

**Response to Comments
Regarding State Implementation Plan Revisions
concerning
Attainment Demonstration for the 2008 Ozone National Ambient Air Quality
Standards (NAAQS)
and
Statewide Motor Vehicle Emissions Budgets**

On November 10, 2021, the Commissioner of the Department of Energy and Environmental Protection (DEEP) published notice of intent to revise the State Implementation Plan (SIP) for air quality to address the requirements under sections 172 and 182(c) of the Clean Air Act (CAA) for serious nonattainment areas. Pursuant to such notice, the proposed SIP was open for comments and a public hearing was scheduled for January 6, 2022, provided such a hearing was requested. No such request was received, and the hearing was cancelled on January 4, 2022. The public comment period remained open through January 6, 2022.

This report addresses the comments received on the proposed implementation plan revisions during the comment period and final recommendations for the plan revision.

Written comments were received from the following persons/organizations:

1. John Rogan, Branch Chief
Air Quality Branch
U.S. Environmental Protection Agency, Region 1
5 Post Office Square, Suite 100
Boston, MA 02109-3912

2. Sarah Kane, Associate Attorney
Sierra Club Environmental Law Program
50 F St. NW, 8th Floor
Washington, DC 20001

All comments submitted are available on the DEEP website¹, together with the proposed and revised SIP. The comments are summarized below with DEEP's responses.

Comments by EPA

Comment: EPA intends to propose Federal Implementation Plans (FIPs) to eliminate significant contribution to downwind states' ozone monitors. While these FIPs are intended for the 2015 ozone NAAQS, EPA anticipates that the potential emissions reductions from these FIPs will also help Connecticut meet attainment for the 2008 ozone standard as well.

¹ <https://portal.ct.gov/DEEP/Air/Planning/Ozone/2008-Ozone-NAAQS-Attainment-Demonstrations>

Response: While DEEP appreciates EPA’s efforts, DEEP notes that states were to have Good Neighbor SIPs to prohibit significant contribution to nonattainment in downwind states by 2011 for the 2008 ozone NAAQS. When states failed to satisfy these Good Neighbor obligations, EPA promulgated additional federal rules, which also failed to mitigate the impacts of interstate air pollution transport on Connecticut. In 2019, the D.C. Circuit recognized in *Wisconsin v. EPA*² that the federal rules failed to prevent upwind states from significantly contributing to downwind state’s nonattainment. A short time later, *New York v. EPA*³, reinforced the Wisconsin ruling. While EPA’s most recent Good Neighbor FIP [87 CFR 20036], relative to the 2015 ozone NAAQS, is directionally correct, it will not fully mitigate the impacts of transport. DEEP urges EPA to act timelier in its role of ensuring that states fully comply with CAA section 110(a)(2)(d) Good Neighbor requirements.

Comment: EPA anticipates, based on monitoring data, that the New York - New Jersey - Connecticut (NY-NJ-CT) nonattainment area will be reclassified from serious to severe for the 2008 ozone NAAQS. This reclassification introduces a new attainment date of July 20, 2027. In addition, the NY-NJ-CT nonattainment area has an attainment year of 2024 for the 2015 ozone NAAQS. EPA encourages New York, New Jersey, and Connecticut to work together to explore a variety of possible control measures, to assist in working towards attainment.

Response: DEEP appreciates EPA’s recognition of the difficult position Connecticut is in as DEEP continues to work with these nearby upwind states to reduce their significant contribution to Connecticut’s nonattainment.

Comment: An OTC workgroup released a report in 2021⁴, which explored control technology for large municipal waste combustor (MWC) units in the Ozone Transport Region (OTR). The workgroup concluded that control technologies currently installed at some of the MWC facilities can result in NOx limits of 105 parts per million (ppm) on a 24-hour basis and 110 ppm on a 30-day basis. In Connecticut, MWCs are the largest point source sector in the state, so DEEP should explore any possible reductions from this sector.

Response: The OTC MWC Workgroup report included annual NOx emission data from 12 large MWC units in Connecticut. Table 1 below shows annual NOx emissions in tons per year (tpy) from the Connecticut units identified in the workgroup’s report for 2017 to 2020. Total NOx emissions decreased from 2017 to 2020 due to rule changes implemented in Regulations of Connecticut State Agencies (RSCA) 22a-174-38, which required optimizing NOx emission controls effective in August 2017.

The report also indicates that approximately 63 MWC facilities exist outside of the OTR, most of which are large MWCs. Of these 63 units, 12 are in states which contribute significantly to poor air quality in the OTR.

² *Wisconsin v. EPA*, 938 F.3d 303, 312–13 (D.C. Cir. 2019)

³ *New York v. EPA*, 781 F. App’x 4, 7 (D.C. Cir. 2019).

⁴ Ozone Transport Commission, Stationary and Area Sources Committee, *Municipal Waste Combustor Workgroup Report*, June 2021. https://otcair.org/upload/Documents/Reports/20210624%20SAS%20MWC%20report%20updated%2012_9_21.pdf

Table 1: Annual NOx emissions at 12 large MWC units in Connecticut from 2017 to 2020.

Plant Name	County	2017 Annual NOx Emissions (tpy)	2018 Annual NOx Emissions (tpy)	2019 Annual NOx Emissions (tpy)	2020 Annual NOx Emissions (tpy)
Wheelabrator Bridgeport	Fairfield	354.5	312.9	329.1	318.4
Wheelabrator Bridgeport	Fairfield	358.0	323.1	315.3	325.2
Wheelabrator Bridgeport	Fairfield	383.0	309.4	312.8	317.6
Covanta Bristol Energy	Hartford	104.5	95.0	108.6	108.6
Covanta Bristol Energy	Hartford	150.0	119.1	131.3	127.8
CT Resource Rec Authority Facility / MIRA	Hartford	226.3	144.7	155.6	189.6
CT Resource Rec Authority Facility / MIRA	Hartford	184.5	139.9	155.9	149.4
CT Resource Rec Authority Facility / MIRA	Hartford	199.9	141.6	180.4	175.7
Covanta Southeastern Connecticut Company	New London	182.6	168.4	168.1	156.5
Covanta Southeastern Connecticut Company	New London	184.7	161.8	157.7	153.1
Wheelabrator Lisbon	New London	135.4	125.9	121.7	119.6
Wheelabrator Lisbon	New London	131.4	126.8	117.8	117.9
Total Annual NOx		2594.8	2168.6	2254.3	2259.4

Connecticut has already committed to pursue adoption of feasible control measures for these sources that result from the OTC recommendations⁵.

Since additional NOx controls may be considered feasible in the OTR, EPA should urge these linked states to also explore these additional NOx controls as well.

Additionally, DEEP notes that the resource recovery facility (MIRA) in Hartford is anticipated to shut down in 2023. The MIRA facility currently emits approximately 514 tons of NOx per year.

⁵ Connecticut Department of Energy and Environmental Protection Bureau of Air Management, *Reasonably Available Control Technology Analysis under the 2008 8-Hour Ozone National Ambient Air Quality Standard Reclassification to Serious Nonattainment and the 2015 8-Hour Ozone National Ambient Air Quality Standard Initial Classification*. Page 14-15. November 2020. <https://portal.ct.gov/-/media/DEEP/air/RACT/Attachment-A-1-Final-RACT-SIP-Revision-Rev.pdf>

Comment: Connecticut should explore VOC emissions reductions from volatile chemical products (VCP). The Long Island Sound Tropospheric Ozone Study (LISTOS) conducted studies to learn important information about the formation of ozone in the New York City (NYC) metropolitan area, over Long Island Sound, and along the coast of Connecticut. LISTOS research revealed that the VOC emissions from VCPs may play an important role in ozone formation in the area and the impact is underestimated. DEEP should explore the possibility of control requirements to limit VCP emissions from the variety of products in which they are found.

Response: The LISTOS research, summarized in “*Volatile Chemical Product Emissions Enhance and Modulate Urban Chemistry*” by Coggon et al.⁶, indicates that VCPs make up half of the petrochemical VOCs emitted in urban areas and contribute as much as 10 parts per billion (ppb) to nearby ozone concentrations. DEEP appreciates EPA’s suggestion and will further explore the benefits of controlling anthropogenic VCP especially as it relates to ozone concentrations in areas downwind of high VCP emitting urban centers.

Comment: The NY-NJ-CT nonattainment area includes a variety of marine ports where commercial marine vessels (CMV) dock. CMVs typically use diesel auxiliary engines, which creates an opportunity for reducing NOx emissions at these ports. The California Air Resources Board (CARB) introduced regulations that require CMVs to use electric power or use control equipment on their auxiliary engines when docked. EPA offers additional resources at their “Ports Initiative” website for DEEP to explore potential emission reduction opportunities at ports from CMVs, heavy-duty trucks, and locomotives.

Response: DEEP has made efforts to reduce diesel emissions from CMVs and at ports through funding from the Diesel Emissions Reduction Act (DERA) and the Volkswagen Settlement. A large portion of that money, approximately \$6 million, has been spent at coastal sites and ports. To date, DEEP has allocated approximately \$2 million to retrofit a variety of CMVs, approximately \$700,000 for retrofitting heavy-duty diesel trucks and establishing a Truck Stop Electrification facility at the Port of New Haven, and approximately \$3 million on an electric gantry crane also at the Port of New Haven. DEEP intends to continue to distribute grant money to NOx emission reduction programs at ports and coastal areas and will further consider all measures to reduce emissions from these sources, including consideration of EPA’s Ports Initiative Website and CARB’s electrification project.

Comment: DEEP should review current aboveground storage tank regulations to determine whether any update should be made to ensure that any potential control technology, testing, or emissions limits would be beneficial.

Response: DEEP agrees that current aboveground storage tank regulations should be reviewed and is investigating the potential for further reduction of VOC emissions from storage tanks.

⁶ Mathew M. Coggon et al. August 10, 2021. Volatile chemical product emissions enhance ozone and modulate urban chemistry. Proceedings of the National Academy of Sciences. 118(32); <https://doi.org/10.1073/pnas.2026653118>

Comment: Connecticut is a national leader in development of policies to reduce GHG emissions such as EV Connecticut and the Connecticut Hydrogen and Electric Automobile Purchase Rebate (CHEAPR). An additional benefit of these policies and programs is the reduction of ozone precursor emissions. EPA recommends that DEEP continue to explore ways to bring the benefits of energy efficiency and renewable energy technologies together through the “GLIMPSE” model.

Response: The recent enactment of Public Act 22-25 will provide additional funding to DEEP to expand CHEAPR to increase the pace of vehicle electrification. DEEP staff also took part in information sessions presented by EPA in 2021 on the use of the GLIMPSE model and staff have been working with EPA to develop skills in using the model. Connecticut thanks EPA and will continue to build knowledge of the model and consider how it might assist in planning for ozone attainment.

Comment: DEEP should explore potential benefits from a clean peak energy standard similar to Massachusetts’ 2020 Clean Peak Energy Standard, which creates incentives for renewable energy use and storage during high electric demand days (HEDD).

Response: DEEP participated in the OTC HEDD workgroup in 2016 and 2017 and provided insight to the group regarding strategies for reducing NOx emissions from electric generating units (EGUs) on HEDD⁷. Connecticut has two rules for limiting NOx emissions from EGUs on HEDD. Regulations of Connecticut State Agencies (RCSA) section 22a-174-22e (NOx RACT rule) and RCSA section 22a-174-22f are aimed at controlling NOx emissions on HEDD from major and non-major sources of NOx, respectively. These rules set limits for NOx emissions with specific requirements for ozone season.

DEEP will continue its efforts to reduce NOx emissions on HEDD and explore the potential for incentives to increase the use of renewable energy and energy storage at (EGUs).

Comment: DEEP should consider reaching out to facilities with older industrial and commercial sized boilers, as provided in the attached list, to be sure they are aware of EPA’s [ENERGY STAR](#) program.

Response: DEEP has emailed the representatives on the list to provide them with ENERGY STAR information and suggested they consider the benefits of replacing their boilers. Further, DEEP encourages consideration of ENERGY STAR upgrades through its website, [CT Energy Efficiency](#), which also contains additional information regarding energy efficiency and conservation for homes and businesses throughout Connecticut.

⁷ Ozone Transport Commission, Stationary and Area Sources Committee, *Strategies to Reduce Emissions of Nitrogen Oxides on High Electric Demand Days*, August 10, 2017. [https://otcair.org/upload/Documents/Meeting%20Materials/OTC HEDD Workgroup Strategies Whitepaper Final Draft 0828 2017.docx](https://otcair.org/upload/Documents/Meeting%20Materials/OTC%20HEDD%20Workgroup%20Strategies%20Whitepaper%20Final%20Draft%2008282017.docx)

Comment: The NY-NJ-CT serious nonattainment area did not reach attainment by the July 2021 deadline for the 2008 ozone NAAQS. DEEP's SIP provides state contributions in parts per billion (ppb) using EPA modeling to support the Revised CSAPR Update rule, which shows the impact of upwind states' pollution to downwind states' ozone monitors. The data show that New York and New Jersey are the largest upwind contributors, which amplifies the need for continued emission reductions in the nonattainment area itself, in addition to the states outside of the nonattainment area.

EPA notes that Connecticut's SIP does not include additional modeling results or other analyses to examine the extent and location of emissions of ozone precursors in the area, and how to achieve any necessary reductions. As a result, EPA encourages Connecticut to work with New York and New Jersey to produce modeling analyses that allow the states to determine where emissions reductions can be achieved within and outside of the nonattainment area. The states should also collaborate to determine the most efficient combination of VOC and NOx emissions reductions and a reasonable timeline for achieving these reductions.

Furthermore, EPA intends to propose Federal Implementation Plans (FIPs) to determine any ozone precursor emission reductions that are necessary to eliminate significant contribution from upwind states for the 2015 NAAQS. Any emissions reductions from these FIPs may help Connecticut attain the 2008 and 2015 ozone NAAQS in the future.

Response: Modeling results referenced in our SIP included ongoing reductions in emissions from existing rules. DEEP continues to collaborate with New York and New Jersey to determine further emissions reductions to pursue within the nonattainment area. As noted in our SIP, full compliance with the CAA prohibitions on transport of air pollutants from upwind states would assure attainment in Connecticut. DEEP notes that in April 2022, EPA proposed its Good Neighbor FIP for the 2015 ozone NAAQS. While EPA's proposal is directionally correct and an improvement over past efforts to address interstate air pollution transport, DEEP notes the trading provisions within this proposal will not ensure the impacts of transport are fully addressed.

Comment: Southwest Connecticut is classified as serious for ozone nonattainment for the 2008 NAAQS and as a result, is required by CAA section 182(g) to submit an RFP milestone compliance document (MCD) to EPA for the 2008 and 2015 NAAQS. Since DEEP's SIP includes an RFP Plan that demonstrates that the RFP milestone for 2018-2020 was met, EPA suggests that 2020 emissions and 2020 RFP target emissions be used to satisfy MCD obligations.

Response: DEEP appreciates EPA's effort to streamline the MCD process and has amended the RFP portion of the SIP to document that Connecticut has met the MCD obligation. Section 9.3 of the SIP has been modified to include the following sentence: **Moreover, these reductions demonstrate RFP milestones were met and satisfy the requirements of CAA section 182(g).**

Comment: Connecticut's SIP Revision includes the state's commitment to adopt contingency measure from the mobile source sector since this sector plays an important role in ozone

formation. The measures identified and adopted by DEEP should be prospective and have a triggering mechanism dependent on notification by EPA.

Response: DEEP will continue its efforts towards adopting and implementing contingency measures for the mobile source sector and notes that existing motor vehicle emissions are reduced through fleet turnover which is prospective in nature. DEEP believes it is practical and beneficial to be proactive in implementing these emissions reductions as we are fully aware that monitoring data and the failure of upwind states to satisfy CAA Good Neighbor requirements leave us with a continued designation of nonattainment.

Comment: The OTC's HEDD workgroup released a report in 2016 which evaluated NOx emissions from small EGUs that are not required to report their emissions due to their small size. EPA suggests that DEEP evaluate whether these units should be required to report their emissions because their emissions on HEDD can be substantial, and the modeling done by EPA may not accurately represent this sector.

Response: Connecticut's RCSA section 22a-174-22f became effective in 2016 to obtain emission reductions from high daily NOx emitting units at non-major sources of NOx. DEEP considered recordkeeping and reporting requirements in development of the regulation and they were included in the regulation upon its adoption.

Comment: Connecticut should consider revising its existing case-by-case RACT requirements to include expiration/re-application provisions similar to those New Jersey recently incorporated into N.J.A.C 7:27-19.13, which allows the state to re-evaluate previously issued requirements to discern whether advances in air pollution control technologies not previously available may be appropriate for the source.

Response: DEEP has reviewed the expiration/re-application provisions of New Jersey's case-by-case RACT ([N.J.A.C. 7:27-19.13](#)) and determined them to be less stringent than Connecticut's ([R.C.S.A. 22a-174-22e\(h\)](#)). Connecticut requires case-by-case RACT sources to conform to standard RACT requirements or shut down by May 1, 2028. NJDEP's rule provides sources continued opportunity to operate under less stringent case-by-case RACT through the re-application process and thus operate beyond the original expiration date which may have been used to justify such alternative RACT. DEEP should not revise its case-by-case RACT rule to conform to New Jersey's.

Comment: The Infrastructure Investment and Jobs Act (IIJA), which was mentioned in the proposal as providing funding for electric vehicles (EVs) became Public Law No: 117-58 effective on November 15, 2021. Additionally, Connecticut mentioned potential entry to the Transportation and Climate Initiative Program (TCI-P), but instead withdrew from the program.

Response: Connecticut has revised the SIP, on page three, to note the Infrastructure Investment bill is now Law and has removed language regarding the TCI-P.

Comment: Included in Connecticut’s SIP is Table 7-1 “2020 Motor Vehicle Emission Budgets,” which has a potential error under the listed 2020 VOC Budget for Southwest Connecticut. EPA notes that the 2020 value is the same as the 2017 budget and that DEEP should investigate this issue. Additionally, EPA Region 1 needs to review the MOVES input and output data to replicate the runs to arrive at the same data submitted as 2020 MVEBs.

Response: The inputs used in the 2020 MVEBs were based on the latest information at the time of analysis. Between the development of the 2017 MVEBs (based on CT Department of Transportation [DOT] VMT Series 31) and the development of these 2020 MVEBs (based on CT DOT VMT Series 31H), CT DOT updated their traffic demand model with more recent data. This update resulted in significant increases of modeled VMT nearly across the board, with some counties and source types, especially heavy-duty source types, rising more than others. While MVEBs appear identical on paper, they are in fact based on the best available VMT data at the time of each analysis and are accurate. In addition, other required inputs (Vpop, age dist, hoteling, etc) were also updated with the latest best assumptions, which results in other less significant effects on the values presented in the table below.

Table 2: 2017 and 2020 MVEBS for Southwest Connecticut.

	Fairfield	Middlesex	New Haven	Total	MVEB (Total + 2% Safety)	
2017 SWCT MVEB VOC	7.9914	1.7247	7.492	17.208	17.6	Based on CTDOT Series 31
2020 SWCT MVEB VOC	8.2506	1.6775	7.3451	17.273	17.6	Based on CTDOT Series 31H

DEEP made the MOVES input and output data available for download on our [Ozone Planning webpage](#) under the 2008 NAAQS header.

Comments by Sierra Club

Comment: In recent years, Connecticut has reduced NOx emissions from the mobile source sector through actions such as adopting California’s motor vehicle emission standards. Sierra Club urges DEEP to continue this work and adopt the Advanced Clean Trucks (ACT) rule and the Heavy-Duty Omnibus rule to ensure that ozone pollution in the state is reduced through the reduction of NOx and other ozone precursor emissions.

Response: DEEP appreciates Sierra Club’s recognition of the many steps Connecticut has taken to reduce emissions that contribute to ozone formation in the state. As stated in the SIP, DEEP agrees that the ACT and Heavy-Duty Omnibus rules can help reduce ozone and NOx emissions in the state.

Connecticut signed onto the multistate [Memorandum of Understanding Medium and Heavy Duty Vehicles](#) (MHD MOU) in July of 2020. One of the stated goals of that MOU is to adopt the California Advanced Clean Trucks and Low NOx rules. Further, Governor Lamont signed an Executive Order in 2021, [21-3](#), that required the Department to undertake [an assessment](#) of adopting those standards, which the Department released on

March 9, 2022. Additionally, the Connecticut General Assembly enacted [Public Act 22-24](#), *An Act Concerning the Connecticut Clean Air Act*, which authorizes DEEP to adopt the California medium and heavy-duty vehicle standards. The Department anticipates it will commence rulemaking efforts as soon as practically possible.

Additional Comments of the Hearing Officer

Given the time elapse from the date of public notice for this proposed SIP revision, the Department updated the non-substantive introductory portions of the SIP narrative to better reflect the current factual status of internally referenced materials. As such, the following non-substantive changes to the narrative were made:

- On page 2, updated references with respect to the status of National Highway Traffic Safety Administration efforts regarding fuel efficiency standards for 2024-26 model year passenger cars and light trucks;
- On page 2, updated statistics and programs designed to expedite the deployment of low emitting and electric vehicles;
- On page 4, updated text and references to acknowledge EPA’s recently proposed [Federal Implementation Plan Addressing Regional Ozone Transport for the 2015 Ozone National Ambient Air Quality Standard](#) published on April 6, 2022;
- On page 14, to correct a minor typographical error and text changes to reflect that EPA has issued draft heavy-duty vehicle standards; and
- On page 16, changes made regarding the new I/M contract.

Conclusion

Based upon the comments submitted by interested parties and addressed in this report, I recommend that the SIP revision, revised as recommended in this report, be submitted to EPA for approval.

/s/ Kristin Salimeno
Kristin Salimeno, Hearing Officer

June 21, 2022
Date