pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

June 20, 2022

Honorable Michael S. Regan
Administrator
United States Environmental Protection Agency
Air and Radiation Docket
1200 Pennsylvania Avenue, N.W.
Washington, DC 20460

Attn: Docket ID No. EPA–HQ–OAR–2021–0668

RE: Comments on EPA's proposed rulemaking entitled "Federal Implementation Plan Addressing Regional Ozone Transport for the 2015 Ozone National Ambient Air Quality Standard." 87 Fed. Reg. 20,036 (April 6, 2022)

Dear Administrator Regan:

The Pennsylvania Department of Environmental Protection (Department) appreciates the opportunity to provide comments on the United States Environmental Protection Agency's (EPA) proposed rulemaking entitled "Federal Implementation Plan Addressing Regional Ozone Transport for the 2015 Ozone National Ambient Air Quality Standard." 87 Fed. Reg. 20,036 (April 6, 2022) (Proposed Transport FIP). For your consideration, the Department submits the following comments and supporting information.

Foremost, the Department supports EPA's dynamic oxides of nitrogen (NOx) budgeting process, the 10% budget limitation on banked allowances, and the 3:1 allowance surrender for excess emissions when daily average NOx emissions for coal fired EGUs exceed 0.14 lb/mmBtu. The 0.14 lb/mmBtu daily backstop and other measures ensure that reductions of NOx emissions are made and retained during future ozone seasons. The Department strongly supports the Proposed Transport FIP because it attempts to provide a full remedy to the region's ozone transport issues. It is important that the 5-county Philadelphia nonattainment area in Pennsylvania receives the maximum benefit from other states reducing their respective contributions of ozone transport by implementing the measures in the Proposed Transport FIP. However, the Department is concerned that high ozone monitored values in southeast Pennsylvania, which will impact future design values and Pennsylvania's ability to reach attainment, may not match EPA's modeling results due to the transport of ozone from high emitting EGUs in other states on high electric demand days (HEDDs). Therefore, the Department recommends that the 0.14 lb/mmBtu daily backstop (backstop) be applied across the board to all EGUs covered by the Proposed Transport FIP rather than just to coal fired units in order to reduce emissions from high emitting units which primarily operate on the highest ozone days. As such, EGUs with rated capacities below 25 Megawatts (MW) should also be addressed in the Proposed Transport FIP.

Potential Impacts from the "Coal-Only" Backstop

The application of the backstop emission rate to coal fired units with selective catalytic reduction (SCR) controls in 2024, and then to other coal units not currently controlled with SCR in 2026, will cause an economic disparity that will allow higher emitting NOx units to run at an economic advantage for two years. This could cause an increase in NOx precursor emissions and the transport of ozone within the two-year timeframe due to generation leakage toward higher emitting units. Pennsylvania is concerned that leakage toward higher emitting units will make it difficult for the Commonwealth to demonstrate attainment of the 2015 ozone standard by August 3, 2024. The 2024 attainment date would be required due to EPA's recently proposed 'bump up' of the Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE area to moderate nonattainment from marginal nonattainment. 87 Fed. Reg. 21842, 21846 (Apr. 13, 2022).

The Proposed Transport FIP addresses EGUs rated above 25 MW. Regarding EGUs rated at or below 25 MW (small EGUs), EPA has requested comment on whether there are any cost-effective reductions and corresponding air quality benefits to nonattainment or maintenance receptors from any units within this small EGU segment. In response, the Department believes EPA should consider that these small EGUs emit more NOx on a heat input basis and tend to operate more on high ozone days. The economics, due to the backstop, may displace cleaner coal generation in favor of these higher emitting small EGUs that can now operate at a lower cost. The "SCR coal only backstop" could increase NOx emissions on high ozone days due to generation leakage to small EGUs, which are not currently addressed in the Proposed Transport Rule. EPA's argument to exclude smaller EGUs (see 87 Fed. Reg. 20084-20285) is flawed because if these excess emissions are not subject to the same economic cost, EPA may be causing emissions backsliding through economic disparity.

Another consideration is that many of the higher emitting HEDD units operate in environmental justice communities emitting NOx along with other pollutants, including carbon monoxide (CO), fine particulate matter (PM 2.5), and volatile organic compounds (VOCs). The unintended consequences from this backsliding, which is not permitted under the federal Clean Air Act (CAA), should be reviewed for Environmental Justice related issues. In Attachment 1, the Department lists 24, 921 MW of capacity for 5,776 small EGUs operating in the affected transport states which could benefit from the economics of the Proposed Transport FIP backstop program. This data is taken from the U.S. Energy Information Administration's (EIA) form EIA860. This capacity is equivalent to 24 large uncontrolled power plants. The number of units and rated capacity is likely much greater than those identified in EIA, but the EIA does not collect data from all small EGUs. Many of these units can emit NOx at greater than 0.14 lb/mmBtu, averaged, on a daily basis, and operate on the worst ozone days. The Department recommends that EPA should apply the backstop or another similar standard to these units and require a 3:1 surrender for excess emissions consistent with the proposed backstop for coal units.

Based upon 1993 information, EPA argues in the Proposed Transport FIP that due to low potential reductions, relatively high cost per ton of reduction, and high monitoring and other compliance burdens EPA has not included control requirements for emissions for units less than or equal to 25 MW (87 Fed. Reg. 20084). EPA argues that a preliminary survey of current data, compared to this initial justification, does not appear to offer a compelling reason to depart from

this past practice by requiring emission reductions from these small EGU sources as part of this rule. EPA argues that only 6 percent of the nationwide emissions come from small EGUs. However, the Department believes EPA uses that metric incorrectly as 365 days a year on a nationwide basis is not representative of health impacts on any specific high ozone day. Since these units primarily operate on the worse ozone days, EPA should look at these HEDD units' percentage of emissions contribution on high ozone days. If EPA never evaluates all EGUs on a high ozone day basis, it will allow the smaller and higher emitting EGUs to displace cleaner electricity generation.

Trading programs generally allow cleaner EGUs to operate more because they can provide electricity at a lower cost due to reduced allowance retirement. Higher emitting units are less cost effective and operate less due to the cost of buying allowances for compliance. An economic based program should require the next cleanest MW of electricity to be generated at the lowest cost. Adjusting the backstop to apply to all high emitting units would help achieve that objective.

As mentioned above, many of the higher emitting units operate in environmental justice communities. Thus, there is a public health detriment when infrequently run units, operating without controls, emit NOx on high ozone days. The 0.14 lb/mmBtu of heat input backstop, with the requirements of a 3:1 surrender for excess NOx emissions, not only provides a significant economic incentive to prevent coal units from operating without running their SCR controls, would also provide incentive not to run other high emitting units if properly applied. The Proposed Transport FIP should not incentivize the operation of higher emitting NOx units due to the lower cost from not having a daily backstop nor a 3:1 daily excess emissions retirement penalty.

Many units participating in the Clean AIR Markets Division's (CAMD) trading program subject to the Proposed Transport FIP can exceed the daily backstop of 0.14 lb NOx/mmBtu on any number of individual days. The Department is providing a list of CAMD EGU units that exceed the 0.14 lb/mmBtu backstop averaged for the whole ozone season, as an example of its concern. Attachment 2 provides a list of 2021 CAMD non-coal units in various states with emissions that exceed the 0.14 lb NOx/mmBtu on a daily basis. These units could operate and displace lower NOx emitting coal units due to the economic costs placed on coal units from the 3:1 allowance surrender imposed by the proposed backstop. This could cause a trading program backsliding issue under the CAA. The Department recommends that EPA require a daily backstop in the Final Transport FIP for all EGUs that emit NOx at greater than 0.14 lbs. of NOx per mmBtu; and, as with coal units, EPA should subject all of these EGUs to the 3:1 allowance surrender rate for excess daily NOx emissions.

EPA Modeling Approach

The Department supports EPA's use of the average of the 10 highest modeled exceedances for determining each upwind state's contribution to each receptor in downwind states. Other commentators may favor a modeled 4th highest exceedances approach in determining contribution; however, the use of that approach can concentrate ozone impacts based upon one type of meteorological scenario. The 4th highest modeled exceedances approach could cause an

overestimation of ozone contributions as actual meteorology often differs from the modeled meteorology.

Non-EGU Issues

The Department supports EPA's proposed non-EGU limits for certain source categories as well as the development of a standard for Municipal Waste Combustors in the Proposed Transport FIP. However, the Department has concerns about how the limits being proposed may impact NOx reductions and transport issues that go beyond the ozone season. EPA's analysis includes high dollar per ton of NOx reduced costs associated with those source categories. The costs in the Proposed Transport FIP - for the non-EGU limits - go beyond the costs associated with reductions made by EGUs. If the non-EGUs were allowed to participate in limited trading by buying and surrendering allowances for excess emissions, EGUs participating in the trading program would then be able to make additional cost effective reductions to address any excess emissions generated by the non-EGUs.

Allowing non-EGU owners and operators the option to buy and retire allowances for excess emissions through an allowance surrender requirement during the control period would address the issue of regulating NOx emissions generated outside the ozone season. If EPA needs to consider the limits as backstops it should require a 3:1 surrender, similar to coal fired EGUs, for excess emissions. This would provide incentive to control the units during the ozone season. This non-EGU allowance surrender approach would be more consistent with the provision of past trading programs. Treating the proposed non-EGU limits as backstops or requiring allowance surrender for excess emissions would give non-EGUs with existing control and limits in place some flexibility in meeting the Proposed Transport FIP obligations without causing compliance issues in many states, including Pennsylvania.

Lastly, the Department recommends that EPA review its definitions and clarify natural gas fired units, specifically at steel/ferroalloy facilities where some boilers use a combination of natural gas and coke oven gas in their operations. The Department recommends that EPA consider proposing a specific standard for coke oven gas or provide definitions that address coke oven gas and natural gas fuel fired combinations to clarify what is a coke oven gas fired boiler and what is a natural gas fired boiler.

Conclusion

The Department is supportive of EPA's Proposed Transport FIP and appreciates EPA's consideration on recommended improvements mentioned above. Where previous transport FIPs have come up short providing a full remedy addressing the Good Neighbor provision under the CAA, the Proposed Transport FIP adequately addresses ozone transport issues across many states. The Proposed Transport FIP also succeeds in helping Pennsylvania and other states in the Ozone Transport Region attain and maintain the 2015 ozone standard.

Again, thank you for your consideration in this matter.

This letter, along with the attached supporting documentation, is being submitted to EPA electronically through Regulations.gov. Should you have any questions regarding this submission, please contact Mark Hammond, Director for Bureau of Air Quality, by e-mail at mahammond@pa.gov or by telephone at 717.787.9702.

Sincerely,

Patrick McDonnell
Secretary

cc: Cristina Fernandez, EPA Region III
Mark Hammond, DEP, Director, Bureau of Air Quality

Attachments