, there hasn't been a consecutive three-year period from 2000 through 2020 that has had ozone conducive conditions similar to 2012. Therefore, if TCEQ had followed the EPA's methodology, TCEQ would have used the 2012 monitored regulatory design value as the DVB, which would have ignored the downward trend in design values and resulted in the misidentification of monitors as maintenance monitors.

Commenter: The Luminant Companies

Commenter ID: 44

Docket ID: EPA-R06-OAR-2021-0801

Comment:

TCEQ's Maintenance Monitor Selection Properly Identified Maintenance Receptors for Purposes of the 2015 Ozone NAAQS

EPA similarly second-guesses TCEQ's maintenance receptor methodology in proposing to disapprove Texas's SIP because, EPA says, TCEQ has not adopted an identical approach to EPA. Specifically, EPA would rely on the *maximum* design value during the 5-year base period to identify future maintenance receptors, whereas TCEQ relied on the most recent design value from the relevant base period when identifying future maintenance receptors to ensure that its projection appropriately captured emission trends. EPA claims that its method of selecting maintenance receptors "was upheld in the EME Homer City litigation." But this is irrelevant for EPA's analysis of Texas's SIP—EPA's method is not codified and has not been deemed the only appropriate way to identify maintenance receptors for the 2015 ozone NAAQS or any other NAAQS for that matter. Simply because EPA would take a different approach does not mean TCEQ's approach was inappropriate or not technically sound.

Further, although EPA itself recognizes that "it is not mandatory to follow the EPA's modeling guidance," TCEQ's approach does, in fact, align with guidance EPA issued in October 2018, which recognized that the use of differing design values from the base period may be appropriate. TCEQ has provided significant technical justification for its maintenance methodology approach, and the approach provides reasonable and supportable results. EPA's complaints that the years associated with the design values used by TCEQ "*may not have* had meteorological conditions particularly conducive for formation of high ozone concentrations" or that TCEQ "*may* effectively 'double count' emission trends" are insufficient to support a finding by EPA that Texas's SIP is technically deficient under the statutory requirements of the Clean Air Act. Such speculation is not a valid basis for disapproval. Further, it is EPA's own approach to identifying maintenance receptors that is flawed, as EPA relied on design values that were historically extreme. This inappropriately inflates EPA's future projected design values. Therefore, using EPA's approach would require reductions from upwind states that are not necessary for maintenance of the NAAQS—a form of unlawful overcontrol.

Importantly, EPA's role in reviewing SIP submissions is narrowly tailored under the Clean Air Act. As EPA has previously explained, "Congress assigned to states the primary responsibility to implement the NAAQS[.]" If a SIP is deemed complete, "the Administrator shall approve such submittal as a whole if it meets all the applicable requirements of this chapter[.]" Thus, if a SIP submission "meets all of the applicable [Clean Air Act] requirements, the EPA must approve it." In the proposal here, EPA has strayed outside the statute and established court precedent to propose disapproval simply because TCEQ's modeling is not the same as EPA's.

Response

The EPA disagrees that the use of only the latest 3-year period (of a 5-year baseline period) for calculating a DV properly accounts for the effects of meteorological variability for the purpose of identifying projected maintenance receptors. Rather, the use of a 3-year average has the effect of discounting or even ignoring, not accounting for, the effects of inter-annual variability in ozone conducive meteorology. TCEQ'S alternative methodology for determining maintenance receptors used the most recent design value of the three DVs, regardless of whether the most recent design value was highest or lowest. The "Modeling Guidance for Demonstrating Air Quality Goals for Ozone, PM2.5, and Regional Haze" from November, 2018 notes that 1 or more years of meteorological conditions which are not conducive to ozone formation in either the base year period or the most recent design value period will have the effect of making it appear that an area is closer to attaining the NAAQS than would otherwise be the case if more typical meteorological conditions had occurred. An area may appear to be on track to attain the NAAQS (or close to attaining) but, in reality, may need substantial additional emissions reductions to attain under average or above average meteorological conditions.[63]

The EPA disagrees that the deficiencies we identified with TCEQ's approach to identifying maintenance receptors were based on speculation or that EPA proposed to disapprove TCEQ's approach because it was not identical to our approach. Rather, in our proposed disapproval we stated that TCEQ's approach to identifying maintenance receptors, which uses only the most recent design value, is flawed because it fails to adequately consider interannual variability in ozone-conducive meteorology that may cause certain receptors to struggle to maintain the NAAQS in ozone conducive years. The *North Carolina* decision made clear that in interpreting the good neighbor provision, upwind states' and the EPA's obligations to reduce emissions must account for variable conditions that could cause an area that is sometimes attaining the NAAQS to fall out of attainment. *North Carolina v. EPA*, 531 F.3d 896, 908-911 (D.C. Cir. 2008). *See also Wisconsin,* 938 F.3d at 327 ("Variations in atmospheric conditions and weather patterns can bring maintenance receptors into nonattainment even *without* elevated emissions.") In both our proposal and accompanying Evaluation of TCEQ Modeling TSD, we explained that TCEQ did not adequately demonstrate that the 2014 DV used was necessarily conducive to ozone formation. Additionally, we showed how the 2014 Design Value used by TCEQ included years where the meteorology was not particularly conducive to ozone formation as compared to other years in the 5-year base period. Thus, TCEQ's approach to identifying maintenance receptors fails to appropriately account for variable conditions that could cause an area to struggle to maintain the NAAQS in ozone conducive years.

The EPA also disagrees that its approach relies on design values that were historically extreme. Rather, the EPA's approach to identifying a "maintenance" receptor for purposes of defining interference with maintenance, is consistent with the method used in the CSAPR and upheld by the D.C. Circuit in *EME Homer City Generation, L.P. v. EPA,* 795 F.3d 118, 136 (D.C. Cir. 2015) ("With the Transport Rule, EPA created a distinct category of maintenance receptors that could independently trigger an upwind state's good neighbor obligations. Therefore, the Transport Rule complied with *North Carolina*'s requirement that EPA give the nonattainment and maintenance prongs 'independent significance.'") Specifically, the EPA identified maintenance receptors as those receptors that would have difficulty maintaining the

[63] *See* EPA's "Modeling Guidance for Demonstrating Air Quality Goals for Ozone, PM2.5, and Regional Haze" from November 2018, page 174.

relevant NAAQS in a scenario that takes into account historical variability in air quality at that receptor. The variability in air quality was determined by evaluating the ‘‘maximum’’ future DV at each receptor based on a projection of the maximum measured DV over the relevant period. The EPA interprets the projected maximum future DV to be a potential future air quality outcome consistent with the meteorology that yielded maximum measured concentrations in the ambient data set analyzed for that receptor (i.e., ozone conducive meteorology). The EPA also recognizes that previously experienced meteorological conditions (e.g., dominant wind direction, temperatures, air mass patterns) promoting ozone formation that led to maximum concentrations in the measured data may reoccur in the future. Thus, the EPA finds that the maximum DV gives a reasonable projection of future air quality at the receptor under a scenario in which such conditions do, in fact, reoccur.

In addition, in response to this comment and others, the EPA compared the projected 2023 maximum design values based on the 2016v3 modeling for this final action to the corresponding 2021 and preliminary 2022 design values based on measured data at individual monitoring sites nationwide. The table below provides the projected 2023 maximum design values at modeling-based receptor sites nationwide along with the difference between these maximum design value and the measured design values in 2021 and 2022 (preliminary). The data in the table indicate that of the 33 receptors projected maximum 2023 design values are more than 1 ppb lower than the corresponding 2021 (2022) preliminary design values at 24 (22) receptors. In addition, EPA has identified 49 monitoring sites that are projected to be in attainment based on model-projected 2023 average and maximum design value but are measuring nonattainment based on 2021 and preliminary 2022 data. As described in the preamble of this final action, the EPA has identified these sites as “violating-monitor” maintenance-only receptors in 2023. Thus, current measured data indicate that EPA’s method for identifying modeling-based maintenance-only receptors based on projected base period measured maximum design values does not “inflate” design values that are expected in 2023. Rather, the data suggest that the EPA’s approach may actually understate the magnitude and geographic extent of the ozone nonattainment and/or maintenance problem in 2023.

The EPA has placed in the docket of this final action a data file that contains the model-projected average and maximum design values for 2023 and the 2021 and preliminary 2022 data for monitoring sites nationwide.

Other topics in these comments are addressed in Section 10.3 (Cooperative Federalism and the EPA’s Authority).

Table 6-3 Comparison of Projected 2023 Maximum Design Values and Measured Design Values in 2021 and 2022 (Preliminary)

AQS ID	State	County	2023 Max DV	2023 Max DV – 2021 DV	2023 Max DV – 2022 DV (Preliminary)
40278011	Arizona	Yuma	72.1	5.1	4.1
60650016	California	Riverside	73.1	-4.9	-3.9
60651016	California	Riverside	92.2	-2.8	2.2
80350004	Colorado	Douglas	71.9	-11.1	-11.1
80590006	Colorado	Jefferson	73.5	-7.5	-9.5
80590011	Colorado	Jefferson	74.1	-8.9	-9.9
80690011	Colorado	Larimer	72.1	-4.9	-4.9
90010017	Connecticut	Fairfield	72.2	-6.8	-4.8
90013007	Connecticut	Fairfield	73.8	-7.2	-7.2
90019003	Connecticut	Fairfield	73.6	-6.4	-6.4
90099002	Connecticut	New Haven	72.6	-9.4	-6.4
170310001	Illinois	Cook	71.9	0.9	-0.1
170314201	Illinois	Cook	71.5	-2.5	-2.5
170317002	Illinois	Cook	71.3	-1.7	-2.7
350130021	New Mexico	Dona Ana	72.1	-7.9	-8.9
350130022	New Mexico	Dona Ana	72.4	-2.6	-2.6
350151005	New Mexico	Eddy	74.1	-2.9	-2.9
350250008	New Mexico	Lea	72.2	6.2	6.2
480391004	Texas	Brazoria	72.5	-2.5	-0.5
481210034	Texas	Denton	71.6	-2.4	-4.4
481410037	Texas	El Paso	71.4	-3.6	Missing 2022 DV
481671034	Texas	Galveston	72.8	0.8	2.8
482010024	Texas	Harris	76.7	2.7	7.7
482010055	Texas	Harris	71.9	-5.1	-5.1
482011034	Texas	Harris	71.3	0.3	-0.7
482011035	Texas	Harris	71.3	0.3	-0.7
490110004	Utah	Davis	74.2	-3.8	-4.8
490353006	Utah	Salt Lake	74.2	-1.8	-1.8
490353013	Utah	Salt Lake	73.8	-2.2	-3.2
530330023	Washington	King	71.0	7.0	1.0
550590019	Wisconsin	Kenosha	71.7	-2.3	-3.3
551010020	Wisconsin	Racine	71.5	-1.5	-3.5
551170006	Wisconsin	Sheboygan	73.6	1.6	-1.4

Comment

Commenter: Midwest Ozone Group

Commenter ID: 30

Docket ID: EPA-R05-OAR-2022-0006

Comment:

MOG specifically objects to EPA's approach to implementation of the flexibility guidance issued by EPA in 2018 for the specific application by states to the development of 2015 ozone NAAQS Good Neighbor SIPs. With respect to Ohio, we note that Ohio EPA ("OEPA") specifically provided significant technical support justifying an alternative approach for determining maintenance-only receptors. To support its justification, OEPA provided an alternate method of future design value projection using the most recent 3-year design values (DV) from the analytic years rather than the highest 3-year DVs from the 5-year period. This was further supported with declining VOC and NOx emission trends and observed air quality improvement at each of the impacted monitors. OEPA also supported its calculations with information on inter-annual meteorological variability and the divergence from long-term temperature trends in the years 2011, 2012, and 2013 (the early years of the 5-year period). With these data and their supporting calculations, OEPA was able to demonstrate that the monitoring sites identified as maintenance are not reasonably expected to have difficulty maintaining the standards in 2023. EPA's rejection of that demonstration is clearly in error.

Response

The EPA disagrees that the use of only the latest three 3-year period (of a 5-year baseline period) for calculating a DV properly accounts for the effects of meteorological variability for the purpose of identifying projected maintenance receptors. Rather, the use of a 3-year average has the effect of discounting or even ignoring, not accounting for, the effects of inter-annual variability in ozone conducive meteorology. TCEQ'S alternative methodology for determining maintenance receptors used the most recent design value of the three DVs, regardless of whether the most recent design value was highest or lowest. The "Modeling Guidance for Demonstrating Air Quality Goals for Ozone, PM2.5, and Regional Haze" from November, 2018 notes that 1 or more years of meteorological conditions which are not conducive to ozone formation in either the base year period or the most recent design value period will have the effect of making it appear that an area is closer to attaining the NAAQS than would otherwise be the case if more typical meteorological conditions had occurred. An area may appear to be on track to attain the NAAQS (or close to attaining) but, in reality, may need substantial additional emissions reductions to attain under average or above average meteorological conditions.[64]

With respect to the commenter's assertions that Ohio EPA "provided significant technical support justifying an alternative approach, the EPA disagrees. As stated in the proposed rulemaking, Ohio EPA's

[64] *See* EPA's "Modeling Guidance for Demonstrating Air Quality Goals for Ozone, PM2.5, and Regional Haze" from November, 2018, page 174.

proffered explanation for using the most recent design value to identify maintenance receptors was that the latest design value "takes into consideration . . . any emissions reductions that might have occurred."87 FR at 9870 (citing TCEQ submission at 3–39 to 3–40.) Ohio EPA in its submission did not explain why or how this methodology identifies those areas that may be meeting the NAAQS or that may be projected to meet the NAAQS but may nevertheless struggle to maintain the NAAQS, given interannual variability in ozone conducive meteorology. In fact, because the TCEQ's methodology adopted by Ohio EPA uses the most recent design value to capture more recent emissions reductions rather than capture variable conditions, the methodology appears to be aimed at limiting receptors which could be identified as maintenance receptors, compared to EPA's methodology, which was designed to identify those areas that might struggle to maintain the NAAQS in ozone conducive conditions.

Ohio EPA provided the following ozone DV trend data for the four eliminated monitors spanning 2000-2017. [65] While the submission uses these data to show overall decreasing trends, EPA highlights that the figure provided shows stagnant or increasing ozone DVs from 2014 onward. For three out of the four maintenance receptors Ohio EPA identified via the TCEQ method, the 2013 DV was the lowest of the three DVs in the 5-year base period. While Ohio EPA attributes this to emission reduction measures, the EPA considers this to highlight the selectiveness of the TCEQ method and the aforementioned lack of accounting for meteorological variability. The figure demonstrates variability in ozone DV trends that would have been incorporated using the highest of the three DVs in the 5-year base period. Further, the meteorological plots provided in OEPA's submission show maximum temperatures from 2011 through 2013. In two of the three years used for the 2013 design value calculation, maximum temperatures were not above average in Ohio. In those years, (2011 and 2013), there are areas in Ohio that experienced less than average temperatures. The EPA does not believe these plots demonstrate that this design value period fully accounts for meteorological variability, and it would be more appropriate to use the EPA method of the maximum of the three design value periods. Ohio EPA's analysis of meteorological information did not discuss or consider how other meteorological factors that are typically associated with high ozone episodes such as humidity, solar radiation, vertical mixing, and/or other meteorological indicators such as cooling-degree days to confirm whether conditions affecting these monitors may have been conducive to ozone formation during the 2009 through 2013 base period. In addition, the ozone trends data provided in the Ohio EPA submittal indicate that several of the receptors in Coastal Connecticut to which Ohio is linked by more than 1 ppb continue to measure ozone design values close to or exceeding 80 ppb with no overall downward trend in the most recent data in the submittal.[66]

[65] "Figure 4. Ozone Design Value Trends- Maintenance Monitors Eliminated with Texas Approach"; "Ohio's Interstate Pollution Transport Analysis 2015 Ozone Standard", September 2018 included as Appendix 3 of Ohio 2015 Ozone Infrastructure SIP (Document ID EPA-R05-OAR-2022-006-006).
[66] *See* "2010 Thru 2021 Ozone Design Values.xlsx" in docket ID No. EPA-HQ-OAR-2021-0663.

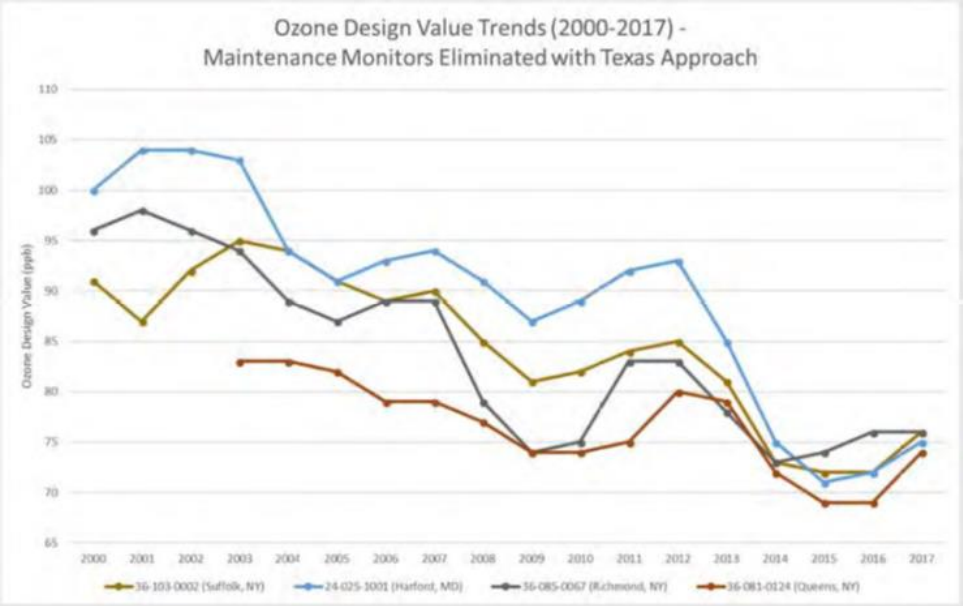


Figure 6-1 Ozone Trends Figure from Ohio EPA SIP Submission

In any event, Ohio EPA's use of an alternative approach to identifying maintenance receptors does not result in a dispositive change in receptor status for purposes of EPA's evaluation of Ohio EPA's SIP submission at Step 1 because Ohio EPA did not reach the conclusion that there were no receptors in 2023 or claim at Step 2 that Ohio was not linked to any receptor on the basis of the use of an alternative definition of maintenance receptor.

6.4 October 2018 Memorandum

Comments

Commenter: Midwest Ozone Group

Commenter ID: 30

Docket ID: EPA-R05-OAR-2022-0006

Comment:

MOG specifically objects to EPA's approach to implementation of the flexibility guidance issued by EPA in 2018 for the specific application by states to the development of 2015 ozone NAAQS Good Neighbor SIPs. With respect to Ohio, we note that Ohio EPA ("OEPA") specifically provided significant technical support justifying an alternative approach for determining maintenance-only receptors. To support its justification, OEPA provided an alternate method of future design value projection using the most

recent 3-year design values (DV) from the analytic years rather than the highest 3-year DVs from the 5-year period. This was further supported with declining VOC and NOx emission trends and observed air quality improvement at each of the impacted monitors. OEPA also supported its calculations with information on interannual meteorological variability and the divergence from long-term temperature trends in the years 2011, 2012, and 2013 (the early years of the 5-year period). With these data and their supporting calculations, OEPA was able to demonstrate that the monitoring sites identified as maintenance are not reasonably expected to have difficulty maintaining the standards in 2023. EPA's rejection of that demonstration is clearly in error.

Commenter: Mississippi Department of Environmental Quality

Commenter ID: 32

Docket ID: EPA-R04-OAR-2021-0841

Comment:

Also, in EPA's proposed decision to disapprove Mississippi's iSIP, EPA suggests that MDEQ failed to use the most recent (i.e., 2018) available data. However, EPA fails to recognize that certified 2018 Texas monitor data had not been released at the time MDEQ began the public comment period for the proposed iSIP; therefore, MDEQ did in fact use the most recent certified Texas monitor data when drafting the "good neighbor" portion of the Mississippi iSIP. While it is our position that to disapprove Mississippi's iSIP on this basis is, at best, arbitrary and capricious, at the very least the proposed FIP should not be imposed until MDEQ is given a reasonable opportunity to address the alleged deficiencies in the iSIP and to resolve the modeling errors referenced herein.

Response

We respond to general comments about the October 2018 memorandum in Section V.B.3 of the preamble.

In response to one commenter's (MDEQ) contention that they did rely on the most recent monitoring data available at the time of its submission to support its use of an alternative maintenance receptor definition, and that EPA's evaluation of their submittal was therefore erroneous, the EPA disagrees. The Specifically, the commenter is referring to the available ozone design value for the Harris County, Texas Deer Park monitoring site (ID 482011039) in Houston and EPA's statement that the SIP submission did not meet the criteria set out in the October 2018 memorandum including an assessment of the available ozone design values at the monitor at the time. The state relied on the 2014 to 2017 design values at the Deer Park receptor (i.e., 69 ppb, 67 ppb, and 68 ppb, respectively) as the basis for stating that this receptor met EPA's definition of a maintenance receptor.

The EPA disagrees with the commenter that the 2018 design value for the Deer Park monitor was not available at the time Mississippi gave public notice of their transport SIP submission. In fact, the EPA's official comments on the draft SIP submission during the state's public comment period indicates that the 2015-2017 3-year design value of 68 ppb was not the most current available data for the Deer Park

monitor but rather 2016-2018 design value of 71 ppb for the site was above the 2015 standard, suggesting that the 2018 data for the monitor was in fact available at the time the state public noticed the submission in August of 2019. In addition, the 2018 data would have been certified by the time the state made its submission.

The EPA responds to APC et al.'s comment related to the October 2018 memorandum in Section 6.2. The EPA responds to comments on timing in the preamble in Section V.A.

6.5 Certain Monitoring Sites in California at Step 1

Comments

Commenter: Alabama Department of Environmental Management

Commenter ID: 02

Docket ID: EPA-R04-OAR-2021-0841

Comment:

EPA also argues that the threshold should not be permitted at 1 ppb to retain national consistency within the program. However, EPA's own action in its approval of the Oregon SIP negates this argument. A review of the EPA modeling data indicates that Oregon had contribution to 14 monitors in California that are predicted to exceed the standard in 2023, some with contributions greater than 1 ppb. Yet, EPA approved the Oregon SIP stating that Oregon did not significantly contribute to nonattainment or maintenance sites. National consistency was obviously not an obstacle to approval in this case.

Commenter: Alabama Power Company, Southern Power Company, and PowerSouth Energy Cooperative

Commenter ID: 04

Docket ID: EPA-R04-OAR-2021-0841

Comment:

Even if EPA were able to show that a 1 ppb threshold is unreasonable and unjustified, EPA could find that the Denton and Harris County monitoring sites are not properly regarded as receptors under Step 1 of its "FIP" analysis. EPA did just that for Oregon—allowing an exception to the 1 percent threshold for Oregon's transport SIP for the 2015 ozone NAAQS. As explained in EPA's recently published proposed FIP, EPA found that, although Oregon was linked above the 1 percent threshold "to several monitoring sites in California," it determined that these monitoring sites "should not be treated as receptors for purposes of determining interstate transport obligations of upwind states" because Oregon's total cumulative contribution to any of the sites was only 2.8 percent, each site only had one upwind state contribution above the 1 percent of the NAAQS, and the monitoring sites were "overwhelmingly

impacted by in-state emission." EPA also explained that a similar finding had been made for Arizona's 2008 ozone NAAQS transport SIP for other monitoring sites in California, where Arizona's contribution ranged from 2.5 to 4.4 percent. EPA, therefore concluded that these monitoring sites should not be considered receptors under Step 1 of the 4-step framework and that Oregon did not contribute significantly to nonattainment or interfere with maintenance of the NAAQS in any downwind state. Similarly, as set out above, Alabama's modelled contributions to the Denton and Harris sites are low—6 and 7 percent, respectively—and in-state emissions vastly outweigh upwind contributions. Thus, Alabama's contributions to these sites are not significant. EPA should address this analysis prior to any final action on Alabama's 2022 SIP.

Commenter: Air Pollution Control Program, Missouri Department of Natural Resources

Commenter ID: 01

Docket ID: EPA-R07-OAR-2021-0851

Comment:

For the Brazoria, TX monitor, EPA's updated modeling shows that Missouri is no longer linked to this monitor because Missouri's contribution is 0.55 ppb, which is below 1 percent of the 2015 ozone standard. In our SIP submission, the Air Program utilized the flexibility in EPA's August memo, to avoid linkage with this receptor because Missouri's projected contribution was below 1 ppb. In the previous modeling, Missouri's contribution to this receptor was 0.88 ppb. Our SIP submission demonstrated that this monitor was not significantly impacted by upwind state contributions, and instead the receptor status was largely the result of contribution from local sources and international (Mexico) emissions. This is substantially similar to EPA's own determination in their latest actions associated with the proposed disapproval and the proposed FIP with respect to linkages between Oregon and California, where Oregon is absolved of their linkages to California for this very reason. However, EPA treats Missouri differently by denying this same basis for the determination that a 1 ppb threshold was appropriate as stated in our SIP submission.

For the Harris, TX monitor, EPA's updated modeling shows this receptor as no longer being a maintenance receptor. The maximum 2023 projected design value for that monitor in the updated modeling is 68.5 ppb. In Missouri's good neighbor SIP submission, this was a nonattainment receptor with a maximum 2023 design value of 73.5 ppb. Missouri's contribution to this monitor was 0.88 ppb, thus qualifying it for the use of the flexibility offered in EPA's August memo. Similarly to the Brazoria monitor, Missouri's SIP submission explained that this monitor was not significantly impacted by upwind state contributions, and instead the receptor status was largely the result of contribution from local sources and international (Mexico) emissions. While EPA uses this same basis for approving Oregon's SIP using the updated modeling when it comes to 15 separate linkages in California that are at or above the 1 percent threshold and two receptors with contributions above 1 ppb, EPA denies this basis as included in Missouri's SIP submission for justifying the removal of the Harris, TX monitor linkage with Missouri at Step 2.

Commenter: Tennessee Department of Environment and Conservation

Commenter ID: 41

Docket ID: EPA-R04-OAR-2021-0841

Comment:

EPA's proposed action is inconsistent with EPA's prior finding for Oregon, in which it deviated from the 1% NAAQS threshold in determining that Oregon was not linked to downwind states. Approval of Oregon's SIP, while denying Tennessee's SIP, belies EPA's assertion that the Agency is applying a nationally uniform approach to nonattainment and maintenance receptors and a nationally uniform approach to contribution threshold analysis.

Response

The EPA approved Oregon's good neighbor SIP submission for the 2015 NAAQS on May 17, 2019 (84 FR 22376). In a separate rulemaking action from this one (87 FR 20036, April 6, 2022), the EPA explained why the Agency was not pursuing an error correction of that approval on the basis of the EPA's proposed assessment of relevant monitoring sites in California at Step 1. The EPA's proposed treatment of Oregon and assessment of certain monitors in California in that separate rulemaking action is beyond the scope of this action. Nonetheless, we respond to these comments here to the extent that the proposed FIP analysis raises, according to these commenters, a consistency issue with our treatment of states that are included in this disapproval action.

The EPA proposed in the April 2022 transport FIP that certain monitoring sites in California should not be considered receptors at Step 1 for the purpose of assessing 2015 ozone NAAQS interstate transport obligations. 87 FR 20036, 20075. The EPA did not propose a different contribution threshold at Step 2 for Oregon or for western states generally, nor did the EPA propose this conclusion based on any evaluation at Step 3 of emissions reduction opportunities in Oregon.

In the FIP proposal, we pointed out that California receptors are heavily impacted by in-state emissions. The basis for our proposed determinations with respect to these sites is not the level of in-state contribution but rather the fact that the contribution from upwind states is so low. The elevated ozone levels at these sites may be attributable to biogenic emissions, international emissions, or boundary-conditions, in addition to in-state anthropogenic emissions. Our proposal was not intended to suggest that a certain level of in-state anthropogenic emissions influenced our treatment of these sites under the good neighbor provision. Rather, the critical point was that the total level of impact from upwind states at these California sites is so low. The 4-step interstate transport framework that the Agency has applied to address interstate ozone transport is informed by the "collective contribution" problem observed throughout many areas of the country (i.e., the fact that total ozone levels are the result of many small contributors over a wide geographic area). That approach generally continues to make good sense throughout most of the country based on our air quality and contribution analysis to-date and in this final action. A limited circumstance, which we previously observed with respect to certain California

sites in acting on Arizona's 2008 ozone NAAQS good neighbor SIP submission, presents the exception. Where total contribution from upwind states is as low as 1.4 percent and only one state contributes above 1% of the NAAQS, that monitoring site does not, in the EPA's view, suffer from an interstate contribution problem. See the EPA's response to comments in Section 8.2 (Alleged De Minimis Contribution) for further discussion of the topic of collective contribution.

Although commenters claim that this same consideration could be applied at other receptors across the country to reach the same conclusion (i.e., eliminate other receptors outside California at Step 1), nowhere else do we project such a low total upwind contribution and with only a single upwind state contributing at or above one percent of the NAAQS.

The EPA did not view it to be necessary to establish a bright-line threshold in proposing this determination and disagrees with commenters who assert such a threshold is needed now. As we noted in the FIP proposal, the level of total upwind-state impact at the California monitoring sites at issue for Oregon (2.8 percent) is less than the amount for which we issued a similar determination in approving Arizona's good neighbor SIP submission for the 2008 ozone NAAQS (4.4 percent). 81 FR 15200 (March 22, 2016) (proposal); 81 FR 31513 (May 19, 2016) (final rule). Thus, the proposed analysis, if finalized, is consistent with that precedent. If the proposed finding for Oregon is finalized, there would still be no other state covered by this disapproval action with linkages to receptors that fall within the analytical circumstances of the analysis for either Oregon or Arizona.

Nor does it matter that there are several monitoring sites in California for which this circumstance exists. The same observation can be made for each one of these sites: the level of total upwind-state contribution is small enough that they should not be considered interstate-transport receptors.

7 Step 2

7.1 Methodology for Determining Future Year Contributions

Comments

Commenter: Air Pollution Control Program, Missouri Department of Natural Resources

Commenter ID: 01

Docket ID: EPA-R07-OAR-2021-0851

Comment:

EPA's updated modeling shows that Missouri's contribution to linked receptors is below 1 percent of the standard on all days where the modeled MDA8 is below the level of the 2015 ozone standard.

In EPA's methodology for determining contributions at Step 2, it uses the average contributions from the upwind states for the top ten modeled days that are above 60 ppb for the MDA8. If there are fewer than 10 modeled days with MDA8 above 60 ppb for the receptor, then EPA uses the average of those days for however many values are available if there are at least five days with modeled MDA8 values above 60 ppb. This approach is consistent with EPA's traditional approach to the good neighbor SIP obligation to establish linkages at Step 2. However, the approach has serious flaws. Under this approach, emissions from upwind states can still be considered significant contribution even if the modeled MDA8 on a particular day is actually below the level of the 2015 ozone standard, which is what the good neighbor provision is intended to address. If a state is contributing above one percent of the level of the standard to a problem monitor on days when that same problem monitor is not having any ozone concentration concern with respect to the standard, those values should not count against the upwind state when determining whether the upwind state is linked at Step 2.

For example, even if an upwind state were contributing to ozone concentrations at a monitor at levels of 20 percent of the standard on a particular day, the good neighbor provision would not apply if the monitor didn't measure an exceedance of the standard that day. So, the good neighbor provision does not restrict contribution from upwind states at downwind monitors on days when ozone concentrations at the downwind monitor are below the health-based standard established by EPA (i.e., the NAAQS). The use of contribution data on days where the monitor is complying with the standard is therefore arbitrary and capricious action on the part of EPA that results in the addition of states that are not contributing significantly to nonattainment or interfering with maintenance.

EPA provided the Air Program with the list of the MDA8 values for all modeled days for the receptors to which Missouri is linked to in the updated modeling. The list also includes the corresponding upwind state contribution on each of the modeled days. In that dataset, there is not a single day where the modeled MDA8 value at any of the receptors linked to Missouri is both above 70 ppb and Missouri's contribution is above 1 percent of the standard (0.7 ppb). As explained in the paragraphs above, upwind state contributions on days where the model is predicting the receptor to be in compliance with the

standard cannot be used to justify a linkage with Missouri at Step 2. This is another reason why EPA's proposed disapproval of Missouri's SIP is flawed and cannot stand.

Commenter: Ameren Missouri

Commenter ID: 05

Docket ID: EPA-R07-OAR-2021-0851

Comment:

1. USEPA's most recent CAMX modeling platform 2016v2 referenced in USEPA's proposed disapproval of the Missouri Good Neighbor SIP for the 2015 Ozone Standard shows that the monitors to which USEPA linked to Missouri in the previous model platform (2016v1) are not actually linked to Missouri, providing independent verification that Missouri emissions are not significantly contributing to nonattainment or maintenance at those monitors and further evaluation is moot.

[…]

7. To the extent that USEPA includes Missouri emission source contributions on days when the relevant monitors were observed to be in attainment of the standard or are modeled to be in attainment of the standard, USEPA is improperly determining Missouri's "significant contribution" in Step 2 of its analysis.

[…] By including days that monitors are in attainment in the modeling analysis of a state's contribution to ozone levels, USEP A is determining the average contribution to ozone concentrations at the relevant monitor to the top ten modeled ozone concentrations in a year. But by including days monitors attain the standard, USEPA's analysis is not showing the average contribution by a state to ozone nonattainment at the monitor under Step 2 of its analysis as is required by the language in the Act. USEP A must properly calculate on a state's anthropogenic contribution to days where a monitor is both observed in the base year to exceed the standard (71 ppb or above) and is modeled in the future year to exceed the standard (71 ppb or above) in order to link a state's emissions to nonattainment.

Because only the contribution to nonattainment is required to be prohibited by Good Neighbor SIPs (GNS), EPA errs by including a contribution by a state that is not prohibited when determining state level contributions. It is not reasonable for USEPA to assume that contributions from nonadjacent states on days when the monitors show attainment of the standard can be compared to USEPA Step 2 thresholds for linking states to a monitor and thereby determining if a state's emission sources significantly contribute to nonattainment. It is not reasonable to assume that the conditions that transport NOx and/or ozone from Missouri up to Lake Michigan on days when a monitor on the Lake Michigan shore and/or the model shows the monitor is in attainment of the standard contribute to nonattainment at all without some showing in the record. It is likely that on days when ozone (in amounts above 0.70 ppb) is transported into the Chicago NAA from states like Missouri and impact the Lake Michigan shoreline monitors at issue are not the same days when stagnated air persists around the monitors and which are conducive to ozone formation and high ozone levels.

Response

The EPA disagrees with comments that say the average contribution metric that the EPA uses to evaluate upwind state contributions in Step 2 of the four-step transport framework should only be calculated based on days with measured exceedances or days with model-predicted exceedances in 2023. Commenters object to the EPA's methodology for calculating contribution at Step 2 because the top ten high ozone days, utilized for calculating the relative contribution factor (RCF), may include days with measured and/or future year modeled values below the NAAQS. This concern fundamentally misunderstands the intended use of modeling for projecting future year design values and contributions between Steps 1 and 2. For the purpose of projecting future design values, the EPA's modeling guidance recommends using data for the top-ten modeled ozone concentrations days using a minimum threshold of 60 ppb when calculating relative response factors (RRF). That is, any days with model-predicted MDA8 ozone concentrations below 60 ppb in the base year (e.g., 2016) are not included in the calculation of the projected design value.[67] The RRF plays an important role in projecting future year design values at Step 1. Rather than taking the projected 2023 results themselves as definitive of future air quality conditions, the RRF methodology applies the change in modeled air quality between the base and future year and then applies that to the historical monitored ozone levels at each receptor, thus grounding modeled change to real-world data.

In the contribution analysis at Step 2, we use the modeled concentrations and modeled contributions for the future year to derive a relative contribution factor (RCF) working from the *modeled* 2023 future year (not the 2016-based monitoring data). The RCF is calculated as the ratio of the 2023 average contribution to the 2023 average ozone concentration, where the averages are based on the top 10 ozone concentration days in 2023. It is important to note that the top 10 concentration days in 2023 may not be the same as the top 10 concentration days in 2016 monitoring data or 2016 base year modeling. Because the average contribution metric is intended to reflect upwind state impacts in 2023, it would be illogical to base that average value in 2023 on measured data or model predictions for the 2016 base year, 7 years earlier. The RCF is then applied to the projected 2023 average design value (taken from Step 1 following the use of RRF, not just the 2023 CAMx projection) in a manner similar, in concept, to the method for projecting design values.

Step 2 analysis starts from the premise that downwind receptors have already been properly identified using the methodology at Step 1. At Step 2, the question is who is contributing to those receptors, for which EPA's methodology provides a reliable answer using modeling and the RCF approach. As noted above, the approach for selecting days to calculate the contribution metric is designed to align with recommendations in the EPA's modeling guidance for projecting future year design values. Following the selection of days, the approach for calculating the average contribution metric then determines what proportion of the ozone formed on those days, on average, was attributable to emissions from each upwind state or other source.

Regarding the comment that that the EPA should use data on days with *measured* exceedances in 2016 when calculating the contribution metric, since the purpose of this metric is to evaluate contributions for a *future year*, for which actual measured concentrations cannot be known prior to their occurrence,

[67] In addition, for monitoring sites where there are fewer than 5 days with model-predicted ozone greater than or equal to 60 ppb, EPA's guidance recommends not calculating a projected design value for those monitoring sites.

it would be inappropriate to base future year contributions on days which may have relatively low model-predicted ozone even if those days happen to have measured values in 2016 that exceeded the NAAQS. The EPA addressed and rejected a substantially similar comment in the Revised CSAPR Update. *See* 86 FR 23054, 23085 (April 30, 2021).

The EPA incorporated public comments received on the proposals to update its emissions inventories and model design, as described in the preamble and in the Final Action AQM TSD. In the 2023 modeling using the v3 platform Missouri is linked above a 1 percent of the NAAQS contribution threshold to four downwind receptors (i.e., Chicago/Evanston, Kenosha/Chiwaukee, Racine, and Sheboygan). The average contribution metric values that link Missouri to these states are 1.39 ppb, 1.01 ppb, 1.19 ppb, and 1.87 ppb, respectively.

Out of an abundance of caution, the EPA performed a sensitivity analysis to examine the contribution from Missouri to these 4 receptors if the contributions were based only on those days with measured exceedances in 2016 at each receptor. The table below provides average contribution metric values for Missouri's contributions to each of these receptors if this metric was based solely on daily modeled contributions on days with measured exceedances at each receptor. While we do not agree that this is a superior or even appropriate method of calculating contribution, the results of this sensitivity analysis indicate that even if the average contributions were based only on days with measured ozone that exceeds the NAAQS, Missouri would still be linked to all four of these receptors using the 1 percent of the NAAQS threshold (or even a 1 ppb threshold).

Table 7-1 Sensitivity Analysis of Missouri Contributions Based on Contributions on Days with Measured Exceedances

	Number of Days with Measured Exceedances in 2016	**Average Contribution Metric (ppb)**
Evanston	7	0.72
Kenosha/Chiwaukee	14	1.62
Racine	8	1.18
Sheboygan	4	1.59

The EPA performed a similar sensitivity analysis in response to commenter's concerns regarding the use of model-predicted days below the NAAQS in 2023 when calculating the average contribution metric. In this sensitivity analysis the EPA first identified all days with predicted MDA8 ozone concentrations greater than or equal to 71 ppb in 2023 at each of the four receptors to which Missouri is linked based on the EPA's 2016v3 modeling. The table below provides the average contribution metric values for Missouri's contribution to each receptor based on this analysis. Also provided in the table are the number of exceedance days in 2023 and the range in 2023 MDA8 ozone concentrations on days included in the calculations. Because there are fewer than 5 days with predicted exceedances at the Racine and Sheboygan receptors, data for additional days (2 for Racine and 3 for Sheboygan) were included in the calculations for these two receptors. While we do not agree that this is a superior or even appropriate method of calculating contribution, the results of this sensitivity analysis shows that Missouri would still be linked in 2023 to each of these four receptors even if the contribution metric was

based on projected exceedance days alone (Evanston and Kenosha/Chiwaukee) or on exceedance days combined with other days above 60 ppb (Racine and Sheboygan)

Table 7-2

Table 7-2 Sensitivity Analysis of Missouri Contributions Based on Contributions on Days with Modeled Exceedances

	Number of Days with Modeled Exceedances in 2023	Range of Concentrations in 2023 in this Sensitivity Analysis	Average Contribution Metric (ppb)
Evanston	9	71.6 - 83.8	1.06
Kenosha/Chiwaukee	6	71.0 - 84.1	0.98
Racine	3	69.1 - 75.8	1.10
Sheboygan	2	67.9 - 75.2	1.10

Comment

Commenter: Texas Commission on Environmental Quality

Commenter ID: 42

Docket ID: EPA-R06-OAR-2021-0801

Comment:

TCEQ's methodology for determining future contributions is consistent with EPA modeling guidance.

The EPA Modeling Guidance provides details on the model values and the grid cells to use when estimating the future year design value as part of the modeled attainment test. The TCEQ's methodology to determine a state's contribution to the future aligns with the method used to estimate future year design values. The TCEQ's methodology is internally consistent as the grid cell and top ten days used in the design value calculation are the same as those used to estimate the source (state) contribution. The TCEQ's methodology follows the EPA modeling guidance while the EPA's methodology does not. The TCEQ has repeatedly raised concerns about the EPA's method to determine future year contributions since the EPA approach does not align with the calculation of the future year nonattainment and maintenance design values with respect to the model grid cell and top ten days used.

The EPA should only use contributions from days in the calculation of the relative response factor when calculating an upwind state's contributions to future design values. Using one set of days to calculate the future year design value that is the basis for a monitor's future attainment status (attainment/maintenance/nonattainment) and a different set to determine the states' contribution to that design value is inconsistent and arbitrary.

Further, the EPA uses concentrations from the grid cell containing the monitor to determine state contributions while using concentrations at the grid cell with the maximum modeled concentration in a "3x3" array centered on the monitor when calculating design values. The EPA's approach could result in the use of modeled concentrations from different grid cell locations potentially disconnecting the future year contributions from the future year design values.

The TCEQ's approach uses modeled concentrations from the grid cell on the days that were used in the design value calculation to determine future year contributions. The TCEQ's method is consistent, and the EPA failed to provide a rational justification for its concerns with regards to the TCEQ's approach.

Response

As explained in the previous response, the EPA's method for calculating contribution is designed to align with recommendations in the EPA's modeling guidance for projecting future year design values and allows for the effective identification of linked upwind states at Step 2.

The EPA believes that its approach for calculating the future year average contribution metric, as described in the preamble and the Final Action AQM TSD for this final action, provides a more technically reliable estimate of contributions than the method suggested by the commenter. In calculating the average contribution metric, the EPA uses modeled contributions on the 10 days in the future year with the highest model-predicted concentrations. In part because the formation of ozone from precursor emissions can be nonlinear and dependent on meteorological conditions, the response of ozone to emission reductions can vary from day to day. In this regard, the days with the highest model-predicted ozone concentrations in the 2016 base year that are used for projecting ozone design values may not be among the highest ozone days in the future analytic year. In this situation, the calculation of the average contribution metric could inappropriately exclude days with higher concentrations in the future year in favor of lower future-concentration days that happened to correspond to the highest days in 2016. In addition, ignoring the concentrations in the future year could result in including contributions on low ozone days with modeled ozone concentrations below 60 ppb in the calculation of the average contribution metric. Among other things, this runs a risk of identifying states as linked that are, in fact, actually not linked considering contributions on high ozone days in 2023 at the receptor.

Based on the air quality modeling for this final action, Texas is linked to 10 downwind nonattainment or maintenance-only receptors. Of these 10 receptors, the contributions from Texas to the 6 receptors in Illinois and Wisconsin are likely to be those most influenced by applying an alternative contribution calculating method since these receptors are more distant and therefore more subject to day-to-day differences in long-range transport wind flows compared to the 4 receptors in New Mexico that are located near the border with Texas. In this regard, the EPA recalculated Texas' average contribution using a method akin to the method proffered by the commenter. Specifically, in this method the average contribution metric was calculated based on the daily contributions on the same set of days used to project the 2023 design value at each of these receptors. The contributions from Texas to the receptors in Illinois and Wisconsin based on the EPA's method and the alternative method are provided in the table below. While we do not agree that the alternative approach is a superior or even

appropriate method of calculating contribution, the results show that Texas would still be linked to each of these receptors using the alternative method.

Table 7-3 Comparison of Texas' Contributions Using the EPA's Method and the Alternative Method

			Contributions from Texas in 2023	
AQS ID	**State**	**Receptor**	**EPA Method**	**TCEQ Method**
170310001	Illinois	Chicago/Alsip	1.09	1.11
170314201	Illinois	Chicago/Northbrook	1.05	1.65
170317002	Illinois	Chicago/Evanston	1.95	1.81
550590019	Wisconsin	Kenosha	1.54	1.47
551010020	Wisconsin	Racine	1.57	1.56
551170006	Wisconsin	Sheboygan	1.03	1.02

It is obviously impossible for the EPA, or anyone, to predict which exact days in a future year will have high ozone levels, nor does it make sense to analyze contribution on modeled days of low ozone concentration. The EPA's methodology is reasonable in projecting where ozone problems are likely to recur in a future year (at Step 1), and, by using the highest predicted 2023 MDA8 ozone days with a minimum threshold (at Step 2), identifying who is contributing to those problems under the conditions for high ozone formation at those locations in the future.

Comment

Commenter: PacifiCorp (Attachment – Ramboll Evaluation)

Commenter ID: 38

Docket ID: EPA-R08-OAR-2022-0315

Comment:

The Proposed Transport Rule Upwind State ozone contribution metric to a downwind nonattainment/maintenance receptor used a contribution factor (CF) as the average of the Upwind State ozone contribution divided by the average total ozone at the receptor where the averaging was performed over the top 10 modeled 2023 ozone days. The CF was multiplied by the receptor's 2023 and 2026 ozone design values to obtain the Upwind State ozone contribution to the receptor (see Section 1.4 for detailed description of how Wyoming's ozone contribution to the 2023 ozone design value at Chatfield receptor was calculated). The use of 10 days in the ozone contribution metric is arbitrary and not supported by any standard, guidance or technical basis. Below we analyze alternative Upwind State ozone contribution metrics that are based on previous CSAPR rules, based on EPA guidance or based on the 2015 ozone NAAQS rather than the arbitrary selection of 10 days.[(The following comment excerpt is paraphrased.)]

EPA's use of the Anthropogenic Precursor Culpability Assessment (APCA) probing tool instead of the Ozone Source Apportionment Technology (OSAT) will overstate Utah's and Wyoming's contributions to ozone design values at downwind receptors because APCA allocates ozone formed from Utah and Wyoming anthropogenic NOx emissions reacting with biogenic VOC emissions under VOC-limited ozone formation conditions to the Wyoming NOx emissions instead of to the biogenic VOC emissions. Unlike OSAT, APCA is not a true ozone source apportionment because it expresses a bias toward assigning ozone formed to one type of Source Group over another, which is why it is called a culpability assessment and not an ozone source apportionment.

The cumulative effects of EPA missing emissions, using a coarse 12-km grid spacing and WRF meteorological inputs, and using APCA instead of OSAT would likely reduce Wyoming's contribution to 2023 and 2026 ozone design values at Chatfield to below the 1 percent of the 2015 ozone NAAQS significance threshold.

For Utah the case is not quite as clear whether the cumulative effects of all the deficiencies in the Proposed Transport Rule would be sufficient to reduce the ozone contributions at DM/NFR NAA receptors to below the significance threshold used in the Proposed Transport Rule. An explicitly CAMx ozone source apportionment simulation correcting these Proposed Transport Rule deficiencies is needed, but there was insufficient time to conduct such a simulation given the short comment period.

For all these reasons' EPA's Proposed Transport Rule overstates Utah's and Wyoming's ozone contributions.

Ramboll's Independent CAMx 2023 APCA and OSAT Source Apportionment Simulation for the Western States Lowers Utah and Wyoming contributions:

The CAMx 2023 western states APCA modeling results were processed for the three nonattainment/maintenance receptors in the DM/NFR NAA and our Upwind state ozone contribution results exactly matched those in the Proposed Transport Rule (e.g., Wyoming had a 0.81 ppb ozone contribution to 2023 ozone design value at Chatfield). Table 5-1 [available in full comment] compare the western state ozone contributions at the four key monitoring sites in the DM/NFR ozone NAA from our western states CAMx 2023 APCA and OSAT ozone source apportionment modeling. As expected, the state with the largest difference in the APCA and OSAT ozone source apportionment modeling ozone contributions was for Colorado (-18%) as there is more VOC-limited ozone formation in the Denver Metro urban area containing the receptors than in the more rural areas.

For Wyoming, the CAMx 2023 APCA ozone source apportionment had a 0.81 ppb contribution to CHAT that was 0.12 ppb above EPA's level needed to have an insignificant contribution (0.69 ppb) using the Proposed Transport Rule significant contribution threshold (0.70 ppb). Using the CAMx OSAT ozone source apportionment, Wyoming's contribution to CHAT is 0.75 ppb that is 0.06 ppb lower than APCA and half-way to being below EPA's significant contribution threshold so that is a significant effect.

For Utah, the CAMx 2023 OSAT ozone source apportionment modeling had a 0.02 to 0.04 ppb lower ozone contribution at DM/NFR NAA receptors compared to using the APCA probing tool.

Response

As explained elsewhere in Section 7.1, the EPA's method for calculating contribution follows the EPA's modeling guidance and is a longstanding and appropriate approach to assessing contribution at Step 2.

Based on the source apportionment modeling by the commenter using OSAT, both Wyoming and Utah remain linked to the Chatfield receptor in Denver. The EPA's response to comments regarding the use of the APCA source apportionment technique is in Section 4.1.2. We are deferring final action at this time on Wyoming's SIP submission, pending further review of the updated air quality and contribution modeling and analysis.

Comment

Commenter: PacifiCorp

Commenter ID: 38

Docket ID: EPA-R08-OAR-2022-0315

Comment:

Upwind State Ozone Contributions at Downwind State Receptors are Overstated. ([Ramboll,] Chapter 5).

The Proposed Rule overstates upwind state 2023 and 2026 ozone contributions to ozone design values at receptors in downwind states in a number of ways. For example, EPA's modeling ignored certain emissions, such as NO_X formed by lightning, which occurs frequently in the Front Range area and can represent as much as 14% of summer ozone formation. EPA's coarse grid resolution, described in Chapter 4 of the Ramboll Report, also understates local emissions and ozone contributions, which has the ultimate effect of overstating upwind state contributions. Other choices made by EPA in conducting the Proposed Rule's CAMx ozone source apportionment modeling, such as the selected meteorological inputs and culpability assessment, further overstate upwind contributions.

Response

As described in Section III.A.2 of the preamble, and in response to this issue raised by commenters, the EPA included NO_X emissions from lightning strikes in the 2016v3 emissions inventory used for the air quality modeling of this final action. *See* Preparation of Emissions Inventories for the 2016v3 North American Emissions Modeling Platform TSD (2016v3 Emissions Modeling TSD), available in the docket and at https://www.epa.gov/air-emissions-modeling/2016v3-platform. The method for including these emissions in the modeling are described in this document.

The EPA's response to comments on culpability assessment modeling can be found in Section 4.1.2.

The EPA's response to comments on model grid resolution and associated meteorology can be found in Section 4.

Comments

Commenter: Wisconsin Department of Natural Resources

Commenter ID: 51

Docket ID: EPA-R05-OAR-2022-0006

Comment:

1. EPA does not identify Wisconsin's Sheboygan Kohler-Andrae monitor as a 2023 nonattainment monitor in any proposal and must correct this omission.

EPA's evaluation of state transport SIPs is incomplete because it does not include the Sheboygan Kohler-Andrae monitor. As noted above, EPA's 2023 "no water" modeling results indicate that the Sheboygan monitor (Site ID 551170006) will have a 2023 average design value of 73.6 ppb and a 2023 maximum design value of 74.5 ppb. Applying EPA's CSAPR methodology, Sheboygan is considered a "nonattainment" monitor, since its average projected design value is above the 2015 ozone NAAQS. However, Sheboygan is not identified in any of EPA's proposed 2015 ozone transport SIP disapprovals (for Region 5, or any other region) as a 2023 nonattainment monitor, even as other monitors in Wisconsin (such as those in Racine and Kenosha) were properly included. Since Sheboygan clearly meets EPA's criteria as a nonattainment monitor, EPA should review all its 2015 transport SIP proposals and identify Sheboygan as a 2023 nonattainment monitor whenever appropriate.

2. EPA must identify all the states that are linked to the Sheboygan monitor in 2023.

Since Sheboygan was not identified by EPA as a nonattainment monitor in any submittal, EPA subsequently did not identify states linked to the monitor using EPA's "1% of the NAAQS" criteria (that is, a contribution equal or greater than 0.70 ppb). Based on contribution data for the Sheboygan monitor provided separately by EPA to WDNR, seven states are shown to contribute at least 0.70 ppb to Sheboygan in 2023 (Table 2). These states therefore would be linked to the monitor for transport purposes.

[Table 2 available in full comment]

To be consistent with the CSAPR four-step framework, EPA needs to identify that these states contribute to Sheboygan and therefore have transport obligations to that monitor. The WDNR also recommends that EPA independently review its contribution data for the Sheboygan monitor to confirm that no additional states should be identified as significant contributors beyond those listed above.

3. EPA must adjust its methods for selecting monitors for transport assessment to ensure monitors like Sheboygan are not omitted in the future.

[…]

EPA needs to adjust its methods for selecting monitors for transport assessment so that its transport modeling includes, by default, contribution data for all monitors with projected average or maximum

future year design values above the ozone standard being assessed (including Sheboygan, when that monitor so qualifies).

Commenter: Wisconsin Department of Natural Resources

Commenter ID: 51

Docket ID: EPA-R06-OAR-2021-0801

Comment:

1. EPA does not identify Wisconsin's Sheboygan Kohler-Andrae monitor as a 2023 nonattainment monitor in any proposal and must correct this omission.

EPA's 2023 "no water" modeling results indicate that Sheboygan monitor (Site ID 551170006) will have a 2023 average design value of 73.6 ppb and a 2023 maximum design value of 74.5 ppb. Applying EPA's CSAPR methodology, Sheboygan is considered a "nonattainment" monitor, since its average projected design value is above the 2015 ozone NAAQS. However, as noted above, Sheboygan is not identified in any of EPA's proposed 2015 ozone transport SIP disapprovals (including those in Region 7) as a 2023 nonattainment monitor, even as other monitors in Wisconsin (such as those in Racine and Kenosha) were properly included. Sheboygan is a monitor of regulatory significance that is projected to have the highest ozone design values in the Midwest. Since Sheboygan clearly meets EPA's criteria as a nonattainment monitor, EPA needs to review all of its 2015 transport SIP proposals and identify Sheboygan as a 2023 nonattainment monitor whenever appropriate.

2. EPA must identify Texas and Arkansas as states that are linked to the Sheboygan monitor in 2023.

Since Sheboygan was not identified by EPA as a nonattainment monitor in any submittal, EPA subsequently did not identify states linked to the monitor using EPA's "1% of the NAAQS" criteria (that is, a contribution equal or greater than 0.70 ppb). Based on contribution data for the Sheboygan monitor provided separately by EPA to WDNR, seven states, including Texas and Arkansas in Region 6, are shown to contribute at least 0.70 ppb to Sheboygan in 2023 (see Table). These states therefore would be linked to the monitor for transport purposes.

[Table 1 in full comment]

To be consistent with the CSAPR four-step analytic framework, EPA must identify Texas and Arkansas as states contributing to Sheboygan and that therefore having transport obligations to that monitor. The WDNR also recommends that EPA independently review its contribution data for the Sheboygan monitor to confirm that no additional states should be identified as significant contributors beyond those listed above.

Response

The EPA has identified the Sheboygan monitor as a nonattainment receptor in the air quality modeling for this final action, and the daily contribution data meet the criterion of a minimum of 5 days with

future year MDA8 modeled ozone concentrations greater than or equal to 60 ppb. In this regard, the EPA has calculated contributions to the Sheboygan receptor (Receptor ID: 551170006). The upwind states that contribute greater than or equal to 0.70 ppb screening threshold in this final action are Illinois, Indiana, Michigan, Missouri, Ohio, and Texas. The average contribution metric values from these states to the Sheboygan receptor can be found in the Final Action Air Quality Modeling TSD.

As explained in the Air Quality Modeling TSD for the proposal, as well as the Air Quality Modeling TSD for the final rule, both in docket in No. EPA–HQ–OAR–2021–0663, the methodology for calculating contributions is based on the average of daily contributions on the days with the top 10 model-predicted MDA8 ozone concentrations greater than or equal to 60 ppb in the future year modeling. If there are fewer than 10 modeled days that meet this criterion for the given receptor, then the average contribution is calculated based on the remaining days greater than or equal to 60 ppb, providing that there are at least five days with modeled MDA8 values greater than or equal to 60 ppb. Average contribution metric values are not calculated for a receptor if there are fewer than 5 days with future year modeled MDA8 ozone concentrations at or above this threshold.

The basis for using the average contribution as the metric for evaluating upwind state contributions with respect to the 0.70 ppb screening threshold and the basis for requiring a minimum of 5 days with MDA8 ozone concentrations for calculating the average contribution metric is that the magnitude of contributions from upwind states can have very large day-to-day variability. The variability in contributions is the result of different multi-day transport wind patterns combined with the relative proximity of the upwind state to the downwind receptor.

The following tables illustrates the variability in daily contributions on the set of days used to calculate the average contribution metric values from upwind states linked to the Sheboygan receptor based on the modeling for this final action. At this receptor there are 9 days in 2023 with predicted concentrations greater than or equal to 60 ppb. The data for these 9 days are used in calculating the average contribution metric values for this receptor.

The first table provides the daily contributions by day for each upwind state. The second table provides the daily contributions for each upwind state ranked by the magnitude of the contribution. In both tables the bold/highlighted text denotes contributions greater than 0.70 ppb. Viewed together, the tables show that the upwind states closest to Sheboygan (i.e., Illinois, Indiana, and Michigan) have by far the largest contributions. For the other, more distant, upwind states, the difference in contributions across the top concentrations can be quite large. For example, the contributions from Missouri, Ohio, and Texas are each greater than 1 ppb on June 15. However, in contrast, on August 18 the contribution from Missouri is more than 5 ppb, while the contributions from both Ohio and Texas are well below the 1 percent threshold. In addition, the days with high contributions from nearby upwind states are not the same days for the more distant upwind states (i.e., Missouri, Ohio, and Texas). For example, on August 4 the contribution from Ohio is 3.65 ppb while the contributions from Missouri and Texas on this same day are much lower at 0.17 ppb and 0.34 ppb, respectively.

The ranked-ordered daily contributions in the second table illustrate the sharp contrast in the magnitude of contributions across the distribution of values. That is, the contributions from the 3 more distant states are either very high or very low. As an example, the 5th highest contribution from Missouri is 2.24 ppb, whereas the 6th highest contribution is nearly an order of magnitude lower at 0.37 ppb.

The EPA's methodology is designed to help ensure that the resulting average metric values are not biased toward only the days with the highest or lowest contributions. This provides a high degree of confidence that on average over these top days, each of these states contribute to the Sheboygan receptor's ozone concentrations.

In this regard, the EPA continues to find that its approach for calculating the average contribution metric is appropriate in that it provides a robust projection of contributions that can be expected in future years.

Table 7-4

	Daily 8-Hour Averge Contributions (ppb) from Linked Upwind States in 2023					
Date	**IL**	**IN**	**MI**	**MO**	**OH**	**TX**
May 24	**14.41**	**4.14**	**1.15**	**2.32**	0.46	**0.82**
June 10	**12.58**	**4.19**	**0.82**	**2.45**	0.06	**3.15**
June 15	**8.35**	**3.15**	0.61	**2.24**	**1.08**	**1.62**
June 19	**7.37**	**8.19**	**0.95**	0.13	**2.92**	0.11
June 25	**8.41**	**12.84**	**3.05**	0.37	**4.60**	0.65
July 11	**16.25**	**11.58**	**0.90**	**2.25**	0.00	**0.71**
July 20	**15.80**	**10.19**	**1.17**	0.31	0.02	**0.86**
August 04	**15.49**	**16.20**	**4.45**	0.17	**3.65**	0.34
August 18	**16.18**	**3.11**	0.05	**5.20**	0.00	0.26

Table 7-5

	Rank-Ordered Daily 8-Hour Averge Contributions (ppb) from Linked Upwind States in 2023					
Rank	**IL**	**IN**	**MI**	**MO**	**OH**	**TX**
Highest	**16.25**	**16.20**	**4.45**	**5.20**	**4.60**	**3.15**
	16.18	**12.84**	**3.05**	**2.45**	**3.65**	**1.62**
	15.80	**11.58**	**1.17**	**2.32**	**2.92**	**0.86**
	15.49	**10.19**	**1.15**	**2.25**	**1.08**	**0.82**
	14.41	**8.19**	**0.95**	**2.24**	0.46	**0.71**
	12.58	**4.19**	**0.90**	0.37	0.06	0.65
	8.41	**4.14**	**0.82**	0.31	0.02	0.34
	8.35	**3.15**	0.61	0.17	0.00	0.26
Lowest	**7.37**	**3.11**	0.05	0.13	0.00	0.11

7.2 Contributions

Comment

Commenter: Air Pollution Control Program, Missouri Department of Natural Resources

Commenter ID: 01

Docket ID: EPA-R07-OAR-2021-0851

Comment:

With respect to the receptor in Chicago, IL, to which the updated modeling links Missouri, no other receptors in Cook County, IL are linked to Missouri at Step 2. This calls into question the validity and assuredness of the model performance when it comes to the source apportionment techniques. In EPA's spreadsheet listing the design values and upwind state contributions, there are 10 receptors located in Cook County with available data all located in relatively close proximity to the newly identified linked receptor for Missouri. While the contribution identified from Missouri for the one linked receptor in Cook County is 0.94 ppb, the receptor with the next highest Missouri contribution is 0.56 ppb, approximately 40 percent less. From a practical standpoint it makes no sense that Missouri is contributing to this single receptor above the 1 percent threshold since there are nine other monitors in the same county where Missouri's contribution is at least 40 percent less than the modeled contribution to that problem receptor. This calls into question the ability of the model to determine significant contribution levels and the arbitrary nature of the 1 percent threshold at Step 2.

Response

The commenter states that in the 2016v2 modeling used for the proposed actions, Missouri was linked to only one of the five receptors in Cook County, IL. The commenter notes that the contribution to the monitor to which Missouri was linked (i.e., Evanston, monitor ID 170317002) was 0.94 ppb, but Missouri's contribution to the receptor with the next highest contribution was 0.56 ppb[68]. The commenter then claims that the large difference in the magnitude of contributions from Missouri to receptors within a single county calls into question the ability of the EPA's modeling to determine which contributions are significant. Commenters also claim the disparity in contributions underscores the arbitrary nature of the 1 percent threshold at Step 2.

The EPA disagrees with this comment. First, the EPA's average contribution metric which is used in Step 2 to evaluate each state's contribution with respect to the 1 percent of the NAAQS screening threshold is based on the multi-day average concentration and contribution on the top 10 concentration days greater than or equal to 60 ppb in 2023 at each receptor. The differences in average contributions from Missouri to the five receptors in Cook County as noted by the commenter are the result of differences in which days are used to calculate the average contribution metric. That is, because there are large spatial gradients in ozone concentrations in Cook County on some days, which may be due, either fully or in

[68] Missouri's average contribution to the five receptors in Cook County ranges from 0.20 ppb to 0.94 ppb at receptors in Cook County.

part, to the effects of the complex, local scale meteorological conditions associated with lake breeze from Lake Michigan, the average contribution at each receptor can be based on a different set of days. Because the magnitude of contributions from Missouri (and other upwind states) can vary by large amounts from day to day, in response to day to day differences in regional transport wind flows, the use of different days in the calculations can result in large differences in the average contribution among the five receptors.

The effects of day to day variability in the concentrations and contributions used to calculate the average contribution metric are evident from the data in the table below. This table provides the daily MDA8 ozone (i.e., O3) concentrations and contributions from Missouri to each of the five receptors in Cook County on the collective set of days used to calculate the average contribution metric at each receptor (concentrations and contributions are in units of ppb). In this table the data are ranked from highest to lowest based on the magnitude of the daily contributions from Missouri to the Evanston, Illinois receptor. The MDA8 concentrations shaded gray denote the days used to calculate the average contribution metric at each receptor. Daily contributions from Missouri that are greater than or equal to 1 percent of the NAAQS (i.e., 0.70 ppb) are shaded orange. The data in the table show that the days with the highest contributions from Missouri (i.e., contribution values shaded orange) occur on a consistent set of days at nearly all the receptors (the exception being July 23 when the contributions from Missouri to two receptors are above the threshold, whereas the contributions to the other three are below the threshold.) That is, days with high contributions from Missouri at one receptor are, with one exception, also the days with high contributions from Missouri at the other receptors. Thus, the modeling is consistent in terms of which days are most impacted by emissions from Missouri at the Cook County receptors. Looking at the concentration and contribution data on the specific days used in calculating the average contribution metric at each receptor (i.e., MDA8 concentrations shaded gray) confirms that the differences between receptors in the magnitude of daily MDA8 ozone concentrations are the cause of the large difference in the average contribution from Missouri to these receptors. For example, at the Evanston receptor, four of the days used to calculate the average contribution are well above 0.70 ppb. The Alsip receptor also has high contributions from Missouri on these same days, but the MDA8 ozone concentrations on these days are well below 60 ppb such that none of these high contribution days are included in calculating the average contribution at this receptor.[69] Thus, as this analysis clearly demonstrates, the EPA finds that its contribution modeling provides consistent results in terms of the contributions from Missouri to the receptors in Cook County and that receptor to receptor difference in the average contribution from Missouri is the result of differences in the magnitude of model-predicted ozone concentrations at individual receptor on specific days.

See also Section 4.2 for the EPA's response to comments on coarse scale (i.e., 12 km) modeling.

[69] Note that there are fewer than 10 days with model predicted MDA8 ozone concentrations in 2023 that meet the 60 ppb criteria. In this regard, the average contributions at this receptor are based on the data for the seven days that meet this criterion.

Table 7-6

		Evanston (170317002)		Alsip (170310001)		So. Water Plant (170310032)		COM ED (170310076)		Northbrook (170314201)	
Month	Day	MDA8 O3	Missouri	MDA8 O3	Missouri	MDA8 O3	Missouri	MDA8 O3	Missouri	MDA8 O3	Missouri
July	7	***67.0***	***3.32***	46.8	**3.11**	51.4	**3.14**	48.2	**2.77**	***61.8***	***2.59***
June	15	***67.6***	***2.09***	54.7	**1.22**	***60.3***	***1.56***	55.2	**1.31**	54.6	**1.62**
July	22	***61.2***	***1.92***	57.0	**1.53**	***63.1***	***1.96***	56.7	**1.70**	55.6	**1.54**
June	25	***65.4***	***0.89***	55.4	**1.10**	57.1	**0.83**	56.1	**1.06**	***62.0***	***1.12***
August	10	***62.0***	***0.48***	***67.5***	***0.50***	***60.9***	***0.41***	***68.2***	***0.51***	***67.7***	***0.59***
June	19	***61.7***	***0.44***	55.3	0.52	56.7	0.47	56.6	0.52	58.4	0.49
July	23	***64.6***	***0.43***	***63.3***	***0.90***	***67.3***	***0.68***	***70.9***	***0.81***	***75.4***	***0.52***
August	3	***63.5***	***0.42***	***61.3***	***0.25***	***66.0***	***0.31***	***62.0***	***0.33***	***64.7***	***0.45***
July	18	55.1	0.13	***70.7***	***0.22***	***61.5***	***0.18***	***69.4***	***0.16***	59.1	0.10
August	4	***74.7***	***0.07***	58.2	0.05	***62.0***	***0.05***	***60.3***	***0.05***	***70.9***	***0.07***
August	2	57.4	0.05	55.2	0.09	56.9	0.06	***60.4***	***0.08***	***65.3***	***0.07***
July	19	56.0	0.01	***70.7***	***0.04***	***68.1***	***0.04***	***76.2***	***0.04***	***66.2***	***0.01***
July	25	51.2	0.00	***70.9***	***0.00***	57.4	0.00	***64.2***	***0.00***	49.0	0.00
July	27	***74.4***	***0.00***	57.9	0.00	***66.1***	***0.00***	***62.8***	***0.00***	***72.5***	***0.00***
July	26	60.8	0.00	***66.8***	***0.00***	***61.4***	***0.00***	***69.6***	***0.00***	***67.4***	***0.00***

Comment

Commenter: Tennessee Department of Environment and Conservation

Commenter ID: 41

Docket ID: EPA-R04-OAR-2021-0841

Comment:

Tennessee's modeled contribution may be overstated because EPA did not have ten days of "high-ozone" for the monitor

EPA's modeling technical support document summarizes the basic approach for calculating the average contribution metric[.] […] The Denton County monitor used to calculate Tennessee's contribution meets this minimum criterion, but only barely – monitor ID 481210034 had only six modeled days above 60 ppb and only one day above 70 ppb (Table 5). Those six days (not 10) were used to calculate an average contribution of 0.94 ppb for Tennessee. Our reading of the technical support document suggests that EPA should have calculated Tennessee's average contribution using all ten days. If all ten days are used, Tennessee's contribution falls to 0.73 ppb, a value that exceeds the 1% value but only by a marginal amount. If all ten days are used, the tenth-highest value is 57.39 ppb. Tennessee also notes that of 153 modeled days, only one day (September 21) exceeded 70 ppb at all.

[Table 5 available in full comment]

Response

The commenter contends that, according to the approach described in the Air Quality Modeling TSD to support proposed SIP actions, the average contributions at the Denton County, TX should have been based on model predictions from the top 10 concentrations days. Instead, the EPA used the contributions on the top six modeled days above 60 ppb to calculate the avg contribution from upwind states to this receptor, because the EPA's modeling did not have at least 10 "high ozone days" in 2023. The commenter points out that there was only one day in the ozone season when the modeled concentration at this receptor was above 70 ppb. The average contribution based on six days was 0.94 ppb, whereas the contribution would be 0.73 ppb if the data on the top 10 days was used. The commenter notes that 0.73 ppb exceeds the 1 percent threshold by only a small margin.

The EPA first notes that in this action, the EPA is not taking final action on the state whose contributions are in question, Tennessee. The EPA will take final action on this state at a later point in time. However, to the extent that the commenter questions the methodology that the EPA has applied nationwide to calculate upwind state contributions, we are responding to this comment.

The EPA's methodology for projecting design values and calculating upwind contributions is explained in the 2016v2 modeling's Air Quality Modeling TSD "2015 Ozone National Ambient Air Quality Standards Proposed Interstate Transport Air Plan Disapproval," found in the docket for this action, docket ID No. EPA–HQ–OAR–2021–0663. The EPA's methodology for projecting design values and contributions is in accordance with the EPA's guidance for attainment demonstration modeling (US EPA, 2018). The criterion of having at least 5 days with MDA8 ozone concentrations greater than or equal to 60 ppb was chosen to avoid including contributions on days that are well below the NAAQS in the calculation of the contribution metric. Using 5 days with MDA8 ozone greater than or equal to 60 ppb aligns with recommendations in the EPA's air quality modeling guidance for projecting future year design values. The EPA continues to find it appropriate to follow this methodology in projecting ozone concentrations and contributions in future years.

In this instance, as the commenter also points out under the alternative methodology presented, Tennessee would still contribute greater than 0.70 ppb to the Denton receptor using the 2016v2 modeling platform and, therefore, Tennessee would still be considered "linked" at step 2 of the 4-step interstate transport framework if we had continued to rely on that modeling for final action. In fact, in the sensitivity modeling completed using GEOS-Chem, there were 10 days greater than or equal to 60 ppb in 2023 at the Denton receptor. Using the data for all 10 days results in an avg contribution from Tennessee to Denton of 0.71 ppb.

Comments

Commenter: Louisiana Chemical Association

Commenter ID: 26

Docket ID: EPA-R06-OAR-2021-0801

Comment:

EPA's projected nonattainment and maintenance receptors with Louisiana linkages are different under the 2016v2 model than they were under the *2015 Ozone NAAQS Memo* model. EPA does not explain why the models produce differing linked receptors but alleges without justification that this does not call the 2016v2 model accuracy/credibility into question. The differences are summarized below. The orange cells are receptors that are identified as Louisiana linkages in the 2015 Ozone NAAQS Memo results spreadsheet but not the 2016v2 results spreadsheet, or vice versa.

[table in full comment]

The fact that every single receptor shows an increase in Louisiana's contribution ***despite a decrease in ozone precursor emissions*** in Louisiana calls into question the legitimacy of input data for the 2016v2 model.

[table in full comment]

The modeling of Texas contributions to Louisiana monitors (see table) suggests decreases in the Texas emissions inventory over time and projections of increases in the Louisiana inventories.

Commenter: Louisiana Department of Environmental Quality

Commenter ID: 27

Docket ID: EPA-R06-OAR-2021-0801

Comment:

Measured verifiable data shows that ozone precursor (NOx and VOC) emissions have decreased, demonstrating that existing regulations are functioning properly to ensure cleaner air for our citizens, and by extension, our state neighbors. Statewide ozone precursor levels are as follow:

[table in full comment]

The data unmistakably demonstrates that there is less transport, yet EPA has determined that EPA contributes more in the future.

[table in full comment]

This calls into question the reliability of the EPA's modeling.

Response

In response to commenter's claims that the EPA's modeling may be unreliable, the commenter claims unspecified modeling results demonstrate an increase in contribution from Louisiana at certain receptors between 2017 and 2028, despite a decrease in emissions between 2015 and 2020. The source

of data for both tables in this comment is not identified. It appears the commenter may be using the EPA's modeling of 2017 using a 2011-based modeling platform, and modeling of 2028 using the 2016v1 platform from the Revised CSAPR Update. We did not model 2028 using the 2016v2 platform, nor is 2028 a relevant analytic year for this action, falling five years beyond the 2023 analytic year associated with the Moderate area attainment date. In any case, the EPA notes that the correlation drawn by the commenter is flawed. The commenter's analysis fails to consider critical factors that influence the level of contributions from upwind states determined in different modeling platforms. The commenter is apparently comparing, on the one hand, contributions based on 2011 meteorology using emissions projected for 2017 from the 2011-based platform to, on the other hand, contributions based on 2016 meteorology with emissions projected for 2028 from the 2016v1 platform. The difference in contributions is a result of differences in transport wind flows in 2011 compared to 2016, as well as differences in the magnitude and spatial distribution of emissions in 2017 compared to 2028. Further, overall declines in emissions of ozone precursors in Louisiana from 2015 to 2020 do not in themselves establish that the state is not still contributing to receptors in 2023.

In the table below, to illustrate how the state's contribution would change using a consistent set of emissions inventory data and meteorology, we compare Louisiana's contributions to certain monitoring sites in 2023 and 2026 based on modeling from the 2016v3 platform. This illustrates that the contributions to receptors in eastern Texas from sources in Louisiana in 2026 are less than the contributions in 2023, but are still nonetheless well above the 1% threshold for Step 2 purposes. The EPA notes, however, that 2026 is beyond the next applicable attainment date and is not a relevant year for this action.

Table 7-7

		Average Contribution from Louisiana (ppb)		**Percent Change**
AQS ID	**Location**	**2023**	**2026**	**2026 vs 2023**
480391004	Brazoria/Manvel Croix Park	5.21	5.03	-3.5%
481210034	Dallas/Denton Airport	2.87	2.77	-3.5%
481671034	Galveston	9.51	9.37	-1.5%
482010024	Houston/Aldine	4.75	4.57	-3.8%
482010055	Houston/Bayland Park	5.49	5.30	-3.5%
482011034	Houston/East	5.62	5.43	-3.4%
482011035	Houston/Clinton	5.44	5.25	-3.5%

Other issues raised by these comments are addressed in the following sections: 1.4 (Use of Updated Modeling), 1.7 (Length of Comment Period), 5 (Updates to Modeling and Changes in Linkages), and 8.5 (Air Quality Factors).

Comment

Commenter: United States Steel Corporation

Commenter ID: 45

Docket ID: EPA-R05-OAR-2022-0006

Comment:

The emission estimates from other sources, including those in Illinois, Indiana, Ohio and Michigan – and in particular, emissions from the iron and steel sources in those states, are overstated and are inconsistent with prior state submittals. Finally, separate from the emission estimates, the modeling used in the disapproval over-predicts impacts from the upwind states and sources.

Response

The EPA's response to comments on emissions inventories can be found Section 3. The comment provided no basis for claiming that the EPA's modeling for the proposed disapproval actions over-predicts impacts from upwind states.

7.3 1 Percent as a Contribution Threshold

Comments

Commenter: Air Pollution Control Program, Missouri Department of Natural Resources

Commenter ID: 01

Docket ID: EPA-R07-OAR-2021-0851

Comment:

EPA's 4-step framework provides for a finding of significant contribution or linkage at a level of one percent of the 2015 ozone standard. Due to this, the 4-step framework as applied by EPA, results in decisions that some states are able to narrowly avoid or narrowly be brought in to the FIP requirements based on extremely small changes to the modeling results. Therefore, if EPA's application of step 2 holds with a one percent threshold for establishing linkages, which it should not, as discussed at length in later comments, an underperforming model is unacceptable. If EPA claims that a one percent threshold is appropriate for establishing linkages, then arguments could be made that the model should be able to predict within one percent the ozone concentrations that have been measured in the past in the base case modeling scenario (modeling using past known meteorology and emission levels and comparing it to actual measured ozone concentrations).

[…]

EPA's application of a 1 percent of the standard contribution as the threshold (1 percent threshold) to establish significant contribution is arbitrary and unjustified. In the proposed FIP, EPA states its reasoning simply as the fact that the threshold is the same value it has used in the past under previous CSAPR regulations. In EPA's original CSAPR, it justifies the use of the 1 percent contribution with a generic statement about how in many cases relatively small contributions from many states can collectively contribute in significant amounts to the downwind problem. However, the only analysis that EPA has performed in these latest CSAPR actions is in its August 2018 memo where EPA concluded and recommended that a higher threshold may be appropriate. The memo goes into great detail about the level of downwind contribution captured at various thresholds and uses this as the basis for suggesting that an alternative (higher) threshold may be appropriate.

EPA has offered no analysis in their proposed disapproval nor in their proposed FIP to justify the continued use of a 1 percent threshold. If the generic reasoning in the original CSAPR still stands that relatively small contributions from many states can collectively contribute in significant amounts, then EPA could supposedly pick an even lower threshold for significant contribution and it would assuredly prevail, and bring more states into this predicament. On the converse, EPA, despite all of the new modeling and upwind state contribution data it now has available, offers no reasoning as to why a higher threshold is not appropriate. This is a complete reversal in the stance EPA took with its August 2018 memo where thorough analysis was used to potentially justify such higher thresholds. The lack of reasoning and justification, and instead just pointing to the fact that EPA has successfully used the threshold in similar regulations before, is evidence that calls into question whether EPA is able to adequately justify the use of a 1 percent threshold in light of the data before it. EPA must adequately explain how the data from the updated modeling justifies the use of a 1 percent threshold and then re-propose and take comment on that rationale. Failure to do so before promulgating a final disapproval or final promulgation of a FIP would rob states and the public from an informed public participation process that will result in billions of dollars of costs and future policy implications that could defer even greater authority of this federal agency over state sovereign rights.

[…]

Further, the real effects of EPA using, without justification, the 1 percent threshold sheds even more light on the inappropriateness of this approach. EPA states in its disapproval that it had previously attempted to justify the use of an alternative threshold for the state of Iowa in a proposed approval of their good neighbor SIP, because Iowa had no linkage to any receptors above a 1 ppb contribution, which EPA's August memo sought to allow. In Missouri's proposed disapproval, EPA states that it attempted to augment Iowa's submission to allow for the use of the 1 ppb threshold for that state, but that it was not moving forward with that proposal. EPA offers no reasoning or justification for why it could not move forward with that proposal, and instead decided to approve Iowa's SIP because the updated modeling did not include any linked receptors to Iowa because the highest contribution from Iowa for any remaining linked receptors in the updated modeling is below the 1 percent threshold. As a result, EPA is proposing to approve Iowa's SIP, but for a different reason that what EPA proposed earlier. This determination only magnifies the arbitrary nature of the 1 percent threshold, where states can fall

in and out of billions of dollars of compliance costs that are federally mandated based on relatively minor changes in the modeling results.

Commenter: Alabama Department of Environmental Management

Commenter ID: 02

Docket ID: EPA-R04-OAR-2021-0841

Comment:

EPA's selection of 1% is arbitrary. It could have just as easily adopted 1 ppb as its threshold in the first place, as requested by many States, but it chose 1% apparently due to the additional 5% (7% in the 2018 modeling) of emissions reductions provided. Information is not readily available to determine if EPA actually investigated whether implementing the 1 ppb threshold in its reduction methodology in the proposed FIP would have been sufficient to address the attainment and maintenance issues in question. While EPA has the ability to set the thresholds for the program, it does not have the right to require overcontrol of source emissions purely as a method of reducing overall emissions or imposing restrictions on target source categories. If the reductions necessary could have been achieved at the 1 ppb threshold, the 1% threshold requirements clearly demonstrate an overcontrol situation.

Lastly, if the 1% threshold is considered a bright line for SIP approval, then rulemaking should be undertaken with technical supporting documentation and opportunity for notice and comment. Absent rulemaking, the States, who are responsible for the development and implementation of SIPs, will use best judgement and sound scientific principles, regarding all available information in said development and implementation.

Commenter: Louisiana Chemical Association

Commenter ID: 26

Docket ID: EPA-R06-OAR-2021-0801

Comment:

The use of 1% of the NAAQS threshold for modeled contribution as the sole definition of significant contribution is inappropriate for the 2015 Ozone NAAQS since the more stringent .7ppb (1%) threshold is an order of magnitude smaller than the biases and errors typically documented for regional photochemical modeling (cited Simon et al., 2012). In fact, although modeling bias (difference between monitored and modeled values) has been reduced over the last 10-15 years with updated CMAX modeling versions, summertime NOx bias still remains above the 1% threshold, particularly in the South, including Louisiana. (cited Toro, C, et al. 2021. Evaluation of 15 years of modeled atmospheric oxidized nitrogen compounds across the contiguous United States). The EPA screening level now being used to evaluate Louisiana's SIP is a fraction of a part per billion – an incredibly low value. EPA has provided no scientific support for a 1% screening level to be always applied for every NAAQS without consideration

of factors such as the ability to discern ozone impacts of precursors at such infinitesimally small values and model performance. Although EPA addresses the bias limitations of the modeling in the Proposed Rule, it does not explain why the 1 ppb threshold is arbitrary and capricious and should not be used.

Commenter: Louisiana Department of Environmental Quality

Commenter ID: 27

Docket ID: EPA-R06-OAR-2021-0801

Comment:

EPA's discussion of 1% of the standard (or 0.07 ppb) versus 1 part per billion (ppb) is silent on linkages to Sheboygan WI, which LDEQ used, yet dismisses the use on linkage to other monitors because the 2016v2 modeling show increased transport.

This discussion is moot. Use of 1% of the standard is problematic as EPA's own performance specifications for automated analyzers allow up to 2.5 ppb as "noise" according to Table B-1, Subpart 53.

Commenter: PacifiCorp

Commenter ID: 38

Docket ID: EPA-R08-OAR-2022-0315

Comment:

EPA ignores a significant EPA study supporting use of the 1 ppb threshold. Admittedly, EPA determined the one-percent threshold was appropriate when it first adopted the original CSAPR rule. This was based on 2011 modeling analysis that compared a 5% threshold, a 1% threshold, and ½% threshold. Based on this modeling analysis, EPA concluded that the upwind capture rates under the 1% and ½% threshold options were similar, indicating that little benefit would be achieved with the lower threshold. EPA did find that raising the threshold to 5% would leave too many upwind states and emission sources unregulated.

EPA conducted further analysis in 2018 when it issued the Threshold Guidance that re-analyzed the minimum threshold using a tighter range of options and more up-to-date modeling techniques and data. Specifically, EPA evaluated the difference in capture rates between the previous threshold of 0.7 ppb (1%), a threshold of 1 ppb, and a threshold of 2 ppb. Like the 2011 analysis, EPA's 2018 analysis again concluded that the difference between the two lower options—0.7 ppb and 1 ppb—was minimal, while the higher threshold of 2 ppb left too many emissions unregulated. As a result, EPA considered capture rates at the 0.7 ppb and 1 ppb thresholds to be generally comparable, and thus concluded that "it may be reasonable and appropriate for states to use a 1 ppb contribution threshold, as an alternative to a 1 percent threshold," in addressing interstate transport under the CAA good neighbor provision. Notably, a threshold of 1 ppb is just 1.4% of the ozone standard of 70 ppb, and therefore would round down to 1%.

[…]

EPA's insistence on a 1 percent threshold is not based on sound reasoning or science.

EPA engaged in robust statistical analysis in other guidance that defined a Significant Impact Level ("SIL") for ozone to be used as part of the PSD permitting process (setting it at 1 ppb) ("SILs Memo"). The purpose of the SILs Memo was to provide an ozone level "for the permitting authority to conclude that the proposed source will not cause or contribute to a violation of a National Ambient Air Quality Standard (NAAQS)." That analysis was peer-reviewed by three independent economic statisticians employed as faculty at major U.S. universities. But the SILs Memo was not just limited to PSD permitting. As stated in their associated statistical analysis report:

> The statistical methods and analysis detailed in this report focus on using the conceptual framework of *statistical significance* to calculate levels of change in air quality concentrations that have a 'significant impact' or an 'insignificant impact' on air quality degradation. *Statistical significance* is a well-established concept with a basis in commonly accepted scientific and mathematical theory. This analysis examines *statistical significance* for a range of values measured by air quality monitors. The statistical methods and data reflected in **this analysis may be applicable for multiple regulatory applications** where EPA and state agencies seek to quantify a level of impact on air quality that they consider to be either 'significant' or 'not significant'.

EPA found that the "technical analysis may have utility in several contexts." Moreover, EPA recommended in the SILs Memo that the 1 ppb SIL for ozone should "apply to the NAAQS everywhere, regardless of the class of the airshed." This statement by EPA is directly contrary to EPA's statements about use of the SILs in its disapproval of so many states' good neighbor SIPs. The SILs analysis further supports use of the 1 ppb significance threshold and undermines EPA's claim that Utah's use of a 1 ppb ozone NAAQS threshold is inconsistent with EPA's past analysis.

Commenter: PacifiCorp (Attachment - Berkshire Hathaway Energy (BHE) Company Comments on Proposed Ozone Transport Rule)

Commenter ID: 38

Docket ID: EPA-R08-OAR-2022-0315

Comment:

EPA determined the one-percent threshold was appropriate when it first adopted the original CSAPR rule based on a 2011 modeling analysis that compared results under a five-percent threshold, a one-percent threshold, and a half-percent threshold. EPA's analysis compared the "capture rates" for the different options—i.e., the percentage of total upwind contribution that would be regulated under the different thresholds under consideration. Based on its modeling analysis, EPA concluded that the capture rates under the one-percent and half-a-percent options were similar, indicating that little benefit would be achieved with the lower threshold, but that raising the threshold to five percent would leave too many upwind states and emission sources unregulated. BHE asks EPA to reconsider its

minimum contribution threshold. Unless EPA can identify some rational basis for preferring its older and now outdated 2011 analysis, the 2018 analysis appears superior and more appropriate for both identifying significant contributions and evaluating the possibility of over-control.

[…]

In addition, as noted above, EPA has already determined in another context that two ozone design values (DV) that differ by less than 1 ppb are not statistically significantly different from each other, based on the statistical analysis use to define 1 ppb ozone as the Significant Impact Level (SIL) for the Prevention of Significant Deterioration (PSD) program. EPA's own demonstration that 1 ppb is not statistically significant confirms that 1 ppb is an appropriate de minimis threshold. Further discussion of this point is provided in the enclosed report from Ramboll evaluating the EPA modeling analysis underlying the Proposed Rule.

Commenter: PacifiCorp (Attachment – Ramboll Evaluation)

Commenter ID: 38

Docket ID: EPA-R08-OAR-2022-0315

Comment:

Wyoming's and Utah's Ozone Contribution Is Not Statistically Significant According to EPA's Statistical Analysis

[…]

EPA has conducted a robust statistical analysis to demonstrate that two ozone design values (DV) that differ by less than 1 ppb are not statistically significantly different from each other. The analysis was performed to define the 1 ppb ozone Significant Impact Level (SIL) that is used as part of the Prevention of Significant Deterioration (PSD) permitting process to define an ozone level "for the permitting authority to conclude that the proposed source will not cause or contribute to a violation of a National Ambient Air Quality Standard (NAAQS)." That analysis was peer reviewed by three independent economic statisticians employed as faculty at major U.S. universities. Therefore, EPA should not consider contributions to be significant unless they are greater than 1 ppb. At that threshold, Wyoming would not significantly contribute to any downwind receptor. Also, at that threshold, Utah would not significantly contribute to any downwind receptor based on the more tailored RAQC / CDPHE modeling discussed above (Ramboll, Chapter 4).

[…]

EPA's Justification for the 1 Percent of the 2015 NAAQS Significance Threshold in the Proposed Transport Rule is Unfounded

On August 31, 2018, EPA released a Memorandum whose purpose was "*to provide analytical information regarding the degree to which certain air quality threshold amounts capture the collective amount of upwind contribution from upwind states to downwind receptors for the 2015 ozone National*

Ambient Air Quality standard (NAAQS)." (Tsirigotis, 2018b, pp. 1). The 2018 Memorandum evaluated significant ozone contribution thresholds of 1 ppb, 2 ppb and 1 percent of the 2015 ozone NAAQS (0.70 ppb) and concluded "*Based on the data and analysis summarized here, the EPA believes that a threshold of 1 ppb may be appropriate for states to use to develop SIP revisions addressing the good neighbor provision for the 2015 ozone NAAQS*." (Tsirigotis, 2018b, pp. 3). This conclusion is technically justifiable given the statistical analysis EPA conducted to justify the 1 ppb SIL (EPA, 2018a).

In the Proposed Transport Rule, EPA discusses their 2018 Memorandum for states to use alterative ozone contribution thresholds in their good neighbor SIPs and offers a specious argument why use of a single threshold of 1 percent of the 2015 NAAQS is needed as "*the Agency now believes using different thresholds at Step 2 with respect to the 2015 ozone NAAQS raises substantial policy consistency and practical implementation concerns*." (EPA, 2022, pp. 20073). [H]owever, EPA doesn't mention that the EPA 2018 Memorandum believed that a 1 ppb threshold is appropriate for states to use and its use as the single significance threshold would also alleviate the policy concerns of using multiple significance thresholds that EPA was concerned about. The Proposed Transport Rule then goes on to note that the 1 ppb threshold "*has the disadvantage of losing a certain amount of total upwind contribution*" compared to the 1 percent of the NAAQS threshold and "*there does not appear to be a compelling policy imperative in moving to a 1 ppb threshold*." (EPA, 2022, pp. 20074). There is, however, a very powerful and compelling technical argument for moving to a 1 ppb significant contribution threshold based on EPA's statistical analysis to justify the 1 ppb ozone SIL that demonstrated two ozone DVs that differ by 1 ppb or less are not statistically significantly different from each other (EPA, 2018a).

Commenter: Sierra Club

Commenter ID: 39

Docket ID: EPA-R04-OAR-2021-0841

Comment:

First, Sierra Club strongly supports EPA's observation that "consistency in requirements and expectations across all states is essential" in regulating emissions to address a regional air pollutant such as ozone. As EPA correctly observes, utilizing different contribution thresholds for different states "would allow certain states to avoid further evaluation of potential emissions controls while other states must proceed to a Step 3 analysis," creating "significant equity and consistency problems among states." Indeed, a lack of uniformity in the stringency of control measures being applied to sources in upwind and downwind states is a significant cause of the persistent ozone nonattainment issues in many downwind areas. States that contribute above a fixed amount to a downwind nonattainment or maintenance area should, uniformly, be included in EPA's Step 3 analysis.

[…]

Third, Sierra Club agrees with EPA that consistency also counsels in favor of retention of the 1% contribution threshold. The 2018 Guidance Memorandum identified no reasoned basis for deviating from EPA's consistent prior actions and guidance on this issue, and Sierra Club perceives none other

than to simply reduce the number of states obligated to address their significant contributions to downwind nonattainment and maintenance. But shrinking the pool of states working to address regional ozone transport simply shifts the burden even more heavily to the downwind states, many of which contribute comparatively little to their own nonattainment and already control their in-state sources to a degree unmatched by their upwind counterparts.

Commenter: Tennessee Department of Environment and Conservation

Commenter ID: 41

Docket ID: EPA-R04-OAR-2021-0841

Comment:

EPA has not engaged in the rulemaking required under the Clean Air Act to establish 1 percent of the NAAQS as a bright-line SIP approval threshold for compliance with the 2015 8-Hour Ozone NAAQS, so EPA cannot disapprove Tennessee's SIP for a standard that has not been properly promulgated.

[N]either the 2015 8-Hour Ozone NAAQS, nor the implementation standards contain the 1% of the NAAQS compliance threshold for State SIPs.

While has EPA previously used a 1% significance threshold to address interstate transport, these metrics have been applied to issue SIP calls (e. g., the NOX SIP Call and CAIR NOX Ozone Season Trading Program) or to adopt Federal Implementation Plans in the absence of a SIP submittal. EPA's use of 1% is generally reasonable in such instances, because no state action has taken place (i. e., the state has not submitted a SIP), the state may provide comments and technical information on EPA's action (i.e., the 1% threshold is a rebuttable proposition to which the state may object), and – most importantly – the final result is a *rulemaking*, which complies with the applicable provisions of CAA section 307(d). It is well established that states have primary responsibility to develop and implement the SIP. However, in this instance EPA has decided to substitute its own judgement in place of the state's by imposing a 1% threshold on certain states (but not others as discussed in Comment #6) without engaging in the required rulemaking to impose this as a uniform standard to determine whether an upwind state is linked at Step 2 of the Framework. If, as EPA indicates, most states cannot justify or utilize an alternative standard in practice, then the 1% threshold has, by implication, become a critical approvability threshold for a SIP addressing the Good Neighbor provision and, as such, must be promulgated as a rulemaking, technically and legally supported, with an opportunity for notice and comment. If EPA wishes to establish a bright-line metric for review of infrastructure SIPs, then it should promulgate that metric through rulemaking under CAA section 307(d).

Commenter: United States Steel Corporation

Commenter ID: 45

Docket ID: EPA-R05-OAR-2022-0006

Comment:

<u>One Percent Contribution Criterion is Not Appropriate as it is Lower than What U.S. EPA Advised States and it is Lower Than What Can be Supported Based on the Precision of the Modeling</u>

U. S. Steel notes that while U.S. EPA may believe the modeling used to support its disapproval of the SIPs is accurate and precise, the accuracy and precision of the modeling does not support an impact threshold of 0.70 ppb. U.S. EPA needs to consider the accuracy and the precision of the modeling when determining an appropriate "interference" threshold. U. S. Steel acknowledges that a model cannot necessarily be "perfect" as U. S. EPA points out, but the U.S. EPA's decisions and impacts to the regulated need to reflect the model's accuracy and precision.

Commenter: Utah Petroleum Association and the Utah Mining Association

Commenter ID: 48

Docket ID: EPA-R08-OAR-2022-0315

Comment:

EPA should not apply the same downwind threshold contribution in the western United States that it applies in the east.

EPA judged the Utah IT SIP based on a threshold contribution of 0.7 ppb to downwind States, but numerous other influences affect ozone in the west, meaning that such a small contribution can be difficult to predict with any accuracy. In their comments on the Proposed GNR, the Western States Air Resources Council ("WESTAR") stated:

> *Air quality in the WESTAR region is influenced by both human activities and natural phenomena. Baseline air quality and the sources of impacts to that baseline differ based on local industry, geography, population, meteorology, and other state or regional conditions. Across the West, high elevations, extreme variations in topography, vast landscapes, and variable weather patterns influence air quality. The West is also disproportionately affected by wildfires, high wind dust events, volcanic activity, and international transport of pollutants. Pollutant sources, methods of dispersion, and types of affected areas in the West are quite different from those in the eastern United States.*

While EPA strives for consistency, being consistent does not always mean being the same. The differentiating factors in the WESTAR comments must be considered. At a minimum, these factors point to greater uncertainty in air quality modeling. Considering the myriad of factors lending uncertainty to modeling results, the 0.7 ppb threshold contribution is too low.

Response

The EPA responds to these comments in the preamble in Section V.B. Specifically, comments regarding the technical merits and justification of a 1 percent of the NAAQS contribution threshold are addressed

in Section V.B.4. and Section V.B.5. of the preamble, respectively. Comments advocating use of the Prevention of Significant Deterioration Significant Impact Level as the contribution threshold at Step 2 are addressed in Section V.B.6. of the preamble.

As the EPA recognized when it first applied this threshold in CSAPR, using a threshold expressed as a percentage of the NAAQS allows for the threshold to become more stringent in proportion to the increased protectiveness of public health and the environment when the EPA revises the NAAQS. 76 FR 48208, 48238 (Aug. 8, 2011) (The "approach is readily applicable to any current and future NAAQS and would automatically adjust the stringency of the transport threshold to maintain a constant relationship with the stringency of the relevant NAAQS as they are revised."). No state or commenter has explained why this well-considered policy is unlawful or arbitrary and capricious.

One commenter pointed to the EPA's proposed error correction of the EPA's prior approval of Delaware's SIP submission in a separate rulemaking proceeding to argue that updates to modeling make the threshold too small, as a states' contribution can change to be above or below a 1 percent of the NAAQS contribution threshold after updates are made to the modeling. But the same would be true for any threshold, including 1 ppb. Some states that would fall just above a 1 ppb threshold could be anticipated to make (and indeed, several included in this action do make) virtually identical arguments as the states that are just over the 1 percent of the NAAQS threshold.

Additionally, in the case of every state covered by this action, with the exception of Alabama, Kentucky, and Minnesota, the difference between a 1 percent threshold and a 1 ppb threshold is irrelevant to the decision here because linkages are present above the 1 ppb level in the 2016v3 modeling.

Another commenter argued that 1 percent of the NAAQS fails limits of modeling and monitoring capability and so violates the requirement from *Michigan v. EPA*, 213 F.3d 663 (D.C. Cir. 2012) for EPA to establish a "measurable contribution" before identifying the amount of "significant contribution." *Michigan*, 231 F.3d at 684. Another commenter apparently references Table B-1 to subpart B of 40 CFR Part 53 (performance limit specifications for automated methods), to make a similar argument regarding the capabilities of monitoring equipment. We address the comments on whether monitoring technology accuracy is relevant in Section V.B.4 of the preamble. There is also no conflict with *Michigan*. Contributions as low as 1 percent of the NAAQS (and impacts at even lower levels) are reliably measured through our modeling to calculating and apportioning contribution.

Other issues raised by these comments are addressed in the preamble in Sections V.A.4., V.B.2., V.B.6., V.B.7., and V.C.2. and in the following sections: Sections 1.2 (Guidance for SIP Submissions), 1.4 (Use of Updated Modeling), 4.2 (Model Performance), 5 (Updates to Modeling and Changes in Linkages), 7.2 (August 2018 Memorandum), 9.2 (Over-Control), 10.3 (Cooperative Federalism and the EPA's Authority), 11.4 (Transport Policy – Western State Ozone Regulation), and 11.5 (International Contributions). Further explanation of the EPA's contribution calculation can be found in the Final Action Air Quality Modeling TSD, in the docket for this action.

7.4 August 2018 Memorandum

Comments

Commenter: Air Pollution Control Program, Missouri Department of Natural Resources

Commenter ID: 01

Docket ID: EPA-R07-OAR-2021-0851

Comment:

The use of the 1 percent threshold is assuredly arbitrary and capricious, and EPA offers no justification or reasoning for its selection of that threshold in Missouri's SIP disapproval to counter this claim. EPA's disapproval only states that in light of the fact that it has not found any state's justification adequate for the use of a different threshold at step 2, it no longer thinks it is advisable to consider using different thresholds to establish linkages at step 2. However, EPA does not go on to defend its use of the 1 percent threshold, and simply assumes that because it was able to use it before, it must be able to use it again without question or any consideration of the new facts and data that are now available with the updated modeling. This assumption is flawed, and without providing this reasoning and an opportunity for public notice and comment, the proposed disapproval cannot stand without a re-proposal that clearly articulates the reasoning for the 1 percent threshold, or any other threshold EPA decides to use. Further, the real effects of EPA using, without justification, the 1 percent threshold sheds even more light on the inappropriateness of this approach. EPA states in its disapproval that it had previously attempted to justify the use of an alternative threshold for the state of Iowa in a proposed approval of their good neighbor SIP, because Iowa had no linkage to any receptors above a 1 ppb contribution, which EPA's August memo sought to allow. In Missouri's proposed disapproval, EPA states that it attempted to augment Iowa's submission to allow for the use of the 1 ppb threshold for that state, but that it was not moving forward with that proposal. EPA offers no reasoning or justification for why it could not move forward with that proposal, and instead decided to approve Iowa's SIP because the updated modeling did not include any linked receptors to Iowa because the highest contribution from Iowa for any remaining linked receptors in the updated modeling is below the 1 percent threshold. As a result, EPA is proposing to approve Iowa's SIP, but for a different reason that what EPA proposed earlier. This determination only magnifies the arbitrary nature of the 1 percent threshold, where states can fall in and out of billions of dollars of compliance costs that are federally mandated based on relatively minor changes in the modeling results. Delaware is in a similar, but completely opposite, situation as Iowa that sheds even more light on the arbitrary nature of such a low significant contribution threshold. In the previous modeling, Delaware's contribution levels were below the 1 percent threshold, and now EPA is proposing to reverse their approval of Delaware's SIP and bring them into the FIP. Such monumental changes in EPA's approval status based solely on the latest modeling analysis shows that if these proposed disapprovals and proposed FIP are allowed to stand that no state can ever be assured that their good neighbor obligations have actually been met. Delaware has not relaxed any control measures between the final approval of their SIP and the proposed reversal of that approval. Yet, EPA is now proposing to impose a FIP on Delaware. This goes to show that the significant contribution value of

1 percent, which either requires hundreds of millions of dollars of compliance costs, or no costs whatsoever, is not justifiable or equitable in any way. EPA states in their proposed disapproval of Missouri's SIP that consideration of alternative significant contribution thresholds would raise serious concerns about equity among states, but this action shows that such a low contribution threshold at step 2 will certainly have the same effect. States are at the mercy of the modeling, and anytime EPA wishes, it may update the modeling and reverse course on the inclusion of a state resulting in the imposition of a detrimentally costly FIP. For all of these reasons, EPA's selection for a 1 percent threshold, or any other threshold, in the proposed disapproval cannot stand without a re-proposal that clearly articulates the explanation in light of the most recent data why such a threshold is appropriate.

Commenter: Alabama Department of Environmental Management

Commenter ID: 02

Docket ID: EPA-R04-OAR-2021-0841

Comment:

In November 2018 Iowa submitted its 2015 ozone transport SIP which relied on EPAs 2023 modeling as presented in EPNs memorandum from March 2018 to identify downwind receptors that may be impacted by Iowa emissions. Iowa concluded that the State did not contribute significantly to nonattainment or interfere with maintenance of the 2015 ozone NAAQS in any other State. Iowa referred to the analytic information in EPAs August 2018 memorandum as a basis to use a 1 ppb contribution threshold when evaluating the State contribution to downwind receptors. Iowa identified two downwind receptors to which it was contributing between 1% and 1 ppb. In the March 2020 proposed approval, EPA proposed to determine that Iowa was justified in applying a 1 ppb threshold for purposes of evaluating upwind State linkages. EPA stated that the amount of upwind contribution captured with the 1% and 1 ppb thresholds is generally comparable on average across all receptors, therefore EPA concluded that it may be reasonable and appropriate for States to use the alternate threshold of 1 ppb. This conclusion led EPA to propose approval of Iowa's transport SIP submittal, which relied on a 1 ppb contribution threshold. When the updated 2016v2 modeling was released, Iowa was shown to contribute less than the threshold of 1% of the 2015 ozone NAAQS to all downwind receptors. This finding led EPA to withdraw the March 2020 proposed approval that relied on a 1 ppb threshold and to re-propose approval based on the new modeling and on the fact that Iowa's contribution to all other States was now below 1% of the 2015 ozone NAAQS. While this action by EPA is appropriate based on the new modeling results, the fact that EPA had full intentions to approve Iowa's November 2018 transport SIP submittal that relied on a 1 ppb threshold is an obvious indication that EPA agreed that this alternative threshold was adequate and approvable. This fact goes completely against EPAs current reasoning that the use of a 1 ppb alternate contribution threshold is unacceptable due to the negative effects it would have on national consistency and policy issues.

[…]

In response to ADEM's SIP submittal, EPA contends that ADEM did not provide sufficient technical justification for using a 1 ppb threshold instead of EPA's arbitrary 1% threshold. In fact, EPA states it was

not providing a methodology for justifying a 1 ppb threshold and that all States that had attempted to had not successfully demonstrated a sufficient technical justification. EPA is fully aware that few, if any, States have the resources available to provide the additional modeling necessary to demonstrate a technical justification. Additionally, EPA did not provide additional technical information for why the 1 ppb threshold is not appropriate.

EPA can update and/or revise guidance but cannot simply disregard guidance that has not been withdrawn. The August 2018 memo states that "the amount of upwind collective contribution captured with the 1% and 1 ppb thresholds is generally comparable, and that it may be reasonable and appropriate to use the 1 ppb threshold". In fact, EPA did just that when conducting the Iowa WOE analysis for the 2015 ozone NAAQS. The analysis asked the question "What are the impacts of individual upwind States linked at 1 ppb or higher to the receptor?" In evaluating individual upwind States' contributions to the Denton County and Harris County, Texas receptors, Alabama's impacts, 0.71 and 0.88 ppb, respectively, represents 9% of the impact of upwind States above 1% at the Denton County receptor, while for the Harris County receptor, the impact is 10.6% of the impact of upwind States above 1%. Said another way, the Alabama contributions of 0.71 ppb (Denton) and 0.88 ppb (Harris) represent 6% and 7% of the total impact of upwind States. Alabama is significant at neither monitor relative to the 1 ppb threshold, nor is the State significant at either threshold for the 2026 future year.

For the upwind States above 1 ppb, three States are identified for the Denton County receptor (LA, MS, OK), and three States (AR, LA, MS), likewise are identified for the Harris County receptor.

[table in full comment]

The impacts of the States above 1 ppb is 5.55 ppb (45% of total upwind contributions) for the Denton County receptor, and 7.43 ppb (63% of total up-wind contributions) for the Harris Count receptor.

The table below lists the contributions Using the two thresholds for the Denton County (481210034) and Harris County (482010055), Texas receptors, considering all upwind States' contributions as well as States with contributions of ≥1% (0.71ppb), and States with contributions ≥1 ppb.

[table in full comment]

As can be seen in the table above, the impacts of upwind State contributions, in total, are less than half the contribution from Texas. Further, the impacts of the offshore, fires and biogenic sectors exceed the contribution from Alabama sources.

[…]

EPA states in the proposed disapproval that ADEM "did not identify any periods of clean data for the Denton County, Texas maintenance receptor for which meteorological conditions could be assessed to determine whether particular summers have ozone conducive or unconducive meteorology during a period of clean data." In looking at the 8-hr design values for the Denton County receptor, the trend is downward (Figure 1).

Of even more importance are the reductions in precursor emissions (NOx) for Alabama, Louisiana, Arkansas and Mississippi. Reductions on the order of 40 - 50% have occurred since 2011 (Figure 2). Texas NOx emissions have also shown a 36% decrease over the same time period, although the

statewide NOx emissions in Texas in many cases dwarf the other the other states. When looking at EGU and non-EGU NOx sources, it should be noted that Texas' emissions are many orders of magnitude greater than Alabama's. This is also the case in both the on-road and non-road sectors. While the design value for the Harris County, Texas receptor remains relatively unchanged, the NOx reductions both within and at upwind States are still notable.

[Figure 1 and Figure 2 are in the full comment]

In the EPA WOE analysis that was conducted for Iowa, EPA looked at the impact of in-state emissions on ozone levels relative to the collective upwind impacts. The upwind States' contribution to the Denton County receptor (481210034) is 17% (12.2 ppb) of the 2023 average ozone design value, as compared to 39% or 27.3 ppb from in-state sources, with Alabama's contribution of 0.71 ppb only contributing 6% to the total contribution of all upwind States at the Denton County receptor.

Alabama is ranked 6th and last when using EPA's 1% significance threshold (Table 1). When looking at both the Denton and Harris County receptors, ADEM compared the year to year NOx changes at both the ozone and NOx monitors, which are co-located (Figures 3 and 4). While statewide NOx emissions are declining, the NOx concentrations at the receptors do not reflect what is being seen across the State, indicating that local NOx sources, such as vehicles, may play a bigger role in the formation of ozone, not transported precursors.

[Table 1, Figure 3, and Figure 4 in full comment]

Another issue of note is that with the continued reductions in NOx, it is unclear how lower NOx emissions in the 2022 modeling resulted in higher concentrations relative to the 2021 modeling which assumably reflected higher NOx emissions.

Based on the assessment of NOx emissions from Alabama and other upwind States, Alabama's contribution to the 2023 average ozone design value relative to Texas and other upwind States, and supplemental NOx data, ADEM asserts that NOx emissions in 2023 will have an insignificant impact on the Denton County, Texas monitor.

[…]

In the EPA WOE analysis completed for Iowa, EPA considered the linkages between the upwind States' impact on the nonattainment or maintenance receptor, specifically in relation to the two thresholds, 1% (0.71 ppb) and 1 ppb. For the Denton County receptor, in addition to Alabama, there are two other upwind States that contribute between 0.71 and 1 ppb, Arkansas and Tennessee. The collective contribution for those two States is 14% of the total upwind contributions. While Tennessee and Alabama are not linked to any other receptor above 1 ppb, Arkansas is linked above 1 ppb to other monitors in Texas. For the Harris County receptor, Alabama is the only State with a contribution between the two thresholds, with a total contribution of 7% of the total upwind contribution. The difference between the thresholds, as shown above are 7.4% (0.88 ppb) for the Harris County receptor, and 19.7% (2.41 ppb) for the Denton County receptor. These percentages are in line with the analysis EPA completed for Iowa, which indicated that an alternative threshold could be supported.

Additionally, it is worth looking at the number of linkages for each State to 2023 nonattainment and maintenance receptors. For the Denton County receptor Alabama is only linked to two receptors, one nonattainment receptor (Harris County, Texas- 482010055) and one maintenance receptor (Denton County, Texas- 481210034). With respect to all linkages identified, Alabama is ranked 18th of 23 for non-attainment receptors, and 21st out of 27 for all linkages. At 1 ppb, Alabama is not linked to any receptors, nonattainment or maintenance, and Alabama is not linked to any receptors in 2026, regardless of the threshold.

Based on Alabama's ranking when considering which States are linked to future nonattainment and or maintenance receptors as well as the magnitude of the linkages (between 1% (0.71ppb) and 1 ppb for both receptors), this supports an alternative threshold of significance.

Commenter: Alabama Power Company, Southern Power Company, and PowerSouth Energy Cooperative

Commenter ID: 04

Docket ID: EPA-R04-OAR-2021-0841

Comment:

Specifically, ADEM's SIP submission package identifies multiple factors that support its analysis: […] (4) application of an alternative contribution threshold. Each of these factors suggests that Alabama sources do not contribute significantly to ozone concentrations in Texas and that further regulation of Alabama sources would not appreciably decrease ozone concentrations in Texas.

[…]

Finally, ADEM argues that 1 ppb is a reasonable and acceptable contribution threshold in this case.

[…]

EPA contends that ADEM's "arguments in support of using a 1 ppb threshold are not approvable," however, this is not the correct standard by which to review the SIP. The threshold is merely a proxy EPA has instituted in its 4-step framework in order to determine potential state linkages in step 2. Whereas EPA proposes to rely on a 1 percent (0.7 ppb) threshold for "evaluating a State's contribution to nonattainment or maintenance of the 2015 8-hour ozone NAAQS . . . at downwind receptors" based on a theory of consistency, other thresholds have been utilized in the past. EPA concedes that it previously recognized that a 1 ppb contribution threshold is "justifiable" in "certain circumstances." There is ample evidence in the record, which is ignored by EPA, that this is one of those circumstances. While EPA attempts to brush off Alabama's alternative contribution threshold by stating that "nearly every State that attempted to rely on a 1 ppb threshold did not provide sufficient information and analysis to support a determination that an alternative threshold was reasonable or appropriate," it fails to consider the evidence in the record. By ignoring that evidence, EPA has not explained why a 1 ppb threshold is not reasonable. Support, including technical analysis, for the alternative threshold proposed by ADEM is set out below.

First, despite EPA's newly articulated theory that alternative thresholds raise "policy consistency and practical implementation concerns," EPA has allowed for flexibility in determining contribution thresholds. EPA's August 2018 memorandum on contribution thresholds states that "the amount of upwind collective contribution captured using a 1 ppb threshold is generally comparable to the amount captured using a threshold equivalent to 1 percent of the NAAQS" and "[b]ecause the amount of upwind collective contribution captured with the 1 percent and 1 ppb thresholds is generally comparable, overall, we believe it may be reasonable and appropriate for states to use a 1 ppb contribution threshold, as an alternative to a 1 percent threshold." Moreover, EPA has not identified any evidence to suggest that the use of an alternative threshold would actually harm air quality; instead it seems EPA's focus is on expanding its 4-step FIP framework at the expense of cooperative federalism and the states' right to implement their own standards to ensure interstate air quality.

Furthermore, in the Iowa Infrastructure SIP for the 2015 Ozone NAAQS, EPA proposed to approve the use of a 1 ppb threshold for two downwind receptors where Iowa's contribution was between 1 percent and 1 ppb. In the proposed rule for Iowa's SIP, EPA presented an analysis to support the use of a 1 ppb contribution threshold. First, EPA considered whether, for these specific receptors, the 1 ppb threshold captures a comparable amount of upwind collective contribution as a 1 percent threshold (as stated in the August 2018 EPA memorandum). Then, EPA conducted a WOE analysis to evaluate the following three factors to determine whether a 1 ppb threshold was appropriate for the two receptors:

1. How does the impact of in-state emissions on ozone levels at this receptor compare to collective upwind impacts?

2. What are the impacts of individual upwind states linked at 1 ppb or higher to the receptor?

3. Are individual upwind states impacting this receptor between 1 percent and 1 ppb linked above 1 ppb to *other* receptors?

After applying these factors, EPA concluded that "the 1 ppb contribution threshold is reasonable and appropriate to support the conclusion that [Iowa's use] . . . will not contribute" to either receptor at issue.

According to EPA "Alabama does not provide discussion or analysis containing information specific to the State or a receptor analysis for the affected monitors . . . to evaluate whether the alternative threshold was appropriate to apply with respect to the monitors to which Alabama was linked." However, state-specific information and analysis is exactly what was included in the SIP submittal package. Alabama's proposed SIP revision package included an analysis—which was provided to EPA—assessing each of these factors for the Denton and Harris County monitors and found that a 1 ppb threshold is equally appropriate for analyzing Alabama's contribution to those areas. The following analysis applies the three factors to the Denton County monitor and the Harris County monitor and compares the results to those from the Iowa SIP approval. EPA ignores this analysis in its proposed disapproval.

Denton County, Texas

Applying the first factor (impact of in-state emissions on ozone levels at this receptor compared to collective upwind impacts) to data from the Denton County monitor, upwind states collectively

contribute 17% (12.2 ppb) to the 2023 average ozone design value, as compared to 39% (27.3 ppb) from in-state emissions, thus in-state emissions have a much larger impact than upwind sources on this receptor. Under the second factor (impacts of individual upwind states linked at 1 ppb or higher to the receptor), three upwind states contribute above 1 ppb to this receptor, with a collective contribution of 5.55 ppb (or 45% of all upwind contributions) versus Alabama's modelled contribution, which is 0.71 ppb, or 6% of the total contribution of all upwind states. Therefore, a significant portion of upwind contribution will be captured by states linked at or above 1 ppb. Considering the third factor (individual upwind states impacting this receptor between 1 percent and 1 ppb linked above 1 ppb to *other* receptors), in addition to Alabama, there are two other upwind states—Arkansas and Tennessee—that are modelled to contribute between 1 percent and 1 ppb to this receptor. The collective contribution of these two additional states is 1.70 ppb (14% of total upwind contributions). Tennessee and Alabama are not linked to any other receptor at or above 1 ppb. However, Arkansas is linked to several other receptors in Texas at or above 1 ppb, thus, Arkansas's emission reductions for other linkage receptors would also likely benefit this receptor.

Harris County, Texas

Applying the three factors to the Harris County monitor, first, upwind states collectively contribute 17% (11.9 ppb) to the 2023 average ozone design value, as compared to 40% (28.3 ppb) from in-state emissions, thus in-state emissions have a much larger impact than upwind sources on this receptor. Under the second factor, three upwind states contribute 1 ppb or more to this receptor, with a collective contribution of 7.4 ppb (or 62% of all upwind contributions) versus Alabama's modelled contribution which is 0.88 ppb, or 7% of the total contribution of all upwind states. Therefore, a significant portion of upwind contribution will be captured by states linked at or above 1 ppb. Third and finally, there are no other states that contribute between 1 percent and 1 ppb to this receptor. In addition, Alabama is not linked to any other state at or above 1 ppb.

Comparing these results to those in the Iowa three-factor analysis, we see that, unlike Iowa, the first factor here highlights that in-state, not upwind, contributions have a larger impact on these receptors. In Iowa's case, upwind contributions were much higher than in-state contributions to the receptors at issue. This factor weighs in favor of a 1 ppb threshold for Alabama. Turning to the second factor, Alabama's modelled contributions to the receptors at issue are 6-7% of all upwind contributions, whereas states linked with a contribution above 1 ppb account for approximately 45-60% of all upwind contributions. Therefore, like Iowa, a substantial amount of upwind contribution from states will be captured by a 1 ppb threshold. Finally, the third factor also supports a 1 ppb threshold for Alabama in the case of Harris County since no other state contributions lie between 1 percent and 1 ppb. For Denton County, of the two states other than Alabama that are between the two thresholds, Arkansas is linked elsewhere above 1 ppb—this situation is similar to that of Iowa and the Allegan receptor, where one other state had additional linkages above 1 ppb, meaning that emission reductions by that state would benefit the receptor at issue.

In addition to these three factors, like for Iowa, collective upwind ozone contribution captured with a 1 percent threshold is comparable to the contribution captured with a 1 ppb threshold for both Denton and Harris counties. At the Denton monitor, a 1 percent threshold captures contributions of 7.96 ppb and a 1 ppb threshold captures contributions of 5.55 ppb (or 70% of the upwind contribution that would

be captured using a 1 percent threshold). At the Harris County receptor, a 1 percent threshold captures 8.31 ppb and a 1 ppb threshold captures 7.43 ppb (or 89% of upwind contributions that would be captured using a 1 percent threshold). For comparison, the 1 ppb threshold captured 83% and 94% of contributions to the receptors (Milwaukee and Allegan, respectively) at issue in the Iowa SIP. Thus, at over 89% capture, the 1 ppb threshold is easily appropriate for the Harris County receptor. Though the percentage captured by the 1 ppb threshold is slightly lower for the Denton monitor, this is because the monitor is so close to attainment. There is only a 2.4 ppb difference in the amount captured, which is also comparable to that in Iowa, where there was a 4.8 ppb difference in the amount of contributions captured using a 1 percent versus a 1 ppb threshold for Milwaukee and a 2.2 ppb difference for Allegan.

This "state specific" analysis demonstrates that, based on the factors set out by EPA, a 1 ppb significant threshold is reasonable and appropriate for Alabama, as the amount of upwind collective contribution captured with the 1 percent and 1 ppb thresholds is generally comparable and Alabama's overall modelled contributions to the receptors at issue is small. Surely, this analysis meets EPA's bar for "technical data relevant to Alabama" demonstrating why a 1 ppb threshold is reasonable.

[table in full comment]

Commenter: Arkansas Department of Energy and Environment, Division of Environmental Quality

Commenter ID: 07

Docket ID: EPA-R06-OAR-2021-0801

Comment:

Although EPA has not revoked the August 2018 Memorandum, EPA attempts to justify why they no longer consider this memorandum "guidance" and why they now specify that all states should conform to their policy choice with respect to the arbitrary 1% threshold. ADEQ finds that it is unreasonable for EPA to transform into a requirement that which was initially packaged and delivered to states as one of several options. This puts states at a critical disadvantage, as state rulemaking and the associated SIPs take years to develop, and early EPA guidance and conversations with EPA Regional Offices are the first pillars of state SIP development. States must undertake SIP development with limited technical resources, so the states rely heavily on EPA data and EPA guidance in their decision-making. The threshold decision is fundamental to further steps in the Interstate Transport Framework analysis. Therefore, this late-stage decision by EPA is unreasonable. DEQ finds that this decision effectively forces states to fail in meeting EPA's vacillating interpretation of what is necessary for SIPs to meet interstate transport obligations.

[…]

In the Proposed Rule, EPA proposes to substitute its arbitrary 1% threshold for the threshold used by DEQ in the Arkansas Transport SIP to identify potential linkages between Arkansas and identified nonattainment and maintenance areas. Consistent with EPA's August 2018 Memorandum, DEQ selected a 1 part per billion (ppb) threshold for identifying linkages between Arkansas and nonattainment and maintenance receptors. EPA now attempts to dismiss its own guidance by attempting to add, post hoc, a

requirement that DEQ should base its use of the 1 ppb threshold on "an evaluation of state specific circumstances." The August 2018 memo contains no such directive. Instead, the memo contains boilerplate language that "each state should consider whether the recommendations in this guidance are appropriate for each situation." Because of the interstate nature of the SIP, there are no "state-specific circumstances" with regard to the linkage threshold. DEQ instead chose to follow the plain meaning of the "consider" language and the spirit of guidance in the August 2018 memo. That is, it was the clear intent that the EPA, at the time of the August 2018 memo, wanted each state to exercise its rational and independent judgement as to whether the 1 ppb threshold was an appropriate measure to identify linkages. The appropriateness of this threshold was supported in ADEQ's SIP by multiple facts. First, EPA's August 2018 memorandum provided evidence that a 1 ppb threshold is generally comparable to a 1% threshold for the 2015 ozone NAAQS. Second, 1 ppb is a threshold used for another program to determine whether a PSD source has a significant impact that causes or contributes to a violation of a NAAQS or PSD increment. Third, 1 ppb is the significant digit for reporting ozone monitoring data. These three pieces of evidence support DEQ's selection of a 1 ppb threshold for determining what the state considers to be a potential linkage to nonattainment and maintenance receptors. In its proposed disapproval, EPA dismisses the weight of evidence provided by ADEQ in its choice of the 1 ppb threshold and substitutes its own policy for the state's without any evidence to support their 1% threshold other than to state that the 1% threshold captures marginally more contributions. Unlike EPA's arbitrary threshold, DEQ's threshold for evaluating linkages is based on a robust weight-of-evidence.

[…]

EPA's proposed disapproval also conflates a "linkage" based on its arbitrary 1% threshold with "significant contribution" that automatically imposes some emission reduction obligation on sources or emissions activities in a state. The threshold, whether 1% or 1 ppb, is a screening device triggering further analysis to determine whether particular emissions sources and activities within a state are "significantly" contributing to nonattainment or interfering with maintenance in another state. Arkansas's obligation is to prohibit "any source or other type of emissions activity within the State from emitting any air pollutant in amounts [that will] contribute significantly to nonattainment in, or interfere with maintenance by, any other State with respect to any such national primary or secondary ambient air quality standard." A "linkage" in and of itself is not a "source" or "emission activity" and is not a construct established under the Clean Air Act. It is a tool EPA established in guidance to assist states (and themselves) in evaluating whether there may be a source or emission activity in one state that is emitting an air pollutant(s) in an amount that may "significantly" contribute to nonattainment in or interfere with maintenance by any other State. In the Arkansas Transport SIP, DEQ made use of a 1 ppb threshold as a tool for determining whether further inquiry into potential "significant" contribution or interference by a source or emission activity is required (Step 3 of EPA's interstate transport framework).

[…]

Determination of linkages and significant contributions occurs at separate steps in the four-step analysis. DEQ does not agree that a 1% linkage to an entire state is the same as a significant contribution from a source or emissions activity. The state's obligation is not to eliminate an arbitrary threshold (or to

reduce emissions such that a neighboring state that may be its own primary contributor to nonattainment is not overburdened by their own obligations), but to determine if any emissions sources or emissions activity in the state are significantly contributing to a downwind nonattainment receptor or interfering with maintenance of the NAAQS by a downwind state and respond accordingly to mitigate significant contributions.

With respect to EPA's proposed disapproval of Arkansas's SIP, EPA is proposing to disapprove of Arkansas's use of an alternative 1 parts per billion ("ppb") threshold to identify whether Arkansas is "linked" to projected nonattainment and/or maintenance receptors in other states, in part due to EPA's determination that use of an alternative threshold "may be impractical or otherwise inadvisable for a number of additional policy reasons." EPA also claims that "it is not clear that national ozone transport policy is best served by allowing for less stringent thresholds at Step 2." Instead, EPA believes the appropriate threshold to determine linkages is 1 percent of the 2015 ozone NAAQS (i.e., 0.70 ppb).

[…]

Likewise, EPA's claim that it may be impracticable to apply an alternative threshold is an inappropriate basis for rejecting a state's choice. Impracticality, like policy reasons, plays no part in whether a SIP meets the applicable CAA requirements. EPA's analysis of whether the DEQ SIP complied with CAA requirements should have been limited to the rules, guidance and information existing at the time of DEQ's SIP submittal and not on EPA's new policy judgments.

[…]

With this proposal, EPA indicates that the agency does not support state-justified alternatives that differ from the arbitrary line drawn by EPA in the Proposed Rule. EPA's discussion in the Proposed Rule indicates that the agency does not consider the recommendations that EPA presented to states in the EPA's August 2018 guidance as viable alternatives to a one-size-fits-all EPA implementation of policy in 2022. The agency goes on to say they will "evaluate whether the state adequately justified the technical and legal basis" for any alternative compliance options that a state proposed. But, then EPA states that the August 2018 memo and its Attachment A "do not constitute agency guidance," though the title of the document in question is "Preliminary List of Potential Flexibilities." At the time the memo was released, seven months before state plans were due to EPA, it was clearly intended by EPA to provide guidance to the states. (See sentences 6 and 10 of the memo.) Four years later, EPA now rejects its former position and is attempting to substitute the states' policy judgments with its own.

Commenter: Arkansas Environmental Federation

Commenter ID: 09

Docket ID: EPA-R06-OAR-2021-0801

Comment:

Further, EPA cannot base disapproval of a SIP on the fact that states, even when following the 4-Step interstate transport framework that EPA has established, may apply different thresholds in Step 2 of the

framework, which would have "the potential to result in inconsistent application of interstate transport obligations based solely on the strength of a state's SIP submittal at Step 2 of the 4-Step framework." The states, in the first instance, have wide discretion in determining how to achieve the NAAQS, including their interstate transport obligations, and EPA cannot force the states to adopt approaches reflecting the Agency's policy preferences for consistency in interstate transport obligations. A "SIP basically embodies a set of choices . . . *that the state must make for itself* in attempting to reach the NAAQS with minimum dislocation."[14]

[14] *Bridesburg*, 836 F.2d at 780–81 (emphasis added); *see also Com. of Va.*, 108 F.3d at 1410 (D.C. Cir.) (CAA Section 110 "does not enable EPA to force particular control measures on the states.").

Commenter: Cleco Corporate Holdings LLC

Commenter ID: 14

Docket ID: EPA-R06-OAR-2021-0801

Comment:

The writer of the August 2018 memorandum provides information and argument which is summarized at the end that "*Because the amount of upwind collective contribution captured with the 1 percent and 1 ppb thresholds is generally comparable, overall, we believe it may be reasonable and appropriate for states to use a 1 ppb contribution threshold, as an alternative to a 1 percent threshold, at Step 2 of the 4-step framework in developing their SIP revisions addressing the good neighbor provision for the 2015 ozone NAAQS*." Again, the memorandum does not call for the party utilizing the 1 ppb threshold to conduct "appropriate additional analysis". But as found in the Louisiana SIP, LDEQ did consider whether the recommendation for the August 31, 2018 guidance was appropriate for the situation and this was documented in the SIP. That is, *The LDEQ has maintained that an arbitrary threshold of 1% of the NAAQS for significant contribution to nonattainment or interference with maintenance is not applicable because the value is not detectable by the monitor and following the manner in which a design value is calculated, one percent of the standard would be truncated to zero. Therefore, Louisiana will use the flexibility allowed in the March 2018 memorandum allowing the use of 1 ppb*. In addition, LDEQ further indicated in the SIP, *the use of 1 % of the NAA QS threshold for modeled contribution as the sole definition of significant contribution is inappropriate for the 2015 ozone NAAQS since the more stringent 0. 7 ppb threshold is an order of magnitude smaller than the biases and errors typically documented for regional photochemical modeling (Simon et al., 2012)*. It's obvious that LDEQ considered whether the recommendation for this guidance was appropriate for the situation.

However, EPA goes on to indicate in the Proposal that now its position is that although it has not revoked the guidance in the August 2018 memorandum, it no longer considers the August 2018 memorandum guidance's approval of reliance on the 1 ppb screening threshold as proper. It is inappropriate for EPA to change course on what was presented in its August 2018 memorandum analysis because many in the regulated community relied upon it in the crafting of their state implementation plans. Cleco encourages the Agency to continue to support the August 2018 memorandum as written.

Commenter: Eagle Materials Inc.

Commenter ID: 16

Docket ID: EPA-R09-OAR-2022-0138

Comment:

EPA unreasonably departed from a 1 ppb linkage threshold.

EPA previously articulated a policy finding it reasonable for states to apply a 1 ppb linkage threshold in assessing their ozone transport obligations. While the APA does not prevent EPA from changing its prior policies, EPA must, at minimum, acknowledge such a change and provide a reasonable explanation. In articulating its explanation, EPA "cannot ignore its prior factual findings that contradict its new policy nor ignore reliance interests." Rather, EPA must "show that 'there are good reasons' for the new policy and 'that the agency believes it to be better, which the conscious change of course adequately indicates.'"

EPA's August 2018 Guidance specifically concluded "that a threshold of 1 ppb may be appropriate for states to use to develop SIP revisions addressing the good neighbor provision for the 2015 ozone NAAQS." In making this determination, EPA emphasized that "the amount of upwind collective contribution captured using a 1 ppb threshold is generally comparable to the amount captured using a threshold equivalent to 1 percent of the NAAQS," noting that the difference in captured emissions was only 7% when summed across all receptors and was "of a similar magnitude" at individual receptors.

However, in its Proposed SIP Disapproval, EPA notes that "its experience since the issuance of the August 2018 memorandum regarding use of alternative thresholds at Step 2… leads the Agency to now believe it may not be appropriate to continue to attempt to recognize alternative contribution thresholds at Step 2." EPA explains that a 1 ppb threshold "*may* be impractical or otherwise inadvisable" for the following reasons:

- "[C]onsistency in requirements and expectations across all states is essential,"
- "Consistency with past interstate transport actions… is also important," and
- "[T]he 1 ppb threshold has the disadvantage of losing a certain amount of total upwind contribution for further evaluation."

EPA does not adequately explain its change in position. In its August 2018 Memo, EPA determined that a 7% loss in total upwind state contribution did not interfere with state interstate transport obligations, but in the Proposed SIP Disapproval, EPA concludes that a 5% loss is unacceptable. EPA's only explanation for this about-face is "the core statutory objective of ensuring elimination of all significant contribution to nonattainment or interference of the NAAQS in other states and the broad, regional nature of the collective contribution problem with respect to ozone," which does not address why a 5% difference would not still eliminate *significant* contributions—particularly when EPA applies a marginal cost threshold as a proxy for significance at the next step of its analysis. EPA also apparently requires a

"compelling policy imperative" for changing this threshold from 0.70 ppb, but does not apply the same standard to changing the threshold from 1 ppb.

Commenter: Environmental Federation of Oklahoma

Commenter ID: 20

Docket ID: EPA-R06-OAR-2021-0801

Comment:

In particular, EFO supports DEQ's assessment that EPA has overstepped its authority by circumventing the normal SIP development and approval process in a number of ways, including but not limited to: […] fifth, ignoring, or at least mischaracterizing, its own final guidance to the states.

Commenter: Idaho Power Company

Commenter ID: 23

Docket ID: EPA-R09-OAR-2022-0138

Comment:

Finally, EPA unreasonably departs from its own policy finding it reasonable for states to apply a 1 ppb linkage threshold in assessing their ozone transport obligations. EPA's August 2018 Guidance specifically concluded "that a threshold of 1 ppb may be appropriate for states to use to develop SIP revisions addressing the good neighbor provision for the 2015 ozone NAAQS." EPA inexplicably changes course in the Proposed Disapproval, claiming that "its experience since the issuance of the August 2018 memorandum… leads the Agency to now believe it may not be appropriate to continue to attempt to recognize alternative contribution thresholds," like the 1 ppb threshold. EPA's only explanation for this about-face is "the core statutory objective of ensuring elimination of *all* significant contribution to nonattainment or interference of the NAAQS in other states and the broad, regional nature of the collective contribution problem with respect to ozone," which is nonsensical because EPA applies a marginal cost threshold as a *proxy for significance at the next step* of its analysis.

Commenter: Kentucky Division for Air Quality

Commenter ID: 25

Docket ID: EPA-R04-OAR-2021-0841

Comment:

EPA Reversal on use of 1% Contribution Threshold

In the August 2018 memo, EPA states, "The data in the tables below indicate that, for the 2015 ozone NAAQS, the amount of upwind collective contribution captured using a 1 ppb threshold is generally comparable to the amount captured using a threshold equivalent to 1 percent of the NAAQS. Overall, using a 1 ppb threshold captures 70 percent, which is a similar and only slightly lower amount of contribution." Due to the close correlation between the use of a 1% threshold and a 1 ppb threshold, Kentucky chose to use the 1 ppb threshold for screening purposes in Step 2 of the framework, following EPA's published guidance. EPA has not provided any new information for rejecting the use of the 1 ppb threshold. Rather, the proposed rule states, "EPA's experience since the issuance of that [August 2018] memorandum has revealed substantial programmatic and policy difficulties in attempting to implement this approach." In this proposed action, EPA is relying on the 1% threshold to evaluate a state's contribution to a nonattainment or maintenance monitor. EPA identifies the need for consistency in its evaluation across all its Interstate Transport requirements, for all NAAQS.

Commenter: Louisiana Electric Utility Environmental Group

Commenter ID: 28

Docket ID: EPA-R06-OAR-2021-0801

Comment:

With respect to EPA's proposed disapproval of Louisiana's SIP, EPA is proposing to disapprove of Louisiana's use of an alternative 1 ppb threshold to identify projected nonattainment and/or maintenance receptors in other states, in part due to EPA's determination that use of an alternative threshold "may be impractical or otherwise inadvisable for a number of additional policy reasons." Impracticality, like policy reasons, play no part in whether a SIP meets the applicable CAA requirements.

Further, EPA cannot base disapproval of a SIP on the fact that states, even when following the 4-Step interstate transport framework that EPA has established, may apply different thresholds in Step 2 of the framework, which would have "the potential to result in inconsistent application of interstate transport obligations based solely on the strength of a state's SIP submittal at Step 2 of the 4-Step framework." The states, have wide discretion in determining how to achieve the NAAQS, including their interstate transport obligations and EPA cannot force the states to adopt approaches reflecting the Agency's policy preferences for consistency in interstate transport obligations. A "SIP basically embodies a set of choices . . . *that the state must make for itself* in attempting to reach the NAAQS with minimum dislocation."

Commenter: Louisiana Chemical Association

Commenter ID: 26

Docket ID: EPA-R06-OAR-2021-0801

Comment:

LDEQ relied on the EPA's 2018 August Guidance and applied the 1 ppb screening limit in performing Step 2 of its analysis. Based on the 1 ppb screening limit, the monitors in Michigan and Wisconsin were not flagged for further analysis as the modeled contributions from Louisiana sources at those receptors were all less than 1 ppb:

Milwaukee, WI……..0.72

Sheboygan, WI……..0.84

Allegan, MI……..0.70

The August 2018 Guidance notes that the contribution captured with the 1 ppb threshold versus a 0.70 ppb threshold for Milwaukee, Sheboygan, and Allegan are as follows: 83.0%, 91.8%, and 94.2%. Thus, it was reasonable for the LDEQ to rely on the August 2018 Guidance approval of the 1 ppb screening threshold to exclude these locations from further analysis. Moreover, as noted by the LDEQ in the Louisiana Transport SIP: "In addition, the use of 1% of the NAAQS threshold for modeled contribution as the sole definition of significant contribution is inappropriate for the 2015 Ozone NAAQS since the more stringent 0.7 ppb threshold is an order of magnitude smaller than the biases and errors typically documented for regional photochemical modeling (Simon et al., 2012)." In fact, although modeling bias (difference between monitored and modeled values) has been reduced over the last 10-15 years with updated CMAX modeling versions, summertime NOx bias still remains above the 1% threshold, particularly in the South, including Louisiana.

Now, EPA's position, as indicated in the Proposed Rule, is that although EPA has not revoked the guidance in the August 2018 memorandum, it no longer considers the August 2018 memorandum guidance's approval of reliance on the 1 ppb screening threshold as proper. It is inappropriate for EPA to "pull the rug" out from under states who reasonably relied upon EPA guidance that was scientifically based and not arbitrary simply because EPA now believes a different approach is preferrable. Based on similarities in the contributions captured using a 1 ppb threshold and the 0.07 ppb (1%) threshold and the fact that the bias in modeling is greater than 1% for this type of regional photochemical modeling (particularly, bias towards overprediction in the Southern states for summertime ozone), LDEQ's reliance on a 1 ppb threshold to screen out the Michigan and Wisconsin monitors noted above was reasonable. The EPA screening level now being used to evaluate Louisiana's SIP is a fraction of a part per billion – an incredibly low value. EPA has provided no scientific support for a 1% screening level to be always applied for every NAAQS without consideration of factors such as the ability to discern ozone impacts of precursors at such infinitesimally small values and model performance. Although EPA addresses the bias limitations of the modeling in the Proposed Rule, it does not explain why the 1 ppb threshold is arbitrary and capricious and should not be used given the similarities in results provided in the August 2018 Guidance.

Accordingly, the EPA's proposed disapproval of LDEQ's use of the 1 ppb screening threshold, including as it relates to the exclusion of the Wisconsin and Michigan monitors from further transport analysis, was unreasonable and fails to comport with the federalism principles inherent in the CAA. EPA must allow states the opportunity to use reasonable alternatives to the 1% screening threshold.

Commenter: Midwest Ozone Group

Commenter ID: 30

Docket ID: EPA-R07-OAR-2021-0851

Comment:

Finally, EPA misstates Missouri's argument with respect to contribution. In accordance with the flexibility provisions in the EPA's August 31, 2018, guidance memo, Missouri demonstrated that its emissions and their contribution to ozone in Wisconsin, Texas, and Michigan were not significant in comparison to local emissions. Missouri demonstrated that its emissions were less than 2% of NAAQS and were generally small in comparison with local, background and international contributions, which were larger than the Missouri emissions in some cases. EPA's failure to acknowledge that Missouri emissions were not significant in comparison to other sources exceeds the agency's discretionary authority.

Commenter: Midwest Ozone Group

Commenter ID: 30

Docket ID: EPA-R02-OAR-2021-0673, EPA-R03-OAR-2021-0872, EPA-R03-OAR-2021-0873, EPA-R04-OAR-2021-0841, EPA-R05-OAR-2022-0006, EPA-R06-OAR-2021-0801, EPA-R07-OAR-2021-0851

Comment:

The August 13, 2018, Tsirigotis guidance memo, styled "Analysis of Contribution Thresholds for Use in Clean Air Act Section 110(a)(2)(D)(i)(I) Interstate Transport State Implementation Plan Submissions for the 2015 Ozone National Ambient Air Quality Standards," also was addressed to EPA Regional Air Directors in all EPA Regions. The memo states,

> "[t]the purpose of this memorandum is to provide analytical information regarding the degree to which certain air quality threshold amounts capture the collective amount of upwind contribution from upwind states to downwind receptors for the 2015 ozone National Ambient Air Quality Standards (NAAQS). It also interprets that information to make recommendations about what thresholds may be appropriate for use in state implementation plan (SIP) revisions addressing the good neighbor provision for that NAAQS . . . [t]his document does not substitute for provisions or regulations of the Clean Air Act (CAA), nor is it a regulation itself. Rather, it provides recommendations for states using the included analytical information in developing SIP submissions, and for the Environmental Protection Agency (EPA) Regional offices in acting on them. Thus, it does not impose binding, enforceable requirements on any party. State air agencies retain the discretion to develop good neighbor SIP revisions that differ from this guidance."

In the ensuing two years and six months since the last guidance document was published, EPA has known that states might be incorporating the 2018 guidance into Good Neighbor SIP submittals and has made no public statement saying that it would not honor its guidance. Moreover, all of the subject 19

Good Neighbor SIPs have been pending before the agency between two and one-half and almost four years with only one proposed action by EPA – the proposed approval of Iowa's Good Neighbor SIP that incorporated the 2018 guidance in a March 2, 2020, proposal at 85 Fed. Reg. 12,232. Now, nearly three years after the first Tsirigotis memo was published and two and a half years after the last was published, EPA is attempting to assert that these documents are archival in nature and trying to walk back the proposed Iowa approval (*See* 87 Fed. Reg. 9,477, February 22, 2022).

[…]

Once an agency issues guidance to regulated parties, the agency cannot "simply disregard" the substance of its guidance and rely on "post hoc justifications" when deciding whether regulated parties have acted in accordance with such guidance. *Hoosier Env't Council v. Nat. Prairie Indiana Farmland Holdings, LLC*, No. 4:19-CV-71 DRL-JEM, 2021 WL 4477152, at **13, 16 (N.D. Ind. Sept. 29, 2021). Doing so constitutes an arbitrary and capricious action by the agency. Id. at *17. By waiting for years and until after states complied with EPA's 2018 guidance to backtrack on the guidance, add a new requirement, not in the guidance, that alternative methods used by states in their SIPs must be "substantially justified and have a well-documented technical basis," and disapprove SIPs on that basis, EPA is engaging in arbitrary and capricious actions. EPA should alter its position and encourage states to take advantage of these flexibilities, as appropriate, and to incorporate these guidance flexibilities into their Good Neighbor SIPs.

Commenter: Midwest Ozone Group

Commenter ID: 30

Docket ID: EPA-R08-OAR-2022-0315, EPA-R09-OAR-2022-0394, EPA-R09-OAR-2022-0138

Comment:

The August 13, 2018, Tsirigotis guidance memo, styled "Analysis of Contribution Thresholds for Use in Clean Air Act Section 110(a)(2)(D)(i)(I) Interstate Transport State Implementation Plan Submissions for the 2015 Ozone National Ambient Air Quality Standards," also was addressed to EPA Regional Air Directors in all EPA Regions. […]

In the ensuing period of time since the last guidance document was published, EPA has known that states might be incorporating the 2018 guidance into Good Neighbor SIP submittals and has made no public statement saying that it would not honor its guidance.

Commenter: Oklahoma Department of Environmental Quality

Commenter ID: 37

Docket ID: EPA-R06-OAR-2021-0801

Comment:

Comment 1: States Relied in Good Faith on Flexibilities Offered in EPA Memos, but the Memos Are Not Being Honored by EPA

In developing its 2018 Ozone Infrastructure SIP, specifically the good neighbor/ozone transport provisions of said SIP, ODEQ relied on all three 2018 Tsirigotis Memos. However, ODEQ relied on the March and August 2018 Tsirigotis Memos for the flexibilities described herein, specifically the decision to use a 1 ppb significance threshold. EPA stated in the August 2018 Tsirigotis Memo, on page 4:

> Because the amount of upwind collective contribution captured with the 1 percent and 1 ppb thresholds is generally comparable, overall, we believe it may be reasonable and appropriate for states to use a 1 ppb contribution threshold, as an Page 4 of 15 alternative to a 1 percent threshold, at Step 2 of the 4-step framework in developing their SIP revisions addressing the good neighbor provision for the 2015 ozone NAAQS.

States, including Oklahoma, relied in good faith on the flexibilities that were held out by the Tsirigotis memos—and with good reason, since EPA encouraged states to rely on said memos during SIP development. Because EPA now refuses to honor the statements in said memos, EPA has created an unpredictable, uncooperative, and inequitable landscape that states now must attempt to navigate. EPA's failure to recognize its own guidance, and the predicament it has now put states in that face a SIP disapproval and subsequent FIP, undermines the cooperative nature of the EPA-state relationship.

The states' good faith reliance on EPA—not just reliance on the 2018 Tsirigotis memos, but reliance on EPA itself, through ordinary avenues of cooperative federalism—in ozone transport SIP development has now put states at a disadvantage. Oklahoma acted in good faith during its SIP development process by continually paddling the channels of communication with EPA Region 6, apprising EPA of Oklahoma's SIP development plans as both a courtesy and to avoid a disapproval. At no point during the SIP development process was Oklahoma on notice that its proposed SIP would be disapproved on the grounds that reliance on the 2018 Tsirigotis Memos was inappropriate. EPA has, without explanation, arbitrarily and capriciously changed its policy position through its refusal to acknowledge the legitimacy of states' good faith reliance on EPA guidance memoranda.

Comment 6: Oklahoma's Proposed Threshold of 1 ppb is Appropriate and Justified

EPA states in the proposed disapproval that it "recognized in the August 2018 memorandum that there was some similarity in the amount of total upwind contribution captured (on a nationwide basis) between 1 percent and 1 ppb. However, the EPA notes that while this may be true in some sense, that is hardly a compelling basis to move to a 1 ppb threshold." 87 Fed. Reg. 9819. This is a gross mischaracterization of the statements made by EPA in the August 2018 Tsirigotis Memo. The August 2018 Tsirigotis Memo concluded that "using a 1 ppb threshold is generally comparable to the amount captured using a threshold equivalent to 1 percent of the NAAQS." August 2018 Tsirigotis Memo, page 4. It further states, "The data in Table 2 indicate that the percent of upwind contribution captured by a 1 percent and 1 ppb threshold at individual receptors are also of a similar magnitude at most sites." *Id.* EPA further concluded:

> Because the amount of upwind collective contribution captured with the 1 percent and 1 ppb thresholds is generally comparable, overall, we believe it may be reasonable and appropriate for states to use a 1 ppb contribution threshold, as an alternative to a 1 percent threshold, at Step 2

> of the 4-step framework in developing their SIP revisions addressing the good neighbor provision for the 2015 ozone NAAQS. *Id*. at 4.

For states like Oklahoma, with very low contributions to upwind states, the use of the 1 ppb contribution threshold versus the 1% of the NAAQS threshold is appropriate and justified based on the conclusions drawn by EPA in its August 2018 memo.

Commenter: Tennessee Department of Environment and Conservation

Commenter ID: 41

Docket ID: EPA-R04-OAR-2021-0841

Comment:

Comment #4: While a consistent approach is desirable for evaluating Infrastructure SIPs, EPA may not disregard its own guidance and must respect the states' role in creating a compliant SIP.

As noted in Comments #2 and #3 and conceded by EPA, Tennessee satisfied the primary (1% of NAAQS) threshold at the time of its 2018 iSIP submittal based on then-available data. However, in the iSIP Disapproval, EPA also expressed reservations about the 1 ppb (alternate) threshold that Tennessee discussed in its 2018 submittal on the grounds that "Tennessee did not provide additional discussion or analysis . . . which is necessary to evaluate the state-specific circumstances that could support approval of an alternative threshold." Therefore, while it is not necessary for Tennessee to use this alternate threshold to prove that its 2018 submission was compliant, it takes the opportunity to do so to preserve the ability to use an alternate threshold in the future, in conformance with EPA policy.

Tennessee agrees with EPA's discussion in the iSIP Disapproval that the 1 percent of the NAAQS threshold in Step 2 of the Framework is one reasonable (though not the exclusive) approach for assessing a state's contribution to downwind nonattainment, but believes that EPA's proposed disapproval fails to consider an essential issue: EPA may update or revise its previously-established guidance, but may not simply disregard its own established guidance that has not actually been withdrawn.[32]

In explaining its proposed disapproval of the use of an alternate threshold in Tennessee's 2018 SIP submission, EPA extensively discussed its August 31, 2018, memorandum on the topic (the "August 2018 memorandum"). This August 2018 memorandum, which EPA extensively cites in the iSIP Disapproval and has not been rescinded, recognized that in certain circumstances, a state may be able to establish that an alternative contribution threshold of 1 ppb is justifiable. The memorandum explains that when a state relies on this alternative threshold to determine that it is not linked to a downwind nonattainment or maintenance area, EPA will evaluate whether the state provided a technically sound assessment of the alternative threshold based on the facts and circumstances in the particular SIP submission, as follows:

> Following these recommendations does not ensure that the EPA will approve a SIP revision in all instances where the recommendations are followed, as the guidance may not apply to the facts

and circumstances underlying a particular SIP. Final decisions by the EPA to approve a particular SIP revision will only be made based on the requirements of the statute and will only be made following an air agency's final submission of the SIP revision to the EPA, and after appropriate notice and opportunity for public review and comment. Interested parties may raise comment about the appropriateness of the application of this guidance to a particular SIP revision. *The EPA and air agencies should consider whether the recommendations in this guidance are appropriate for each situation*.

The SIP Disapproval further explains that since issuing the August 2018 memorandum, EPA has identified the following substantial programmatic and policy difficulties in attempting to implement this approach:

- EPA believes, based on the review of 49 good neighbor SIP submittals for the 2015 ozone NAAQS, that nearly every state that attempted to rely on a 1 ppb threshold did not provide sufficient information and analysis to support a determination that an alternative threshold was reasonable or appropriate for that state. For instance, in nearly all submittals, the states did not provide EPA with analysis specific to their state or the receptors to which its emissions are potentially linked.
- EPA notes that for the March 2, 2020, proposed approval of Iowa's SIP submittal, the Agency expended its own resources to supplement the information submitted by the state, in order to more thoroughly evaluate the state-specific circumstances that could support approval. This analysis was performed at EPA's sole discretion, the Agency was not obligated to conduct supplemental analyses for each SIP, and the Agency no longer intends to undertake supplemental analysis of SIP submittals with respect to alternative thresholds at Step 2.
- EPA now believes that allowing for alternative Step 2 thresholds may be impractical or otherwise inadvisable for a number of additional policy reasons. For a regional air pollutant such as ozone, EPA now takes the position that consistency in requirements and expectations across all states is essential, and the availability of different thresholds at Step 2 creates the potential for inconsistent application of good neighbor obligations based solely on the strength of a state's implementation plan submittal at Step 2 of the 4-step interstate transport framework. Specifically, EPA argues that the use of an alternative threshold would allow certain states to avoid further evaluation of potential emission controls while other states must proceed to a Step 3 analysis, which EPA believes can create significant equity and consistency problems among states.
- The proposed disapproval states that it is not clear that national ozone transport policy is best served by allowing for less stringent thresholds at Step 2. EPA argues that while there is some similarity in the amount of total upwind contribution captured (on a nationwide basis) between 1% and 1 ppb, the 1 ppb threshold loses a certain amount of total upwind contribution for further evaluation at Step 3. Based on core statutory objective of eliminating all significant contribution to nonattainment or interference with maintenance, as well as the broad, regional nature of ozone transport, EPA believes, "there does not appear to be a compelling policy imperative in allowing some states to use a 1 ppb threshold while others rely on a 1 percent of the NAAQS threshold."

Notwithstanding these concerns, EPA goes out of its way to note that "EPA is not at this time rescinding the August 2018 memorandum." EPA's proposed disapproval attempts to have it both ways—by confirming that the underlying guidance has not been withdrawn, but also asserting—after-the-fact—that the Step 21-ppb threshold identified in the August2018 memorandum is (almost) universally inappropriate because: (1) a number of states in this particular round of SIPs did not provide EPA with analysis specific to their state or the receptors to which its emissions are potentially linked; and (2) allowing for alternative significance thresholds may be impractical or otherwise inadvisable for a number of additional policy reasons. For the following reasons, we believe that EPA is incorrect on both points:

1. Tennessee's 2018 iSIP submittal used then-current modeling, which indicated that Tennessee's downwind contribution was less than both appliable Step 2 thresholds: the default threshold of 1% of the ozone NAAQS and the alternate 1 ppb threshold. While EPA had the opportunity to provide comments to Tennessee's 2018 submittal during a comment period (which closed three years ago), EPA identified no inadequacy regarding the use of an alternate threshold during the original public participation process and offered no comments, during either pre-draft review or formal public participation, to indicate that an alternate threshold was problematic or that Tennessee should supplement its demonstration to account for a 1 ppb alternative threshold (see Appendix A for a copy of EPA's comment letter). Furthermore, Tennessee could not have justified an alternate significance threshold in 2018 because the data required for a proper technical analysis (i.e., model results showing downwind contributions between 0.70 ppb and 1 ppb) ***were not available*** at that time. Part II of these comments (technical comments) demonstrate, based on EPA's most recent modeling, why a 1 ppb significance threshold is appropriate for Tennessee. Since EPA did not make these data available at the time of our original submittal, EPA must fully consider an alternate threshold based on information provided at this time.
2. As discussed in more detail in comment #7, EPA itself has not consistently applied the 1% of the NAAQS threshold in determining whether upwind states are 'linked'. Instead, EPA has determined that there are circumstances in which the 1% of the NAAQS threshold should not be used, as discussed in the proposed Federal Implementation Plan that it published in connection with this rulemaking.

EPA has put states in an impossible position by waiting to act on SIP submittals that occurred in 2018 and basing such actions on modeling that has been consistently changing since 2018 and is still undergoing public comment. EPA quickly followed its proposed iSIP Disapproval with the proposed Federal Implementation Plan EPA will put in place as it is highly unlikely that states will have the time to revise their SIPs and resubmit them to EPA for consideration before the final Federal Implementation Plan will take effect. Consistent with the 2018 memorandum that EPA has not withdrawn, Tennessee must be given the chance to have the information presented in the technical comments considered. EPA risks making an arbitrary and capricious decision by disapproving Tennessee's use of the alternate 1ppb threshold in its infrastructure iSIP without fully considering the information cited within these comments, because EPA would be disregarding its own practice and published guidance by doing so.

[…]

While Tennessee's downwind contribution is "significant" when measured by a bright-line threshold of 1% of the NAAQS, this contribution occurs at only a *single* monitor, that monitor is maintenance-only, and Tennessee's contribution, based on EPA's own modeling, is less than the 1 ppb alternative threshold established by prior EPA guidance. Tennessee believes that the attached evaluation of the modeling data for this monitor demonstrates that this contribution is not significant, in accordance with EPA's prior guidance in the August 2018 memorandum.

1. Tennessee does not contribute more than 1% of the NAAQS to any nonattaining downwind monitor.

[…]

2. Tennessee contributes more than 1% of the NAAQS to only one maintenance-only downwind monitor.

[…]

Another element to consider when evaluating the significance of upwind contributions is the total number of linkages – states with significant interstate transport problems contribute to multiple downwind states or monitoring locations.

[…]

[Table 3 in full comment]

Table 3 shows that Tennessee is ranked at the bottom with respect to nonattainment linkages (since none exist) and one step above the bottom with respect to total linkages. For the other two states with a single linkage (Delaware and Wyoming), both linkages are for nonattainment, rather than maintenance monitors. Stated more clearly, Tennessee crosses EPA's 1% contribution threshold, but that contribution is sufficiently marginal that an alternative threshold of 1 ppb is worthy of consideration. Of the 26 upwind states identified in Table 4, ten states (California, Indiana, Kentucky, Maryland, Michigan, New Jersey, New York, Ohio, Virginia, and West Virginia) are linked to two or more states with nonattaining monitors, and six states (California, Indiana, Missouri, Ohio, Oklahoma, and Texas) are linked to two or more downwind states with maintenance-only monitors. As noted above, Tennessee is linked to a single maintenance-only monitor in a single state. These facts, considered as a whole, support the consideration of a 1 ppb alternative threshold for significance.

[…]

Tennessee considered the following additional factors based on our review of EPA's 2020 proposal to approve Iowa's infrastructure SIP (85 FR 12232).

How does the impact of in-state emissions on ozone levels at this receptor compare to collective upwind impacts? Tennessee reviewed the model results and determined that the cumulative upwind contribution (all upwind states with contribution greater than 0 ppb) was 12.24 ppb (17.0% of the 2023 maximum concentration) compared to in in-state contribution of 27.30 ppb from sources within Texas (37.8% of the 2023 maximum concentration). Of upwind contributors, Tennessee is ranked fourth, based on EPA's methodology for calculating the contribution (Table 8). However, Tennessee's relative contribution must be weighed against other factors, including the low number of high-ozone days and back-trajectory analyses.

[Table 8 in full comment]

What are the impacts of individual upwind states linked at 1 ppb or higher to the receptor? Table 8 above indicates that three states (Louisiana, Oklahoma, and Mississippi) contribute greater than 1 ppb to the Denton County monitor, and these states account for 45.3% of the total upwind state contribution.

Are individual upwind states impacting this receptor between 1 percent and 1 ppb linked above 1 ppb to other receptors? Arkansas contributes greater than 1 ppb for four other maintenance receptors in Texas. Alabama and Tennessee do not contribute 1 ppb or greater to any other nonattainment or maintenance receptors.

Tennessee believes that a 1 ppb significance threshold is justifiable in light of the facts enumerated within this document. EPA's most recent modeling data demonstrate that emission sources in Tennessee will not contribute significantly to nonattainment in another state and will not interfere with maintenance in another state. Therefore, Tennessee's SIP complies with the requirements of CAA §110(a)(2)(D) for the 2015 ozone NAAQS.

[32] See *FCC v. Fox TV Stations, Inc.*, 556 U.S. 502, 515 (2009) ("An agency may not, for example, depart from a prior policy sub silentio or simply disregard rules that are still on the books".) (citing *United States v. Nixon*, 418 U.S. 683, 696 (1974)).

Commenter: PacifiCorp

Commenter ID: 38

Docket ID: EPA-R08-OAR-2022-0315

Comment:

EPA's Threshold Guidance provided states a pathway to use a 1 ppb threshold for significant impacts on downwind monitors. Utah and almost every other state followed this pathway, but EPA has now changed its mind and rejects the very pathway it opened for all of these states for "policy reasons". Utah relied on the Threshold Guidance to justify using the 1 ppb threshold at Step 2 as a basis to assert that Utah would not be linked to some projected downwind nonattainment or maintenance receptors and that other linkages were not significant given other EPA-suggested considerations. See Sub-Section II.d below. In the Proposed Disapproval, EPA insists that only a 1 percent ("%") threshold, or 0.7 ppb, can be used. EPA explains it has moved on from the positions it stated in the August 2018 Threshold Guidance, and EPA ultimately applies the 1% threshold to justify the Proposed Disapproval. EPA should allow use of the 1 ppb threshold.

[…]

i. The fact that EPA's new 1 ppb interpretation runs contrary to 49 states' understanding signals error.

In the Proposed Disapproval EPA states:

> Following receipt and review of 49 good neighbor SIP submittals for the 2015 8-hour ozone NAAQS, the EPA's experience has been that nearly every state that attempted to rely on a 1 ppb threshold did not provide sufficient information and analysis to support a determination that an alternative threshold was reasonable or appropriate for that state.

The fact that nearly every state got it wrong is more an indication that EPA changed course without notice than that the states are unable to read and interpret EPA guidance. While technically retaining the Threshold Guidance, EPA proposes to disapprove numerous state submissions that relied on the guidance, including Utah's SIP, claiming that those states should have somehow done more analysis than EPA required in the memo, and asserting without explanation that consistency is needed across the country. This is an about face for EPA, which clarified in a previous ozone rulemaking that western states should not be treated the same as other areas of the country because the different geography, meteorology, background ozone levels, wildfire impacts and stratospheric ozone events in the West necessitated case-by-case treatment. To justify its about face, EPA now claims that the Threshold Guidance may only be relied on, even for high altitude western states like Utah, when a state meets its new, unannounced standards by providing "a technically sound assessment of the appropriateness of using this alternative threshold based on the facts and circumstances underlying its application in the particular SIP submission." EPA's new demand for the states to provide a technical analysis to support the use of the 1 ppb threshold identified in the August 2018 Threshold Guidance is inconsistent with EPA's earlier communications with Utah (and other states) and with the stated purpose of the Threshold Guidance, which was to "provide analytical information" and to allow states to use that "information to make recommendations about what thresholds may be appropriate for use" in SIPs. EPA is essentially punishing Utah and almost all other states for using the "recommendation" that EPA made in the Threshold Guidance.

Like so many states, Utah used the 1 ppb threshold in its Interstate Transport Ozone SIP. In fact, EPA commented on Utah's use of the 1 ppb threshold and recommended that it rely on the Threshold Guidance to do so. In EPA's comments on Utah's SIP during the state rulemaking process, EPA instructed: "[g]iven that the draft analysis makes use of the 1 ppb threshold, the EPA recommends the state review the August 31, 2018 Memo and the associated rationale for the use of this threshold." Utah did just that, providing analysis in its SIP based on the August 2018 Threshold Guidance and supporting the use of the 1 ppb threshold with data and analysis. Utah and the numerous other states were not acting unreasonably to rely on EPA's Threshold Guidance, particularly when EPA published the Threshold Guidance for that very purpose during the very time states were drafting their SIPs. EPA was aware of Utah's reliance on the Threshold Guidance, and provided direction to Utah supporting its use of the Threshold Guidance.

Despite the fact that the Threshold Guidance was based on the same principles as EPA's 2011 analysis and was improved through use of a tighter range of options and more current data and modeling, EPA now all but disavows it. Moreover, EPA is proposing to disapprove of Utah's use of an alternative 1 ppb threshold in part due to EPA's determination that use of an alternative threshold "may be impractical or otherwise inadvisable for a number of additional policy reasons." Under the appliable requirements of the CAA, changing policy reasons play no part in authorizing EPA to disapprove a SIP.

PacifiCorp asks EPA to reconsider its minimum contribution threshold because EPA has not identified any rational basis for preferring its older—and now superseded—2011 analysis. The 2018 analysis is superior and more appropriate for both identifying significant contributions and avoiding the likelihood of over-control. EPA should not disapprove Utah's Interstate Transport Ozone SIP based on an unfounded requirement to only use the 1 percent threshold.

i. EPA's new "after-the-fact" standard on a 1 ppb threshold is arbitrary and capricious.

While EPA may claim some deference for its decision-making, it is not unlimited. EPA cannot act in a manner that is inconsistent with the authorizing statute or that is arbitrary and capricious. The agency must "articulate . . . a rational connection between the facts found and the choice made." Particularly applicable here, when an agency's "new policy rests upon factual findings that contradict those which underlay its prior policy, or when its prior policy has engendered serious reliance interests," the Administrative Procedure Act requires an agency to provide "a more detailed justification" than it otherwise would. Here, Utah and other states undoubtedly relied on the Threshold Guidance and "engendered serious reliance interests." EPA acknowledges as much in the Proposed Disapproval. EPA's failure to acknowledge and account for Utah's "reliance interests" renders its Proposed Disapproval both arbitrary and capricious.

Commenter: PacifiCorp (Attachment - Berkshire Hathaway Energy (BHE) Company Comments on Proposed Ozone Transport Rule)

Commenter ID: 38

Docket ID: EPA-R08-OAR-2022-0315

Comment:

EPA Used an Arbitrary Ozone Contribution Metric. Use of Other Reliable Metrics Show Wyoming Has an Insignificant Ozone Contribution. (Chapter 6).

[…]

In 2018, EPA issued a guidance memorandum that re-analyzed the minimum threshold using a tighter range of options and more up-to-date modeling techniques and data. Specifically, EPA evaluated the difference in capture rates between the previous threshold of 0.7 ppb (one percent), a threshold of 1 ppb, and a threshold of 2 ppb. Like the 2011 analysis, EPA's 2018 analysis again concluded that the difference between the two lower options—0.7 ppb and 1 ppb—was minimal, while the higher threshold left too many emissions unregulated. As a result, EPA considered capture rates at the 0.7 ppb and 1 ppb thresholds to be generally comparable, and thus concluded that "it may be reasonable and appropriate for states to use a 1 ppb contribution threshold, as an alternative to a 1 percent threshold," in addressing interstate transport under the Clean Air Act good neighbor provision. Notably, a threshold of 1 ppb is 1.4 percent of the ozone standard of 70 ppb, and therefore rounds down to 1 percent if truncated.

Despite the fact that the 2018 analysis was based on the same principles as the 2011 analysis and was improved by use of a tighter range of options and more current data and modeling, EPA now all but disavows it. While technically retaining the 2018 memo, EPA has proposed to disapprove numerous state submissions that relied on the memo, claiming that those states should have somehow done more analysis than EPA did itself in writing the memo, and asserting without explanation that consistency is needed across the country.

Commenter: Sierra Club

Commenter ID: 39

Docket ID: EPA-R04-OAR-2021-0841

Comment:

EPA Should Formally Rescind Its 2018 Alternative Contribution Threshold Guidance Memorandum

For years, EPA has relied on a 1% contribution threshold for determining whether an upwind state's contribution to a downwind nonattainment or maintenance monitor was "significant" for purposes of implementing Section 110(a)(2)(D)(i)(I). EPA applied this 1% contribution threshold in the Cross-State Air Pollution Rule in 2011, again in the CSAPR Update in 2016, and in the Revised CSAPR Update in 2021.58 Sierra Club supports EPA's proposed retention of the 1% contribution threshold and, for the reasons identified below, urge EPA to formally rescind its 2018 Guidance Memorandum.

In its Proposed Disapproval, EPA reaffirmed its use of a 1% contribution threshold for Screening at Step 2 of the interstate transport framework. EPA identified several reasons the alternative contribution thresholds discussed in the 2018 Guidance Memorandum were less appropriate, explaining that "experience since the issuance of that [2018 Guidance M]emorandum has revealed substantial programmatic and policy difficulties in attempting to implement this approach." However, EPA did not propose to rescind the 2018 Guidance Memorandum. For the reasons identified by EPA itself and for additional reasons described below, the Sierra Club urges EPA to rescind the 2018 Guidance Memorandum.

[…]

Second, Sierra Club disputes the 2018 Guidance Memorandum's characterization of the upwind contribution captured by a 1 ppb threshold and a 1% threshold as "generally comparable" and agrees with the Agency's observation in its Proposed Disapproval that, even if this were "true in some sense," it "is hardly a compelling basis to move to a 1 ppb threshold." Indeed, as EPA now observes, "the core statutory objective of ensuring elimination of all significant contribution to nonattainment or interference of the NAAQS in other states and the broad, regional nature of the collective contribution problem with respect to ozone" counsel in favor of establishing a contribution threshold that pulls in more, not less, of the upwind emissions that are contributing to nonattainment and maintenance issues. Moreover, as EPA points out, an important virtue of a contribution threshold set as a percentage of the NAAQS is that, as the stringency of the NAAQS increases, "an appropriate increase in stringency at Step 2 occurs, so as to ensure an appropriately larger amount of total upwind-state contribution is captured

for purposes of fully addressing interstate transport for the more stringent NAAQS." Removing nearly 1/3 of the contributing upwind emissions at Step 2—as would occur with the use of a 1 ppb contribution threshold—as would increase the cost and challenge of ameliorating ozone nonattainment in areas affected by ozone transport.

Commenter: United States Steel Corporation

Commenter ID: 45

Docket ID: EPA-R05-OAR-2022-0006

Comment:

U. S. Steel further notes that affected states and the regulated community reasonably relied on 1 ppb threshold that U.S. EPA found to be appropriate; and it is inappropriate for U. S. EPA now to unilaterally disapprove any SIP because in its SIP submittal, the state used a 1 ppb threshold.

Commenter: Utah Division of Air Quality

Commenter ID: 47

Docket ID: EPA-R08-OAR-2022-0315

Comment:

The benefit of cooperative federalism is having the autonomy to do what's best for the state, but do so in partnership with EPA to ensure that the CAA intent and requirements are met.

In this same spirit, UDAQ engaged early and often with our counterparts at Region 8 in the development of our interstate transport SIP. Through this collaboration and EPA's guidance, Utah selected the alternative threshold of 1 ppb. As noted in the guidance, the use of an alternative threshold provides greater flexibility to states while SIPs are developed. Specifically, the guidance states that "a threshold of 1 ppb may be appropriate for states to use to develop SIP revisions addressing the good neighbor provision for the 2015 ozone NAAQS", since "the amount of upwind collective contribution captured with the 1 percent and 1 ppb threshold is generally comparable overall." Thus, UDAQ was surprised when EPA proposed to include Utah in the proposed FIP, and subsequently disapproved the state's SIP based in large part on the selection of the 1 ppb over the 1% of the NAAQS threshold.

Commenter: Utah Petroleum Association and the Utah Mining Association

Commenter ID: 48

Docket ID: EPA-R08-OAR-2022-0315

Comment:

Utah followed existing EPA guidance, which EPA has not withdrawn and should honor.

In general, EPA uses a 1% of the National Ambient Air Quality Standard ("NAAQS") contribution threshold to downwind States in evaluating IT SIPs. For the 2015 ozone NAAQS, this equates to 0.7 ppb. However, in August 2018, EPA published guidance for alternate thresholds and stated that it believes a threshold of 1 ppb may be appropriate.

In the Proposed GNR, published long after the due date for States to submit IT SIPs, EPA stated that it now believes that it may not be appropriate to recognize alternate contribution thresholds. In the Proposed Disapproval, EPA stated that it views 1% of the NAAQS to be more appropriate.

EPA cannot simply change its mind on the guidance nearly three years after issuing it and more than two years after Utah (and other states) relied on it, without providing a well-reasoned explanation and formal withdrawal of the guidance. EPA has not provided a well-reasoned explanation nor a formal withdrawal of the guidance.

[…]

Utah's IT SIP includes a lengthy weight-of-evidence analysis showing how its approach matches other interstate transport SIP approvals and EPA guidance, including the following: Analysis showing how Utah meets the recommendations of EPA's August 2018 memo discussing the possible use of different contribution thresholds.

Commenter: West Virginia Department of Environmental Protection

Commenter ID: 49

Docket ID: EPA-R03-OAR-2021-0873

Comment:

DAQ also asserts EPA is inconsistent with its definition of screening threshold impacts in relation to downwind receptor (monitor) linkage. In an August 31, 2018 memorandum from OAQPS Director Peter Tsirigotis to regional air divisions directors titled Analysis of Contribution Thresholds for Use in Clean air Act Section 110(a)(2)(D)(i)(I) Interstate Transport State Implementation Plan Submissions for the 2015 Ozone National Ambient Air Quality Standards ("Threshold Memorandum"), EPA compared alternative thresholds of 1 and 2 ppb (0.001 and 0.002 ppm, respectively) to be consistent with previous thresholds of one percent of the 2015 ozone NAAQS standard (1% of 70 ppb, equal to 7 ppb or 0.0007 ppm) for the purposes of screening threshold for SIP development. EPA stated within the Threshold Memorandum, "Based on the data and analysis summarized here, the EPA believes that a threshold of 1 ppb may be appropriate for states to use to develop SIP revisions addressing the good neighbor provisions for the 2015 ozone NAAQS." In this proposed disapproval action, it appears EPA has abandoned these alternatives in favor of the one percent definition.

Response

Our primary response to these comments is in Section V.B.7 of the preamble. Here we address in more detail several specific arguments raised by commenters.

The EPA disagrees with some commenters' assertion that the EPA's proposed approval of Iowa's SIP submission is proof the EPA previously viewed the 1 ppb alternative threshold was "adequate and approvable" in all instances, but subsequently changed position. As the EPA explained at proposal, the first proposal for Iowa specifically examined "state-specific circumstances" as contemplated by the August 2018 Memorandum. *See, e.g*., 87 FR 66418 (citing 87 FR 9477 (Feb. 22, 2022)) Even if the EPA had finalized the Iowa approval on the basis of the first proposal, doing so would have been specific to Iowa's state-specific circumstances. The EPA evaluated each interstate transport SIP submission based on the merits of the arguments put forward in each SIP submission. However, in all submissions that relied on the EPA's August 2018 memo—where that threshold would have been a dispositive basis to exclude the state from further analysis—the EPA determined the submissions did not provide the EPA with analysis specific to their state or the receptors to which its emissions are potentially linked. This is true even for Iowa's submission, as explained at proposal. *See, e.g.,* 87 FR 64418.

Other topics raised by these comments are addressed in the preamble in Sections V.A.4. (technical merits), V.A.5. (justification), V.A.6. (guidance), V.B.6. (PSD SILs), V.B.7. (basis for approval of Iowa's SIP), and in the following sections: Sections 1.2 (Guidance for SIP Submissions), 1.4 (Use of Updated Modeling), 1.6 (EPA Input During SIP Submission Development), 4.2 (Model Performance), 5 (Updates to Modeling and Changes in Linkages), 7.2 (Contributions), 10.3 (Cooperative Federalism and the EPA's Authority), 11.3 (Transport Policy), and 11.8 (Mobile Sources).

The EPA responds to specific issues raised by commenters about the appropriateness of an alternative contribution threshold for specific states:

<u>Alabama</u>

Alabama did not provide a sufficient technical analysis to justify the use of an alternative 1 ppb threshold in its submission. 87 FR 64423-25. Alabama's SIP submission simply states that ADEM agrees with EPA's rationale set out in the August 2018 memorandum that the amount of upwind collective contribution captured with the 1 percent and 1 ppb thresholds was generally comparable. But the August 2018 Memorandum anticipated that states would evaluate whether the alternative threshold was appropriate under their specific facts and circumstances, not that the use of the alternative threshold would be automatically approvable.

ADEM and Alabama Power Company (APC) et al. claim that 1 ppb is an appropriate contribution threshold to use for Alabama and conduct an assessment fashioned to emulate the EPA's assessment in the now withdrawn proposal related to Iowa. Concluding that 1 ppb is generally similar to 1 percent, they next examine the factors that the EPA considered in the now withdrawn proposal related to Iowa to conclude that 1 ppb is an appropriate contribution threshold for Alabama.

The EPA does not agree that this assessment justifies the use of a 1 ppb contribution threshold for Alabama. As an initial matter, ADEM did not supply anything like this analysis in their SIP submission. This highlights the potential unfairness we identified as a policy concern at proposal, in that allowing some states to attempt to justify alternative thresholds could result in inconsistent treatment of states

based on the quality of the analysis they conducted. Further, as EPA explained at proposal, there is an administrative cost to public agencies, including the EPA, in going through the burden of conducting this type of analysis for each state, or for each set of comments on SIP actions, where the difference being evaluated is merely between a 1% and 1 ppb threshold, and the objective of using 1 ppb for certain states and sources is to excuse themselves from further analysis, thus shifting the burden of addressing interstate transport onto other upwind states and the downwind home state. Further, although commenter attempts to replicate the *proposal* analysis for Iowa, we never finalized that analysis and withdrew it. The factors in that analysis do not constitute a final agency policy or precedent on how a state-specific, 1 ppb-threshold analysis should be conducted. At proposal for this state's disapproval and others included in this action, we explained that we would not be undertaking this analysis where states failed to conduct it themselves.

All of that said, we further conclude that these comments still fail, even under the terms of the Iowa-proposal factors, to justify the use of a 1 ppb threshold for Alabama. Alabama's contribution alone at the Denton County (Airport) and Harris County (Houston Bayland Park) receptors in Texas in the 2016v2 modeling represents about 6 and 7 percent respectively of the total upwind state contribution at either monitor. Further, the loss in capture of total upwind-state contribution at 1 ppb versus 1 percent at these receptors is not trivial and well exceeds the ~7% losses contemplated in the August 2018 memorandum. For example, as noted by these comments, two other states are identified with contribution to the Denton County, TX receptor between 1 percent of NAAQS and 1 ppb. If we were to approve a 1 ppb threshold, one of those state's contributions would go unaddressed as well (Tennessee), constituting a loss, when in addition to Alabama's, of about 18 percent of the upwind state contribution over 1 percent at this receptor. That value is more than twice the 7% loss of upwind contribution figure that was identified as *potentially* acceptable in the August 2018 memorandum. Further, the treatment of Arkansas in this analysis would discount the loss of its contribution to this receptor, solely on the basis of its linkage above 1 ppb to other receptors—the idea being that if Arkansas were required to make emissions reductions in relation to those receptors, then it might incidentally benefit this receptor. While the EPA proposed to consider contribution in this way in the Iowa proposal, this is actually not consistent with the way EPA has considered the relevance of incidental effects in prior transport actions such as CSAPR Update and the Revised CSAPR Update. Reliance on such incidental effects introduces an inequitable situation in which states may be able to evade good neighbor obligations in reliance on the incidental effects of other states' efforts. *See* 81 FR at 74550. The EPA cannot agree that it is appropriate to treat Arkansas' contribution to this receptor as irrelevant simply because it contributes above 1 ppb to other receptors. If Arkansas's contribution were to be included in this analysis, then the total loss of contribution at the Denton receptor (using 2016v2) is actually on the order of 25 percent of total upwind state contribution.

Turning to the 2016v3 modeling used for this final action, these results are reinforced. In the 2016v3 modeling Alabama is linked in 2023 to the modeling-based receptor in Galveston, Texas. The total collective contribution from all upwind states is 26 percent of total ozone at this receptor. Of the 5 upwind states linked to this receptor, 3 contribute between 1 percent and 1 ppb. Using a 1 ppb threshold would represent a loss of about 19 percent of the total upwind contribution above 1 percent. In addition, Alabama's contribution to this receptor represents 30 percent of the total contribution that would be lost using a 1 ppb threshold. In addition, in our final rule analysis we note that Alabama is also

linked to the Pilot Point violating-monitor maintenance-only receptor in Denton County, Texas at which the collective contribution from upwind states is 18 percent of the total ozone at this receptor in 2023. Of the 6 upwind states linked to this receptor, 4 contribute between 1 percent and 1 ppb. Using a 1 ppb threshold would represent a loss of about 41 percent of the total upwind contribution above 1 percent at the Denton Pilot Point receptor. In addition, Alabama's contribution to this receptor represents 25 percent of the total contribution that would be lost using a 1 ppb threshold.

As we explain in the proposals and in the preamble of the final action, interstate ozone transport remains a collective-contribution problem involving many smaller contributors, and so the effect of approving a 1 ppb threshold needs to be reviewed for its holistic impacts. In this case, we do not find that the record would support approving a 1 ppb threshold for Alabama, even if we were to apply the factors used in the withdrawn Iowa proposal. ADEM observes that "it is unclear how lower NOx emissions in the 2022 modeling resulted in higher concentrations relative to the 2021 modeling" despite "continued reductions in NOx." If ADEM meant to question the validity of EPA's modeling with this statement, the EPA responds to comments on model performance in Section 4.2. If ADEM meant to say "contributions" instead of "concentrations," the EPA addresses a similar comment in Section 7.2. In response to the claim that EPA ignored evidence in the record when evaluating Alabama's SIP submission, specifically APC's comments submitted on the draft SIP submission during the state's public notice and comment period, which were included as attachment to Alabama's submission, the EPA disagrees. As noted in the proposal, Alabama did not explicitly discuss the comments it received during their state public comment period from Alabama Power Company and Sierra Club; Alabama only identified one specific assertion from their state public comment period as part of their response to public comments. Additionally, because SIP submissions are required to include a compilation of public comments received, it is not notable that these comment letters were attached to Alabama's SIP submission. 40 CFR Part 51, Appx V, 2.1(h). Thus, the EPA determined that Alabama's June 21, 2022, SIP submission did not rely on the legal, technical, or policy arguments provided in comments except as expressly stated by Alabama. In their own comment on this action, Alabama did not indicate that the EPA's assumption of Alabama's intention regarding the purpose of the inclusion of the comments from Alabama Power Company and Sierra Club on the submission was incorrect. *See* EPA-R04-OAR-2021-0841-0033. It remains unclear what the state's view is of and whether and to what extent the comments from APC and Sierra Club constitute an expression of the state's own position on its submission. Therefore, the EPA believes that the commenter is mistaken that the APC and Sierra Club comments received during the state's public comment process were explicitly embraced by Alabama as part of the state's SIP submission package. The EPA evaluated the information the state put forth in the SIP submission package and those specific arguments the state specifically acknowledged as part of their final SIP submission package.

Arkansas

One commenter argues that Arkansas provided sufficient analysis in the state's SIP submission to justify a conclusion that a 1 ppb contribution threshold is appropriate for the state. The EPA disagrees. The EPA's August 2018 memorandum explained that a 1 ppb contribution threshold "may" be appropriate,[70] and that "air agencies should consider whether the recommendations in this guidance are appropriate

[70] August 2018 memorandum, page 4.

for each situation."[71] Arkansas did not do that. In the SIP submission, Arkansas Division of Environmental Quality (ADEQ) (1) concluded based on the EPA's nationwide collective contribution comparison of different thresholds in the August 2018 memorandum that 1 percent and 1 ppb are generally comparable, (2) asserted that the prevention of significant deterioration significant impact level are sufficiently analogous to Step 2 of the 4-step interstate transport framework to support 1 ppb, and (3) concluded that 40 CFR part 50, Appendix U supports truncating to 0 a value of 0.7 ppb (1 percent of the NAAQS). 87 FR 9798, 9804 (Feb. 22, 2022). Arkansas identified it contributed more than 1 percent of the NAAQS but less than 1 ppb to three receptors in Texas, 87 FR 9804, but none of its justifications for a 1 ppb contribution threshold were related to those receptors or Arkansas's contributions to them. The EPA is unpersuaded that any of Arkansas's arguments supported a conclusion that a 1 ppb threshold is appropriate for Arkansas. In response to Arkansas Environmental Federation's comment that EPA cannot disapprove a SIP submission on the basis of a state's use of alternate contribution threshold, the EPA notes that Arkansas's SIP submission identified Arkansas as contributing more than 1 ppb to one or more downwind receptors. 87 FR 9798, 9804 (Feb. 22, 2022). Thus, the difference between a 1 percent of the NAAQS threshold and a 1 ppb threshold is not meaningful to the conclusion that Arkansas is linked at Step 2, because Arkansas contributes more than 1 ppb to a downwind receptor in 2023 both in the modeling relied on by the state and in the additional modeling developed by EPA to inform both the proposed and final actions (2016v2 and 2016v3).

Kentucky

The EPA disagrees with Kentucky Division for Air Quality that Kentucky followed the August 2018 Memorandum. Kentucky identified that it contributed more than 1 percent of the NAAQS but less than 1 ppb to four receptors in Connecticut and Wisconsin (and more than 1 ppb to one receptor in Maryland), 87 FR 9504. Kentucky simply applied EPA's rationale presented in the August 2018 memorandum (i.e., that the amount of *nationwide* upwind collective contribution captured with the 1 percent and 1 ppb thresholds was generally comparable) without discussion or analysis specific to Kentucky or the receptors in Connecticut and Wisconsin, as anticipated in the August 2018 memorandum.[72] 87 FR 9509-9510. Given the absence of technical analysis to support the use of a 1 ppb threshold under the facts and circumstances relevant to Kentucky and its linked receptors, the EPA determines that Kentucky's submission does not provide a sufficient justification to support the use of a 1 ppb contribution threshold.

Louisiana

A commenter argues that a 1 ppb contribution threshold is appropriate for Louisiana, regardless of Louisiana's contributions of more than 1 percent of the NAAQS but less than 1 ppb to Milwaukee, Sheboygan, and Allegan because the contribution captured with the 1 ppb threshold at those sites would be 83.0%, 91.8%, and 94.2%, respectively. The EPA notes that Louisiana did not provide that information in its submission, and in the 2016v3 modeling for this final action, Louisiana is linked to 7 receptors in Texas, but is not linked to Milwaukee, Sheboygan, or Allegan in this updated modeling. However, the EPA disagrees with commenters that Louisiana's SIP submission supports a conclusion that

[71] August 2018 memorandum, page 1.

[72] *Id*. ("air agencies should consider whether the recommendations in this guidance are appropriate for each situation.")

a 1 ppb threshold is an appropriate contribution threshold for Louisiana for any receptor, because Louisiana's justification is flawed. The EPA's August 2018 memorandum explained that a 1 ppb contribution threshold "may" be appropriate,[73] and that "air agencies should consider whether the recommendations in this guidance are appropriate for each situation."[74] LDEQ's SIP submission attempted to justify the state's use of a 1 ppb threshold based on concerns over the use of a 1 percent threshold, namely alleging that it is an arbitrarily small value. *See* 87 FR 9798, 9811 (Feb. 22, 2022). In the EPA's view, a criticism of a threshold of 1 percent of the NAAQS does not constitute a state-specific justification for the use of an alternative contribution threshold. We have responded to various criticisms of the 1 percent threshold in Sections V.B.4.-V.B.7 of the preamble. Further, in the SIP submission, LDEQ identified Louisiana as contributing more than 1 ppb to one or more downwind receptors and so conceded Louisiana is linked at Step 2 in Louisiana's SIP submission. The difference between a 1 percent of the NAAQS threshold and a 1 ppb threshold is not meaningful to the conclusion that Louisiana is linked at Step 2 because Louisiana contributes more than 1 ppb to a downwind receptor both in the modeling relied on by the state and in the modeling relied on by EPA in this final action.

Oklahoma

The EPA disagrees with Oklahoma Department of Environmental Quality that Oklahoma's rationale for supporting the use of a 1 ppb contribution threshold is justified under the text of the August 2018 memorandum. The EPA's August 2018 memorandum explained that a 1 ppb contribution threshold "may" be appropriate,[75] and that "air agencies should consider whether the recommendations in this guidance are appropriate for each situation."[76] Oklahoma did not do that.

In its SIP submission, Oklahoma identified that the state contributed more than 1 percent of the NAAQS but less than 1 ppb to three receptors in Texas and Wisconsin. 87 FR 9817. Instead of considering whether a 1 ppb contribution threshold would be appropriate for Oklahoma as to these specific receptors, Oklahoma's SIP submission pointed to the EPA's PSD SILs Guidance. The EPA addresses comment related to the PSD SILs guidance in Section V.B.6. of the preamble. The EPA also does not agree with the blanket statement in the comment that the August 2018 memorandum supports a conclusion that 1 ppb contribution is appropriate for any state with "low contributions." Somewhat similar issues regarding Oklahoma are addressed in Section 11.3.

Tennessee

The EPA is not taking final action on Tennessee's submission at this time.

One commenter suggests that because Tennessee is linked to a single maintenance-only monitor in a single state above one percent compared to other upwind states linked to multiple nonattainment and maintenance receptors, this supports the consideration of a 1 ppb alternative threshold. To the extent this may be considered an issue more broadly relevant than just to Tennessee, EPA disagrees with the commenter's assumption that an upwind state's number of downwind linkages justifies an alternative

[73] August 2018 memorandum, page 4.
[74] August 2018 memorandum, page 1.
[75] August 2018 memorandum, page 4.
[76] August 2018 memorandum, page 1.

threshold. Tennessee's analysis of the number of upwind linkages does not provide evidence that a 1 ppb threshold would effectively capture an appropriate degree of upwind-state collective contribution, even if only to a single identified downwind receptor. The commenter also asserts that Tennessee's contribution to a downwind maintenance-only receptor is sufficiently marginal that an alternative threshold of 1 ppb should be considered. The EPA notes that the commenter does not clarify their definition of a marginal contribution in the context of a collective contribution problem, or why 1 ppb appropriately excludes "marginal" contribution in some way that 1 percent does not—indeed, as explained in Section V.B.7, while 1 ppb may be considered "similar" to 1 percent, it still causes some loss of upwind contribution from further analysis for elimination and in that respect would reflect a weakening of the Step 2 threshold for the more protective 2015 ozone NAAQS. No commenter has explained why this incongruity is an acceptable outcome in light of the purpose of the statute.

Utah

The EPA disagrees that Utah's SIP submission justified the use of a 1 ppb threshold pursuant to the August 2018 Memorandum. The EPA reviewed the analysis UDAQ provided in its SIP submission and concluded that UDAQ did not adequately explain how a 1 ppb threshold would be justified with respect to Denver area receptors, as explained at proposal. 87 FR 31478. The difference between a 1 percent of the NAAQS threshold and a 1 ppb threshold is not meaningful to the conclusion that Utah is linked at Step 2, because Utah identified it contributes more than 1 ppb to four downwind receptors. Utah is also projected to contribute more than 1 ppb to one or more downwind receptors in the updated modeling developed by EPA to inform both the proposed and final actions (2016v2 and 2016v3).

The EPA does not agree that the recommendation it made in reviewing a pre-submission version of Utah's SIP submission, that UDAQ review the August 2018 memorandum, can reasonably be construed as an endorsement of the appropriateness of the 1 ppb threshold for the state of Utah.

7.5 Maintenance-Only Linkages

Comment

Commenter: Tennessee Department of Environment and Conservation

Commenter ID: 41

Docket ID: EPA-R04-OAR-2021-0841

Comment:

Tennessee contributes more than 1% of the NAAQS to only one maintenance-only downwind monitor.

[…]

EPA's proposed disapproval of Tennessee's Infrastructure SIP based on Prong 1of CAA §110(a)(2)(D)(i)(I) is without merit and has no factual basis or support because EPA does not allege that Tennessee emissions significantly contribute to nonattainment of the NAAQS in another state.

EPA's proposed disapproval of Tennessee's Infrastructure SIP ("iSIP") relative to Prong 1 is not only arbitrary and capricious in that it lacks any factual merit, but it also lends evidence to support Tennessee's concern, discussed throughout these comments, that EPA intends to set an impossible standard whereby states are held accountable for technical data that has yet to be produced and cannot be known to states at the time they develop and submit their iSIPs. The iSIP Disapproval discusses the two ''prongs'' contained in CAA section 110(a)(2)(D)(i)(I) used to evaluate whether a SIP satisfies the Good Neighbor provision: the SIP must contain adequate provisions prohibiting any source or other type of emissions activity within the state from emitting air pollutants in amounts that will: (i) significantly contribute to nonattainment of the NAAQS in another state (prong 1); or (ii) interfere with maintenance of the NAAQS in another state (prong 2). Under the precedent established in *North Carolina v. EPA*, EPA and states must give independent significance to each prong when evaluating downwind air quality problems under CAA §110(a)(2)(D)(i)(I). EPA has developed a 4-step "interstate transport framework" (the "Framework") to evaluate whether a state's SIP satisfies both prongs of its Good Neighbor obligations to eliminate interstate transport emissions. Under Step 1, EPA identifies monitoring sites in NAAQS nonattainment or maintenance areas, then in Step 2 determines whether the emissions from states that are upwind of these sites impact the air quality in the downwind states, such that the upwind states are "linked". An upwind state is only "linked" if its contribution value equals or exceeds "the threshold of 1 percent of the NAAQS (i.e., 0.70 ppb for the 2015 8-hour ozone NAAQS)" to a downwind state. If an upwind state is not "linked", then EPA "concludes that the state does not significantly contribute to nonattainment or interfere with maintenance of the NAAQS in the downwind states" and Steps 3 (identifying required emissions reductions) and 4 (adopting permanent and enforceable control strategies) become moot because the upwind state is not required to make any emission reductions.

In the iSIP Disapproval, EPA does not argue or present any evidence to suggest that Tennessee has or is projected to significantly contribute to nonattainment of the NAAQS in another state (prong 1) for the applicable timeframes. Instead, EPA states:

> …EPA performed updated air quality modeling to project design values and contributions for 2023. These data were examined to determine if Tennessee contributes at or above the threshold of 1 percent of the 2015 8-hour ozone NAAQS (0.70ppb) to any downwind nonattainment or maintenance receptor. As shown in Table 3 [available in full comment], the date indicated that in 2023, emissions from Tennessee contribute greater than 1 percent of the standard to the **maintenance-only** receptor in Denton County, Texas…

The Denton County, TX receptor is the sole receptor to which Tennessee is projected to be linked in 2023 and EPA provides no evidence to the contrary. However, in Section II.C.4. of the iSIP Disapproval "EPA is proposing to find that the portion of Tennessee's September 13, 2018, SIP submission… does not meet the State's interstate transport obligations because it fails to contain the necessary provisions to eliminate emissions that ***will contribute significantly to nonattainment*** or interfere with maintenance of the 2015 8-hour ozone NAAQS in any other state." This statement is plainly false, Tennessee does not contribute significantly to nonattainment for the 2015 8-hour ozone NAAQs in any other state.

Because EPA does not allege or present any information in the iSIP Disapproval that Tennessee emissions significantly contribute to nonattainment of the NAAQS in another state, EPA may not disapprove Tennessee's Infrastructure SIP based on Prong 1 of CAA §110(a)(2)(D)(i)(I).

[…]

In the absence of a significant contribution to downwind states, Tennessee should not be required to include either Framework Step 3 (multifactor analyses) or Framework Step 4 (permanent and enforceable reductions) in its infrastructure SIP

Tennessee notes that its original 2018 infrastructure SIP submission was based upon modeling data that were current at the time of submittal, and that the submittal was made available for EPA review and comment. If EPA properly resolves the issues identified above with the alternative significance threshold, then Tennessee is not linked at step 2, making steps 3 and 4 not applicable, making the issues identified by EPA in these steps moot and therefore insufficient grounds for disapproval of the SIP.

Response

The EPA is deferring final action on Tennessee's good neighbor SIP submission for the 2015 ozone NAAQS at this time. As explained in Sections IV.J and IV.U of the preamble, the EPA is now finalizing partial disapprovals (i.e., at prong 2) for states included in this action that are only linked to maintenance-only receptors, which are Minnesota and Wisconsin. Other issues raised by this comment are addressed in Section 1.4 (Use of Updated Modeling) and Section 5 (Updates to Modeling and Changes in Linkages).

8 Step 3

8.1 Determination of Significant Contribution

Comment

Commenter: Alabama Department of Environmental Management

Commenter ID: 02

Docket ID: EPA-R04-OAR-2021-0841

Comment:

The WOE analysis presented arguments concerning the contribution threshold, an emissions evaluation, and an analysis of the meteorology, through back trajectories, which in total justified, to the State's satisfaction, that Alabama will not significantly contribute to downwind nonattainment or maintenance in 2023 or beyond.

[…]

Weight of Evidence (WOE) Analysis:

In the revised SIP submitted in April of this year, a WOE analysis was provided in an effort to highlight concerns with the modeling system and associated inputs and outputs. WOE analyses are not new and have historically been relied on when modeling predictions are close to the air quality goal, or, in this case a "significant contribution" to future NAAQS non-attainment and maintenance areas. EPA has utilized and approved the use of WOE analyses in SIP actions for years, most recently for the 2008 ozone NAAQS SIPs for New Mexico and Wyoming, as well as the 2015 ozone NAAQS for Alaska and Hawaii. As stated in the April submittal, a WOE analysis relies on assessing the available information and weighing the data by considering the relevance and quality of the information through qualitative and quantitative analysis. In the April submittal, ADEM evaluated the meteorological influence on the predicted Denton and Harris County, Texas receptors, as well as an assessment of Alabama's emissions sources, concerns over model performance and issues with the significance threshold relied on by EPA in the February modeling. As part of these comments, ADEM is submitting additional information to bolster the WOE argument presented in April, given additional time and resources. Additional analyses of emissions, linkages, meteorology and further justification for an alternate significance level are being provided below.

Response

With limited circumstances in which certain unique analytical needs justified it, the EPA generally has not taken an alternative approach to western states in its assessment of interstate transport under the 2015 ozone NAAQS. See Section V.C.3 of the preamble. As explained at proposal while the EPA has in limited circumstances found unique issues associated with addressing ozone transport in western states, the EPA has otherwise consistently applied the 4-step interstate transport framework in western states

and has identified ozone transport problems in the west that are similar to those in the east. *See, e.g.,* 87 FR 31453.

Commenter cites EPA's approval of the good neighbor SIP submissions from New Mexico and Wyoming for the 2008 ozone NAAQS and Alaska and Hawaii for the 2015 ozone NAAQS. It should be noted that our use of a weight of evidence approach for Alaska and Hawaii was driven by the fact that we did not have CAMx modeling that could be used to evaluate those state's emissions. *See, e.g.,* 86 FR 53571, 53574 (September 28, 2021) (Hawaii). Similarly, in our approach to Colorado for the 2015 ozone NAAQS, we used analysis beyond modeling to assess potential contribution to the Uinta Basin, again because the CAMx modeling was not designed for evaluating the wintertime inversion conditions that were at issue. 87 FR 61249, 61253-61255 (October 11, 2022). The approvals for New Mexico and Wyoming were for a less protective NAAQS, also involved somewhat unique analytical circumstances, and did not reflect a wholesale setting aside of the four-step framework. In any case, the commenter has not established that the factors that were relevant to our analysis in those actions are present with respect to Alabama.

As explained in the proposed disapproval of Alabama's April 2022 SIP submission, the EPA disagrees that Alabama's analysis, which the state characterizes as a weight of evidence analysis, is sufficient to support a conclusion that the state does not contribute significantly to nonattainment or interference with maintenance. 87 FR 64421-64426. The information provided by ADEM in comments on this action does not change the EPA's determination.

Alabama's SIP submission does not analyze future emissions reduction opportunities beyond pointing to existing NO_X emission reductions from SIP-approved and Federal measures. Alabama's submission cursorily evaluates NO_X emissions from point and mobile source categories from the 2017 NEI and suggests there is a steep decline in emissions from major sources in the state. However, Alabama does not include a comprehensive accounting of facilities in the state and does not include a sufficient analysis of potential NO_X emissions control technologies, their associated costs, estimated emissions reductions, and downwind air quality improvements for the purpose of identifying what additional emission controls may be necessary to eliminate their significant contribution.

For example, Alabama does not provide details to demonstrate why, how, or to what magnitude NOx emissions from sources in Alabama, Louisiana, Arkansas, Mississippi, or Texas are expected to continue to decline through the next attainment date for the Dallas-Fort Worth-Arlington, Texas, area. Further, Alabama does not show how NOx reductions could potentially affect nonattainment or maintenance issues – or Alabama's contribution to such issues – in future years.

Likewise, comparisons between Alabama's emissions and other states' emissions, including home-state emissions, do not address whether some portion of Alabama's contributions to downwind receptors may be deemed significant. The ozone transport problem in the United States results from the collective impacts of relatively small contributions from a number of upwind states. As presented in the Final Action AQM TSD, a substantial fraction of ozone at nonattainment and maintenance receptors comes from this collective contribution from upwind states. The cumulative impact of emissions reductions from upwind states and sources is an important part of resolving the impact of transported emissions on downwind air quality problems.

The EPA addresses ADEM's comments related to the August 2018 memorandum in Section 7.4, air quality factors in Section 8.5, and back trajectory analyses in Section 8.8. The EPA responds to comments on the contribution threshold in Section V.B.5 of the preamble and in Sections 7.2 and 7.3, and further comments on the EPA's emissions inventories and modeling in Sections 3 and 4, respectively.

Comment

Commenter: Alabama Power Company, Southern Power Company, and PowerSouth Energy Cooperative

Commenter ID: 04

Docket ID: EPA-R04-OAR-2021-0841

Comment:

EPA proposes to disapprove Alabama's 2022 SIP submission without determining in the first instance whether Alabama's SIP is approvable under Section 110(a)(2)(D)(i)(I) of the Clean Air Act. Instead, EPA evaluated Alabama's SIP solely with reference to EPA's "4-step interstate transport framework." Under this framework, EPA proposed to determine that certain undefined Alabama emissions contribute significantly to nonattainment or interfere with maintenance of the 2015 8-hour ozone NAAQS in two counties in Texas. EPA's proposal makes multiple errors.

First, as demonstrated by ADEM's 2022 SIP submittal package, based on a weight of evidence ("WOE") analysis, and by applying the requirements of the Clean Air Act, Alabama sources do not significantly contribute to nonattainment in or interfere with maintenance by any other state. Alabama is not required to assess its emissions contribution using EPA's 4-step Federal Implementation Plan ("FIP") framework, and EPA may not disapprove Alabama's SIP relying solely on an application of the limited and outdated 4-step approach. Instead, Alabama's SIP package demonstrates that under the plain meaning of the Act, its SIP must be approved. EPA fails to adequately consider ADEM's WOE analysis and the evidence in the record supporting it. As explained below, because Alabama's 2022 SIP satisfies all requirements of the Clean Air Act, EPA must approve Alabama's SIP revision.

[…]

B. ADEM's Use of a Weight of Evidence Analysis to Address the Good Neighbor Obligations for the 2015 Ozone NAAQS Satisfies the Requirements of the Clean Air Act

As noted above, Alabama advances a WOE analysis to support its determination that emissions from Alabama are not significantly contributing to downwind nonattainment or maintenance issues in downwind states. In doing so, Alabama looks at several factors and concludes they all weigh in favor of the determination that no sources in Alabama are contributing significantly to downwind ozone issues. In the proposed disapproval, EPA uses a "4-step interstate transport framework to evaluate" the State's SIP submittal; however, EPA has been clear that states may satisfy the "good neighbor" obligation in a variety of ways. EPA has explained that "[t]he precise nature and contents of such a submission is not stipulated in the statute. [Therefore,] EPA believes that the contents of the SIP submission required by section 110(a)(2)(D)(i) may vary depending upon the facts and circumstances related to the specific

NAAQS." For example, EPA "has not directed states that they must conduct a Step 3 analysis in precisely the manner the EPA has done in its prior regional transport rulemakings."

While EPA acknowledges in the proposed disapproval that Alabama's SIP submission is "not organized by EPA's 4-Step Framework for assessing good neighbor obligations," it nevertheless shoehorns Alabama's submission into that FIP framework in order to analyze it. But EPA cannot use its SIP review process (in which EPA *shall* approve a SIP if it meets the requirements of the Clean Air Act) to force this FIP framework on states. Instead, EPA should consider ADEM's WOE analysis only in the context of the requirements of the plain language of the Act. Because Congress did not define the term "contribute significantly" or mandate that EPA or the States determine whether a contribution is "significant" in any particular manner, EPA and the States have analyzed this obligation in various ways in the past. Generally, these approaches have looked to various factors impacting air quality and cost-effectiveness. For example, in prior EPA rulemakings to address the "good neighbor" obligation, to determine what states were "significant" contributors to downwind nonattainment, EPA stated that its goal was to "determine whether [each upwind State] has emissions whose contributions to downwind nonattainment problems are large and/or frequent enough to be of concern."[31]

EPA has utilized, and approved the use of, weight of evidence analyses in interstate transport SIP actions for years,[32] and ADEM's proposal is appropriate and consistent with the EPA's analysis for other states. Indeed, EPA recently assessed Kansas's SIP submissions addressing the "good neighbor" obligation for the 2010 sulfur dioxide (SO_2) NAAQS.[33] Kansas "conducted a weight of evidence analysis to examine whether . . . emissions from [that state] adversely affect attainment or maintenance of the 2010 SO2 NAAQS in downwind states."[34] EPA did not insist on reviewing the SIP under any 4-step FIP framework and instead performed an evaluation of that WOE analysis and, in fact, performed its own WOE analysis, under the two "prongs" of Section 110(a)(2)(D)(i)(I): (1) significant contribution to nonattainment of the NAAQS in another state; and (2) interference with maintenance of the NAAQS in another state.[35] EPA and Kansas considered actual monitoring data, modeling data, emissions data from sources within the relevant state, and information on mobile source emissions in border counties in their "Prong 1" analysis of significant contribution to nonattainment.[36] The "Prong 2" analysis regarding maintenance areas built on the Prong 1 analysis and further considered emission trends and regulatory programs that had already led to or were expected to lead to reductions in emissions.[37]

ADEM has relied on many of the same factors identified in its WOE analysis for its proposed SIP revision such as emissions from Alabama sources, modeling information, and regulatory programs that have led to emission reductions. EPA should weigh each factor to determine whether Alabama has satisfied the two "prongs" of its "good neighbor" obligation as it did with Kansas. Alabama's SIP satisfies all of the requirements of the Clean Air Act, and, considering the weight of the evidence, EPA should approve Alabama's SIP just as it did with Kansas's SIP.

[31] 63 Fed. Reg. 57,356, 57,381 (Oct. 27, 1998) (emphasis added).

[32] *See, e.g.*, Approval and Promulgation of Air Quality Implementation Plans; Wyoming; Interstate Transport for the 2008 Ozone National Ambient Air Quality Standards, 84 Fed. Reg. 3,389 (Feb. 12, 2019); Air Plan Approval; New Mexico; Interstate Transport Requirements for the 2008 Ozone NAAQS, 84 Fed. Reg. 66,098 (Dec. 3, 2019); Air Plan Approval; Hawaii; Interstate Transport for the 2015 Ozone NAAQS, 86 Fed. Reg. 53,571 (Sept. 28, 2021); Air Quality State Implementation Plans; Approvals and Promulgations: Alaska; Interstate Transport Requirements for the 2015 Ozone Standard, 84 Fed. Reg. 26,041 (June 4, 2019).

[33] 86 Fed. Reg. 31,645 (June 15, 2021).
[34] *Id.* at 31,648.
[35] *Id.*
[36] *Id.* at 31,645-52.
[37] *Id.* at 31,652-53.

Response

With respect to commenter's assertions that the EPA did not evaluate or determine whether Alabama's SIP submission is approvable under Section 110(a)(2)(D)(i)(I), EPA disagrees. The EPA's notice of proposed rulemaking explains why Alabama's SIP submission did not appropriately apply a "weight of evidence" (WOE) analysis to determine Alabama will not significantly contribute to downwind nonattainment or maintenance in 2023 or beyond. *See* 87 FR 64412. The EPA assessed the details of Alabama's SIP submission on their own merits and provided explanations as to why the SIP submission did not provide analysis sufficient for the EPA to approve the submittal. *See id.* The EPA has provided additional detail with respect to the weight of evidence approach above, in response to comments by ADEM.

Similarly, the EPA has addressed comments regarding the use of a WOE approach in interstate transport submissions, as well as the weight of evidence approach used by Alabama in responding to ADEM's comments, above.

Commenter's comparisons to the Kansas 2010 sulfur dioxide (SO_2) analysis containing a weight of evidence approach do not persuade the EPA to adopt commenter's preferred analysis using weight of evidence for Alabama's submission as to interstate transport under the 2015 ozone NAAQS. First, as the EPA explains in the NPRM for Kansas and Nebraska: "[I]nterstate transport of SO_2 is unlike the transport of fine particulate matter ($PM_{2.5}$) or ozone, in that SO_2 is not a regional pollutant and does not commonly contribute to widespread nonattainment over a large (and often multi-state) area. . . . SO_2 transport is therefore a unique case and requires a different approach." 86 FR 31645 (June 15, 2021); 86 FR 43960 (August 11, 2021). Second, with respect to the SO_2 transport analysis for Kansas, various monitoring and modeling results indicated that there were no violations or maintenance issues in nearby states close enough to be impacted by SO_2 transport from Kansas (e.g., on the scale of around 50 kilometers or less), and the various additional pieces of evidence that EPA looked at supported those conclusions; in the case here, where modeling results project Alabama to contribute to downwind nonattainment and maintenance receptors, a much more robust analysis of emissions sources and emissions control opportunities would be required than what was provided by Alabama to conclude that no emissions from Alabama should be deemed "significant." *See id.*

In response to commenter's claim that the EPA is forcing a FIP framework on states or failing to limit its evaluation of ADEM's "WOE" analysis to the context of the requirements of the Act, see Section V.B.6. of the preamble. The EPA addresses comments about the EPA's statutory authority in Section 10.3.

Comment

Commenter: Arkansas Department of Energy and Environment, Division of Environmental Quality

Commenter ID: 07

Docket ID: EPA-R06-OAR-2021-0801

Comment:

In EPA's proposed disapproval, EPA purports that DEQ did not conduct an adequate analysis of emissions from the sources and other emission activity from within the state to determine whether its contributions were significant. DEQ finds that EPA is objectively wrong in this assertion. DEQ performed a robust analysis of emissions activities within the state that had the potential to significantly contribute to nonattainment or interfere with maintenance of the NAAQS in other states. This analysis covered all sources in Arkansas with elevated stacks[20] (including both EGUs another industrial sources) that are under DEQ's regulatory authority. EPA inaccurately states in the proposed disapproval that DEQ's analysis under Step 3 only focuses on EGUs. DEQ focused analysis on emissions of NOx, as most VOC emissions within Arkansas are not anthropogenic, and are therefore uncontrollable.[21]

[20] DEQ chose to focus analysis on elevated stack sources because emissions from such sources are more likely to penetrate through the atmospheric mixing layer and thus be transported long distances.
[21] According to the EPA 2014 National Emission Inventory, emissions from biogenic sources make up eighty-two percent of the Arkansas VOC emission inventory. Point sources contribute only two percent of total VOC emissions to Arkansas's VOC emission inventory, thus VOCs were not further examined.

Response

The EPA explained the deficiencies in Arkansas's SIP submission at proposal. 87 FR 9808-9811. Related issues raised by this commenter are addressed in Section 8.6.

Comment

Commenter: City Utilities of Springfield, Missouri

Commenter ID: 13

Docket ID: EPA-R07-OAR-2021-0851

Comment:

In essence, City Utilities (CU) believes that EPA erred in disapproving Missouri's SIPs that addressed interstate transport or the "good neighbor" provisions, for the 2015 8-hour ozone NAAQS

[…]

A. EPA failed to adequately justify why Missouri's "good neighbor" SIP was disapproved and provided no recourse to supplement the regulatory action. City Utilities generally supports efforts by the Missouri Department of Natural Resources (MDNR) Air Program to redress deficiencies EPA identified in

Missouri's SIP. EPA's burden to determine certainty that Missouri emissions are a significant contributing influence on ambient monitor receptors in downwind States has not been met.

Response

The EPA explained the deficiencies in Missouri's SIP submission at proposal, 87 FR 9540-9544. The commenter did not indicate with reasonable specificity their concern with the EPA's assessment. The EPA cannot legally extend Missouri's deadline to submit a SIP submission; similar comments are addressed in the preamble in Section V.A.2 and in Section 1.1. The EPA received a second good neighbor SIP submission addressing the 2015 ozone NAAQS from Missouri on November 1, 2022, as discussed in more detail in Section 9. The EPA is not required to identify what amounts of contribution are "significant" in acting on a good neighbor SIP submission. *See EME Homer City*, 572 U.S. at 509 ("Nor does the Act condition the duty to promulgate a FIP on EPA's having first quantified an upwind state's good neighbor obligations."). The EPA has found that the Missouri SIP submission, as well as each state's submission included in this action, is deficient at Step 3 for a variety of reasons; indeed, neither Missouri nor any other state identified any emissions from its sources or emissions activity as being significant and therefore in need of prohibition. The deficiencies in these analyses could be, and have been, identified in this action, well before the need to evaluate these submissions against any specific benchmark of "significance."

Comments

Commenter: Eagle Materials Inc.

Commenter ID: 16

Docket ID: EPA-R09-OAR-2022-0138

Comment:

Nevada reasonably applied a technical evaluation of its significant contributions to downwind air quality problems, guided by EPA's Guidance and the requirements of the CAA. EPA cannot now impose rigid requirements using its own analysis, and must instead evaluate Nevada's chosen framework against the requirements of Section 110(a)(2)(D)(i)(I).

Commenter: Idaho Power Company

Commenter ID: 23

Docket ID: EPA-R09-OAR-2022-0138

Comment:

Nevada reasonably applied a technical evaluation of its significant contributions to downwind air quality problems, guided by EPA's Guidance and the requirements of the CAA, and *timely* submitted its SIP for approval. EPA cannot now impose requirements based on its own preferences, but must instead evaluate Nevada chosen framework against the requirements of Section 110(a)(2)(D)(i)(I).

Response

The EPA explained the deficiencies in Nevada's SIP submission is the proposal at 87 FR 31492-31493. The EPA responds to these and similar comments in Section V.B.8. of the preamble and Section 10.3 of the RTC document.

Comment

Commenter: Maryland Department of the Environment

Commenter ID: 29

Docket ID: EPA-R03-OAR-2021-0872

Comment:

EPA now proposes to disapprove Maryland's SIP, in part, because it "does not offer an alternative modeling assessment showing that projected reductions in Maryland's emissions... would eliminate the contribution Maryland's emissions make to non-attaining or maintenance monitors." This determination is arbitrary and capricious in several respects.

As an initial matter, EPA's position establishes a false requirement that EPA's own transport rules do not adhere to. It is unreasonable to require Maryland to demonstrate that its SIP "would eliminate the contribution Maryland's emissions make to non-attaining or maintenance monitors." Section 110(a)(2)(D)(i)(I) only requires that Maryland eliminate its significant contribution, not all contributions.

Second, it is unclear what "alternative modeling" would be required for SIP approval. EPA's memo does not require that "alternative modeling" be provided in each of the 20 alternate analytical approaches discussed in its memo. In apparent acknowledgement of that fact, EPA's disapproval contends that the flexibilities were only "intended to generate further discussion around potential approaches to addressing ozone transport among interested stakeholders". However this position, like its remanded decision in *New York v. EPA*, 964 F.3d 1214, 1223 (D.C. Cir. 2020), is an unreasonable moving target.

[…]

In its 2015 Good Neighbor SIP, Maryland followed EPA's four step framework (without taking advantage of any flexibilities), and conducted a thorough Step 3 analysis (as discussed in Section C) showing that it has resolved its significant contribution to downwind nonattainment and maintenance areas.

EPA states that Maryland's Step 3 analysis is insufficient, in part, because the Step 3 analysis Maryland provided was not what EPA was expecting. EPA states: At Step 3 of the 4-step interstate transport framework, Maryland did not include an accounting of all of the NOx ["Nitrogen Oxides"] emitting

facilities in the state along with an analysis of potential NOx emissions control technologies, their associated costs, estimated emissions reductions, and downwind air quality improvements.

However, Maryland cannot reasonably be expected to know what EPA requires when EPA has never articulated a specific set of analytical requirements. EPA acknowledges that it has issued no guidance on what elements must be required in the Good Neighbor SIP. EPA states:

> While the EPA has not prescribed a particular method for this assessment, the EPA expects states at a minimum to present a sufficient technical evaluation. This would typically include information on emissions sources, applicable control technologies, emissions reductions, costs, cost effectiveness, and downwind air quality impacts of the estimated reductions, before concluding that no additional emissions controls should be required.

Maryland provided exactly that by explaining each of the regulations on a set of sources, evaluated the expected emissions from the sources that were anticipated to provide the maximum amount of reductions at a high cost-per-ton value, and found that they were sufficient to address the state's Good Neighbor obligations. Maryland also discussed the state's other NOx (and Volatile Organic Compound ("VOC")) regulations, which provide further assurance that the state has eliminated its significant contribution to downwind nonattainment and maintenance areas. EPA is thus obligated to engage in an actual evaluation of Maryland's submittal, not simply declare it to be "insufficient" based on an amorphous set of expectations. If the EPA should finalize its disapproval of the submittal on the basis that it is insufficient, EPA must document all the metrics and analysis used in the final disapproval of Maryland's 2015 Good Neighbor SIP at Step 3 and provide official guidance that details what a "sufficient technical evaluation" entails.

> To that regard, EPA's proposed disapproval does not require states to complete a Step 3 analysis in precisely the same manner that EPA has in previous transport actions. All EPA says is necessary for a "sufficient technical evaluation" is "something similar" to EPA's analysis to determine whether and to what degree emissions should be eliminated to address significant contribution.

As detailed in Section C, MDE has met those Step 3 requirements. MDE used the only known benchmark at the time of its submittal, a NOx mass cap of 3,828 tons per ozone season at a cost effectiveness of $1,400/ton, to demonstrate that the state's aggressive emissions reductions programs outlined in its 2015 Good Neighbor SIP have far exceeded that threshold, thereby satisfying its Good Neighbor obligations for the 2015 ozone NAAQS. It is unreasonable for EPA to propose to disapprove Maryland's 2015 Good Neighbor SIP on the basis that the elements it has not articulated, and says are not required, were not present in Maryland's SIP submission.

Response

The EPA agrees that the CAA does not require Maryland, or any state, to show that it has eliminated all of its contribution to downwind nonattainment. The standard in CAA section 110(a)(2)(D)(i)(I) is that a SIP submission for a new or revised NAAQS must contain adequate provisions prohibiting any source or other type of emissions activity within the state from emitting air pollutants in amounts that will *significantly* contribute to nonattainment or interfere with maintenance of the NAAQS in another state

(emphasis added). The proposal was clear on this in its description of the 4-step interstate transport framework when it stated that "… if a state's contribution equals or exceeds the 1 percent threshold, the state's emissions are further evaluated in Step 3, considering both air quality and cost as part of a multi-factor analysis, to determine what, if any, emissions might be deemed "significant" and, thus, must be eliminated under CAA section 110(a)(2)(D)(i)(I)." 87 FR 9468.

The EPA said in full in the proposal that:

> Maryland's 2019 SIP submission lacks an analysis of the effect that Maryland's adopted emission reductions would have on the specific downwind monitors which the EPA's March 2018 memorandum modeling analysis and 2016v2 emissions platform analysis determined that Maryland sources contribute more than 1 percent to nonattainment or interference with maintenance. Maryland's SIP submission disputes neither the significant contribution from Maryland nor the ''linkages'' between Maryland emissions and these downwind nonattainment or maintenance monitors. Further, although Maryland objects to the modeling assessment included with the EPA's March 2018 Memorandum, it does not offer an alternative modeling assessment showing that projected reductions in Maryland's emissions, as outlined in its 2019 SIP submittal, would eliminate the contribution Maryland's emissions make to nonattaining or maintenance monitors identified by the EPA's 2018 memorandum modeling assessment, or to those in the more recent 2016v2 emissions platform assessment. Maryland's modeling assessment in its 2019 SIP submittal merely explores the varying effects that various emission reduction strategies in eastern states would have on ozone nonattainment in general, rather than the effect Maryland's reductions would have on non-attaining or maintenance monitors to which it is linked.

87 FR 9474. The EPA's statement about Maryland not offering alternative modeling was not a suggestion that Maryland was obligated to examine alternative modeling. Rather, the statement was intended as a factual observation that Maryland did not rebut, or attempt to rebut, the conclusion in the very modeling on which Maryland relied – that the state contributes above the contribution threshold. Thus, EPA would have expected Maryland to provide an analysis supporting a conclusion that despite those contributions Maryland was not significantly contributing to nonattainment or interference with maintenance.

Although Maryland identified a number of emissions control requirements, in general, the emissions reducing effects of all existing emissions control requirements are already reflected in the air quality results of the modeling for Steps 1 and 2. And yet Maryland was still identified as linked above 1 percent of the NAAQS contribution threshold to one or more downwind receptors at Step 2. 87 FR 9473. The EPA explained at proposal why Maryland provided an insufficient analysis at Step 3 to support a conclusion that the state's good neighbor obligations for the 2015 ozone NAAQS are resolved. 87 FR 9471. MDE's comment here does not change the EPA's assessment of Maryland's SIP submission. A related comment is addressed in Section 8.3.

The EPA address comment related to availability of guidance in Section 1.2. The EPA responds to MDE's argument based on *New York v. EPA* in Section 1.4. The EPA addresses comments about existing and future state controls in Section 8.3.

Comment

Commenter: Oklahoma Department of Environmental Quality

Commenter ID: 37

Docket ID: EPA-R06-OAR-2021-0801

Comment:

COMMENT 4: EPA's Backwards Approach to Transport SIP Approvals Renders States' Burdens Unknowable at the Time of SIP Development

As was mentioned in Section III and in Comment 1, Oklahoma relied extensively on the projected design values and guidance offered in the three 2018 Tsirigotis Memos. Theses memos coupled with the Cross-State Air Pollution Rule (CSAPR) framework establish the criteria by which EPA determines whether an upwind state is making a significant contribution to nonattainment or maintenance issues at monitors located in downwind states. As will be discussed in more detail later, there are two criteria, or "prongs" as Oklahoma has called them, both of which must be met to establish this significant contribution to nonattainment or interference with maintenance. In essence the "significant contribution" language in the Clean Air Act has been operationally defined as meeting both of the following prongs: (1) air quality modeling must show that the total anthropogenic NOx emissions from the upwind state must meet or exceed a contribution threshold at a downwind monitor that is having trouble attaining the ozone standard (i.e., steps 1 and 2 of the CSAPR 4-step framework) and (2) the upwind state must have some quantity of NOx emissions reductions available at a uniform cost threshold (i.e., steps 3 and 4 of the CSAPR 4-step framework). The determination of the quantity of emissions that must be reduced to eliminate the downwind contribution happens at Step 3 of the CSAPR framework, a step that occurs only after considerable work to model the relationship between upwind states' emissions and downwind concentrations. During the preparation of its SIP, a state agency cannot move forward unless the flexibilities, design values, and general guidance offered in the EPA memos to avoid needing to conduct a Step 3 analysis. Further, if modeling appears to show that the state's contributions meet or exceed the contribution threshold, the state cannot determine the magnitude of NOx emissions reductions needed (if any at all) until EPA completes its work on Step 3 of the CSAPR framework. These uncertainties yield a complicated and confusing burden where a state's obligations are fundamentally unknowable at the time a state is required to develop its SIP.

[…]

COMMENT 8: Demonstrating "No Linkage" Should Have Been Sufficient

As noted in the proposed disapproval at 87 Fed. Reg. 9824, the Oklahoma SIP did not identify any NOx emission reductions beyond those required by the CSAPR Update, which establishes an ozone-season NOx trading program for all Oklahoma fossil-fueled electricity generating units (EGUs) with a nameplate generating capacity of more than 25 MWe that produce electricity for sale. Oklahoma determined there was no need to identify NOx emissions reductions because demonstrating no significant contribution to a downwind monitor under prong 1 should have been sufficient on its own. This is because, as already stated above, the significance determination under the CSAPR framework is fundamentally two-pronged, and if either prong is not satisfied then the state does not contribute significantly to downwind

nonattainment or maintenance. Oklahoma's SIP addressed the first prong (i.e., Steps 1 and 2) and demonstrated that there was no linkage to a downwind monitor. Having made that demonstration, ODEQ did not need to address the second prong (i.e., Steps 3 and 4), and therefore did not need to identify additional NOx emission reductions.

Additionally, adequately addressing the second prong represents an unreasonable burden due to the complexity of Step 3 of the CSAPR framework. The level of complexity is demonstrated in this description from the "Ozone Transport Policy Analysis Proposed Rule TSD:"

> In order to establish EGU NO_X emissions control stringencies for each linked upwind state, EPA first identifies various possible uniform levels of NO_X control stringency based on available EGU NO_X control strategies and represented by cost thresholds. The EGU emission reductions pertaining to each level of control stringency are derived using historical data, engineering analyses, and the Integrated Planning Model (IPM) for the power sector as described in sections B and C of this TSD. A similar assessment for one scenario was done for non-EGUs. Next, EPA uses the ozone Air Quality Assessment Tool (AQAT) to estimate the air quality impacts of the upwind state emissions reductions on downwind ozone pollution levels for each of the assessed cost threshold levels. Specifically, EPA looks at the magnitude of air quality improvement at each receptor at each level of control, it also examines whether receptors change status (shifting from either nonattainment to maintenance, or from maintenance to attainment), and looks at the individual contributions of each state to each of its receptors.

The photochemical modeling that is used to connect emissions from upwind states to nonattainment and maintenance receptors in downwind states is so complicated and takes so long to run that EPA uses a simpler tool, the Air Quality Assessment Tool or AQAT, to check each intermediate sub-step to see whether the emissions reductions at a particular cost threshold are sufficient to bring the downwind monitors into attainment of the NAAQS. The AQAT was not available when the Oklahoma Transport SIP was developed and submitted. In fact, the AQAT was not released until March 24, 2022. It is an unreasonable burden to expect states, with fewer resources than the EPA, to perform a level of analysis that taxes the EPA's abilities and resources.

Response

In response to the commenter's claim that the EPA should approve Prongs 1 and 2 of CAA section 110(a)(2)(D)(i)(I) for Oklahoma, we note that in its submission ODEQ refers to Steps 1 and 2 of the 4-step interstate transport framework collectively as Prong 1 and Steps 3 and 4 of the 4-step interstate transport framework collectively as Prong 2. The EPA has consistently used the term "prongs" to refer instead to the requirements found in CAA section 110(a)(2)(D)(i). There are two so-called ''prongs'' within CAA section 110(a)(2)(D)(i)(I). A SIP submission for a new or revised NAAQS must contain adequate provisions prohibiting any source or other type of emissions activity within the state from emitting air pollutants in amounts that will significantly contribute to nonattainment of the NAAQS in another state (prong 1) or interfere with maintenance of the NAAQS in another state (prong 2).

In response to commenter's claims that the level of analysis required at Step 3 of the 4-step interstate transport framework is overly burdensome for states, the EPA disagrees this is necessarily the case, and

even if the analytical burden is great, this would not be a reason to approve deficient SIP submissions. While the EPA appreciates the work required by states in these actions, the Supreme Court confirmed that the states have the first obligation to prepare and submit state plans that prohibit the appropriate levels of emissions that significantly contribute to nonattainment or interfere with maintenance of the NAAQS in other states. In *EPA v. EME Homer City Generation, L.P.*, the Supreme Court clearly held that "nothing in the statute places the EPA under an obligation to provide specific metrics to states before they undertake to fulfill their good neighbor obligations." 572 U.S. at 509.

The EPA disagrees that the work involved in performing a Step 3 analysis necessitates the identification of so-called "flexibilities," so that states can avoid having to conduct further analysis of emissions-control opportunities or avoid imposing any emissions reduction obligations on their sources. The core statutory objective of the good neighbor provision is to ensure elimination of all significant contribution to nonattainment or interference of the NAAQS in other states. Allowing flexibility for the purpose of avoiding the work required to assess whether a state's emissions contribute significantly to downwind states is inconsistent with the requirements of the statute and would render the good neighbor provision ineffective. As noted in the preamble, the EPA's experience has been that in general, states that attempted to rely on the flexibilities mentioned in previous EPA memos did not provide sufficient state-specific analysis to justify their appropriateness.

The EPA disagrees that it must conduct its own quantification and analysis of cost-effective controls in evaluating a state's SIP submission, or do this analysis on behalf of the state. *See EME Homer City*, 572 U.S. at 509. That is the state's responsibility, and if it has not done that analysis (or an alternative analysis that comports with the Act), then the SIP submission is not approvable. This action is not determining what, if any, cost effective controls exist at Step 3 of the 4-step interstate transport framework—nor need it, if the state's submission is lacking in such an analysis. Instead, the EPA is evaluating the states' interstate transport SIP submissions to determine whether the submissions satisfy the statutory obligations at CAA section 110(a)(2)(D)(i)(I). In order for the EPA to approve a state's SIP submission, a state's chosen approach must contain an adequate technical justification and be consistent with the requirements of the CAA. ODEQ stated that controls imposed through the 2016 CSAPR Update FIP were the only reasonable controls to require. EPA noted in its proposal that the EPA's 2016v2 modeling incorporated emission reductions from prior ozone transport rulemakings, including the CSAPR Update and the Revised CSAPR Update, and even with those reductions, modeling still shows that Oklahoma is linked to downwind receptors. Where a state's submission simply relies on controls and cost thresholds from previous ozone transport actions without explaining why that cost threshold remains appropriate or evaluating other potentially cost-effective controls, it fails to provide an adequate justification and thus is deficient. Additional comments on issues raised by the comment are addressed in Sections 8.3 (Existing and Future State Controls) and 8.6 (Cost Thresholds).

Comment

Commenter: Texas Commission on Environmental Quality

Commenter ID: 42

Docket ID: EPA-R06-OAR-2021-0801

Comment:

The TCEQ disagrees with EPA's claim that it does not use the 0.7 ppb contribution threshold as the 'sole' determinant of significant contribution from upwind states because the EPA evaluated potential emission reductions in upwind states to determine whether potential emissions reductions are significant to downwind monitors.

The EPA claims that by evaluating if a state has sufficient emission reductions to remove the 0.7 ppb contribution to a downwind nonattainment or maintenance monitor, the EPA's 4-step methodology does not use the 0.7 ppb as the 'sole' determinant of significant contribution and that EPA's methodology is similar to the TCEQ's weight of evidence methodology. However, the EPA is conflating the ability to mitigate contributions with whether the contribution itself is significant in its approach. The potential for emissions reductions should not be used as justification for significant contribution. Significant contribution should be established prior to determining if emissions reductions are needed as the TCEQ did in its transport analysis.

Response

This comment expresses an inaccurate description of the 4-step interstate transport framework, in that the EPA does not in fact define "significance" by reference to the Step 2 "contribution" threshold. We acknowledge that TCEQ in its SIP submission attempted to provide an alternative approach in its analysis that would have concluded it does not have "significant" emissions prior to conducting any analysis of emissions reduction opportunities. Rather, the state attempted to use a variety of additional "air quality factors" to justify the non-significance of its emissions. For reasons explained in the proposed disapproval, the EPA finds TCEQ's approach is not approvable. *See* 87 FR at 9831-34. Thus, our analysis (including our evaluation of TCEQ's modeling and methodological choices) establishes that the state does contribute to receptors out of state, and the state's reasoning for why none of those contributions should be considered "significant" is not approvable.

8.2 Alleged De Minimis Contribution

Comments

Commenter: Alabama Power Company, Southern Power Company, and PowerSouth Energy Cooperative

Commenter ID: 04

Docket ID: EPA-R04-OAR-2021-0841

Comment:

Second, ADEM points out that statewide NO_X emissions from point sources in Alabama continue to decline and most emissions are from mobile sources, which would only contribute to local ozone. This factor is further supported by the fact that Alabama is not projected by EPA's modeling to be linked to

any other state's nonattainment or maintenance in 2026, based solely on existing SIP requirements.[40] Any additional mandates for reductions in emissions from point sources in Alabama would have disproportionately small impacts on ozone concentrations in Texas. In fact, EPA only projects an improvement of 0.17 ppb and 0.36 ppb at the Denton and Harris County monitors, respectively, in 2023 as a result of emission reductions.[41] And only approximately 0.015 ppb and 0.038 ppb of those reductions might be considered attributable to Alabama.[42] These are vanishingly small amounts that do not constitute any common sense understanding of potentially significant contribution. Indeed, every other "linked" state contributes more to these monitors than Alabama.

[41] 87 Fed. Reg. at 20,092.

[42] "Linked" states are only projected to contribute 7.97 ppb and 8.34 ppb to the Denton and Harris County monitors, respectively, in 2023. *See* EPA, Ozone Air Quality Assessment Tool (AQAT), available at https://www.epa.gov/csapr/good-neighbor-plan-2015-ozone-naaqs. Alabama accounts for 9% and 11% of that total linked contribution to each receptor, respectively. Therefore, it could be assumed that 9% and 11% of the total improvement at those receptors from emission reductions at those receptors is due to Alabama. This assumption is likely conservative and the influence on the Texas receptors is actually less.

Commenter: Arkansas Department of Energy and Environment, Division of Environmental Quality

Commenter ID: 07

Docket ID: EPA-R06-OAR-2021-0801

Comment:

Because the modeling that EPA provided to the states at the time of SIP development did not include sector-specific tagging, DEQ examined sources with elevated stacks to determine whether any sources in Arkansas were anticipated to significantly contribute to nonattainment or interfere with maintenance. Because DEQ had additional information about EGU emissions, DEQ performed additional analysis for this source type. As previously discussed, the analysis focused solely on Allegan County, MI because that was the only receptor DEQ identified as being potentially linked to Arkansas—although DEQ's HYSPLIT analysis suggests that this linkage is not persistent or consistent. The data presented in the Arkansas Transport SIP indicates that EGUs in Arkansas are not significantly contributing to nonattainment or interfering with maintenance in Allegan County, MI. The data also show that controlling emissions activities in Arkansas would not be an effective way of reducing the ozone concentrations in Allegan County—particularly when looking at Arkansas's relative contribution to the Allegan County monitor compared to the proximity and quantity of emissions in other states near to Allegan County. DEQ did not perform similar analyses for the receptors identified by EPA in their disapproval because the data upon which those "linkages" were identified was not available and DEQ adequately justified its 1 ppb threshold.

[...]

EPA's modeling projects that the Harris County, TX monitor (482010055) will not attain the 2015 ozone NAAQS by 2023. Therefore, new control measures are necessary to bring Harris County into attainment. However, Arkansas's relatively small contribution to this monitor based on EPA's 2016v2 modeling does not indicate that new controls for Arkansas sources is an effective means of bringing this area into

attainment and that it is unlikely that a particular emission source or emission activity in Arkansas will significantly contribute to nonattainment or interfere with maintenance at that monitor.

Commenter: PacifiCorp (Attachment – Ramboll Evaluation)

Commenter ID: 38

Docket ID: EPA-R08-OAR-2022-0315

Comment:

Tables 1-3 and 1-4 summarize the contributions of Wyoming and Utah EGU and PacifiCorp EGU NOX emissions to 2023 ozone design values at receptors in the DM/NFR ozone NAA. The EGU contributions were obtained using the Proposed Transport Rule Step 2 CAMx 2023 APCA ozone source apportionment modeling state ozone contributions assuming that the EGU fraction of that ozone contribution was proportional to the EGU NOX emissions fraction to the state's total anthropogenic NOX emissions. The EGU fraction of the Wyoming and Utah total anthropogenic NOX emissions was taken from the pie charts above. The PacifiCorp EGU fraction of each of the states total EGU NOX emissions is from Table 3-2 in Chapter 3.

The Wyoming EGU contribution to the 2023 ozone design at the CHAT monitor is 0.14 ppb, or 0.19%. Using the Proposed Transport Rule Step 1&2 data the PacifiCorp EGUs contribution to the 2023 ozone AvgDV at CHAT is 0.05 ppb, or 0.06%.

Utah EGUs are estimated to contribution 0.22 to 0.29 ppb to the 2023 ozone design values at the three sites in the DM/NFR NAA, which represents 0.30% to 0.40% of the design value (Table 1-3). PacifiCorp EGUs are estimated to contribute 0.10-0.12 ppb or 0.13-0.17% to the 2023 ozone AvgDV at the three sies in the DM/NFR NAA.

Thus, the Wyoming and Utah EGU and PacifiCorp EGU ozone contributions to the 2023 ozone design values in the DM/NFR NAA are quite small and probably not even measurable.

Table 1-3. Contributions of Wyoming and Utah EGU NOX emissions to 2023 ozone design values at receptors in the DM / NFR ozone NAA.

Receptor	2023 Ozone AvgDV (ppb)	2023 State Ozone Contribution (ppb)	2023 State EGU Contribution		
			State Total Anthropogenic NOX Emissions	EGU Ozone Contribution (ppb)	EGU Ozone Contribution (%)
Wyoming					
CHAT	71.7	0.81	17%	0.14	0.19%
Utah					
CHAT	71.7	1.37	21%	0.29	0.40%
RFNO	72.6	1.10	21%	0.23	0.32%
NREL	73.8	1.06	21%	0.22	0.30%

Table 1-4. Contributions of Wyoming and Utah PacifiCorp EGU NOX emissions to 2023 ozone design values at receptors in the DM/NFR ozone NAA.

Receptor	2023 Ozone AvgDV (ppb)	2023 State Ozone Contribution (ppb)	2023 PacifiCorp State EGU Contribution		
			State Total Anthropogenic NOX Emissions	EGU Ozone Contribution (ppb)	EGU Ozone Contribution (%)
Wyoming					
CHAT	71.7	0.81	6%	0.05	0.06%
Utah					
CHAT	71.7	1.37	9%	0.12	0.17%
RFNO	72.6	1.10	9%	0.10	0.14%
NREL	73.8	1.06	9%	0.10	0.13%

Response

The contributions from no state covered by this action, including Alabama, Arkansas, or Utah, are so small that the states have proven they do not significantly contribute to nonattainment or interfere with maintenance.

In the NO_X SIP Call, the EPA adopted a "collective contribution" approach to determining whether sources "contribute" to nonattainment downwind. 63 FR 57376 (Oct. 27, 1998). The EPA said that:

> EPA believes that each ozone nonattainment problem at issue in today's rulemaking is the result of emissions from numerous sources over a broad geographic area. The contribution from sources in an upwind State must be evaluated in this context. This ''collective contribution'' nature of the ozone problem supports the proposition that the solution to the problem lies in a range of controls covering sources in a broad area, including upwind sources that cause a substantial portion of the ozone problem. This upwind share is typically caused by NOx emissions from sources in numerous States. States adjacent to the State with the nonattainment problem generally make the largest contribution, but States further upwind, collectively, make a contribution that constitutes a large percentage in the context of the overall problem.

63 FR 57386.

EPA adopted the same approach to quantifying the level of states' significant contribution to downwind nonattainment areas in CAIR as it used in the NO_X SIP Call, based on the determination in the NO_X SIP Call that downwind ozone nonattainment is due to the impact of emissions from numerous upwind sources and states. CAIR, 70 FR 25162, 25172 (May 12, 2005).

Citing to prior determinations made in the NO_X SIP Call and CAIR, EPA continued to find a collective contribution problem impacting downwind ozone nonattainment and maintenance areas in CSAPR. 76 FR 48208 (Aug. 8, 2011). Specifically, EPA found "that the total 'collective contribution' from upwind sources represents a large portion of $PM_{2.5}$ and ozone at downwind locations and that the total amount of transport is composed of the individual contribution from numerous upwind states." *Id.* at 48237.

The EPA continued to hold this view in the CSAPR Update: "The EPA continues to find that the total collective contribution from upwind states' sources represent a significant portion of the ozone

concentrations at downwind nonattainment and maintenance receptor locations." 81 FR 74519 (Oct. 26, 2016). Further, the D.C. Circuit, in upholding EPA's approach to allocating responsibility at Step 3, rejected Wisconsin's argument that it should not face good neighbor obligations for the 2008 ozone NAAQS in the CSAPR Update on the basis that its emission reductions would only improve a downwind receptor by two ten-thousandths of a part per billion. *Wisconsin v. EPA*, 938 F.3d 303, 322–23 (D.C. Cir. 2019) (citing *EPA v. EME Homer*, 572 U.S. 489, 524 (2014)).

In evaluating ozone transport, the EPA continues to place great importance on collective contribution, including in the context of evaluating SIP submissions. For example, Alabama is linked to the Galveston, Texas receptor and also to the Denton/Pilot Point, Texas violating-monitor maintenance-only receptor. The collective upwind contribution to Galveston is 26 percent of the total ozone in 2023 at this receptor. In addition, at the Denton/Pilot Point receptor, the collective upwind contribution is 18 percent of the total ozone in 2023 at this receptor. Also, ADEQ says any reductions from Arkansas won't "be effective" at assisting Harris County, TX monitor (482010055) attain. The EPA notes that in the 2016v3 modeling, Arkansas is linked to 6 receptors in Brazoria, Denton, Galveston, and Harris counties Texas. The collective contribution from upwind states to these receptors as a percent of total ozone ranges from 14 percent to 26 percent. Utah's highest contribution is to the Chatfield receptor in Douglas County, Colorado where the collective contribution is 8 percent of the total ozone. These measures of the baseline contribution from upwind states rebut any generalized assertions that reductions in these emissions would not be impactful when implemented across the linked upwind geography.

In their comment Alabama Power Company et al. provides no basis for claiming that "additional mandates for reductions in emissions from point sources in Alabama would have disproportionately small impacts on ozone concentrations in Texas," nor do they provide a basis for claiming that mobile source emissions reductions would only reduce ozone locally. In addition, commenter's generalized assertions regarding overall emissions trends and the causes of poor air quality are not an adequate substitute for an evaluation of significant contribution in 2023. Commenter's evaluation does not reflect an adequate comparison between baseline emissions, and the air quality impacts of additional emissions control opportunities in Alabama, much less the inclusion in the SIP submission of enforceable emissions controls that would render those projected reductions permanent and enforceable. In this action, the EPA does not necessarily agree with the comment's calculation of Alabama's air quality impacts based on the estimated air quality improvements as a result of the EPA's April 2022 proposed FIP's emissions reductions and the state's proportion of overall ozone concentrations at the downwind receptors to which the state was linked based on 206v2 modeling. Even still, we note that these estimated air quality impacts alone are not reason to believe Alabama's contributions are not significant. As mentioned previously, the D.C. Circuit rejected Wisconsin's argument that it should not face good neighbor obligations for the 2008 ozone NAAQS in the CSAPR Update on the basis that its emission reductions would only improve a downwind receptor by two ten-thousandths of a part per billion. *Wisconsin v. EPA*, 938 F.3d 303, 322–23 (D.C. Cir. 2019) (citing *EPA v. EME Homer*, 572 U.S. 489, 524 (2014)).

ADEQ's argument that eliminating its own significant contribution to a linked receptor is "ineffective" is unsupported and not a convincing argument that Arkansas has resolved its good neighbor obligations for the 2015 ozone NAAQS, as explained in the proposal. *See, e.g.*, 87 FR 9809-9810. The EPA addresses comments deferring to ADEQ's existing controls to ensure the State does not violate the good neighbor

provision below, in Section 8.3. The EPA addresses comment related to updates to modeling and changes to linkages in Section 5.

In response to PacifiCorp's Ramboll Attachment, the EPA notes first that the EPA is deferring final action on Wyoming's SIP submission. Second, the EPA reiterates that the Agency is not requiring any controls on any source in this action.

The EPA addresses comments on HYSPLIT Model analysis in Section 8.8 of this RTC.

8.3 Existing and Future State Controls

Comments

Commenter: Alabama Power Company, Southern Power Company, and PowerSouth Energy Cooperative

Commenter ID: 04

Docket ID: EPA-R04-OAR-2021-0841

Comment:

In addition, emissions will decrease due to existing provisions of the SIP, including New Source Performance Standards (such as subpart KKKK) and existing CSAPR programs (due to retirements and new unit set aside).

[…]

ADEM clearly explains that the State of Alabama has implemented several programs in recent years that have resulted in a reduction of ozone precursor emissions, such as NO_X. Meanwhile, EPA admonishes ADEM for not including in its Step 3 analysis "future emissions reduction opportunities beyond pointing to NO_X emission reductions from SIP-approved and Federal measures." EPA does not explain why the programs ADEM identifies—including the Tier 1 and 2 mobile source rules, the nonroad Diesel Rule, the 2007 Heavy-duty Highway Rule, New Source Performance Standards, National Emission Standards for Hazardous Air Pollutants, and CSAPR—are insufficient means by which to achieve future reduction in emissions. EPA is seemingly requiring that Alabama present new control measures to show future emissions reductions. However, it should not matter whether the control measures utilized by Alabama to achieve emissions reductions are new measures for new measures' sake or measures implemented through existing programs or the existing SIP. EPA fails to recognize this distinction and the more important fact that, under these existing programs, Alabama's emissions are already low and will continue to fall. For example, under the existing SIP, emissions from Alabama were well below levels that EPA would deem significant on the relevant dates, as shown in Section C. iii.

Commenter: Arkansas Department of Energy and Environment, Division of Environmental Quality

Commenter ID: 07

Docket ID: EPA-R06-OAR-2021-0801

Comment:

Four out of five of the newly-identified Arkansas linkages are projected maintenance receptors. These receptors are anticipated to attain the NAAQS based on existing control measures. Therefore, significant increases in emissions could interfere with attainment and maintenance of the NAAQS. However, DEQ's prevention of significant deterioration new source review process adequately prohibits emissions from a new source or modification to an existing source in an amount that could contribute to nonattainment or interfere with maintenance of the NAAQS. Therefore, asserting that additional control measures on existing sources are necessary to address EPA-identified linkages to those receptors is not reasonable.

Commenter: California Air Resources Board

Commenter ID: 12

Docket ID: EPA-R09-OAR-2022-0394

Comment:

The Act requires the interstate transport portion of the SIP to contain adequate provisions to prohibit emissions from within the state from significantly contributing to nonattainment or interfering with maintenance of the 2015 Ozone NAAQS due to downwind transport to impacted states, including California. CARB agrees it is important to address ozone interstate transport in order to protect public health and welfare of all. CARB also accepts the latest modeling from EPA's analysis which indicated linkages between California and eight nonattainment areas and four maintenance areas.

California has authority under the Act to set its own stricter-than-federal mobile source emissions regulations. Congress provided this authority to address the dominant role that mobile sources play in the poor air quality within the state, considering California's population, climate, and topography. California's pioneering mobile source control programs have paved the way for numerous federal mobile source control programs that have since provided national public health benefits. This additional increment of more robust mobile source controls has been implemented by CARB to expedite attainment of air quality standards within California.

California has the only two areas (Los Angeles-South Coast Air Basin and San Joaquin Valley) in the nation that are extreme nonattainment areas for the 2015 Ozone NAAQS, whereby the State and local districts are constantly looking for aggressive emissions reductions with additional benefits of reducing downwind transport of ozone and ozone precursors of Oxides of Nitrogen (NO_X) and Volatile Organic Compounds (VOCs). In the proposed transport FIP, EPA focuses on NO_X emissions reductions, and finds that the "NO_X emissions reductions required in the proposed rule would fully eliminate these states' significant contributions to downwind air quality problems for the 2015 Ozone NAAQS." California's latest statewide emissions estimates projected for the summer months of 2026 from CARB's Criteria Pollutant Emission Inventory Database (CEPAM2022 v1.01 Summer season) indicate that approximately

75 percent of anthropogenic NO_X emissions in California are from mobile sources, with only approximately 15 percent being from stationary source fuel combustion categories.

In December 2021, CARB adopted a new regulation, California's Heavy-Duty Vehicle Inspection and Maintenance program which will ensure heavy-duty vehicles have properly functioning emissions control systems and that malfunction repairs are completed in a timely manner. This regulation is projected to single-handedly reduce NO_X emissions by over 25,000 tpy in 2026. Additionally, CARB's 2022 State SIP Strategy lists an assortment of measures providing an additional 7,500 tpy reduction in NO_X emissions in 2026. The 2022 State SIP Strategy that will be considered at a public meeting of the CARB Board later this year, together with measures from the 2016 State SIP Strategy that were very recently adopted and not accounted for in EPA's transport modeling, will result in the additional reduction of nearly 32,500 tons of NO_X emissions in 2026. In contrast, the proposed FIP estimates 1,666 tpy of NO_X emission reductions from non-electric generating unit (EGU) sources. CARB's new mobile source control measures will provide about 20 times more NO_X emission reductions than were specified in the proposed FIP. Given California's mix of emissions sources and our unique authority, it is most appropriate for CARB to focus on reducing mobile source emissions to mitigate California's impact on downwind neighbors.

Commenter: Louisiana Department of Environmental Quality

Commenter ID: 27

Docket ID: EPA-R06-OAR-2021-0801

Comment:

EPA finds in its proposal that Louisiana's November 2019 submittal does not meet the obligations with respect to prohibiting emissions that contribute significantly to nonattainment or interfere with maintenance of the 2015 NAAQS in downwind states based upon EPA's 4- step interstate transport framework.

LDEQ has an established Part 70 air permitting program, approved by EPA. The program's regulations set forth obligations that industry must follow prior to construction. All permit applications must show that their potential to emit emissions meets the prevention of significant deterioration (PSD) or nonattainment new source review requirements (NNSR). To date, there have been no FCAA § 126 actions filed against Louisiana. FCAA § 126 gives a state the authority to ask EPA to set emissions limits for specific sources of air pollution in other states that significantly contribute to nonattainment or interfere with maintenance of one or more NAAQS in the petitioning state.

Commenter: Maryland Department of the Environment

Commenter ID: 29

Docket ID: EPA-R03-OAR-2021-0872

Comment:

C. The Step 3 analysis in Maryland's 2015 Good Neighbor SIP demonstrates that the State has resolved its significant contribution to downwind nonattainment and maintenance areas.

[…]

MDE disagrees that it failed to provide a well-documented evaluation of its efforts to address significant contributions to downwind states. Maryland evaluated its aggressive in-state emissions reductions programs and found that they provide all available emissions reductions at a significant cost-per-ton threshold, thus satisfying the CAA's Good Neighbor requirements. Without any guidance from EPA on what constitutes an approvable Good Neighbor SIP (as discussed in Section B), MDE used EPA's past transport actions as a guideline for how to assess its sources and what emissions reductions may be necessary.

EPA's past transport rules, CSAPR, the CSAPR Update, and the RCU all aimed to achieve reductions of ozone-forming emissions from facilities required to report emissions pursuant to EPA's Part 75 Clean Air Markets Division ("CAMD") reporters – the majority of said reductions coming from coal-fired EGU's with Selective Catalytic Reduction ("SCR") controls. As such, the main component of emissions reductions in Maryland's 2015 Good Neighbor SIP are from Maryland's coal-fired EGU's.

MDE first cited the emissions reductions from the CSAPR Update, which capped Maryland's NOx emissions at 3,828 tons per ozone season beginning in 2017. That rule established a cost-effectiveness threshold of $1,400 per ton of NOx" reduced as the point at which all significant contributions of emissions have been addressed from coal-fired EGUs with SCR controls.

MDE agrees with EPA's conclusion that the CSAPR Update was intended to provide NOx emissions reductions for a less-stringent NAAQS. MDE also agrees with EPA that the cost-effectiveness threshold for the CSAPR Update may not be sufficient for a more stringent NAAQS.16 That is why MDE did not rely solely on the CSAPR Update to satisfy its significant contribution for the lower 2015 ozone NAAQS. MDE also relies on the Maryland NOx Rule (*Control of NOx Emissions from Coal-Fired Electric Generating Units* [footnote: See Code of Maryland Regulations ("COMAR") 26.11.38.03 and 26.11.38.05.]) which sets daily unit-specific emission rate limits as well as 30-day fleet-wide emission rate limits resulting in actual emissions rates well below those achieved by either the CSAPR Update or Revised CSAPR Update FIPs. That regulation, which is part of Maryland's SIP, requires all Maryland coal-fired EGUs with post combustion controls (both SCR and Selective Non-catalytic Reduction ("SNCR") controlled units) to operate and optimize the controls for maximally practicable NOx reductions every day of the ozone season. This approach goes beyond the simple ozone season NOx mass cap provided by the CSAPR Update. This rule provides *more* NOx reductions than the CSAPR Update and requires sources to spend more than the CSAPR Update's benchmark of $1,400/ton.

By way of example, the bar chart below shows ozone season CSAPR Update budgets and ozone season NOx mass for Maryland, Pennsylvania, Virginia and West Virginia. States with emissions limited by only the CSAPR Update had consistently similar NOx emissions year-over-year, while Maryland's emissions were consistently well below the CSAPR Update budget. Pennsylvania and Virginia are, on average, 20-25% below the budget and West Virginia is almost always on budget. By contrast, Maryland is typically 30-60% below the budget. This is due, in large part, to Maryland's NOx rule, which went into place in

2015, and requires more emissions reductions than the CSAPR Update, as would be necessary for the more stringent 2015 standard.

[bar chart available in comment]

Furthermore, when Maryland's NOx Rule was implemented, it was anticipated that the affected sources would have to spend approximately $5,733 per ton of NOx reduced. This is well above EPA's minimum $1,400/ton threshold it set for the less stringent standard. In effect, Maryland requires its sources to reduce NOx by 30-60% more and spend 310% more in cost-per-ton of NOx reduced for a standard that is 5 parts per billion ("ppb") (or 6%) lower.

As EPA did not set a cost-per-ton threshold at which significant contribution for the more stringent NAAQS has been resolved, Maryland concluded that requiring more emissions reductions at a higher cost threshold is sufficient to address its significant contribution to downwind nonattainment and maintenance areas.

To further ensure that Maryland explored all possible emissions reductions, MDE also cited other emissions control programs that limit statewide emissions. Those include, but are not limited to, NOx and VOC Reasonably Available Control Technology ("RACT") regulations, as well as area, non-EGU, point, and mobile source measures.

At the time of submission, MDE concluded that its Step 3 analysis was complete and the emission reduction control programs identified in Maryland's 2015 Good Neighbor SIP fully addresses the state's significant contribution to downwind nonattainment and maintenance areas.

EPA's recently released proposed transport FIP for the 2015 Ozone NAAQS confirms this conclusion. On February 28, 2022, EPA released a pre-publication version of the FIP for the 2015 Ozone NAAQS which includes proposed seasonal emissions budgets and a cost-per-ton significant contribution level for EGUs. This included immediate optimization of installed controls as well as retrofit of new controls in 2026. EPA also proposed emission rate limits for certain other industrial stationary sources (referred to generally as non-EGUs. A comparison of the proposed FIP limits for both EGUs and non-EGUs in Maryland to the limits Maryland imposes on its sources demonstrates that Maryland's limits are more stringent.

The proposed FIP demonstrates that Maryland's aggressive EGU emissions controls are more stringent on two fronts.

First, Maryland's EGU Regulation is more stringent than the FIP. The proposed FIP establishes a seasonal emissions budget based on coal-fired EGUs with SCR's operating at an average emission rate of 0.08 pounds per million British thermal units ("lbs/mmBtu"). The FIP's emissions budgets are based on coal-fired EGUs with SCR's reducing NOx at a cost of $1,800/ton. Conversely, COMAR 26.11.38 requires daily optimization of the installed SCR and SNCR controls. Optimization is assured by requiring Maryland's SCR equipped sources to limit daily emissions to a rate no higher than 0.08 lbs/mmBtu, with most limited to 0.07 lbs/mmBtu. The only SNCR still operating in Maryland, AES Warrior Run, has a daily emissions limit of 0.10 lbs/mmBtu and almost exclusively operates below 0.08 lbs/mmBtu. COMAR 26.11.38 is estimated to cost over $5,000 per ton of NOx reduced. Therefore, Maryland's regulations are more stringent than the proposed FIP because (1) maximum practicable emissions reductions through

optimization of the installed controls is required every day instead of seasonally, (2) the optimized NOx emission rate is equivalent to or lower than the proposed FIP rate, and (3) the cost-per-ton of NOx reductions is significantly higher than the value in the proposed FIP. COMAR 26.11.38 has resolved significant contributions for EGUs.

Second, the proposed FIP demonstrates that there are no additional emissions reductions from Maryland's EGUs. The state budget calculations for the FIP in 2023 through 2026 does not require any additional NOx reductions from Maryland's coal-fired EGUs equipped with SCRs. EPA flagged all of Maryland's units as already optimized or retired. EPA's only EGU NOx reductions in Maryland were obtained from a single coal-fired, circulating fluidized bed EGU equipped with an SNCR (AES Warrior Run), which reduced the state's ozone season NOx by 8 tons from a 2021 level. The FIP indicates that would be achieved by requiring AES Warrior Run to meet an ozone season average NOx emission rate of 0.071 lbs/mmBtu in each of the future year ozone seasons. As EPA notes in the same analysis, 2019-2021 emissions data indicates that this unit currently achieves an ozone season average emission rate of 0.066 lbs/mmBtu. Examining all three years of data from the state budget calculations for the FIP demonstrates that AES Warrior Run is already optimized beyond EPA's expectations, and no further emissions reductions are required. Optimization in Maryland, and at this specific unit, has already been achieved through the Revised CSAPR Update and COMAR 26.11.38. Maryland has resolved significant contributions for EGUs.

Similarly, the proposed FIP demonstrates that Maryland's aggressive non-EGU emissions controls are more stringent than EPA's replacement solution. [footnote: The FIP proposed emission rate limits for multiple non-EGU source categories. MDE is only responding to the source categories where such facilities exist in the State.]

Maryland has two cement and concrete manufacturing facilities that would be subject to the limits in the Proposed FIP. Holcim Inc operates a preheater/precalciner cement kiln with a NOx limit imposed by MDE of 1.8 lbs/ton clinker, which is 35.7% lower than EPA's proposed limit of 2.8 lbs/ton clinker. Maryland's limit achieves an additional 213.59 tons of NOx reductions per year. Lehigh Cement Company operates a precalciner cement kiln with a NOx limit imposed by MDE of 2.4 lbs/ton clinker, which is 4.3% higher that EPA's proposed limit of 2.3 lbs/ton clinker. EPA's proposed limit achieves an additional 107.14 tons of NOx reductions per year. Maryland's limits on cement and concrete manufacturing facilities provide a net gain of approximately 100 tpy in emissions reductions. Maryland's regulations are more stringent than the proposed EPA FIP limit. While EPA's proposed FIP does not anticipate requiring emissions reductions from Maryland's Cement facilities at the time of proposal, Maryland has resolved significant contributions for cement and concrete manufacturing.

Maryland has two pipeline transportation of natural gas facilities that would be subject to the limits in the proposed FIP. Transcontinental Gas Pipeline Company operates seven lean burn 2-cycle engines rated at 2,050 brake horsepower and three lean burn 2-cycle engines rated at 2,100 brake horsepower. Texas Eastern Transmission, L.P. operates two lean burn 2-cycle engines rated at 5,500 brake horsepower. The EPA proposed FIP limit for this source category is 3 grams per horsepower-hour (Hp-Hr). The Maryland limit of 125 ppmv is at least 40% more stringent. The proposed FIP would not require any further reductions from this sector. Maryland has resolved significant contributions from pipeline transportation of natural gas.

EPA's proposed FIP, which is purported to completely resolve the state's significant contribution, would not require any further emissions reductions from EGU or non-EGU sources beyond what Maryland imposes on its sources. Maryland's emission reduction control programs identified in the 2015 Good Neighbor SIP are sufficient to resolve the state's significant contribution to downwind nonattainment and maintenance areas and SIP achieves more reductions than the FIP can provide.

Commenter: Midwest Ozone Group

Commenter ID: 30

Docket ID: EPA-R04-OAR-2021-0841

Comment:

Finally, EPA improperly dismisses Kentucky's insistence that EPA assess "on-the- books" or "on-the-way" controls. EPA's rejection is based upon Kentucky's failure to quantify these reductions "in a meaningful way or demonstrate that the downwind improvements from these regulations and programs would be sufficient to eliminate the Commonwealth's significant contribution or interference with maintenance." [87 Fed. Reg. 9505] at 9512. In doing so, EPA fails to recognize that it is EPA's burden to assure that all such control programs are properly addressed in its analysis. The agency's attempt to shift this burden to the states is inappropriate. EPA's actions are inconsistent with the concept of cooperative federalism. It is EPA's task to marshal its significant multi-state resources to assess these types of "on-the-books" and "on-the-way" programs.

Commenter: New Jersey Department of Environmental Protection

Commenter ID: 34

Docket ID: EPA-R02-OAR-2021-0673

Comment:

NJDEP acknowledges that the EPA is disapproving its SIP so that it can be fully addressed in the proposed FIP. A review of this proposed rule indicates that many of the requirements are similar to, if not exactly the same as, control measures already implemented in New Jersey for over a decade. The reductions required for EGU's located in New Jersey are mostly attributed to currently planned unit shutdowns. New Jersey is pleased that EPA is addressing non-EGU sources in the proposed rule, which will finally bring nearby and upwind states in line with New Jersey's standards. Considering the proposed rule expects 0% emissions reductions from non-EGU sources located in New Jersey, this supports New Jersey's GN SIP as a full remedy to addressing its transport contributions well ahead of the 2015 Ozone FIP.

Commenter: PacifiCorp

Commenter ID: 38

Docket ID: EPA-R08-OAR-2022-0315

Comment:

In the Proposed Disapproval, EPA admits that Utah's analysis included reductions in emissions of VOCs and NOx "through a combination of regulatory actions" and EPA agrees that these reductions are "beneficial in reducing VOCs and NOx in the State. However, EPA argues that the emissions reductions have been considered in EPA's modeling as "on-the-books" controls and that most of the emissions reductions were VOCs. EPA, for the first time and without any relevant scientific analysis or CAA authority to do so, argues that NOx emissions reductions are more important than VOCs for ozone reduction. The precise mixture of NOx and VOC emissions to achieve ozone reductions is a complex and unresolved issue in the West. It is one of the reasons that EPA has recognized western ozone analyses must be determined on a case-by-case basis. EPA cannot simply reject Utah's SIP because the emissions reductions come from VOCs. If Utah's SIP is effective at reducing its ozone contribution below thresholds levels, then EPA cannot criticize how that is done.

Commenter: Utah Petroleum Association and the Utah Mining Association

Commenter ID: 48

Docket ID: EPA-R08-OAR-2022-0315

Comment:

Utah's IT SIP includes a lengthy weight-of-evidence analysis showing how its approach matches other interstate transport SIP approvals and EPA guidance, including the following:

[…]

- Analysis in Utah's SIP showing significant reductions in emissions in Utah after the time of EPA's modeling study quantifying impacts to downwind States, including a number of actions related to applying Best Available Control Technology and Best Available Control Measures for the Salt Lake City PM2.5 nonattainment area, implementing controls in the Uinta Basin on oil and gas sources to reduce ozone formation, and implementation of Tier 3 gasoline

Several of these show that Utah does not have a ***significant*** influence on ozone in Colorado. While EPA tries to explain in the Proposed Disapproval why it does not accept Utah's reasoning on these points, EPA's explanations ring hollow in the face of the evidence that EPA already made up its mind to disapprove the Utah IT SIP, namely that the Proposed GNR includes a FIP in lieu of the IT SIP for Utah and other States. For these reasons and the other reasons stated above, EPA should approve Utah's IT SIP.

Response

As explained at proposal, in general, the EPA already includes on-the-books rules in its transport modeling. *See e.g.*, 87 FR 9472. In the SIP submissions, some states pointed out existing state rules, retirements, consent decrees, etc. which they believed were not accounted for in the EPA's modeling, and the EPA determined whether the cited controls should be included in the 2016v2 modeling (and if not, the reasons for that and the EPA's explanation for why it did not change the Agency's conclusions). *See e.g.*, 87 FR 9472. Therefore, the EPA disagrees with Alabama Power Company et al., which argues that the EPA did not explain at proposal why Alabama's recitation of existing state controls was insufficient to support a conclusion the state has no outstanding good neighbor obligations for the 2015 ozone NAAAQS. The EPA did so. 87 FR 64425-64426. In response to Utah Petroleum Association and Utah Mining Association, the EPA explained at proposal why Utah's reference to then-forthcoming Best Available Control Technology (BACT) for the Salt Lake City $PM_{2.5}$ nonattainment area, implementing controls on oil and gas sources in the Uinta Basin, and implementation of Tier 3 gasoline was insufficient to support a conclusion that the state has no outstanding good neighbor obligations for the 2015 ozone NAAQS. *See* 87 FR 31482-31483.

The EPA updated emissions inventories and modeling from 2016v2 to 2016v3 in response to public comment, including comments identifying state rules, etc. commenters believed were not accounted for in the 2016v2 modeling. *See* Preamble Section III.A.; 2016v3 Emissions Modeling TSD. In response to Alabama Power Company et al., the EPA notes that the rules they identified (Tier 1 and 2 mobile source rules, the nonroad Diesel Rule, the 2007 Heavy-duty Highway Rule, New Source Performance Standards, National Emissions Standards for Hazardous Air Pollutants, and existing CSAPR Programs) as well as newer rules are included in the 2016v3 modeling. *See* 2016v3 Emissions Modeling TSD. In response to Utah Petroleum Association and Utah Mining Association, the EPA notes that the Tier 3 program is included in the EPA's 2016v3 modeling. *Id.* Moreover, as explained in Section III.A. of the Preamble, the 2016v3 modeling projects that, despite these controls, every state covered by this action is projected to contribute more than 1 percent of the NAAQS to one or more downwind receptor.

Some commenters compared some of their state rules to the proposed level of stringency in the proposed FIP. The EPA disagrees with the premise of the comment from New Jersey Department of Environmental Protection that the EPA's disapproval of New Jersey's SIP submission is motivated by including the state in a FIP. The EPA explained the deficiencies in New Jersey's SIP submission at proposal (*See* 87 FR 9484; February 22, 2022). This action does not disapprove state submissions by comparison to the proposed FIP as a benchmark. While the emissions control strategies of the proposed FIPs do not form a definitive benchmark in our evaluation of these submissions, we do note that in the proposed FIPs, despite what some commenters assert, the EPA found emissions reduction opportunities at its proposed Step 3 emissions control stringency levels for all states that are covered in this disapproval action.

EPA addresses other issues raised in these comments below and elsewhere in this Response to Comment document, including in Section 5 (Updates to Modeling and Changes in Linkages), Section 10.6 (Allegations that Disapprovals of Western State SIP Submissions was Predetermined), Section 11.2 (CAA Section 126 Petitions), and Section 11.8 (Mobile Source Emissions).

PSD Programs

In response to comments suggesting that PSD programs are sufficient to satisfy states' good neighbor obligations, the EPA disagrees, as explained at proposal in relation to existing minor source, PSD, and NNSR permitting programs:

> [T]here are likewise important distinctions between the permitting program requirements and interstate transport requirements, including but not limited to: (i) The permitting programs generally apply only to new sources or major modification of existing sources; (ii) the evaluation of impacts on attainment and maintenance in other states in the context of a permit for a single source may not be as robust and have the same geographic scope as that undertaken by states and the EPA for purposes of section 110(a)(2)(D)(i)(I); and (iii) the timing of the permitting process evaluation may have no bearing on the NAAQS at issue (i.e., a permit issued in 2005 would not have considered impacts vis a vis the 2015 8-hour ozone NAAQS). Further, existing sources may have been permitted under a new source permitting program years or even decades ago, before more effective or cheaper emissions control technologies became available.
>
> Thus, even if the permitting programs address new sources of emissions for the intended purposes of those programs, it does not necessarily follow that they automatically meet all other CAA requirements as well. The EPA disagrees, therefore, with the conclusion that the existence of these permitting programs resolves the issue of whether there are additional control measures that the State should impose specifically for purposes of eliminating significant contribution to nonattainment or interference with maintenance at downwind receptors for the 2015 8-hour ozone NAAQS.

87 FR 9529 (West Virginia) (footnote omitted).

In particular, the PSD permitting program applies in areas that have been designated as in attainment of the NAAQS and is intended to ensure that such areas remain in attainment even if emissions were to increase as a result of new sources or major modifications to existing sources located in those areas. This purpose is different than the purpose of the good neighbor provision, which is to assist downwind areas (in some cases hundreds or thousands of miles away) in resolving ongoing nonattainment of the NAAQS or difficulty maintaining the NAAQS through eliminating the emissions from other states that are significantly contributing to those problems. Although Arkansas and Louisiana may have EPA-approved PSD programs, that does not alleviate the states of their interstate transport responsibility, as these are two separate provisions under the CAA serving two separate purposes.

Further, ADEQ and LDEQ did not sufficiently explain how their states' PSD programs could eliminate Arkansas and Louisiana's potential significant contributions to downwind receptors, as these programs would only apply to potential future source emissions, as opposed to existing emissions in the state. Where sources have adopted enforceable emissions reductions, the EPA has accounted for this in its emissions inventories used as an input to its modeling, as described in the 2016v3 Emissions Modeling TSD.

We additionally note that the justification provided in the comment regarding Arkansas' obligations as to maintenance receptors, even if accepted as valid (which EPA does not), does not address the state's linkage to a nonattainment receptor.[77]

Mobile Source Controls

In response to CARB's claims regarding the high proportion of mobile source emissions in California, the EPA recognizes that mobile sources represent a large portion of NO_X emissions in California and therefore those emissions would be expected to affect downwind nonattainment and maintenance receptors.

However, even if mobile source emissions are a large portion of California's NO_X emissions, and even if they represent a large portion of the state's contribution to downwind nonattainment and maintenance receptors, this would not support a basis to approve the adequacy of California's 2015 ozone transport SIP submission. These in-state, anthropogenic emissions are assigned to the state for purposes of determining the state's contribution to receptors at Step 2. For the 2016v3 platform, CARB provided updated onroad, nonroad, and locomotive emissions for 2023 and 2026 and these were incorporated in the modeling for Steps 1 and 2. In its comment letter, CARB states that it accepts the EPA's modeling analysis indicating that emissions from California are linked to downwind nonattainment and maintenance receptors in other states. The state's transport SIP submission also acknowledged the linkage with other states but concluded their emissions did not significantly affect nonattainment or interfere with maintenance in another state. Because the EPA's modeling showed a linkage at steps 1 and 2 between emissions in California and nonattainment or maintenance receptors in downwind areas, and CARB did not provide information to refute the EPA's analysis or provide an adequate analysis equivalent to or alternative to EPA's step 3 analysis determining whether any controls were available to eliminate any potential significant contributions, California's SIP submission remains deficient. As such, the EPA must disapprove California's SIP submission for failing to satisfy the statutory requirements of CAA section 110(a)(2)(D)(i)(I).

We commend CARB on its emissions reductions measures to reduce NO_X emissions from mobile sources in the state. To the extent that CARB is arguing that NO_X emissions reductions anticipated from the EPA's proposed FIP are small in comparison to newly approved and soon to-be-adopted state measures, we note that comments on the proposed FIP are outside the scope of this action. In addition, we note any emissions reductions that are anticipated beyond 2023 cannot appropriately be taken into account in evaluating contribution in this action. EPA responds to other comments about mobile sources in Section 11.8 (Mobile Source Emissions).

Maryland's NO_X Rule and Limits on Certain Non-EGU Source Categories

The EPA disagrees with the claim that Maryland's step 3 analysis shows that the state has resolved its significant contribution to downwind nonattainment and maintenance-only receptors for the 2015 ozone NAAQS. 87 FR 9470-9473. EPA's 2016v3 modeling platform accounts for actual emissions from

[77] Arkansas was also linked to a nonattainment receptor in EPA's proposed modeling (2016v2) in Harris County, Texas (AQS Site ID 482010055). Arkansas is linked to a nonattainment receptor in Galveston County, Texas (AQS Site ID 481671034) based on 2016v3 modeling. For further explanation of Arkansas' changed linkages between the 2016v2 and 2016v3 modeling see Sections 1.4 and 5.

Maryland's EGUs equipped with Selective Catalytic Reduction (SCR) and SNCR through 2021 and projected emissions for these EGUs in 2023 taking into account announced shutdowns and the effects of all CSAPR regulations through the Revised CSAPR Update. Even taking into account Maryland's 2015 NO_X rule, the 2016v3 modeling still projects that sources in Maryland are linked to downwind nonattainment and maintenance-only receptors. Preamble Section III.C. In its SIP submission, Maryland does not dispute that it is linked at Step 2.

Regarding Maryland's claims that its existing NO_X Rule at Code of Maryland Regulations (COMAR) 26.11.38 achieves more emission reductions from coal-fired EGUs equipped with SCRs than EPA's CSAPR Update, and required sources to spend more than the CSAPR Update's benchmark of $1,400/ton, as explained in the proposal the CSAPR Update is not an appropriate benchmark for measuring whether Maryland has met the good neighbor requirements of the CAA for the more protective 2015 ozone NAAQS. 87 FR 9471. Additionally, the EPA found that between the time the Agency issued the CSAPR Update and the Revised CSAPR Update, the $1,400/ton threshold used in the CSAPR update was no longer the appropriate cost threshold to eliminate significant contribution, even for the less protective [78]

To the extent that Maryland is claiming, at Step 3, that there are no further NO_X emission reductions to be obtained from Maryland sources at a reasonable marginal cost per ton, the EPA disagrees that the SIP submission supports that conclusion. 87 FR 9470-9473. The substance of the proposed FIP, including proposed controls, are beyond the scope of the rulemaking, and in any event are not being used as a benchmark to disapprove any state's SIP submission in this action.

MDE believes certain requirements in MDE's state-level regulations or enforceable permit limits applicable to non-EGUs are more stringent than the limits in the proposed FIP. First, in order to be creditable under the Clean Air Act, all such emissions reductions needed to be included in the SIP submission for EPA approval and made permanent and federally enforceable; state-law requirements, permits, and other measures that are not in the SIP cannot be counted as eliminating the state's significant contribution. Further, MDE presented no analysis of the air quality impacts of these non-EGU controls on downwind receptors as part of Maryland's SIP submission. The examples identified by the commenter do not substitute for a Step 3 analysis and are insufficient to support a conclusion that Maryland has resolved its good neighbor obligations for the 2015 ozone NAAQS.

Finally, Maryland's comparison of individual source-level controls to the limits in the proposed FIP fails to take into account the overall effect of all the limits in the proposed FIP. In isolation, some of Maryland's existing limits may be more stringent than the limits used in the proposed FIP. However, applying the uniform cost-effectiveness thresholds, the proposed FIP is expected to provide a reduction of around 45 tons of ozone season NO_X from the state. Although this is a potentially relatively small reduction from Maryland's sources compared to other states, it is, under the EPA's proposed approach, more enforceable emissions reductions than the state has offered beyond the current baseline. Maryland has not offered a satisfactory alternative approach to defining significance, and under the EPA's proposed approach, because the state has made relatively greater progress in reducing its

[78] *See* 82 FR 23054, 23088 (April 30, 2021) ("The CSAPR Update found $1,400 per ton was a level of uniform control stringency that represented turning on idled SCR controls. EPA uses the same costing methodology, but updating for input cost increases (e.g., urea reagent) to arrive at $1,600 per ton in this rule (while also updated from 2011 dollars to 2016 dollars).").

emissions compared to other states, its reduction obligation would be relatively small. While the proportion of significant contribution from a single upwind state may be relatively small, the effect of eliminating the contribution on a uniform-stringency basis from all linked upwind states can be quite large. Allowing Maryland to rely only on its existing limits in its regulations, which modeling has shown does not resolve its contribution, in the absence of an evaluation of additional emissions control opportunities, would be inconsistent with the analysis, and potential emissions control obligations, expected of other upwind contributing states. In Maryland's SIP submission, the state did not assess the availability of additional emissions controls or provide justification as to why additional air quality controls were not required. Instead, Maryland merely identified what their existing regulations currently required. Still, the Good Neighbor Plan for the 2015 8-hour Ozone NAAQS FIP is not yet final and the EPA is not using the FIP as a direct benchmark in its action on states' plans here. The limits which have been proposed for Maryland and to which the state is drawing a comparison in these comments could change. Additionally, the limits within the FIP are not within the scope of this action.

Additional topics are addressed in Section 8.6 (Cost Thresholds) and Section 10.3 (Cooperative Federalism and the EPA's Authority).

VOCs

The EPA does not dispute that VOCs are precursors to ozone. Revised CSAPR Update, 86 FR 83087 (April 30, 2021). The EPA does not agree that Utah's reliance on existing VOC controls measures in their SIP submission is sufficient to support a conclusion that the state has no outstanding good neighbor obligations for the 2015 ozone NAAQS, particularly in light of the fact that Utah did not examine potential emissions reduction opportunities at sources contributing greater amounts of ozone precursor emissions. *See* 87 FR 31483.

8.4 Modeling and CAA Section 179B Guidance

Comments

Commenter: Utah Petroleum Association and the Utah Mining Association

Commenter ID: 48

Docket ID: EPA-R08-OAR-2022-0315

Comment:

EPA's persistence in applying a 0.7 ppb contribution threshold is wholly inconsistent with EPA's proposed disapproval of the 179B demonstration for Utah's Northern Wasatch Front ozone nonattainment area ("NWF"). In the NWF case, EPA strongly criticized the modeling for underpredicting local ozone production and, as a result, EPA did not agree with the model demonstration of 6 to 8 ppb international influence on NWF ozone. On the other hand, EPA's modeling also shows significant underprediction of both Utah and Denver ozone by as much as 10 to 20 ppb on high ozone days, and yet

EPA used these model results despite the poor performance to evaluate downwind impacts of only 1 ppb or 0.7 ppb. The model simply does not have the accuracy for these small predictions to be reliable. The inconsistencies in EPA's approach between the two different but simultaneous rulemakings pose an unacceptable dichotomy.

Furthermore, EPA questioned the accuracy of 2 to 3 ppb in Texas' model for its 179B demonstration for the San Antonio ozone nonattainment area ("SAT") because the 2 to 3 ppb influence falls within the range of model uncertainty. If modeling does not have enough accuracy in the SAT case to show a 2-3 ppb impact, it also does not have enough accuracy to show a 0.7 ppb or 1 ppb impact for the IT SIPs. In fact, in the SAT case, Texas developed a model specifically for SAT, a more detailed and accurate exercise than EPA's larger modeling domain and coarser grid for the interstate transport evaluations, and the San Antonio geographical area lacks the complex terrain of Salt Lake City and Denver. Therefore, the SAT modeling likely has less inherent inaccuracy.

EPA cannot have it both ways. If a 6 to 8 ppb difference and a 2 to 3 ppb difference do not have sufficient accuracy to show upwind impacts in the NWF and SAT 179B demonstrations, respectively, then a 1 ppb or 0.7 ppb difference would not be sufficiently accurate in Utah's IT SIP, considering the magnitude of inherent error in the modeling. EPA's inconsistent approaches pose an arbitrary standard. EPA should not persist in applying the 0.7 ppb threshold. To continue to do so would go beyond the bounds of the CAA which requires addressing significant downwind contributions.

Commenter: PacifiCorp

Commenter ID: 38

Docket ID: EPA-R08-OAR-2022-0315

Comment:

As explained in the BHE Comments and expert analysis provided by Ramboll, EPA's chosen modeling, however, has several unexplained inconsistencies. Moreover, EPA rejected the very type of modeling it relies on to support the Proposed Disapproval when it denied the state of Utah's recent request for an ozone exception. As Utah explained, "EPA used a similar level of modeling bias [as] grounds for denying Utah's recently submitted 179B(b) demonstration. . . while simultaneously upholding an extensive federal action that has widespread national implications [based on similarly biased modeling]." It is arbitrary and capricious for EPA to reject Utah's 179B(b) demonstration due to model underperformance while simultaneously using a model with highly similar underperformance limitations as justification to disapprove Utah's Intestate Transport SIP.

Commenter: PacifiCorp (Attachment - Berkshire Hathaway Energy (BHE) Company Comments on Proposed Ozone Transport Rule)

Commenter ID: 38

Docket ID: EPA-R08-OAR-2022-0315

Comment:

EPA rejected the very type of modeling it relies on to support the Proposed Rule when it denied the state of Utah's recent request for an ozone exception. As the state of Utah has explained, EPA relies on the 2016v2 model, which has a high negative bias, to support the Proposed Rule. The negative bias indicates that EPA's model is underpredicting either transport or local photochemical production (or some combination of both). EPA cited a similar negative bias in Utah's recent 179B(b) demonstration as one reason for rejecting Utah's ozone demonstration. It is arbitrary and capricious for EPA to reject Utah's 179B(b) demonstration due to model underperformance while simultaneously using a model with similar underperformance limitations as justification to include Utah and other western states in the FIP.

Finally, BHE understands that because of these significant errors EPA is considering remodeling for the Proposed Rule, and BHE supports any efforts to take into account the issues presented here and in more detail in the Ramboll Report.

Response

Several commenters claimed that it is arbitrary and capricious for the EPA to reject Utah's 179B(b) demonstration due to model underperformance while simultaneously using a model with similar underperformance limitations as justification to include Utah and other western states in the FIP.

First, CAA sections 110(a)(2)(D)(i) and 179B are different provisions to address distinct issues and are governed by their own respective requirements. It would be unreasonable to apply the same criteria to different CAA requirements.

Second, we disapproved Utah's 179B demonstration for many different reasons, as described in detail in the TSD, RTC and final rule (*See* Technical Support Document ("TSD"), Northern Wasatch Front (NWF), Utah: Failure to Attain 2015 Ozone National Ambient Air Quality Standard by Attainment Date; Reclassification and Disapproval of International Emissions Demonstration January 2022, *found at* Regulations.gov at EPA-HQ-OAR-2021-0742-0043). The EPA will not here restate all our reasons for disapproving Utah's 179B demonstration, as that information is provided in the TSD, RTC, and final rule for that action. Comments relating to CAA section 179B are outside the scope of this action. The model performance was simply considered in the context of the information provided and in the context of the conclusion being drawn.

In addition, the EPA disagrees with the interpretation of model performance implications as stated by the commenter. With respect to model performance, the EPA notes that the type of conclusions needed for CAA section 179B and for the proposed interstate transport FIP have very different implications for the evaluation submitted by the state. The NWF submission and accompanying report suggests that US-regional and international transport of ozone to Utah is well simulated, while local contributions are likely underpredicted. The effects of an underprediction of local ozone contribution would overstate the relative role of international contributions in the context of a CAA section 179B demonstration. The same underprediction of local ozone contributions could understate the contribution of NWF emissions to ozone at monitors in other states.

As described in the Final Action AQM TSD for this final rule, the EPA performed air quality modeling using the 2016v3 platform which includes updates made in response to comments on the proposal modeling. The table below provides NMB and NME model performance statistics at individual monitoring sites in the NWF for June through August for both the 2016v2 and 2016v3 modeling. The EPA v3 model performance information, provided in Table 4-X is substantially improved compared to both the EPA v2 modeling and the Ramboll modeling submitted in the state's 179B demonstration. The data show that model performance improved when looking across all days and on just those days with MDA8 ozone > 60 ppb. Note that the statistics for the 2016v3 modeling are well within the range of the performance criteria for NMB (<+15%) and NME (<25%) offered by Emery et.al. (2017). In contrast to EPA's 2016v3 modeling, the 2016 Ramboll modeling presented in Utah's 179B(b) petition cited by the commenters had average NMB and NME of -6% and 10% for all days in the period June through August and -12% and 13% for those days with observed MDA8 ozone $\geq$ 60 ppb. In summary, model performance concerns for monitors in the NWF expressed by the commenters have been addressed in the EPA's 2016v3 modeling. The statistics for the updated modeling at the monitors in the table below are well within the range of performance criteria offered by Emery et.al. (2017) for NMB ($\leq$ +15%) and NME ($\leq$ 25%).

The EPA addresses other topics in Section 8.4 (Modeling and CAA Section 179B Guidance).

Table 8-1

June - August MDA8 O3 Stats for All Days

			2016v2 Proposal Modeling		2016v3 Updated Modeling	
Site ID	County	Site	NMB (%)	NME (%)	NMB (%)	NME (%)
490110004	Davis	Bountiful Viewmont	-6.8	10.9	0.3	9.5
490353006	Salt Lake	Hawthorne	-5.2	10.8	1.0	11.0
490353013	Salt Lake	Herriman	-12.5	13.2	-5.3	9.5
490450004	Tooele	Erda	-7.6	11.0	-0.4	9.3
490570002	Weber	Ogden	-7.7	10.6	-1.0	8.9
490571003	Weber	Harrisville	-12.5	13.5	-6.0	9.4

June - August Stats for Days with Obs MDA8 O3 $\geq$ 60 ppb

			2016v2 Proposal Modeling		2016v3 Updated Modeling	
Site ID	County	Site	NMB (%)	NME (%)	NMB (%)	NME (%)
490110004	Davis	Bountiful Viewmont	-14.0	14.6	-6.8	9.2
490353006	Salt Lake	Hawthorne	-14.1	16.4	-8.1	11.1
490353013	Salt Lake	Herriman	-16.4	16.6	-9.3	10.9
490450004	Tooele	Erda	-15.9	16.7	-8.6	10.8
490570002	Weber	Ogden	-15.5	15.7	-8.2	9.8
490571003	Weber	Harrisville	-16.4	16.5	-9.4	9.9

Comment

Commenter: Texas Commission on Environmental Quality

Commenter ID: 42

Docket ID: EPA-R06-OAR-2021-0801

Comment:

[T]he TCEQ's use of a weight of evidence approach to determine significant contribution is consistent with the EPA's modeling guidance, "*Modeling Guidance for Demonstrating Air Quality Goals for Ozone, PM2.5, and Regional Haze*" (EPA Modeling Guidance) and the approach laid out in "*Guidance on the Preparation of Clean Air Act Section 179B Demonstrations for Nonattainment Areas Affected by International Transport of Emissions*," (179B Guidance) where a determination of significant contribution is made if sources outside of a nonattainment area impact a nonattainment area in the context of a 179B demonstration. When air quality modeling is used in the context of attainment and 179B demonstrations, the EPA requires states to provide supplemental analysis to support the modeling results, such as local factors and emission trends. However, in the context of the "Good Neighbor" provision, the EPA dismisses the additional analyses provided by the TCEQ as qualitative assessments that, while informative, do not provide quantitative assessments. The EPA's reliance on chemical transport models as the sole arbiter of significant contribution contradicts its own modeling guidance, which states that "…supplemental analyses may provide information which may provide further support for the outcome of the modeled test or *may indicate a different outcome than the modeled test*."[4] (Emphasis added.) It should be noted that the 179B Guidance is prescriptive and lays out a weight of evidence approach that relies on more than source apportionment modeling results to determine impacts from international sources. The EPA's heavy reliance on source apportionment modeling and disregard of additional evidence in the context of interstate transport is arbitrary and inconsistent with its guidance on international transport.

[4] Page 170 of the EPA Modeling Guidance, https://www.epa.gov/sites/production/files/2020- 10/documents/o3-pm-rh-modeling_guidance-2018.pdf

Response

In response to commenter's claims regarding TCEQ's weight of evidence approach to evaluating its significant contribution, which TCEQ indicates was based on guidance under CAA section 179B, CAA section 110(a)(2)(D)(i)(I) and CAA section 179B are different provisions to address different problems and are governed by their own respective requirements, and as such do not require the same approach to implementation. We have addressed this previously in prior ozone transport rules. *See* CSAPR Update, 81 FR 74535-36 (Oct. 26, 2016). As we explained there:

> The specific terms of section 179B outline which nonattainment area requirements will and will not apply upon approval of a section 179B demonstration, none of which apply directly to upwind states via section 110(a)(2)(D)(i)(I). In particular, the good neighbor provision does not require upwind areas to ''demonstrate attainment and maintenance'' of the NAAQS. Rather, the statute requires upwind states to prohibit emissions which will ''contribute significantly to

nonattainment'' or ''interfere with maintenance'' of a NAAQS. While upwind states must address their fair share of downwind air quality problems, the EPA has not interpreted this provision to hold upwind areas responsible for bringing downwind areas into attainment. Therefore, the relief provided by section 179B(a) and (b) from the obligation to demonstrate attainment, extension of the attainment date, and mandatory reclassifications, is simply not applicable to downwind states. Even if section 179B were in some manner applicable to upwind states' transport obligations, the EPA does not believe that the contribution of international emissions should impact EPA's identification of downwind nonattainment and maintenance receptors affected by the interstate transport of emissions. These receptors represent areas that the EPA projects will have difficulty attaining and maintaining the NAAQS, and which therefore require adequate safeguards to protect public health and welfare. The EPA therefore does not agree that, when identifying downwind air quality problems for purposes of interstate transport, section 179B requires that we subtract the contributions of international emissions from the projected design values. This would be inconsistent with EPA's approach to area designations and is simply not required by the plain language of the statute. Moreover, such an interpretation would allow downwind and upwind areas to make no efforts to address clear violations of the NAAQS, leaving the area's citizens to suffer the health and environmental consequences of such inaction. Moreover, just as any state with a nonattainment area—including downwind states—must take reasonable steps to control emissions even where an area is impacted by international emissions, the EPA believes that it is appropriate for upwind states to also adopt reasonable emissions controls to lessen the impact of emissions generated in their state and subsequently transported to downwind areas. As noted in Section IV of the preamble, the EPA does not view the obligation under the good neighbor provision as a requirement for upwind states to bear all of the burden for resolving downwind air quality problems. Rather, it is an obligation that upwind and downwind states share responsibility for addressing air quality problems. If, after implementation of reasonable emissions reductions by an upwind state, a downwind air quality problem persists, whether due to international emissions or emissions originating within the downwind state, the EPA can relieve the upwind state of the obligation to make additional reductions to address that air quality problem. But the statute does not absolve the upwind state of the obligation to make reasonable reductions in the first instance.

We note that the EPA was upheld in its approach to the treatment of international contribution in *Wisconsin*, 938 F.3d at 323-24. See also our response to comment at Section V.C.2 in the preamble.

The EPA's CAA section 179B guidance says nothing to the contrary. As stated in the EPA's *Guidance on the Preparation of Clean Air Act Section 179B Demonstrations for Nonattainment Areas Affected by International Transport of Emissions*, "EPA notes that an upwind state that is considering or has an approved section 179B demonstration must still meet its obligations for contributions to downwind states under CAA section 110(a)(2)(D). Likewise, an upwind state that contributes to a downwind state that is considering or has an approved section 179B demonstration must still meet its obligations for contributions to that downwind state, per CAA section 110(a)(2)(D). Policy governing whether an air agency can take into account emissions emanating from outside the U.S. in developing a plan to meet its interstate transport obligation for any NAAQS is outside the scope of this guidance."

In response to commenters' claims that the EPA did not consider more than source apportionment modeling as part of our evaluation of TCEQ's SIP submission, we disagree that we apply source apportionment modeling as the sole determinant of "significant contribution" nor was it the only information we looked to in evaluating TCEQ's SIP submission with respect to Steps 1 or 2. For example, in projecting average and maximum design values we used the most recent measured ozone design values in conjunction with the modeling results to identify potential nonattainment or maintenance sites in the relevant future years. Further, we reviewed the "weight of evidence" analysis and information provided by TCEQ. As explained in greater detail in the Evaluation of TCEQ Modeling TSD, we did not find that the additional analyses performed by TCEQ provided sufficient evidence to refute the modeling results that indicated that emissions from Texas were linked to downwind nonattainment or maintenance receptors at contributions of 0.70 ppb or greater. Further, although Texas asserted that its weight of evidence analysis is a permissible way to interpret which contributions are ''significant'' because that analysis examines whether there was a ''persistent and consistent pattern of contribution on several days with elevated ozone'' we found that such pattern, as explained in detail in the Evaluation of TCEQ Modeling TSD, is already established by a modeled linkage at Step 2. See Section 8.7 ("Consistent and Persistent" Contribution) of this document. In addition, as described more fully in Section 8.8 (Hybrid Single-Particle Lagrangian Integrated Trajectory (HYSPLIT) Model) below, and in the Final Action AQM TSD, the EPA also performed a back trajectory analysis for projected receptors in 2023 that were identified based on the 2016v3 platform used for this final action. The results of this trajectory analysis confirm the EPA's modeling-based finding that Texas is linked to downwind receptors in 2023.

8.5 Air Quality Factors

Comments

Commenter: Alabama Power Company, Southern Power Company, and PowerSouth Energy Cooperative

Commenter ID: 04

Docket ID: EPA-R04-OAR-2021-0841

Comment:

EPA contends that, under Step 3 of its 4-step framework, Alabama does not provide sufficient evidence "regarding future emissions reduction opportunities beyond pointing to NO_X emission reductions from SIP-approved and Federal measures." EPA goes on to state that Alabama "does not include a sufficient analysis of potential NO_X emission control technologies, their associated costs, estimated emissions reductions, and downwind air quality improvements" to support the claim that the ongoing decline in NO_X emissions from stationary sources in Alabama are sufficient to eliminate any significant contributions from the state. According to EPA, "states generally should prepare an accounting of sources and other emissions activity for relevant pollutants and access potential, additional emissions reduction opportunities." This is exactly what Alabama's SIP submittal package provides. Once again,

EPA's evaluation ignores specific evidence in the record on the continuous decline in NOX emissions expected in Alabama.

Specifically, ADEM presented evidence in comments attached to the SIP submission that NO_X emissions from EGUs in Alabama have decreased from 27,674 tons in 2016 to 14,708 tons in 2021, with similar reductions during the ozone season in particular from 11,612 tons during the 2016 ozone season to 6,648 tons during the 2021 ozone season.[89] Further, the state-wide average emission rate of NO_X from EGUs has dropped by over 35% during that same time period, with an average emission rate in 2021 of 0.043 lb/MMBtu.[90] This is well below EPA's backstop emission rate for coal-fired EGUs of 0.14 lb/MMBtu in its proposed FIP. Therefore, not only are overall emissions decreasing, but sources have taken measures to become better controlled for NO_X in recent years. Clearly, Alabama Power and Southern Power's comments provide evidence to support ADEM's determination that the "overwhelming majority . . . of EGUs are already fully controlled for NOX[.]"

[89] Based on information provided in EPA's Clean Air Markets Database for the State of Alabama and EPA's Ozone Transport Policy Analysis Proposed Rule Technical Support Document.
[90] EPA's Clean Air Markets Database provides that Alabama's statewide NO_X emissions from CSAPR NO_X Annual Program sources in 2016 were 27,674 tons with a total heat input of 810,490,815 MMBtu. This equates to a statewide average emission rate of 0.068 lb/MMBtu. Alabama's statewide NO_X emissions in 2021 were 14,708 tons with a total heat input of 688,699,255 MMBtu. This equates to a statewide average emission rate of 0.043 lb/MMBtu.

Commenter: Louisiana Chemical Association

Commenter ID: 26

Docket ID: EPA-R06-OAR-2021-0801

Comment:

It is significant that all areas of Louisiana have shown ***decreases*** in eight-hour ozone design values over the past 15 years and all areas in Louisiana are below the 2015 ozone NAAQS of 70 ppb.[31] Further, annual point source category emissions inventory data collected since the last periodic emissions inventory, 2014 through 2017, indicates a continued trend of ozone precursor emissions reductions. Anthropogenic emissions have decreased a combined 3% between 2014 and 2017.[32] This fact supports the position that Louisiana sources do not pose ozone problems in state and are even less likely to do so out of state. In light of compliance with the ozone NAAQS throughout Louisiana, it is scarcely plausible that Louisiana emissions are "significantly" contributing to ozone NAAQS issues in Dallas and Houston. It is particularly notable that the design values in the western parishes of Louisiana are among the lowest in the state as show in the chart below of the 2014-2016 DV values from the *2015 Ozone NAAQS Memo*:[33]

220170001	Louisiana	Caddo	……	64
220190009	Louisiana	Calcasieu	……	64
220190002	Louisiana	Calcasieu	……	68

[31] La. SIP Submission, Section 2.3.1.
[32] *Id.*

[33] Results spreadsheet for *2015 Ozone NAAQS* Memo model analysis, available at: https://view.officeapps.live.com/op/view.aspx?src=https%3A%2F%2Fwww.epa.gov%2Fsites%2Fdefault%2Ffiles%2F2018- 05%2Fupdated_2023_modeling_dvs_collective_contributions.xlsx&wdOrigin=BROWSELINK (last accessed 4/15/2022) and in the docket at: EPA-HQ-OAR-2021-0663-0019.

Response

The EPA disagrees that the overall emissions trends or the lack of nonattainment areas in a state, alone, can serve as an adequate basis for determining whether a state contributes significantly to downwind receptors in other states. The EPA's 2016v2 modeling utilized an updated emissions platform and inventory to capture more recent ozone design trends and emissions. The original starting point for the emission inventories used in the 2016v2 modeling was the 2016v1 platform. The 2016v1 data were updated with information and methods from the 2017 NEI, MOVES3, and updated inventory methodologies. Activity data and other inputs provided during the 2016v1 development process were retained in 2016v2 where appropriate.

The EPA responds to the claim that the Alabama Power Company's (and Sierra Club's) comments on Alabama's SIP submission were actually part of rationale supporting Alabama's SIP submission in Section 7.4.

In any event, the EPA does not agree that the EGU emissions trends cited by Alabama Power Company provide evidence that EGUs in Alabama are already fully controlled for NO_X. Many states' EGU emissions trends have been downward in recent years; that does not mean emissions from these sources are not still potentially significantly contributing in violation of the good neighbor provision. To the extent that these downwind trends are attributable to enforceable emissions controls or retirements, these changes would generally already be taken into account in EPA's modeling, which indicates that Alabama still contributes above 1 percent of the NAAQS to one or more downwind receptors. Moreover, even if the average annual emission rate for all EGUs in the state in 2021 was 0.043 lb/MMBtu, this statistic is not inherently meaningful, nor is it sufficient to support a conclusion that Alabama has no unresolved good neighbor obligations for the 2015 ozone NAAQS. Further, pointing to the backstop emission rate for coal-fired EGUs in EPA's proposed FIP is also not helpful to the commenter's case. First, the proposed FIP's level of emissions control is not used as a benchmark for our evaluation of state SIP submissions in this action. More to the point, Alabama Power is comparing an average annual emission rate for all of the EGUs in Alabama, irrespective of the fuel used (e.g., including natural gas-fired facilities), with the proposed FIP's backstop daily emission rate, which is for large coal-fired EGUs and would be applied on a unit-specific basis.

In response to Louisiana Chemical Association, the EPA does not agree that ozone design values in Louisiana or anthropogenic emission trends from 2014-2017 have not discount EPA's robust investigation into whether emissions from Louisiana are leaving the state and potentially significantly contributing to nonattainment or maintenance in other states. While the EPA acknowledges that all areas in Louisiana are currently in attainment for the 2015 ozone NAAQS and it may be the case that overall anthropogenic ozone-precursor emissions trends decreased from 2014 and 2017 in the state, the EPA disagrees that this establishes that continuing emissions from Louisiana are not significantly contributing to nonattainment or interfering with maintenance in other states. Emission inventories utilized for EPA's 2023 modeling include increases and reductions in anthropogenic emissions in

Louisiana. Neither the state or other commenters supplied information that there were such a degree of additional reductions that EPA had not already characterized in the 2023 modeling that would result in changes to the impacts from Louisiana's emissions, such that the state would not be linked to receptors in Texas. Nor did the state supply a satisfactory Step 3 analysis regarding its continuing emissions. 87 FR 9814-9816.

8.6 Cost Thresholds

Comments

Commenter: Alabama Power Company, Southern Power Company, and PowerSouth Energy Cooperative

Commenter ID: 04

Docket ID: EPA-R04-OAR-2021-0841

Comment:

Furthermore, EPA states that cost-effectiveness of available emission reductions must be evaluated at Step 3 but then ignores the discussion on the availability of cost-effective emissions reductions included in the materials attached to ADEM's SIP submission. Specifically, this evidence shows that EGUs in the state cannot make any further cost-effective NOX reductions. For example, NOX was emitted from EGUs in Alabama at an average rate of 0.04 lbs/MMBtu during the 2021 ozone season. This rate already meets the aggressive rate that EPA has Indicated would be considered cost-effective for coal units retrofitted with new selective catalytic reduction ("SCR") beginning in 2026. More specifically, only 3 of the 84 EGUs in Alabama have been identified by EPA as potentially eligible for cost-effective controls, but each of these units, as demonstrated below, is, in fact, either already controlling NOX emissions in a cost-effective manner, or will have changed to lower emitting fuel prior to the 2023 ozone season. In light of this, none of the EGUs in Alabama can reduce NOX further in a cost-effective manner.

[Information about Plant Gaston Unit 5, Plant Barry Unit 4, and Plant Harris Unit 1A]

Because no cost-effective reductions are, in fact, available from any of these units, which are the only units from which such reductions could potentially be considered,[101] then no units in Alabama can be regarded as causing significant contribution to or interference of maintenance with downwind receptors. EPA must consider this analysis in its final action on Alabama's 2022 SIP.

[101] [EPA, Appendix A: Proposed Rule State Emission Budget Calculations and Engineering Analytics, available at https://www.epa.gov/csapr/good-neighbor-plan-2015-ozone-naaqs.]
[102] 87 Fed. Reg. at 64,420.

Commenter: Arkansas Department of Energy and Environment, Division of Environmental Quality

Commenter ID: 07

Docket ID: EPA-R06-OAR-2021-0801

Comment:

Although DEQ did not identify any emissions sources or activities within the state as "significantly" contributing to nonattainment or interfering with maintenance in another state, DEQ performed a cost analysis for NOx emission reductions from the highest emitting sources in Arkansas. DEQ ultimately focused its evaluation of costs of potential control strategies on EGUs, but only after evaluating NOx emissions from all elevated emission sources in Arkansas. DEQ observed during evaluation a natural break between EGUs and non-EGUs when it examined the top NOx emitting sources in the state. The highest-emitting non-EGU emitted less than half of the emissions from the lowest-emitting EGU. This was a reasonable breakpoint for emissions data. Additionally, DEQ focused the analysis in this manner using the framework EPA used for selecting sources for a reasonable progress analysis in their Regional Haze FIP for Arkansas.

For context, in the 2016 Arkansas Regional Haze FIP, now replaced by approved Arkansas SIP revisions, EPA performed a reasonable progress analysis to determine whether any additional control strategies were necessary to ensure reasonable progress towards natural visibility conditions in the 2008 – 2018 time period. In starting their analysis, EPA analyzed SO_2 and NOx emissions inventories for point sources and identified three facilities, which the EPA determined were the largest contributors to these emissions. Collectively, these facilities were responsible for 84% of point SO_2 point source emissions and, more directly related to the Arkansas Transport SIP submittal, 55% of NOx point source emissions in the state. EPA decided not to perform further evaluations of lower-emitting non-EGU sources. DEQ drew a similar line in the natural break between EGUs and non-EGUs in their contribution to NOx emissions with consideration of the fact that the lowest-emitting EGU emits over double that of the highest emitting non-EGU facility in the state. If considerations of the largest emitters and natural break points are an adequate argument for source selection for emission reduction strategy analysis when provided by EPA, then such arguments should be equally adequate when provided by the state in which the argument applies.

DEQ did not define a bright line threshold for what control strategies the state considers cost-effective. DEQ did, however, note that its cost analyses showed that the cost-effectiveness values of controls greatly exceeded metrics that EPA used in past ozone transport federal implementation plans. In DEQ's most recent Regional Haze Planning Period II SIP draft, DEQ provides updated cost-effectiveness values in 2019 dollars for SCR and SNCR at Flint Creek and at Independence Units 1 and 2 with a calculated range of $5,771 to $24,084 for implementation of these controls. In consideration of the cost-effectiveness threshold of $5,086 for EGUs in the Regional Haze context, the cost of implementing SCR and SNCR exceeds what the state considers reasonable, especially when considering the remaining life-time of facilities such as White Bluff and Independence, which are set to cease coal-fired operations in 2028 and 2030, respectively. For comparison, EPA's proposed FIP costs of control averaging $11,000 per ton (for coal-fired EGUs) and $7,700 per ton (for oil- and gas-fired EGUs) is beyond excessive and lacks consideration of factors known by EPA, such as scheduled facility closures. This is much higher than costs considered reasonable for other Clean Air Act programs. For context, refer to EPA's Regulatory Impact Analysis for the Final Revised Cross-State Air Pollution Rule (CSAPR) Update for the 2008 Ozone NAAQS 2021, Regulatory Impact Analysis of the Cross-State Air Pollution Rule (CSAPR) Update for the

2008 National Ambient Air Quality Standards for Ground-Level Ozone, 2016, and DEQ's compilation of costs for the Regional Haze planning period two SIP.

Commenter: Air Pollution Control Program, Missouri Department of Natural Resources

Commenter ID: 01

Docket ID: EPA-R07-OAR-2021-0851

Comment:

EPA is intentionally exploiting the Supreme Court decision in EME Homer City vs. EPA to justify any costs or requirements it deems necessary to further federal policy decisions. The court decision permitted EPA to impose cost effective controls on any state that was deemed to be a significant contributor so long as such controls don't result in over-control of any state. However, the decision did not indicate what might be considered "cost effective controls". For this reason, EPA is using this decision to assume new authority to implement anything it deems as a "cost effective control" requirement.

Commenter: Oklahoma Department of Environmental Quality

Commenter ID: 37

Docket ID: EPA-R06-OAR-2021-0801

Comment:

The Proposed Disapproval Excludes Quantification of Cost-Effective Controls and Is Therefore Deficient

EPA's proposed disapproval of the Oklahoma SIP is *prima facie* deficient because it fails to include a quantification of the cost-effective controls from Step 3 of the CSAPR framework (i.e., EPA did not complete "prong 2" in the proposed disapproval). It is impossible to determine whether a state meets or fails to meet its good neighbor obligations under Section 110(a)(2)(D)(i)(I) of the CAA without satisfying *both* prongs of the two-prong CSAPR determination (i.e., prong 1 is completion of steps 1 and 2 of the CSAPR 4-step framework, and prong 2 is completion of steps 3 and 4). EPA claims it has satisfied the first prong establishing a linkage between Oklahoma emissions and downwind air quality problems. Oklahoma disagrees with the reasoning behind that claim. However, even granting that claim (for the sake of argument only), EPA makes no attempt to complete step 3 of the CSAPR framework (i.e., prong 2). That is, in the proposed disapproval, EPA makes no effort to quantify the cost-effective NOx emissions reductions that will yield sufficient downwind air quality benefits. EPA may argue that the quantification of those NOx emission reductions occurs after the fact in the development of the FIP. However, until a FIP is finalized, EPA has failed to complete its evaluation of the Oklahoma SIP. As such EPA establishes an inappropriate burden, requiring states to look into the future, anticipate EPA's work on federal rulemaking, and incorporate those anticipated findings in a SIP submitted years before EPA is set to begin its efforts. This process is arbitrary and capricious, and it subverts the principle of cooperative federalism enshrined in the CAA.

EPA states in the proposed disapproval:

> The 2015 ozone NAAQS is a more stringent and more protective air quality standard, it is reasonable to expect control measures or strategies to address interstate transport under this NAAQS to reflect higher marginal control costs. As such, the marginal cost threshold of $1,400/ton for the CSAPR Update (which addresses the 2008 ozone NAAQS and is in 2011$) is not an appropriate cost threshold and cannot be approved as a benchmark to use for interstate transport SIP submissions for the 2015 ozone NAAQS. 87 Fed. Reg. 9823.

ODEQ takes exception with this statement on a fundamental level. As technological advances and innovations occur in the environmental field, it should not be considered a foregone conclusion that control equipment must increase in cost over time. EPA should not dismiss outright that control measures equivalent in cost to previous iterations of the ozone NAAQS could be sufficiently protective for downwind states, especially if EPA is also expecting non-electric generating units (non-EGUs) to be considered for possible reductions.

[…]

EPA's Proposal is a Fundamental Change in Policy and is Not in Line With Previous CSAPR Policy-Making

As mentioned previously, under current EPA policy it is not possible for a state to be certain that any quantity of NOx emissions reductions will comply with the good neighbor requirements without waiting for the completion of Step 3 of the CSAPR framework. Because Step 3 is to be undertaken during the development of the FIP, it is appropriate to note that the approach adopted by EPA in its proposed FIP represents a substantive change in policy, rather than an extension of the current approach. EPA's CSAPR approach was challenged in the courts and survived those challenges, giving EPA confidence in the fundamental appropriateness of actions taken previously. However, the previous CSAPR remedies constitute a different policy approach than the present EPA proposed action, which has metamorphosed into a form substantively different from its previous versions.

Response

Substantive comments on the proposed FIPs, including the proposed cost-effectiveness thresholds therein, are outside the scope of this action and will not be addressed.

This action is not determining what, if any, cost effective controls exist at Step 3 of the 4-step interstate transport framework, and the EPA disagrees that it must include a quantification of cost-effective controls to be able to disapprove the SIP submissions at issue in this action. *See EME Homer City*, 572 U.S. at 509. Instead, the EPA is evaluating the states' interstate transport SIP submissions to determine whether they satisfy the statutory obligations of CAA section 110(a)(2)(D)(i)(I). Where a state put forward an assessment of what it considered to be cost-effective, the EPA assessed that claim for approvability. *See e.g.*, 87 FR 64426 (Alabama), 87 FR 9810 (Arkansas), 87 FR 9822-9823 (Oklahoma).

EPA further disputes that the Agency is "intentionally exploiting the Supreme Court decision in EME Homer City vs. EPA to justify any costs or requirements it deems necessary to further federal policy

decisions." EPA is not promulgating any requirements in this action. If the commenter is referring to the proposed FIP, the comment is out of the scope of this action.

Alabama Power Company et al. suggest there are no cost-effective controls available from any EGUs in Alabama. The EPA disagrees with the assertion that the information provided in their comment letter is sufficient evidence to support ADEM's claim that the majority of EGUs in Alabama are already fully controlled for NO_X. Commenter claims that in the proposed FIP, the EPA identified only three EGUs (Plant Gaston Unit 5, Plant Barry Unit 4, Plant Harris Unit 1A) for which there are potential cost-effective controls. Commenter asserts that these units are already adequately controlling NO_X emissions or will change to lower emitting fuel by 2023. First, those changes were not included in Alabama's transport SIP to be approved as permanent and enforceable emissions-control requirements so they cannot be relied upon. The Good Neighbor provision requires the "prohibition" of emissions that significantly contribute in the SIP itself. Second, these statements made about the three identified units do not satisfy a Step 3 multifactor analysis that more comprehensively analyzes emissions control opportunities across the state of Alabama. The SIP submission is insufficient to support a conclusion that Alabama has no outstanding obligations under CAA section 110(a)(2)(D)(i)(I). Whether Alabama may be shown through a full assessment of emissions control opportunities to have a substantial additional amount of emissions control opportunity or only very little, anecdotal information regarding the emissions profile of a small number of units does not replace an approvable Step 3 analysis by a state regarding the identification of emissions that significantly contribute for purposes of the 2015 ozone NAAQS. *See also* Section 8.3 addressing a similar comment raised by MDE.

The EPA explained the deficiencies with Arkansas' cost-effectiveness analysis in the proposal. 87 FR 9810. There, the EPA also emphasized that "Relying on the CSAPR Update's (or any other CAA program's) determination of cost-effectiveness without further Step 3 analysis is not approvable. Cost-effectiveness must be assessed in the context of the specific CAA program; assessing cost-effectiveness in the context of ozone transport should reflect a more comprehensive evaluation of the nature of the interstate transport problem, the total emissions reductions available at several cost thresholds, and the potential air quality impacts of those reductions at downwind receptors." *Id.* The EPA similarly disagrees with the comment that analysis conducted under the regional haze program is appropriate for conducting a cost-effectiveness analysis in the context of the good neighbor provision. Regional Haze is a different program, with a different purpose. Typically, the analysis of cost-effectiveness in the context of regional haze involves a detailed, facility-specific evaluation of multiple potential control technologies and is weighed with other statutory factors. The result of a BART five-factor or Reasonable Progress four-factor analysis is typically a control determination coupled with an enforceable emissions limit. Even if a similar approach could be applied to interstate ozone transport (and we note again there are many differences between these programs), Arkansas did nothing of this kind in its SIP submission. Finally, the "break point" that ADEQ identified between non-EGUs and EGUs was based solely on a comparison of emissions, with no examination of emissions-reduction potential or relative cost-effectiveness of such options. As such, this was not an approval basis on which to exclude non-EGU emissions sources from further analysis.

The EPA explained the deficiencies with Oklahoma's cost-effectiveness analysis in the proposal. 87 FR 9822-9823. As for the concern raised by ODEM that the marginal cost threshold for the less protective 2008 ozone NAAQS may in fact be suitable for the more protective 2015 ozone NAAQS due to advances

in technology and in consideration of reductions in emissions from non-EGUs, the commenter did not provide sufficient evidence to support a finding that a marginal cost threshold of $1,400/ton from the CSAPR Update is appropriate for EGUs in Oklahoma for the 2015 ozone NAAQS or that applying that cost-effective threshold on EGUs in the state would resolve the state's good neighbor obligations for the 2015 ozone NAAQS. In any event, states may not rely on FIPs in a SIP submission, as discussed in more detail in the preamble in Section V.B.9.

Comments on cooperative federalism are addressed in Section 10.3.

8.7 "Consistent and Persistent" Contribution

Comments

Commenter: Arkansas Department of Energy and Environment, Division of Environmental Quality

Commenter ID: 07

Docket ID: EPA-R06-OAR-2021-0801

Comment:

EPA's proposed disapproval points out that DEQ concluded that the CAMx modeled potential linkage to Allegan County was not "persistent or consistent" without defining what is meant by "persistent" or "consistent." Of the 608 back-trajectories evaluated for those ninety-five elevated ozone days, only 6.74% of those back-trajectories passed through Arkansas with the number varying greatly from year to year (i.e., 93% did NOT pass through Arkansas). Although DEQ did not define a bright line for "persistent and consistent," swings in linked elevated ozone day back trajectories from year to year shows a lack of consistency. The very low percentage of back trajectories' paths that passed through Arkansas prior to reaching Allegan County on high ozone days indicates that impacts from Arkansas sources to Allegan County are not persistent. DEQ did not perform this analysis for the Texas receptors because those receptors did not meet DEQ's threshold for a potential linkage based on the data available at the time of SIP development.

Commenter: Association of Electric Companies of Texas, BCCA Appeal Group, Texas Chemical Council and Texas Oil & Gas Association

Commenter ID: 11

Docket ID: EPA-R06-OAR-2021-0801

Comment:

D. EPA should not rely on anomalous 2012 modeling results in determining linkages between Texas and Colorado and other western states.

EPA appears to rely in part on purported linkages between Texas and Colorado and western states based on a selective interpretation of TCEQ's 2012-based platform modeling. Such an inference would be erroneous. 2012 was an extreme ozone event year for Colorado and other western states. EPA should not rely on 2012 modeling results to determine whether Texas contributes significantly to nonattainment or interferes with maintenance of NAAQS in those states. Data from 2012 shows that it was among the highest ozone years since 2005 to 2007, even when statistically adjusting for meteorological variability. [footnote: Attachment 1, at 13-14.]

In Texas's SIP submission, TCEQ identified monitors in Colorado which were appropriate for additional investigation but, based on its analysis, determined that emissions from Texas did not contribute significantly to nonattainment or interfere with maintenance at the tagged Colorado monitors. TCEQ's HYSPLIT trajectory analysis, in particular, showed that the vast majority of observed high ozone days from 2007 through 2016 at the linked Colorado monitors were not associated with transport from or near Texas, supporting TCEQ's claim that there was not a persistent and consistent pattern of contribution from Texas sources. TCEQ's conclusion that Texas does not contribute significantly or interfere with maintenance of the NAAQS at the linked Colorado monitors is consistent with EPA's modeling, using base years of 2011 and 2016, which did not link Texas to ozone monitors in Colorado.

[From Attachment 1 - Technical Comments on Air Plan Disapproval; Arkansas, Louisiana, Oklahoma, and Texas; Interstate Transport of Air Pollution for the 2015 8-Hour Ozone National Ambient Air Quality Standards; Docket No. EPA-R06-OAR-2021-0801 prepared by Sonoma Technology:]

With minor deviations, TCEQ used EPA's 4-Step Transport Framework in its Texas Transport SIP submittal. As part of "Step 1" TCEQ identified nonattainment/maintenance monitors in Colorado. In "Step 2" TCEQ reported modeling suggesting Texas' anthropogenic emissions contributing more than 0.70 ppb of ozone on high modeled ozone days. However, in "Step 3" TCEQ found the emissions from Texas did not contribute significantly to nonattainment or interfere with maintenance at the tagged Colorado receptors. In support of these observations, we note that multiple rounds of transport modeling conducted by EPA using base years of 2011 and 2016 did not link Texas to ozone monitors in Colorado, as the modeled contributions for future year 2023 were below the 0.75 ppb or 0.70 ppb thresholds (1% of the applicable NAAQS). The use of a different base year by TCEQ (2012), compared to EPA's transport modeling (2011 and 2016), was likely the biggest contributing factor as to why TCEQ's modeling showed larger ozone contributions from Texas at the Colorado monitors. Nationally, 2012 was among the highest ozone years since 2005-2007 even when statistically adjusting for meteorological variability (Figure 2). 2012 appeared to be a relatively high ozone year in Colorado as well, and there were a larger number of extreme events in Colorado in 2012 compared to other years (*see* Figure 3-41 of TCEQ's Transport SIP). The HYSPLIT trajectory analysis conducted by TCEQ as part of its SIP submittal showed that the vast majority of *observed* high ozone days from 2007 through 2016 at the tagged Colorado monitors were not associated with transport from or near Texas, supporting TCEQ's position that there was not a persistent and consistent pattern of contribution from Texas. The number of trajectories that did originate from Texas on the high *observed* ozone days was higher in 2012 compared to other years, indicating a connection between the high ozone year and anomalous regional meteorological conditions. EPA's modeling from 2011 and 2016, did not show such a pattern of transport in at least two other years that were, on average, also conducive to high ozone. Accordingly, TCEQ's 2012-based modeling results suggesting a link to Colorado and other western states appears to

be anomalous, and not reflective of a meaningful and sustained link between Texas and ozone values in those states.

Commenter: Cleco Corporate Holdings LLC

Commenter ID: 14

Docket ID: EPA-R06-OAR-2021-0801

Comment:

The LDEQ HYSPLIT modeling demonstrates the absence of a persistent and consistent pattern of contribution of pollutants to Texas monitors from Louisiana.

Commenter: Louisiana Electric Utility Environmental Group

Commenter ID: 28

Docket ID: EPA-R06-OAR-2021-0801

Comment:

EPA's analysis of Louisiana's approach for defining significant contribution with respect to whether there is a "persistent and consistent" pattern of contribution from the state appears largely focused on explaining that the state's approach is inferior to EPA's rather than on explaining why the state's determination does not comport with the CAA.

Accordingly, EPA's Proposed Disapproval of Louisiana's SIP falls short and EPA has overstepped its authority under the CAA. EPA should re-evaluate Louisiana's SIP on the basis of whether the SIP meets the applicable requirements of the CAA, not on the basis of whether Louisiana made different choices than EPA would have made had it been the decision-maker with respect to fulfilling the state's Good Neighbor obligation to address interstate transport of ozone under Section 110(a)(2)(D)(i)(I) of the CAA. EPA also must avoid any policy determinations or a desire to adopt a "national ozone transport policy" in evaluating Louisiana's SIP.

Commenter: Texas Commission on Environmental Quality

Commenter ID: 42

Docket ID: EPA-R06-OAR-2021-0801

Comment:

The EPA mischaracterizes the purpose and analytic details in the TCEQ's weight of evidence, invalidating the EPA's conclusions regarding the impact of Texas emissions.

In the "*EPA Region 6 2015 8-Hour Ozone Transport SIP Proposal Technical Support Document*" the EPA states that the TCEQ used its weight of evidence to counter the modeling results. This is a misinterpretation of the purpose of the weight of evidence. The TCEQ used the weight of evidence not to determine if Texas contributed *at all* to linked monitors but rather to determine if Texas contributes to those monitors *significantly and persistently*.

Response

In the proposed disapprovals, the EPA explained its assessment of claims at Step 3 made by several states that there is not a "persistent and consistent" level of contribution from their states to receptors. See 87 FR 9808-9809 (Arkansas); 87 FR 9812-9815 (Louisiana); 87 FR 9831-9834 (Texas). *See also* Evaluation of TCEQ Modeling TSD, at 76-100.[79] As explained at proposal, these arguments are in effect an attempt to dispute the contribution finding at Step 2.

> To be clear, the modeling establishing linkages of [Arkansas/Louisianas] to downwind nonattainment and maintenance receptors already establishes that there is a consistent and persistent pattern of contribution on elevated ozone days from [these states] to other states. That is because EPA's methodology for projecting future year ozone concentrations accounts for precisely these concerns . . . by looking only at days with elevated ozone levels.

87 FR at 9808, 9814. (The EPA has acknowledged an inadvertent error in our description of the Step 2 analysis in this language from proposal (see Section 11.9 – Typographical Concerns), but the quoted language adequately conveys the intended meaning. The EPA further explains this point below in relation to the same arguments raised by TCEQ.).

While the EPA rejects that a so-called "persistent and consistent" analysis of contribution is appropriate to excuse states from analysis of emissions control opportunities at Step 3 (again, because the fact that a state's emissions "contribute" to high ozone levels at receptors is already established at Step 2), the EPA further evaluates here several aspects of this issue as raised by commenters.

The EPA notes that ADEQ only provided a "persistent and consistent" analysis for the Allegan, Michigan receptor and did not provide a "persistent and consistent" analysis for receptors in Texas that Arkansas was linked in EPA's 2011 base year modeling that ADEQ's SIP used. The EPA notes that both the EPA's 2016v2 base year modeling used at proposal and the latest 2016v3 modeling for this final action continue to identify that Arkansas is linked to Texas receptors with a maximum contribution of 1.21 ppb to a receptor in Brazoria County Texas (AQS Site ID 480391004). As discussed in the proposed disapproval, the EPA does not agree that ADEQ's analysis for Allegan, Michigan receptor showed that Arkansas's contribution was not "persistent and consistent." Furthermore, this point is not necessary to support disapproval, because Arkansas did not present such arguments as to its linkages to multiple receptors in Texas.

The EPA disagrees that it mischaracterizes the TCEQ's weight of evidence analysis. TCEQ's comment is not exactly accurate as the EPA appreciates that the state was indeed attempting to argue at Step 3 that contributions found at Step 2 are not "significant." However, the EPA's point is that the basis for that

[79] Evaluation of TCEQ Modeling TSD (EPA-R06-OAR-2021-0801-0002) in Docket ID No. EPA-R06-OAR-2021-0801.

argument (i.e., the degree of persistence or consistency in the contribution) is not supportable as a Step 3 factor when the Step 2 analysis has already confirmed that the contribution from a state is in fact impacting receptors on the days when they are projected to have high ozone levels. The ozone transport modeling conducted by the TCEQ and the EPA already factors in whether contribution is sufficient to be considered "consistent and persistent" when determining projected contributions. In calculating contribution from a state to a particular receptor, the EPA averages the MDA8 concentrations for the top 10 modeled ozone concentration days in the future year (in this case 2023) at the receptor and averages the corresponding 8-hour average contributions for each of these same days from each state. Then the EPA divides the 10-day average contribution for each state by the corresponding 10-day average concentration to obtain a Relative Contribution Factor (RCF) for each state at each monitor. The EPA requires there be at least 5 days in which the model-predicted concentration days are equal to or greater than 60 ppb in the future year before determining a state's contribution. TCEQ's method for calculating contribution differs from the EPA's in the selection of days used but still uses up to 10 days (with a minimum of 5 days) for calculating the average contribution in determining linkages. Thus, both TCEQ's modeling and the EPA's modeling inherently consider whether a state's contribution is sufficiently persistent and consistent, and TCEQ's "weight of evidence" approach fails to demonstrate that contribution from Texas to downwind receptors is not consistent and persistent.

Therefore, the EPA's view is that the modeling results from multiple modeling analyses using the top 5 to 10 high-ozone days for contribution analysis already establish that a so-called "persistent and consistent" linkage exists. In addition to TCEQ's modeling showing linkages on this basis to receptors in the western U.S., in this case there is also the EPA's modeling results for 2023 working from a 2011 base period and 2016 base period that show linkages from Texas to other areas. The EPA's review in the proposal indicated that Texas' emissions have linkages to downwind receptors in other states with a variation of receptors due to different meteorology and emissions base periods resulting from the use of different modeled years (see 87 FR 9833-9834). The EPA also indicated on page 100 of the Evaluation of TCEQ Modeling TSD:

> Other factors/WOE analysis does not provide sufficient compelling technically supported information to counter the conclusions from photochemical modeling in terms of linkages from Texas to downwind receptors.
>
> TCEQ indicated that Texas contribution should be deemed "significant" only if there is a persistent and consistent pattern of contribution on several days with elevated ozone. We note that modeling for three different years of meteorology (2011, 2012, and 2016) have all indicated that Texas was linked to downwind nonattainment and/or maintenance receptors. We think this consistent result indicates that Texas's emissions are substantial enough to link Texas to downwind receptors, under varying assumptions and meteorological conditions which further indicates that there is a persistent pattern of Texas' emissions contributing above 1 % to ozone at downwind nonattainment and/or maintenance receptors.

The EPA evaluated each component of the analysis that TCEQ included in their weight of evidence analysis and concluded that the information was not sufficient to refute or counter the modeling results showing linkages.

Regarding comments as to whether the EPA should utilize TCEQ's 2012 based modeling results in disapproving TCEQ's SIP: As noted in the proposal (87 FR 9832-9834) and the Evaluation of TCEQ Modeling TSD, the EPA has concerns with some of the details of TCEQ's HYSPLIT back trajectories, including how some were screened out, which limits the conclusions that can be drawn from TCEQ's HYSPLIT analysis and does not refute the modeling findings indicating linkages. *See also* Section 8.8 (Hybrid Single Particle Lagrangian Integrated Trajectory (HYSPLIT) Model). Still, as at proposal, TCEQ's conclusions that 2012 had more back trajectories that reached Texas than most years for many of the Colorado monitors appears consistent with TCEQ identifying linkages to Colorado when the EPA's 2016 based modeling did not (FR 87 9833).

Based on the information available, the EPA tends to agree with the comment that the use of a different base year by TCEQ (2012), compared to the EPA's transport modeling (2011 and 2016), was likely the biggest contributing factor as to why TCEQ's modeling showed larger ozone contributions from Texas at the Colorado monitors. EPA does not agree that 2012 was necessarily an anomalous year or was an extreme year for ozone in Denver, but meteorology did seem to favor high ozone concentrations in the west and transport of Texas' emissions to this region compared to other years that the EPA has modeled.[80] The EPA's modeling of other years has continued to show that Texas has linkages with other areas of the U.S. But for purposes of this disapproval action, the EPA does not agree that TCEQ's 2012 based modeling results indicating linkages to receptors in the western U.S. should be entirely discounted or ignored.

Overall TCEQ's modeling showed linkages for a year that may have favored higher ozone in the western U.S. and the EPA's 2011 base year modeling and EPA's 2016v2 modeling both indicated Texas had linkages to other areas of the U.S. (likely due to differing meteorology as the commenter noted) that was cited in the proposed disapproval. TCEQ's 2023 (2012 base meteorology) and the EPA's 2023 modeling (2011 and 2016 base meteorology) have consistently shown that Texas' anthropogenic emissions are large enough to result in linkages to receptors in downwind states even with differing meteorology and base periods that have resulted in different linkages. The EPA has also conducted HYPSLIT analysis for the Midwest area receptors that Texas is linked in the EPA's 2016v3 modeling (see Section 8.8) that indicates Texas is often an upwind contributing state during the 12 years of exceedances for which back trajectories were performed, thus indicating that the EPA's modeled linkages using CAMx are robust and not anomalies.

In response to LEUEG's claim that the EPA failed to appropriately demonstrate that Louisiana's Step 3 arguments were inadequate and, instead, only drew a comparison of the state's Step 3 analysis to its own Step 3 analysis the EPA typically applies when determining significant contribution, the EPA disagrees. Independent of how the EPA has typically performed a Step 3 analysis, the EPA identified critical flaws with LDEQ's Step 3 analysis. 87 FR 9812-9816. Instead of conducting analysis to determine whether and to what degree emissions from Louisiana should be prohibited to eliminate emissions that will contribute significantly to nonattainment in or interfere with maintenance of the 2015 ozone

[80] Even if these conditions were "extreme" or "anomalous," neither commenter or TCEQ adequately justifies why these conditions would not merit mitigation under the Good Neighbor Provision in light of the statutory obligation to resolve "interference with maintenance" of the NAAQS in other states, including through recognition of interannual variability in air quality. *See* 87 FR at 9820 (discussing *North Carolina*, 531 F.3d 896, 909-11, and subsequent case law).

NAAQS in other states, LDEQ's SIP submission attempts to downplay linkages between Louisiana and downwind receptors by alleging that Louisiana's contribution to these receptors is not sufficiently "consistent and persistent." Irrespective of the EPA's historical approach at Step 3, we reject that this can be a valid factor for analysis at Step 3 when this degree of linkage is already established at Step 2, for the same reasons as explained above in relation to TCEQ's arguments.

LDEQ relied on their HYSPLIT analysis and general wind rose analysis to support their assertion that there was not a "persistent and consistent" pattern of contribution. The EPA indicated in the proposal that LDEQ's trajectories on ozone exceedances days at receptors in Texas indicated they passed through Louisiana 28% of the time (28% of the 99 trajectories). LDEQ proffered that some of these back trajectories did not pass directly over areas with emissions, but the EPA noted that LDEQ did not consider that the back trajectories only represent a centerline and there are areas on either side of the centerline that would also be contributing areas. Further, in the EPA's view, back trajectories occurring over an upwind state 25% of the time represents a relatively large percentage of time and robustly confirms rather than calls into question the EPA's modeling results. LDEQ's analysis did not provide evidence that was contrary to the conclusions of the EPA's photochemical modeling analyses, regardless of whether this is considered relevant at Step 3 or Step 2 (though, again, the EPA views this as a Step 2 question).

As explained in the Air Quality Modeling Technical Support Document for 2015 Ozone NAAQS Transport SIP Proposed Actions included in Docket ID No. EPA-HQ-OAR-2021-0663, the modeling that both the EPA and LDEQ relied on already establishes a sufficiently persistent and consistent contribution because the contribution analysis relies on an average contribution over 10 days. Based on the 2016v3 modeling for this final action, Louisiana is linked to 7 receptors in Texas. The table below provides a count of the number of days that Louisiana contributes above 0.70 ppb, 2 ppb, 5 ppb, and 10 ppb during the top 10 concentration days used to calculate Louisiana's average contribution metric value at each of these receptors. The data indicate that Louisiana contributes at or above the 0.70 ppb screening threshold on nearly all of the top 10 concentration days at each receptor. In fact, Louisiana contributes ozone in amounts greater than or equal to 5 ppb and, in some cases greater than or equal to 10 ppb at 6 of the 7 receptors. These data serve to confirm that there is a "persistent and consistent" pattern of high contributions to receptors in Texas from emissions sources in Louisiana.

Table 8-2

AQS SiteID	County	Site Name	Days Greater Than or Equal to 0.70 ppb	Days Greater Than or Equal to 2 ppb	Days Greater Than or Equal to 5 ppb	Days Greater Than or Equal to 10 ppb
482010055	Harris	Houston Bayland Park	8	7	5	2
482010024	Harris	Houston Aldine	8	5	4	1
481210034	Denton	Denton Airport	8	6	2	0
481671034	Galveston	Galveston	8	8	7	5
482011035	Harris	Clinton	9	6	5	2
482011034	Harris	Houston East	9	6	5	2
480391004	Brazoria	Manvel Croix Park	9	7	5	1

Accordingly, LDEQ's approach is flawed, and as a result, Louisiana's SIP submission fails to support a conclusion that it satisfies the statute's requirement of prohibiting any source or other type of emissions activity within the State from emitting air pollutants which will contribute significantly to or interfere with maintenance of the NAAQS in other states. The EPA responds to comments about EPA's statutory authority under the CAA in Section 10.3 (Cooperative Federalism and the EPA's Authority).

8.8 Hybrid Single-Particle Lagrangian Integrated Trajectory (HYSPLIT) Model

Comments

Commenter: Alabama Department of Environmental Management

Commenter ID: 02

Docket ID: EPA-R04-OAR-2021-0841

Comment:

Meteorological Influence

Part of the WOE analysis submitted with the revised SIP in April evaluated the meteorology associated with high ozone days at the Denton and Harris County, Texas monitors. Additional analysis has been completed to attempt to further flesh out some of the issues with the meteorology.

As presented in the analysis, back trajectories were included for both the Harris County and Denton County, Texas receptors for high ozone days (8-hr ozone greater than 70 ppb). Additionally, an assessment of Alabama's air quality during and previous to those high days was provided. In part, we have modified our analysis to be consistent with the form of the standard and the resulting back trajectories are included (Figures 5 – 32). For the 4 highest 8-hr ozone days over the 2019-2021 period (27 days total for both receptors), for both areas (Denton and Harris County), on only one of the days

does the back trajectory pass through Alabama, specifically June 18, 2021 for the Harris County receptor, and June 19, 2021 for the Denton County receptor. On both of those days, the plume centerline passes over western and northern Alabama. Looking at the emissions sources of NOx in those areas, primarily EGU NOx, there are no large industrial NOx sources in those areas.

[Figures 5-32 available in full comment]

For the Harris County receptor, wind roses were developed for the 2016 calendar year (Figure 33), as well as the top 10 8-hr ozone days for the year. For the yearly wind rose, the Harris County receptor (482010055) wind rose is not in line with wind roses at the other monitors in the area. In particular, other Harris County monitors show a predominant north/south component, while the wind rose for the Harris County receptor (482010055) shows a distinct east/west component. Monitors closer to the bay in east Houston that would logically reflect a bay breeze don't during 2016. Subsequently, a 2017 wind rose (Figure 34) was generated for the monitors, and the Harris County receptor is more in line with the other monitors. Since the meteorology for 2016 was forecast to 2023 and beyond, the differences in the wind roses is important. Also identified on the map (Figures 43 and 44) are the maximum concentrations from Alabama NOx sources. It should be noted that the higher concentrations are on the west side of Houston, and lower on the east side, which lies closer to Alabama.

[Figures 33-34 available in full comment]

Next, wind roses were developed for the top 10 ozone days, consistent with the way EPA summarizes calculating high ozone days, to evaluate the wind flow regionally. The meteorological site is very close in proximity to the Harris County receptor (482010055). The resulting wind roses show varied wind patterns on the 10 highest days (Figures 35-44). Five of the ten days had a significant number of calms (40+%). Several of the days, five in total, appear to show wind flow patterns that do not line up with possible impacts from Alabama. On a majority of the days, the winds are generally less than 10 mph. Given the calm to low wind speeds identified on these wind roses, higher concentrations on these days are likely due to recirculation.

Commenter: Alabama Power Company, Southern Power Company, and PowerSouth Energy Cooperative

Commenter ID: 04

Docket ID: EPA-R04-OAR-2021-0841

Comment:

Specifically, ADEM's SIP submission package identifies multiple factors that support its analysis: (1) meteorological influence[.]

The first factor demonstrates that weather patterns do not support a finding that emissions from Alabama contributed to ozone concentrations at the Denton and Harris County monitors. Back trajectories provided by ADEM indicate that air moving over Alabama seldom moved into Denton and Harris counties, and emissions from sources in Alabama were low on the relevant days. EPA ignores the

essential point of ADEM's HYSPLIT analysis and EPA's own data confirms that contribution by Alabama to Denton and Harris counties would be insignificant and infrequent.

[…]

82. iii. HYSPLIT Trajectories Emissions from Alabama Sources Are Not Linked to Ozone Exceedances Recorded in Texas

ADEM includes in its WOE analysis a HYSPLIT model of back trajectories to demonstrate that ozone concentrations in Alabama were relatively low on the days preceding high ozone events at downwind receptors in Denton and Harris counties. EPA criticizes the back trajectory analysis on the basis that ADEM fails to consider ozone-precursor emissions in its analysis, stating "it has long been understood that ozone concentrations in downwind areas are affected . . . [by] ozone formed downwind from the ozone-precursor emissions, such as NOx, in the upwind state." EPA entirely overlooks the principal point of Alabama's HYSPLIT analysis: air rarely moves from Alabama westward into Texas. Of the 31 days that the Harris County monitor showed an ozone exceedance from 2018-2020, the HYSPLIT analysis confirms that air moved from Alabama into Harris County on only 4 occasions. Likewise, for Denton County, air travelled westward from Alabama on only 3 occasions out of 26 exceedance days. In other words, Alabama establishes convincingly that Alabama emissions are highly unlikely, just as a starting point, to contribute to ozone formation in Dallas or Houston.

EPA goes on to explain that, despite low ozone in the upwind state, "sources and other emissions activities in that State nonetheless may be emitting ozone-precursor emissions in amounts sufficient to contribute ozone above one percent of the NAAQS to the high-ozone event that occurs at the downwind receptor." However, as this section will explain, on the days leading up to the high ozone events at the Texas receptors, ozone-precursor emissions in Alabama were low.

In order to determine whether Alabama sources of NO_X emissions could be considered to "significantly contribute" to ozone nonattainment or maintenance issues in Texas, the commenters evaluated statewide EGU emissions of NOX on the days that could have led to ozone formation at the Denton or Harris County monitors. The commenters used the HYSPLIT data presented in Alabama's SIP submittal to identify when air packets travelled over Alabama preceding the affected days at each monitor. EPA's own CAMD database provided the total NO_X emissions for the relevant day. Each daily NOX emission total is compared to the level of NO_X emissions that EPA has defined as "significant" for EGUs in Alabama. Specifically, the ozone-season NO_X emissions budget proposed by EPA for Alabama in its proposed FIP was prorated across the days in the ozone season and that total was then ratioed by 75% in accordance with EPA's methodology for setting the "daily backstop" rate. Thus, for Alabama EGUs, EPA defines total daily significant contribution as 73 tons.

Date of Monitor Exceedance (Harris County)	**Date of Air Packet Over Alabama**	**Daily Emissions Defined as "Significant" by EPA (Tons)**	**Actual NO_X Emissions on Relevant Date (Tons)**	**Percent Below Significance**
July 26, 2019	July 24, 2019	73	56	**-23%**
July 26, 2019	July 25, 2019	73	52	**-29%**
Sept. 5, 2019	Sept. 3, 2019	73	58	**-21%**

Sept. 6, 2019	Sept. 3, 2019	73	58	**-21%**
June 18, 2021	June 16, 2021	73	41	**-41%**

Date of Monitor Exceedance (Denton County)	**Date of Air Packet Over Alabama**	**Daily Emissions Defined as "Significant" by EPA (Tons)**	**Actual NO_X Emissions on Relevant Date (Tons)**	**Percent Below Significance**
June 19, 2021	June 17, 2021	73	41	**-41%**
Aug. 4, 2021	Aug. 2, 2021	73	52	**-29%**
Sept. 12, 2021	Sept. 10, 2021	73	39	**-46%**

As these data plainly show, emissions from Alabama EGUs on the relevant days were low, and well below any reasonable conception of "significant contribution." As a result, EPA should conclude that sources in Alabama are not contributing to nonattainment or maintenance in Texas and it is plain Alabama's SIP already contains measures sufficient to prohibit actual contribution to any downwind ozone concerns.[82]

[82] In addition, while EPA points out that "vectors of [ADEM's] back trajectories only show the center line of air flow" and do not capture the full "breadth of the air currents," 87 Fed. Reg. at 64,425, EPA fails to analyze which sources are in the region these air currents pass through. Identification and consideration of the actual sources contributing to interstate transport of emissions is essential to EPA's review of SIPs under the "good neighbor" provision. *See* 42 U.S.C. § 7410(a)(2)(D)(i) ("prohibit[] . . . any source . . . from . . . contribut[ing] significantly").

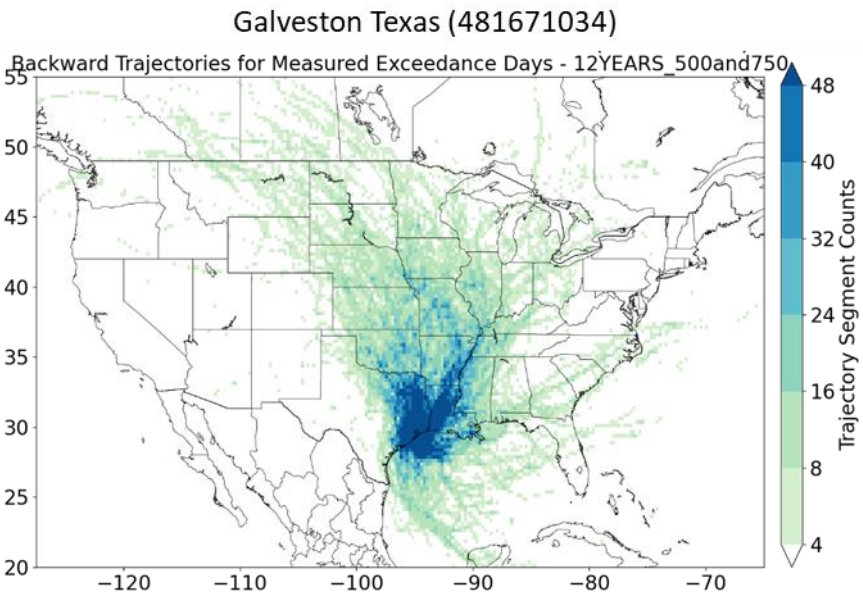
Response

The EPA found that emissions in Alabama were linked to downwind receptors in Harris County (monitoring site 482010055) and Denton County (monitoring site 481210034) based on the 2016v2 modeling performed for the proposed disapproval. The commenters claim that Alabama should not be linked to these receptors because they claim that air rarely moves from Alabama west toward Texas on days with measured exceedance at these downwind receptors. The commenters rely upon analyses of near ground-level wind flow (i.e., wind roses) and HYSPLIT-based multi-day back trajectories on days with measured exceedances at these two receptors to support their claims that Alabama should not be linked to these receptors.

The EPA disagrees that the Agency should conclude that sources in Alabama do not contribute to nonattainment or maintenance receptors in Texas. First, regional pollutant transport occurs when ozone precursor emissions (i.e., NO_X and VOCs) from sources an upwind state are emitted into the air and form ozone. The photochemical reactions that form ozone also form "by-product" pollutant that are "recycled" to form additional ozone farther downwind. The ozone and by-product pollutant species are vertically mixed due to dispersion and updrafts/downdrafts within the daytime boundary layer (i.e., the mixed layer) during the day. Variations in wind speed and direction between the ground and the mid-to top of the daytime mixed layer can result in different transport patterns aloft than near the ground. In addition, pollutants that remain aloft during the day or are emitted aloft overnight above the very shallow nighttime surface layer can be transported long distances due to the effects of the "nocturnal

jet" which is a high-speed ribbon of air that forms above the top of the nighttime surface layer. In addition, wind speed typically increases with height within the mixed layer, because the effects of surface roughness, which reduces wind speed near the ground, diminishes with height. Pollutants transported downwind aloft are typically brought down to the ground on subsequent days beginning in mid-morning as the height of the mixed layer rises. By this process pollutants transported aloft from upwind states can contribute to high ozone concentrations at monitoring sites in downwind states. While wind roses and trajectories based on data near or within a few hundred meters of the ground are useful for analyzing local scale transport (i.e., within an urban area) such analyses generally will not provide particularly reliable or meaningful information on long-range, multi-day transport of ozone and by-product pollutants aloft.

In the EPA's 2016v3 modeling for this final action, Alabama was found to contribute above the 0.70 ppb screening threshold to two maintenance-only receptors (i.e., Galveston, Texas and Dallas/Denton-Pilot Point).[81] The EPA ran HYSPLIT to create back trajectories from the Galveston receptor, among others, on days with measured ozone exceedances during the 12 years from 2010 through 2021. The map below shows the back trajectory analysis for the Galveston receptor-based trajectories at 500 m and 750 m (i.e., generally in the mid portion of the daytime mixed layer). The map provides a visual representation of areas typically upwind wind of Galveston on days with measured exceedances at this receptor. The trajectories indicate that the air can travel from east to west such that Alabama is upwind of Galveston on exceedance days. This result confirms the EPA's finding that Alabama is linked to receptors in Texas. The EPA's back trajectory analysis is described in the Final Action AQM TSD.



[81] Note that in the 2016v2 modeling used for the proposed action, Alabama was linked to the South Airport receptor in Denton, Texas. In the final modeling Alabama is linked to the Pilot Point "violating monitor" maintenance-only receptor in Denton.

The EPA addresses comments related to existing controls in Section 8.3 (Existing and Future State Controls). It is the state's responsibility to identify and then prohibit any source or other type of emissions activity from emitting any pollutant in amounts which will contribute significantly to nonattainment or interfere with maintenance in other states in a SIP under CAA section 110(a)(2)(D)(i)(I). It is not the Agency's burden in evaluating a SIP submission for compliance with the requirements of CAA section 110(a)(2)(D)(i)(I) to conduct an analysis of which of the state's individual sources or other type of emissions activity might be deemed significant. The EPA's analysis at Step 2 measures the total anthropogenic contribution of emissions from the upwind state. Once contribution passes the threshold, we proceed to Step 3. The Alabama SIP submission's cursory discussion of emissions sources and reduction potential in the state does not constitute an adequate Step 3 analysis (or appropriate substitute or alternative to such an analysis). We do not concede commenter APC et al.'s characterization of the proposed approach to "significance" in the proposed FIPs is correct; however, the analysis is irrelevant in any case because the state itself conducted no such analysis, and that is what we are evaluating. The EPA is not requiring controls on any states or any sources in this action, and comments on the substance of the proposed FIP are beyond the scope of this rulemaking.

Comment

Commenter: Arkansas Department of Energy and Environment, Divison of Environmental Quality

Commenter ID: 07

Docket ID: EPA-R06-OAR-2021-0801

Comment:

EPA's proposed disapproval also dismisses ADEQ's HYSPLIT modeling used to identify whether a potential linkage was significant as irrelevant. While DEQ agrees that CAMx is a state-of-the science tool, this does not mean that other tools cannot be informative. In addition, EPA provided input on DEQ's HYSPLIT modeling analysis during the comment period for the SIP and DEQ made adjustments to its modeling in response to EPA's comments. If EPA contends that HYSPLIT modeling is not informative for the purposes of SIP decision-making, this should have been stated in early conversations between the agency and DEQ, before DEQ performed HYSPLIT modeling, or during the public comment period (rather than suggesting modifications to DEQ's methodology, resulting in additional state resources invested in HYSPLIT modeling to bolster the SIP submittal in response to EPA comments). See EPA comments and DEQ responses to comments on 2015 Ozone Transport SIP, included here as Appendix A.

EPA's argument regarding the HYSPLIT central path in the proposed disapproval was not raised during preproposal consultation or the comment period for the SIP. Indeed, EPA doesn't quantify the degree to which they believe a back-trajectory should pull in areas on each side horizontally and vertically in their proposed FIP. This argument by EPA in their proposed disapproval leaves DEQ with no information about what EPA believes would be an appropriate buffer around the back-trajectories if DEQ were to reevaluate how it interpreted HYSPLIT data to address EPA's alleged concern.

DEQ continues to assert that its HYSPLIT analysis provides meaningful insight as to whether the potential linkages identified by CAMx are consistent and persistent. EPA's CAMx modeling only looks at five to ten

elevated ozone days. For comparison, DEQ's HYSPLIT analysis evaluated ninety-five elevated ozone days over the course of a ten-year period.

Response

As noted in comments to ADEQ and in our proposal (FR 87 9804-9809) EPA has concerns with ADEQ's HYSPLIT methodologies, including screening out back trajectories based on the start height and the start time of the back trajectories. We noted these concerns in our comments on ADEQ's proposed SIP and indicated that this technique is not standard and has not been used by EPA in our trajectory analyses such as Appendix E of the CSAPR Update AQ Modeling TSD.[82] As footnoted in the proposal (FR 87 9809) both ADEQ and TCEQ both screened out back trajectories based on start height, and we discussed how this was inappropriate in the Evaluation of TCEQ Modeling TSD, pages 81-86. We also identified concerns with screening of HYSPLIT back trajectories when the centerline passed near but not through Arkansas because Arkansas has some very large point sources near the Arkansas state line that could be contributing (FR 87 9809). When using the HYSPLIT model it is understood that the HYSPLIT back trajectory results are a central path that represents the centerline of the particles' path and there are areas on each side horizontally and vertically that also contribute to the concentrations at the end point. The horizontal and vertical areas that potentially contribute to concentrations at the endpoint grow wider from the centerline the further back in time the trajectory goes. Therefore, a HYSPLIT centerline does not have to pass directly over emissions sources or emission-source areas but merely relatively near emission source areas for those areas to contribute to concentrations at the trajectory endpoint and trajectories that were close to Arkansas but did not necessarily pass through can still indicate the opportunity for contribution from Arkansas' emissions and should not necessarily be excluded from the count of trajectories that indicate Arkansas could contribute. The HYSPLIT model does have the capability to create trajectories that reflect the dispersion of pollutants based on variations in meteorology, atmospheric turbulence and other physical processes.[83] However, the back trajectories created by the commenter were not based on this version of the model.

ADEQ's SIP submission included the inappropriate screening of back trajectories based on start height and start time despite these concerns and for this reason, in addition to the centerline concerns, EPA determined that the results were not valid. EPA did not indicate in the proposal that back trajectory analyses are never useful, just that Arkansas's trajectories were flawed. The EPA finds that back trajectory analysis can be potentially useful as a corollary analysis along with observation-based meteorological wind fields at multiple heights to examine the general plausibility of the photochemical model linkages, so long as the limited utility of this analysis is fully appreciated in comparison to photochemical grid modeling for characterizing ozone transport over long distances.

We did note in the proposal that while we disagreed with ADEQ's methodologies, their results did not show that either 2011 (base year meteorology from EPA's 2011 modeling results used in ADEQ's SIP) or the newer 2016 based meteorology (EPA modeling using 2016v2 and 2016v3 emission inventories) were

[82] Appendix E of the Air Quality Modeling TSD for the Final CSAPR Update can be found in docket EPA-HQ-OAR-2015-0500 (Document ID is EPA-HQ-OAR-2015-0500-0575)

[83] NOAA's HYSPLIT Atmospheric Transport and Dispersion Modeling System," *Bulletin of the American Meteorological Society* 96, 12 (2015): 2059-2077.

anomalous. We note that EPA's 2011, 2016v2, and 2016v3 modeling results all indicate Arkansas is linked to receptors in Texas. In response to other comments in this Section (Section 8.8) EPA has conducted HYSPLIT back trajectories for some of the receptors in Texas to which Arkansas has been identified as linked. The results of the trajectory analysis corroborate and add confidence to the upwind/downwind linkages.

Comments

Commenter: Cleco Corporate Holdings LLC

Commenter ID: 14

Docket ID: EPA-R06-OAR-2021-0801

Comment:

The LDEQ HYSPLIT modeling demonstrates the absence of a persistent and consistent pattern of contribution of pollutants to Texas monitors from Louisiana.

For identified monitors in Texas, LDEQ performed HYSPLIT modeling to examine the significance of contribution under the 1 ppb threshold. LDEQ followed EPA's suggestion that it provide back trajectories for all high ozone days for the Texas (Houston and Dallas area) monitors. This involved the providing of back trajectories for 99 exceedances during the 2015- 2018 season. It's interesting that, while EPA suggested (perhaps requested) LDEQ to conduct back trajectory analysis, in the Proposal it now opposes LDEQ's use of the HYSPLIT back trajectory analysis. The Agency indicates that HYSPLIT is only a corollary analysis for examining the general plausibility of the photochemical model linkages and that the use of back trajectories do not quantitatively evaluate the magnitude of the existing photochemical contributions because the "calculations do not account for any air pollution formation, dispersion, transformation, or removal processes as influenced by emissions, chemistry, deposition, etc." EPA should explain why the HYSPLIT analysis cannot be relied upon due to these reasons and also more thoroughly explain why the use of back trajectories is not sufficient to determine significant contribution. Nevertheless, the back trajectory analyses showed that on high ozone days at the Texas receptors that were identified using the March 27, 2018 memorandum (March 27, 2018, *Information on the Interstate Transport State Implementation Plan Submissions for the 2015 Ozone National Ambient Air Quality Standards under Clean Air Act Section (D)(i)(I)*), only 28% of the trajectories traveled in or through Louisiana. Of that 28%, only 8% originated in Louisiana. In addition, of the 28% of the trajectories, only 35% originated in or crossed the industrialized part of the State. Considering that EPA proposed that LDEQ conduct the HYSPLIT analyses and also considering the results of the analyses, Cleco believes the modeling demonstrates the absence of a persistent and consistent pattern of contribution and therefore the absence of contribution-significance under the 1 ppb threshold.

Commenter: Louisiana Chemical Association

Commenter ID: 26

Docket ID: EPA-R06-OAR-2021-0801

Comment:

b. LDEQ's use of the HYSPLIT Model to establish that there were no persistent or consistent relationships between the cited Texas receptors and Louisiana air emissions was proper.

In its significant contribution analysis, LDEQ identified monitors in the Dallas/Fort Worth and Houston/Galveston areas for further review under the 1 ppb screening standard: Denton Airport South (Dallas); FAA Site off Alta Vista Road (Dallas); Croix Parkway (Houston); Aldine Mail Road (Houston); and Durant Street (Houston). LDEQ's process for analyzing the significance of contributions in the Louisiana Transport SIP included: an applicable weather pattern analysis; wind rose analysis; and use of the Hybrid Single Particle Lagrangian Integrated Trajectory ("HYSPLIT") Model developed by the National Oceanic and Atmospheric Administration ("NOAA").

In its comments to the proposed Louisiana Transport SIP, EPA noted that to strengthen the analysis, LDEQ "should provide individual back trajectories for all high ozone days in the Houston or DFW area during the baseline period." EPA provided a link to the existing analyses from the Texas Commission on Environmental Quality. LDEQ accepted this comment and, to address EPA's recommendation, LDEQ provided back trajectories for 99 ozone exceedances at the identified receptors that occurred during the 2015-2018 ozone season with data derived from the TCEQ website.

Specifically, for the days of ozone standard exceedances at the Houston and Dallas area monitors during 2016, 2017 and 2018, LDEQ used the HYSPLIT Model to illustrate backward trajectories for the air parcels present at the monitors when the exceedances occurred. As discussed in the Louisiana Transport SIP, "the projections depict a composite of four backwards trajectories starting at the location of the monitor and tracking the air in reverse for seventy-two hours. Each projection accounts for one eight-hour exceedance period with the four trajectories beginning their routes at the six, four, two and zero hour marks." LDEQ also performed additional modeling/ to evaluate the exceedances that revealed trajectories originating in or crossing Louisiana to include Mixing Depth (in meters) and provide one trajectory for the beginning of each hour of the daily eight-hour ozone exceedance for the exceedance to identify the areas of the state most often impacting Texas monitor exceedances.

LDEQ's HYSPLIT back trajectory analysis showed that on high ozone days in Texas at the receptors identified using the *2015 Ozone NAAQS Memo*, only 28% of the trajectories traveled in or through Louisiana. Of that 28%, only 8% originated in Louisiana. Moreover, of the 28% of the trajectories, only 35% originated in or crossed the industrialized part of the State.

Although EPA requested LDEQ to conduct back trajectory analysis, in the Proposed Rule EPA now opposes LDEQ's use of the HYSPLIT back trajectory analysis. According to EPA, back trajectory analysis is a corollary analysis along with observation-based meteorological wind fields at multiple heights to examine the general plausibility of the photochemical model 'linkages.'" The EPA goes on to indicate that the use of back trajectories does not quantitatively evaluate the magnitude of the existing photochemical contributions because the "calculations do not account for any air pollution formation, dispersion, transformation, or removal processes as influenced by emissions, chemistry, deposition,

etc." Still, EPA does not explain why the HYSPLIT analysis cannot be relied upon for these reasons. EPA should more thoroughly explain why the use of back trajectories is not sufficient to determine significant contribution.

Further, the HYSPLIT back trajectories presented in the Louisiana Transport SIP call into question the plausibility of EPA's proposed linkages based on both the *2015 Ozone NAAQS Memo* and the 2016v2 model. This is especially true given Texas's large contributions to Louisiana receptors.

[…]

In sum, LDEQ's analysis based on the HYSPLIT Model and additional mixing depth models that show no likely impact from Louisiana emissions, is also consistent with Louisiana's compliant ozone design values throughout the state, the trend of decreases in ozone precursor emissions from Louisiana sources. EPA had the opportunity to disapprove of LDEQ's use of the HYSPLIT model. Instead, EPA commented on ways to strengthen the method, which LDEQ followed in developing the final Louisiana Transport SIP. LDEQ modeled the likely route of an air parcel transported to the receptors during ozone exceedance instances and demonstrated that of the 99 instances modeled, less than one third of the routes were from or through Louisiana, with a fractional amount originating in Louisiana. This is sufficient to show that there is no persistent and consistent pattern of significant contribution by Louisiana on the days with elevated ozone at the Texas area monitors. Therefore, Louisiana's contribution to the identified Texas receptors should not be deemed significant.

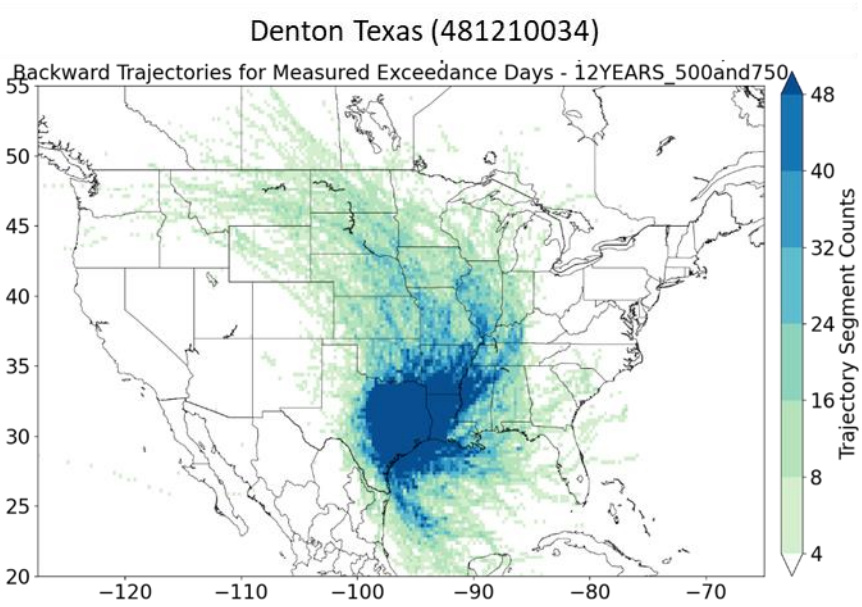
Response

The EPA evaluated Louisiana's HYSPLIT analysis in the proposal. 87 FR 9812-9815. The EPA does not believe that HYSPLIT analyses are sufficient to determine significant contribution because HYSPLIT trajectory analyses, as run by LDEQ, do not provide any quantitative measure of contribution (see responses to comments above). Quantitative contributions are necessary to evaluate the magnitude of an upwind state's contribution to downwind receptors with respect to the 1 percent of the NAAQS screening threshold used in Step 2 of the 4-step interstate transport framework. As noted in the proposal (87 FR 9815) HYSPLIT does not account for air pollution formation from emissions of pre-cursors (NOx and VOC emissions react to form ozone for example), dispersion, transformation, or removal processes as influenced by chemistry, deposition, etc., so the trajectories cannot be used to develop quantitative amounts for how much ozone was formed at the downwind receptor from emissions of pre-cursors in the state of Louisiana. The commenter failed to provide any rationale or methodologies explaining how trajectory analyses can be used alone to determine significant contribution. EPA did provide comments and recommend LDEQ perform HYSPLIT analyses to evaluate the transport meteorology as a way to refine the technical analysis that LDEQ was performing for their SIP (See responses to other comments in Section 1.6 related to EPA comments on proposed SIPs). Moreover, the EPA's Guideline on Air Quality Models[84] specifically states that "Control agencies with jurisdiction over areas with ozone problems should use photochemical grid models to evaluate the relationship between precursor species and ozone." Because the amount of interstate ozone transport is dependent in large part on the ability to credibly quantify ozone and precursor species concentrations,

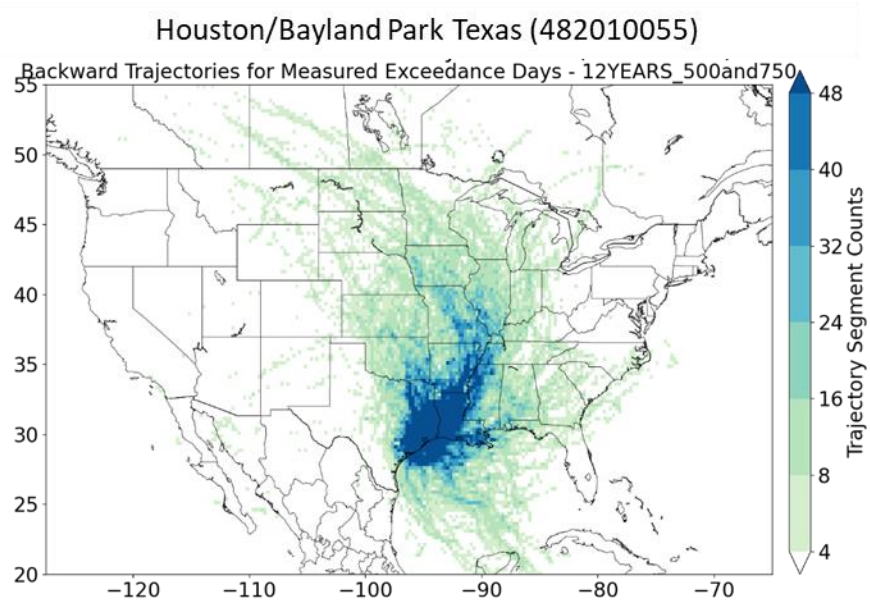
[84] *Guideline on Air Quality Models* ("Appendix W" to 40 CFR Part 51), section 5.3.1, page 5213.

the EPA believes that photochemical grid modeling, rather than trajectories designed to track transport of non-reactive (i.e., inert) pollutants, is the appropriate method for evaluating interstate contributions.

The EPA ran HYSPLIT to create back trajectories from each of these receptors, among others, on days with measured ozone exceedances during the 12 years from 2010 through 2021. The maps below show the back trajectories from the Denton and Houston receptors for elevations of 500 m and 750 m (i.e., generally in the mid portion of the daytime mixed layer).[85] These maps provide a visual representation of areas typically upwind wind of the Denton and Houston/Bayland receptors on days with measured exceedances at these locations. The trajectories indicate that the air can travel from east to west such that Louisiana is upwind of the Denton and Houston receptors on days when ozone exceeds the NAAQS. This result confirms the EPA's finding that Louisiana is linked to these receptors in Texas.



[85] The back trajectory map shown here are also provided in a response to other comments in this section of the document.



The EPA addresses comments about EPA's input during SIP development in Section 1.6.

Comment

Commenter: Mississippi Department of Environmental Quality

Commenter ID: 32

Docket ID: EPA-R04-OAR-2021-0841

Comment:

METEOROLOGY/MONITORED DATA

Meteorological research regarding EPA's reliance on the air quality modeling for the 2016v2 Emissions Modeling Platform and Mississippi's alleged significant (i.e., ≥1% threshold) contributions to receptors in Texas is attached to this correspondence. This research indicates Mississippi has no significant contributions to monitors in Brazoria (Manvel Croix Park, site ID# 48031004), Denton (Denton Airport South, site ID# 481210034), or Harris County (Houston Bayland Park, site ID# 482010055), TX for nitrogen oxide (NO_X) and volatile organic compounds (VOC) pollutants to contribute to secondary O3 formation. In most occurrences of high O_3 days in Brazoria, Denton, and Harris County, TX, the Houston and/or Dallas core-based statistical areas (CBSA), as applicable, are under very stagnant conditions with minimal mixing, allowing O_3 to build. Thorough research shows no correlation when Brazoria, Denton, and Harris County, TX experience an easterly fetch (i.e., easterly winds), which is the only time Mississippi emissions could conceivably contribute to high O_3 in these areas.

[…]

Attachment: Meteorological Review of Contributions from Mississippi to Brazoria, Denton, and Harris County, TX National Ambient Air Quality Standards for Ozone Exceedances

Based upon air quality modeling for the 2016v2 Emissions Platform, the Environmental Protection Agency (EPA) has proposed that Mississippi significantly contributes to nonattainment or interferes with maintenance of the national ambient air quality standards (NAAQS) for ozone (O_3) for the following monitors in Texas:

- Site ID #480391004 - Manvel Croix Park in Brazoria County (located in Houston, TX core-based statistical area (CBSA))
- Site ID #481210034 - Denton Airport South in Denton County (located in Dallas, TX CBSA)
- Site ID #482010055 - Houston Bayland Park in Harris County (located in Houston, TX CBSA)

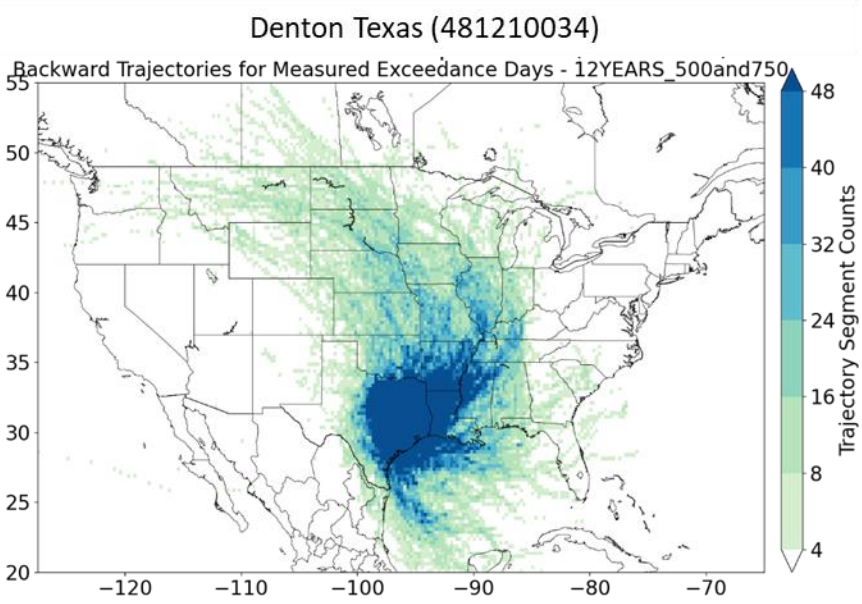
Regarding meteorological influence, Mississippi has a negligible effect on VOC/NOx transport to contribute downwind to Texas air monitoring sites. On days where Harris, Brazoria, and Denton NAAQS exceedances occur, the O_3 development was locally driven, as shown by the following back trajectories.

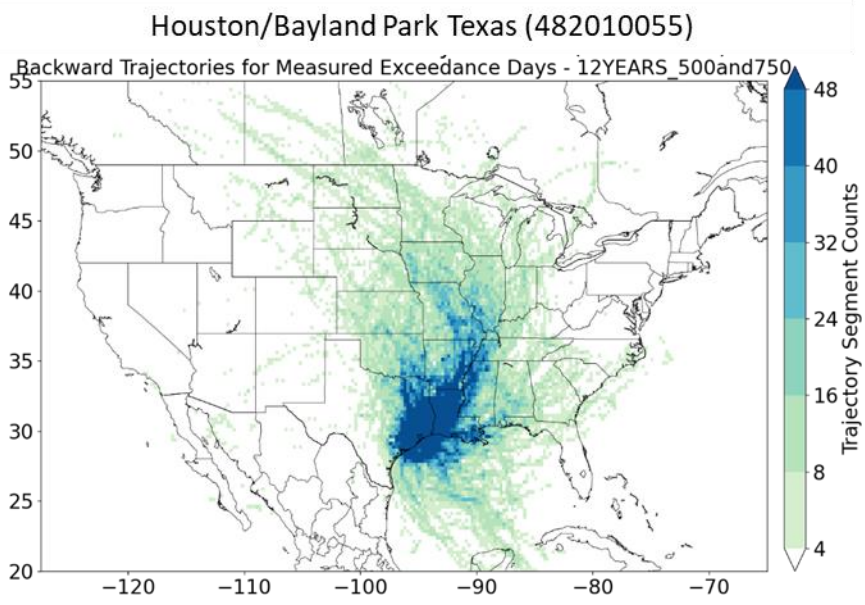
[Images in comment]

Response

The EPA disagrees with the commenter that Mississippi does not contribute to high ozone at downwind receptors in Texas. In the EPA's 2016v3 modeling for this final action the Agency found that Mississippi contributes above the 0.70 ppb screening threshold to three receptors in 2023: Denton County (monitor 481210034), Galveston County (monitor 481671034), and Houston/Bayland (monitor 482010055). The EPA ran HYSPLIT to create back trajectories from each of these receptors, among others, on days with measured ozone exceedances during the 12 years from 2010 through 2021. The maps below show the back trajectories from the Denton and Houston receptors for elevations of 500 m and 750 m (i.e., generally in the mid portion of the daytime mixed layer).[86] These maps provide a visual representation of areas typically upwind wind of the Denton and Houston/Bayland receptors on days with measured exceedances at these locations. The trajectories indicate that the air can travel from east to west such that Mississippi is upwind of the Denton and Houston receptors on days when ozone exceeds the NAAQS. This result confirms the EPA's finding that Mississippi is linked to these receptors in Texas.

[86] The back trajectory map is provided in a response to other comments in this section of the document.





Comment

Commenter: Tennessee Department of Environment and Conservation

Commenter ID: 41

Docket ID: EPA-R04-OAR-2021-0841

Comment:

4. Back-Trajectory Analysis Supports a Finding of No Significant Contribution

Tennessee reviewed the four highest ozone days (or the five highest days where there are multiple days with the same fourth-high concentration) for calendar years 2018, 2019, 2020, and 2021 at the Denton County site (Table 6) and calculated five-day back-trajectories for air parcels ending up at 10 m above ground level at the monitor. Only two of the 18 exceedance events (October 8, 2020, and June 19, 2021) had air movement tracing back to Tennessee (Figure 1, with individual back trajectories included in Appendix A). For all other high-ozone days identified in Table 6, the back-trajectory analysis indicates that Tennessee was not a contributor.

[Table 6 available in full comment]

Table 6: 2018-2021 Highest Ozone Concentrations at AQS Site ID 481210034

[Figure 1 available in full comment]

Figure 1: 2018 through 2021 Five-Day Back Trajectories, Annual Four Highest Ozone Days at 48-121-0034

Tennessee reviewed the back trajectory analyses, and the air parcels passed through west Tennessee on October 8, 2020 and June 19, 2021. For all other high-ozone days identified in Table 6, the back-trajectory analysis indicates that Tennessee was not a contributor.

- For the October 8, 2020, event, the air parcel passes through Tennessee on October 5 at just under 500 m above ground level.
- For the June 19, 2021, event, the air parcel passes through Tennessee on June 15-16. The back-trajectory analysis for this event is unusual because the air parcel passes close to ground level as it moves through Tennessee, then it is lifted upward to about 1,000 meters before gradually returning to ground level.

East-to-west travel of air masses is relatively uncommon, and Tennessee notes that both of the events identified here were associated with tropical systems to the east of Texas (Hurricane Delta on October 8, 2020, and Tropical Storm Claudette on June 19, 2021), which block a normal zonal west-east flow (Figure 2).

[Figure 2 available in full comment]

Figure 2: Hurricane Delta and Tropical Storm Claudette

Response

The EPA is not taking final action on Tennessee's good neighbor SIP submission for the 2015 ozone NAAQS in this action.

Comment

Commenter: Texas Commission on Environmental Quality

Commenter ID: 42

Docket ID: EPA-R06-OAR-2021-0801

Comment:

In addition, the following errors in the EPA's Technical Support Document (TSD) make its SIP disapproval invalid:

- On pages 81-86 of the TSD, the EPA states concerns with the trajectory parameters used by the TCEQ. The TCEQ's trajectory parameters were set at ranges typically used for analyses of this kind. This is not a legitimate basis for disapproval since the EPA did not provide specific guidance on acceptable parameters for this application. In other applications (for example the Guidance on the Preparation of Clean Air Act Section 179B Demonstrations for Nonattainment Areas Affected by International Transport of Emissions), the EPA has provided specific trajectory parameters required for approval.
- The EPA incorrectly describes the start time of the TCEQ's trajectories. The EPA states "TCEQ used the 1st hour of the 8-hour exceedance as the start time" (page 82 of TX TSD). The Texas SIP clearly states on page 3-53 that "The time of daily maximum one-hour ozone on the elevated eight-hour ozone day was used as the starting hour for each trajectory." The EPA's concerns regarding the start time of trajectories are based on an erroneous reading of the document and thus should not be considered in evaluating the Texas SIP revision.
- On page 82, the EPA states that the TCEQ should have also used an additional 100 meters above ground level (m AGL) start height for the trajectories; however, trajectories with too low of a start height may hit the ground. Once a trajectory hits the ground it loses accuracy and may no longer provide useful data, especially when considering the distance between the source and receptor in the TCEQ's analysis. The National Oceanic and Atmospheric Administration (NOAA) recommends start heights that are located in the middle of the planetary boundary layer. Start heights at 500 m AGL are well within these standard parameters; therefore, disagreement regarding trajectory start height is not a legitimate reason to discount the TCEQ analysis or disapprove this Texas SIP revision.
- The TCEQ used scientifically appropriate filtering criteria on its trajectories. As stated above, NOAA recommends start heights located in the middle of the mixing layer. Trajectories that hit the ground may be inaccurate and removing them to analyze more significant trajectories was appropriate in the context of the weight of evidence analysis. All trajectory endpoints that met these two criteria were presented regardless of whether they were in the mixing layer over Texas. The analysis only filtered endpoints within the mixing layer over Texas as an additional analysis to describe trajectories that show more meaningful transport patterns. The EPA has no scientific basis for concluding that the TCEQ inappropriately filtered trajectories. The analysis only filtered endpoints within the mixing layer over Texas as an additional analysis to describe trajectories that show more meaningful transport patterns.

Response

The EPA disagrees with the commenter that the TCEQ SIP should be approved because the commenter takes issue with some of EPA's technical comments on the trajectory analyses included as part of the information in their proposed SIP. The EPA's rationale for the disapproval of Texas's SIP Submission was

explained at proposal. *See* 87 FR 9826-9834.[87] The EPA appreciates the clarifying points from commenter regarding aspects of the HYSPLIT analysis with which the Agency took issue at proposal.

In regard to the first bullet related to trajectory parameters, as noted in the Evaluation of the TCEQ Modeling TSD we disagree that 72 hours was a long enough period to calculate back trajectories since some of the trajectories ended before fully transporting over Texas or before potentially entering Texas. In regard to the second bullet, we appreciate the clarification that we mischaracterized the start time for the HYSPLIT trajectories that they are not at the start of the 8-hour period of the MDA8 but at the hour that had the maximum 1-hour value during the eight hours in the MDA8.

In regard to the second bullet, we appreciate the clarification that we mischaracterized the start time for the HYSPLIT trajectories and that they are not at the start of the 8-hour period of the MDA8 but at the hour that had the maximum 1-hour value during the eight hours in the MDA8. In regard to the third bullet, we often run 100 meter start heights (as is mentioned in the 179b guidance that commenter referred to in its first bullet) and felt this was especially important since TCEQ was screening out some 500 and 1000 meter start heights based on the planetary boundary layer height. Also related to the third bullet EPA does not agree that centerline trajectories that touch the ground should be screened out in this type of analysis. In regard to the fourth bullet, we disagree with screening the start height with the planetary boundary layer mix height as the MDA8 is made up of 8-hours and TCEQ's method bases dropping the trajectory for that day even though some of the hours in the MDA8 eight hour period may have been well below the mix height indicating that day should be evaluated for transport. EPA also disagrees with screening the centerline endpoints over Texas with the planetary boundary layer height as the vertical dispersion at the distances from the Colorado receptors would be expected to have contributing air from above and below the planetary boundary layer.

With the exception of the clarification of the start hour on the trajectories, the EPA continues to take issue with technical aspects of the back trajectory analysis. The commenter's points still do not resolve all of the issues that the EPA identified in its TSD, such as the need to run the trajectories for a sufficient length of time and inappropriate screening out of trajectories. *See* Evaluation of TCEQ's Modeling TSD at 81-86. Nonetheless, as these issues generally relate to TCEQ's arguments regarding potential linkages in its own modeling to Colorado and California (which are not found in EPA's modeling), these technical matters do not materially alter the bases for the EPA's disapproval as to Texas.

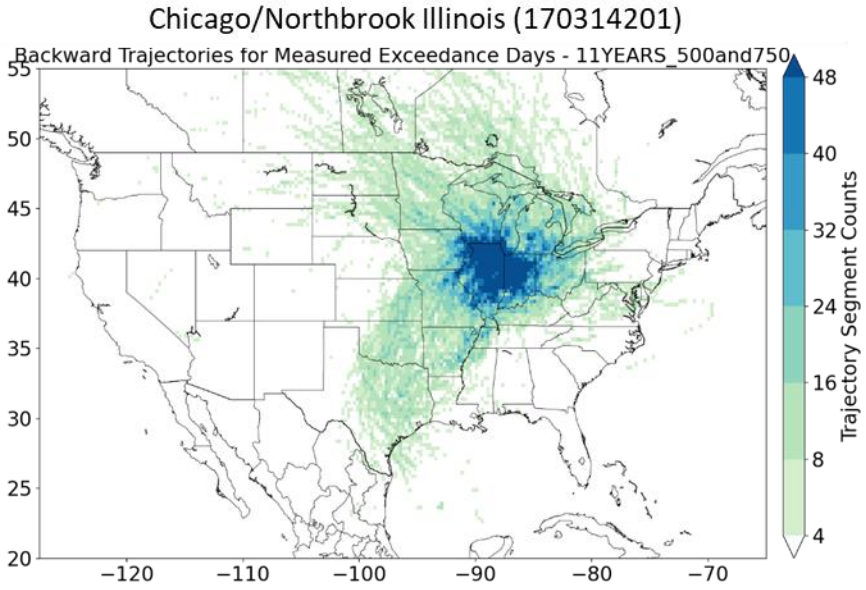
For this final action, the EPA conducted its own HYSPLIT back trajectory analysis for projected modeling-based nonattainment and maintenance receptors in 2023. As part of this analysis back trajectories were created for each of the 10 downwind receptors to which Texas is linked based on the 2016v3 modeling used for this final actions. EPA ran these trajectories 96 hours (longer than the 72 hours that TCEQ ran their back trajectories). These receptors are identified in the table below.

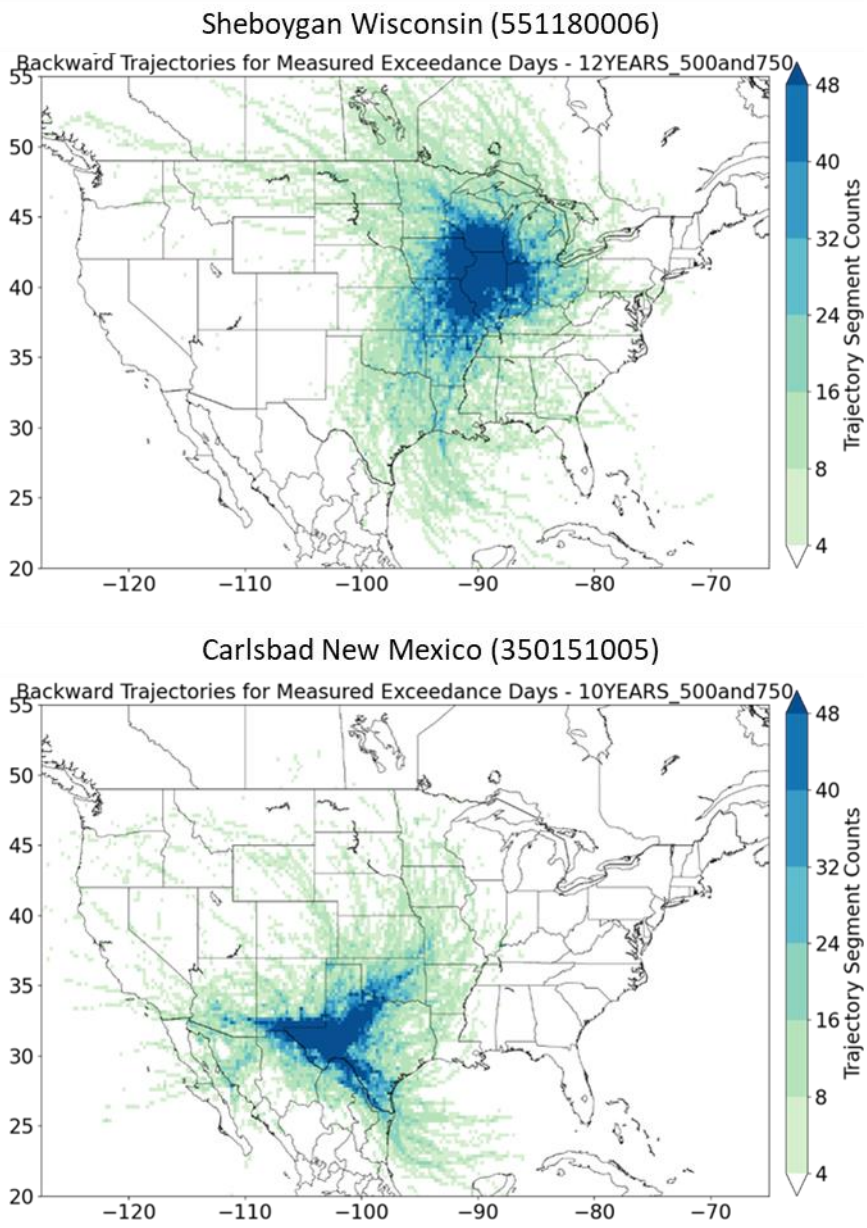
[87] The EPA further explained its rationale in the Evaluation of TCEQ Modeling TSD in Docket ID No. EPA-R06-OAR-2021-0801.

Table 8-3 Receptors Linked to Texas in 2023 Based on the 2016v3 Modeling

Receptors Linked to Texas in 2023 Based on the 2016v3 Modeling			
AQS ID	**State**	**County**	**Location**
170310001	Illinois	Cook	Chicago/Alsip
170314201	Illinois	Cook	Chicago/Northbrook
170317002	Illinois	Cook	Chicago/Evanston
350130021	New Mexico	Dona Ana	Las Cruces/Desert View
350130022	New Mexico	Dona Ana	Las Cruces/Santa Teresa
350151005	New Mexico	Eddy	Carlsbad/BLM
350250008	New Mexico	Lea	Hobbs
550590019	Wisconsin	Kenosha	Chiwaukee Prairie
551010020	Wisconsin	Racine	Racine
551170006	Wisconsin	Sheboygan	Sheboygan

The EPA created HYSPLIT-based back trajectories for days when measured ozone concentrations exceeded the NAAQS at each of these receptors over the 12 year period from 2010 to 2021. The maps below show the back trajectory analysis for three of these receptors, the Chicago/Northbrook, Sheboygan, and Carlsbad area receptors, based trajectories at 500 m and 750 m (i.e., generally in the mid portion of the daytime mixed layer). The maps provide a visual representation of areas typically upwind wind of the Chicago/Northbrook, Sheboygan, and Carlsbad receptors on days with measured exceedances at these receptors (trajectory paths are similar for the other receptors identified in the table above). The trajectory paths serve to reinforce the EPA's finding that Texas is linked to these receptors in this final action. The EPA's back trajectory analysis is more fully described and the results for all 10 receptors are provided in the Final Action AQM TSD.





8.9 Allegations of Inconsistency with Other Recent EPA Actions

Comments

Commenter: Association of Electric Companies of Texas, BCCA Appeal Group, Texas Chemical Council and Texas Oil & Gas Association

Commenter ID: 11

Docket ID: EPA-R06-OAR-2021-0801

Comment:

E. EPA's conclusions in its disapproval of Texas's SIP conflict with other recent EPA actions.

EPA recently proposed to redesignate the Illinois portion of the Chicago area to attainment of the 2008 ozone NAAQS[46] and finalized redesignation of the Wisconsin portion of the Chicago nonattainment area.[47] In EPA's proposed redesignation, the Agency recognized that 2011-based modeling performed by EPA and LADCO in support of the interstate transport requirements for the 2015 ozone NAAQS projected that "the highest 2023 average design values to be 0.0662 and 0.0668" for Illinois's Chicago monitors.[48] In contrast to EPA's position in the Proposed Disapproval that four of Illinois's Chicago monitors will have average DVs of 69.6 ppb to 70.1 ppb in 2023, the modeling cited in EPA's proposed redesignation projects that the Illinois's Chicago monitors will be well under the 2015 ozone NAAQS of 70 ppb in 2023.

EPA viewed this 2011-based modeling of 2023 DVs favorably and as additional support for redesignation, noting that "[t]hese results provide evidence that ozone concentrations will continue to decrease across the entire nonattainment area," despite the fact that EPA's 2016v2 modeling platform was available. As explained by Sonoma Technology, the EPA and LADCO results agree with TCEQ's conclusion: Chicago-region monitors do not satisfy EPA's tests for "nonattainment" or "maintenance" monitors for purposes of interstate transport planning.

EPA's conflicting positions on modeling and on the Chicago-area monitors' ability to attain the 2015 ozone NAAQS further show how EPA's Proposed Disapproval is arbitrary and capricious as to EPA's determination that Texas's emissions contribute significantly to nonattainment or interfere with maintenance of the 2015 ozone NAAQS at certain Chicago-area monitors.

[46] Illinois Redesignation Proposal, 87 Fed. Reg. 13,668.
[47] Air Plan Approval; Wisconsin; Redesignation of the Wisconsin Portion of the Chicago-Naperville, Illinois-Indiana-Wisconsin Area to Attainment of the 2008 Ozone Standard, 87 Fed. Reg. 21,027 (Apr. 11, 2022).
[48] Illinois Redesignation Proposal, 87 Fed. Reg. at 13,679 n.5.

Commenter: Xcel Energy

Commenter ID: 52

Docket ID: EPA-R05-OAR-2022-0006

Comment:

3. EPA's Air Plan Proposed Approval finding Illinois Portion of the Chicago-Naperville, Illinois Indiana-Wisconsin Area to Attainment of the 2008 Ozone Standard

On March 10th, 2022 EPA proposed to designate that the Illinois portion of the Chicago Naperville, IL-IN-WI area (Chicago area) in attainment for the 2008 ozone National Ambient Air Quality Standards. Cook

County, the receptor area linked to Minnesota's designation as exceeding the contribution threshold, makes up a large portion of the Chicago area. The approval goes on to state:

"While modeling is not required, Illinois cited photochemical modeling performed by EPA and LADCO in support of the interstate transport "Good Neighbor" provision of the CAA for the 2015 ozone NAAQS. These modeling results project the highest 2023 average design values to be 0.0662 and 0.0668, well below the 2008 ozone NAAQS. Compared to actual monitored 2009—2013 average design values, both sets of 2023 modeling results show large decreases in ozone concentrations, especially in the heart of the urban area and at the critical monitors at the north of the nonattainment area along the shore of Lake Michigan. These results provide evidence that ozone concentrations will continue to decrease across the entire nonattainment area."

The finding that the region's ozone design values from both the LADCO and EPA s modeling results show 1. That the region is below the 2008 standard, 2. That the region is also below the 2015 threshold of 0.070ppb, and 3. that ozone concentrations are expected to continue to decrease across the region, conflicts with the finding that Minnesota is linked to contributing above the impact threshold in Illinois/Chicago for the 2015 Ozone NAAQS. At a minimum, it raises the question as to why EPA found the 2016v2 modeling platform to be superior to the LADCO photochemical analysis in determining Minnesota's contribution in modeling efforts performed for the 2015 Ozone NAAQS.

Commenter: Xcel Energy

Commenter ID: 52

Docket ID: EPA-R06-OAR-2021-0801

Comment:

3. EPA's Air Plan Proposed Approval finding Illinois Portion of the Chicago-Naperville, Illinois Indiana-Wisconsin Area to Attainment of the 2008 Ozone Standard

On March 10th, 2022 EPA proposed to designate that the Illinois portion of the Chicago Naperville, IL-IN-WI area (Chicago area) in attainment for the 2008 ozone National Ambient Air Quality Standards. Cook County, the receptor area linked to Texas's designation as exceeding the contribution threshold, makes up a large portion of the Chicago area. The approval goes on to state:

"While modeling is not required, Illinois cited photochemical modeling performed by EPA and LADCO in support of the interstate transport "Good Neighbor" provision of the CAA for the 2015 ozone NAAQS. These modeling results project the highest 2023 average design values to be 0.0662 and 0.0668, well below the 2008 ozone NAAQS. Compared to actual monitored 2009—2013 average design values, both sets of 2023 modeling results show large decreases in ozone concentrations, especially in the heart of the urban area and at the critical monitors at the north of the nonattainment area along the shore of Lake Michigan. These results provide evidence that ozone concentrations will continue to decrease across the entire nonattainment area."

The region's ozone design values from both the LADCO and EPA's modeling results show the region below the 2008 standard, below the 2015 threshold of 0.070 ppb, and that ozone concentrations are expected to continue to decrease across the area. This result conflicts with the finding that Texas is

linked to contributing above the impact threshold in Illinois/Chicago in evaluating its SIP for the 2015 Ozone NAAQS. At a minimum, it raises the question as to why EPA found the 2016v2 modeling platform to be superior to the TCEQ photochemical analysis in determining Texas's contribution in modeling efforts performed for the 2015 Ozone NAAQS.

Response

The EPA disagrees that there is any meaningful conflict between the air quality projections in this action and certain observations the Agency made in a footnote to a proposed action on March 10, 2022. In that notice, the EPA proposed to find that the Illinois portion of the Chicago-Naperville, IL-IN-WI area is attaining the 2008 ozone NAAQS. 87 FR 13668 (March 10, 2022). This action, as acknowledged by commenter, only applies to the 2008 ozone NAAQS. However, the EPA noted in that proposal that "while modeling is not required" to support that action, there was modeling by EPA and LADCO suggesting that average design values in 2023 may be as low as around 66 ppb. *Id.* at 13679 n.5. This observation was not necessary to support that proposal, and the Agency did not cite to or otherwise explain the basis for the statement in this footnote. However, this appears to have been in reference to the EPA's older modeling of 2023, which has of course been updated in the 2016v2 modeling used at proposal and the 2016v3 modeling used at final, both of which now project that ozone levels in the Chicago area will remain above the 2015 ozone NAAQS in 2023. In fact, when the EPA finalized this proposal, it made no further reference to that older modeling as a basis for its action or otherwise, and in response to adverse comments highlighting the EPA's updated transport modeling, we acknowledged: "EPA's ozone transport modeling indicates that, barring further emissions reductions, this area will continue to have difficulty attaining or maintaining the 2015 NAAQS in 2024." 87 FR 30821, 30826 (May 20, 2022). Subsequently, in the EPA's final "Determinations of Attainment by the Attainment Date" (DAAD) rule for the 2015 ozone NAAQS, the EPA found that the Chicago-Naperville (IL-IN-WI) nonattainment area had failed to attain the NAAQS and had design values of 79 ppb, 77 ppb, and 76 ppb for the 2018-2020 period. 87 FR 60904 (Oct. 7, 2022). As such, the EPA reclassified the area to Moderate nonattainment, and that area is now subject to a January 1, 2023, deadline among other things to submit a SIP submission revision implementing RACM/RACT. *Id.* at 60900.

Consistent with the information presented by the EPA in these final actions in May and October of this year, the EPA's latest ozone transport modeling indicates that this area will continue to have difficulty attaining or maintaining the 2015 ozone NAAQS in 2023. Further, the EPA's modeling of the contributions to that ongoing air quality problem used in this action further indicates that these elevated ozone levels are due in part to the emissions of ozone-precursor pollutants transported from upwind states, such as Minnesota and Texas. Therefore, the EPA disagrees with commenters that our analysis in this action conflicts with other EPA actions.

9 Controls

9.1 Supplemental Submission

Comment

Commenter: Air Pollution Control Program, Missouri Department of Natural Resources

Commenter ID: 01

Docket ID: EPA-R07-OAR-2021-0851

Comment:

Although Missouri disagrees with virtually every aspect of the proposed disapproval and the proposed FIP, the Air Program is willing to supplement our SIP submission to address the comments we responded to with regards to continuous operation of NOx control equipment on our affected sources. The Air Program acknowledges that in the last three years, while EPA has not acted on our good neighbor SIP submission, that certain units have not run their NOx control technology. Our response to EPA's comments about this issue indicated that the control technology was likely to be utilized with the imposition of the CSAPR Update; however, this has not been the case in 2020 and 2021 where Missouri has exceeded its assurance level both years. EPA points to these reasons in its FIP proposal as to why EPA must impose never-before-seen stringent levels of assurance requirements in the proposed FIPs. However, the Air Program plans to develop a supplement to Missouri's SIP to ensure the continued operation of all installed NOx control technology at all power plants in the state.

In light of the intended supplement to Missouri's good neighbor SIP submission, the Air Program requests that when EPA updates the modeling for any final disapproval or final FIP, that no emission reductions between baseline levels and control case levels be included for any Missouri power plant that has a Selective Catalytic Reduction (SCR) control device currently installed. The control case levels should be assumed for any SCR controlled units in any updated modeling that EPA conducts to support these final rules. The Air Program will stay in close communication with EPA Region 7 to communicate the status of the intended SIP supplement with regard to this issue.

Response

The EPA is not requiring controls on sources in Missouri or any other state in this action.

The EPA received a second good neighbor SIP submission addressing the 2015 ozone NAAQS from Missouri on November 1, 2022. Although Missouri identified this submission as a "supplement," the EPA pointed out in a comment letter to Missouri DNR on a draft version of the submission that we view this submission as a separate SIP submission, which does not impact our pre-existing obligation (now subject

to court-ordered deadline) to act on Missouri's original transport submittal.[88] We further note that the letter identified several concerns the Agency had with the State's approach in its draft submission. The EPA will evaluate that submission, including how the state addressed the concerns in our letter, at the time we act on that submission.

9.2 Over-Control

Comment

Commenter: Alabama Power Company, Southern Power Company, and PowerSouth Energy Cooperative

Commenter ID: 04

Docket ID: EPA-R04-OAR-2021-0841

Comment:

Because no cost-effective reductions are, in fact, available from [Plant Gaston Unit 5, Plant Barry Unit 4, Plant Harris Unit 1A], which are the only units from which such reductions could potentially be considered, then no units in Alabama can be regarded as causing significant contribution to or interference of maintenance with downwind receptors. EPA must consider this analysis in its final action on Alabama's 2022 SIP. Even more, requiring Alabama to reduce emissions in 2023 would result in over-control because EPA's own modeling finds that Alabama will be in compliance with the good neighbor provision by 2026 without making any reductions.[102] Any reductions made now would be costly and would result in no real benefit to future good neighbor compliance.

[102] 87 Fed. Reg. at 64,420.

Response

See Section 8.6 for the EPA's response regarding Alabama Power Company et al.'s claim that there are no cost-effective reductions available at certain EGUs in Alabama and whether the information provided constitutes a satisfactory Step 3 evaluation for the state of Alabama.

The EPA disagrees with the commenter's assertion that any additional NO_X emissions for EGUs in the state in 2023 results in over control because the EPA's modeling indicates no downwind contribution in 2026 and any reductions made now would be costly and no provide any benefits for future GNP obligations. The EPA's action to disapprove Alabama's transport SIP submission evaluates the state's interstate transport SIP submission to determine whether the current package satisfies the statutory obligations at CAA 110(a)(2)(D)(i)(I). This action is not determining what, if any, cost effective controls exist at Step 3 of the 4-step interstate transport framework. Rather, we find Alabama simply did not conduct an adequate analysis at Step 3.

[88] *See* "Comments on Missouri State Implementation Plan Revision Addressing Interstate Transport for the 2015 Ozone Standard", August 18, 2022. Available in the docket for this action.

The claim that any good neighbor emissions-reduction obligations that may be needed and achievable by 2023 are overcontrol based on projections that the state may not have a linkage by 2026 is in direct conflict with the holdings of *North Carolina*, 531 F.3d 896, 912 (D.C. Cir. 2008), *Wisconsin,* 938 F.3d 303, 313-20 (D.C. Cir. 2019), *Maryland*, 958 F.3d 1185, 1203-04 (D.C. Cir. 2020), and *New York v. EPA*, 964 F.3d 1214, 1226 (D.C. Cir. 2020), because 2026 is beyond the next attainment date, which is August 3, 2024. As explained in the preamble in Section II.D.1, 2023 is the relevant analytic year associated with that attainment date, and so the appropriate year for which the EPA conducted its evaluation of state submittals in this action.

However, the EPA is not requiring any controls from Alabama or any other state in this action. Comments on the substance of the proposed FIP action are beyond the scope of this rulemaking.

10 Legal Comments Not Otherwise Addressed Elsewhere

10.1 Venue

Comments

Commenter: Alabama Power Company

Commenter ID: 03

Docket ID: EPA-R04-OAR-2021-0841

Comment:

Lastly, if EPA were to finalize its proposal on ADEM's now withdrawn 2018 SIP submittal, EPA's belief that its action would be "nationally applicable" or, in the alternative, "based on a determination of nationwide scope or effect" is incorrect and should not be finalized. EPA's action is a locally or regionally applicable action only, and review is proper only in the appropriate regional circuit. When determining whether an action is locally or regionally applicable under Section 7607(b)(1), one must "look only to the face of the [action], rather than to its practical effects."[21] A primary consideration is whether the action's "application beyond the instant case is limited by its own terms."[22] EPA's proposal is "limited by its own terms." It applies only to three states in a single EPA region. And EPA separately reviews and addresses each state's SIP submittal and has proposed action based on the unique attributes and facts of each state.

Moreover, EPA's proposal is not "based on a determination of nationwide scope or effect" simply because "EPA interprets and applies section 110(a)(2)(d)(i)(I) . . . based on a common core of nationwide policy judgments and technical analysis[.]"[23] The actual determinations EPA relies on in its proposal are state-specific determinations related to the particularities of each state's SIP. Therefore, EPA's proposal to find that its action is "based on a determination of nationwide scope or effect" is flawed, and EPA should not finalize this proposed finding.

[21] *Am. Road & Transp. Builders Ass'n v. EPA*, 705 F.3d 453, 456 (D.C. Cir. 2013).
[22] *Sierra Club v. EPA*, 926 F.3d 844, 849 (D.C. Cir. 2019)
[23] 87 Fed. Reg. at 9,562.

Commenter: Alabama Power Company, Southern Power Company, and PowerSouth Energy Cooperative

Commenter ID: 04

Docket ID: EPA-R04-OAR-2021-0841

Comment:

Finally, if EPA were to finalize its proposal, EPA's belief that its action would be "nationally applicable" or, in the alternative, "based on a determination of nationwide scope or effect" is incorrect and should not be finalized.[104] EPA's action is a locally or regionally applicable action only and review is proper only

in the appropriate regional circuit. When determining whether an action is locally or regionally applicable under Section 7607(b)(1), one must "look only to the face of the [action], rather than to its practical effects."[105] A primary consideration is whether the action's "application beyond the instant case is limited by its own terms."[106] EPA's proposal is "limited by its own terms"—it applies only to Alabama.

Moreover, EPA's proposal is not "based on a determination of nationwide scope or effect" simply because "EPA interprets and applies section 110(a)(2)(d)(i)(I) . . . based on a common core of nationwide policy judgments and technical analysis[.]"[107] The actual determinations EPA relies on in its proposal are state-specific determinations related to the particularities of Alabama's SIP. Therefore, EPA's proposal to find that its action is "based on a determination of nationwide scope or effect" is flawed, and EPA should not finalize this proposed finding.

[104] [87 Fed. Reg.] at 64,427.
[105] *Am. Road & Transp. Builders Ass'n v. EPA*, 705 F.3d 453, 456 (D.C. Cir. 2013).
[106] *Sierra Club v. EPA*, 926 F.3d 844, 849 (D.C. Cir. 2019).
[107] 87 Fed. Reg. at 64,427.

Commenter: Arkansas Environmental Federation

Commenter ID: 09

Docket ID: EPA-R06-OAR-2021-0801

Comment:

III. The Appropriate Venue for Hearing Challenges to the Proposed Disapproval of Arkansas's SIP Is the Eighth Circuit.

EPA claims that the appropriate venue for challenges to EPA's final action on the interstate transport SIPs for Louisiana, Arkansas, Texas, and Oklahoma is the U.S. Court of Appeals for the District of Columbia Circuit ("D.C. Circuit").[26] Under Section 307(b)(1) of the CAA, for purposes of determining venue for challenges to EPA actions, the relevant questions are whether the action is: (1) a nationally applicable action; (2) a locally or regionally applicable action; or (3) a locally or regionally applicable action based on a determination that has nationwide scope or effect.[27]

EPA claims that the proposed rulemaking, if finalized, would be a "nationally applicable" action under CAA Section 307(b)(1) because it would address four states, located in three different Federal judicial circuits, and "would apply uniform, nationwide analytical methods, policy judgments, and interpretation with respect to the same CAA obligations."[28] EPA's reasoning is insufficient to make the final rulemaking a "nationally applicable" action and it would be inconsistent with EPA's recent final rulemaking approving the ozone interstate transport SIPs for Florida, Georgia, North Carolina, and South Carolina.[29] Despite the fact that rulemaking applied to four states located in two different Federal judicial circuits, and also relied on EPA's 4-Step interstate transport framework, EPA did not determine that action was nationally applicable, with judicial review available only in the D.C. Circuit. Instead, EPA determined that judicial review of that rule must be filed in the United States Court of Appeals *for the appropriate circuit*.[30]

In the alternative to determining that the final rulemaking would be "nationally applicable," "the Administrator intends to exercise the complete discretion afforded to him under the CAA to make and publish a finding that the final action … is based on a determination of 'nationwide scope or effect.'"[31] However, despite the Agency's unsupported claim, EPA is not afforded "complete discretion" in proposing to find that the final rulemaking would be based on a determination of "nationwide scope or effect" within the meaning of CAA Section 307(b)(1). Courts do not defer to EPA's determination of venue.[32] Likewise, there is no provision in CAA Section 307(b)(1) that gives EPA the exclusive authority to determine whether an action is based on a determination of nationwide scope or effect.[33] Rather, the CAA "provides a clear metric by which a court can assess the scope or effect of the relevant determinations. The reviewing court merely asks whether the scope or effect of the determinations is nationwide."[34]

EPA's intent to "apply uniform, nationwide analytical methods, policy judgments, and interpretation with respect to the same CAA obligations" in this and other ozone transport SIP rulemakings would not transform any of the final rulemakings into one that is "based on a determination of nationwide scope or effect." Indeed, it would be arbitrary and capricious for EPA to apply non-uniform analytical methods, inconsistent policy judgments, and inconsistent interpretations to the various state ozone transport SIP submittals.[35] If EPA relies on the same concept or interpretation in "other final agency action, it will be subject to judicial review upon challenge" to that separate action.[36] In approving the interstate transport SIPs for Georgia, Florida, North Carolina, and South Carolina, EPA relied on the same 4-Step framework on which it relied for this Proposal and yet EPA made no claim that its approval of those states' SIPs was based on a determination of nationwide scope or effect, in direct contrast to this rulemaking.[37]

Despite EPA's claim that its final rulemaking with respect to the ozone transport SIPs for Arkansas, Louisiana, Texas, and Oklahoma will be nationally applicable or based on a determination of nationwide scope or effect, EPA's final action on these states' SIPs will be locally or regionally applicable, and *not* based on a determination of nationwide scope or effect. "The question of applicability turns on the legal impact of the action as a whole."[38] Here, EPA's proposed action is limited to a single EPA region and directly impacts only four states. This is the prototypical example of a regionally applicable action. Although EPA claims to be applying uniform, nationwide analytical methods, policy judgments, and interpretations, EPA's proposed disapprovals are inherently state-specific and depend on the "facts and circumstances of each particular state's submittal."[39] Accordingly, petitions for review of EPA's final action with respect to the interstate ozone transport SIPs may be brought only in the court of appeals for the appropriate circuit. For EPA's final action with respect to Arkansas's SIP, that will be the U.S. Court of Appeals for the Eighth Circuit.

[26] 87 Fed. Reg. at 9835.
[27] See 42 U.S.C. § 7807(b)(1); see also Texas v. EPA, 829 F.3d 405, 418 (5th Cir. 2016)
[28] 87 Fed. Reg. at 9835.
[29] Air Plan Approval; FL, GA, NC, SC; Interstate Transport (Prongs 1 and 2) for the 2015 8-Hour Ozone Standard, 86 Fed. Reg. 68,413 (Dec. 2, 2022)
[30] 86 Fed. Reg. at 68,430.
[31] 87 Fed. Reg. at 9835
[32] *Texas v. EPA*, 829 F.3d 405, 417–18 (5th Cir. 2016).
[33] *Id* at 420.
[34] *Id*.

[35] As noted above, however, policy judgments should not be a factor in whether or not an interstate transport SIP is approvable.
[36] *Sierra Club v. EPA*, 926 F.3d 844, 849 (D.C. Cir. 2019).
[37] *See* 86 Fed. Reg. 68,413.
[38] *Texas*, 829 F.3d at 419; *accord Texas v. EPA*, No. 10-60961, 2011 WL 710598, at *2 (5th Cir. Feb. 24, 2011) (unpublished) ("Determining whether an action by the EPA is regional or local on the one hand or national on the other should depend on the location of the persons or enterprises that the actio n regulates rather than on where the effects of the action are felt." (internal quotation omitted)).
[39] 87 Fed. Reg. at 9801.

Commenter: Association of Electric Companies of Texas, BCCA Appeal Group, Texas Chemical Council and Texas Oil & Gas Association

Commenter ID: 11

Docket ID: EPA-R06-OAR-2021-0801

Comment:

EPA's claim that petitions for review of the Proposed Disapproval, if finalized, must be filed in the U.S. Court of Appeals for the D.C. Circuit is erroneous. For purposes of determining venue, the relevant questions to consider are whether the Proposed Disapproval is: 1) a nationally applicable action; 2) a locally or regionally applicable action; or 3) a locally or regionally applicable action based on a determination that has nationwide scope or effect.[52]

EPA's Proposed Disapproval is locally or regionally applicable under CAA Section 307(b)(1). "The question of applicability turns on the legal impact of the action as a whole."[53] Here, EPA's proposed disapproval of Texas's SIP applies only to Texas. EPA has cited no authority to support its apparent position that lumping multiple separate actions into one notice converts those individual actions into a single action for purposes of the statute's venue provision. Even taking EPA's entire *Federal Register* notice into account, EPA's proposed action is limited to a single EPA region and directly impacts only four states. Even together, this is the prototypical example of a regionally applicable action. Although EPA claims to be applying uniform, nationwide analytical methods, policy judgments, and interpretations, EPA's proposed disapprovals are inherently state-specific and depend on the "facts and circumstances of each particular state's submittal."[54] Accordingly, "petitions for review of SIP disapprovals may be brought only in the court of appeals 'for the *appropriate* circuit,'" that is, the regional circuit.[55]

EPA's reasoning that the proposed disapproval is nationally applicable is arbitrary and capricious. EPA previously determined that judicial review of its approval of four interstate transport SIP submissions should be filed in the U.S. Court of Appeals for the appropriate circuit, *not* the U.S. Court of Appeals for the D.C. Circuit which is the appropriate venue for nationally applicable agency actions. In December 2021, EPA approved the interstate transport SIP submissions for Florida, Georgia, North Carolina, and South Carolina.[56] This final rule applies to four states located in two different Federal judicial circuits. EPA, however, did not determine that this final rule was nationally applicable or based on a determination of nationwide scope or effect. Rather, EPA determined that judicial review of this rule must be filed in the United States Court of Appeals for the appropriate circuit.[57] Similarly, in EPA's

proposed approval of Iowa's interstate transport SIP, which was published on the same day as the Proposed Disapproval, EPA was silent as to whether the rule would have national applicability or be based on a determination of nationwide scope or effect.[58]

EPA's proposed disapproval is not nationally applicable nor is it based on a determination that has nationwide scope or effect. Therefore, the proper venue for judicial review of the proposed disapproval of Texas's SIP is the U.S. Court of Appeals for the Fifth Circuit. For the purposes of the CAA's venue provision, "'the relevant determinations are those that lie at the core of the agency action,' not determinations that are 'peripheral or extraneous.'"[59] "Section 7607(b)(1) . . . looks to the 'determination' that the challenged action is 'based on.' These determinations are the justifications the agency gives for the action and they can be found in the agency's explanation of its action. They are the reason the agency takes the action that it does."[60] "Determinations are not of nationwide scope or effect if they are 'intensely factual determinations such as those related to the particularities of the emissions sources in Texas.'"[61]

Even if concepts or interpretations from the proposed action are applied in other rulemakings, that is irrelevant to the venue inquiry, because it is "typical" for the "interpretative reasoning offered by [EPA] . . . [to have] precedential effect in future EPA proceedings . . . , including regionally and locally applicable ones."[62] EPA's consistent interpretation of the CAA does not transform the action into one that is "based on a determination of nationwide scope or effect." Rather, if EPA relies on the same concept or interpretation in "other final agency action, it will be subject to judicial review upon challenge" to that separate action.[63] In approving interstate transport SIPs for the 2015 ozone NAAQS for Georgia, Florida, North Carolina and South Carolina, EPA also relied on the same four-step framework on which it relied for the Proposed Disapproval, and yet, EPA made no claim that its approval of those states' SIPs was based on a determination of nationwide scope or effect, in direct contrast to the Proposed Disapproval.[64]

Furthermore, despite the Agency's unsupported claim in the Proposed Disapproval, EPA is not afforded "complete discretion" in proposing to find that the Proposed Disapproval is based on a determination of "nationwide scope or effect" within the meaning of CAA Section 307(b)(1). Courts do not defer to EPA's determination of venue.[66] Likewise, there is no provision in CAA Section 307(b)(1) that gives EPA the exclusive authority to determine whether an action is based on a determination of nationwide scope or effect.[67]

[52] 42 U.S.C. § 7807(b)(1); Texas v. EPA, 829 F.3d 405, 418 (5th Cir. 2016).
[53] *Texas*, 829 F.3d at 419; *accord Texas v. EPA*, No. 10-60961, 2011 WL 710598, at *2 (5th Cir. Feb. 24, 2011) (unpublished) ("Determining whether an action by the EPA is regional or local on the one hand or national on the other should depend on the location of the persons or enterprises that the action regulates rather than on where the effects of the action are felt." (internal quotation omitted)).
[54] Proposed Disapproval, 87 Fed. Reg. at 9,801.
[55] [*EME Homer City Generation v. EPA*], 696 F.3d [7 (D.C. Cir. 2012)] at 44 n.6 (Judge Rogers, dissenting) (emphasis in original)
[56] Air Plan Approval; FL, GA, NC, SC; Interstate Transport (Prongs 1 and 2) for the 2015 8-Hour Ozone Standard, 86 Fed. Reg. 68,413 (Dec. 2, 2022) ("FL, GA, NC, SC Approval").
[57] Id. at 68,420.
[58] Air Plan Approval; Iowa; Interstate Transport of Air Pollution for the 2015 8-Hour Ozone National Ambient Air Quality Standards, 87 Fed. Reg. 9,477 (Feb. 22, 2022).

[59] Texas v. EPA, 706 Fed. Appx. 159, 164 (5th Cir. 2017) (quoting *Texas*, 829 F.3d at 419).
[60] *Texas*, 829 F.3d at 419.
[61] Texas, 706 Fed. Appx. at 164 (quoting *Texas*, 829 F.3d at 421).
[62] *Sierra Club v. EPA*, 926 F.3d 844, 850 (D.C. Cir. 2019); *see also Texas*, 829 F.3d at 423 ("Nor are we persuaded . . . that whatever precedential effect the Final Rule has shows that it is based on determinations with nationwide scope or effect.").
63 *Sierra Club*, 926 F.3d at 849.
64 Compare FL, GA, NC, SC Approval, 86 Fed. Reg. at 68,420 ("[P]etitions for judicial review of this action must be filed in the United States Court of Appeals for the appropriate circuit by January 31, 2022.") *with* Proposed Disapproval, 87 Fed. Reg. at 9,835 ("EPA anticipates that this proposed rulemaking, if finalized, would be "nationally applicable" . . . If the EPA takes final action on this proposed rulemaking[, in the alternative,] the Administrator intends to exercise the complete discretion afforded to him under the CAA to make and publish a finding that the final action (to the extent a court finds the action to be locally or regionaly applicable is based on a determination of "nationwide scope or effect" within the meaning of CAA section 307(b)(1).").
65 Proposed Disapproval, 87 Fed. Reg. at 9,835.
66 *Texas*, 829 F.3d at 417–18.
67 *Id*. at 420 n.19.

Commenter: Louisiana Electric Utility Environmental Group

Commenter ID: 28

Docket ID: EPA-R06-OAR-2021-0801

Comment:

B. The Appropriate Venue for Hearing Challenges to the Proposed Disapproval of Louisiana's SIP Is the Fifth Circuit.

EPA claims that the appropriate venue for challenges to EPA's final action on the interstate transport SIPs for Louisiana, Arkansas, Texas, and Oklahoma is the U.S. Court of Appeals for the District of Columbia Circuit ("D.C. Circuit").[15] Under Section 307(b)(1) of the CAA, for purposes of determining venue for challenges to EPA actions, the relevant questions are whether the action is: (1) a nationally applicable action; (2) a locally or regionally applicable action; or (3) a locally or regionally applicable action based on a determination that has nationwide scope or effect.[16]

EPA claims that the proposed rulemaking, if finalized, would be a "nationally applicable" action under CAA Section 307(b)(1) because it would address four states, located in three different Federal judicial circuits, and "would apply uniform, nationwide analytical methods, policy judgments, and interpretation with respect to the same CAA obligations."[17] EPA's reasoning is insufficient to make the final rulemaking a "nationally applicable" action and it would be inconsistent with EPA's recent final rulemaking approving the ozone interstate transport SIPs for Florida, Georgia, North Carolina, and South Carolina.[18] Despite the fact that rulemaking applied to four states located in two different Federal judicial circuits, and also relied on EPA's 4-Step interstate transport framework, EPA did not determine that action was nationally applicable, with judicial review available only in the D.C. Circuit. Instead, EPA determined that judicial review of that rule must be filed in the United States Court of Appeals for the appropriate circuit.[19]

In the alternative to determining that the final rulemaking would be "nationally applicable," "the Administrator intends to exercise the complete discretion afforded to him under the CAA to make and publish a finding that the final action … is based on a determination of 'nationwide scope or effect.'"[20] However, despite the Agency's unsupported claim, EPA is not afforded "complete discretion" in proposing to find that the final rulemaking would be based on a determination of "nationwide scope or effect" within the meaning of CAA Section 307(b)(1). Courts do not defer to EPA's determination of venue.[21] Likewise, there is no provision in CAA Section 307(b)(1) that gives EPA the exclusive authority to determine whether an action is based on a determination of nationwide scope or effect.[22] Rather, the CAA "provides a clear metric by which a court can assess the scope or effect of the relevant determinations. The reviewing court merely asks whether the scope or effect of the determinations is nationwide."[23]

EPA's intent to "apply uniform, nationwide analytical methods, policy judgments, and interpretation with respect to the same CAA obligations" in this and other ozone transport SIP rulemakings would not transform any of the final rulemakings into one that is "based on a determination of nationwide scope or effect." Indeed, it would be arbitrary and capricious for EPA to apply non-uniform analytical methods, inconsistent policy judgments, and inconsistent interpretations to the various state ozone transport SIP submittals. If EPA relies on the same concept or interpretation in "other final agency action, it will be subject to judicial review upon challenge" to that separate action.[24] In approving the interstate transport SIPs for Georgia, Florida, North Carolina, and South Carolina, EPA relied on the same 4-Step framework on which it relied for this Proposal and yet EPA made no claim that its approval of those states' SIPs was based on a determination of nationwide scope or effect, in direct contrast to this rulemaking.[25]

Despite EPA's claim that its final rulemaking with respect to the ozone transport SIPs for Arkansas, Louisiana, Texas, and Oklahoma will be nationally applicable or based on a determination of nationwide scope or effect, EPA's final action on these states' SIPs will be locally or regionally applicable, and *not* based on a determination of nationwide scope or effect. "The question of applicability turns on the legal impact of the action as a whole."[26] Here, EPA's proposed action is limited to a single EPA region and directly impacts only four states. This is the prototypical example of a regionally applicable action. Although EPA claims to be applying uniform, nationwide analytical methods, policy judgments, and interpretations, EPA's proposed disapprovals are inherently state-specific and depend on the "facts and circumstances of each particular state's submittal."[27] Accordingly, petitions for review of EPA's final action with respect to the interstate ozone transport SIPs may be brought only in the court of appeals for the appropriate circuit. For EPA's final action with respect to Louisiana's SIP, that will be the U.S. Court of Appeals for the Fifth Circuit.

[15] 87 Fed. Reg. at 9835.
[16] *See* 42 U.S.C. § 7807(b)(1); *see also Texas v. EPA*, 829 F.3d 405, 418 (5th Cir. 2016).
[17] 87 Fed. Reg. at 9835.
[18] Air Plan Approval; FL, GA, NC, SC; Interstate Transport (Prongs 1 and 2) for the 2015 8-Hour Ozone Standard, 86 Fed. Reg. 68,413 (Dec. 2, 2022).
[19] 86 Fed. Reg. at 68,430;
[20] 87 Fed. Reg. at 9835.
[21] *Texas v. EPA*, 829 F.3d 405, 417–18 (5th Cir. 2016).
[22] *Id* at 420.
[23] *Id*.

[24] *Sierra Club v. EPA*, 926 F.3d 844, 849 (D.C. Cir. 2019).
[25] *See* 86 Fed. Reg. 68,413.
[26] *Texas*, 829 F.3d at 419; *accord Texas v. EPA*, No. 10-60961, 2011 WL 710598, at *2 (5th Cir. Feb. 24, 2011) (unpublished) ("Determining whether an action by the EPA is regional or local on the one hand or national on the other should depend on the location of the persons or enterprises that the action regulates rather than on where the effects of the action are felt." (internal quotation omitted)).
[27] 87 Fed. Reg. at 9801.

Commenter: The Luminant Companies

Commenter ID: 44

Docket ID: EPA-R06-OAR-2021-0801

Comment:

IV. EPA's Proposal Is Locally or Regionally Applicable Only and Should be Subject to Review in the "Appropriate Circuit"

The Proposed Disapproval is a locally or regionally applicable action only, and review is only proper in the appropriate regional circuit.[56] "The question of applicability turns on the legal impact of the action as a whole."[57] SIP disapprovals are the prototypical locally or regionally applicable action, and challenges "may be brought only in the court of appeals 'for the *appropriate* circuit[.]'".[58] The Proposed Disapproval, on its face, addresses Texas's SIP independently. Simply because EPA has chosen to combine its review of multiple, independent SIP submissions in a single proposal does not transform EPA's action into a "nationally applicable" action. And even looking to EPA's combined action, the Proposed Disapproval only relates to four states in a single EPA region, and EPA addresses each state's SIP independently. Specifically, the action only has legal effect in those states[59] and has no impact beyond the single EPA region. In reality, the Proposed Disapproval separately reviews and addresses each of the four states' SIP submittals and has proposed action based on the unique circumstances of each state.[60] Thus, the action is "locally or regionally applicable" under the Clean Air Act's judicial review provision.[61]

Moreover, the Proposed Disapproval is not "based on a determination of nationwide scope or effect." For the purposes of the Clean Air Act's venue provision, "'the relevant determinations are those that lie at the core of the agency action,' not determinations that are 'peripheral or extraneous.'"[62] "Section 7607(b)(1) . . . looks to the 'determination' that the challenged action is 'based on.' These determinations are the justifications the agency gives for the action and they can be found in the agency's explanation of its action. They are the reason the agency takes the action that it does."[63] "Determinations are not of nationwide scope or effect if they are 'intensely factual determinations' such as those 'related to the particularities of the emissions sources in Texas."[64] And, even if concepts or interpretations from the proposed action are applied in other rulemakings, that is irrelevant to the venue inquiry, because it is "typical" for "the interpretative reasoning offered by [EPA] . . . [to have] precedential effect in [other] EPA proceedings . . . , including regionally and locally applicable ones."[65] EPA's consistent interpretation of the Clean Air Act does not transform an action into one that is "based on a determination of nationwide scope or effect." Rather, if EPA relies on a concept or interpretation

set forth in "other final agency action, it will be subject to judicial review upon challenge" to that separate action. [66]

Here, the Proposed Disapproval relies on the specific details and attributes of each state's individual and unique SIP submittal. As EPA itself explained in the Proposed Disapproval, it must analyze the approach taken by a given state to determine whether it is "technically justified and appropriate in light of the facts and circumstances of each particular state's submittal."[67] And EPA has done just that—EPA's proposal with respect to Texas's SIP was "[b]ased on the EPA's evaluation of [Texas's] SIP submission[.]"[68] EPA looked to the specific modeling and weight of evidence analysis provided by TCEQ to assess the approvability of Texas's SIP.[69] EPA's claim that it is interpreting the interstate transport obligation "based on a common core of nationwide policy judgments and technical analysis"[70] is irrelevant for purposes of determining venue, as EPA's analysis as applied to the particular facts of each state is subject to review in the appropriate regional circuit. It should be expected that EPA will always act based on a common core of nationwide policy judgments at some level. It cannot be the case that venue is appropriate in the local circuits only when EPA deviates from its standard practices. The actual determinations EPA relies on in its Proposed Disapproval are "intensely factual determinations" such as those related to the particularities of each state's SIP. Therefore, the "nationwide scope or effect" "exception" to the "default presumption" of regional court review is not applicable here,[71] and EPA should not finalize its proposed finding.

[56] 42 U.S.C. § 7607(b)(1).
[57] *Texas*, 829 F.3d. at 419.
[58] [*EME Homer City Generation, L.P. v. EPA*], 696 F.3d [7 (D.C. Cir. 2012)] at 44 n.6.
[59] *Texas v. EPA*, 706 Fed. Appx. 159, 164 (5th Cir. 2017).
[60] *See, e.g.*, 87 Fed. Reg. at 9,824-34 (performing Texas-specific analysis).
[61] *Texas*, 829 F.3d at 419.
[62] *Texas*, 706 Fed. Appx. at 165 (quoting *Texas*, 829 F.3d at 419).
[63] *Texas*, 829 F.3d at 419.
[64] Texas, 706 Fed. Appx. at 165 (quoting *Texas*, 829 F.3d at 421).
[65] *Sierra Club v. EPA*, 926 F.3d 844, 850 (D.C. Cir. 2019); *see also Texas*, 829 F.3d at 423 ("Nor are we persuaded . . . that whatever precedential effect the Final Rule has shows that it is based on determinations with nationwide scope or effect.").
[66] *Sierra Club*, 926 F.3d at 849.
[67] 87 Fed. Reg. at 9,801.
[68] *Id*. at 9,826.
[69] *Id*. at 9,824.
[70] *Id*. at 9,835.
[71] *Texas*, 829 F.3d at 419-21.

Commenter: Tennessee Department of Environment and Conservation

Commenter ID: 41

Docket ID: EPA-R04-OAR-2021-0841

Comment:

Comment #8: The iSIP Disapproval is not a Nationally Applicable Regulation and does not have nationwide scope or effect, therefore the DC Circuit is not the exclusive venue for challenge

EPA argues that the ISIP Disapproval is "nationally applicable within the meaning of CAA section 307(b)(1) because it would take final action on SIP submittals for the 2015 8-hour ozone NAAQS for the states of Alabama, Mississippi, and Tennessee, which are located in three different Federal judicial circuits."[56] However, CAA section 307(b)(1) makes it clear that a "petition for review of the Administrator's action in approving or promulgating any implementation plan under section 110 . . . which is *locally or regionally applicable* may be filed *only* in *the United States Court of Appeals for the appropriate circuit*." And EPA has omitted to mention that all three of these states share boundaries with one another and are all located within the same EPA Region, but do happen to fall in different judicial circuits due to historical happenstance[58].

Therefore, EPA's argument is misplaced; instead, the Court of Appeals for the D.C. Circuit, where venue would be found for "nationally applicable" matters under section 307(b)(1), holds that "EPA's action in approving or promulgating any implementation plan [is] . . . the *prototypical locally or regionally applicable action that may be challenged only in the appropriate regional court of appeals*."[59] In the case of three contiguous states, venue would be improper in the D.C. Circuit because the iSIP Disapproval is a "prototypical . . . regionally applicable action".

Notwithstanding this provision, a petition for review may be filed only in the United States Court of Appeals for the District of Columbia 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. The proposed disapproval states that this action would be "nationally applicable" within the meaning of CAA §307(b)(1) because it would take final action on SIP submittals that are located in three different Federal judicial circuits (the Eleventh Circuit, the Fifth Circuit, and the Sixth Circuit, respectively) and would apply uniform, nationwide analytical methods, policy judgments, and interpretation with respect to the same CAA obligations. EPA's proposed finding is insufficient and should be withdrawn.

[56] 87 FR 9545, 9561.
[57] CAA §307(b)(1) (emphasis added).
[58] Regarding the geographic split of Alabama, Mississippi, and Tennessee between different judicial circuits, Tennessee notes that EPA could have published the proposed disapprovals for all three states in separate notices but declined to do so.
[59] *Am. Rd. & Transp. Builders Ass'n v. EPA*, 705 F.3d 453, 455 (D.C. Cir. 2013).

Commenter: United States Steel Corporation

Commenter ID: 45

Docket ID: EPA-R05-OAR-2022-0006

Comment:

Judicial Review of Any Disapproved SIP Belongs in the Appropriate Circuit Court for the State

The disapproval of the individual SIPs does not have nationwide effect regardless how U.S. EPA attempts to characterize its proposed action. If finalized as proposed, the rule would result in the disapproval of SIPs for Illinois, Indiana, Michigan, Minnesota, Ohio, and Wisconsin. Each SIP has individual, unique sources, and unique air quality aspects. The SIP submittals are unique to each State. Each state has different types of sources. The issues are unique to each State. The impacts of disapproving these State SIPs are local and regional to the affected states and industries in those states. While U.S. EPA may prefer to have a "one size fits all" approach in developing a FIP to replace these SIPs; this does not change the fact that Congress gave States primary responsibility to adopt State Implementation Plans. The individual State submittals are unique to the individual State and sources; and disapproval of any SIP is presumably unique to the individual State.

Response

CAA section 307(b)(1) establishes two routes by which venue may be proper in the D.C. Circuit. First, the D.C. Circuit is "the exclusive venue when EPA's challenged action is 'nationally applicable' rather than 'locally or regionally applicable.'" *Sierra Club v. EPA*, 47 F.4th 738, 742-43 (D.C. Cir. 2022). "Second, and alternatively, venue also lies exclusively in [the D.C. Circuit] if an otherwise 'locally or regionally applicable' action 'is based on a determination of nationwide scope or effect' and EPA 'finds and publishes that such action is based on such a determination.'" *Id.* at 743. For the reasons provided below, this final action is nationally applicable. Alternatively, if a court finds this action to be locally or regionally applicable, the Administrator is exercising his complete discretion to find and publish that this action is based on a determination of nationwide scope or effect.

Nationally Applicable

To determine whether an action is "nationally applicable" or "locally or regionally applicable," a court "'look[s] only to the face of the agency action, not its practical effects.'" *Chevron U.S.A. Inc. v. EPA*, 45 F.4th 380, 386 (D.C. Cir. 2022) (quoting *Sierra Club*, 926 F.3d 844, 849). Venue turns on the nature of the agency "action," not the nature of a petitioner's challenge. *ATK Launch Systems, Inc. v. EPA*, 651 F.3d 1194, 1197 (10th Cir. 2011) (holding that "this court must analyze whether the regulation itself is nationally applicable, not whether the effects complained of or the petitioner's challenge to that regulation is nationally applicable"); *Texas v. EPA*, 829 F.3d 405, 419 (5th Cir. 2016) ("The question of applicability turns on the legal impact of the action as a whole"); *S. Ill. Power Coop. v. EPA*, 863 F.3d 666, 670 (7th Cir. 2017). On its face, this final rulemaking is "nationally applicable" because it directly applies to 21 states located in ten federal judicial circuits and in eight EPA regions across the entire continental United States.

Specifically, in this action the EPA is disapproving the good neighbor SIPs submitted by Alabama, Arkansas, California, Illinois, Indiana, Kentucky, Louisiana, Maryland, Michigan, Minnesota, Mississippi, Missouri, Nevada, New Jersey, New York, Ohio, Oklahoma, Texas, Utah, West Virginia, and Wisconsin based on a uniform legal interpretation and common, nationwide analytical methods with respect to the requirements of CAA section 110(a)(2)(D)(i)(I) concerning interstate transport of pollution (i.e., the EPA's 4-step interstate ozone transport framework for the 2015 ozone NAAQS). This disapproval is based on the EPA's conclusion that the good neighbor SIPs submitted by all of these states fail to contain adequate provisions to prohibit, consistent with the provisions of title I of the CAA, any source or other

type of emissions activity within each state from emitting any air pollutant in amounts that will contribute significantly to nonattainment in, or interfere with maintenance by, any other state with respect to the 2015 ozone NAAQS, as required by CAA section 110(a)(2)(D)(i). The immediate legal effect of this disapproval is that the EPA is now obligated under CAA section 110(c)(1) to promulgate one or more Federal implementation plans (FIPs) that satisfy the requirements of CAA section 110(a)(2)(D)(i) for the 2015 ozone NAAQS for all of these states.

The EPA is relying on the results from nationwide photochemical grid modeling using a 2016 base year and 2023 projection year as the primary basis for its assessment of air quality conditions and pollution contribution levels at Step 1 and Step 2 of the EPA's 4-step interstate transport framework and applying a nationally uniform approach to the identification of nonattainment and maintenance receptors across the entire geographic area covered by this final action. The EPA has also evaluated each state's arguments for the use of alternative approaches or alternative sets of data with an eye to ensuring national consistency and avoiding inconsistent or inequitable results among upwind states (i.e., those states for which good neighbor obligations are being evaluated in this action) and between upwind and downwind states (i.e., those states that contain receptors signifying ozone nonattainment or maintenance problems). Given that on its face this action addresses implementation of the good neighbor requirements of CAA section 110(a)(2)(D)(i)(I) in a large number of states located across the country and given the interdependent nature of interstate pollution transport and the common core of knowledge and analysis involved in evaluating the SIP submissions, this is a "nationally applicable" action within the meaning of CAA section 307(b)(1). This action derives from the EPA's "national interpretation" of CAA section 110(a)(2)(D)(i) and "any challenge thereto belongs in the D.C. Circuit." *ATK Launch Systems, Inc. v. EPA*, 651 F.3d 1194, 1200 (10th Cir. 2011).

The EPA disagrees with commenters' suggestion that all the EPA actions on implementation plans must be "locally or regionally applicable" actions subject to review in the regional circuit courts. Commenters correctly note that in *Am. Rd. & Transp. Builders Ass'n v. EPA*, 705 F.3d 453 (D.C. Cir. 2013) (hereafter *ARTBA*), the D.C. Circuit stated that "EPA's 'action in approving or promulgating any implementation plan' is the prototypical 'locally or regionally applicable action' that may be challenged only in the appropriate regional court of appeals." 705 F.3d at 455. But that case involved the EPA's approval of a SIP submission from a single state. The court in *ARTBA* did not state that *every* EPA action on an implementation plan under CAA section 110 must be a "locally or regionally applicable action," nor did the court's venue decision address any SIP action beyond the one before the court – i.e., the EPA's approval of a particular SIP submission from California. To the extent commenters intended to cite *ARTBA* for the proposition that the regional circuit courts are the exclusive venue for any challenge to any EPA "action in approving or promulgating any implementation plan under [CAA section 110]," that claim is incorrect and unsupported by the statutory text. We note that although the Administrator's promulgation of Federal implementation plans under section 110(c) for multiple states under the good neighbor provision would constitute actions "promulgating [an] implementation plan under [CAA section 110]," judicial challenges to these actions have historically been heard in the D.C. Circuit Court of Appeals. Indeed, regional courts of appeals have transferred petitions for review of those FIPs or related actions on SIPs to the D.C. Circuit on at least two occasions over petitioners' opposition. *West Virginia Chamber of Commerce v. Browner*, 1998 WL 827315, at *6 (4th Cir. 1998); *Cedar Falls Utilities v. U.S. EPA*, No. 16-4504 (8th Cir. filed Feb. 22, 2017).

The EPA also disagrees with commenters' claim that the geographic applicability of the EPA's proposed rules dictates venue, as only final actions are subject to judicial review under CAA section 307(b)(1). We note, however, that the EPA signaled its intent in each of the proposed rules to take a single, nationally applicable final action. *See, e.g.,* 87 FR 9498, 9516 n.73 (February 22, 2022). Additionally, all of the proposed rules leading to this final action were supported by a national docket maintained by the EPA Headquarters and containing the key modeling files, data, and support documents that were used in the EPA's nationwide photochemical grid modeling analysis. *See, e.g*., 87 FR 9484, 9485 (February 22, 2022).

One commenter cited to a December 2021 EPA action approving good neighbor SIPs for Florida, Georgia, North Carolina, and South Carolina in which the EPA stated that "[u]nder section 307(b)(1) of the CAA, petitions for judicial review of this action must be filed in the United States Court of Appeals for the appropriate circuit by" a specified date (*see* 86 FR 68413, 68420 (Dec. 2, 2021)), claiming that the EPA treated this prior multi-state SIP approval action as locally or regionally applicable and that it is therefore arbitrary and capricious to treat the final rule promulgated today as nationally applicable. We note that, in the December 2021 rulemaking, the EPA stated only that venue would lie in the "appropriate circuit" and did not indicate whether the D.C. Circuit or a regional circuit court would be the appropriate circuit. In any case, commenters fail to identify anything in the December 2021 rulemaking that undermines the EPA's conclusion that the final action here is nationally applicable.

Nationwide Scope or Effect

Under CAA section 307(b)(1), an EPA action which is locally or regionally applicable may be filed only in the United States Court of Appeals "for the appropriate circuit" with one exception: if the locally or regionally applicable action (i) "is based on a determination of nationwide scope or effect," and (ii) the Administrator "finds and publishes that such action is based on such a determination," venue lies exclusively in the D.C. Circuit. The venue provision of the Act thus expressly grants the EPA complete discretion to determine whether to invoke an exception to the general rule that challenges to locally or regionally applicable actions be heard in the appropriate regional circuits. As the D.C. Circuit recently held in *Sierra Club v. EPA*, 47 F.4th 738 (D.C. Cir. 2022), the "EPA's decision whether to make and publish a finding of nationwide scope or effect is committed to the agency's discretion and thus is unreviewable."[89] Although "[a] court may review whether an action by EPA is nationally applicable, as well as whether locally or regionally applicable action is based on a determination of nationwide scope or effect *when EPA so finds and publishes*…. A court may not 'second-guess' the agency's discretionary decision to make and publish (or not) a finding of nationwide scope or effect."[90] For these reasons, the EPA disagrees with commenters' claim that the EPA lacks discretion to make and publish a finding that this action is based on a determination of nationwide scope or effect.

The Administrator is exercising the complete discretion afforded to him by the CAA to make and publish a finding that, if a court finds this action to be locally or regionally applicable, this action is based on a determination of "nationwide scope or effect" within the meaning of CAA section 307(b)(1). Thus, even

[89] 47 F.4th at 745 (D.C. Cir. 2022); *see also Texas v. EPA*, 983 F.3d 826, 835 (5th Cir. 2020) ("when a locally applicable action is based on a determination of nationwide scope or effect, the EPA has discretion to select the venue for judicial review").

[90] 47 F.4th at 746 ("The Act offers 'no basis on which a reviewing court could properly assess' the agency's discretionary decision" to make a nationwide scope or effect finding) (emphases added).

if this action is locally or regionally applicable, challenges to it may only be brought in the D.C. Circuit. All of the factors discussed above that support the EPA's conclusion that this action is nationally applicable, as explained further here, also support the Administrator's finding that this action is based on a determination of nationwide scope or effect. In this final action, the EPA is interpreting and applying CAA section 110(a)(2)(D)(i)(I) for the 2015 ozone NAAQS based on a common core of nationwide policy judgments and technical analysis concerning the interstate transport of pollutants throughout the continental U.S. In particular, the EPA is applying here the same, nationally consistent 4-step interstate transport framework for assessing good neighbor obligations for the 2015 ozone NAAQS that it has applied in other nationally applicable rulemakings, such as CSAPR, the CSAPR Update, and the Revised CSAPR Update. The EPA is relying on the results from nationwide photochemical grid modeling using a 2016 base year and 2023 projection year as the primary basis for its assessment of air quality conditions and pollution contribution levels at Step 1 and Step 2 of the EPA's 4-step interstate transport framework and applying a nationally uniform approach to the identification of nonattainment and maintenance receptors across the entire geographic area covered by this final action.[91] While the commenter is correct that the EPA has evaluated the particulars of each state's submission, our findings with respect to these submissions are nationally consistent and based on determinations of nationwide scope or effect. The EPA has evaluated each state's arguments for the use of alternative approaches or alternative sets of data with an eye to ensuring national consistency and avoiding inconsistent or inequitable results among upwind states (i.e., those states for which good neighbor obligations are being evaluated in this action) and between upwind and downwind states (i.e., those states that contain receptors signifying ozone nonattainment or maintenance problems).

Additionally, the EPA in this action has set forth its views on the importance of a nationally uniform approach to contribution-threshold analysis at Step 2 and has evaluated states' arguments in support of a non-uniform approach. In this final action, we respond to these arguments in a nationally coordinated fashion, informed in part by the importance of ensuring consistency and fair and equitable treatment of both upwind contributing states and downwind states impacted by upwind pollution. Similarly, the EPA has also determined that other arguments from states regarding the other three steps of the 4-step interstate transport framework are insufficient to support approval of the SIP submissions. In many cases these arguments are highly similar to one another. The EPA's determinations with respect to these issues rest on the same or highly similar grounds, across all of the states covered by this action. Section V of the preamble presents consolidated responses to comments on these cross-cutting issues. All of these determinations have nationwide scope or effect.

The EPA therefore disagrees with commenters' claim that this action is "inherently state-specific" and dependent on the "facts and circumstances" of each particular SIP submission and the particularities of each state's air quality and emissions sources. In any case, even if this action is locally or regionally applicable, venue for any challenge to it is proper only in the D.C. Circuit because the action is based on

[91] In the report on the 1977 Amendments that revised section 307(b)(1) of the CAA, Congress noted that the Administrator's determination that the "nationwide scope or effect" exception applies would be appropriate for any action that has a scope or effect beyond a single judicial circuit. *See* H.R. Rep. No. 95-294 at 323, 324, reprinted in 1977 U.S.C.C.A.N. 1402-03.

one or more determinations of nationwide scope or effect and the Administrator is exercising his complete discretion to find and publish that it is based on such determinations.

Additionally, the Administrator finds that this is a matter on which national uniformity in judicial resolution of any petitions for review is desirable, to take advantage of the D.C. Circuit's administrative law expertise, and to facilitate the orderly development of the basic law under the Act. The Administrator also finds that consolidated review of this action in the D.C. Circuit will avoid piecemeal litigation in the regional circuits, further judicial economy, and eliminate the risk of inconsistent results for different states, and that a nationally consistent approach to the CAA's mandate concerning interstate transport of ozone pollution constitutes the best use of Agency resources.

Commenters fail to support their argument that "courts do not defer to EPA's determination of venue," and it is not clear what the commenters mean in asserting that CAA section 307(b)(1) does not give the EPA "exclusive authority" to find that an action is based on a determination of nationwide scope or effect. As the *Sierra Club* court noted, courts may review whether a locally or regionally applicable action is based on a determination of nationwide scope or effect *when EPA so finds and publishes.* But the decision whether to make and publish a finding of nationwide scope or effect is committed to agency discretion by law.

Finally, the EPA disagrees with commenters' claim that the EPA's decision not to publish a "nationwide scope or effect" finding in its December 2021 action approving good neighbor SIPs for Florida, Georgia, North Carolina, and South Carolina (86 FR 68413 (Dec. 2, 2021)) prohibits the EPA from making a "nationwide scope or effect" finding in this action. Whether or not the EPA invoked the exception in CAA section 307(b)(1) for transferring venue to the D.C. Circuit in a prior action, that prior action has no bearing on the EPA's discretion to invoke the exception here. The CAA allows the EPA to direct locally or regionally applicable actions that are "based on a determination of nationwide scope or effect" to the D.C. Circuit, but it does not require the EPA to send such cases there, nor does it provide any criteria for the Agency's exercise of its discretion.[92]

The commenter correctly notes that the EPA has approved interstate transport SIPs for the 2015 ozone NAAQS for many states throughout the country that were found not to contribute above the one percent of NAAQS threshold at Step 2 and, in these actions, made no finding that the actions were based on determinations of nationwide scope or effect. However, the absence of such a finding in one action provides no basis for challenging the Agency's finding in another. Given the far greater degree of technical and policy judgment with respect to numerous national-scale issues that the EPA has exercised in this action as part of the EPA's review of these SIP submissions, it is reasonable for the EPA to seek national consistency in the judicial resolution of any petitions for review of this action.

[92] *See Texas v. EPA*, 983 F.3d at 834-35 (5th Cir. 2020); *see also Sierra Club v. EPA,* 47 F.4th 738, 746 (D.C. Cir. 2022) (noting that "[i]n deciding whether to make and publish a finding of nationwide scope or effect—and thus to direct review to [the D.C. Circuit], as opposed to a regional circuit—EPA may weigh any number of considerations").

10.2 SIP Call

Comments

Commenter: Alabama Department of Environmental Management

Commenter ID: 02

Docket ID: EPA-R04-OAR-2021-0841

Comment:

Additionally, it should be noted that the purpose of an iSIP is to verify that the State has the authority to address the regulations of the Clean Air Act (CAA), not to determine if, and by how much, an upwind State may impact a downwind monitor. If EPA intended to use updated modeling to assess impacts at future nonattaining and maintenance receptors, a call for plan revisions should have occurred, allowing EPA to incorporate and rely on modeling and monitoring data, while providing States the opportunity to review the data and incorporate any changes, if needed, without the need for a FIP call.

Commenter: Kentucky Division for Air Quality

Commenter ID: 25

Docket ID: EPA-R04-OAR-2021-0841

Comment:

Many states that submitted a 2015 Ozone Transport SIP to EPA for approval did use the 1 ppb threshold. Given the reliance on the August 2018 memo, it would have been appropriate for EPA to, via a SIP Call, rescind the memo and request that states submit revised SIPs that did not use the 1 ppb threshold.

In this proposed action, EPA is relying on the 1% threshold to evaluate a state's contribution to a nonattainment or maintenance monitor, EPA identifies the need for consistency in its evaluation across all of its Interstate Transport requirements, for all NAAQS. Kentucky believes retraction of the August 2018 memo and issuance of a call for plan revisions under 42 U.S.C. § 7410(k)(5) would further promote consistency across states' evaluations of their SIPs,

Commenter: Midwest Ozone Group

Commenter ID: 30

Docket ID: EPA-R02-OAR-2021-0673, EPA-R03-OAR-2021-0872, EPA-R03-OAR-2021-0873, EPA-R04-OAR-2021-0841, EPA-R05-OAR-2022-0006, EPA-R06-OAR-2021-0801, EPA-R07-OAR-2021-0851, EPA-R08-OAR-2022-0315, EPA-R09-OAR-2022-0394, EPA-R09-OAR-2022-0138

Comment:

EPA does not offer explanation for not electing to work with the states to develop a state implementation plan call pursuant to 110(k)(5) which provides for up to 18 months for states to address flaws in the disapproved SIPs. These accelerated actions by the agency clearly indicate that transparency is not a priority. EPA should, instead, have provided updated guidance, updated modeling, instructions on addressing specific state deficiencies, and adequate time for state response.

Commenter: Air Pollution Control Program, Missouri Department of Natural Resources

Commenter ID: 01

Docket ID: EPA-R07-OAR-2021-0851

Comment:

If EPA desires to make a formal finding that Missouri's SIP is inadequate because of these newly identified receptors, it must approve our original SIP and then issue a SIP call to provide Missouri a chance to address the receptors that have been newly identified in the updated modeling. Failure to do so, would circumvent EPA's obligation to put forth any effort for cooperative federalism as envisioned in the Clean Air Act.

Commenter: PacifiCorp

Commenter ID: 38

Docket ID: EPA-R08-OAR-2022-0315

Comment:

Where new information arises that is critical to ensure compliance with the Act, EPA has authority under section 7410(k)(5) to ensure SIPs are revised to satisfy the Act. This procedure gives states the opportunity to re-draft SIPs in light of any such new data or analysis. By acting on post-record material to disapprove a SIP, EPA denies states this opportunity.

Response

The EPA disagrees that the Agency was required to explain why it did not exercise its discretion under CAA section 110(k)(5), which allows the EPA to require a state "to revise the [SIP] as necessary" [w]henever the Administrator deems a SIP is "substantially inadequate to attain or maintain the relevant [NAAQS][.]" This "SIP call" authority is discretionary with the Agency, and nothing in the statute obligates EPA to first provide states a second opportunity to submit approvable SIPs before promulgating FIPs. *See EME Homer City*, 572 U.S. at 509.

As a preliminary matter, commenters have not raised an issue that is actually within scope of the present action, which is the decision to disapprove the SIP submissions that are before the Agency as

required by CAA section 110(k)(2) and (3). The deadline established for the EPA action on a SIP submission under CAA section 110(k)(2) is not altered or displaced by the fact that the EPA has discretionary authority to issue a SIP call under CAA section 110(k)(5). Additionally, the EPA's evaluation of a SIP submission pursuant to CAA section 110(k)(3) to determine whether the submission "meets all of the applicable requirements of this chapter" is similarly not altered or displaced by the fact that the EPA has discretionary authority to issue a SIP call under CAA section 110(k)(5). The FIP that the EPA proposed in April of 2022 is not a component of this present action. Further, the larger policy considerations that may have informed the Agency's consideration of *when* to act on these SIP submissions are also not within the scope of this action.

In this action, the Agency is acting on the SIP submissions that are before it, as required by CAA section 110(k)(2) and (3), and therefore, comments urging the Agency to issue a SIP call pursuant to CAA section 110(k)(5) are effectively requesting that the Agency engage in an additional rulemaking effort separate from this action.[93] Without offering any final determination on that suggestion, which is beyond the scope of this action, a SIP call, if undertaken as an alternative to the present action, would effectively cause a delay of several years in implementing interstate transport obligations for the 2015 ozone NAAQS. Thus, if this even were a reviewable question with respect to the Agency's action here, it is reasonable for the Agency not to embark on that course of action.

Commenters problematically prioritize giving states further opportunities to submit an approvable SIP before EPA promulgates a FIP, rather than prioritizing the statutory obligation to eliminate pollution significantly contributing to nonattainment and interfering with the NAAQS in other states as expeditiously as practicable. Commenters' policy preference is not required by the Act; importantly, it is in tension with the Act's substantive mandates. It is entirely appropriate for the Agency to not pursue a discretionary SIP call in the circumstances here, where expeditious action to address outstanding obligations is paramount, delays have already occurred, and the Agency seeks to address an area of CAA implementation (interstate air pollution at the regional scale) where EPA historically has been obligated to exercise its FIP authority to achieve necessary emissions reductions.

The EPA does not rule out the possibility of using mechanisms such as CAA section 110(k)(5) or the promulgation of an obligations rule to inform states' development of transport SIP submissions for future NAAQS revisions. In the context of this NAAQS, at this time, however, such an approach would further delay the implementation of good neighbor obligations that the courts have already found the EPA is past due in addressing. *See, e.g., Maryland v. EPA*, 958 F.3d 1185, 1203-04 (D.C. Cir. 2020). To illustrate this, under the EPA's current sequencing of actions, upon finalization of this action disapproving SIP submissions, and if the Agency finalizes the proposed FIP sometime in early 2023, the EPA will be able to ensure emissions reductions to address good neighbor obligations beginning in the

[93] We note as well that EPA is obligated to act on these SIP submissions pursuant to multiple federal consent decrees, which were entered to resolve litigation alleging that EPA had already missed statutory deadlines pursuant to CAA section 110(k)(2). EPA is aware of no authority, and commenters cite none, that would authorize EPA not to act on these submittals and instead take the alternate course of issuing a SIP call under 110(k)(5). Further, EPA has an obligation to promulgate a FIP under CAA section 110(c)(1) upon final action disapproving these SIP submittals, unless EPA first approves a SIP revision. Thus, commenters have not explained how, even if EPA issued a SIP call as a separate action in relation to good neighbor obligations for the 2015 ozone NAAQS, this would alter the schedule of actions it is obligated to undertake by virtue of 110(k)(2), (3), and (c)(1).

2023 ozone season. By contrast, even under a relatively aggressive timetable for issuing a SIP call, these emission reductions could easily be delayed by as much as three years or more. (This estimate takes into account the time needed to propose and finalize action issuing the SIP call, the time needed for states to develop, take comment on, and submit SIP revisions, the time needed for the EPA to propose and finalize action on those SIP revisions, and the time needed to propose and promulgate a FIP, if necessary.)

During the time needed to implement a SIP call as commenters suggest, the EPA would have allowed significant contribution to continue through both the 2024 Moderate area attainment date and quite possibly the 2027 Serious area attainment date, missing not one but two critical attainment dates (the "ultimate failsafe" in the words of the *Wisconsin* court, 938 F.3d at 317) in implementing CAA obligations that are at "the heart of the Act," *id.* at 316 (quoting *Train v. NRDC*, 421 U.S. 60, 66 (1975)). The EPA would have been required to proceed through not one but two additional rulemaking efforts (both the SIP call, and actions on SIP submissions in response to the SIP call). And the EPA would have allowed this to occur even though, as the *Wisconsin* court also recognized,

> When EPA determines that a State's SIP is inadequate, EPA presumably must issue a FIP that will bring that State into compliance before upcoming attainment deadlines, even if the outer limit of the statutory timeframe gives EPA more time to formulate the FIP. *See Sierra Club v. EPA*, 294 F.3d 155, 161 (D.C. Cir. 2002) ("the attainment deadlines remain intact" even if procedural deadlines are missed or changed). The same is true when a State's SIP fails to provide for the full elimination of the State's significant contributions to downwind nonattainment.

Id. at 318.

Consistent with the court's observations in this passage, under the EPA's approach, the EPA is able to take final action on these SIP submissions in this action, thereby establishing predicate FIP authority (as needed) before the start of the 2023 ozone season. By proposing a FIP in April of 2022, EPA is also in a position to finalize that FIP in time for the 2023 ozone season, thus beginning implementation of needed emissions reductions to eliminate significant contribution in the analytic year associated with the next relevant attainment date for the 2015 ozone NAAQS. Further, with that proposal, EPA was also able to put states and sources on notice of its proposed expectations regarding what level of emissions reductions would be needed to eliminate the amounts of emissions significantly contributing to nonattainment and interfering with maintenance. *See* 87 FR 20040, 20149-51. Following promulgation of a FIP, states may replace that FIP with a SIP so long as the substantive CAA obligations are achieved. The FIP, if finalized, would provide a degree of information comparable to what EPA would include in a SIP call in terms of identifying with specificity the level of emissions reductions each state is expected to implement.[94] Thus, the EPA's approach does not even sacrifice the key benefit commenters apparently hope to achieve via a SIP call, which is a level of certainty for states regarding their good neighbor obligations to allow them to formulate approvable SIP submissions.

[94] As discussed in the cited passage of the proposed FIP, EPA always allows states the opportunity to implement a different mix of emissions controls than it has implemented through a FIP so long as the overall CAA obligation is met.

We reiterate that our reasoning as to the disadvantages of conducting a SIP call—as well as the potential timing for finalizing FIP actions—is not within the scope of this action and is offered simply to illustrate the disadvantages associated with this alternative sequence of steps advocated for by many commenters. We further acknowledge that there are many circumstances under the CAA where a SIP call may be an appropriate mechanism to ensure that the SIP complies with the CAA and that states are adequately fulfilling their CAA obligations to implement the NAAQS. The EPA has even used this tool to address good neighbor obligations (as per the 1998 NOX SIP Call[95]) and may do so again under appropriate circumstances in the future. However, there is nothing in the CAA that *requires* the agency to issue SIP calls instead of acting on SIP submissions under CAA section 110(k)(2) and (3) that are not approvable. This irreducible statutory fact is not changed even if the EPA is accused of failing to issue guidance that was sufficiently clear or prescriptive to states before their original SIP submissions were due—the EPA has no such obligation. *See EME Homer City*, 572 U.S. at 508-11. Here, it is reasonable not to further delay fulfilling the EPA's mandatory duty to act on these SIP submissions by embarking on a discretionary SIP call.

10.3 Cooperative Federalism and the EPA's Authority

Comments

Commenter: Air Pollution Control Program, Missouri Department of Natural Resources

Commenter ID: 01

Docket ID: EPA-R07-OAR-2021-0851

Comment:

EPA is intentionally exploiting the Supreme Court decision in EME Homer City vs. EPA to justify any costs or requirements it deems necessary to further federal policy decisions.

Commenter: Alabama Department of Environmental Management

Commenter ID: 02

Docket ID: EPA-R04-OAR-2021-0841

Comment:

[95] Notably, the NO_X SIP Call was judicially stayed by the D.C. Circuit Court of Appeals, and this led EPA to exercise its independent authority to directly federally regulate sources violating the good neighbor provision in response to petitions under CAA section 126(b), an action which that same court subsequently upheld. *See Appalachian Power Co. v. EPA*, 249 F.3d 1032, 1039 (D.C. Cir. 2001).

Absent rulemaking, the States, who are responsible for the development and implementation of SIPs, will use best judgement and sound scientific principles, regarding all available information in said development and implementation.

[…]

From a legal perspective, it is important to note that the Clean Air Act (CAA) does not mandate how States address the Good Neighbor provisions of Section 110(a)(2)(D)(i). More specifically, EPA has stated that the contents of SIP submissions "may vary depending on the facts and circumstances". Given that States have the primary responsibility to develop and implement the SIP, ADEM contends that Alabama reserves the right to submit a revised SIP, using the criteria that the State deems appropriate and consistent with the CAA.

Commenter: Alabama Power Company

Commenter ID: 03

Docket ID: EPA-R04-OAR-2021-0841

Comment:

However, even if ADEM had not withdrawn its 2018 SIP submittal, EPA should not finalize its proposed disapproval of Alabama's 2018 submittal. The Act "expressly gave the states initial responsibility for determining the manner in which air quality standards were to be achieved."[8] EPA must review state plans to confirm the state has discharged its obligations, but "EPA's role is to approve state choices, provided that they meet the criteria of the CAA." [9] Accordingly, if a state's submission satisfies the statutory criteria, EPA cannot disapprove its SIP submission.[10]

With specific regard for the "good neighbor" aspect of state SIPs, EPA has been clear that states may satisfy this obligation in a variety of ways. EPA has explained that "[t]he precise nature and contents of a good neighbor provision is not stipulated in the statute. [Therefore,] EPA believes that the contents of the SIP submission required by section 110(a)(2)(D)(i) may vary depending on the facts and circumstances related to the specific NAAQS."[11] For example, EPA "has not directed states that they must conduct a Step 3 analysis in precisely the manner the EPA has done in its prior regional transport rulemakings."[12]

Accordingly, EPA could not determine the adequacy of Alabama's 2018 SIP submittal based on non-statutory, policy preferences.[13] The law is well-established that states are granted this same discretion with respect to SIP provisions regarding interstate transport. In fact, a state's authority in adopting a SIP is the same as EPA's authority with regard to implementing Federal Plans.[14] Because Alabama is primarily responsible for "adequately" identifying and eliminating any "significant contribution," EPA could only disapprove Alabama's SIP if it failed to "'explain whether or not emissions from the state' significantly contribute to nonattainment in other states."[15] EPA's proposed disapproval would undermine the well-established cooperative federalism approach of the CAA, where "air pollution prevention . . . and air pollution control at its source is the primary responsibility of States and local governments."[16] On the applicable and timely record, that is, excluding the post-hoc analysis offered by

EPA in 2022, it is plain that Alabama's submission satisfied the statutory requirements of the CAA. Moreover, were it not moot, even in light of EPA's new analyses, Alabama's 2018 SIP submittal, when considered as a whole and in view of EPA's 2018 Guidance, should not be disapproved.[17]

[8] *See* 42 U.S.C. § 7410(a) (requiring States to submit plans to implement, maintain, and enforce NAAQS); *see also Com. of Va. v. EPA*, 108 F.3d 1397, 1407 (D.C. Cir. 1997), *modified on reh'g*, 116 F.3d 499 (D.C. Cir. 1997) (the CAA "expressly gave the states initial responsibility for determining the manner in which air quality standards were to be achieved").
[9] 87 Fed. Reg. 21,027, 21,028 (Apr. 11, 2022)
[10] *See* 42 U.S.C. § 7410(k)(3).
[11] *See* EPA, *Guidance for State Implementation Plan (SIP) Submissions to Meet Current Outstanding Obligations Under Section 110(a)(2)(D)(i) for the 8-Hour Ozone and PM2.5 National Ambient Air Quality Standards* 3 (Aug. 15, 2006),
https://www3.epa.gov/ttn/naaqs/aqmguide/collection/cp2/20060815_harnett_final_section_110(a)(2)(D)(i)_guidance.pdf ("2006 Guidance").
[12] 87 Fed. Reg. at 9,554.
[13] *See Luminant Generation Co., L.L.C. v. EPA*, 675 F.3d 917, 927-29 (5th Cir. 2012) (rejecting EPA's attempt to enforce non-statutory requirements through SIP review process); *Com. of Va.*, 108 F.3d at 1410 (stating that CAA Section 110 "does not enable EPA to force particular control measures on the states."); *see also Concerned Citizens of Bridesburg v. EPA*, 836 F.2d 777, 780-81 (3d Cir. 1987) ("[A] SIP basically embodies a set of choices . . . that the state makes for itself in attempting to reach the NAAQS with minimum dislocation.).
[14] *Cf. EME Homer City Generation v. EPA*, 696 F.3d 7, 47-48 (D.C. Cir. 2012) (Judge Rogers, dissenting), *rev'd on other grounds*, 572 U.S. 489 (2014) ("EME Homer I").
[15] *See Westar Energy, Inc. v. EPA, 608 F. App'x 1, *3 (D.C. Cir. 2015) (*quoting EPA, *Guidance on SIP Elements Required Under Sections 110(a)(1) and (2) for the 2006 24–hour Fine Particle (PM2.5) National Ambient Air Quality Standards (NAAQS)* 3 (Sept. 25, 2009)) (affirming EPA disapproval where Kansas had not analyzed the downwind impact of in-state emissions and had not concluded that its in-state emissions did not contribute).
[16] 42 U.S.C. § 7401(a)(3).
[17] See attached comments of Alabama Power and Southern Power on ADEM's proposed SIP withdrawal and replacement, April 15, 2022, which are incorporated herein by reference.

Commenter: Alabama Power Company, Southern Power Company, and PowerSouth Energy Cooperative

Commenter ID: 04

Docket ID: EPA-R04-OAR-2021-0841

Comment:

A. ADEM Has the Primary Authority for Addressing its "Good Neighbor" Obligation Under the Clean Air Act

Under the Clean Air Act, a state's SIP must include, among other things, provisions prohibiting emissions from sources in the state that will "contribute significantly to nonattainment in, or interfere with maintenance by, any other state with respect to" the 2015 ozone NAAQS.[15] Although EPA has the primary responsibility in establishing air quality standards, the Clean Air Act "expressly gave the states initial responsibility for determining the manner in which air quality standards were to be achieved."[16] In other words, states are given the first opportunity to create a reasonable SIP that ensures compliance with the Clean Air Act. Importantly, the Clean Air Act does not mandate that states address their "good

neighbor" obligation under any particular framework;[17] rather, states have broad discretion in developing their SIP provisions.

Moreover, although EPA has adopted regulations that govern the SIP submittal process generally, EPA has not adopted any additional regulatory standards that define the requirements for Clean Air Act Section 110(a)(2)(D)(i)(I) interstate transport SIPs related to the 2015 ozone standard.[18] Notably, EPA has established regulatory standards for other NAAQS, thus, EPA's silence here indicates there are no specific requirements states must meet in crafting their interstate transport SIPs for the 2015 ozone NAAQS. Because EPA's regulations are silent on this matter, EPA must approve of ADEM's SIP if the SIP package "explain[s] whether or not emissions for the state significantly contribute to nonattainment in other states."[19] No single approach is required, as states have taken various approaches to addressing this obligation, and EPA has approved these different approaches.[20] The "4-step framework" favored by EPA is not in the Clean Air Act, nor does the Act mandate a certain analytical approach for interstate transport. In other words, while EPA's 4-step framework may or may not be appropriate for evaluating some future EPA *FIP*, it does not apply to EPA's review of Alabama's *SIP* submittal.

Ultimately, "EPA's role is to approve state choices, provided that they meet the criteria of the CAA."[21] EPA cannot assess the adequacy of Alabama's 2022 SIP submittal based on non-statutory, policy preferences.[22] Accordingly, if a state's submission satisfies the statutory criteria, EPA must approve the SIP.[23] Rather than respect Alabama's primary role in the development of its SIP, EPA's proposed disapproval undermines the well-established cooperative federalism approach of the CAA, where "air pollution prevention . . . and air pollution control at its source is the primary responsibility of States and local governments."[24] Because Alabama's 2022 SIP satisfies the requirements of the Clean Air Act, including "'explaining whether or not emissions from the state' significantly contribute to nonattainment in other states,"[25] EPA must approve Alabama's SIP.

[15] 42 U.S.C. § 7410(a)(2)(D)(i).
[16] *Com. of Va. v. EPA*, 108 F.3d 1397, 1407 (D.C. Cir. 1997), *modified on reh'g*, 116 F.3d 499 (D.C. Cir. 1997); *see also* 42 U.S.C. § 7401(a)(3) ("[A]ir pollution control at its source is the primary responsibility of States and local governments[.]").
[17] *See* EPA*, Guidance for State Implementation Plan (SIP) Submissions to Meet Current Outstanding Obligations Under Section 110(a)(2)(D)(i) for the 8-Hour Ozone and PM2.5 National Ambient Air Quality Standards*, at 3 (Aug. 15, 2006), available at https://www3.epa.gov/ttn/naaqs/aqmguide/collection/cp2/20060815_harnett_final_section_110(a)(2)(D)(i)_guidanc e.pdf ("The precise nature and contents of [a SIP] submission [are] not stipulated in the statute.").
[18] However, EPA has done so for other NAAQS. See 40 C.F.R. §§ 51.123–.124.
[19] *Westar Energy, Inc. v. EPA*, 608 Fed. App'x 1, *3 (D.C. Cir. 2015).
[20] *See, e.g.*, Air Plan Approval; Hawaii; Interstate Transport for the 2015 Ozone NAAQS, 86 Fed. Reg. 53,571 (Sept. 28, 2021); Air Quality State Implementation Plans; Approvals and Promulgations: Alaska; Interstate Transport Requirements for the 2015 Ozone Standard, 84 Fed. Reg. 26,041 (June 4, 2019).
[21] 87 Fed. Reg. 21,027, 21,028 (Apr. 11, 2022)
[22] *See Luminant Generation Co., L.L.C. v. EPA*, 675 F.3d 917, 927-29 (5th Cir. 2012) (rejecting EPA's attempt to enforce non-statutory requirements through SIP review process); *Com. of Va.*, 108 F.3d at 1410 (stating that CAA Section 110 "does not enable EPA to force particular control measures on the states."); *see also Concerned Citizens of Bridesburg v. EPA*, 836 F.2d 777, 780-81 (3d Cir. 1987) ("[A] SIP basically embodies a set of choices . . . that the state makes for itself in attempting to reach the NAAQS with minimum dislocation.").
[23] *See* 42 U.S.C. § 7410(k)(3).
[24] 42 U.S.C. § 7401(a)(3).

[25] *See Westar Energy*, 608 Fed. App'x at *3 (quoting EPA, *Guidance on SIP Elements Required Under Sections 110(a)(1) and (2) for the 2006 24–hour Fine Particle (PM2.5) National Ambient Air Quality Standards (NAAQS)* 3 (Sept. 25, 2009)) (affirming EPA disapproval where Kansas had not analyzed the downwind impact of in-state emissions and had not concluded that its in-state emissions did not contribute).

Commenter: Arkansas Department of Energy and Environment, Division of Environmental Quality

Commenter ID: 07

Docket ID: EPA-R06-OAR-2021-0801

Comment:

IX. The Federal-State Partnership

One of the most important pillars of our federal-state regulatory framework under the Clean Air Act is the concept of cooperative federalism. One-size-fits-all policies are in direct conflict with cooperative federalism, as these policies do not reflect the nuances of a state's individual circumstances. By setting in place an overarching policy without attention to state individuality (such as EPA's 1% threshold or its control strategy under the proposed FIP), the federal government initiates an effort to coerce local and state entities into conformity with national policy. At minimum, if a federal agency ultimately decides to dismiss requested state input, then the federal government must take on a role in an advisory capacity and one with increasing collaboration and support, especially through provision of additional funding and technical resources.[28]

In this latest action by EPA, the agency attempts to set local policy goals by dismissing individual state analyses, and having a FIP waiting in the wings constitutes an "or else" coercive strategy by the EPA. EPA's concurrent proposal of a FIP with their proposed disapprovals instead of providing states with the customary two years to submit a corrective SIP revision is clear evidence that EPA prefers a national policy in contravention of Congress' intent that states be the primary policy makers with respect to implementing the NAAQS.

States have limited resources, and use what is at their disposal to meet requirements under the Clean Air Act. Suddenly, EPA is very specific about which tools states should use for policy assessment at the state-level, with no consideration of the resource constraints faced by state regulators. In the disapproval, EPA states that DEQ's analysis "does not consider …impacts on assessed controls at downwind receptors." This type of analysis is only possible through photochemical modeling, a method that the state was unable to do in-house at the time of SIP development, is costly, and was seemingly not necessary based on the guidance in place during the time of SIP development. Much of the technical basis for states' analyses comes from existing EPA modeling and guidance. It is not ideal, but it is what states are faced with, and historically, this has been acceptable methodology. DEQ acted in confidence, based on continued feedback from EPA at that time, that its alternative methods of analysis were sufficiently robust, and spent significant resources to reach the conclusions presented in the SIP submittal. For EPA to require an expensive modeling exercise for approvability, without providing the means to do so, is essentially creating an unfunded mandate.

[…]

Ultimately, EPA is undermining the framework of the Clean Air Act as established by Congress, and has changed direction on states after conclusion of the SIP development process. The proposed disapproval of the Arkansas Transport SIP and the proposed FIP will force installation of costly controls that are unnecessary for addressing specific Clean Air Act interstate transport requirements for the 2015 ozone NAAQS. In its disapproval, EPA dismisses sound reasoning and science-based evidence presented by the state and makes a bid to wholesale replace state rationale and policy decisions with its own. In no way is this equitable, nor is it the type of collaboration that the Clean Air Act affords state and federal partners tackling such multijurisdictional issues.

[…]

X. Conclusion

EPA's disapproval of Arkansas's 2015 Ozone Transport SIP is an example of a failure in cooperative federalism. EPA failed to meet its statutory deadline to act on Arkansas's SIP submittal. Then, after being sued for this failure, EPA moves the goal post on what they believe is required to satisfy Clean Air Act Section 110(a)(2)(D) requirements by dismissing its previous guidance without revoking it and substituting data that EPA provided in 2017 for states to rely upon in their submittals with new data. EPA further dismisses the weight of evidence used as part of Arkansas's decision-making process with respect to how the state defines a "significant contribution," how the state selected sources for a cost analysis of NOx reduction strategies, and the state's decisions on whether the cost of additional controls are reasonable. EPA then proposes to substitute its own policies for those that the state has demonstrated are reasonable and consistent with the Clean Air Act. With this action and their proposed FIP for the State of Arkansas, EPA fails to acknowledge that Congress gave states, not EPA, the primary authority in establishing plans to protect air quality standards.

[28] "The Evolution of Cooperative Federalism," April 15, 2021. https://online.law.tulane.edu/blog/the-evolution-ofcooperative-federalism

Commenter: Arkansas Environmental Federation

Commenter ID: 09

Docket ID: EPA-R06-OAR-2021-0801

Comment:

I. EPA Has a Narrow Role in the SIP Process

EPA's proposed disapproval of Arkansas's interstate transport SIP for the 2015 ozone NAAQS exceeds the Agency's authority under the Clean Air Act ("CAA"). The CAA creates a system of cooperative federalism whereby EPA "determines the ends—the standards of air quality—while states are given the initiative and broad responsibility to determine the means to achieve those ends."[2] Accordingly, the CAA grants states the authority to develop plans addressing the NAAQS[3] and the states have extensive discretion in what their plans encompass.[4] The states' primary role in developing SIPs under Section 110 also extends to the "Good Neighbor" obligation in CAA Section 110(a)(2)(D)(i)(I) to develop SIPs to address interstate transport.[5]

EPA's role is limited once a state submits a SIP. According to Section 110 of the CAA, the Administrator *shall* approve [a SIP or SIP revision] as a whole if it meets all of the applicable requirements of this chapter."[6] EPA has long recognized its limited role; most recently in a SIP approval earlier this month:

> [T]he Administrator is required to approve a SIP submission that complies with the provisions of the CAA and applicable Federal regulations. 42 U.S.C. 7410(k); 40 CFR 52.02(a). Thus, in reviewing SIP submissions, EPA's role is to approve state choices, provided that they meet the criteria of the CAA.[7]

Given EPA's limited role it is inappropriate for EPA to propose "to apply a consistent set of *policy judgements* across all states for purposes of evaluating interstate transport obligations and the approvability of interstate transport SIP submittals for the 2015 ozone NAAQS,"[8] including for the proposed disapproval of Arkansas's SIP. EPA goes on to state that its

> policy judgments reflect consistency with relevant case law and past agency practice as reflected in the CSAPR and related rulemakings. Nationwide consistency in approach is particularly important in the context of interstate ozone transport, which is a regional-scale pollution problem involving many smaller contributors.[9]

Furthermore, these policy judgments, which EPA is now attempting to enforce as binding on the states and regulated facilities through EPA's actions on the SIP, have not been through proper notice and comment as required by law and thus are unenforceable.

[…]

EPA's policy judgments, upheld by courts in support of its *Federal* rulemakings to address interstate transport, have no place in determining whether a SIP meets the applicable CAA requirements. Despite the "regional-scale pollution problem" of ozone transport, Congress granted authority to the states, in the first instance, to determine how to address interstate ozone transport. Imposing EPA's policy preferences on the states improperly negates their authority to develop their own SIPs to address interstate transport and the Agency's policy preferences fail to determine whether the states have complied with the *law* in developing their interstate transport SIPs.

[2] *Concerned Citizens of Bridesburg v. EPA*, 836 F.2d 777, 779 (3rd. Cir. 1987) (citing *Bethlehem Steel Corp. v. Gorsuch*, 742 F.2d 1028, 1036 (7th Cir. 1984)).
[3] *See* 42 U.S.C. § 7410(a) (requiring States to submit plans to implement, maintain, and enforce NAAQS); *see also Com. of Va. v. EPA*, 108 F.3d 1397, 1407 (D.C. Cir.), decision modified on reh'g, 116 F.3d 499 (D.C. Cir. 1997) (stating that the CAA "expressly gave the states initial responsibility for determining the manner in which air quality standards were to be achieved.").
[4] *See Union Elec. Co. v. EPA*, 427 U.S. 246, 250 (1976) ("Each State is given wide discretion in formulating its plan."); *Train v. NRDC*, 412 U.S. 60, 79 (1975) ("[EPA] is relegated by the [Clean Air] Act to a secondary role in the process of determining and enforcing the specific, source-by-source emission limitations which are necessary if the national standards it has set are to be met."); *Fla. Power & Light Co. v. Costle*, 650 F.2d 579, 587 (5th Cir. 1981) ("The great flexibility accorded the states under the Clean Air Act is further illustrated by the sharply contrasting, narrow role to be played by EPA.").
[5] *See North Carolina v. EPA*, 531 F.3d 896, 923 (D.C. Cir. 2008) ("the text of section 110 . . . establishes the state as the appropriate primary administrative unit to address interstate transport of emissions.") (citations omitted); *see also Michigan v. EPA*, 213 F.3d 663, 671 (D.C. Cir. 2000).
[6] 42 U.S.C. § 7410(k)(3) (emphasis added).

[7] Air Plan Approval; Wisconsin; Redesignation of the Wisconsin Portion of the Chicago-Naperville, Illinois-IndianaWisconsin Area to Attainment of the 2008 Ozone Standard, 87 Fed. Reg. 21,027, 21,028 (Apr. 11, 2022).
[8] 87 Fed. Reg. 9798, 9801 (Feb. 22, 2022) (emphasis added).
[9] *Id.*

Commenter: Association of Electric Companies of Texas, BCCA Appeal Group, Texas Chemical Council and Texas Oil & Gas Association

Commenter ID: 11

Docket ID: EPA-R06-OAR-2021-0801

Comment:

A. The Texas SIP meets all statutory requirements, and EPA should approve it.

The Act gives states the authority to develop SIPs to implement the NAAQS in the first instance.[3] EPA, on the other hand, is "plainly . . . relegated by the Act to a secondary role in the process of determining and enforcing the specific, source-by-source emissions limitations."[4] While EPA is tasked with reviewing SIPs, the Agency cannot substitute its judgment for the state's.[5] "EPA's role is to approve state choices, provided that they meet the criteria of the CAA."[6]

The "Good Neighbor" or "interstate transport" provisions of the CAA require that SIPs "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 such national primary or secondary ambient air quality standard."[7] If an interstate transport SIP meets these requirements, the Act directs the Administrator to approve the SIP revision.[8]

The CAA does not require states to address their Good Neighbor obligations in a specific manner, nor does it "enable EPA to force particular control measures on the states."[9] EPA has not attempted to adopt nationwide regulatory standards that purport to define the requirements for interstate transport SIPs with respect to the 2015 ozone NAAQS.[10] Specifically, EPA's separate quantification and assessment of a state's "significant contribution" to downwind nonattainment or maintenance issues is *not* a requirement of the Act and may not form the basis for disapproval of a SIP.[11] EPA has previously explained that "[t]he precise nature and contents of such a submission is not stipulated in the statute. [Therefore,] EPA believes that the contents of the SIP submission required by section 110(a)(2)(D)(i) may vary depending upon the facts and circumstances related to the specific NAAQS."[12]

EPA has recognized this flexibility afforded to states in its guidance documents[13] and in the Proposed Disapproval. In its 2006 Guidance, EPA asserted that states may establish their own framework for significant contribution "using considerations comparable to those used by EPA in evaluating significant contribution."[14] The statute does not require that states use an approach "comparable" with EPA's own.[15] In recognition of state flexibility, in the Proposed Disapproval, EPA recognized that it "has not directed states that they must conduct a Step 3 analysis in precisely the manner the EPA has done in its prior regional transport rulemakings."[16] The Proposed Disapproval fails to recognize this flexibility, and instead asserts a "one-size-fits-all" approach to assessing significant contribution.

Accordingly, EPA may not require Texas to adopt EPA's non-statutory, after-the-fact policy preferences through the SIP review process.[17] States are granted this same discretion with respect to SIP provisions regarding interstate transport. EPA's reliance on the "regional nature" of ozone transport, and its desire "to apply a consistent set of *policy judgments* across all states for purposes of evaluating interstate transport obligations and the approvability of interstate transport SIP submittals for the 2015 ozone NAAQS,"[18] have no bearing on whether a state's SIP is approvable or not. States, not EPA, are primarily responsible for quantifying and preventing their own significant contribution.[19] Therefore, EPA could only disapprove Texas's SIP if it failed to explain "whether or not emissions from the state significantly contribute to nonattainment in other states."[20]

In Texas's SIP, TCEQ provided an "analysis of ozone design value and emissions trends in Texas, a modeling analysis of the impacts of Texas's emissions on other states, and a discussion of existing ozone control strategies to demonstrate that emissions from Texas do not contribute significantly to nonattainment or interfere with maintenance of the 2015 ozone NAAQS in another state."[21] TCEQ explained its three-step approach to determine whether emissions from Texas contribute significantly to nonattainment or interfere with maintenance at downwind monitors in another state and provided appropriate justification – through the examination of several factors, such as "design value trends, number of elevated ozone days, back trajectory analysis on elevated ozone days, modeled concentrations on future expected elevated ozone days, total interstate contributions at tagged monitors, and responsiveness of ozone to Texas emissions"[22] – to support its determination that emissions from Texas do not contribute significantly to nonattainment or interfere with maintenance of the 2015 eight-hour ozone NAAQS at the linked downwind monitors. Texas's SIP fulfilled the requirements of the CAA by showing that the control measures currently in place are adequate to prevent in-state sources from significantly contributing or interfering with maintenance of the NAAQS. TCEQ also provided a robust technical justification for its determinations. Texas's SIP "contain[s] adequate provisions" addressing interstate transport, and EPA must approve Texas's SIP.[23]

In proposing to disapprove the SIP, EPA overstepped its statutory authority under the CAA. EPA is not authorized to judge Texas's submission based on EPA's new quantification of the State's "significant contribution" or "interference with maintenance." EPA's view of Texas's contribution or its potential to interfere with maintenance in downwind States, and EPA's methodology for determining these issues, are not requirements of the Act and thus cannot be the basis for disapproval. EPA should approve Texas's SIP based on the data available to TCEQ by the statutory deadline. EPA may not, as addressed below, disapprove Texas's SIP based on a new and deeply flawed analysis.

4 Train v. Natural Res. Def. Council, Inc., 421 U.S. 60, 79 (1975); *see also* Am. Elec. Power Co. v. Connecticut, 565 U.S. 410, 428 (2011) ("The Act envisions extensive cooperation between federal and state authorities, generally permitting each State to take the first cut at determining how best to achieve EPA emissions standards within its domain.") (internal citations omitted).
5 *See* 42 U.S.C. § 7410(k)(3) ("[T]he Administrator *shall* approve [a SIP or SIP revision] as a whole if it meets all of the applicable requirements of this chapter.") (emphasis added).
6 Air Plan Approval; Iowa; Interstate Transport of Air Pollution for the 2015 8-Hour Ozone National Ambient Air Quality Standards, 87 Fed. Reg. 9,477, 9,483 (Feb. 22, 2022).
7 42 U.S.C. § 7410(a)(2)(D)(i)(I).
8 *Id.* at § 7410(k)(3).
9 *Com. of Va.*, 108 F.3d at 1410.
10 Compare with 40 C.F.R. §§ 51.123, 52.124 (outlining requirements for NOx and SO2 SIPs).

[11] EME Homer City Generation v. EPA, 696 F.3d 7, 47 (D.C. Cir. 2012) (Judge Rogers, dissenting), reversed on other grounds, 134 S.Ct. 1584 (2014) ("*EME Homer I*") ("Nowhere does the CAA place a requirement on EPA to quantify each State's amount of 'significant contribution' to be eliminated pursuant to the 'good neighbor' provision[.]").
[12] EPA, GUIDANCE FOR STATE IMPLEMENTATION PLAN (SIP) SUBMISSIONS TO MEET CURRENT OUTSTANDING OBLIGATIONS UNDER SECTION 110(A)(2)(D)(I) FOR THE 8-HOUR OZONE AND PM2.5 NATIONAL AMBIENT AIR QUALITY STANDARDS 3 (Aug. 15, 2006), https://www3.epa.gov/ttn/naaqs/aqmguide/collection/cp2/20060815_harnett_final_section_110(a)(2)(D)(i)_guidance.pdf ("2006 Guidance").
[13] *See* EPA, INFORMATION ON THE INTERSTATE TRANSPORT STATE IMPLEMENTATION PLAN SUBMISSIONS FOR THE 2015 OZONE NATIONAL AMBIENT AIR QUALITY STANDARDS UNDER CLEAN AIR ACT SECTION 110(A)(2)(D)(I)(I), at 6 (Mar. 27, 2018) ("March 2018 Guidance") ("States may consider using this national modeling to develop SIPs that address requirements of the good neighbor provision for the 2015 ozone NAAQS. . . . States may also choose to use other information to identify nonattainment and maintenance receptors relevant to development of their good neighbor SIPs."); EPA, CONSIDERATIONS FOR IDENTIFYING MAINTENANCE RECEPTORS FOR USE IN CLEAN AIR ACT SECTION 11 0(A)(2)(D)(I)(I) INTERSTATE TRANSPORT STATE IMPLEMENTATION PLAN SUBMISSIONS FOR THE 2015 OZONE NATIONAL AMBIENT AIR QUALITY STANDARDS 4 (Oct. 19, 2018) ("EPA has identified two potential flexibilities that states may use to identify maintenance receptors with an appropriate technical demonstration.") ("October 2018 Guidance").
[14] 2006 Guidance, at 5.
[15] *See* 42 U.S.C. § 7410(a)(2)(D)(i)(I) (only requiring that SIPs "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 such national primary or secondary ambient air quality standard.").
[16] Proposed Disapproval, 87 Fed. Reg. at 9,810.
[17] Luminant Generation Company LLC v. EPA, 675 F.3d 917, 927–29 (5th Cir. 2012) (rejecting EPA attempt to enforce non-statutory requirements through SIP review process); *Com. of Va.*, 108 F.3d at 1410 (D.C. Cir.) (stating that CAA Section 110 "does not enable EPA to force particular control measures on the states."); *see also* Concerned Citizens of Bridesburg, 836 F.2d 777, 780–81 ("[A] SIP basically embodies a set of choices . . . that the state must make for itself in attempting to reach the NAAQS with minimum dislocation.).
[18] Proposed Disapproval, 87 Fed. Reg. at 9,801 (emphasis added).
[19] *EME Homer I*, 696 F.3d at 49 (Judge Rogers, dissenting) ("States are fully capable of measuring interstate transport of emissions by conducting modeling, and they have done so before and continue to do so[.]").
[20] *See* Westar Energy, Inc. v. EPA, 608 Fed. Appx. 1, *3 (D.C. Cir. 2015) (citing EPA, GUIDANCE ON SIP ELEMENTS REQUIRED UNDER SECTIONS 110(A)(1) AND (2) FOR THE 2006 24–HOUR FINE PARTICLE (PM2.5) NATIONAL AMBIENT AIR QUALITY STANDARDS (NAAQS) at 3 (Sept. 25, 2009) (affirming EPA disapproval where Kansas had not analyzed the downwind impact of in-state emissions and had not concluded that its in-state emissions did not contribute).
[21] TCEQ, REVISIONS TO THE STATE OF TEXAS AIR QUALITY IMPLEMENTATION PLAN CONCERNING FEDERAL CLEAN AIR ACT SECTIONS 110(A)(1) AND (2) INFRASTRUCTURE, at ES-1 (Aug. 8, 2018)
[22] Id. at 7-1.
[23] 42 U.S.C. § 7410(a)(2)(D)(i)(I); id. at § 7410(k)(3)

Commenter: Ducote, Samuel

Commenter ID: 15

Docket ID: EPA-R06-OAR-2021-0801

Comment:

As a resident of Louisiana, I opposed the EPA's proposed disapproval of Louisiana's SIP. Louisiana's SIP meets the standards and obligations necessary to obtain the NAAQS as set forth by the EPA. The disapproval of the SIP solely regarding the potential effect of the "Good neighbor" provisions is a demonstration of regulatory overreach. In short, the Louisiana State Implementation Plan was designed

by the Louisiana Department of Environmental Quality to meet the NAAQS 'within' state boundaries. The state SIP was designed by LDEQ to meet the NAAQS within state boundaries. Allowing the EPA disapprove Louisiana's SIP on speculative "good neighbor" grounds is not a valid exercise of regulatory authority consistent with the text and purpose of the CAA. I strongly oppose the EPA's decision here. As a region of this nation responsible for fueling the needs of the nation, the Louisiana-Texas-Arkansas-Oklahoma region needs to extend special "good neighbor" exceptions for the contribution to the nation at large, especially considering the states have valid SIPs in place that meets the NAAQS requirements within each state individually.

Commenter: Eagle Materials Inc.

Commenter ID: 16

Docket ID: EPA-R09-OAR-2022-0138

Comment:

II. Nevada's Proposed SIP Meets Statutory Requirements and EPA Must Therefore Approve It.

The CAA makes clear that *states* have the primary responsibility to develop and implement emissions control measures for sources within their jurisdiction in meeting the Act's requirements.[20] While EPA provides administrative oversight in reviewing SIPs, the Agency is also "plainly . . . relegated by the Act to a secondary role in the process of determining and enforcing the specific, source-by-source emissions limitations,"[21] and cannot instead substitute its judgment for that of the state.[22] EPA has itself recognized its limited authority, noting in a recent SIP action that "EPA's role is to approve state choices, provided that they meet the criteria of the CAA."[23] In its Proposed SIP Disapproval, however, EPA oversteps this limited oversight authority by imposing its own assessment of Nevada's interstate transport obligations, rather than appropriately limiting its review to whether the state's assessment was reasonable. Because Nevada's Proposed SIP satisfies the state's interstate transport obligations under the Act, EPA must approve it.

A. States Have Significant Discretion to Determine Measures Needed to Fulfill Their Interstate Transport Obligations.

Section 110(a)(2)(D)(i)(I) of the CAA requires states to address interstate transport by preparing 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 such national primary or secondary ambient air quality standard." This language leaves substantial discretion to the states in determining both their significant contributions and the reduction measures necessary to eliminate them.

[…]

In performing its limited oversight role under the CAA, EPA cannot substitute its own judgment for that of the states, and in particular, cannot "force particular control measures on the states." Nevada

reasonably applied a technical evaluation of its significant contributions to downwind air quality problems, guided by EPA's Guidance and the requirements of the CAA. EPA cannot now impose rigid requirements using its own analysis, and must instead evaluate Nevada's chosen framework against the requirements of Section 110(a)(2)(D)(i)(I).

[…]

III. EPA's Proposed Disapproval is Unreasonable and Oversteps EPA's Authority Under the Clean Air Act.

In evaluating Nevada's SIP Submittal, EPA must assess (1) whether Nevada is "linked" to downwind air quality problems, based on a reasonable linkage threshold; and (2) whether Nevada has fulfilled its ozone transport obligations by submitting an approvable SIP, based on the requirements of the CAA. EPA's evaluation is unreasonable for each of these factors.

[20] *See* 42 U.S.C. § 7410(a) (requiring States to submit plans to implement, maintain, and enforce NAAQS). *See also Com. of Va. v. EPA*, 108 F.3d 1397, 1407 (D.C. Cir.), decision modified on reh'g, 116 F.3d 499 (D.C. Cir. 1997) (stating that the CAA "expressly gave the states initial responsibility for determining the manner in which air quality standards were to be achieved."); *Am. Elec. Power Co. v. Connecticut*, 565 U.S. 410, 428 (2011) ("The Act envisions extensive cooperation between federal and state authorities, generally permitting each State to take the first cut at determining how best to achieve EPA emissions standards within its domain.") (Internal citations omitted).
[21] *Train v. Natural Res. Def. Council, Inc.*, 421 U.S. 60, 79 (1975).
[22] *See* 42 U.S.C. § 7410(k)(3) (emphasizing that EPA "shall approve [a SIP or SIP revision] as a whole if it meets all of the applicable requirements of this chapter.") (Emphasis added).
[23] Air Plan Approval; Iowa; Interstate Transport of Air Pollution for the 2015 8-Hour Ozone National Ambient Air Quality Standards, 87 Fed. Reg. 9,477, 9,483 (Feb. 22, 2022).

Commenter: Environmental Federation of Oklahoma

Commenter ID: 20

Docket ID: EPA-R06-OAR-2021-0801

Comment:

In particular, EFO supports DEQ's assessment that EPA has overstepped its authority by circumventing the normal SIP development and approval process in a number of ways, including but not limited to: first, by evaluating the SIP based on federal policy decisions rather than law; […] EPA's actions represent a blatant disregard for cooperative federalism and for the state's extensive efforts at developing a SIP that met all requirements in place at the time of submittal.

Moreover, EFO, along with DEQ, questions the rationality of any federal action that places any significant (relative to more localized emissions) burden on Oklahoma industry for air quality improvements in Dallas, TX and Chicago, IL. This is truly the tail wagging the dog.

Commenter: Evergy, Inc.

Commenter ID: 21

Docket ID: EPA-R07-OAR-2021-0851

Comment:

Evergy disagrees with EPA's proposal to disapprove the State of Missouri's June 10, 2019, Interstate Transport SIP. The primary concern with the disapproval of the Missouri SIP is EPA's disregard for the concept of cooperative federalism. In enacting the CAA, Congress emphasized that "air pollution control at its source is the primary responsibility of States and local governments," but that federal leadership "is essential for the development of cooperative Federal, State, regional, and local programs to prevent and control air pollution." 42 U.S.C. § 7401.

[…]

EPA has not provided Missouri the opportunity to update and retain control over their SIP. This goes against the policy of cooperative federalism.

Commenter: Idaho Power Company

Commenter ID: 23

Docket ID: EPA-R09-OAR-2022-0138

Comment:

A. States have substantial discretion in implementing the Good Neighbor provisions.

Section 110(a)(2)(D)(i)(I) of the CAA requires states to address interstate transport by preparing 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 such national primary or secondary ambient air quality standard." This language leaves substantial discretion to the states in determining both their significant contributions and the reduction measures necessary to eliminate them.

[…]

In performing its limited oversight role under the CAA, EPA cannot substitute its own judgment for that of the states, and in particular, cannot "force particular control measures on the states."[5]

[…]

C. The Proposed Disapproval oversteps EPA's statutorily assigned role.

The Proposed Disapproval boils down to EPA substituting its judgment for that of Nevada, which it may not do under the Clean Air Act. While EPA "determines the ends—the standards of air quality," the CAA *gives* states "the initiative and broad responsibility to determine the means to achieve those ends."[13] EPA, by contrast, is "relegated . . . to a secondary role" in the SIP process.[14] As EPA has acknowledged, in the Good Neighbor context, "EPA's role is to approve state choices, provided that they meet the criteria of the CAA."[15]

In the Proposed Disapproval, EPA oversteps its limited role by unreasonably substituting its own analysis in evaluating Nevada's SIP, rather than determining whether Nevada's analysis was reasonable.

[5] *Com. of Va. v. EPA*, 108 F.3d 1397, 1410 (D.C. Cir.), *decision modified on reh'g*, 116 F.3d 499 (D.C. Cir. 1997)
[13] *Concerned Citizens of Bridesburg v. EPA*, 836 F.2d 777, 779 (3rd. Cir. 1987) (citing *Bethlehem Steel Corp. v. Gorsuch*, 742 F.2d 1028, 1036 (7th Cir. 1984)).
[14] *Train v. Natural Res. Def. Council, Inc.*, 421 U.S. 60, 79 (1975); *see also Am. Elec. Power Co. v. Connecticut*, 565 U.S. 410, 428 (2011) ("The Act envisions extensive cooperation between federal and state authorities, generally permitting each State to take the first cut at determining how best to achieve EPA emissions standards within its domain.") (internal citations omitted).
[15] Air Plan Approval; Iowa; Interstate Transport of Air Pollution for the 2015 8-Hour Ozone National Ambient Air Quality Standards, 87 Fed. Reg. 9,477, 9,483 (Feb. 22, 2022).

Commenter: Kentucky Division for Air Quality

Commenter ID: 25

Docket ID: EPA-R04-OAR-2021-0841

Comment:

Since the requirement for submitting an Infrastructure SIP for each NAAQS was implemented, Kentucky has provided a document demonstrating that the state has the authority, regulations, and required programs in place to address all requirements of CAA section 110(a). Beginning with the 2008 Ozone NAAQS, EPA significantly changed their perspective regarding the purpose of the I-SIP, requiring an in-depth technical demonstration, with extensive modeling, data analysis, and demonstration of whether or not potential upwind emissions are contributing to downwind problems. Kentucky maintains that the purpose of the I-SIP is to verify that the state has the authority, regulations, and programs in place to address the requirements of the CAA, not to determine if, and how much, an upwind source may be impacting a downwind monitor.

Commenter: Louisiana Electric Utility Environmental Group

Commenter ID: 28

Docket ID: EPA-R06-OAR-2021-0801

Comment:

A. EPA Has a Narrow Role in the SIP Process

EPA's proposed disapproval of Louisiana's interstate transport SIP for the 2015 ozone NAAQS exceeds the Agency's authority under the Clean Air Act ("CAA"). The CAA creates a system of cooperative federalism whereby EPA "determines the ends—the standards of air quality—while states are given the initiative and broad responsibility to determine the means to achieve those ends."[1] Accordingly, the CAA grants states the authority to develop plans addressing NAAQS[2] and the states have extensive discretion in what their plans encompass.[3] The states' primary role in developing SIPs under Section 110 also

extends to the "Good Neighbor" obligation in CAA Section 110(a)(2)(D)(i)(I) to develop SIPs to address interstate transport.[4]

EPA's role is limited once a state submits a SIP. According to Section 110 of the CAA, the Administrator *shall* approve [a SIP or SIP revision] as a whole if it meets all of the applicable requirements of this chapter."[5] EPA has long recognized its limited role; most recently in a SIP approval earlier this month:

> [T]he Administrator is required to approve a SIP submission that complies with the provisions of the CAA and applicable Federal regulations. 42 U.S.C. 7410(k); 40 CFR 52.02(a). Thus, in reviewing SIP submissions, EPA's role is to approve state choices, provided that they meet the criteria of the CAA.[6]

Given EPA's limited role, it is inappropriate for EPA to propose "to apply a consistent set of *policy judgments* across all states for purposes of evaluating interstate transport obligations and the approvability of interstate transport SIP submittals for the 2015 ozone NAAQS," including for the proposed disapproval of Louisiana's SIP.

[…]

The states, in the first instance, have wide discretion in determining how to achieve the NAAQS, including their interstate transport obligations, and EPA cannot force the states to adopt approaches reflecting the Agency's policy preferences for consistency in interstate transport obligations. A "SIP basically embodies a set of choices . . . that the state must make for itself in attempting to reach the NAAQS with minimum dislocation."[10]

EPA also cannot substitute its own judgment for that of the state's in crafting a SIP, as the courts have recognized.[11]

[…]

Accordingly, EPA's Proposed Disapproval of Louisiana's SIP falls short and EPA has overstepped its authority under the CAA. EPA should re-evaluate Louisiana's SIP on the basis of whether the SIP meets the applicable requirements of the CAA, not on the basis of whether Louisiana made different choices than EPA would have made had it been the decision-maker with respect to fulfilling the state's Good Neighbor obligation to address interstate transport of ozone under Section 110(a)(2)(D)(i)(I) of the CAA. EPA also must avoid any policy determinations or a desire to adopt a "national ozone transport policy" in evaluating Louisiana's SIP.

[1] *Concerned Citizens of Bridesburg v. EPA*, 836 F.2d 777, 779 (3rd. Cir. 1987) (citing *Bethlehem Steel Corp. v. Gorsuch*, 742 F.2d 1028, 1036 (7th Cir. 1984)).
[2] *See* 42 U.S.C. § 7410(a) (requiring States to submit plans to implement, maintain, and enforce NAAQS); *see also Com. of Va. v. EPA*, 108 F.3d 1397, 1407 (D.C. Cir.), decision modified on reh'g, 116 F.3d 499 (D.C. Cir. 1997) (stating that the CAA "expressly gave the states initial responsibility for determining the manner in which air quality standards were to be achieved.").
[3] *See Union Elec. Co. v. EPA*, 427 U.S. 246, 250 (1976) ("Each State is given wide discretion in formulating its plan."); *Train v. NRDC*, 412 U.S. 60, 79 (1975) ("[EPA] is relegated by the [Clean Air] Act to a secondary role in the process of determining and enforcing the specific, source-by-source emission limitations which are necessary if the national standards it has set are to be met."); *Fla. Power & Light Co. v. Costle*, 650 F.2d 579, 587 (5th Cir. 1981)

("The great flexibility accorded the states under the Clean Air Act is further illustrated by the sharply contrasting, narrow role to be played by EPA.").
[4] *See North Carolina v. EPA*, 531 F.3d 896, 923 (D.C. Cir. 2008) ("the text of section 110 . . . establishes the state as the appropriate primary administrative unit to address interstate transport of emissions.") (citations omitted); *see also Michigan v. EPA*, 213 F.3d 663, 671 (D.C. Cir. 2000).
[5] 42 U.S.C. § 7410(k)(3) (emphasis added).
[6] Air Plan Approval; Wisconsin; Redesignation of the Wisconsin Portion of the Chicago-Naperville, Illinois-Indiana-Wisconsin Area to Attainment of the 2008 Ozone Standard, 87 Fed. Reg. 21027, 21028 (Apr. 11, 2022).
[10] *Bridesburg*, 836 F.2d at 780–81 (emphasis added); *see also Com. of Va.*, 108 F.3d at 1410 (D.C. Cir.) (CAA Section 110 "does not enable EPA to force particular control measures on the states.").
[11] *Bridesburg*, 836 F.2d at 781 (quoting *Train v. Natural Res. Def. Council, Inc.*, 421 U.S. 60, 79 (1975)) (internal citations and quotations omitted) ("EPA has limited authority to reject a SIP . . . . The [CAA] gives the Agency no authority to question the wisdom of a State's choices of emission limitations if they are part of a plan which satisfies the standards of [Section 110(a)(2)], and the Agency may devise and promulgate a specific plan of its own only if a State fails to submit an implementation plan which satisfies those standards.").

Commenter: Maryland Department of the Environment

Commenter ID: 29

Docket ID: EPA-R03-OAR-2021-0872

Comment:

EPA's proposed FIP, which is purported to completely resolve the state's significant contribution, would not require any further emissions reductions from EGU or non-EGU sources beyond what Maryland imposes on its sources. Maryland's emission reduction control programs identified in the 2015 Good Neighbor SIP are sufficient to resolve the state's significant contribution to downwind nonattainment and maintenance areas and SIP achieves more reductions than the FIP can provide. As such, EPA's proposed disapproval inappropriately supplants judgement for that of the state. As various courts have explained, the CAA is a cooperative federalism regime, under which the EPA sets required air quality standards but with the states holding primary responsibility to create plans which achieve them. EPA has no authority to disapprove Maryland's choices of emissions limitation in preference of its own suite of controls, where Maryland has submitted a SIP, which satisfies the requirements of CAA § 110(a)(2)(D). *Train v. Natural Resources Defense Council, Inc.*, 421 U.S. 60, 79 (1975). To the contrary, "the State is at liberty to adopt whatever mix of emission limitations it deems best suited to its particular situation." *Id.* Due to the suite of federally enforceable regulations and permits applicable to Maryland's sources already provide for greater overall emissions reductions from the EGUs and Non-EGU sources than EPA's proposed FIP, EPA's proposed disapproval of Maryland's SIP is arbitrary, capricious, and contrary to the CAA.

Commenter: The Luminant Companies

Commenter ID: 44

Docket ID: EPA-R06-OAR-2021-0801

Comment:

A. The Clean Air Act Gives States the Primary Authority to Address Interstate Transport

The Clean Air Act creates a cooperative federalism structure that divides authority between the federal government and the states.[5] Within this structure, EPA defines the air quality goals for the nation, and the states and local governments implement plans to achieve those standards. Accordingly, "[t]he Act assigns responsibility to the EPA for identifying air pollutants and establishing [the NAAQS.] . . . The states, by contrast, bear the primary responsibility for implementing those standards."[6] In other words, "air pollution prevention . . . and air pollution control at its source is the primary responsibility of States and local governments,"[7] and "[t]he structure of the Clean Air Act indicates a congressional preference that states, not EPA, drive the regulatory process."[8]

With respect to the NAAQS, EPA is required to review the NAAQS at five year intervals and make revisions where necessary.[9] Pursuant to this obligation, on October 1, 2015, EPA revised the primary and secondary ozone NAAQS to establish a new 8-hour average standard of 70 parts per billion (ppb).[10] The Clean Air Act then directs states to submit a revision to their SIP within three years after EPA promulgates a new or revised NAAQS in order to address the new NAAQS.[11] Among those requirements is the state's "good neighbor" or "interstate transport" obligation under 42 U.S.C. § 7410(a)(2)(D)(i)—that is, a state's SIP must "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 the NAAQS.[12] Under the statute, the default is that states will address interstate transport in their SIPs, not EPA in a FIP—a concept which EPA's approach here disregards by assuming that a national approach is the only way to adequately address interstate transport.

[…]

Importantly, EPA's role in reviewing SIP submissions is narrowly tailored under the Clean Air Act. As EPA has previously explained, "Congress assigned to states the primary responsibility to implement the NAAQS[.]"[16] If a SIP is deemed complete, "the Administrator *shall* approve such submittal as a whole if it meets all the applicable requirements of this chapter[.]"[17] Thus, if a SIP submission "meets all of the applicable [Clean Air Act] requirements, the EPA must approve it."[18] In the proposal here, EPA has strayed outside the statute and established court precedent to propose disapproval simply because TCEQ's modeling is not the same as EPA's.

Although the Clean Air Act directs states to address interstate transport, the Clean Air Act does not mandate that states address this obligation in any particular manner. EPA has adopted some regulations that govern the SIP submittal process in general, but EPA has not adopted any regulatory standards that define the requirements for interstate transport SIPs related to the 2015 ozone standard.[19] And EPA itself has recognized that the Clean Air Act gives states flexibility with respect to SIP submissions. EPA has explained that "[t]he precise nature and contents of [a SIP] submission [are] not stipulated in the statute."[20] Further, "EPA believes that the contents of the SIP submission required by section 110(a)(2)(D)(i) may vary depending upon the facts and circumstances related to the specific NAAQS."[21] Accordingly, states have broad discretion in developing SIP provisions to address interstate transport, as

courts and EPA have recognized,[22] and EPA must approve state choices when reviewing SIP submissions, provided that they meet the criteria of the Clean Air Act.[23]

B. EPA's Proposal Ignores the Cooperative Federalism Approach of the Clean Air Act

In light of the states' broad discretion, EPA may not ignore the cooperative federalism structure of the Clean Air Act and ignore the statutory SIP review process in order to enforce its policy preferences or guidance on states.[24] Nor can EPA use Section 110 "to force particular control measures on the states[.]"[25] The Clean Air Act "expressly gave the states initial responsibility for determining the manner in which air quality standards were to be achieved,"[26] and the states, not EPA, are primarily responsible for quantifying and preventing their own significant contribution.[27]

The "regional nature" of ozone transport does not give EPA any greater authority over a SIP, as EPA assumes in the proposal here.[28] In fact, EPA has "unambiguously stated its interpretation that States [have] an independent obligation under section 110(a) to submit 'good neighbor' SIPs regardless of whether EPA first quantified each State's emission reduction obligations."[29] And that is precisely what TCEQ did here. Nonetheless, in the Proposed Disapproval, EPA has turned the Clean Air Act's well-established cooperative federalism regime on its head. Under EPA's approach here, a state could never issue a satisfactory interstate transport SIP, which is clearly contrary to the statute and court precedent.

EPA proposes to go beyond the actual requirements of the Clean Air Act and evaluate Texas's SIP according to new, non-statutory standards. Specifically, EPA proposes to reject TCEQ's expert modeling projections of future design values and TCEQ's quantification and assessment of Texas's "significant contribution" in favor of its own modeling. However, EPA's quantification and assessment of a State's "significant contribution" to downwind nonattainment or maintenance issues is *not* a requirement of the Act.[30] The Clean Air Act does not provide EPA the authority to second-guess TCEQ and disapprove its SIP simply because TCEQ's modeling does not match EPA's modeling or because EPA believes TCEQ's modeling "*may* understate" projected design values or there is "*potential* underestimation."[31] The standard that EPA applies to Texas's SIP and its supporting technical analysis in the Proposed Disapproval has no basis in the Clean Air Act.

EPA has announced its preference for a "nationally consistent approach," but this preference cannot override the clear and settled intent of Congress that states be permitted to implement different and varying approaches if they choose. Nor can EPA's policy goal heighten or alter the standard set out in the Clean Air Act for a state's SIP submittal such that a "deviation" from EPA's preferred approach "must be substantially justified," as EPA claims.[32] Plainly put, EPA does not write SIPs. EPA's competing view of Texas's contribution or its potential to interfere with maintenance in downwind States, and EPA's overconservative methodology for determining these things, are not requirements of the Act, nor has EPA promulgated regulations addressing this. In fact, EPA has recognized that it "has not directed states that they must conduct [their] analysis in precisely the manner the EPA has done in its prior regional transport rulemakings[.]"[33] In fact, EPA has taken inconsistent approaches (none of which are grounded in the statute), previously stating that states must only use an assessment of significant contribution that is "comparable" to EPA's preferred approach in order to have its SIP approved.[34]

Such discretion and flexibility is essential, as states must retain sufficient authority to discharge their obligations under the Clean Air Act. It would be illogical for Congress to impose a burden on the states

that they cannot reasonably discharge on their own but instead must wait for EPA let them know what precisely to do, as EPA proposes here. The Supreme Court has expressly held that this is not the case.[35] In fact, EPA has specifically expressed that the Clean Air Act "plac[es] an independent obligation" on states to address their "good neighbor" obligation "regardless of whether EPA ha[s] prospectively quantified its amount of 'significant contribution.'"[36] And EPA recognized the ability of states to undertake such an obligation, acknowledging that "[s]tates are fully capable of measuring interstate transport of emissions by conducting modeling, and they have done so before and continue to do so[.]"[37] This is logical, as "State air quality divisions are no strangers to complex air quality and meteorological modeling of interstate transport of emissions."[38] Using its expertise in modeling, Texas has discharged its obligation just as the Clean Air Act envisions here.

EPA cannot now ignore Congress's clear language in the Clean Air Act and usurp the states' role in the NAAQS process. Regardless of whether EPA prefers a nationally uniform method for addressing ozone transport, that is not what Congress mandated. As EPA has explained, "the Administrator is required to approve a SIP submission that complies with the provisions of the [Clean Air Act] and applicable Federal regulations."[39] Thus, EPA's preference for states to rely on a certain approach cannot be the basis for disapproval. Ultimately, EPA can only disapprove Texas's SIP if it "fails to explain whether or not emissions from the state significantly contribute to nonattainment in other states," as required by the Clean Air Act.[40]

[5] *Luminant Generation Co. v. EPA*, 675 F.3d 917, 921 (5th Cir. 2012).
[6] *Id.* (internal citations and quotations omitted).
[7] 42 U.S.C. § 7401(a)(3).
[8] *Texas v. EPA*, 829 F.3d 405, 411 (5th Cir. 2016).
[9] 42 U.S.C. § 7409(d).
[10] 80 Fed. Reg. 65,292, 65,292 (Oct. 26, 2015).
[11] 42 U.S.C. § 7410(a)(1).
[12] Id. § 7410(a)(2)(D).
[16] *See* Brief of EPA at 13, *Texas v. EPA*, No. 18-60606 (5th Cir. Mar. 8, 2019).
[17] *See Luminant Generation*, 675 F.3d at 921 ("With regard to implementation, the Act confines the EPA to the ministerial function of reviewing SIPs for consistency with the Act's requirements."); *see also* Brief of EPA at 14, *Texas v. EPA*, No. 18-60606 (5th Cir. Mar. 8, 2019) ("EPA must approve the SIP if it meets the Act's requirements." (citing 42 U.S.C. § 7410(k)(3) and *Union Elec. Co. v. EPA*, 427 U.S. 246, 251 (1976))).
[18] *Luminant Generation*, 675 F.3d at 922 (emphasis added).
[19] However, EPA has done so for other NAAQS. See 40 C.F.R. §§ 51.123-.124.
[20] *See* EPA, *Guidance for State Implementation Plan (SIP) Submissions to Meet Current Outstanding Obligations Under Section 110(a)(2)(D)(i) for the 8-Hour Ozone and PM2.5 National Ambient Air Quality Standards*, at 3 (Aug. 15, 2006), *available at* https://www3.epa.gov/ttn/naaqs/aqmguide/collection/cp2/20060815_harnett_final_section_110(a)(2)(D)(i)_guidance.pdf ("2006 Guidance").
[21] Id.
[22] *See EME Homer City Generation, L.P. v. EPA*, 696 F.3d 7, 47-48 (D.C. Cir. 2012) (Rogers, J., dissenting), *reversed on other grounds*, 134 S. Ct. 1584 (2014) ("*EME Homer I*").
[23] 87 Fed. Reg. 21,027, 21,028 (Apr. 11, 2022).
[24] *Luminant Generation*, 675 F.3d at 927-29 (rejecting EPA attempt to enforce non-statutory requirements through SIP review process).
[25] *Com. of Va. v. EPA*, 108 F.3d 1397, 1410 (D.C. Cir.), *decision modified on reh'g*, 116 F.3d 499 (D.C. Cir. 1997).
[26] Id. at 1407.
[27] *EME Homer I*, 696 F.3d at 49 ("States are fully capable of measuring interstate transport of emissions by conducting modeling, and they have done so before and continue to do so[.]").

[28] Every "good neighbor" obligation is regional by definition, therefore Congress must have understood that such "regional" issues would still be primarily the subject of state responsibility, authority, and reasonable judgment.
[29] *EME Homer I*, 696 F.3d at 39; see also id. at 43.
[30] *Id*. at 47 ("Nowhere does the [Clean Air Act] place a requirement on EPA to quantify each State's amount of 'significant contribution' to be eliminated pursuant to the 'good neighbor' provision[.]").
[31] EPA Region 6, *2015 8-Hour Ozone Transport SIP Proposal, Technical Support Document*, Docket No. EPAR06-OAR-2021-0801-0002, at 39, 66 (Feb. 2022) ("Proposed TSD") (emphasis added).
[32] 87 Fed. Reg. at 9,801.
[33] *Id*. at 9,810.
[34] *See* 2006 Guidance at 5.
[35] *See EME Homer II*, 572 U.S. at 509.
[36] *EME Homer I*, 696 F.3d at 43.
[37] *Id*. at 49.
[38] *Id*.
[39] 86 Fed. Reg. 71,830, 71,830 (Dec. 20, 2021).
[40] *See Westar Energy, Inc. v. EPA*, 608 Fed. Appx. 1, *3 (D.C. Cir. 2015) (affirming EPA disapproval where Kansas had not analyzed the downwind impact of in-state emissions and had not concluded that it did not contribute).

Commenter: PacifiCorp

Commenter ID: 38

Docket ID: EPA-R08-OAR-2022-0315

Comment:

The good neighbor provision, at its core, is a state obligation. It is codified in Section 110 of the CAA, which is the section granting states primary decision-making authority for developing SIPs to achieve the NAAQS. EPA's role under section 110 is to review and approve those plans, not to substitute its own policy preferences or decisions for those made by the states. As long as a state's plan is reasonable and complies with the requirements of the CAA, EPA must approve it. The U.S. Supreme Court and multiple Circuit Courts have repeatedly endorsed this cooperative federalism approach codified in Section 110.[18]

[…]

States have wide discretion in determining how to achieve the NAAQS, including their interstate transport obligations, and EPA cannot force the states to adopt approaches reflecting the Agency's policy preferences. A "SIP basically embodies a set of choices . . . that the state must make for itself in attempting to reach the NAAQS with minimum dislocation."[65] EPA also cannot substitute its own judgment or a one-size-fits-all approach for that of the states when crafting a SIP, as the courts have recognized over and over.[66] This is especially true when a state's SIP relied on guidance put forth by EPA.

[…]

The CAA does not require states to address their Good Neighbor obligations in a specific manner, nor does it "enable EPA to force particular control measures on the states."[83] EPA has not adopted any nationwide regulatory standards that purport to define the requirements for interstate transport SIPs with respect to the 2015 ozone NAAQS.[84] Specifically, EPA has previously explained that "[t]he precise nature and contents of such a submission is not stipulated in the statute. [Therefore,] EPA believes that

the contents of the SIP submission required by section 110(a)(2)(D)(i) may vary depending upon the facts and circumstances related to the specific NAAQS."[85] This is one of the reasons the CAA assigns development of implementation plans to the states – they are able to use their local knowledge and familiarity with regional conditions to best design the right type of plan for their location and citizens' values and priorities.

EPA claims it "has not directed states that they must conduct a Step 3 analysis in precisely the manner the EPA has done in its prior regional transport rulemakings."[86] But EPA rejects the flexibilities it previously provided to the states and instead insists on a one-size-fits-all approach when assessing significant contribution to NAAQS. In fact, EPA's disapprovals force Utah and other states to "complete something similar to EPA's analysis" or "an alternative approach" that meets EPA's policy choices and preferred methods.[87]

The Proposed Disapproval fails to recognize EPA's limited role and obligation: "the Administrator shall approve [a SIP or SIP revision] as a whole if it meets all of the applicable requirements of this chapter."[88] EPA has long recognized its limited role, as stated in a recent SIP approval:

> [T]he Administrator is required to approve a SIP submission that complies with the provisions of the CAA and applicable Federal regulations. 42 U.S.C. 7410(k); 40 CFR 52.02(a). Thus, in reviewing SIP submissions, EPA's role is to approve state choices, provided that they meet the criteria of the CAA.[89]

It is inappropriate given the ozone situation in the West and EPA's limited role for EPA to claim in the Proposed Disapproval that it must "apply a consistent set of policy judgments across all states for purposes of evaluating interstate transport obligations and the approvability of interstate transport SIP submittals for the 2015 ozone NAAQS."[90] New policy judgments, even if labeled as uniform and nationwide, have no place in determining whether a SIP meets applicable CAA requirements (which support tailoring to the needs of the particular state), especially when those judgments contradict previous EPA policies and practices.[91]

[…]

Additionally, EPA partially based its Proposed Disapproval on its own opinion of what factors Utah should have considered:

> UDAQ's analysis failed to evaluate emissions and emissions-reduction opportunities from most of the highest emitting NOx sources in the State, including multiple electric generating units located further east of the Salt Lake City, Utah area and thus closer to the Denver area receptors to which Utah contributes greater than 1 percent of the NAAQS. A state conducting a Step 3 analysis should undertake an evaluation of these kinds of substantial and potentially cost-effective emissions reduction opportunities, and the failure to do so is grounds for disapproval.[95]

However, EPA cannot require Utah to adopt EPA's non-statutory policy preferences through the SIP review process since states, not EPA, are primarily responsible for quantifying and determining the preferred method to prevent their own significant contribution.[96]

[18] *See, e.g., Train*, 412 U.S. 60 (1975); *Union Elec. Co. v. EPA*, 427 U.S. 246 (1976); *Fla. Power & Light Co. v. Costle*, 650 F.2d 579 (5th Cir. 1981).

[65] *Concerned Citizens of Bridesburg v. EPA*, 836 F.2d 777, 780–81 (3rd Cir. 1987); *see also Com. of Virginia.*, 108 F.3d at 1410 (CAA Section 110 "does not enable EPA to force particular control measures on the states.").
[66] *Bridesburg*, 836 F.2d at 781 (quoting *Train v. Natural Res. Def. Council, Inc.*, 421 U.S. 60, 79 (1975)) (internal citations and quotations omitted) ("EPA has limited authority to reject a SIP . . . . The [CAA] gives the Agency no authority to question the wisdom of a State's choices of emission limitations if they are part of a plan which satisfies the standards of [Section 110(a)(2)], and the Agency may devise and promulgate a specific plan of its own only if a State fails to submit an implementation plan which satisfies those standards.").
[83] *Com. of Va. v. EPA*, 108 F.3d 1397, 1410 (D.C. Cir.), *decision modified on reh'g*, 116 F.3d 499 (D.C. Cir. 1997); *see also id.* at 1407 (stating that the CAA "expressly gave the states initial responsibility for determining the manner in which air quality standards were to be achieved.").
[84] Compare with 40 C.F.R. §§ 51.123, 52.124 (outlining requirements for NOx and SO2 SIPs).
[85] EPA, W. Harnett, Guidance For State Implementation Plan (SIP) Submissions To Meet Current Outstanding Obligations Under Section 110(A)(2)(D)(I) For The 8-Hour Ozone And Pm2.5 National Ambient Air Quality Standards (Aug. 15, 2006) at 3, available at https://www3.epa.gov/ttn/naaqs/aqmguide/collection/cp2/20060815_harnett_final_section_110(a)(2)(D)(i)_guidance.pdf ("2006 Guidance").
[86] See 87 FR at 31,481.
[87] *Id.* at 31,482.
[88] *See North Carolina v. EPA*, 531 F.3d 896, 923 (D.C. Cir. 2008) ("the text of section 110 . . . establishes the state as the appropriate primary administrative unit to address interstate transport of emissions.") (citations omitted); *see also Michigan v. EPA*, 213 F.3d 663, 671 (D.C. Cir. 2000) (affirming EPA's approach of "leav[ing] to the States the task of determining how to obtain NOx reductions).
[89] Air Plan Approval; Wisconsin; Redesignation of the Wisconsin Portion of the Chicago- Naperville, Illinois-Indiana-Wisconsin Area to Attainment of the 2008 Ozone Standard, 87 FR 21,027, 21,028 (Apr. 11, 2022).
[90] *See* 87 FR at 31,472.
[91] *See, e.g.*, 81 FR 74,504, 74,506 (October 26, 2016), EPA, Cross-State Air Pollution Rule Update for the 2008 Ozone NAAQS, Oct. 26, 2016 (declining to include western states in CSAPR program due to differences in western ozone transport); EPA, S. Page, Director, OAQPS, "Information on Interstate Transport 'Good Neighbor' Provision for the 2008 Ozone National Ambient Air Quality Standards (NAAQS) under Clean Air Act (CAA) Section 110(a)(2)(D)(i)(I)" (January 2015) at 4 (recommending ozone transport in western states should be evaluated on a case-by-case basis).
[95] 87 FR at 31,483.
[96] *See, e.g., Luminant Generation Company LLC v. EPA*, 675 F.3d 917, 927–29 (5th Cir. 2012) (rejecting EPA's attempt to enforce non-statutory requirements through SIP review process); *Com. of Va.*, 108 F.3d at 1410 (D.C. Cir.) (stating that CAA Section 110 "does not enable EPA to force particular control measures on the states."); *see also Concerned Citizens of Bridesburg*, 836 F.2d 777, 780–81 ("[A] SIP basically embodies a set of choices . . . that the state must make for itself in attempting to reach the NAAQS with minimum dislocation.); *EME Homer I*, 696 F.3d at 49 (Judge Rogers, dissenting) ("States are fully capable of measuring interstate transport of emissions by conducting modeling, and they have done so before and continue to do so[.]").

Commenter: PacifiCorp (Berkshire Hathaway Energy Company Proposed FIP Comments Attachment)

Commenter ID: 38

Docket ID: EPA-R08-OAR-2022-0315

Comment:

BHE supports the authority granted under the CAA to states as the entities best suited to develop and adopt implementation plans that are tailored to the geography, populations, meteorology and other localized conditions of the specific state. The "good neighbor" provision, at its core, is a state obligation.

It is codified in Section 110 of the CAA, which is the section granting states the primary decision-making authority for developing state implementation plans to achieve the NAAQS. EPA's role under section 110 is to review and approve those plans, not to substitute its own policy decisions for those made by the states. As long as a state's plan is reasonable and complies with the requirements of the CAA, EPA must approve it. The D.C. Circuit has repeatedly endorsed this cooperative federalism approach codified in Section 110.[42] However, the Proposed Rule threatens to impose a one-size-fits-all approach onto this complex program rather than working with the western states to find the best solution, which must be tailored to the conditions and resources in each state. EPA may feel backed into a corner because of legal suits and its own delays in reviewing and approving each of the western state's SIPs. BHE believes the CAA provides, and in fact requires, a different and more effective approach.

[…]

States are uniquely positioned to identify the right mix of requirements for the unique emission sources in their jurisdictions and to determine how best to align those requirements with other regulatory efforts that target some of the same units and pollutants, like regional haze. In addition, states are best positioned, and have a sovereign duty, to evaluate and implement the measures necessary to ensure they achieve the required good neighbor provisions while also not jeopardizing their coal communities and the bulk electric systems that serve their citizens.

[…]

BHE supports state authority to adopt a SIP to replace the FIP and recognizes the states' ability to ensure their SIP contains adequate provisions to prevent significant interference with attainment or maintenance of the NAAQS in a downwind state. The good neighbor provision, at its core, is a state obligation. It is codified in Section 110 of the Clean Air Act, which is the section granting states the primary decision-making authority for developing SIPs to achieve the NAAQS. EPA's role under section 110 is to review and approve those plans, not to substitute its own policy preferences or decisions for those made by the states. As long as a state's plan is reasonable and complies with the requirements of the Clean Air Act, EPA must approve it. The D.C. Circuit has repeatedly endorsed this cooperative federalism approach codified in Section 110.[110]

The D.C. Circuit and the U.S. Supreme Court have confirmed in litigation over EPA's prior transport rules that EPA has authority under Section 110 to set the basic parameters of what states must do to comply with the good neighbor provision. Those courts have also confirmed that EPA may issue a FIP only if a state's SIP is deemed to be insufficient based on EPA's parameters. In addition, provisions in the Proposed Rule dictate SIP requirements not found in the CAA and essentially eliminate any reasonable opportunity for states to make a future SIP submission. EPA has undermined the central principles underlying both Section 110 and the Administrative Procedure Act by rejecting state good neighbor SIPs that were based on EPA's own guidance at the time those SIPs were written. For some states like Nevada, Utah, and Wyoming, EPA did not even propose to reject those SIPs until after it had already proposed a federal implementation plan with explicit requirements specifically targeted at those states. Even if EPA ultimately cures its failure to observe the proper sequencing of responding to a state SIP before proposing a FIP, its actions run roughshod over the states' primary role in addressing nonattainment under Section 110 and suggest that EPA never gave the state SIP submittals a considered review, preferring instead to impose its own solution, in violation of legal principles. Agency action

"must be timely, and it must be taken objectively and in good faith, not as an exercise in form over substance, and not as a subterfuge designed to rationalize a decision already made."[111]

[42] *Train v. NRDC*, 412 U.S. 60 (1975); *Union Elec. Co. v. EPA*, 427 U.S. 246 (1976); *Fla. Power & Light Co. v. Costle*, 650 F.2d 579 (5th Cir. 1981).
[110] *Train v. NRDC*, 412 U.S. 60 (1975); *Union Elec. Co. v. EPA*, 427 U.S. 246 (1976); *Fla. Power & Light Co. v. Costle*, 650 F.2d 579 (5th Cir. 1981)
[111] *Metcalf v. Daley*, 214 F.3d 1135, 1142 (9th Cir. 2000).

Commenter: United States Steel Corporation

Commenter ID: 45

Docket ID: EPA-R05-OAR-2022-0006

Comment:

By simultaneously proceeding with a FIP, EPA's actions supplant states' rights and authority under the clean air act as Congress contemplated.

U. S. EPA Cannot Replace Sound State Decisions that Comply with the Clean Air Act with Federal "Judgment" or "Policy". It is well established that States have much latitude in developing and implementing State Implementation Plans (SIPs.) While U.S. EPA may prefer a different approach or alternative, a SIP can only be disapproved when is irrefutably shown to be inconsistent with the Clean Air Act. In the proposed disapproval, U.S. EPA has not shown that the state submittals did not comply with the Clean Air Act. The proposed disapproval of the SIPs is tied closely to EPA's proposed FIP that would have a "one-size fits all" approach that would inappropriately supplant the States' individual authority under the Clean Air Act.

Commenter: United States Steel Corporation

Commenter ID: 45

Docket ID: EPA-R06-OAR-2021-0801

Comment:

EPA has a role in the SIP process. However, that role should be a narrow one that gives deference to the state pursuant to the cooperative federalism system established under the Clean Air Act ("CAA"). EPA's proposal to disapprove Arkansas's interstate transport SIP for the 2015 ozone NAAQS[1] goes beyond the authority given to EPA by the CAA. State's, such as Arkansas, are given discretion under the CAA to address NAAQS through appropriate plans.[2] EPA's proposal oversteps the agency authority under the CAA. The Arkansas SIP should be re-evaluated by EPA solely on the basis of whether Arkansas has met

the applicable CAA requirements. EPA should not use the SIP disapproval process to try to create a "national ozone transport policy".

[1] *See* 42 U.S.C. § 7410(a) (requiring States to submit plans to implement, maintain, and enforce NAAQS); *see also Com. of Va. v. EPA*, 108 F.3d 1397, 1407 (D.C. Cir.), decision modified on reh'g, 116 F.3d 499 (D.C. Cir. 1997) (stating that the CAA "expressly gave the states initial responsibility for determining the manner in which air quality standards were to be achieved.").
[2] *See Union Elec. Co. v. EPA*, 427 U.S. 246, 250 (1976) ("Each State is given wide discretion in formulating its plan."); *Train v. NRDC*, 412 U.S. 60, 79 (1975) ("[EPA] is relegated by the [Clean Air] Act to a secondary role in the process of determining and enforcing the specific, source-by-source emission limitations which are necessary if the national standards it has set are to be met."); *Fla. Power & Light Co. v. Costle*, 650 F.2d 579, 587 (5th Cir. 1981) ("The great flexibility accorded the states under the Clean Air Act is further illustrated by the sharply contrasting, narrow role to be played by EPA.")

Commenter: Utah Division of Air Quality

Commenter ID: 47

Docket ID: EPA-R08-OAR-2022-0315

Comment:

EPA's Proposed Disapproval Goes Against the Principles of Cooperative Federalism

Prior to this proposed disapproval, UDAQ was successful in implementing the requirements of the Clean Air Act (CAA) by working closely with our co-regulatory partners at EPA's Region 8 office, as envisioned by the principles of cooperative federalism. This close working relationship directly contributed to significant recent achievements including reducing ambient PM2.5 concentrations and allowing all three of Utah's PM2.5 nonattainment areas to reach attainment by the attainment date for the current NAAQS. As the state regulatory agency, UDAQ understands the nuances of our airsheds and the people's priorities, and can create state implementation plans that are best for Utah. The benefit of cooperative federalism is having the autonomy to do what's best for the state, but do so in partnership with EPA to ensure that the CAA intent and requirements are met.

[…]

The EPA's decision to change the acceptable criteria *after* the development and submission of SIPs, and to do so with no additional guidance, puts states in the difficult position of trying to plan with a moving set of criteria. This whipsaw approach inevitably results in wasted state time and resources. It has become apparent to UDAQ that working closely with our EPA region has no bearing on the outcome of some of EPA's final regulatory actions and is inconsistent with principles of cooperative federalism. As mentioned in Utah's FIP comments, UDAQ respectfully requests EPA to consider ways to align its agency more efficiently so that the policy priorities of the current administration better align with the implementation and timing of CAA requirements at the regional and state level.

Commenter: Xcel Energy

Commenter ID: 52

Docket ID: EPA-R05-OAR-2022-0006

Comment:

Most importantly, the premature development of FIPs upsets the balance of state and federal authority under the CAA conflicting with the principals of cooperative federalism, as was intended under the Act. Congress delegated the authority to develop implementation plans to the states. EPA is only empowered to develop an implementation plan if a state fails to satisfactorily exercise this authority. The MPCA has developed a SIP which was based on guidance available at the time, taking into consideration known NOx reductions. MN was identified as a non-significant contributor (below 0.7 parts per billion) in modeling performed by both EPA and LADCO and thus the MPCA SIP was built upon that information. EPA's disapproval of the MN SIP is based on revised EPA modeling that the MPCA, in their comments, has identified flaws with (including the failure to consider substantial planned NOx emission reductions). Xcel Energy encourages the EPA to allow the SIP process to work its way through the system as provided for under the regulations - allowing for comments on, or reformulation of, the SIP before EPA proposes or implements a FIP for the state of Minnesota. EPA's premature development of FIPs intrudes on authority that Congress specifically delegated to states.

This is particularly the case where, in the highly technical world of modeling, experts may disagree. In reviewing the competing technical evaluations, it is unclear whether EPA has the more correct view. At a minimum, we believe a more detailed technical discussion is warranted to first fully understand the differences, and second, reach some technical consensus on the proper manner in which to evaluate impacts and determine whether the proposed SIP should truly not be approved.

Commenter: Xcel Energy

Commenter ID: 52

Docket ID: EPA-R06-OAR-2021-0801

Comment:

Most importantly, the premature development of FIPs upsets the balance of state and federal authority under the CAA conflicting with the principals of cooperative federalism, as was intended under the Act. Congress delegated the authority to develop implementation plans to the states. EPA is only empowered to develop an implementation plan if a state fails to satisfactorily exercise this authority. EPA's disapproval of the Texas SIP is based on revised EPA modeling that TCEQ, in their comments, has identified as flawed. Xcel Energy encourages the EPA to allow the SIP process to work its way through the system as provided for under the regulations - allowing for comments on, or reformulation of, the SIP before EPA proposes or implements a FIP for the state of Texas. EPA's premature development of FIPs intrudes on authority that Congress specifically delegated to states.

This is particularly the case where, in the highly technical world of modeling, experts may disagree. In reviewing the competing technical evaluations, it is unclear whether EPA has the more correct view. At a

minimum, we believe a more detailed technical discussion is warranted to first fully understand the differences, and second, reach some technical consensus on the proper manner in which to evaluate impacts and determine whether the proposed SIP is truly not approvable

Response

The EPA responded generally to comments related to cooperative federalism in Section V.A.5 of the preamble. Here, the EPA responds in further detail to comments related to cooperative federalism and the EPA's authority.

The EPA does not agree that it has in any way overstepped its authority in disapproving the SIP submissions in this action. Commenters offer a cavalcade of arguments as to why the EPA cannot or should not be allowed to exercise its independent judgment in evaluating the arguments presented by the states and must approve each state's submission in deference to how states choose to interpret the CAA requirements they must meet. These arguments generally fail to acknowledge the past quarter-century of the EPA's efforts to implement the good neighbor provision through an efficient and equitable allocation of states' responsibility for interstate air pollution and the related case law generally upholding that interstate transport implementation framework. They also generally misstate the roles and responsibilities of the EPA and the states within the structure of the modern CAA as enacted by Congress in 1970 and reflected in fundamental CAA case law. Nonetheless, we will address these arguments in turn.[96]

As an initial matter, the EPA agrees that the CAA establishes a framework for state-federal partnership to implement the NAAQS based on "cooperative federalism." Under the general model of cooperative federalism, the federal government establishes broad standards or goals, states are given the opportunity to determine how they wish to achieve those goals, and if states choose not to or fail to adequately implement programs to achieve those goals, a federal agency is empowered to directly regulate to achieve the necessary ends. Thus, the EPA also agrees that states have the obligation and opportunity in the first instance to develop an implementation plan to achieve the NAAQS under CAA section 110, that state air agencies are fully capable of developing SIP submissions that satisfy the requirements of the CAA, and that the EPA will approve SIP submissions under CAA section 110 that fully satisfy the requirements of the CAA. This sequence of steps is not in dispute.

[96] Some topics raised by these comments are addressed in the preamble or in this RTC ("post hoc" justification, alleged changes in EPA practice and policy, CAA section 126 petitions, requests for EPA to delay final action on SIP submission disapprovals and on proposing or finalizing FIPs, EPA's modeling, TCEQ's modeling, comments about EPA's application of the guidance memoranda, and SIP calls). EPA's response to comments about the withdrawal of Alabama's first good neighbor SIP submission for the 2015 ozone NAAQS is also addressed elsewhere in this document. Some commenters argued that EPA should judge a state's SIP submission based only on the information available at some past date; some commenters pointed to the time of the statutory deadline of the state submitting a SIP submission to EPA, while others pointed to the date a date submitted a SIP submission or EPA's statutory deadline to take action on a complete SIP submission. This topic is addressed elsewhere in the preamble and RTC. Other topics raised in these comments are beyond the scope of this rulemaking (i.e., substantive requirements of proposed FIP in separate rulemaking).

The EPA does not, however, agree with the commenters' characterization of the EPA's role in the state-federal relationship as being "secondary" such that the EPA must defer to state choices heedless of the substantive objectives of the Act; such deference would be particularly inappropriate in the context of addressing interstate pollution. The EPA acknowledges that its role could be considered "secondary" in that it occurs "second" in time, after the states submit SIP submissions. The EPA believes that the commenters fundamentally misunderstand or inaccurately describe this action, as well as the "'division of responsibilities' between the states and the federal government" they identify in CAA section 110 citing the *Train-Virginia* line of cases[97] and other cases.[98] Those cases, some of which pre-date the CAA amendments of 1990 resulting in the current good neighbor provision,[99] stand only for the proposition that EPA must approve state plans *if* they meet the applicable CAA requirements. But these cases say nothing about what those applicable requirements are. The EPA is charged under CAA section 110 with reviewing states' plans and approving or disapproving them. Thus, the EPA must ultimately determine whether state plans satisfy the requirements of the Act or not. Abundant case law, including these cases themselves, reflect an understanding that the EPA must evaluate SIP submissions under CAA section 110(k)(2) and (3).[100] If they are deficient, the EPA must so find, and directly implement the relevant requirements through a federal implementation plan under CAA section 110(c).[101]

In CAA section 110(a)(1), Congress imposed the duty upon all states to have a SIP that provides for "the implementation, maintenance, and enforcement" of the NAAQS. In section 110(a)(2), Congress clearly

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[97] *See Virginia v. EPA*, 108 F.3d 1397, 1407 (D.C. Cir. 1997) (quoting *Train v. Natural Resources Defense Council, Inc.*, 421 U.S. at 79). The "Train-Virginia line of cases" are named for the U.S. Supreme Court case *Train v. Natural Resources Defense Council, Inc.*, 421 U.S. 60 (1975) (Train) and to the D.C. Circuit case *Virginia v. EPA*, 108 F.3d 1397 (D.C. Cir. 1997). The D.C. Circuit has described these cases as defining a "federalism bar" that constrains the EPA's authority with respect to evaluation of state SIP submissions under CAA section 110. *See, e.g., Michigan v. EPA*, 213 F.3d 663, 687 (D.C. Cir. 2000).

[98] Commenters also cited the following to characterize the nature of the state-federal partnership in the CAA: *Union Elec. Co. v. EPA*, 427 U.S. 246 (1976), *Am. Elec. Power Co. v. Connecticut*, 565 U.S. 410 (2011), *Fla. Power & Light v. Costle*, 650 F.2d 579 (5th Cir. 1981), *North Carolina v. EPA*, 531 F.3d 896 (D.C. Cir. 2008), *Luminant*, 675 F.3d 917 (5th. Cir. 2012), *Concerned Citizens of Bridesburg v. EPA*, 836 F.2d 777 (3d Cir. 1987), *Bethlehem Steel Corp. v. Gorsuch*, 742 F.2d 1028 (7th Cir. 1984), *Luminant Co. LLC v. EPA*, 714 F.3d 841 (5th. Cir. 2013), *North Dakota v. EPA*, 730 F.3d 750 (8th. Cir. 2013), and *Texas v. USEPA*, 829 F.3d 405 (5th. Cir. 2016).

[99] The 1970 version of the Act required SIPs to include "adequate provisions for intergovernmental cooperation" concerning interstate air pollution. CAA section 110(a)(2)(E), 84 Stat. 1681, 42 U.S.C. section 1857c–5(a)(2)(E). In 1977, Congress amended the Good Neighbor Provision to direct States to submit SIP submissions that included provisions "adequate" to "prohibi[t] any stationary source within the State from emitting any air pollutant in amounts which will ... prevent attainment or maintenance [of air quality standards] by any other State." CAA section 108(a)(4), 91 Stat. 693, 42 U.S.C. § 7410(a)(2)(E) (1976 ed., Supp. II). Congress again amended the Good Neighbor Provision in 1990. The Act, in its current form, requires SIPs to "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]." CAA section 110(a)(2)(D)(i)(I), 42 U.S.C. § 7410(a)(2)(D)(i) (2006 ed.).

[100] *See, e.g., Virginia*, 108 F.3d at 1406. *See also, e.g., Westar Energy v. EPA*, 608 Fed. App'x 1, 3 (D.C. Cir. 2015) ("EPA acted *well within the bounds* of its delegated authority when it disapproved of Kansas's proposed [good neighbor] SIP.") (emphasis added); *Oklahoma v. EPA*, 723 F.3d 1201, 1209 (10th Cir. 2013) (upholding EPA's disapproval of "best available retrofit technology" (BART) SIP, noting BART "does not differ from other parts of the CAA—states have the ability to create SIPs, but they are subject to EPA review").

[101] *EPA v. EME Homer City Generation, L.P.*, 572 U.S. 489, 495 (2014).

set forth the basic SIP requirements that "[e]ach such plan *shall*" satisfy.[102] By using the mandatory "shall" in section 110(a)(2), Congress established a framework of mandatory requirements *within which* states may exercise their discretion to design SIPs to provide for attainment and maintenance of the NAAQS and to meet other CAA requirements, including the good neighbor provision. In other sections of the Act, Congress also imposed additional, more specific SIP requirements (e.g., the requirements in CAA section 182 associated with ozone nonattainment areas depending on their level of classification).

The U.S. Supreme Court's review of the original CSAPR rulemaking in *EME Homer City* directly affirms the critical role the EPA plays in interpreting and, if necessary, implementing the good neighbor provision and directly contradicts commenters' assertions that the EPA has only a limited role to play in reviewing states' approaches to addressing good neighbor requirements. In the original 2012 decision of the D.C. Circuit in *EME Homer City Generation, L.P. v. EPA* (*EME Homer City I*), the D.C. Circuit vacated the Cross-State Air Pollution Rule for two reasons, one being related to statutory interpretation of CAA section 110(a)(2)(D)(i), the other being "a second, entirely independent problem" based on EPA's purported overstep of the federalism bar identified in the *Train-Virginia* line of cases.[103] After recounting a list of decisions that recognize the cooperative federalism structure of the CAA, the D.C. Circuit concluded that even though states have the "primary responsibility" for implementing the NAAQS, in this case the states had no responsibility to address interstate transport until EPA first quantified the obligations of the states.[104] The dissent, however, described the majority's application of the *Train-Virginia* cases as "a redesign of Congress's vision of cooperative federalism in implementing the CAA . . . ."[105] In reversing the *EME Homer City I* case in 2014, the U.S. Supreme Court held that the touchstone for identifying the division of responsibility between the EPA and the states is the text of CAA section 110(a)(2) itself.[106] The Court noted that pursuant to the CAA, after a NAAQS has been issued, a state must propose a SIP submission that meets the requirements of the CAA, including the good neighbor provision. [107] The Court went on to say that "nothing in the statute places EPA under an obligation to provide specific metrics to States before they undertake to fulfill their good neighbor obligations."[108] More relevant here, the Court upheld certain of EPA's interpretations of CAA section 110(a)(2)(D)(i)(I).[109]

After the U.S. Supreme Court's ruling in *EME Homer City*, the EPA's role under CAA section 110's cooperative federalism framework—as the agency charged with interpreting, applying, and, if necessary, ultimately achieving at the national level the fundamental requirements of CAA section 110(a)(2), and applying those reasonably interpreted requirements in evaluating state SIP submissions—cannot

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[102] CAA section 110(a)(2) (emphasis added); *see EPA v. EME Homer City Generation, L.P.*, 572 U.S. 489, 509 (2014) (holding that section 110(a)(2) "speaks without reservation" regarding what "components" a SIP "'shall' include"); H. Rept. 101–490, at 217 (calling the provisions of section 110(a)(2)(A) through (M) "the basic requirements of SIPs").

[103] *EME Homer City Generation, L.P. v. EPA*, 696 F.3d 7, 28 (D.C. Cir. 2012) (*EME Homer City I*), rev'd, 572 U.S. 489 (2014).

[104] Id at

[105] *Id.* at 38 (Rogers, J., dissenting).

[106] *EPA v. EME Homer City Generation, L.P.*, 572 U.S. 489 (2014) at 507-510.

[107] *Id.* at 509 (citing, *inter alia*, CAA section 110(a)(2)).

[108] *Id.* at 509.

[109] *Id.* at 518-524.

reasonably be in doubt.[110] Several commenters cite the dissent in *EME Homer City I* to argue that states are primarily responsible for quantifying and preventing their own significant contribution. EPA does not dispute that the CAA requires a state to prepare a SIP submission in the first instance before the EPA reviews it, but the EPA does dispute the implication that the EPA must defer in all instances to a state's interpretation of the requirements of the CAA, including a state's determination that its own sources of emissions and other emissions activities do not significantly contribute to nonattainment or interfere with maintenance in other states. The U.S. Supreme Court in *EME Homer City* reiterated that EPA's interpretation of ambiguous statutory language is afforded deference and determined that "[t]he Good Neighbor Provision delegates authority to EPA at least as certainly as the CAA provisions involved in *Chevron*[*, U.S.A., Inc. v. Natural Res. Def. Council, Inc.*, 467 U.S. 837 (1984)]."[111] EPA is therefore granted deference in its interpretation of the requirements of CAA section 110(a)(2)(D)(i)(I) and is not required to accept at face value a state's interpretation in its own SIP submission that the state has fully satisfied the requirements of the CAA. The EPA notes also that courts have been deferential to the EPA's technical expertise in evaluating scientific data, which is particularly relevant in the context of the complex analyses undertaken to implement the good neighbor provision. *Wisconsin v. EPA*, 938 F.3d 303, 328 (D.C. Cir. 2019) (citing *North Carolina v. EPA*, 531 F.3d 896, 925 (D.C. Cir. 2008) (affording "substantial deference to EPA's technical expertise"); *Westar Energy, Inc. v. EPA*, 608 F. App'x 1 (D.C. Cir. 2015) (agency action "regarding technical matters within its area of expertise warrants particular deference") (citing *Baltimore Gas & Elec. Co. v. NRDC*, 462 U.S. 87, 103 (1983); *W. Virginia v. EPA*, 361 F.3d 861, 867-68 (D.C. Cir. 2004)); *see also, e.g., Catawba County v. EPA*, 571 F.3d 20, 41 (D.C. Cir. 2009) (we give an "extreme degree of deference to [EPA] when it is evaluating scientific data within its technical expertise") citing *City of Waukesha v. EPA*, 320 F.3d 228, 247 (D.C. Cir. 2003) (internal quotation marks omitted).

Notwithstanding the directly applicable holdings in *EME Homer City* concerning EPA's authority in implementing the good neighbor provision, commenters cite several other cases for arguments that EPA cannot substantively question the conclusions a state reaches about its own good neighbor obligations in a SIP submission: *Alaska Dep't of Env't Conservation v. EPA*, 540 U.S. 461 (2004), *North Carolina v. EPA*, 531 F.3d 896 (D.C. Cir.), *modified on reh'g in part*, 550 F.3d 1176 (D.C. Cir. 2008), *Michigan v. EPA*, 213 F.3d 663 (D.C. Cir. 2000), *Virginia v. EPA*, 108 F.3d 1397 (D.C. Cir. 1997) *modified on reh'g*, 116 F.3d 499 (D.C. Cir. 1997), *Concerned Citizens of Bridesburg v. EPA*, 836 F.2d 777 (3d Cir. 1987), *Fla. Power & Light v. Costle*, 650 F.2d 579 (5th Cir. 1981), *Luminant Generation Company v. EPA*, 675 F.3d 917 (5th Cir. 2012), *Luminant Co. LLC v. EPA*, 714 F.3d 841 (5th. Cir. 2013), *Texas v. EPA*, 829 F.3d 405 (5th. Cir. 2016), *Bethlehem Steel Corp. v. Gorsuch*, 742 F.2d 1028 (7th Cir. 1984), *Oklahoma v. EPA*, 723 F.3d 1201 (10th Cir. 2013), *North Dakota v. EPA*, 730 F.3d 750, 761 (8th Cir. 2013), and *Westar Energy, Inc. v. EPA*, 608 F. App'x 1 (D.C. Cir. 2015).

None of these cases actually support this proposition.

First, *Alaska Dep't of Envt'l Conservation* does not stand for the premise that the EPA's role in the state-federal partnership is limited to rote application of the exact language of the CAA. To the contrary, the Supreme Court in that case held that the EPA's "oversight role" in CAA sections 113(a)(5) and 167

[110] *See id.* at 495 (citing *Chevron*, 467 U.S. 837).
[111] *Id.* at 513.

included the authority to inquire whether a state's best available control technology (BACT) determination in a prevention of significant deterioration (PSD) permit is reasonable. Under those provisions, the Court held, "[O]nly when a state agency's BACT determination is 'not based on a reasoned analysis' may EPA step in to ensure that the statutory requirements are honored."[112] The Court went on to note, however, that the EPA's discretion in issuing a "stop order" under these provisions was more constrained than issuing initial approvals or disapprovals: "in contrast, a required approval may be withheld if EPA would come to a different determination on the merits."[113] The court further elaborated that "EPA's limited but vital role in enforcing BACT is consistent with a scheme that 'places primary responsibilities and authority with the States, backed by the Federal Government."[114] This case only underscores the role the EPA must play in assessing whether a SIP submission satisfies the requirements of the CAA. The Court noted, "We fail to see why Congress, having expressly endorsed an expansive surveillance role for the EPA in two independent CAA provisions, would then implicitly preclude the Agency from verifying substantive compliance with the BACT provisions and, instead, limit EPA's superintendence to the insubstantial question whether the state permitting authority had uttered the key words 'BACT.'"[115]

Commenters quote *North Carolina v. EPA*, 531 F.3d 896 (D.C. Cir. 2008) *modified on reh'g in part*, 550 F.3d. 1176 (DC Cir. 2008), the D.C. Circuit's review of the Clean Air Interstate Rule, for the sentence that a state is "the appropriate primary administrative unit to address interstate transport of emissions," but that quote was used in the context of the court determining that EPA may select an entire state, as opposed to part of a state, as the "unit of measurement" in either a SIP Call or a FIP rulemaking.[116] *North Carolina* cannot fairly be described as a case holding that EPA does not have authority to interpret the requirements of CAA section 110(a)(2)(D)(i)(I) when reviewing a good neighbor SIP submission.

Commenters cite *Michigan v. EPA*, 213 F.3d 663 (D.C. Cir. 2000) to argue that states get the first opportunity to identify which sources should be controlled and to what degree under the CAA. One commenter argues that the *Michigan* holding means that EPA can only identify the level of emissions reductions to be achieved by states under CAA section 110(a)(2)(D)(i)(I) and states themselves choose the controls. The *Michigan* court found that the NO_X budgets established in the NO_X SIP call did not impermissibly trigger the 'federalism bar' outlined in the *Train-Virginia* line of cases in part because the action did not dictate which individual sources would be subject to controls.[117] In any event though, the action at issue in *Michigan* was a SIP call, not a SIP disapproval. In this SIP disapproval, EPA is not requiring any controls on any states. The *Michigan* case does not prohibit EPA from interpreting the requirements of CAA section 110(a)(2)(D)(i)(I) in reviewing a SIP submission. *Michigan* noted that under the state-federal partnership in the CAA, even though "states have considerable latitude in fashioning SIPs, the CAA 'nonetheless subject[s] the States to strict minimum compliance requirements' and gives EPA the authority to determine a state's compliance with the requirements."[118]

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[112] *Alaska Dep't of Envt'l Conservation*, 540 U.S. 461, 490 (2004).
[113] *Id.* at 491.
[114] *Id.* at 491 (citing S. Rep. No. 95-217, p. 29).
[115] *Id.* at 490.
[116] *North Carolina v. EPA*, 531 F.3d 896, 923 (D.C. Cir. 2008).
[117] *Michigan*, 213 F.3d 663, 687 (D.C. Cir. 2000).
[118] *Id.* (citing *Union Elec. Co. v. EPA*, 427 US 246, 256-257 (1976)).

Commenters cite *Virginia v. EPA*, 108 F.3d 1397 (D.C. Cir. 1997), *modified on reh'g*, 116 F.3d 499 (D.C. Cir. 1997) for the arguments that states have a primary role and responsibility in implementing NAAQS, the EPA cannot substitute states' judgement with its own, and the EPA cannot require specific controls in a SIP or condition approval of a SIP on specific controls. In *Virginia,* the Court remanded an EPA SIP call that sought to require states in the Northeast Ozone Transport Region to adopt restrictions on the sale of new cars to either match California's vehicle emission program or adopt a "Substitute Program" in their SIPs.[119] The *Virginia* court determined the Substitute Program was not a meaningful alternative and so EPA had impermissibly sought to specify particular controls in SIPs.[120] However, the D.C. Circuit clarified in *Appalachian Power Co. v. EPA*, 249 F.3d 1032 (D.C. Cir. 2001), "We did not suggest [in *Virginia*] that under § 110 states may develop their plans free of extrinsic legal constraints. Indeed, SIP development . . . commonly involves decision-making subject to various legal constraints."[121] Therefore, *Virginia* cannot be viewed as supporting an argument that EPA is not permitted to assess a state's judgements in a SIP submission for adherence with the requirements of CAA section 110(a)(2)(D)(i)(I). Furthermore, in these SIP disapprovals, EPA is not requiring any controls in any SIP.

One comment, citing *Virginia*, argued that the EPA cannot disapprove Maryland's choices of emissions limitations and replace them with EPA's preferred emissions limitations in a FIP. However, Maryland concluded in its SIP submission that the state has no obligations to reduce any emissions beyond existing levels under the good neighbor provision for the 2015 ozone NAAQS and made no choice of any emissions limitations to include in its SIP. [87 FR 9463, 9469 (February 22, 2022); *see also* Maryland's October 16, 2019, SIP submittal included in docket ID No. EPA–R03–OAR–2021– 0872. (No other state included any enforceable emissions controls in their SIP submissions either.)

Commenters cite *Concerned Citizens of Bridesburg v. EPA*, 836 F.2d 777 (3d Cir. 1987) for the argument that the EPA is not allowed to make states adopt non-statutory, after the fact policy preferences through the SIP review process. In that case, the court reviewed EPA's action to rescind certain regulations addressing odor, for which there is no NAAQS, in Pennsylvania's SIP, approved by the EPA 13 years previously.[122] The court reached a decision on procedural challenges brought against EPA's action; the court determined that the EPA's action constituted a SIP revision, under an earlier version of the CAA, which was subject to certain procedural requirements, which the EPA failed to follow.[123] However, in this action the EPA is not modifying any prior approval of a SIP addressing CAA section 110(a)(2)(D)(i)(I) for the 2015 ozone NAAQS by EPA. Instead, the EPA is disapproving SIP submissions that fail to satisfy the requirements of CAA section 110(a)(2)(D)(i)(I) for the 2015 ozone NAAQS. Here, the EPA is not seeking to modify any previously approved SIP to account for updated understanding of the breadth of the EPA's legal authority.

Commenters cite *Fla. Power & Light v. Costle*, 650 F.2d 579 (5th Cir. 1981) to argue states have "extensive discretion" in the contents of their SIPs. In that case, under an earlier version of the CAA, Florida submitted a PSD SIP revision submission to accommodate Florida Power & Light's request for an

[119] *Virginia v. EPA*, 108 F.3d 1397 (D.C. Cir. 1997).
[120] *Id at* 1415.
[121] *Appalachian Power Co. v. EPA*, 249 F.3d 1032, 1047 (D.C. Cir. 2001)
[122] *Concerned Citizens of Bridesburg v. EPA*, 836 F.2d 777 (3d Cir. 1987).
[123] *Id.* at 784, 788.

exemption from the approved SIP related to sulfur dioxide emissions.[124] A subsequent "attachment" to the SIP revision submission to the EPA contained a 2-year limit on the exemption, which the EPA approved. Florida later requested to withdraw the 2-year limit, which EPA disapproved. Citing *Train*, the 5th Circuit rejected EPA's inclusion of the 2-year limit in the SIP revision approval on the basis that a 2-year limit was not a substantive requirement of the CAA, and the court rejected EPA's interpretation of Florida law that a 2-year limit would be necessary for the SIP revision to be enforceable under state law. The court's description of the EPA's role under the CAA in that the case did not stand for the premise that the EPA is not permitted to interpret the requirements of CAA; rather that the case concluded that EPA is confined to interpreting the requirements of the CAA. Here, the EPA is not approving, or disapproving, any aspect of a SIP revision that a state no longer wishes to be part of its SIP; the EPA is disapproving these SIP submissions for failing to demonstrate they satisfy the requirements of CAA section 110(a)(2)(D)(i)(I).

Commenters cite *Luminant Generation Company, L.L.C. et al. v. EPA*, 675 F.3d 917 (5th. Cir. 2012), for the premise that the EPA cannot disapprove SIP submissions on the basis of non-statutory policy preferences. Another version of this argument is that the EPA is not allowed to make states adopt non-statutory, after the fact policy preferences through the SIP review process. In *Luminant*, the 5th Circuit remanded the EPA's disapproval of a Texas SIP submission under CAA section 110(*l*) related to New Source Review (NSR) to consider whether the SIP submission comported with the requirements of CAA section 110(a)(2)(C) and 110(*l*); the court found it impermissible for EPA to inquire whether the SIP submission at issue comported with Texas law or satisfied "similar source" and "replicability" requirements, which the court found did not exist in the text of the CAA.

However, the EPA does not view the basis of the EPA's conclusions in the rule at issue in *Luminant* as analogous to this disapproval action. Alabama Power Company did not identify specifically what "non-statutory, policy preferences" they allege the EPA utilized in proposing to disapprove Alabama's earlier SIP submission. Association of Electric Companies of Texas, et. al. cite the EPA's methodology and quantification of Texas's "significant contribution" and "interference with maintenance" as well as EPA's rejection of Texas's analysis as non-statutory factors that cannot be used to assess Texas's SIP submission. A commenter also identifies the EPA modeling as a non-statutory requirement that cannot be used to disapprove Texas's SIP submission. They further argue that EPA has no authority to "second-guess" TCEQ's modeling, particularly because the EPA has not promulgated regulations on modeling. Commenters further argue that the EPA is coercing the states to develop SIP submissions 'comparable' to the EPA's approach, which they say is not a statutory requirement.

The EPA is not disapproving any SIP submission because it did not use the EPA's modeling or methodology for assessing good neighbor obligations, nor is the EPA promulgating a SIP call seeking new SIP submissions. The EPA is disapproving the SIP submissions for failing to support a conclusion that the states have no good neighbor obligations under the 2015 ozone NAAQS. The EPA used its own modeling to inform its assessment of the SIP submissions with the requirements of CAA section 110(a)(2)(D)(i)(I).[125] Additionally, the EPA is authorized in its oversight role under the CAA to examine the analysis put forward by states, so the EPA is well within its authority to "second-guess" TCEQ's

[124] *See* 42 U.S.C. section 7410(a)(2) (Supp. 1979).
[125] *See, e.g.*, 87 FR 9798, 9800-9801.

modeling.[126] The EPA is not required by the CAA to promulgate regulations governing the good neighbor analysis. Further, the EPA is not required to provide guidelines for CAA section 110(a)(2)(D)(i)(I).[127] However, each step in the EPA's analysis in this action is guided by the EPA's interpretation and application of each of the key terms of the CAA in this provision, reflecting over a quarter-century of administrative and judicial precedent. The good neighbor provision remains unchanged from the statutory text the EPA first applied in the NO_X SIP Call, and both the D.C. Circuit and the Supreme Court have had occasion to review the EPA's interpretation and application of those terms across several major rulemakings. In each of these rulemakings, the EPA has applied a consistent analytical approach to addressing the problem of interstate pollution, and that approach faithfully adheres to the terms of the statute as Congress enacted it. Each step of this process is tied to the statute: the identification of "nonattainment" and "maintenance" receptors (Step 1); the identification of "contribution" to those receptors by analyzing emissions from "any source or other type of emissions activity" within each state (Step 2); the analysis of what "amount" of that contribution is "significant" (or "interferes" with maintenance) (Step 3); and finally, the evaluation of whether the SIP "contains adequate provisions" "prohibiting" those emissions (Step 4).

Luminant Co. LLC v. EPA, 714 F.3d 841 (5th. Cir. 2013) is cited to support an argument that Congress tasked the EPA with setting NAAQS but gave states authority to implement it. Although the court in that case did say that "[T]he Act confines the EPA to the ministerial function of reviewing SIPs for consistency with the Act's requirements[,]" the court nevertheless upheld EPA's judgement of Texas's SIP submission that affirmative defenses for unplanned startup, shutdown, and maintenance/malfunction (SSM) activity conformed with the requirements of the CAA, and the EPA was afforded deference in concluding that affirmative defenses for planned SSM activity did not conform with the requirements of the CAA.[128] That court, citing *Fla. Power & Light Co.* and *Bethlehem Steel*, found the EPA was not arbitrary and capricious in partially approving and partially disapproving Texas's iSIP submission.[129] The court also found that CAA section 110(*l*) did not require EPA, in disapproving a SIP submission, to prove a violation of the NAAQS would occur if the Agency approved part of an iSIP submission; rather, the EPA needs to provide "reasoning supporting its conclusion that the disapproved provision would interfere with an applicable requirements of the Act."[130] While the court used the term "ministerial" to describe EPA's role, this case actually reinforces that EPA's role includes interpreting the requirements of the CAA to determine whether a SIP submission comports with those requirements.

Commenters cite *Texas v. EPA*, 829 F.3d 405 (5th. Cir. 2016) to argue that the structure of the CAA itself indicates Congress wanted states to drive the regulatory process, not the EPA. In *Texas*, the 5th Circuit granted a preliminary stay of the EPA's disapproval of Oklahoma's and Texas' regional haze SIP submissions and promulgation of FIPs and did not reach the merits of either the EPA's assessment of the SIP submissions' compliance with the requirements of the CAA or the FIPs.[131] The decision cannot

[126] For specific details on EPA's assessment of TCEQ modeling, please refer to the Evaluation of TCEQ Modeling TSD.
[127] *See EME Homer City* at 510.
[128] *Luminant Co. LLC v. EPA*, 714 F.3d 841, 846 (5th. Cir. 2013)
[129] *Id.* at 858-859.
[130] *Id*. at 858.
[131] *Texas v. EPA*, 829 F.3d 405 (5th. Cir. 2016)

reasonably be interpreted to stand for the proposition that the EPA is not authorized to interpret the requirements of CAA section 110(a)(2)(D)(i)(I) in reviewing good neighbor SIP submissions.

Commenters cite *Bethlehem Steel Corp. v. Gorsuch*, 742 F.2d 1028 (7th Cir. 1984) for the argument that the EPA is not allowed to make states adopt non-statutory, after the fact policy preferences through the SIP review process. In that case, examining an earlier version of the CAA, the court found that EPA did not follow appropriate procedure in partially approving Indiana's SIP revision but disapproving an exemption provision, because the effect of doing that increased the stringency of the SIP for certain emissions above what Indiana had intended.[132] In the court's view, the EPA could have disapproved the SIP submission and followed the required procedure to promulgate a replacement plan.[133] The case did not conclude the EPA is barred from interpreting the requirements of the CAA in determining whether a SIP submission comports with the requirements of the CAA. Further, in this action the EPA's partial approval and partial disapproval of the SIP submissions from Minnesota and Wisconsin has no effect on the stringency of the states' SIPs, since neither SIP submission included any emissions controls to begin with.

Commenters cited *North Dakota v. EPA*, 730 F.3d 750 (8th. Cir. 2013) for the premise that states have primary responsibility to address interstate transport and the EPA is limited to only reviewing a SIP submission for compliance with the CAA. In *North Dakota*, the court dismissed all challenges but one to an action that simultaneously disapproved two SIP submissions and promulgated FIPs for North Dakota under CAA sections 110 and 169A (the court remanded EPA's best available retrofit technology (BART) determination in a FIP).[134] On one of the cited pages in *North Dakota*, 730 F.3d at 757, the court cited cases including *EME Homer City I*, a case later overturned by the Supreme Court, in its background section characterizing cooperative federalism. On the other page of *North Dakota* cited by commenters, *id.* at 761, the court, citing *Oklahoma v. EPA*, 723 F.3d 1201, 1213 n. 7 (10th. Cir. 2013), said, "Although the CAA grants states the primary role of determining the appropriate pollution controls within their borders, the EPA is left with more than the ministerial task of routinely approving SIP submissions."[135] The *North Dakota* court similarly cited the reasoning in *Alaska Department of Environmental Conservation v. EPA*, 540 U.S. 461 (2004) related to the EPA's authority under CAA section 167, finding it "persuasive" in the context of CAA section 169A.[136] This case does not support an argument that the EPA is not permitted to interpret the requirements of the CAA in reviewing a SIP submission for compliance with them. On the contrary, the case reinforces that EPA may (indeed, must) do so.

Commenters cite *Oklahoma v. EPA*, 723 F.3d 1201 (10th. Cir. 2013) to argue that although SIPs are subject to federal oversight, the EPA's ability to reject a SIP submission is more limited compared to its authority to promulgate a FIP. The implication appears to be that the EPA somehow is so limited in its ability to review a SIP submission that the Agency cannot actually disapprove a SIP submission. But in that case, the court did not suggest that the EPA is barred from interpreting the requirements of the

[132] *Bethlehem Steel Corp. v. Gorsuch*, 742 F.2d 1028 (7th Cir. 1984).
[133] *Id*. at 1035.
[134] *North Dakota v. EPA*, 730 F.3d 750 (8th Cir. 2013).
[135] *Id.* at 760-761.
[136] *Id.* at 761.

CAA in reviewing SIP submissions.[137] On the contrary, in *Oklahoma* the court found that EPA has the authority to interpret the requirements of the CAA and review SIP submissions accordingly. The court found that EPA lawfully disapproved Oklahoma's SIP submission related to best available retrofit technology (BART) at units at two generating stations for a sulfur dioxide NAAQS on the basis that EPA concluded Oklahoma's cost estimate methodology was flawed, and that the Agency was not arbitrary and capricious in simultaneously promulgating a FIP for Oklahoma in the same action as the SIP disapproval.[138] Although the commenters cite part of footnote 7 from that case: "EPA has less discretion when it takes actions to reject a SIP than it does when it promulgates a FIP" the full footnote went on to say "However, we believe that the EPA had reason to make the adjustments described in Section IV, Part B, even under the higher standard we would apply when evaluating its actions in rejecting a SIP. OG & E has yet to provide any justification for providing estimates that departed from the [BART] guidelines."[139]

A few commenters, citing *Westar Energy, Inc. v. EPA*, 608 F. App'x 1 (D.C. Cir. 2015), argue that EPA is limited to identifying merely whether a SIP submission "explain[s] whether or not emissions from the state' significantly contribute to nonattainment in other states." That characterization of *Westar* is, however, a misleading representation. In that case, the D.C. Circuit upheld the EPA's disapproval of Kansas's good neighbor SIP submission for the 2006 24-hour $PM_{2.5}$ NAAQS.[140] The court, noting that Agency action "regarding technical matters within its area of expertise warrants particular deference[,] *[s]ee Baltimore Gas & Elec. Co. v. NRDC*, 462 U.S. 87, 103 (1983); *W. Virginia v. EPA*, 361 F.3d 861, 867-68 (D.C. Cir. 2004) [(citations cleaned up)]," held that EPA has authority to determine whether SIP submissions comply with the requirements of the CAA and acted within the bounds of its delegated authority when it disapproved Kansas's good neighbor SIP submission.[141] The court noted that a September 2009 guidance document indicated that states "'must explain whether or not emissions from the state' significantly contribute to nonattainment in other states and if so, 'address the impact'" and "that a state's conclusion 'must be supported by an adequate technical analysis.'"[142] The court also rejected arguments from petitioners that EPA was required to provide specific metrics to states before they undertook fulfilling their good neighbor obligations, citing the Supreme Court's decision in *EME Homer City*.[143] In its SIP submission, Kansas concluded it had no good neighbor obligations for the relevant NAAQS, but did not provide an analysis of the downwind impacts of its emissions. Kansas simply pointed out that four utility companies would reduce NO_X and SO_X emissions due to agreements in Kansas's Regional Haze SIP submission, but Kansas did not consider the downwind impacts of these or any other sources within the state. The EPA determined that Kansas's SIP submission lacked technical justification evaluating nonattainment and maintenance problems in downwind states.[144] In upholding

[137] *Oklahoma v. EPA*, 723 F.3d 1201, 1209 (10th Cir. 2013) ("[S]tates have the ability to create SIPs, but they are subject to EPA review.").
[138] Id. at 1207, 1224,
[139] *Id.* at 1213, n. 7.
[140] *Westar Energy, Inc. v. EPA*, 608 F. App'x 1 at *3.
[141] *Id.* at 3.
[142] *Id.*, citing William T. Hartnett, Director, Air Quality Policy Division, *Guidance on SIP Elements Required Under Sections 110(a)(1) and (2) for the 2006 24–hour Fine Particle (PM2.5) National Ambient Air Quality Standards (NAAQS)* at 3 (Sept. 25, 2009).
[143] *Id.* at 4 citing *EME Homer City* at 509-510.
[144] *Id.* at 3.

the EPA, the court noted, "EPA acted *well within the bounds* of its delegated authority when it disapproved of Kansas's proposed [good neighbor] SIP." *Id.* at 3 (emphasis added).

Several commenters, pointing to the absence of CFR regulations for the good neighbor provisions for the 2015 ozone NAAQS, a guidance document from August 2006 for the 1997 ozone NAAQS and the 1997 $PM_{2.5}$ NAAQS,[145] the 2018 memoranda (discussed elsewhere in this action), and the text of the proposals themselves argue that the EPA has repeatedly recognized that CAA section 110(a)(2)(D)(i)(I) does not stipulate any one specific approach to addressing interstate transport but that EPA is now assessing SIP submissions against the Agency's policy preferences as opposed to the actual requirements of the CAA. One commenter argues that national consistency is not required by the CAA and so the EPA cannot consider it (or the regional nature of the ozone problem) in reviewing SIP submissions for compliance with CAA section 110(a)(2)(D)(i)(I) (conversely, another commenter says that inconsistent treatment across states would be arbitrary).

The EPA disagrees that the Agency in this action is shifting its approach to assessing SIP submissions under the good neighbor provision. The EPA has consistently analyzed good neighbor SIP submissions for compliance with the statute. As reiterated multiple times, the EPA is not required by the CAA to promulgate either regulations or guidance for good neighbor obligations in CAA section 110(a)(2)(D)(i)(I).[146] Specific comments related to the 2018 memoranda are addressed elsewhere.

The comment letter from the Association of Electric Companies of Texas, et. al. argues that the EPA's August 2006 Guidance required a "comparable" Step 3 analysis to the EPA's, but that the text of the CAA does not require this. Luminant also cites the August 2006 Guidance to argue that EPA has been inconsistent in how it has approached the good neighbor provision, pointing out that the 2006 Guidance suggested states should use a "comparable" assessment for significant contribution as the EPA. The EPA first notes the August 2006 guidance was by its own terms for the 1997 8-hour ozone NAAQS and the 1997 $PM_{2.5}$ NAAQS and in particular was written for states that were not subject to CAIR FIPs for either NAAQS. As such, the document is not applicable to the 2015 ozone NAAQS. It was also issued before the D.C. Circuit issued its opinion and remanded CAIR in *North Carolina v. EPA,* 531 F.3d 896 (DC Cir. 2008), *modified on reh'g*, 550 F.3d. 1176 (DC Cir. 2008), thus many suggestions in the guidance are likely now obsolete. To the extent commenters are suggesting the August 2006 guidance was unlawful, EPA notes that the text of the August 2006 guidance document itself said that "this document is merely guidance that States or EPA may elect to follow or deviate from …, as appropriate. The ultimate determination of whether a given SIP submission by a State meets the statutory requirements of section 110(a)(2)(D)(i)(I) will be accomplished through case-by-case notice and comment rulemaking in which the facts and circumstances of each State will be evaluated by EPA."[147] The general propositions for which

[145] "Guidance for State Implementation Plan (SIP) Submissions to Meet Current Outstanding Obligations Under Section 110(a)(2)(D)(i) for the 8-Hour Ozone and $PM_{2.5}$ National Ambient Air Quality Standards" *available at* https://www3.epa.gov/ttn/naaqs/aqmguide/collection/cp2/20060815_harnett_final_section_110(a)(2)(D)(i)_guidance.pdf.

[146] *See EME Homer City* at 510.

[147] "Guidance for State Implementation Plan (SIP) Submissions to Meet Current Outstanding Obligations Under Section 110(a)(2)(D)(i) for the 8-Hour Ozone and $PM_{2.5}$ National Ambient Air Quality Standards" at 2, *available at* https://www3.epa.gov/ttn/naaqs/aqmguide/collection/cp2/20060815_harnett_final_section_110(a)(2)(D)(i)_guidance.pdf.

commenters cited this guidance, that the EPA respects that states may devise their own approvable approaches to addressing good neighbor obligations, is still valid. But for the reasons explained in detail elsewhere in this record, no state that the EPA is acting on in this submission did develop an approvable approach.

The EPA also disagrees with the contention that the EPA significantly changed perspective regarding the purpose of infrastructure SIP submissions beginning with the 2008 ozone NAAQS. The EPA has always expected the portion of iSIPs that address CAA section 110(a)(2)(D)(i)(I) to provide adequate justification to support the conclusions therein. The August 2006 guidance, for the 1997 ozone NAAQS and 1997 PM2.5 NAAQS, indicated that states should submit a "technical demonstration" to support a conclusion that the state does not significantly contribute to nonattainment or interfere with maintenance in other states.[148] The September 2009 guidance, for the 2006 24-hour PM NAAQS, indicated that a "state's conclusion must be supported by an adequate technical analysis."[149] The September 2013 infrastructure SIPs guidance for the 2008 ozone NAAQS, the 2010 nitrogen dioxide NAAQS, the 2010 sulfur dioxide NAAQS, and the 2012 fine particulate matter NAAQS did not include guidance on the good neighbor provision.[150]

In evaluating the SIP submissions here, the EPA used its now well-established 4-step interstate transport framework as a guide, while recognizing that states are not necessarily bound to follow that exact framework. This is not merely the application of an arbitrary "policy preference" but the application of a judicially-tested and upheld framework that provides continuity across multiple NAAQS and provides certainty and predictability with regard to how the EPA will evaluate SIP submissions. While not codified in the CFR, the EPA has a consistent policy and practice of applying this framework both in its evaluation of SIP submissions and in the promulgation of multiple rounds of FIPs to address prior ozone transport obligations. It is altogether reasonable for the Agency to continue to use that general framework as a guide to evaluate these SIP submissions to ensure consistency both across states and with prior good neighbor actions, while continuing to recognize states' discretion to offer alternative approaches that may be satisfactory toward achieving the Act's requirements.

Thus, as explained in the proposals, in this action the EPA is not requiring states to adopt any particular emission limitation or to impose a specific control measure in a SIP submission. Rather, the EPA is determining that the SIP submissions that are the subject of this action do not support a finding that the statutory requirements of CAA section 110(a)(2)(D)(i)(I) have been met. In so doing, the EPA is acting pursuant to its supervisory role under the CAA's cooperative federalism framework, to ensure that SIPs satisfy those broad requirements that section 110(a)(2) mandates SIPs "shall" satisfy.

The EPA also disagrees with the argument that applying the consistent set of policy judgments made in this action across all states for purposes of evaluating interstate transport obligations goes against the

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[148] *Id.* at 5.

[149] September 2009 Guidance at 3.

[150] "Guidance on Infrastructure State Implementation Plan (SIP) Elements under Clean Air Act Section 110(a)(1) and 110(a)(2)" at 30, available at https://www3.epa.gov/airquality/urbanair/sipstatus/docs/Guidance_on_Infrastructure_SIP_Elements_Multipollutant_FINAL_Sept_2013.pdf. (EPA noted this guidance may be also informative for "infrastructure SIPs for new or reviewed NAAQS promulgated in the future.")

framework of cooperative federalism or is otherwise not permitted by the CAA. These policy judgments in interpreting the CAA reflect consistency with relevant case law and past agency practice as reflected in the CSAPR and related rulemakings. Nationwide consistency in approach is particularly important in the context of interstate ozone transport, which is a regional-scale pollution problem involving many smaller contributors. Effective policy solutions to the problem of interstate ozone transport dating back to the NO_X SIP Call (63 FR 57356 (October 27, 1998)) have necessitated the application of a uniform framework of policy judgments to ensure an "efficient and equitable" approach. *See EPA v. EME Homer City Generation, LP,* 572 U.S. 489, 519 (2014). One commenter argued that the regional nature of the problem of interstate transport does not confer greater authority on the EPA to disapprove a SIP submission. However, in highlighting the regional nature of transport, the EPA is not claiming a qualitatively different authority to scrutinize SIP submissions under CAA section 110(a)(2)(D)(i)(I). The EPA's authority to assess a SIP submission for compliance with the CAA is the same for obligations associated with in-state pollution as is it for interstate pollution. But the regional, interstate nature of the ozone-transport issue simply underscores the value of the EPA's role as referee. In this regard, the EPA notes that at the time these disapprovals were proposed, not a single state out of the 49 states and Washington D.C. that had submitted a good neighbor SIP submission for the 2015 ozone NAAQS concluded that any emissions reductions beyond existing controls were necessary to satisfy CAA section 110(a)(2)(D)(i)(I) for the 2015 ozone NAAQS. This fact is entirely unsurprising, but also confirms the need for federal intervention through disapprovals at this stage of the process. As the D.C. Circuit observed with respect to regional haze, which, like ozone, is another interstate, collective-action problem posed by widespread pollution emitters:

> Regional haze is a problem in which the benefits of each state's emissions controls are largely felt in other states. Without federal intervention, then, a state calculating how hard it should press in limiting pollution has no incentive to consider resulting enhancements of other states' welfare. There is no reason to believe that New Mexico, for example, would without federal pressure tighten limits for in-state polluters an extra notch so that tourists could gaze at clear skies above the Grand Canyon. Even an anti-pollution commitment demonstrated by 'numerous stakeholder meetings and public workshops across the West' does not explain why one state would, absent federal pressure, martyr itself for another, or subject its electric power users (for example) to additional costs for the benefit of out-of-state interests. *Cf*. *Maryland People's Counsel v. FERC,* 245 U.S. App. D.C. 365, 761 F.2d 768, 778 (D.C. Cir. 1985*)* ('It is ridiculous to assume that' a company would 'engage in . . . self-sacrificing behavior' 'simply because there is nothing that stops it from doing so').

Center for Energy and Econ. Devel. v. EPA, 398 F.3d 653, 657-58 (D.C. Cir. 2005) (Williams, J.).

One commenter argued that the EPA's proposed FIPs supplant states' rights and authority. Another commenter argued that by having already proposed a FIP, the EPA is attempting to "coerce" local and state entities to conform with national policy. Another commenter argued EPA was "intentionally exploiting" the *EME Homer City* case to support costly federal policy. These comments are beyond the scope of this action. The proposed FIPs, which are not final at this time, are a separate rulemaking action. In any case, the existence of the proposed FIPs does not undermine the EPA's adherence to the procedural requirements of CAA section 110. Approval of these SIP submissions is not conditioned on any specific controls of any specific sources; rather, these SIP submissions are being disapproved. If any

state were to re-submit a good neighbor SIP submission, the EPA would review it against the requirements of CAA section 110(a)(2)(D)(i)(I) pursuant to CAA section 110(k)(3).

One commenter argued that the EPA cannot use the CAA to force particular control measures on states. EPA is not requiring any control measures in this action. Another commenter cites *Arkansas Elec. Co-op. Corp. v. Arkansas Pub. Serv. Comm'n*, 461 U.S. 375 (1983) for the premise that the regulation of utilities is associated with the police power of the states. EPA is not regulating any sources in this action.

One commenter said the EPA's approach to disapproving the SIPs essentially required states to conduct expensive photochemical grid modeling and amounted to an unfunded mandate. EPA disagrees that it is necessarily required for states to conduct photochemical grid modeling to develop approvable good neighbor SIP submissions. Still, the CAA empowers states in the first instance to implement the NAAQS, as many commenters have observed. "State air quality divisions are no strangers to complex air quality and meteorological modeling of interstate transport of emissions."[151] Federal technical and financial support has always been available to states since the enactment of the modern CAA. Where states do not have or do not wish to dedicate the resources that may ultimately be required to develop an approvable SIP submission, the CAA is designed so that EPA will implement the requisite requirements through a FIP, without the state being obligated to expend its own resources. Thus, the EPA disagrees that it has in any way created an unfunded mandate through this disapproval.

For this same reason, the EPA disagrees that this action violates or implicates anti-commandeering principles. One commenter cites *District of Columbia v. Train*, 521 F.2d 971 (D.C. Cir. 1975), *vacated sub nom. EPA v. Brown*, 431 U.S. 99 (1977), for the proposition that the EPA cannot commandeer states' resources or force them to implement federal policies or programs against their consent. No such commandeering of state regulatory authority or resources is occurring by virtue of this SIP disapproval action. The only consequence of this action is that the EPA has an obligation to promulgate a FIP addressing the relevant good neighbor obligations for the covered states within two years. *See* CAA section 110(c)(1). *Cf. D.C. v. Train,* 521 F.2d at 993 ("[W]here cooperation [from states] is not forthcoming, we believe that the recourse contemplated by the commerce clause is direct federal regulation of the offending activity . . . .").

10.4 Reliance on FIP Measures

Comment

Commenter: Maryland Department of the Environment

Commenter ID: 29

Docket ID: EPA-R03-OAR-2021-0872

Comment:

[151] *EME Homer City I* at 50 (Rogers dissenting).

MDE objects to EPA's proposed disapproval of Maryland's 2015 Good Neighbor SIP on the basis that the state relied, in part, on the CSAPR Update, which was not adopted into Maryland' SIP. The CSAPR Update was originally incorporated into Maryland's SIP, but was subsequently withdrawn at EPA's request. Additionally, the CSAPR Update is a federal implementation plan ("FIP"), which stands in place of a SIP. Maryland is not required to submit a SIP to replace that FIP, and can instead operate under the FIP, which is federally enforceable in its own right. For that reason, EPA has historically allowed states to rely on federal measures in a SIP by simple reference, and cannot reasonably reject consideration of emissions reductions from a federal rule in a SIP.

It is unreasonable for EPA to use Maryland's compliance with EPA's directive against it now. EPA is estopped from such action because Maryland reasonably relied on EPA's direction that withdrawal of the 2008 Good Neighbor SIP and IBR would not affect its pending 2015 Good Neighbor SIP submittal. At least, in the spirit of public transparency and consistent with the concept of cooperative federalism upon which the CAA is based, EPA should have acknowledged in the proposed disapproval that the IBR SIP was withdrawn at EPA's request to correct EPA's procedural error. The federal/state relationship is built on trust and that trust is jeopardized when EPA regional offices are not fully transparent with their state counterparts.

Furthermore, the underlying premise that a state cannot rely on emissions reductions required by a FIP is legally flawed. EPA contends that:

[R]elying on a FIP at Step 3 is per se not approvable if the state has not adopted that program into its SIP and instead continues to rely on the FIP. States may not rely on non-SIP measures to meet SIP requirements. See CAA section 110(a)(2)(D) (''Each such [SIP] shall . . . contain adequate provisions . . .''). See also CAA section 110(a)(2)(A); Committee for a Better Arvin v. U.S. E.P.A., 786 F.3d 1169, 1175–76 (9th Cir. 2015) (holding that measures relied on by state to meet CAA requirements must be included in the SIP).

To the contrary, EPA has historically allowed states to meet the "adequate provisions" requirement by citing federal regulations and/or rules in their SIPs. This is true of many federal measures, including but not limited to Corporate Average Fuel Economy standards for on-road mobile vehicles, small off-road engine emission reductions, and commercial marine vessel standards under the federal Emission Control Areas standards. States routinely cite federal rules and regulations within their SIPs and EPA has not disapproved those SIPs as "per se not approvable." The EPA does not require a state to incorporate by reference every federal rule or regulation into state statutes in order for them to be utilized by the state as a federally enforceable regulatory measure to meet SIP requirements. Rather the citing of a federal rule or regulation in the SIP makes it a SIP measure. Therefore, citing a federal measure in a SIP, without incorporating the federal measure into state statute, is sufficient to make the rule or regulation a SIP measure, which allows the state to use the rule or regulation to meet SIP requirements. Moreover, a FIP may only be issued as replacement for a deficient SIP. The FIP stands in place of a SIP, and is federally enforceable by EPA and citizens alike. EPA's contention that Maryland's 2015 Good Neighbor SIP cannot rely on the emissions reductions required by a FIP (which has the same effect as a SIP) is both illogical and counterintuitive. In defense of its position, EPA cites but misapplies the holding of Committee for a Better Arvin v. EPA, 786 F.3d 1169, 1175-76 (9th Cir. 2015). In Arvin, California proposed a SIP that relied in significant part on reductions, which would be achieved through waiver measures implementing

stricter state standards for certain federal standards. Id. at 1175-76. The Ninth Circuit Court of Appeals found the SIP approval improper because the waiver measures were not part of the SIP. At issue there, the waiver measures were neither part of the SIP nor federal standards, and therefore, were not federally enforceable. Id. at 1177 ("We conclude that the enforcement gap for private citizens and EPA in the present SIP is inconsistent with the CAA's requirements and the express aims of Congress."). In contrast, Maryland relied on reductions from a FIP, which is federally enforceable to both EPA and private citizens. As such, EPA acted arbitrarily in rejecting consideration of the emissions reductions anticipated from an implementation plan issued under CAA § 110.

Response

These comments are responded to in Section V.B.9 of the preamble. The EPA addresses the comments regarding our correspondence with MDE regarding the withdrawal of the CSAPR Update SIP submission in Section 1.6 (EPA Input During SIP Submission Development).

10.5 Comments Alleging "Pretext" or Intent to Require Generation Shifting

Comment

Commenter: PacifiCorp

Commenter ID: 38

Docket ID: EPA-R08-OAR-2022-0315

Comment:

The Combined Effect of EPA's Proposed Disapproval and Proposed FIP Will Cause Major Economic and Reliability Impacts for the Western United States.

Finalization of the Proposed Disapproval and subsequent imposition of the Proposed FIP will jeopardize energy supply and reliability in the West and cause major economic impacts. The Proposed Disapproval means electric generating units ("EGUs") in Utah will be subject to the selective catalytic reduction or SCR-forcing provisions of the Proposed FIP. As outlined in comments on the Proposed FIP by the state of Utah, other western states, industry, and the BHE Comments, it is simply not possible to either install the costly SCR equipment or retire and replace the energy generated and vital ancillary services provided by so many units subject to the regulatory constraints and timelines of the Proposed FIP. The Proposed Disapproval and subsequent imposition of the Proposed FIP on Utah will also force generation shifting both explicitly and implicitly.[16]

EPA's attempt to use Utah's alleged marginal impact on a neighboring state's ozone monitors to force the state into EPA's Proposed FIP must be rejected. EPA should not use a disapproval based on improper procedures, impossible timelines and flawed reasoning as a ruse to impose the problematic Proposed FIP, with its harsh economic impacts and threats to the reliability of the western electricity system. EPA's flawed administrative procedures, reversal of established guidance and previous positions, and

the extraordinary economic and reliability impacts that will result from the combined effect of the Proposed Disapproval and imposition of the Proposed FIP counsel caution. The Supreme Court in *West Virginia v. EPA* advised EPA against "dictating the optimal mix of energy sources nationwide," even if "that sort of mandate will reduce air pollution from power plants."[17] PacifiCorp requests that EPA take a more judicious path by following its own guidance and legal procedures and working with Utah to enact an ozone transport SIP legally tailored to effectively address the ozone situation in the western region.

[16] First EPA imposes specific, pre-determined generation-shifting requirements using an opaque Integrated Planning Model ("IPM") that it did not make available for review to the states or other stakeholders. The IPM modeling is particularly impactful on Wyoming, which is expected to immediately shift approximately 10% of its generation less than a year after the Proposed FIP was issued (let alone finalized). Second, EPA implicitly forces generation shifting through the untenable uncertainty and risk created by the SCR-forcing provisions of the Proposed FIP.
[17] *West Virginia v. EPA*, 142 S. Ct. 2,587, 2,612 (June 30, 2022).

Response

The EPA is not finalizing a SIP submission disapproval for Wyoming in this action, and so comments that are specifically related to Wyoming's circumstances are beyond the scope of this action. In addition, we disagree that the final SIP disapprovals for other states are in any way pretextual. Their basis is grounded in the record for this action, including the EPA's reasoning and analysis as set forth in this record. Our disapprovals are in no way based on a state's failure to include generation shifting as an emissions control measure, nor do they use the proposed FIP as a benchmark or as the basis for disapproval. Nor have commenters cited evidence for these claims. The timing of our actions is addressed in Section V.A of the preamble and Section 1 (Timing of SIP Actions), as well as in the following responses to comment.

10.6 Allegation that Disapprovals of Western State SIP Submissions was Predetermined

Comments

Commenter: Eagle Materials Inc.

Commenter ID: 16

Docket ID: EPA-R09-OAR-2022-0138

Comment:

By issuing this Proposed SIP Disapproval *after* publishing a Proposed FIP, EPA is also effectively circumventing required rulemaking procedures by treating the Proposed SIP Disapproval as final, despite its failure to engage with public comments. The Administrative Procedure Act's ("APA") notice-and-comment procedures require EPA to "give interested persons an opportunity to participate in the rule making" before a rule is finalized.[52] Soliciting public comment "allow[s] the agency to benefit from the expertise and input of the parties who file comments with regard to the proposed rule" and "see[s] to it

that the agency maintains a flexible and open-minded attitude towards its own rules," creating important safeguards against arbitrary or unreasonable agency action.[53] However, EPA cannot remain flexible and open-minded in its consideration of its proposed disapproval where the validity of its Proposed FIP depends on this disapproval being finalized. Instead, EPA is effectively finalizing its Proposed SIP Disapproval in a manner that circumvents its responsibility to respond to public comments.[54] Such a procedural shortcut is anathema to the APA's carefully crafted rulemaking structure.[55]

In addition, EPA is effectively depriving members of the public from meaningfully engaging with its Proposed SIP Disapproval by issuing it after its Proposed FIP. The comment period for this Proposed Disapproval did not open until over a month after EPA published its Proposed FIP—the comment period for the Proposed FIP closed before any commenters had a chance to submit comments on the Proposed SIP Disapproval.[56] This puts commenters in the untenable position of having to provide feedback on EPA's comprehensive and complex Proposed FIP without first understanding Nevada's obligations under the CAA.

[52] 5 U.S.C. § 553(c).
[53] *See McLouth Steel Prod. Corp. v. Thomas*, 838 F.2d 1317, 1325 (D.C. Cir. 1988) (internal citations omitted).
[54] *See City of Portland, Oregon v. E.P.A.*, 507 F.3d 706, 715 (D.C. Cir. 2007) (emphasizing that an agency must respond to comments that "raise points relevant to the agency's decision and ... if adopted, would require a change in an agency's proposed rule").
[55] *See Metcalf v. Daley*, 214 F.3d 1135, 1142 (9th Cir. 2000) (emphasizing that agency action "must be timely, and it must be taken objectively and in good faith, not as an exercise in form over substance, and not as a subterfuge designed to rationalize a decision already made").
[56] See Comments, EPA-R09-OAR-2022-0138, https://www.regulations.gov/search/comment?filter=EPAR09-OAR-2022-0138.

Commenter: Idaho Power Company

Commenter ID: 23

Docket ID: EPA-R09-OAR-2022-0138

Comment:

[B]y proposing the FIP first, EPA has made clear that the finalization of the Proposed Disapproval was a foregone conclusion, effectively circumventing required rulemaking procedures by treating the Proposed Disapproval as final before giving any consideration to public comments. The Administrative Procedure Act's ("APA's") notice-and-comment procedures require EPA to "give interested persons an opportunity to participate in the rule making" before a rule is finalized.[32] Soliciting public comment "allow[s] the agency to benefit from the expertise and input of the parties who file comments with regard to the proposed rule" and "see[s] to it that the agency maintains a flexible and open-minded attitude towards its own rules," creating important safeguards against arbitrary or unreasonable agency action.[33] EPA cannot remain flexible and open-minded in its consideration of the Proposed Disapproval where the Proposed FIP depends on this disapproval being finalized. EPA has effectively finalized the Proposed Disapproval in a manner that circumvents its responsibility to respond to public comments.[34] Such a procedural shortcut is anathema to the APA's carefully crafted rulemaking structure.[35]

[32] 5 U.S.C. § 553(c).
[33] *See McLouth Steel Prod. Corp. v. Thomas*, 838 F.2d 1317, 1325 (D.C. Cir. 1988) (internal citations omitted).
[34] *See City of Portland, Oregon v. EPA*, 507 F.3d 706, 715 (D.C. Cir. 2007) (emphasizing that an agency must respond to comments that "raise points relevant to the agency's decision and ... if adopted, would require a change in an agency's proposed rule").
[35] *See Metcalf v. Daley*, 214 F.3d 1135, 1142 (9th Cir. 2000) (emphasizing that agency action "must be timely, and it must be taken objectively and in good faith, not as an exercise in form over substance, and not as a subterfuge designed to rationalize a decision already made").

Commenter: PacifiCorp

Commenter ID: 38

Docket ID: EPA-R08-OAR-2022-0315

Comment:

The Flawed Procedure and Chronology of the FIP/SIP Result in a Predetermined Outcome and an Abuse of Discretion.

The good neighbor provision, at its core, is a state obligation. It is codified in Section 110 of the CAA, which is the section granting states primary decision-making authority for developing SIPs to achieve the NAAQS. EPA's role under section 110 is to review and approve those plans, not to substitute its own policy preferences or decisions for those made by the states. As long as a state's plan is reasonable and complies with the requirements of the CAA, EPA must approve it. The U.S. Supreme Court and multiple Circuit Courts have repeatedly endorsed this cooperative federalism approach codified in Section 110.[18] Courts have also confirmed that EPA may issue a FIP *only if a state's SIP is deemed to be insufficient* according to the requirements of the CAA. EPA has undermined the central principles underlying both Section 110 and the Administrative Procedure Act by not even proposing to reject Utah's SIP until *after* it had already issued the Proposed FIP with explicit requirements specifically targeted at Utah. Even if EPA claims to cure its failure to observe the proper sequencing by projecting (and predetermining) that it will finalize its disapproval of Utah's SIP before finalizing the Proposed FIP, its actions run roughshod over both the sequence ordered by the CAA and the states' primary role in addressing nonattainment under Section 110. EPA should explain why this disapproval was issued without providing time for Utah to respond. EPA had nearly three years to do this. The flawed procedure suggests that EPA isn't giving Utah's SIP submittal a considered review, preferring instead to impose its own Proposed FIP solution in violation of legal principles. Agency action "must be timely, and it must be taken objectively and in good faith, not as an exercise in form over substance, and not as a subterfuge designed to rationalize a decision already made."[19]

By delaying the Proposed Disapproval for Utah's SIP until May 23, 2022, a full month and a half after proposing its FIP and based on a shift in its thinking in the years since the SIPs were originally submitted, EPA is trying to take over the role Congress granted to states. A logical conclusion from this series of actions, and the fact that EPA conducted extensive analysis assuming Utah is subject to the FIP, is that EPA has predetermined the outcome, even if that meant EPA took shortcuts to the required administrative procedures and disregarded the work Utah put into developing its Ozone Transport SIP

according to EPA's guidance. EPA's nonsequential process demonstrates serious disregard for Utah's well-founded determinations underlying its SIP.[20]

[18] *See, e.g., Train*, 412 U.S. 60 (1975); *Union Elec. Co. v. EPA*, 427 U.S. 246 (1976); *Fla. Power & Light Co. v. Costle*, 650 F.2d 579 (5th Cir. 1981).
[19] *Metcalf v. Daley*, 214 F.3d 1135, 1142 (9th Cir. 2000).
[20] EPA also put Utah and other stakeholders in a difficult position, forcing them to devote scarce resources to simultaneously digest and respond to the voluminous Proposed FIP and the Proposed Disapproval and denying numerous formal and informal requests for sorely needed additional time.

Commenter: PacifiCorp (Berkshire Hathaway Energy Company Proposed FIP Comments Attachment)

Commenter ID: 38

Docket ID: EPA-R08-OAR-2022-0315

Comment:

The western states where BHE operates affected EGUs (Nevada, Wyoming, and Utah) submitted their good neighbor SIPs to EPA between October 2018 and October 2019, years in advance of EPA's Proposed Rule. Each of these SIPs, in reliance upon EPA guidance and modeling, demonstrated that there were no significant impacts on ozone nonattainment and maintenance in downwind states. Yet EPA took no action on these SIP submissions for two and a half to three and a half years. It was not until February 2022, when EPA signed the Proposed Rule imposing a FIP on these states (later publishing it for public notice and comment on April 6), that these states learned that EPA did not intend to approve their good neighbor SIPs. EPA did not even propose disapproval for these SIPs until May 23, 2022, a full month and a half after proposing its FIP. And EPA has yet to finalize disapproval (the proper legal predicate for a FIP). What's more, EPA's disapproval of these SIPs is based on a shift in its thinking in the years since the SIPs were originally submitted.

BHE can only conclude from this series of actions that EPA predetermined that these states would be subject to this FIP as its chosen policy outcome without following the required administrative procedure or working in good faith with the states to develop their SIPs. EPA's nonsequential process demonstrates serious disregard for the well-founded state determinations underlying their good neighbor SIPs.43 In failing to observe the appropriate process, EPA has undermined western state authority in contravention of the cooperative federalism underpinning Section 110 of the Clean Air Act.

Commenter: Utah Division of Air Quality

Commenter ID: 47

Docket ID: EPA-R08-OAR-2022-0315

Comment:

UDAQ thinks that EPA's proposed rule to disapprove Utah's SIP is not rooted in the technically accurate analysis but instead is motivated by the desire to include Utah in the proposed interstate transport FIP:

Upon review, UDAQ finds the timing and sequence of the proposed actions in question to be highly irregular compared to a traditional rulemaking process. The fact that EPA proposed to include Utah in the broad and highly impactful FIP prior to issuing proposed disapproval of the state's SIP is unusual. This may suggest that EPA's proposed SIP disapproval aims to regulate a select set of point sources by including Utah in the proposed FIP.

The UDAQ disagrees with EPA's disapproval of the SIP for the following reasons. […] Third, UDAQ thinks that EPA's proposed rule to disapprove Utah's SIP is not rooted in the technically accurate analysis but instead is motivated by the desire to include Utah in the proposed interstate transport FIP. Fourth, UDAQ thinks that the modeling and logic justifying Utah's inclusion in the proposed FIP are flawed. […]

EPA's Proposed Disapproval is Motivated by the Desire to Include Utah in the FIP

Upon review, UDAQ finds the timing and sequence of the proposed actions in question to be highly irregular compared to a traditional rulemaking process. The fact that EPA proposed to include Utah in the broad and highly impactful FIP prior to issuing proposed disapproval of the state's SIP is unusual. This may suggest that EPA's proposed SIP disapproval aims to regulate a select set of point sources by including Utah in the proposed FIP.

EPA's Inclusion of Utah in the FIP Relies on Flawed Logic

As noted above and outlined in our comments related to the proposed FIP, UDAQ believes that the proposed disapproval of Utah's SIP is an effort to fulfill an agenda outside of the original intent of the interstate transport provisions of the CAA. Specifically, the intent is to force Utah's inclusion in the FIP to target emission reductions from fossil fuel-fired electric generating units (EGUs) located in the state.

Commenter: Utah Petroleum Association and the Utah Mining Association

Commenter ID: 48

Docket ID: EPA-R08-OAR-2022-0315

Comment:

EPA must promulgate a Federal Implementation Plan ("FIP") within two years any time that EPA finds that the State failed to make the required SIP submission, finds that the SIP submission did not meet minimum criteria, or disapproves a SIP submitted by the State unless the State corrects the deficiency and EPA approves the plan prior to promulgating the FIP.

On April 6, 2022, EPA proposed its Good Neighbor Rule ("Proposed GNR") with a finding that emissions from 25 States including Utah contribute significantly to nonattainment of the 2015 ozone NAAQS for States downwind. EPA's Proposed GNR includes a FIP to address these emissions.

EPA jumped the gun. The timing of this Proposed Disapproval, six weeks after proposing a FIP as part of the GNR, is out of order and contrary to the requirements of the CAA, which requires that a Disapproval ***be finalized*** before EPA promulgates a FIP such as the GNR.

The timeline suggests that EPA has no intention of paying heed to the comments on the Proposed Disapproval. Such disregard for comments would be a violation of required administrative procedures. EPA must fairly and completely consider all comments submitted.

Response

The sequencing of our actions here with regard to California, Nevada, and Utah is consistent with the procedural requirements of the CAA and the APA and with the EPA's past practice in our efforts to timely address good neighbor obligations. Comments pertaining to Wyoming are beyond the scope of this action. We have generally responded to comments on the timing of our action in Section V.A.1. of the preamble (comments related to the relationship between timing of proposals to disapprove SIPs and promulgate FIPs), Section V.A.2. of the preamble (comments related to requests for more time to revise SIP submissions), and Section V.A.3. of the preamble for (alleged harms to states caused by time between SIP submission and the EPA's action). .

Here, we further elaborate on those responses, specific to these comments about the timing of our western state disapproval proposals. First, neither the Act nor the APA impose any limitations on the timing for when the EPA can propose a SIP or FIP action under CAA section 110. Second, EPA's timing is motivated by the need to address good neighbor obligations as expeditiously as practicable and no later than the next attainment date. Third, allegations that the disapprovals were a foregone conclusion or otherwise prejudiced for any reason is demonstrably proven false by the fact that we are deferring action on Wyoming at this time in light of the updated air quality information. Fourth, there is nothing unprecedented in the EPA proposing FIPs in conjunction with or even before its proposed action on SIP submissions. For example, at the time the EPA proposed the CSAPR Update FIPs for the 2008 ozone NAAQS in December of 2015, we had not yet proposed action on several states' SIP submissions, but proposed and finalized those SIP disapproval actions prior to finalization of the FIPs. The proposed CSAPR Update was published on December 3, 2015, and included proposed FIPs for Indiana, Louisiana, New York, Ohio, Texas, and Wisconsin. 80 FR 75705. At that time, the EPA had not yet proposed action on good neighbor SIP submissions for the 2008 ozone NAAQS from those states; however, the EPA subsequently proposed and finalized these disapprovals. *See* 81 FR 38957 (June 15, 2016) (Indiana); 81 FR 53308 (Aug. 12, 2016) (Louisiana); 81 FR 58849 (Aug. 26, 2016) (New York); 81 FR 38957 (June 15, 2016) (Ohio); 81 FR 53284 (Aug. 12, 2016) (Texas); 81 FR 53309 (Aug. 12, 2016) (Wisconsin) before finalizing the CSAPR Update FIPs, published on October 26, 2016 (81 FR 74504).

As for Utah, the EPA has had the authority to promulgate a FIP for the state since January 6, 2020, which is the effective date of the EPA's finding of failure to submit for the state. 84 FR 66612 (December 5, 2019).

The public has been afforded an opportunity to comment on our proposed action on all three states' ozone transport SIP submissions, in addition to the opportunity to comment on the proposed FIP. The EPA has evaluated and responded to these comments as relevant and within scope of this final action. Other issues raised by these comments are addressed in the following sections of this RTC document: 10.3 (Cooperative Federalism and the EPA's Authority), 10.5 (Comments Alleging "Pretext" or Intent to Require Generation Shifting), and 11.4 (Transport Policy - Western State Ozone Regulation).

10.7 EPA's Response to Comment on Proposed Actions Related to Alabama

Comments

Commenter: Alabama Department of Environmental Management

Commenter ID: 02

Docket ID: EPA-R04-OAR-2021-0841

Comment:

In an effort to quickly provide a SIP based on the newer modeling (February 2022), ADEM rescinded the 2018 SIP, and presented EPA with a revised SIP, including a Weight of Evidence (WOE) argument based on the readily available data.

Commenter: Alabama Power Company, Southern Power Company, and PowerSouth Energy Cooperative

Commenter ID: 04

Docket ID: EPA-R04-OAR-2021-0841

Comment:

In February 2022, EPA reversed course and proposed to disapprove ADEM's 2018 Submittal. EPA explained that new modeling—not available at the time Alabama's SIP was due and developed well after the statutory deadline for review—suggested emissions from Alabama could affect ozone concentrations in Texas. In light of EPA's reliance on new 2022 modeling, ADEM withdrew its 2018 SIP submittal and, on April 21, 2022, separately submitted to EPA a new SIP package (including its SIP revisions and comments received on the SIP revision), which addressed and disputed EPA's new modeling (the "2022 SIP"). On June 14, 2022, EPA notified ADEM of minor administrative deficiencies in the 2022 SIP and, as a result of these errata, found the SIP technically "incomplete." EPA provided that ADEM may correct those deficiencies and resubmit its SIP for EPA's review, and ADEM promptly supplemented its SIP to address those minor deficiencies on June 21, 2022. EPA is now proposing to disapprove Alabama's 2022 SIP submittal.

[…]

EPA should certainly not object to comments raised herein on any claim of lack of specificity or explanation given that EPA refused to provide sufficient time to comment in the first instance and denied a reasonable request for additional time. Notably, in its letter denying ADEM's request for an extension of the comment period, EPA states that "the technical bases underlying the EPA's proposed rationale to disapprove the June 21, 2022, SIP submittal are similar to those underlying the EPA's proposed rationale to disapprove" the prior SIP and that Alabama provided comments in that prior

proposed rulemaking. Because EPA has intertwined its prior proposal to justify its denial of any extension, EPA should have addressed comments made on that prior proposal in this proposal. As a result, EPA should re-propose its action after addressing all the comments received in its previous proposal.

Response

The EPA is electing to respond to comments received on the EPA's February 2022 proposed disapproval of Alabama's now-withdrawn SIP submission (submitted on August 20, 2018) and is also responding to the comments received on the October 2022 proposed disapproval of Alabama's SIP submission (submitted on June 21, 2022), to the extent these comments are relevant to this final action, within scope, and "reasonably specific." Nothing in the APA or the CAA requires the EPA to respond to comments on a notice of proposed rulemaking that is not the action being finalized, even when a second proposal is on the same or similar grounds as the first one. In this case, Alabama chose to withdraw its first SIP submission, and EPA is proposing to disapprove its SIP submission submitted on June 21, 2022.

11 Miscellaneous

11.1 Incorporation of Other's Comments by Reference

Comments

Commenter: Arkansas Electric Cooperative Corporation

Commenter ID: 08

Docket ID: EPA-R06-OAR-2021-0801

Comment:

Arkansas Electric Cooperative Corporation (AECC) shares the concerns of both the Arkansas Department of Energy and Environment, Division of Environmental Quality (DEQ) and the the Arkansas Environmental Federation (AEF) regarding the referenced proposed rule. Therefore, AECC herein incorporates by reference the comments on the proposed rule submitted by ADEQ on April 22, 2022, and AEF on April 25, 2022.

Commenter: Arkansas Forest & Paper Council

Commenter ID: 10

Docket ID: EPA-R06-OAR-2021-0801

Comment:

The commenters support, non-exclusively, and incorporate by reference the comments submitted in this docket by the Arkansas Division of Environmental Quality as well that of the Midwest Ozone Group and Arkansas Environmental Federation.

Commenter: City Utilities of Springfield, Missouri

Commenter ID: 13

Docket ID: EPA-R07-OAR-2021-0851

Comment:

City Utilities supports the Midwest Ozone Group's comment for extension in light of technical review and resources needed to appropriately comment.

Commenter: Cleco Corporate Holdings LLC

Commenter ID: 14

Docket ID: EPA-R06-OAR-2021-0801

Comment:

Cleco adopts and incorporates by reference the comments submitted to EPA by Louisiana Electric Utility Environmental Group (LEUEG), dated April 25, 2022, concerning the Proposal.

Commenter: Louisiana Electric Utility Environmental Group

Commenter ID: 28

Docket ID: EPA-R06-OAR-2021-0801

Comment:

LEUEG adopts and incorporates by reference the comments submitted to EPA by the Louisiana Chemical Association ("LCA"), dated April 25, 2022, concerning the Proposed SIP Disapproval.

Commenter: Ohio Utilities and Generators Group

Commenter ID: 36

Docket ID: EPA-R05-OAR-2022-0006

Comment:

OUG also supports the efforts of the Midwest Ozone Group (hereinafter "MOG") and endorses the more detailed comments filed by MOG.

Commenter: United States Steel Corporation

Commenter ID: 45

Docket ID: EPA-R06-OAR-2021-0801

Comment:

For the reasons set forth above and those provided in the comments filed by DEQ and AEF, U. S. Steel requests EPA approve the Arkansas SIP.

Commenter: Utah Associated Municipal Power System

Commenter ID: 46

Docket ID: EPA-R08-OAR-2022-0315

Comment:

UAMPS supports the comments filed by the State of Utah and those comments filed by PacifiCorp opposing the Proposed Rule.

Commenter: Xcel Energy

Commenter ID: 52

Docket ID: EPA-R05-OAR-2022-0006

Comment:

Xcel Energy endorses the comments filed by the Minnesota Pollution Control Agency (MPCA) in response to EPA's SIP disapproval for Minnesota. In addition to EPA not including all the NOx emission reductions taking place within the state, the EPA erred in the approach taken modeling the influence Lake Michigan has on receptor sites located near the air/water shoreline boundaries, which was factored into the modeling performed by Lake Michigan Air Directors Consortium (LADCO) supporting Minnesota's SIP submittal. We understand that other parties, such as Midwest Ozone Group (MOG), will provide more detail on this matter in their comments.

Commenter: Xcel Energy

Commenter ID: 52

Docket ID: EPA-R06-OAR-2021-0801

Comment:

Xcel Energy endorses the comments filed by the Texas Commission on Environmental Quality (TCEQ) in response to EPA's SIP disapproval for Texas. The EPA erred in the approach taken to modeling the influence Lake Michigan has on the receptor sites located near the air/water shoreline boundaries in Cook County Illinois, Kenosha, and Racine Wisconsin, which was factored into the modeling performed by both TCEQ, further supported by comments filed by the Association of Electric Companies of Texas (AECT) and the associated modeling analysis performed by Sonoma Technology.

Response

Comments submitted on the proposed actions which have been "incorporated by reference" by other commenters are responded to elsewhere in this Response to Comments. Where commenters have "incorporated by reference" and submitted as their own attachment a comment made on the proposed FIP or other materials, the EPA has taken those materials into consideration in this rule to the extent that commenters explained with reasonable specificity how the information included in those referenced comments is relevant and within scope of this action.

11.2 CAA Section 126 Petitions

Comments

Commenter: Kentucky Division for Air Quality

Commenter ID: 25

Docket ID: EPA-R04-OAR-2021-0841

Comment:

In this proposed action, EPA specifies that if a state must make emission reductions to prevent emissions from impacting a downwind monitor, the state must submit a separate SIP revision that makes those emission reductions permanent and enforceable. Kentucky maintains that the purpose of the I-SIP is to verify that the state has the authority, regulations, and programs in place to address the requirements of the CAA, not to determine if, and how much, an upwind source may be impacting a downwind monitor. If an upwind state impacts a downwind state and EPA is called upon to determine the reductions necessary, then EPA's authority comes from a different section of the CAA, specifically section 126.

Commenter: Louisiana Department of Environmental Quality

Commenter ID: 27

Docket ID: EPA-R06-OAR-2021-0801

Comment:

To date, there have been no FCAA Section 126 actions filed against Louisiana. FCAA section 126 gives a state the authority to ask EPA to set emission limits for specific sources of air pollution in other states that significantly contribute to nonattainment or interfere with maintenance of one or more NAAQS in the petitioning state.

Response

The EPA's duty under CAA section 110(a)(2)(D)(i)(I) is to evaluate whether a state's SIP submission includes adequate provisions to prohibit emissions from within the state that significantly contribute to nonattainment or interfere with maintenance of the NAAQS in other states. While CAA section 126 allows downwind jurisdictions to separately petition the EPA to make a finding that upwind sources emit in violation of the good neighbor provision, such a petition is voluntary in nature and can only be initiated by the impacted state or political subdivision. *See Genon Rema v. EPA*, 722 F.3d 513, 520-22 (3d Cir. 2013) (discussing the independent nature of the processes under CAA section 110(a)(2)(D)(i)(I) and 126(b)). Thus, the lack of a petition does not demonstrate that Louisiana's SIP submission meets the

requirements of CAA section 110(a)(2)(D)(i)(I) nor is it dispositive of the existence (or lack thereof) of an interstate transport concern.

11.3 Transport Policy

Comments

Commenter: Ducote, Samuel

Commenter ID: 15

Docket ID: EPA-R06-OAR-2021-0801

Comment:

I strongly oppose the EPA's decision here. As a region of this nation responsible for fueling the needs of the nation, the Louisiana-Texas-Arkansas-Oklahoma region needs to extend special "good neighbor" exceptions for the contribution to the nation at large, especially considering the states have valid SIPs in place that meets the NAAQS requirements within each state individually.

Commenter: Midwest Ozone Group

Commenter ID: 30

Docket ID: EPA-R02-OAR-2021-0673, EPA-R03-OAR-2021-0872, EPA-R03-OAR-2021-0873, EPA-R04-OAR-2021-0841, EPA-R05-OAR-2022-0006, EPA-R06-OAR-2021-0801, EPA-R07-OAR-2021-0851, EPA-R08-OAR-2022-0315, EPA-R09-OAR-2022-0394, EPA-R09-OAR-2022-0138

Comment:

EPA’s proposed Good Neighbor SIP disapprovals are both legally and technically flawed in that EPA seeks to advance the Good Neighbor SIP disapprovals based on incorrect air quality assumptions and calculations and in the absence of consideration of implementation of the flexibility guidance issued by EPA for application to 2015 ozone NAAQS Good Neighbor SIPs

[…]

[T]he Midwest Ozone Group urges that EPA withdraw the subject proposed SIP disapprovals in favor of correcting the legal and technical errors that have been identified in its analysis and proposing an appropriate opportunity for states to address any deficiencies EPA may find in any Good Neighbor Plans implementing the 2015 ozone NAAQS.

Commenter: Midwest Ozone Group

Commenter ID: 30

EPA-R08-OAR-2022-0315, EPA-R09-OAR-2022-0394, EPA-R09-OAR-2022-0138

Comment:

EPA's proposed Good Neighbor SIP disapprovals are both legally and technically flawed in that EPA seeks to advance the Good Neighbor SIP disapprovals based on incorrect air quality assumptions and calculations.

[…]

MOG specifically objects to EPA's approach to implementation of the flexibility guidance issued by EPA in 2018 for the specific application by states to the development of 2015 ozone NAAQS Good Neighbor SIPs.

Commenter: Oklahoma Department of Environmental Quality

Commenter ID: 37

Docket ID: EPA-R06-OAR-2021-0801

Comment:

Oklahoma is Being Penalized for Having Cleaner Air Than Downwind States

Oklahoma is in attainment of the NAAQS. Oklahoma stakeholders have shared concerns with ODEQ that EPA is penalizing Oklahoma sources for the interstate transport of pollutants allegedly emitted by sources in Oklahoma, but which impact receptors in the Dallas-Fort-Worth (DFW) metroplex. These stakeholders note that the emissions from the DFW metroplex impacting receptors in Oklahoma far exceed Oklahoma's impacts on receptors in Texas. While the ultimate goal of the good neighbor provision of the CAA is to ensure that everyone breathes cleaner air, it does seem that Oklahoma sources are required to install costly controls to address a much smaller quantity of emissions moving south while sources in Texas have no requirement to address emissions impacting Oklahoma receptors. Furthermore, the fact that sources in Texas will be required to control emissions to reduce impacts on receptors in Wisconsin and Illinois, but not Oklahoma (since Oklahoma is in attainment), only makes the process appear more absurd. Further, as previously stated, had EPA acted on Oklahoma's SIP in a timely manner, using the data available at the time EPA was supposed to review and approve the SIP, and honored the flexibilities it held out in the 2018 Tsirigotis Memos, it is likely Oklahoma would have already had an approved SIP in place by now. Oklahoma challenges the assumption that its sources are contributing to nonattainment in the DFW metroplex or the Chicago area. Nevertheless, it is nonsensical and unjust to force sources in Oklahoma, a state that is mostly rural, to make up for the poor air quality in the major metropolitan areas of the DFW metroplex and Chicago. The practical outcomes of EPA's decision-making in this instance are unduly burdensome and misplaced.

Commenter: PacifiCorp

Commenter ID: 38

Docket ID: EPA-R08-OAR-2022-0315

Comment:

Recent modeling performed by the State of Colorado demonstrates the Proposed Disapproval is misguided.

EPA must consider relevant Colorado emission reductions when determining Utah's impacts on Colorado monitors, as well as recent modeling performed for the State of Colorado that supports Utah's SIP. In the Proposed Disapproval, EPA states that "EPA does not find . . . the impacts of emissions from sources other than upwind states to be relevant to the analysis of interstate transport to Denver area nonattainment receptors." But this runs contrary to EPA's prior practice. In all of its prior interstate transport rules, EPA has reasonably assumed such "home states" will do their fair share in reducing ozone by employing control measures similar to those required from the upwind states significantly contributing to downwind ozone problems. For example, in the Revised CSAPR Update, which EPA adopted about a year ago, EPA maintained its long-standing position on this important point.

Assuming downwind states will pull their weight in improving air quality is reasonable. After all, the CAA requires states to attain ambient air quality standards, and nothing in the CAA requires upwind states to carry the full burden of bringing a downwind state into attainment. In that sense, the assumption that downwind states like Colorado will do their fair share is also lawful, since EPA should presume that states will meet their legal obligations under the CAA, and EPA is required by law to consider all relevant information in crafting its programs.[38] In fact, the D.C. Circuit advises EPA to recognize home-state efforts, not ignore them. In *Maryland v. EPA*, the court noted that downwind states have "the concomitant responsibility to limit their own emissions," even if their in-state monitors show attainment.[39] *Maryland* supports EPA's consideration of home states' responsibility to limit their own emissions.

The fair-share assumption is outcome-determinative for Utah when Colorado-specific data is included in the analysis. For example, Utah appropriately considered oil- and gas-related emissions reductions in Colorado that will reduce ozone in the impacted monitor areas.[40] Additionally, the Denver Regional Air Quality Council, along with the Colorado Department of Public Health and Environment is preparing a 2023 Severe/Moderate ozone SIP for the Denver Metro/Northern Front Range ("DM/NFR") ozone nonattainment area ("NAA"). The Colorado SIP analysis includes 2026 future year modeling to address attainment of the 2008 NAAQS and 2015 NAAQS. The Colorado ozone SIP modeling provides more reliable and accurate 2023 and 2026 ozone projections than the new and problematic modeling EPA relied on to disapprove Utah's SIP for several reasons[.]

[38] *Michigan v. EPA*, 576 U.S. 743, 750 ("agency action is lawful only if it rests on a consideration of the relevant factors") (quoting *Motor Vehicle Mfrs. Assn. v. State Farm Mut. Automobile Ins.* Co., 463 U.S. 29, 43 (1983)).
[39] 958 F.3d 1185, 1201 (D.C. Cir. 2020).
[40] *See, e.g.*, Colorado Oil & Gas Association, Comments on Proposed Reclassification of Colorado Ozone Nonattainment Areas under 2008 and 2015 NAAQS, submitted June 13, 2022, to Docket Nos. EPA-HQ-OAR-2021-0741 and EPA-HQ-OAR-2021-0742 (outlining recent applicable Colorado O&G air regulations); Proposed Consent Decree between EPA and Colorado with DCP, Civil Action No. 1: 22-cv-01829-NRN (July 25, 2022) (reporting a

proposed consent decree to cut emissions of volatile organic compounds by more than 288 tons and methane releases by some 1,300 tons in Weld County at the western border of Colorado).

Response

Regarding the comment that the EPA must take account of some "fair share" of emissions reductions in the downwind states where receptors are located in assessing whether upwind state contribution exists at Steps 1 and 2, the EPA disagrees. First, our consideration of home-state "fair share" emissions in the CSAPR Update and the Revised CSAPR Update takes place in the assessment of air quality impacts of emissions control strategies at Step 3, including as to the assessment of whether a FIP emissions control strategy overcontrols. *See* 86 FR at 23106; 81 at 74550. In this analysis, we assume the home state would implement emissions reductions at least up to the stringency of the control strategy we would select for upwind states. Comments regarding the FIP action proposed on April 6, 2022, are outside the scope of this action, however, it is illustrative to point out that the EPA once again made this same assumption in the proposed FIP to address the 2015 ozone NAAQS good neighbor obligations, at Step 3, consistent with prior rules, *see* 87 FR 20036, 20092 n.190.[152]

That role for "fair share" analysis is irrelevant to this action. A "fair share" assumption has never been a relevant part of the analysis at Steps 1 and 2. Indeed, a "fair share" assumption cannot even be calculated if the upwind states have not offered to implement an emissions control strategy at Step 3 against which a "fair share" for the downwind could be derived.

While we *do* take account of known on-the-books controls in downwind states, we have never assumed some additional amount of emission reduction in downwind states that has not yet occurred and is not known with certainty based on on-the-books requirements. Further, making such an assumption to conclude that a receptor will no longer exist and therefore an upwind state should not have obligations to reduce its own emissions that may be significantly contributing to that receptor is in conflict with the case law. *Wisconsin* and *North Carolina* both recognized that, regardless of other contributing factors to a downwind receptor, each state must be held responsible for its own significant contribution. 938 F.3d at 324; 531 F.3d at 921. And in *Maryland*, the court expressly recognized that upwind states must eliminate significant contribution regardless of the degree of emissions reductions the downwind state has itself achieved, holding that upwind states have an obligation to eliminate their significant contribution by the Marginal area attainment date for ozone under CAA section 181(a), even if the downwind nonattainment area faces relatively little regulatory obligation at that classification. 958 F.3d at 1204. The court observed "that does not make Delaware's obligation to attain the NAAQS by 2021 any less binding. And an upgrade from a marginal to a moderate nonattainment area carries significant consequences, such as a requirement to provide for annual emissions reductions in SIPs." *Id.*

[152] EPA also questioned in that proposal whether recent case law had called the need for such an assumption into question. *See id.* n. 206 ("In *Maryland*, the EPA had argued that good neighbor obligations should not be required by the Marginal area attainment deadline in part because ''marginal nonattainment areas often achieve the NAAQS without further downwind reductions, so it would be unreasonable to impose reductions on upwind sources based on the next marginal attainment deadline.'' 958 F.3d 1185, 1204. The D.C. Circuit rejected that argument, noting regulatory consequences for the downwind state for failure to attain even at the Marginal date, and, citing *Wisconsin*, the court held that upwind sources violate the good neighbor provision if they significantly contribute even at the Marginal area attainment date. *Id.*").

Commenter cites *Maryland* for a different proposition, that states in a multistate nonattainment area have "a concomitant responsibility to limit their own emissions." 958 F.3d at 1201. But commenter takes this quote out of context, putting the thrust of the observation on the downwind state rather than the upwind state. Thus, commenter derives an opposite meaning from what the court intended. In fact, the court held that Delaware had a valid basis for its Section 126(b) petition against Pennsylvania based on a monitor violating the NAAQS located in Pennsylvania but within a multistate nonattainment area that Delaware shared with Pennsylvania. *Id.* at 1200-01. The court observed that Delaware faced regulatory consequences due to the violating monitor in Pennsylvania, because "Delaware remains bound by the corresponding nonattainment designation. . . . [I]t is stuck in regulatory limbo, affected by an upwind source yet unable to avail itself of the intended remedy for addressing upwind contributions to nonattainment." *Id.* at 1200. The court rejected the EPA's arguments that Delaware could not use Section 126(b) to force emissions controls on the offending upwind sources in Pennsylvania. The court then observed:

> [C]ontrary to EPA's characterization, Delaware is not trying to 'relieve [itself] ... of the specific planning obligations associated with its inclusion in an area designated nonattainment.' Rather, it asks merely that upwind sources contributing to air quality problems in the multistate nonattainment area shoulder a comparable regulatory burden, as the section 126(b) petition process contemplates.
>
> In sum, states in a multistate nonattainment area share not only a nonattainment designation *but also the concomitant responsibility to limit their own emissions*. To equalize the burdens between upwind and downwind states, the Clean Air Act authorizes a state to petition the EPA for a finding that upwind emissions significantly contribute to that state's nonattainment of the ozone NAAQS.

Id. at 1200-01 (emphasis added).

Commenter's attempt to use this passage to argue that an upwind state like Utah should not face good neighbor obligations until a downwind state like Colorado has done its "fair share" is not availing. First, there is no multistate nonattainment at issue here, so the facts are somewhat different than what the court was analyzing in *Maryland*. Nonetheless, Colorado is still in a situation comparable to Delaware. It has a nonattainment area and faces mandatory nonattainment area planning requirements under subpart 2 of title I of the CAA (as commenter acknowledges). Colorado has taken measures to reduce emissions (and if on-the-books, these are reflected in the EPA's modeling), and Colorado may face additional requirements to further reduce its emissions if nonattainment continues to persist. But, under *Maryland* and prior cases, that does not relieve upwind states of the obligation to eliminate their own significant contribution to the air quality problem in Colorado. And without the elimination of that significant contribution, Colorado, like Delaware, faces the prospect of implementing ever more stringent and costly emissions controls on its own, while the upwind states' significant contribution to that problem goes unabated. Therefore, EPA rejects commenter's contention that we must assume some additional level of emissions reduction in Colorado at Steps 1 or 2 beyond what is already included in our baseline modeling.

Regarding the contention that Oklahoma would likely already have an approvable SIP submission had the EPA honored the flexibilities it held out in the 2018 Tsirigotis Memo and acted on Oklahoma's SIP

submission by the statutory deadline, we disagree. The EPA engaged with the justification put forward by each state that attempted to provide a rationale to support the use of an alternative contribution threshold and found each one deficient and otherwise evaluated each of the arguments put forward by the states. *See* 87 FR at 9818-22 (evaluating each of ODEQ's arguments at Steps 1 and 2). In both EPA's 2011 and 2016-based modeling of 2023, Oklahoma was projected to have at least one linkage above 1 ppb and so reliance on the August 2018 memorandum to conclude Oklahoma had no linkages would not have been availing in any case. And EPA explained in the proposal why ODEQ's reliance on TCEQ's alternative modeling was not approvable. The EPA further addresses comments related to Oklahoma and the August 2018 memorandum in Section 7.4.

As commenter points out, the modeling relied upon by Oklahoma as well as the updated modeling conducted by the EPA does not identify any nonattainment or maintenance receptors in Oklahoma. However, if nonattainment or maintenance receptors were identified in Oklahoma, states upwind to Oklahoma would have been evaluated under the same 4-step interstate transport framework the EPA is applying to states in this action. Additionally, while the good neighbor provision seeks to ensure that upwind states eliminate their own "significant contribution" to nonattainment or maintenance receptors in downwind states, other provisions of the CAA impose requirements on downwind states with nonattainment areas. *See* CAA sections 181-185. Thus, the CAA ensures that the responsibility of addressing ozone nonattainment and maintenance issues does not rest solely with the downwind or the upwind states.

Further, the EPA disagrees that it is penalizing certain upwind states or that it requires upwind states to make up for the poor air quality in certain metropolitan areas in downwind states. While it is correct that emissions from in-state sources often contribute to attainment and maintenance problems at receptors, this does not address the question of whether there is also significant contribution from emissions sources or activities in upwind states. The good neighbor provision establishes a standard of contribution, not causation. *See* CAA section 110(a)(2)(D)(i)(I). The good neighbor provision does not make upwind states solely responsible for downwind states reaching attainment, but rather requires the elimination of their own significant contribution to the problem. States are obligated to eliminate their own ''significant contribution'' or ''interference'' with the ability of other states to attain or maintain the NAAQS. The court in *Wisconsin* explained that downwind jurisdictions often may need to rely on emissions reductions from upwind states to achieve attainment of the NAAQS. *Wisconsin*, 938 F.3d at 316–17. Such states would face increased regulatory burdens including the risk of bumping up to a higher nonattainment classification if attainment is not reached. *Maryland*, 958 F.3d at 1204. Therefore, a state is not excused from eliminating its significant contribution on the basis that emissions from other states or in-state emissions also contribute some amount of pollution to the same receptors to which the state is linked.

Finally, we note that we are also finalizing a disapproval of Texas' good neighbor SIP submission in this action. While this disapproval is not premised on a linkage to receptors in Oklahoma, Texas faces the prospect of possible additional emissions controls to address its good neighbor obligations resulting from this action just as Oklahoma does. Further, Texas has three nonattainment areas that failed to attain the 2015 ozone NAAQS by 2021 and that have been "bumped-up" to Moderate nonattainment, with associated emissions reduction obligations under CAA section 182 now applicable under that classification. *See* 87 FR 60897, 60899 (Oct. 7, 2022).

Comments regarding the March, August, and October 2018 memoranda are addressed in Sections V.B.2, V.B.7, and V.B.3 of the preamble, respectively, and further addressed in Sections 1.3, 7.4, and 6.4. Comments regarding the timing of our action on the SIP submissions are addressed in Section V.A. of the preamble. Comments on economic impacts are addressed in Section 11.6.

11.4 Transport Policy- Western State Ozone Regulation

Comments

Commenter: Nevada Division of Environmental Protection

Commenter ID: 33

Docket ID: EPA-R09-OAR-2022-0138

Comment:

EPA's July 22, 2022, proposal to elevate the non-attainment status of the Las Vegas Area to Moderate from Marginal non-attainment for the 2015 ozone NAAQs as a consequence of EPA's rejection of Clark County's analysis of exceptional event demonstrations due to wildfires and stratospheric ozone intrusion underscores the need for a more strategic approach. As regulatory agencies, our collective limited resources should be spent on addressing the most significant sources of ozone formation and transport.

While NDEP acknowledges that interstate ozone transport is a regional scale pollution problem that requires an integrated approach, the proposed FIP does not adequately consider differences between Eastern states and the West. The threshold of 1% modeled ozone contribution may be appropriate for Eastern states, where ozone transport is a problem involving many smaller contributors. However, in the West, there are considerable concerns that EPA has not addressed, including the following mentioned in the June 17, 2022, letter from the Western States Air Resources Council on the FIP proposal:

1. Significant impact of background, interstate, and international ozone.

2. Significant impact from wildfire smoke.

3. Reliability upon a complex array of multiple models and assumptions, whose performance and limitations for the western region have been raised for more than a decade.

4. Expansion of the Cross-State Air Pollution Rule (CSAPR) and its emission trading program spatially (i.e., by including western states) but not in a contiguous manner, and by including separate electrical interconnections, which may make EPA's proposed remedy for interstate transport from EGU sources less effective.

Commenter: PacifiCorp

Commenter ID: 38

Docket ID: EPA-R08-OAR-2022-0315

Comment:

The dual benefits for both Utah and Colorado nonattainment areas of reducing ozone in the Uinta Basin merit serious consideration by EPA. Resolving ozone issues in the Uinta Basin is likely to produce better results than installing controls on EGUs that are further away from the affected monitors. A recent academic study of ozone in the Uinta Basin found that ozone-contributing emissions could be significantly reduced if oil and gas industry equipment is electrified.

Commenter: Utah Division of Air Quality

Commenter ID: 47

Docket ID: EPA-R08-OAR-2022-0315

Comment:

[W]e note region-specific challenges in regulating ozone pollution, which underscore a need for stronger cooperation between Utah and EPA.

Regionally-Specific Ozone Challenges

The UDAQ would also like to note the exceptional challenges of reducing ozone in the Western United States. States in the West face significant and regionally-specific challenges in meeting ozone standards including elevated natural background ozone levels, increasing instances of wildfire, significant biogenic contributions, as well as the influence of internationally transported pollutants. Beyond these regionally-specific challenges, a significant portion of the emissions of Oxides of Nitrogen (NO_X) in Utah comes from mobile sources, an area over which the State has limited regulatory authority. These combined regionally-specific challenges paired with the fact that a substantial portion of emissions is under federal jurisdiction make successful ozone reductions exceedingly challenging, furthering the need for strong cooperative federalism and active collaboration between our respective agencies. The actions proposed by the EPA to deny our SIP to fulfill a specific agenda undermine the trust required for successful cooperative federalism, which only serves to further complicate the shared goals of reducing ozone concentrations and protecting public health.

Response

We respond to comments generally asserting the need for some different or alternative treatment of ozone transport in the western U.S. elsewhere in the record, including in Section V.C.3 of the preamble and in Section 4. We further respond to several specific comments here.

In response to commenters' assertion that emissions from the Uinta Basin are more impactful on downwind ozone concentrations in Colorado than emissions from EGUs in Utah, the EPA agrees with the commenter that the Uinta Basin ozone nonattainment area is geographically closer to the Colorado

nonattainment receptors to which Utah is linked than the EGUs (such as Hunter and Huntington). However, we disagree that not being the nearest source to a downwind receptor might justify the lack of evaluation of emissions sources with substantial and potentially cost-effective emissions reduction opportunities in a state found to contribute to downwind nonattainment or maintenance receptor(s). Additionally, the EPA disagrees that the Uinta Basin emissions reductions the Agency recently finalized are more likely to produce significant reductions at the Colorado receptors than would reductions from the Utah EGUs. 87 FR 75334 (December 8, 2022). As stated in the FIP for the Uintah and Ouray Indian Reservation, "the EPA has concluded that winter ozone levels in the Uinta Basin are most significantly influenced by VOC emissions." 87 FR 75345. The EPA has determined that the action "will result in large reductions of VOC emissions" and "may result in very small NO_x emission increases." 87 FR 75344, n. 63. These VOC reductions from the oil and gas sector are aimed to address high ozone levels during the winter in the Uinta Basin area which are associated with stagnant meteorological conditions that result in the build-up of local ozone precursor emissions and snow cover which enhances the reflectivity of solar radiation which, in turn, accelerates photochemical reactions of the trapped precursors to form locally high ozone concentrations. While the reductions of VOC emissions in the Uinta Basin will serve to address local winter ozone episodes, ozone production in the Uinta Basin in summer is expected to be NO_X limited, and VOC reductions are unlikely to have nearly as pronounced an impact on reducing summer ozone transport contributions at the Colorado receptors. As stated regarding past ozone interstate transport rulemakings, "EPA and others have long regarded NO_X to be the more significant ozone precursor in the context of interstate ozone transport," and "EPA's review of the data leads to the finding that, as proposed, a focus on NO_X emission reductions is appropriate for the purpose of addressing interstate ozone transport." *See* 86 FR at 23087.

Nevada DEP (NDEP) argues that a 1 percent threshold is not an appropriate screening threshold for western states but that it did not include in its infrastructure SIP submission support for a 1 ppb screening threshold because its modeled contribution to downwind nonattainment or maintenance receptors was below 1 percent of the NAAQS. We acknowledge that NDEP could not have foreseen a need to include a demonstration supporting a 1 ppb screening threshold based on the modeling results available at the time of its SIP submission. Nonetheless, as we stated in the proposed action to disapprove the Nevada infrastructure SIP, "following receipt and review of 49 good neighbor SIP submittals for the 2015 8-hour ozone NAAQS, EPA's experience has been that nearly every state that attempted to rely on a 1 ppb threshold did not provide sufficient information and analysis to support a determination that an alternative threshold was reasonable or appropriate for that state." 87 FR 31490. Further, based on the 2016v3 modeling for 2023, Nevada's contribution exceeds 1 ppb to nonattainment receptors in Davis and Salt Lake Counties in Utah.

In response to comments on the impact of wildfires, the EPA agrees that there are more and larger wildfires and, therefore potentially greater impacts of wildfire emissions on ozone in the West compared to the East. Where states have provided some information in their SIP submissions to suggest that atypical events related to wildfire incidents may have impacted the EPA modeling results, the EPA engaged with these arguments. For example, in the EPA's evaluation of California's evaluation of atypical events, the Agency did not necessarily disagree on the state Agency's findings.[153] However, the

[153] 87 FR 31443 at 31454.

EPA found that the removal of data associated with atypical events (e.g., wildfires), as identified by the state still resulted in projected violations at downwind receptors. In addition, the EPA removed all concurred exceptional events data from the base period design values when projecting these data to 2023. To the extent commenters suggest the EPA should or is even required to complete an analysis to identify the impact of atypical events associated with wildfires, consistent with the EPA's guidance on Exceptional Events, we note that the onus is not on the EPA to complete such an analysis. In fact, the guidance commenters suggest the EPA abide by indicates that any such analysis which identifies days impacted by an atypical event needs to be initiated and completed by the state, not the Agency.[154]

Regarding commenter's calls for a unique consideration when evaluating good neighbor obligations in the western U.S., the EPA notes that emissions from wildfires were included as part of the emissions inventories used in the air quality modeling. Moreover, in the source apportionment modeling quantified the impacts of fires (wild and prescribed) on ozone concentrations at individual monitoring sites nationwide. In a similar manner, the impacts from international anthropogenic emissions outside the EPA's 12 km modeling domain are transported into the U.S. as "boundary conditions" from global scale modeling, as described in the final rule Air Quality Modeling TSD.

In response to comments, we analyzed the contributions from fires[155] and from non-US sources (i.e., anthropogenic emissions in Canada and Mexico as well as anthropogenic and natural sources outside the U.S.) to quantify and compare the contributions from these types of sources at receptors in the eastern versus western U.S. Table 11-1 below provides the contributions from fires and from non-U.S. sources on average for each receptor area.[156] In this table the receptor areas are listed based on the magnitude of the contribution from fires. Overall, the contribution from fires declines progressively from west to east. The data indicate that each receptor area appears to fall into one of three geographic bins, based on the magnitude of the contributions. In the farthest western areas (i.e., California Tribal Lands, Yuma, and Salt Lake City) fires contribute approximately 3 ppb. In the areas that include the receptors in Texas, Las Cruces/Carlsbad/Hobbs/El Paso, and Denver the contributions from fires are about 2 ppb lower than in the far western areas at approximately 1 ppb. At receptors in Chicago, Coastal Wisconsin, and Coastal Connecticut, the contributions from fires are an order of magnitude lower than the contributions from fires at the receptors in the far western areas.

Examining the contributions from non-U.S. sources indicates a clear distinction between the east and the west. For example, in western areas (i.e., California Tribal Lands, Denver, Las Cruces/Carlsbad/ Hobbs/El Paso, Salt Lake City, and Yuma) the contribution from non-U.S. sources ranges from approximately 40 ppb to 55 ppb. In contrast, in receptor areas in the East (i.e., Dallas, Houston/Brazoria/Galveston, Chicago, Coastal Wisconsin, and Coastal Connecticut) the contribution from non-US sources ranges from approximately 16 ppb to 22 ppb.

This analysis demonstrates that the EPA's modeling already captures the geographical differences between the west and the east in terms of the contributions from fires and non-U.S. sources. However,

[154] 81 FR 68216 (October 2016), Treatment of Data Influenced by Exceptional Events.
[155] In the source apportionment modeling the fires source tag includes emissions from fires in the U.S. as well as fires from the portions of Canada and Mexico that are inside the EPA's 12 km modeling domain.
[156] The data in this table are based on the top 10-day average contribution metric which is calculated using the same method the EPA uses to calculate this metric for upwind states.

those differences supply no inherent justification why the anthropogenic emissions of western states should be ignored or discounted in evaluating their obligations under the good neighbor provision. In view of these results, the EPA disagrees with the commenter's request that the EPA should treat western states differently than eastern states when evaluating ozone transport.

Table 11-1

Receptor Area	Fires	Non-U.S. Sources
Yuma	3.1	54.0
Salt Lake City	2.9	52.4
California Tribal Lands	2.9	40.9
Denver	1.3	44.1
Las Cruces/Carlsbad/ Hobbs/El Paso	1.0	52.7
Houston/Brazoria/ Galveston	1.0	22.4
Dallas	0.9	20.7
Coastal Connecticut	0.3	21.6
Coastal Wisconsin	0.2	16.5
Chicago	0.2	19.6

The EPA has made a number of updates and improvements to the 2016v2 modeling in response to comments and we find, as discussed in Section 4.2 (Model Performance), that 2016v3 achieves better modeling performance and can be considered reliable to inform air quality and contribution analysis at Step 1 and Step 2, including in the western regions. See Section 4.2 (Model Performance) for further discussion.

Nevada's concern with the expansion of the CSAPR trading program for power plants is beyond the scope of this rulemaking, which is focused on the adequacy of state SIP submissions in addressing the good neighbor provisions for the 2015 ozone NAAQS. Other issues raised by these comments are addressed in Section V.C.1. of the preamble (mobile sources), as well as Sections 10.6 (Comments Alleging "Pretext" or Intent to Require Generation Shifting), 10.6 (Allegations that Disapprovals of Western State SIP Submissions was Predetermined), and 11.8 (Mobile Source Emissions).

11.5 International Contributions

Comment

Commenter: Utah Associated Municipal Power System

Commenter ID: 46

Docket ID: EPA-R08-OAR-2022-0315

Comment:

The Proposed Rule Overlooks Factors Specific to Utah and the West

Inclusion of Utah and other western states in the Proposed Rule is inappropriate and fails to consider specific geographic factors unique to western states. EPA's analysis of Utah's upwind responsibility for downwind nonattainment under the Proposed Rule did not appropriately account for the impacts on downwind receptors of emissions from international and non-anthropogenic sources, emission reductions in the downwind state (Colorado), and emission reductions being achieved in Utah.

Response

See Section V.C.2. of the preamble for discussion of international contributions. The modeling accounts for all sources of contributions, including international and biogenic.

11.6 Economic Impacts

Comments

Commenter: Air Pollution Control Program, Missouri Department of Natural Resources

Commenter ID: 01

Docket ID: EPA-R07-OAR-2021-0851

Comment:

Every single state that is contributing above the 1 percent threshold (except for Oregon, as noted previously) is having their SIP disapproved, and the proposed FIP will control and impose unnegotiable costs on citizens and sources in those states.

Commenter: City Utilities of Springfield, Missouri

Commenter ID: 13

Docket ID: EPA-R07-OAR-2021-0851

Comment:

Missouri has proven to be a *Good Neighbor*, and the utilities and the citizens of Missouri have more than paid for the ambient air quality improvements realized in Missouri and in downwind states. These reductions are no small task for the customer-owners in the Springfield-Greene County area. It is inappropriate to require additional costs and economic hardships for the rate payers of CU when we

have consistently been a good actor by operating control equipment and our area has met the applicable ozone NAAQS.

Commenter: Evergy, Inc.

Commenter ID: 16

Docket ID: EPA-R07-OAR-2021-0851

Comment:

Further, by establishing a link between Missouri and these downwind receptors, EPA is forcing immense compliance costs onto Missouri customers.

Commenter: Mississippi Department of Environmental Quality

Commenter ID: 32

Docket ID: EPA-R04-OAR-2021-0841

Comment:

Disapproving Mississippi's iSIP without allowing the state adequate time to address any EPA concerns prior to imposing the proposed draconian FIP will have economic effects that disproportionally affect lower-income, disadvantaged, and minority Mississippians. In the current economic conditions (unchecked inflation, increased reliance on imported energy sources, eastern European conflicts, etc.), it is imprudent to apply such extreme and unnecessary federal restrictions on energy production and transmission, which will inevitably cause costs of essential goods and services to rise.

Commenter: PacifiCorp

Commenter ID: 38

Docket ID: EPA-R08-OAR-2022-0315

Comment:

The Combined Effect of EPA’s Proposed Disapproval and Proposed FIP Will Cause Major Economic and Reliability Impacts for the Western United States.

Finalization of the Proposed Disapproval and subsequent imposition of the Proposed FIP will jeopardize energy supply and reliability in the West and cause major economic impacts. The Proposed Disapproval means electric generating units (“EGUs”) in Utah will be subject to the selective catalytic reduction or SCR-forcing provisions of the Proposed FIP. As outlined in comments on the Proposed FIP by the state of Utah, other western states, industry, and the BHE Comments, it is simply not possible to either install

the costly SCR equipment or retire and replace the energy generated and vital ancillary services provided by so many units subject to the regulatory constraints and timelines of the Proposed FIP.

[…]

EPA's One-Size-Fits-All Approach Does a Disservice to Utah's Coal Communities.

The Proposed Disapproval does not give adequate consideration to the impacts the Disapproval will have on the communities surrounding the Utah Units due to the forced acceleration of coal-unit retirements that will result from the Proposed FIP. President Biden has committed that U.S. coal communities will experience a just transition as the energy economy changes: "We're never going to forget the men and women who dug the coal and built the nation. We're going to do right by them and make sure they have opportunities to keep building the nation . . ." The Proposed Disapproval is inconsistent with these principles because it will set in motion an inflexible regulatory scheme to be implemented on an unrealistic timeline with disproportionate and adverse impacts for affected communities. Under its own guidelines, EPA must meaningfully engage with affected communities to clearly understand and address the barriers to a just transition that will result from the Proposed Disapproval.

The Utah Units are very important to the local economies surrounding the power plants. The Hunter plant directly employs approximately 186 people, and the Huntington plant employs approximately 136, and thousands of other people are employed by industries that support the Utah Units. Emery and Carbon counties rely on the plants for a significant part of their tax and employment base. For example, PacifiCorp paid $22.6 million in property taxes to Emery County for 2021. This represented almost 70%, or more than two-thirds, of the county's total property tax revenues. These revenues provide funding for the county law enforcement agency, the county governmental operations, and the Emery County School District.

A new Kem Gardner study on Utah's Coal Country ("Coal Country Study") identifies Carbon and Emery counties as among the least economically diverse counties in the state. There are approximately 4,000 jobs in Emery and Carbon counties in mining and other industry services. Wages for plant workers are higher than the overall industrial workforce, and closure of a Utah Unit would have a significant impact on wages earned in the surrounding communities. Because the communities currently rely so heavily on the Utah Units and associated mining and industry services, it is especially important to balance local interests, efficiencies, economics, and impacts to people while pursuing strategies to decrease environmental impacts and grow a cleaner power system.

It is estimated that the early retirement of even a single unit at the Hunter plant would result in an approximate 20-25% employee reduction. Beyond the loss of plant jobs, any unit retirement would have broader impacts to associated industry jobs serving the plants and the local community.

The Coal Country Study explains, "These two counties form a regional economy, with a shared commuter shed, shared industries, and consumer spending patterns. Together, these counties face challenges with changing economic circumstances from declining coal production and the future closures of power plants." The report finds time is a critical factor to diversify the local economies and address the expected employment declines in the natural resource/coal sector. Both Carbon and Emery

County have experienced population loss since 2010, a significant portion of which coincided with the retirement of PacifiCorp's Carbon power plant and the closure of its Deer Creek mine in 2015.

The welfare of the affected communities, which is intertwined with and dependent upon the presence of the Utah Units, is an important factor EPA must consider when weighing the potential impact of the Proposed Disapproval.

Commenter: Utah Associated Municipal Power System

Commenter ID: 46

Docket ID: EPA-R08-OAR-2022-0315

Comment:

Requiring SCR will Adversely Impact UAMPS' Participating Members and Jeopardize Reliability

UAMPS opposes any regulatory requirement to install SCR on Hunter Unit 2, which would constitute overcontrol and adversely impact UAMPS and its members. EPA's required timeline of 36 months to install SCR is patently unreasonable and not feasible. In addition to owning interests in or directly operating power plants and other sources of electrical power, UAMPS and its members regularly purchase power off the grid, and are, therefore, sensitive to market and regulatory forces that impact electricity affordability and reliability. Western power markets are already being tested by retiring power generation facilities; premature closures caused by the Proposed Rule will only exacerbate the western power markets, increase wholesale prices, and result in increased costs to end-use customers within UAMPS' member communities. With an undivided 14.582% ownership interest in Hunter Unit 2, UAMPS and its participating members could face significant adverse economic impacts from a regulatory requirement for PacifiCorp to install SCR on Hunter Unit 2. Further, the Proposed Rule will likely cause early coal-unit retirements that will undermine the reliability of the bulk electric system and adversely impact affected coal communities as well as customers and electricity consumers in the West, significant factors and impacts which EPA failed to take into account.

Response

The EPA is sensitive to commenter's concerns regarding the economic impact of the EPA's regulatory actions. However, these comments do not change the EPA's analysis and conclusion that the SIP submissions being disapproved in this action cannot be found to satisfy the requirements of CAA section 110(a)(2)(D)(i)(I). This final action to disapprove SIP submissions does not require any action from states or emissions sources and therefore does not impose any additional costs or economic hardships on sources or communities. Comments regarding economic and other impacts of the proposed FIP action (87 FR 20036 (April 6, 2022) (Docket ID No. EPA-HQ-OAR-2021-0668)) are outside the scope of this rulemaking.

Comments on the topic of SIP/FIP timing are addressed in Section V.A of the preamble and Section 1.1 of this RTC document. Comments on EPA's proposal in a separate rulemaking to not find error in its

previous approval of Oregon's good neighbor SIP for the 2015 ozone NAAQS is outside the scope of this action.

11.7 Environmental Justice

Comments

Commenter: California Air Resources Board

Commenter ID: 12

Docket ID: EPA-R09-OAR-2022-0394

Comment:

In summary, CARB urges the federal government to help achieve emissions reductions from sources subject to federal controls that significantly impact environmental justice communities and the State's ability to reach air quality Standards. California would like to work alongside the federal government as we all strive for cleaner air and regulatory attainment for all areas. CARB appreciates the opportunity to work with EPA to submit any additional information necessary to support the approval of the "interstate transport" portion of the California 2018 Infrastructure SIP.

Commenter: Midwest Ozone Group

Commenter ID: 30

Docket ID: EPA-R02-OAR-2021-0673, EPA-R03-OAR-2021-0872, EPA-R03-OAR-2021-0873, EPA-R04-OAR-2021-0841, EPA-R05-OAR-2022-0006, EPA-R06-OAR-2021-0801, EPA-R07-OAR-2021-0851, EPA-R08-OAR-2022-0315, EPA-R09-OAR-2022-0394, EPA-R09-OAR-2022-0138

Comment:

EPA is also obligated pursuant to Executive Orders 12898 (Feb. 11, 1994) and 14008 (Jan. 27, 2021), to ensure its actions support the principal of environmental justice, particularly in energy communities. Environmental justice is the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income, with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies.

Response

This action disapproves SIP submissions from states under CAA section 110(a)(2)(D)(i)(I) for the 2015 ozone NAAQS. EPA does not impose emissions reductions in a SIP disapproval. As articulated in the final action, the EPA is determining that certain SIPs do not meet certain minimum requirements, and the

EPA is disapproving those SIPs. Specifically, this action disapproves certain SIP submissions as not containing the necessary provisions to satisfy good neighbor requirements under CAA section 110(a)(2)(D)(i)(I). In a wholly separate regulatory action, the EPA has proposed to address the CAA "good neighbor" requirements under section 110(a)(2)(D)(i)(I) for the 2015 ozone NAAQS for these states under its CAA section 110(c) FIP authority. The EPA acknowledges the importance of giving consideration to the impact of the EPA's actions on environmental justice communities. Although separate from this action, we note that the EPA conducted an environmental justice analysis of the EPA's proposed interstate transport FIP for the 2015 ozone NAAQS. *See* 87 FR 20036-20155 (April 6, 2022).

Executive Orders 12898 and 14008 by their own terms do not create a right to judicial review (Executive Order 12898 section 6-609 and Executive Order 14008 section 301(c)). *See Sur Contra La Contaminacion v. EPA*, 202 F.3d 443, 449-50 (1st Cir. 2000) (judicial review is not available under EO 12898); *Air Transp. Ass'n of Am. v. FAA*, 169 F.3d 1, 8-9 (D.C. Cir. 1999) (holding that a claim under another executive order with nearly identical judicial review language was not judicially reviewable and that petitioner's claim that the action at issue was arbitrary and capricious because of the Agency's alleged violation of the order was "nothing more than an indirect—and impermissible—attempt to enforce private rights under the order").

11.8 Mobile Sources Emissions

Comments

Commenter: California Air Resources Board

Commenter ID: 12

Docket ID: EPA-R09-OAR-2022-0394

Comment:

Emissions from primarily-federally regulated sources are a growing proportion of emissions in California. CARB welcomes assistance and dialogue from EPA and the U.S. government in addressing this challenge. As an example, statewide emissions from primarily federally regulated sources (aircraft, trains, ocean-going vessels, interstate trucks, and preempted off-road equipment) are projected to be the source of more than 45 percent, or approximately 450 tons per day, of anthropogenic NO_X emissions in 2026 (CEPAM2022 v1.01, including ocean going vessels out to 100 nautical miles from shore). Without federal action, by 2030, NO_X emissions from these primarily-federally regulated sources will be double California-regulated mobile sources. Therefore, it is imperative that the federal government act decisively to reduce emissions from air pollution sources under its control in California, as these sources contribute significantly to California's nonattainment challenges. Primarily-federally regulated mobile source emission reduction actions are critically needed alongside California's aggressive and effective control of sources under our authority.

In summary, CARB urges the federal government to help achieve emissions reductions from sources subject to federal control that significantly impact environmental justice communities and the State's ability to reach air quality standards.

Commenter: Midwest Ozone Group

Commenter ID: 30

Docket ID: EPA-R02-OAR-2021-0673, EPA-R03-OAR-2021-0872, EPA-R03-OAR-2021-0873, EPA-R04-OAR-2021-0841, EPA-R05-OAR-2022-0006, EPA-R06-OAR-2021-0801, EPA-R07-OAR-2021-0851

Comment:

Mobile sources are the primary cause of remaining air quality problems.

Available source apportionment data clearly shows that the most significant contributor of ozone in the East is mobile sources. Even EPA recognized that mobile and other local sources are the likely cause of high ozone in Connecticut. In a May 14, 2018, presentation titled "Analysis of Ozone Trends in the East in Relation to Interstate Transport," Norm Possiel of the EPA Office of Air Quality Planning and Standards showed the following slide regarding high ozone in costal Connecticut:

[slide in full comment]

More recently, in a November 9, 2021, presentation to the Ozone Transport Commission (OTC), Dr. Jeff Underhill, Chair of the OTC Modeling Committee, showed hourly source apportionment results that demonstrate that onroad and nonroad emissions dominate ozone formation in the modeled simulation at the Connecticut monitor example provided.

Alpine Geophysics, on behalf of MOG, prepared a summary of source apportionment data in March of 2022 that documents recent ozone source apportionment modeling and associated results of the EPA 2016v2 modeling platform and associated 2023fj projections. For each monitor in the modeling domain, Alpine produced a standard set of products representing the relative contribution of region and category emissions to projected 2023 ozone concentrations.

An example of the relative contribution of EGU and non-EGU point source emissions to the downwind receptor (90099002) at New Haven, Connecticut is presented in Figure 2. Note the small contribution of both EGU and non-EGU point source emissions (6 percent) toward the total contribution of emissions forming ozone in the 2023 modeled simulation.

[Figure 2 available in full comment]

Figure 2. Relative contribution of emissions (by percent) from major source sectors to modeled ozone concentrations in 2023 at the New Haven, Connecticut monitor 90099002.

A similar level of emissions from EGU and non-EGU NOx contribution is seen in Figure 3 at the Kenosha, Wisconsin nonattainment monitor (550590019), where almost 43% of NOx contributions is from mobile and area source sectors.

[Figure 3 available in full comment]

Figure 3**.** Relative contribution of emissions (by percent) from major source sectors to modeled ozone concentrations in 2023 at the Kenosha, Wisconsin monitor 550590019.

Based on these findings, it is questionable whether additional upwind regional ozone season NOx reductions from EGUs or non-EGU point sources would have the intended impact at downwind receptors compared to other, higher contributing, and local, source sectors.

As can easily be seen in the data, the contribution of nearby sources, and especially mobile sources, dwarfs the contribution of upwind state point sources. The data for all monitors in the Northeast are similar. Mobile sources are the dominant source of ozone in the Northeast now and are projected to continue to dominate in 2023.

The EPA Strategic Plan at page 43 states that "EPA will collect and evaluate mobile source emission data to help guide future program priorities related to reducing criteria pollutant and greenhouse gas emissions from light-duty cars and trucks, heavy-duty trucks and buses, nonroad engines and equipment, and from the fuels that power these engines. The Agency will develop the next round of multi-pollutant emission standards for light-duty and highway heavy-duty vehicles, which will improve air quality and reduce pollution near roads and other areas of high truck activity, such as warehouses and ports. EPA will also continue to work to ensure that Clean Air Act requirements are met for new transportation projects with heavy-duty diesel traffic, such that they do not worsen air quality near communities with environmental justice concerns. The Agency will address air quality concerns in these communities through implementing regulations, developing improved air quality models and mitigation measures, and collaborating with a broad range FY 2022-2026 EPA Strategic Plan – Objective 4.1 44 of stakeholders — including state air quality agencies and communities with environmental justice concerns — to develop targeted, sector-based, and place-based strategies for diesel fleets (including school buses, ports, and other goods movement facilities). EPA will support and oversee projects for the replacement of existing school buses with low- or zero-emission school buses funded under the Bipartisan Infrastructure Law, which will be implemented in alignment with Justice."

> MOG notes that EPA plans to deal with mobile sources in the future and has initiated regulatory work in this regard as noted in the EPA Strategic Plan. Specifically, EPA has finalized "Late Model Year Light-Duty Vehicle Greenhouse Gas Emission Standards." 86 Fed. Reg. 74,434 (December 30, 2021). EPAS has also proposed "Control of Air Pollution From New Motor Vehicles: Heavy-Duty Engine and Vehicle Standards," 87 Fed. Reg. 17,414 (March 28, 2022). EPA revised the GHG emission standards for passenger cars and light trucks under the authority provided by section 202(a) of the CAA. This section is found within the Chapter 85 of the U.S. Code titled, "Air Pollution Prevention and Control" and is incorporated into the chapter reference found within the state implementation plan obligations found under Section 110(a)(2), Each implementation plan submitted by a State under **this chapter** shall be adopted by the State after reasonable notice and public hearing. Each such plan shall – (A) include enforceable emission limitations and other control measures, means, or techniques (including economic incentives such as fees, marketable permits, and auctions of emissions rights), as well as schedules and timetables for compliance, as may be necessary or appropriate to meet the applicable requirements of **this chapter**; (Emphasis added).

In summary, nonattainment plans are required to meet the applicable requirements of the Clean Air Act also described as Chapter 85 of Title 42 of the U. S. Code. Approvable NAAQS implementation plans are required to incorporate relevant sections of the Clean Air Act, to include the programs promulgated under Subchapter II – Emission Standards for Moving Sources such as the GHG emissions standards for light-duty vehicles for 2023 and later model years. The air quality impacts from this rule will have tailpipe emissions are measurable and warrant incorporation into the overall calculation of emissions reductions from CAA programs that will improve ozone air quality. 86 Fed. Reg. 74,490.

The proposed Heavy-Duty Engine and Vehicle Standards rule is anticipated to "reduce air pollution from highway heavy-duty vehicles and engines, including ozone, particulate matter, and greenhouse gases." 87 Fed. Reg. 17.414. EPA expects the standards in the proposed Options 1 and 2 to result in meaningful reductions in emissions of NOx, VOC, CO and PM2.5. 87 Fed. Reg. 17,581. Also, EPA predicts, "The proposal would reduce 8-hour ozone design values 26 significantly in 2045." Id. at 17,582. These observations support the known impact of mobile sources on ozone ambient air quality.

As stated earlier in these comments, aligning the obligations to control significant sources of ozone precursors with the upwind and downwind ozone attainment obligations is the only path that leads to successful state implementation plan development as guided by the Clean Air Act. EPA's failure to recognize the impact of the timing of mobile source controls on implementation of the Good Neighbor provisions and the disapprovals being proposed is arbitrary and capricious and exceeds EPA's authority under the CAA.

Commenter: Midwest Ozone Group

Commenter ID: 30

Docket ID: EPA-R08-OAR-2022-0315, EPA-R09-OAR-2022-0394, EPA-R09-OAR-2022-0138

Comment:

Available source apportionment data clearly shows that the most significant contributor of ozone is mobile sources.

Commenter: Nevada Division of Environmental Protection

Commenter ID: 33

Docket ID: EPA-R09-OAR-2022-0138

Comment:

While EPA has proposed to disapprove Nevada's 2018 iSIP, it has not clearly demonstrated that the proposed FIP controls on Nevada stationary sources will achieve meaningful reductions in ozone concentrations in Nevada or neighboring states. The proposed FIP fails to consider and address that in Nevada, mobile sources, not stationary sources, emit the plurality of nitrogen oxide precursors to ozone formation.

Commenter: New Jersey Department of Environmental Protection

Commenter ID: 34

Docket ID: EPA-R02-OAR-2021-0673

Comment:

EPA states that an approvable GN SIP revision must demonstrate enforceable emission control measures that achieve at least the same amount of emission reductions achieved by the FIP. With this in mind, New Jersey would like to note that its 2017 NOx annual emissions inventory indicates that 79% of the state's emissions are from mobile sources (onroad and nonroad), while EGUs make up a mere 3%, and non-EGU point sources make up 14%. This breakdown of New Jersey's NOx emissions inventory reflects not only the extensive and various control strategies implemented in New Jersey but also that EGUs and non-EGU point sources located in New Jersey are already well controlled. Considering the large contribution of NOx from onroad and nonroad mobile sources in New Jersey, it is unclear how New Jersey would demonstrate a significant reduction from the sources that make up such a small fraction of the state's NOx emissions. Additionally, New Jersey's Board of Public Utilities recently approved a plan to shut down the two-remaining coal-fired power plants in the state by the end of May 2022. Therefore, due to the large portion of mobile source emissions compared to stationary sources, and the limited authority for states to implement emission reduction strategies for mobile sources, EPA should advance measures to reduce mobile source emissions as soon as practicable including but not limited emission reductions for new medium and heavy-duty vehicles, new light duty passenger vehicles, and widescale electrification of new onroad and nonroad mobile sources.

EPA also states that New Jersey's GN SIP failed to "contain the necessary provisions to eliminate emissions in amounts that will contribute significantly to nonattainment or interfere with maintenance of the NAAQS in any other state." As noted in New Jersey's 2008 75 ppb 8- Hour Ozone Attainment Demonstration Northern New Jersey-New York-Connecticut Nonattainment Area, the 2023 Ozone Transport Commission (OTC) source apportionment modeling, using the OTC 2011 12km SIP modeling platform predicted that New Jersey's mobile sector contributed 70% of New Jersey's overall contribution to ozone nonattainment while EGUs were merely 5%. These percentages are likely to be similar using EPA's recent 2016 modeling platform that was used to support the latest 2015 Ozone FIP, which predicts New Jersey's overall contribution to ozone nonattainment in Connecticut to be approximately 9 ppb. Therefore, it is estimated that 6.3 ppb of New Jersey's transported ozone is attributed to mobile sources and less than one-half ppb to EGUs. New Jersey has addressed the sources it can control to reduce their significant contribution to downwind nonattainment. Additionally, New Jersey continues to address emissions from mobile sources to the extent that state action is not pre-empted by the Clean Air Act. New Jersey has adopted the more-stringent California new vehicle rules for light-duty vehicles (Low Emission Vehicle and Zero Emission Vehicle programs) and medium/heavy duty vehicles (Advanced Clean Trucks) to ensure that the lowest emitting vehicles in the nation are sold in New Jersey, including increasing numbers of zero emission vehicles. Other states have not made the same commitment. New Jersey also has some of the most stringent rules in the country for vehicle idling and heavy-duty vehicle inspection and maintenance using on-board diagnostics (OBD) technology. EPA should recognize New Jersey for these actions by approving New Jersey's GN SIP.

Commenter: Ohio Utilities and Generators Group

Commenter ID: 36

Docket ID: EPA-R05-OAR-2022-0006

Comment:

Ohio developed its proposed SIP consistent with the Act and the applicable guidance. US EPA's proposed disapproval is inconsistent with its own guidance. The purported modeling upon which US EPA relies does not accurately assess the impact of mobile sources in the nonattainment areas and arbitrarily attributes contributions from Ohio's (& other states) EGU sector. In short, the SIP proposed by Ohio EPA is appropriate and should be approved by US EPA.

Commenter: PacifiCorp

Commenter ID: 38

Docket ID: EPA-R08-OAR-2022-0315

Comment:

Utah's Uinta Basin borders Colorado and is closer to the affected Colorado monitors than the referenced EGUs. The Uinta Basin is currently nonattainment for ozone and significant reductions are and will be made to address its own ozone concerns. These Uinta Basin-based reductions are more likely to produce significant reductions at the impacted monitors in Colorado than EPA's EGU preferences. Recent analysis using data from EPA's 2016v2 modeling platform shows that Utah and Wyoming EGUs contribute less than 0.4% to the Colorado nonattainment monitors. Mobile sources and oil and gas sources are greater contributors (although still relatively small compared to background and natural sources).

Commenter: West Virginia Department of Environmental Protection

Commenter ID: 49

Docket ID: EPA-R03-OAR-2021-0873

Comment:

DAQ contends 2015 8-hour Ozone NAAQS design values at downwind monitors in nonattainment or maintenance areas will continue to respectively be above or near the standard whilst the instruments are adjacent to and generally downwind of major interstate highway arteries, including Interstate 95 and its various spurs and loops. Local mobile NOx sources have always been and continue to be the primary driver of nonattainment and maintenance issues in the areas of concern. This was illustrated quite clearly on page I-6 of Appendix I of the WV 2015 Ozone Good Neighbor SIP. DAQ maintains that should all upwind stationary sources of NOx cease to operate, then these monitors would continue to report much higher than background levels of ground-level ozone, with many in nonattainment. It would be considerably more prudent for EPA to encourage downwind states with nonattainment and

maintenance areas to implement tighter emissions limits or increased tolling for mobile sources located within their respective jurisdictions.

Response

The EPA responds generally to comments regarding mobile source emissions in Section V.C.1 of the preamble. Here, the EPA addresses comments raising arguments pertinent to specific states.

In response to Midwest Ozone Group, the EPA addressed the cited May 14, 2018, presentation at proposal. 87 FR 9859 (February 22, 2022); 87 FR 9873 (February 22, 2022). Substantive comments on mobile source rulemakings are outside the scope of this action.

The EPA describes the emissions inventories of mobile sources in the preamble in Section III.A.3. Additional information about emissions inventories is available in the 2016v3 Emissions Modeling TSD. The EPA addresses comments on methodology for determining future year contribution in Section 7.1 and comments related to mobile source emissions inventories in Section 3.2. Ohio Utilities and Generators Group did not specify which EPA guidance it referenced with sufficient specificity for the EPA to be able to respond, but the EPA responded to other comments related to guidance in Sections 1.2, 6.4, and 7.4 of this RTC document.

California

In response to one comment (CARB) regarding emissions in the state of California from sources in sectors regulated by the federal government, the EPA disagrees that emissions from mobile sources are entirely beyond the regulatory reach of the state. To the extent that CARB is suggesting that the EPA focus on reducing emissions from mobile sources of air pollution in our proposed FIP, we note that comments on the proposed FIP are outside the scope of this action on the California transport SIP submission. As previously stated, we recognize that mobile sources are important contributors to emissions of criteria pollutants and greenhouse gasses. As one commenter points out, the EPA has finalized a rulemaking to reduce emissions of several air pollutants, including NO_X, from heavy-duty vehicles and engines starting in model year 2027[157]. The rule is consistent with President Biden's Executive Order 14037, "Strengthening American Leadership in Clean Cars and Trucks,"[158] and helps ensure that the heavy-duty vehicles and engines that drive American commerce are as clean as possible while charting a path to advance zero-emission vehicles in the heavy-duty fleet.

The Final Rule for control of air pollution from heavy-duty engine and vehicle standards targets emissions reductions beginning in the year 2027. Therefore, these emissions reductions will not begin to take place until after 2023, the relevant analytic year used in this action and is therefore not included in the modeling for this action

[157] On December 20, 2022, the EPA finalized more stringent emissions standards for NO_X and other pollutants from heavy-duty vehicles and engines, beginning with model year 2027. *See https://www.epa.gov/regulations-emissions-vehicles-and-engines/final-rule-and-related-materials-control-air-pollution*. EPA is also developing new multi-pollutant standards for light- and medium-duty vehicles as well as options to address pollution from locomotives.

[158] 86 FR 43583 (August 10, 2021).

New Jersey

One commenter argues that New Jersey's SIP submissions should be approved because, according to the commenter, New Jersey's sources, including mobile sources, are already strongly controlled.

The EPA acknowledges New Jersey has many emissions controls in place, however, the EPA does not view New Jersey's SIP submission as supporting a conclusion that the state has satisfied the requirements of CAA section 110(a)(2)(D)(i)(I) for the 2015 ozone NAAQS. The EPA proposed to disapprove New Jersey's transport SIP submission in part because the state did not evaluate the availability of additional emissions controls to improve downwind air quality at nonattainment and/or maintenance receptors at Step 3, even though New Jersey emissions are linked to receptors at Step 2 as indicated by both the state and the EPA's air quality modeling. The comment does not change the EPA's assessment of the SIP submission. The EPA is finalizing the disapproval of New Jersey's SIP submission for the reasons in the proposal (87 FR 9484, Feb. 22, 2022) and in this final rule.

The commenter also indicated there are more NO_X emissions from mobile sources than stationary sources in New Jersey, and so it is unclear to the commenter what else New Jersey can do. The EPA recognizes that mobile sources represent a large portion of NO_X emissions in New Jersey and would be expected to have a large impact on downwind nonattainment and maintenance receptors in proportion to other sectors. However, simply noting that mobile source emissions are a large portion of New Jersey's NO_X emissions, noting they represent a large portion of New Jersey's contribution to downwind nonattainment and maintenance receptors, and listing existing controls, does not, as an analytical matter, support a conclusion that all necessary emission reductions have been sufficiently achieved to meet the state's interstate transport obligations. Mobile source emissions are among the types of anthropogenic "emissions activity," CAA section 110(a)(2)(D)(i), assigned to states at Step 2. Thus, the EPA includes mobile source emissions in the 2016v2 and 2016v3 modeling to identify state linkages at Steps 1 and 2. For example, New Jersey's adoption of California's LEV criteria pollutant regulations for light-duty vehicles was reflected in the emissions inventory. MOVES3 harmonizes the emission rate standards with CA LEV for ozone precursors in all states starting with model year 2017. ZEV programs are not explicitly modeled, but the light-duty EV population as of 2020 was reflected and grown to the future years using AEO 2022 trends. Both the 2016v2 and 2016v3 modeling indicated that New Jersey continues to be linked at Step 2 of the 4-step interstate transport framework.

Lastly, the commenter seems to be mischaracterizing statements the EPA made in the proposed FIP, separate from this rulemaking, regarding SIP submissions to replace that FIP in the event that a FIP is finalized. The EPA views comments on the proposed FIP to be outside the scope of this rulemaking. If, instead, the commenter is characterizing the EPA's disapproval of New Jersey's good neighbor SIP submissions for the 2008 ozone NAAQS, the EPA clarifies that comparison to a FIP in that action was limited to the Revised CSAPR Update, which was finalized before the EPA's action on the SIP submission and resolved good neighbor obligations for the 2008 ozone NAAQS for New Jersey. 87 FR 55692 (September 12, 2022).

Utah

Regarding the comment that mobile sources and oil and gas sources are greater contributors to Colorado ozone nonattainment than Utah and Wyoming EGUs, this does not answer the question

regarding the adequacy of the Utah's or Wyoming's SIP submissions (though we are not taking final action on Wyoming here), because both states have mobile and oil and gas sources themselves that are "sources or other type of emissions activity" under CAA section 110(a)(2)(D)(i). Utah's transport SIP submission did not include a sufficient examination or a technical justification that could support the conclusion that the state has no good neighbor obligations for the 2015 8-hour ozone NAAQS. As such, the EPA must disapprove the Utah SIP submission for failing to satisfy the statutory requirements of CAA section 110(a)(2)(D)(i)(I). Response to comments regarding oil and gas emissions reductions in the Uinta Basin are addressed in Section 11.4 (Transport Policy-Western State Ozone Regulation).

West Virginia

As stated in the NPRM, the "good neighbor" or "interstate transport" requirements of the CAA requires that each state's SIP contain adequate provisions to prohibit emissions from within the state from significantly contributing to nonattainment or interfering with maintenance of the NAAQS in other states. The question therefore is not whether other sources, such as mobile sources, also contribute to high ozone readings in downwind areas. The question is whether sources in West Virginia are contributing significantly to multiple downwind receptors. The EPA considers a state to be "linked" if it has a contribution value equal to or exceeding the threshold of 1 percent of the NAAQS (i.e., 0.70 parts per billion (ppb) for the 2015 8-hour ozone NAAQS) to a downwind receptor. The EPA's 2016v2 modeling shows that sources in West Virginia are linked to ozone nonattainment and/or maintenance receptors in certain downwind areas in amounts greater than that threshold. As WVDEP mentioned in their comment, shutting down all point sources in the state may not result in the affected receptors achieving attainment, but that is not the relevant standard under the good neighbor provision. Also, the EPA does not disagree that emissions from mobile sources are an issue in ozone nonattainment areas, separate from interstate transport. The EPA has been regulating mobile source emissions since it was established as a federal agency in 1970, and all mobile source sectors are currently subject to NOX emissions standards. However, mobile source emissions remain, and are included in the identification of receptors at Step 1 and state-level contribution at Step 2. West Virginia's good neighbor SIP submission did not show that emissions from West Virginia sources were not contributing significantly to, or interfering with maintenance by, the NAAQS in certain downwind states and therefore this element of the SIP submission did not meet the requirements of CAA section 110(a)(2)(D)(i)(I).

11.9 Typographical Concerns

Comment

Commenter: Oklahoma Department of Environmental Quality

Commenter ID: 37

Docket ID: EPA-R06-OAR-2021-0801

Comment:

ODEQ notes that EPA Region 6 notified Oklahoma on March 2, 2022, that there was a mistake in the proposed action in the description of EPA's method for calculating 2023 contributions from upwind states, specifically in regards to the days with the highest projected ozone levels on page 9809 of the proposed disapproval. The correct description of EPA's methodology is included in at least two Technical Support Documents included in the docket. However, the correct description should be included in the proposed disapproval itself.

There is the second occurrence of the mistake in the description of EPA's method for calculating 2023 contributions from upwind states, specifically regarding the days with the highest projected ozone levels, on pages 9814-15 of the proposed disapproval.

Response

As the commenter notes, the preamble for the proposed action addressing the SIP submissions for states in Region 6 misstated the EPA's method for calculating future year contributions from upwind sates. The Evaluation of TCEQ Modeling TSD identified where the misstatement was specifically located in the preamble and included the correct description of the EPA's method for calculating future year contributions from upwind states. Additionally, on March 2, 2022, the EPA staff sent an email to the Region 6 states to inform them of the issue and where they could find the correct description. We also included a copy of the email in Docket No. EPA-R06-OAR-2021-0801.[159] The misstatement does not affect any aspect of EPA's action or rationale, and other materials included in this action correctly describe the method for how the EPA calculates future year contributions. Based on these actions, the EPA believes that it adequately addressed any potential issues caused by the errant language in the preamble.

11.10 Tribal Concerns

Comment

Commenter: Kaw Nation

Commenter ID: 24

Docket ID: EPA-R06-OAR-2021-0801

Comment:

Kaw Nation is one of the federally recognized Indian Tribes, pursuant to 25 CFR § 11.100 (x), located in Oklahoma, that has a Tribal authority and capability of qualified professionals that could manage Tribal

[159] *See*, Errant language in Proposed Rule; Air Plan Disapproval; Arkansas, Louisiana, Oklahoma, Texas Interstate Transport of Air Pollution 2015 Ozone NAAQS. Attachments to this EPA Region 6, Mar 2, 2022, E-Mail message, available in Docket ID No. EPA–R06–OAR–0801–0663-0011.

Air Quality. It is one of the few Tribes who met the Treatment As State (TAS) eligibility requirements under 40 CFR, 49.6 and approved for Sec. 301(d) of the CAA, 42 U.S.C § 7401 et seq., for the purpose of financial assistance under Sec. 105 of the CAA for TAS under Sec. 505 (a)(2) of the CAA.

Kaw Nation was monitoring Ozone precursors particularly Particulate matters in the Northern parts of Oklahoma for a while and it's within the Attainment zone for Ozone National Ambient Air Quality Standards (NAAQS).

Pursuant to Federal Clean Air Act (CAA), Kaw Nation would propose U.S. EPA to promulgate a federal implementation plan (FIP) than State Implementation Plan (SIP) so that Tribes can address interstate transport requirement.

Kaw Nation also propose to reconsider the approval of SAFETA and make the Oklahoma SIP to be inclusive of Indian Authority and have discussion with Tribal governments.

Kaw Nation is thankful to the U.S. EPA for inviting Tribal Authorities for government-to-government consultation to maintain our environment safe and secured for our future generation to come.

Response

The EPA appreciates the partnership and work that the Kaw Nation does with its air program, which includes participating in numerous regional and national workgroups, conducting an emissions inventory, reviewing air permits, and re-establishing their $PM_{2.5}$ air monitoring site.

The Kaw Nation asked that the EPA promulgate a FIP, rather than a SIP, to enable tribes to address interstate transport issues. In this action, the EPA is disapproving the portion of Oklahoma's SIP submission addressing interstate transport for the 2015 ozone NAAQS, which includes the portion of Oklahoma's SIP submission that would apply in certain areas of Indian country consistent with EPA's October 1, 2020, approval of the state's request pursuant to section 10211(a) of the Safe, Accountable, Flexible, Efficient Transportation Equity Act of 2005: A Legacy for Users, Pub. Law 109-59, 119 Stat. 1144, 1937 (August 10, 2005) ("SAFETEA"). Based on this proposed disapproval, the EPA in a separate action proposed FIPs for several states including the state of Oklahoma and for areas of Indian country within the borders of those states.[160] A tribe may seek Treatment in a Manner Similar to a State (TAS) approval to develop their own CAA regulatory program, including the implementation of a Tribal Implementation Plan (TIP) which could allow tribes to address interstate transport requirements.[161]

Although not part of this rulemaking, on December 22, 2021, the EPA proposed to withdraw and reconsider the October 1, 2020, SAFETEA approval.[162] The EPA engaged with tribes in consultations before and after the EPA's proposal to withdraw and reconsider the October 1, 2020, SAFETEA approval,

[160] Proposed Federal Implementation Plan Addressing Regional Ozone Transport for the 2015 Primary Ozone National Ambient Air Quality Standard, available in EPA-HQ-OAR-2021-0668. As proposed, the FIP would apply in areas of Indian Country in Oklahoma, whether by virtue of authority under CAA section 110(c) or 301(d).
[161] For Oklahoma tribes, SAFETEA 10211(b) requires that the State and Tribe enter into a cooperative agreement prior to seeking TAS approval for a regulatory program. EPA encourages and would support the Nation in seeking such a cooperative agreement and TAS approval should the Nation desire to implement a TIP.
[162] *See* https://www.epa.gov/ok/proposed-withdrawal-and-reconsideration-and-supporting-information.

and is currently considering feedback received from tribes, including the Kaw Nation. The EPA expects to engage in further discussions with tribal governments and the state of Oklahoma as part of this reconsideration.

11.11 Executive Order 13132

Comment

Commenter: Tennessee Department of Environment and Conservation

Commenter ID: 41

Docket ID: EPA-R04-OAR-2021-0841

Comment:

Tennessee believes EPA's proposed Disapproval May Contravene Executive Order 131132 including: (1) the action directly affects the relationship between the states and national government; and (2) EPA's approach to infrastructure SIPs will have a chilling effect on states' abilities to fully develop and implement their obligations under section 110 of the Clean Air Act.

Response

Because action on Tennessee's SIP submission is not included in this final action, to the extent this comment is relevant to Tennessee it is out of scope. The EPA disagrees that this disapproval action is inconsistent with the cooperative federalism framework of the CAA. The EPA addresses comments on cooperative federalism in Section 10.3 (Cooperative Federalism and the EPA's Authority).

Based on footnote 60 of the comment letter, the EPA believes the reference to Executive Order 131132 was a typographical error and that the comment intended to refer to Executive Order 13132. The EPA disagrees that this action contravenes the requirements of Executive Order 13132.

In CAA section 110(k)(3), Congress directed the EPA, not the states, to determine whether SIP submissions satisfy the requirements of the CAA. It is only after a SIP is approved that state measures included in a SIP submission become federally enforceable. And, by disapproving a SIP submission, EPA is not invalidating any state law or regulation. As such, the EPA's disapprovals do not take away any authority that a state would otherwise have to regulate air pollution. This rulemaking thus does not alter the legal relationship between the states and the federal government, nor does it create any substantial new burden affecting the states. Indeed, this rulemaking does not directly regulate any state or local governments at all. Accordingly, the EPA believes that this rule is consistent with the CAA and its policies as well as the Executive Order. The EPA also disagrees with the claim that the disapprovals will impact states' abilities to fully develop and implement their obligations under the CAA should they choose to do so following this action, and the EPA approves their SIP submissions.

Executive Order 13132 by its own terms does not create a right to judicial review (Executive Order 13132 section 11). *See Air Transp. Ass'n of Am. v. FAA*, 169 F.3d 1, 8-9 (D.C. Cir. 1999) (holding that a

claim under another executive order with nearly identical judicial review language was not judicially reviewable and that petitioner's claim that the action at issue was arbitrary and capricious because of the Agency's alleged violation of the order was "nothing more than an indirect—and impermissible—attempt to enforce private rights under the order").

11.12 Consent Decrees

Comments

Commenter: Midwest Ozone Group

Commenter ID: 30

Docket ID: EPA-R02-OAR-2021-0673, EPA-R03-OAR-2021-0872, EPA-R03-OAR-2021-0873, EPA-R04-OAR-2021-0841, EPA-R05-OAR-2022-0006, EPA-R06-OAR-2021-0801, EPA-R07-OAR-2021-0851, EPA-R08-OAR-2022-0315, EPA-R09-OAR-2022-0394, EPA-R09-OAR-2022-0138

Comment:

Pursuant to the January 12, 2022, Consent Decree entered in *Downwinders at Risk et al. v. Regan*[4] EPA must by April 30, 2022, approve or disapprove the interstate ozone state implementation plans (SIPs) of 21 states: Alabama, Arkansas, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maryland, Michigan, Minnesota, Mississippi, Missouri, New Jersey, New York, Ohio, Oklahoma, Tennessee, Texas, West Virginia and Wisconsin. Also, if EPA by February 28, 2022, proposes full or partial disapproval of a SIP from one of the 21 states, along with a proposed FIP to directly regulate interstate ozone emissions from that state, it must finalize its full or partial disapproval of the state's own plan by December 15, 2022. MOG also notes that the proposed *Downwinders* Consent Decree was provided for comment and that the concerns of the upwind states and the regulated community were ignored. *See* comments of Alabama, Missouri, Wyoming, and MOG in docket EPA-HQ-OGC-2021-0692.

[4] U.S. District Court for the Northern District of California, Case No. 4:21-cv-3551. [This footnote is footnote 5 in MOG's letter in EPA-R08-OAR-2022-0315, EPA-R09-OAR-2022-0394, EPA-R09-OAR-2022-0138]

Commenter: Air Pollution Control Program, Missouri Department of Natural Resources

Commenter ID: 01

Docket ID: EPA-R07-OAR-2021-0851

Comment:

On October 15, 2021, EPA published a proposed consent decree in the federal register that provided court enforceable timeframes for EPA to act on the good neighbor SIP submissions for the 2015 ozone standard from 32 states, including Missouri. For most of these states, including Missouri, the proposed

consent decree provided EPA with incentive, by granting it additional time, to propose SIP disapprovals and to also quickly propose federal plans for any state where it proposed a disapproval of the good neighbor SIP submission. The Air Program submitted comments to the docket on that proposed consent decree on November 8, 2021. The comments expressed concerns about the "sue and settle" process EPA was using to justify a hurried imposition of a FIP without providing states sufficient time to address any deficiencies that EPA may identify in their upcoming SIP disapprovals.

EPA never offered any summary of comments it received, nor provided any responses to any of the comments it received on the proposed consent decree. Instead, on January 12, 2022, EPA quietly executed the consent decree, as proposed, in the U.S. District Court for the Northern District of California, Oakland Division, and the U.S. Ninth Circuit Court of Appeals. EPA also never posted the final consent decree after it was executed, nor made any type of public announcement to indicate that it had executed the consent decree. Since the final consent decree and EPA's proposed disapproval of Missouri's SIP are inextricably linked, the Air Program is attaching and incorporating the comments submitted to docket on the proposed consent decree. EPA must address those comments before it can finalize this action, and EPA must explain why it decided not to provide any responses or notice that it had even considered the comments it received before executing the consent decree that impacted the rights of so many states, including Missouri.

Commenter: Oklahoma Department of Environmental Quality

Commenter ID: 37

Docket ID: EPA-R06-OAR-2021-0801

Comment:

It should also be noted that EPA's delay shortens the lead time available to address ongoing nonattainment and maintenance problems due to upwind contributions. Because of these delays, EPA would be advised to seek court approval to expand the review period to accommodate additional time to negotiate compromise language for SIPs proposed for disapproval as well as additional review time to address concerns raised by the substantive policy change noted in the proposed FIP.

Response

The commenters referenced the consent decree entered in *Downwinders at Risk, et al. v. Regan*, No. 21-cv-03551 (N.D. Cal.). They generally argue that the EPA should have provided responses to comments raised on the cited proposed consent decree. The proposed consent decree cited by the commenters, as well as two others,[163] established deadlines for the EPA to take action on the SIP submissions and do not dictate the substantive outcome of EPA's actions. The EPA views comments related to the terms of the consent decrees, and the EPA's compliance with CAA section 113(g) as related to public notice and

[163] EPA also solicited public comment on the other two relevant consent decrees. *New York et al. v. Regan, et al.*, No. 1:21-CV-00252 (S.D.N.Y.) (Indiana, Kentucky, Michigan, Ohio, Texas, and West Virginia); *Our Children's Earth Foundation* v. *EPA,* No. 20-8232 (S.D.N.Y.) (New York).

comment, as beyond the scope of this rulemaking, which is determining whether certain SIP submissions meet the requirements of CAA section 110(a)(2)(D)(i)(I). This rulemaking action is not the appropriate forum to bring challenges against the consent decree or EPA's compliance with CAA section 113(g) in relation to it.

While the EPA is not obligated to further respond to comments regarding these consent decrees, we note that the EPA is not required under the CAA to post a final notice regarding its legal settlements or post publicly its evaluation of comments under CAA section 113(g) for proposed consent decrees, and the EPA has never had a practice of doing so. CAA section 113(g) states in whole:

> At least 30 days before a consent order or settlement agreement of any kind under this chapter to which the United States is a party (other than enforcement actions under this section, section 7420 of this title, or subchapter II of this chapter, whether or not involving civil or criminal penalties, or judgments subject to Department of Justice policy on public participation) is final or filed with a court, the Administrator shall provide a reasonable opportunity by notice in the Federal Register to persons who are not named as parties or intervenors to the action or matter to comment in writing. The Administrator or the Attorney General, as appropriate, shall promptly consider any such written comments and may withdraw or withhold his consent to the proposed order or agreement if the comments disclose facts or considerations which indicate that such consent is inappropriate, improper, inadequate, or inconsistent with the requirements of this chapter. Nothing in this subsection shall apply to civil or criminal penalties under this chapter.

CAA section 113(g).

The EPA followed the requirements of CAA section 113(g) with regard to all three consent decrees establishing deadlines relevant to this action. Pursuant to CAA section 113(g), the EPA solicited public comment on the draft proposed consent decree in *Downwinders at Risk, et al. v. Regan*, No. 21-cv-03551 (N.D. Cal.) in the *Federal Register*. 86 FR 57423 (Oct. 15, 2022).[164] The EPA also posted information about soliciting public comment on the draft proposed consent decree on its website (https://www.epa.gov/ogc/proposed-consent-decrees-and-draft-settlement-agreements) and sent out an email notification to members of the public who had signed up for email alerts at https://www.epa.gov/ogc/email-subscriptions-notifications-about-new-litigation. The public comment period ended on November 15, 2021. 86 FR 57423 (Oct. 15, 2021).[165] All comments are available in the public docket for that notice (Docket No. EPA-HQ-OGC-2021-0692, available at regulations.gov). Consistent with the requirements of CAA section 113(g), the EPA and the United States Department of Justice reviewed the comments. As the EPA publicly stated to the court, "The comments received did not disclose facts or considerations that indicate that Defendant or the United States Department of Justice should withhold consent." Joint Motion to Enter Consent Decree, *Downwinders at Risk, et al. v.*

[164] The notice and docket for the *New York et al. v. Regan, et al.* consent decree can be found at 86 FR 40825 (July 29, 2021) and EPA-HQ-OGC-2021-0444 (available on regulations.gov). The notice and docket for the *Our Children's Earth Foundation v. EPA* consent decree can be found at 86 FR 66546 (Nov. 23, 2021) and EPA-HQ-OGC-2021-0800 (available on regulations.gov).

[165] The comment period for the *New York et al. v. Regan* consent decree ended on August 30, 2021. 86 FR 40825. The comment period for the *Our Children's Earth Foundation* ended on December 23, 2021. 86 FR 66546.

Regan, No. 21-cv-03551 (N.D. Cal.), ECF 22 at para. 4.[166] The joint motion to enter the consent decree, and the court's entry of the consent decree, are both public documents available in the docket for that litigation. *Downwinders at Risk, et al. v. Regan*, No. 21-cv-03551 (N.D. Cal.) (ECF 22 and ECF 23).

One commenter, representing Missouri, claimed that the final consent decree and the EPA's decision to *disapprove* Missouri's good neighbor SIP submission were "inextricably linked" and impacted states' rights. The EPA disputes that the consent decree requires the EPA to *disapprove* any good neighbor SIP submission, including Missouri's submission, or that it impacted any state's rights. The consent decree only establishes deadlines for EPA to take final action on various SIP submissions; by its own terms it does not predetermine whether the EPA shall approve, disapprove, conditionally approve, or approve in part and conditionally approve or disapprove in part any SIP submission. Consent Decree, *Downwinders at Risk, et al. v. Regan*, No. 21-cv-03551 (N.D. Cal.) ECF 23 at paras. 3-6. Commenters have established no evidence that these dates were negotiated in bad faith or prejudiced the Agency in its review and action on the SIP submissions. In fact, the EPA has taken action to both approve and disapprove SIP submissions covered by EPA's deadlines in the consent decree. *See e.g.*, 87 FR 19390 (April 4, 2022) (approval of Kansas's SIP); 87 FR 21578 (May 15, 2022) (approval of Montana's SIP).[167] All proposed actions on SIP submissions for which EPA had deadlines to take final action pursuant to the consent decree were put out for public comment, and the EPA evaluated those comments pursuant to CAA section 113(g). Furthermore, Missouri itself submitted lengthy comments in the course of the notice and comment procedure for the EPA's proposed action on the state's SIP submission, to which EPA is responding in this document and in the preamble. The EPA notes that for Missouri specifically, the EPA's statutory deadline to take final action on the state's good neighbor SIP submission was in November 2020, whereas the consent decrees, as modified by stipulation, now require EPA to take final action on Missouri's SIP submission by January 31, 2023.[168]

11.13 General Recommendations

Comment

Commenter: Anonymous

Commenter ID: 06

[166] EPA made similar statements regarding public comments to the Southern District of New York, also in public dockets containing the entered consent decrees. *See* JOINT LETTER addressed to Judge Andrew L. Carter, Jr. from Peter Aronoff dated 11/1/2021 re: seeking the entry of a proposed consent decree to resolve this matter, *New York et al. v. Regan, et al.*, No. 1:21-CV-00252 (S.D.N.Y.) (ECF 36); JOINT LETTER addressed to Judge J. Paul Oetken from Peter Aronoff dated 1/13/2022 re: joint request to enter proposed consent decree, *Our Children's Earth Foundation* v. *EPA*, No. 20-8232 (S.D.N.Y.) (ECF 30).

[167] EPA also took final action to approve several states' good neighbor SIPs after the CAA section 113(g) public comment process and before entry of the *Downwinders at Risk* consent decree, as noted in a "whereas" clause of that consent decree. These states were Florida, Georgia, North Carolina, and South Carolina (86 FR 68413, Dec. 2, 2021), Connecticut (86 FR 71830, Dec. 20, 2021), and Hawaii (86 FR 73129, Dec. 27, 2021).

[168] *Downwinders at Risk et al. v. Regan*, No. 21-cv-03551 (N.D. Cal.), Docket No. 32.

Docket ID: EPA-R08-OAR-2022-0315

Comment:

I recommend Utah be held to the highest standard and no extension or exclusion be given. Utah has the worst sir quality and the corrupt politicians are failing to fix this as well as any other issue that would affect their personal wealth or standing. In addition, Mike Lee attempted a coup and insurrection and shpuld not be allowed to run for office.

Response

This comment covers a range of topics that are generally beyond the scope of this action. It appears the comment is generally supportive of the disapproval of Utah's SIP submission.

Comments

Commenter: Hagerty, Logan

Commenter ID: 22

Docket ID: EPA-R05-OAR-2022-0006

Comment:

EPA Should Provide Explicit Guidance to States Drafting SIPs in the Proposed Rule

The EPA should provide closer guidance to the five states drafting future SIPs because it promotes enforcement efficiency.

If the EPA passes this rule and needs to create FIPs, the EPA must insure those FIPs are created as quickly as possible.

[…]

Thus, in the proposed rule, the EPA should provide examples of how specific procedures— like providing standardized outlines for SIPs—could be used to mitigate potential delays between SIP approval and EPA enforcement. Because the FIP process can take up to two years and because these five states are in the same Region, could the EPA draft one cohesive FIPs for these five states at the same time? The EPA could also solve future delays caused by inadequate SIP submissions by hiring or lending staff to state-level agencies that are less familiar with drafting SIPs.

In the proposed rule, the EPA had no issues with the outside data modeling group the five states used, the Lake Michigan Air Directors Consortium ("LADCO"). Still, the EPA should preemptively address the ways in which third-party data can be prevented from being incorrectly applied to states' SIPs. Moreover, if the EPA through investigation determines these five states intentionally misused the March 2018 Memorandum, the EPA should hold persons or parties accountable. The proposed rule should include: any state which intentionally drafts an inadequate SIP should be held liable for the harms

arising in other states, due to their lack of compliance. Here, the use of sanctions against these five states may be fair if they caused a delay in CAA enforcement which, in turn, affects neighboring states.

Commenter: Maryland Department of the Environment

Commenter ID: 29

Docket ID: EPA-R03-OAR-2021-0872

Comment:

MDE requests that EPA develop and publish official guidance that states can use in their Good Neighbor SIPs. That guidance must include the required elements and analyses EPA expects to see in every Good Neighbor SIP. Formal guidance levels the playing field by providing the same set of rules within which to work, and eliminates any confusion going forward.

Response

The EPA appreciates commenters' feedback and will take the suggestion to issue guidance for future good neighbor SIP development under consideration.

Comments on the proposed FIP are outside the scope of this action. Based on context of the full comment from Commenter ID 22, the EPA believes the reference to the March 2018 Memorandum by one commenter refers to Attachment A to the March 2018 Memorandum. Comments on that topic are addressed in Section 1.3 (Attachment A to the March 2018 Memorandum).

Comment

Commenter: Oklahoma Department of Environmental Quality

Commenter ID: 37

Docket ID: EPA-R06-OAR-2021-0801

Comment:

For future actions, the Oklahoma respectfully requests that EPA release the [Emissions Modeling Platform] under a Notice of Data Availability (NODA), take comment on the EMP, and resolve any outstanding issues before pursuing complex air quality modeling in support of rule development.

Response

The EPA will take the suggestion to issue a Notice of Data Availability for Emissions Modeling Platform releases for future actions under consideration.

11.14 Out of Scope

Comment

Commenter: Anonymous

Commenter ID: 06

Docket ID: EPA-R08-OAR-2022-0315

Comment:

In addition, Mike Lee attempted a coup and insurrection and shpuld not be allowed to run for office.

Response

This comment is out of the scope of this action.

Comment

Commenter: Emley, Margaret

Commenter ID: 17

Docket ID: EPA-R02-OAR-2021-0673

Comment:

Various health impacts result from air pollution exposure, including ozone and particulate matter. The evidence of public health concerns underlines the importance of each state's contribution to air quality, and its ability to take responsibility to reduce emissions that contribute to climate change. It is important to utilize the Clean Air Act, the World Health Organization, the Paris Agreement, and 2030 sustainability goals to regulate states at an appropriate standard. The new WHO guidelines are expected to save millions of lives if countries implement the guidelines.

Response

The EPA agrees that ozone has a number of adverse health impacts. However, the EPA considers the comments regarding the health impacts of ozone and other pollutants to be outside the scope of this action, which evaluates whether certain SIP submissions adequately address interstate transport requirements in CAA section 110(a)(2)(D)(i)(I) for the 2015 ozone NAAQS.

For clarification, the EPA notes that the evaluation of air quality standards, including the impacts to public health and welfare, are part of the standard setting process for a NAAQS, rather than a step in determining whether a state has adequate provisions in its SIP submission to address their interstate transport obligations for a particular NAAQS. Section 109(d)(1) of the Act requires periodic review and, if appropriate, revision of existing air quality criteria to reflect advances in scientific knowledge concerning

the effects of the pollutant on public health and welfare. Under the same provision, the EPA is also required to periodically review and, if appropriate, revise the NAAQS, at five-year intervals, based on the revised air quality criteria.

For informational purposes, the EPA notes that the Agency last revised the primary and secondary ozone NAAQS in October 2015.[169] In December 2020, the EPA announced its decision to retain the ozone standards without revision [170] The EPA is currently reconsidering the December 2020 final action.[171]

The commenter also states that it is important to utilize the Clean Air Act, the World Health Organization, the Paris Agreement, and 2030 sustainability goals to regulate states at an appropriate standard. While the EPA acknowledges that there are many efforts, globally, to address air quality, the authority for this action is CAA section 110 as related to implementing the 2015 ozone NAAQS.

Comment

Commenter: Emley, Margaret

Commenter ID: 17

Docket ID: EPA-R02-OAR-2021-0673

Comment:

Rapid urbanization along with industrial growth is one of the major causes of elevated air pollution levels in urban areas. To manage and control deteriorating urban air quality, an efficient and effective urban air quality management plan is required consisting of systematic sampling, monitoring and analysis; modeling; and control protocols (Gulia et al, 2020). Air quality monitoring is the essential and basic step that develops the foundation of any management plan. It also describes step-by-step procedures for chemical characterization of both organic and inorganic constituents of ambient particulate matter along with molecular markers, which are essential to identify the corresponding sources of particulate matter. Additionally, an appropriate air quality management plan discusses the need for coupling low-cost wireless sensor-based stations with a limited number of real-time ambient air monitoring stations to make it cost-effective, yet robust (Gulia et al, 2020). Satellite-based remote sensing monitoring calibrated with ground-level measurement has the potential for regional-scale air quality monitoring that captures transport of transboundary pollution and makes it easier to quantify levels of pollution by state, ensuring each state can create and submit appropriate SIPs.

[169] 80 FR 65292 (October 26, 2015).
[170] 85 FR 87256 (December 31, 2020).
[171] https://www.epa.gov/ground-level-ozone-pollution/epa-reconsider-previous-administrations-decision-retain-2015-ozone

Response

The comment does not explain the relevancy of the recommendations for urban air quality management plans to the EPA's action to disapprove certain good neighbor SIP submissions for the 2015 ozone NAAQS. The EPA considers the comment to be outside the scope of this action.

Comment

Commenter: Hagerty, Logan

Commenter ID: 22

Docket ID: EPA-R05-OAR-2022-0006

Comment:

EPA Should Consider the Use of Sanctions in the Proposed Rule

The proposed rule states that "[d]isapproval [of SIPs] does not start a mandatory sanctions clock." However, U.S.C. § 7413(a)(2) says that damages or sanctions should and can be triggered upon future violations of the same nature. For example, if ". . . [the EPA] Administrator finds that violations of an applicable implementation plan . . .are so widespread that such violations appear to result from a failure of the State in which the plan or permit program applies to enforce the plan or permit program effectively," the Administrator may require the state to fix its SIP through administrative penalties or civil action. In instances where a state is responsible for following an explicit instruction, it is only fair that state is held accountable. Currently, the proposed rule problematically places zero penalties on these five states for drafting inadequate SIPs. Meanwhile, other states suffer from the effects of ozone far more. For example, California and Arizona contain the top seven cities affected by ozone in our nation. It is important to note California and Arizona submitted appropriate SIPs that gained EPA approval.

Current EPA Administrator Michael S. Regan stated: "Air pollution doesn't stop at the state line. This step will help our state partners meet air quality health standards, saving lives and improving public health in smog-affected communities across the United States." Because ozone is a national concern, the EPA should consider how these five states acted unfairly towards other states like California and Arizona by drafting inappropriate SIPs. The proposed rule states that "[e]ffective policy solutions to the problem of interstate ozone transport . . . have necessitated the application of a uniform framework of policy judgments to ensure an 'efficient and equitable" approach.'" In SIP disapproval instances, the EPA has discretion to bring penalties where, as here, several states do not comply with explicit instructions to create SIPs. That is critical because noncompliant states derail national efforts under the CAA to jointly combat air pollution. Under the CAA, the EPA can bring injunctive penalties:

Whenever, on the basis of any available information, the Administrator finds that a State is not acting in compliance with any requirement or prohibition of the chapter relating to the construction of new sources or the modification of existing sources, the Administrator may—

(A) issue an order prohibiting the construction or modification of any major stationary source in any area to which such requirement applies . . .

Here, orders may be appropriate because the five states may have failed to comply with new source requirements. For example, these states may have permitted current ozone polluters to expand despite the states not holding approved SIPs. The proposed rule should prohibit these five states from approving the expansion, through construction or modification, of any ozone source that contributes to the state's current violation of the NAAQS and CAA. Specifically, the EPA should order restrictions on the modification or expansion of major power plants in these five states. This is because power plants are major stationary sources of ozone. Coal-fired power plants are major stationary sources because they create nitrogen oxides. In turn, nitrogen oxides create "lower-level ozone" pollution. Science has shown that ". . .NOx emissions could be mitigated if power plants continue to transition from coal to natural gas and renewable energy sources." Some of the nation's largest power plants are in the states the proposed rule affects – Michigan and Indiana. Michigan and Indiana contain the Monroe and Gibson power plants, respectively. These are both coal-fired power plants, owned by DTE Electric and Duke Energy. The EPA might propose these power plants cannot develop their facilities until Michigan and Indiana submit adequate SIPs. On a broader note, if the EPA is to impose penalties, the penalties should be fairly construed to target the largest producers of ozone pollution. The EPA should be careful to not burden the citizens of these states who are already harmed by ozone pollution because of these polluters.

Response

In this action, the EPA is finalizing disapproval and partial approval/partial disapproval for 21 good neighbor SIP submissions for the 2015 ozone NAAQS. The EPA views this recommendation as beyond the scope of this rulemaking.

11.15 Out of Scope - Comments on the Proposed FIP

The EPA notes initially that PacifiCorp attached two comments submitted by Berkshire Hathaway Energy Company (BHE) and Ramboll on the Proposed FIP to its own comment on this SIP action. To the extent the BHE and Ramboll attachments made comments relevant to *this* action, the EPA responded in the preamble or in this RTC document. The EPA considers the comments in the BHE and Ramboll attachments specific to the Proposed FIP to be out of the scope of this rulemaking and they will not be reproduced here, but they are available in full in the docket (and are included in the same document as PacifiCorp's comments). The EPA anticipates responding to comments on the Proposed FIP in any final rulemaking resulting from that proposal.

Comments

Commenter: Air Pollution Control Program, Missouri Department of Natural Resources

Commenter ID: 01

Docket ID: EPA-R07-OAR-2021-0851

Comment:

The following paragraphs explain the flaws of EPA's step-3 analysis that it has proposed in the FIPs for 26 states, including Missouri.

EPA is intentionally exploiting the Supreme Court decision in EME Homer City vs. EPA to justify any costs or requirements it deems necessary to further federal policy decisions. The court decision permitted EPA to impose cost effective controls on any state that was deemed to be a significant contributor so long as such controls don't result in over-control of any state. However, the decision did not indicate what might be considered "cost effective controls". For this reason, EPA is using this decision to assume new authority to implement anything it deems as a "cost effective control" requirement. Further, EPA's step 3 process completely ignores the real question at hand with the enabling statute, which ties contribution to an amount which contributes significantly to downwind maintenance or nonattainment problems. Instead, EPA completely ignores the statutory contribution issue and instead is imposing controls that suit federal policy choices regardless of their impact on the downwind receptors that EPA used as justification for disapproving the SIPs to begin with.

EPA's decisions at step three in their proposed FIP are severely flawed. EPA completely ignores the contribution analysis and makes no attempt to address what it considers as significant contribution when it proposes new control requirements.

Commenter: Alabama Power Company, Southern Power Company, and PowerSouth Energy Cooperative

Commenter ID: 04

Docket ID: EPA-R04-OAR-2021-0841

Comment:

Finally, EPA should approve Alabama's SIP submittal as discussed in these comments. However, if EPA finalizes this proposed disapproval and ultimately issues a FIP for Alabama within two years of June 2022, EPA must clarify that such action relies only on the disapproval for EPA's FIP authority. At that point, EPA's prior, unlawful finding of failure to submit should effectively be rendered moot.

Commenter: Arkansas Department of Energy and Environment, Division of Environmental Quality

Commenter ID: 07

Docket ID: EPA-R06-OAR-2021-0801

Comment:

In their proposed FIP, EPA did not identify specific sources or emissions activities in Arkansas that significantly contribute to downwind air quality problems (as the rule requires), but instead chose from a nationwide set of sources with available control technologies as being subject to emission reduction requirements in their proposed FIP. There was no further analysis provided by EPA to show that specific sources in Arkansas are actually contributing significantly to the Harris County monitor or interfering with maintenance of the NAAQS by other receptors, thus EPA is effectively contending that a 1% linkage

is the same as a significant contribution, which is not consistent with their guidance or Clean Air Act 110(a)(2)(D)(i).

Commenter: Nevada Division of Environmental Protection

Commenter ID: 33

Docket ID: EPA-R09-OAR-2022-0138

Comment:

EPA's Proposed Ozone FIP jeopardizes anticipated Nevada greenhouse gas emission reductions

EPA's Proposed FIP, along with EPA's failure to meaningfully collaborate with NDEP on the Proposed FIP, may have the unintended consequence of eliminating greenhouse gas (GHG) emission reductions anticipated in Nevada's upcoming updated Regional Haze State Implementation Plan (Regional Haze SIP). The Regional Haze SIP currently anticipated shutdown of certain stationary sources to meet Regional Haze targets. However, the Proposed FIP may require these stationary sources to place pollution controls to meet short term ozone reduction requirements and maintain grid reliability. Once these controls are placed on to meet short term ozone requirements, the stationary sources may be able to meet Regional Haze requirements without shutting down. This would have the net effect of eliminating the potential future reductions in greenhouse gas emissions.

Commenter: Oklahoma Department of Environmental Quality

Commenter ID: 37

Docket ID: EPA-R06-OAR-2021-0801

Comment:

It should also be noted that EPA's delay shortens the lead time available to address ongoing nonattainment and maintenance problems due to upwind contributions.

[…]

The original CSAPR rule established ozone-season NOx reductions based on a $500 per ton cost threshold. The CSAPR Update increased the cost threshold to $1,400 and the Revised CSAPR Update to $1,800. For the current proposal, the cost threshold for NOx reductions ranges from $7,500 to over $11,000 per ton.9 This escalation does not constitute a simple expansion of an existing policy but, rather, constitutes a change significant enough to warrant reevaluation. In addition, the previous CSAPR rules only sought emissions reductions from EGUs. The current proposal seeks reductions from an expanded list of sectors: reciprocating internal combustion engines in pipeline transportation of natural gas; kilns in cement and cement product manufacturing; boilers and furnaces in iron and steel mills and ferroalloy manufacturing; furnaces in glass and glass product manufacturing; and high-emitting equipment and large boilers in basic chemical manufacturing, petroleum and coal products

manufacturing, and pulp, paper, and paperboard mills. By significantly increasing the cost and widely expanding the sectors subject to the remedy, the EPA has changed the policy to such a degree that a fundamental rethinking of the approach is in order.

Oklahoma asserts that if EPA moves forward with its disapproval of state SIPs (and a subsequent FIP), EPA should work with states and other air agencies to develop an approach that addresses downwind air quality in a more cost-effective manner. This approach may necessitate variable cost-effectiveness thresholds for different upwind states, but that change is warranted to avoid the significant cost increases seen in the current proposal. In working with states, EPA is encouraged to assist state agencies in the use of modeling (either the CAMx model or the AQAT) while states are preparing SIPs rather than after SIPs have been submitted and rejected. Due to these concerns, it would be appropriate for EPA to defer final action on the Oklahoma SIP until this process can be brought to a more mutually acceptable conclusion.

Commenter: United States Steel Corporation

Commenter ID: 45

Docket ID: EPA-R05-OAR-2022-0006

Comment:

Second, to the extent that U. S. EPA somehow still finds that emissions from these sources "contribute" or "interfere" with downwind states' ability to attain and maintain the ozone NAAQS [after consideration of updated emissions inventory information], which does not seem plausible, U. S. EPA will need to re-evaluate its costs determinations in the separate ozone transport FIP rulemaking.

Commenter: Wisconsin Department of Natural Resources

Commenter ID: 51

Docket ID: EPA-R05-OAR-2022-0006

Comment:

<u>EPA must ensure its transport rule for the 2015 ozone NAAQS fully resolves upwind state obligations to Wisconsin's nonattainment areas.</u>

On February 28, 2022, EPA proposed a transport rule to resolve "good neighbor" obligations for the 2015 ozone NAAQS for the states for which it is proposing SIP disapprovals. Based on WDNR's initial assessment, EPA will need to adjust its final rule so that it constitutes a "full remedy" for upwind state transport obligations to all of Wisconsin's nonattainment and maintenance monitors, including Sheboygan. Wisconsin will provide comments on that proposal separately.

Response

To the extent these comments concern the substance of the proposed FIP for the 2015 ozone NAAQS, such as the EPA's proposed determinations of cost-effective controls available in that action, or the EPA's authority to finalize FIPs, those comments are outside the scope of this action. Additionally, the EPA disagrees that the decisions proposed in the FIP necessitates any kind of delay or deferral on a state's SIP submission. This action is not determining what, if any, cost effective controls exist at Step 3 of the 4-step interstate transport framework. Instead, the EPA is evaluating the states' interstate transport SIP submissions to determine whether the submission satisfies the statutory obligations provided for in CAA section 110(a)(2)(D)(i)(I).

One commenter claims that the EPA's use of AQAT to justify the inclusion of Utah in the proposed 2015 ozone interstate transport FIP is inappropriate and goes against the EPA's own guidance. We first note that, in this action, the EPA is not using the Step 3 analysis in the proposed FIP action to support its action on the SIP submission. The EPA's reasoning for disapproving the Utah SIP submission is based on an evaluation of the SIP submission itself, as well as EPA modeling results and air quality analysis. To the extent that the commenter is implying that the EPA is using the AQAT results in any way in this action this is simply inaccurate. Nowhere in the proposed disapproval of Utah's SIP has the EPA made this claim. The EPA further addresses claims that the EPA is relying on the results of the FIP to support or pre-judge action on a state's SIP submission in Section 10.5 (Comment Alleging "Pretext" or Intent to Require Generation Shifting). Comments regarding the appropriateness of the use of the AQAT tool in the proposed FIP is outside of the scope of this action. However, we note that, regarding the alleged differences in EGU emissions projections between EPA's Step 1 and Step 2 analysis using IPM and the emissions projections using engineering analytics in the proposed FIP at Step 3, this is easily explained by the different assumptions and methodologies used. The higher emissions estimates for EGUs used to propose budgets in the FIP reflected a more conservative assessment relying only on known and historical information about fleet operation. Had the EPA used the engineering analysis values for EGUs from the Step 3 analysis of the proposed FIP in our analysis of Steps 1 and 2 in this SIP disapproval action, the effect, generally, would have been to have higher EGU emissions estimates in the baseline, which would have only served to reinforce our conclusions as to which upwind states are linked to downwind receptors.

In response to Wisconsin Department of Natural Resources' call for the EPA's proposed FIP to constitute a full remedy for all receptors in Wisconsin, we address this commenter's concern regarding the identification of the monitor in Sheboygan County, Wisconsin as a projected receptor in Section 7.1 (Methodology for Determining Future Year Contribution). The EPA is not, in this action, making a determination whether the April 2022 proposed FIP is a complete remedy for states' good neighbor obligations under the 2015 ozone NAAQS. In response to APC et al., the EPA explained the basis for the disapproval of Alabama's SIP submission, submitted on June 21, 2022, at proposal. 87 FR 64412 (October 25, 2022). The EPA is not promulgating a FIP for Alabama in this action, so comments on the EPA's FIP authority are beyond the scope of this rulemaking.