

June 21, 2022

Mr. Michael S. Regan, Administrator
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue, NW
Washington, DC 20460

Via Electronic Submission
To the Federal eRulemaking Portal
www.regulations.gov

Attention: Docket ID No. EPA-HQ-OAR-2021-0668

RE: Federal Implementation Plan Addressing Regional Ozone Transport for the 2015 Ozone National Ambient Air Quality Standard

Dear Administrator Regan:

The Connecticut Department of Energy and Environmental Protection (DEEP) welcomes the opportunity to submit these written comments on the United States Environmental Protection Agency's (EPA's) proposed rule, "Federal Implementation Plan Addressing Regional Ozone Transport for the 2015 Ozone National Ambient Air Quality Standard" [87 FR 20036, April 6, 2022]. These comments supplement our oral comments made at the hearing held by EPA on this proposal on April 21, 2022.

Section 110(a)(2)(D) of the Clean Air Act (CAA) requires every state to adopt in its state implementation plan (SIP) adequate provisions to prohibit sources within the state from emitting at levels which will contribute significantly to nonattainment in, or interfere with maintenance by any other state. For the 2015 ozone national ambient air quality standards (NAAQS), the CAA required that states submit "Good Neighbor" SIPs addressing interstate transport by October 2018. The failure by several states to timely satisfy their Good Neighbor obligations required EPA to propose this federal implementation plan (FIP), which builds upon a series of Good Neighbor rules developed by EPA for the 2008 ozone standard.¹

DEEP is pleased that EPA has revised its approach to resolving interstate transport to include control measures for electric generation units (EGUs) and non-EGUs with this proposal. In many respects, this proposed FIP is far superior to EPA's past attempts to address interstate air

¹ DEEP's comments on the series of rules that attempted to resolve transport for the 2008 ozone NAAQS can be found at: [Cross-State Air Pollution Rule \(CSAPR\) Update](#) (2016); [CSAPR Close-out Rule](#) (2018); [Revised CSAPR Update](#) (2020).

pollution transport. Connecticut encourages EPA, in the final rule, to incorporate measures to achieve deeper reductions sooner. The projected 0.6 ppb reductions at impacted Connecticut monitors will not occur until 2026, which is too late to assist Connecticut in meeting its 2024 attainment date for the 2015 NAAQS. As these monitors exceed the standard by as much as 12 ppb and are impacted by up to 25 ppb of transported ozone, even if intra-state contributions are eliminated, Connecticut will fail to meet the standard.²

DEEP encourages EPA to accelerate its efforts to provide states the opportunity to meet important health-based air quality standards as expeditiously as possible. EPA can achieve this by providing clear and timely guidance to states so that they can prepare acceptable Good Neighbor SIPs in advance of the delay necessitated by the FIP process. DEEP also encourages EPA to further consider the relative impacts by states. Nearby states have a greater impact on their neighbors and EPA's policies will bring more immediate benefits to public health and air quality by acknowledging and addressing this enhanced impact.

DEEP applauds EPA's efforts and supports many provisions of the proposed FIP. To fully achieve the air quality and public health benefits associated with its implementation, DEEP urges EPA to further strengthen the framework for corrective action. Furthermore, to achieve a full remedy, EPA must also adopt control strategies for all contributing source sectors within the purview of federal regulation this would include on-road, non-road and other stationary sources. The comments attached to this letter detail Connecticut's recommendations to fully address interstate transport. We look forward to working with EPA in support of the proposed rule, and opportunities to further strengthen it.

Sincerely,



Katie S. Dykes
Commissioner

² See Ozone Air Quality Assessment Tool(AQAT).(xlsx) at <https://www.epa.gov/csapr/good-neighbor-plan-2015-ozone-naaqs>.

ATTACHMENT
CONNECTICUT DEPARTMENT OF ENERGY AND ENVIRONMENTAL PROTECTION
WRITTEN COMMENTS ON THE FEDERAL IMPLEMENTATION PLAN ADDRESSING
REGIONAL OZONE TRANSPORT FOR THE 2015 OZONE NATIONAL AMBIENT AIR
QUALITY STANDARDS.

DEEP submits the following recommendations for EPA's consideration to more fully meet its obligation to address interstate ozone transport that violates the good neighbor provision of the Clean Air Act (CAA).

EPA's approach could go farther to fully prohibit significant contribution to interstate transport. The proposed rule falls short of fulfilling EPA's obligations to address ozone transport under the CAA and as mandated by court rulings.

The four-step process EPA relies on to fulfill good neighbor obligations was found acceptable by the Supreme Court, and in its ruling, *EPA v. EME Homer City Generation*. In *Homer*, the Supreme Court recognized EPA's broad statutory authority to seek reductions which result in attainment. As stated in the ruling:

As the Good Neighbor Provision seeks attainment in every downwind State, however, exceeding attainment in one State cannot rank as "over-control" unless unnecessary to achieving attainment in any downwind State. Only reductions unnecessary to downwind attainment anywhere fall outside the Agency's statutory authority.

Second, while EPA has a statutory duty to avoid over-control, the Agency also has a statutory obligation to avoid "under-control," i.e., to maximize achievement of attainment downwind. For reasons earlier explained, see supra, at 3–4, a degree of imprecision is inevitable in tackling the problem of interstate air pollution. Slight changes in wind patterns or energy consumption, for example, may vary downwind air quality in ways EPA might not have anticipated. The Good Neighbor Provision requires EPA to seek downwind attainment of NAAQS notwithstanding the uncertainties.³

EPA's proposal does not model attainment at three of Connecticut's critical ozone monitors. While EPA conducts an over-control analysis for individual states [87 FR 20098] and determines that there may be reason to exclude individual states from certain controls based on those states no longer being linked to nonattainment receptors, EPA does not then turn its consideration to the implications of under-control.

Though EPA acknowledges it is obliged to consider under-control [87 FR 20055], it conducts no such assessment with respect to contributions to Connecticut's Greenwich, Stratford and Westport monitors that EPA modeling predicts will remain nonattainment through, and likely beyond, 2026. These three sites are linked to three nearby states in excess of the one-percent threshold EPA uses to establish linkage to a significant contribution, both before and after

³ <https://supreme.justia.com/cases/federal/us/572/489/#tab-opinion-1970878>

consideration of the proposed rule. As such, DEEP believes EPA is required to further evaluate its proposed rule for under-control.

As set out in the table below, EPA’s “Air Quality Assessment Tool” (AQAT) shows the largest state contributions to the Westport monitor as a result of the proposed rule. Based on EPA’s modeling, it is clear the Westport monitor will not meet the 2015 standard within the required timeframe.

Contributions to Connecticut’s Westport Monitor. State total contributions for the base case and proposed rule from all states contributing 2.5 ppb ozone or more to the Westport Monitor. All values are for model year 2026. A negative change in contribution indicates a reduction with the proposed rule. Note that Connecticut is not subject to this rule and contribution remains unchanged. Modeled average design values also shown. All values taken from EPA’s Air Quality Assessment Tool tabs 2026fj_All and 2026_proposed_rule at <https://www.epa.gov/csapr/good-neighbor-plan-2015-ozone-naaqs>.

Contributing State	2026 Scenario Base Contribution (ppb)	2026 Proposed Rule Contribution (ppb)	Change in Contribution (ppb)
Connecticut	2.8606	2.8606	0.0000
New Jersey	8.5496	8.5524	0.0028
New York	14.1858	14.1671	-0.0187
Pennsylvania	6.8286	6.6752	-0.1534
2026 Modeled Average Design Value	74.6	74.1593	-0.4407

Establishing linkage to a significant contribution at a threshold of one percent of the standard (i.e. 0.7 ppb). Prior guidance from EPA allowed consideration of higher thresholds for establishing a linkage to nonattainment receptors.⁴ DEEP agrees with EPA’s proposal to establish linkage at one percent of the standard but recommends that EPA develop a tiered approach to establishing linkages. An efficient and equitable solution to the allocation problem of Good Neighbor responsibility cannot end by addressing only the lowest contributions at the lowest costs when attainment is not met at all downwind receptors – especially when those receptors are so heavily influenced by a few upwind States’ contributions.⁵ DEEP recommends that EPA consider adopting a methodology designed to obtaining further reductions from states with contributions above the 2.5 ppb threshold.

Number of exceedance days to establish linkage. The EPA uses the average state contributions from the top ten modeled ozone days with 8-hour daily maximum averages above 60 ppb to establish significant contribution linkages. However, the form of the ozone NAAQS is the 3-year average of the 4th annual maximum daily 8-hour average. Assessing linkages based on average

⁴ https://www.epa.gov/sites/default/files/2018-09/documents/contrib_thresholds_transport_sip_subm_2015_ozone_memo_08_31_18.pdf

⁵ EPA’s Air Quality Assessment Tool at <https://www.epa.gov/csapr/good-neighbor-plan-2015-ozone-naaqs> in 2026_scenario_links tab showing five states linked to nonattainment receptors at contributions greater than 2.5 ppb

contributions across ten high ozone days can dilute upwind impacts on the days that are most relevant to a NAAQS violation. For example, the weather patterns conducive to high ozone transport on the four highest days may differ substantially from the conditions on other days within the ten days, resulting in the high upwind contributions on the worst days “washing out” in the average across all ten modeled days.

The Ozone Transport Commission (OTC) shared an example of an approach with the EPA in February 2022 where the top four state contributions during modeled high ozone days are averaged. In the example, the high ozone threshold started at the current NAAQS and iteratively decreased by 5 ppb as needed, until four high ozone days were included for calculation. The example was intended to reflect the form of the NAAQS while still accounting for variability by identifying important contributing states that might have been diluted in the averaging contributions in the EPA’s ten highest ozone days. This example shows the technique currently being used by EPA to identify contribution linkages to nonattainment and maintenance monitors can be improved. DEEP suggests using the existing EPA-State modeling collaborative group to review and assess potential contribution techniques for future application.

EPA’s cost effectiveness threshold. DEEP is encouraged that EPA has selected a more equitable cost effectiveness threshold for EGU’s of \$11,000/ton and a non-EGU threshold of \$7,500/ton. These proposed thresholds more closely reflect Connecticut’s regulatory threshold, which is in excess of \$13,000/ton.⁶ DEEP appreciates that EPA has proposed a more equitable cost threshold.

Ozone season emission rate limit. The EPA uses the 0.08 lb/mmBtu seasonal average rate limit in its state emission budget calculations and engineering analytics for this proposed rulemaking⁷ as this seasonal rate is considered to be reasonably achievable for coal-fired units equipped with SCRs that are optimally operated. The proposed FIP ozone season NOx caps are established by multiplying this reasonable rate by an EGU’s average heat input. The EPA continuously refers to this as “optimizing” the SCR; however, the proposed FIP mass cap allows the unit operators to decide if they want to optimize the SCR or not, simply by operating less (meaning a lower amount of heat input or burning less coal) during an ozone season, albeit now subject to the proposed backstop daily emission rate of 0.14 lb/mmBtu. As an assurance that units capable of operating at lower NOx emission rates do not choose to run less optimally over extended periods in the space created below the backstop daily rate, a reasonable and further constraint can be established using the EPA-defined reasonable rate of 0.08 lb/mmBtu for the entire ozone season.

Consideration of non-EGU sources is too narrow in scope and does not meaningfully affect Connecticut’s ozone values. DEEP appreciates EPA is considering the impact of non-EGU sources on ozone transport. EPA has proposed to include NOx emission limits on the following sources: reciprocating internal combustion engines in pipeline transport of natural gas; kilns in cement manufacturing; boilers in iron and steel production; furnaces in glass manufacturing; and

⁶ Regulations of Connecticut State Agencies section 22a-174-22e(h) regarding control of nitrogen oxide emissions.

⁷ See <https://www.epa.gov/system/files/documents/2022-03/proposal-appendix-a-proposed-rule-state-emission-budget-calculations-and-engineering-analytics.xls> (accessed May 9, 2022).

boilers in chemical manufacturing, paper mills and petroleum products manufacturing. Unfortunately, EPA does not propose to implement these limits until 2026.

EPA's "*Industrial Sources: Technical Memorandum: Screening Assessment of Potential Emissions Reductions, Air Quality Impacts, and Costs from Non-EGU Emissions Units for 2026*" shows the location of the non-EGU sources covered by the rule.⁸ The sources are located generally outside the geographic areas from which predominate south westerly winds bring ozone and its precursors into Connecticut's nonattainment areas on high ozone days.

DEEP recommends EPA broaden its scope to include additional sources and source categories that are located in the highly linked states (e.g., greater than 2.5 ppb modeled impact at violating monitors) and in geographic areas likely to contribute to nonattainment based on the predominant high ozone day meteorology.

As EPA notes in the proposed FIP, its historical exemption of EGUs less than or equal to 25 MW (small EGUs) dates back to its 1993 Acid Rain permitting rule. The Acid Rain rule, however, looked primarily at sulfur dioxide (SO₂) emissions, while also citing the "de minimis" nature of carbon dioxide (CO₂) and NO_x emissions. DEEP is concerned about the EPA's proposed continuance of exempting small EGUs from the proposed FIP. We note that there are about 24,800 MW of small EGU capacity in the states covered in the proposed FIP and the OTR states combined.⁹ This is the equivalent capacity of 24 large 1000 MW power plants. With increasing compliance costs for larger EGUs, as is warranted, the exemption is fostering a potential leakage problem by creating greater incentives to shift increasing generation shares across numerous smaller EGUs during the ozone season. This will be a particularly harmful outcome if the shifts occur on the highest ozone days.

The OTC has identified Municipal Waste Combustors (MWC) as a category which can provide significant emission reductions. Working with stakeholders, the OTC has determined that more than 7,000 tons of NO_x can be reduced by 2023 in the ozone transport region at costs of less than \$8,000 per ton if its recommendations were implemented.¹⁰ DEEP encourages EPA to adopt further emissions reductions on the MWC sector for inclusion in the final FIP.

DEEP notes that airports, which are typically located near and within nonattainment areas, are also large contributors of NO_x emissions. Airports negatively impact downwind states and should be considered by EPA for further emission reductions. Airports are home to a variety of different emission sources including aircraft, trucks, emergency engines, boilers and ground support equipment. The Federal Aviation Administration (FAA) has established programs, such

⁸ See page 15 of <https://www.epa.gov/system/files/documents/2022-03/nonegu-reductions-ppb-impacts-2015-o3-transport-fip-final-memo.pdf>

⁹ Based on U.S. Energy Information Administration data from "Form EIA-860 detailed data with previous form data (EIA-860A/860B)" at <https://www.eia.gov/electricity/data/eia860/>.

¹⁰https://otcair.org/upload/Documents/Meeting%20Materials/OTC%20MWC%20report%20overview%2019_2022.pdf

as the Voluntary Airport Low Emission (VALE) Program and the Airport Zero Emissions Vehicle and Infrastructure Pilot Program in an attempt to reduce emissions from airports. These voluntary programs support projects that improve air quality at airports. DEEP recommends EPA revisit emissions standards for aircraft and associated equipment as well as the potential for reducing emissions through electrification of ground support operations.

EPA should also consider further reductions in the mobile source sector beyond the proposed heavy duty truck rule.¹¹ Congestion mitigation and transportation control measures in the contributing states should be included in EPA's assessment of non-EGU source categories.

EPA should sunset emissions trading as a compliance option by 2027 and require NO_x controls to be optimized and run on a daily basis. There is little justification for continuation of a trading program to address ozone transport. DEEP believes ozone precursor emission reductions are required nearer to the time and location of the ozone exceedances they are intended to reduce. This is critically important in Connecticut especially on those hot summer peak electricity demand days when ozone concentrations are the highest. Furthermore, cap and trade programs should be designed with our environmental justice communities in mind to assure emission reductions occur in these communities especially on high ozone days, on a daily basis consistent with the short-term ozone standard or in a particular location.

Connecticut is a strong supporter of market-based mechanisms, including cap-and trade programs, as economically efficient mechanisms to achieve compliance. When used to control for local pollutants such as NO_x or ozone, such mechanisms must be very carefully designed to ensure that they do not inadvertently contribute to the persistence of concentrated pollution levels in affected communities. The policy argument that trading mitigates the cost of controls, especially for sources which are expected to permanently shut down in the near future, must be weighed against the public health costs of long-term nonattainment. Connecticut has borne the cost of nonattainment for over fifty years, and we cannot overlook the economic benefit that has been afforded to sources operating during the last half-century. Moreover, selective catalytic reduction and selective noncatalytic reduction have been required as Best Available Control Technology for new sources since the 1990's. The owner of any source not already equipped with such controls has reaped significant economic benefit while imposing the cost of air pollution on society.

Moreover, based on another EPA proposed rule¹², Connecticut will soon be bumped up to severe nonattainment in three of its eight counties and required to attain the 2008 ozone standards in 2027, based on monitored air quality data from 2024-26. It is highly plausible Connecticut will not attain by this date, in which event major sources in the nonattainment area will be subject to fees under CAA section 185. These potential fee payers are sources with potential emissions of just 25 tons per year of NO_x or VOC, well below the 150 ton threshold of actual NO_x emissions

¹¹ <https://www.govinfo.gov/content/pkg/FR-2022-03-28/pdf/2022-04934.pdf>

¹² Determinations of Attainment by the Attainment Date, Extensions of the Attainment Date, and Reclassification of Areas for the 2008 and 2015 Ozone National Ambient Air Quality Standards – Proposed Rule (87 FR 21825, April 13, 2022)

now under consideration [see 87 FR 20095]. The CAA section 185 fees currently exceed \$10,600 per ton of NO_x or VOC.¹³ That rate will be adjusted for inflation and by 2027 will undoubtedly exceed the “reasonably” cost effective threshold EPA has set for control of sources for this rule.

Operation of NO_x Controls Benefits Regional Haze. A recent study shows that nitrate is becoming a more important contributor to regional haze.¹⁴ Control measures focused on sulfate in the first two rounds of regional haze SIP revisions have been successful in improving visibility, but to attain natural visibility conditions, further reductions in haze forming pollutants like nitrogen oxides will be necessary. DEEP encourages EPA to consider the potential co-benefits to improved visibility that could result from emissions reductions from this proposal and include those benefits in its cost assessments.

¹³ https://www.epa.gov/system/files/documents/2021-12/memorandum_sec-185-penalty-fees-for-year-2021.pdf

¹⁴ <https://www.nescaum.org/documents/the-changing-nature-of-visibility-impairment-in-the-mid-atlantic-northeast-visibility-union-mane-vu-region/changing-nature-visibility-mane-vu-region-em202204.pdf>