



Good Neighbor Ozone Transport in 2021: What's the Fuss for NOx Sources in Upwind States?

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Congress addressed the issue of interstate transport of air pollution in the Clean Air Act by enacting a Good Neighbor Provision. That provision requires upwind states to eliminate their contributions to air pollution in downwind states. EPA has promulgated various rules to implement the Good Neighbor Provision, beginning with the NOx Budget Trading Program and including the Clean Air Interstate Rule and, most recently, the Cross-State Air Pollution Rule (CSAPR). These rulemakings address the interstate transportation of ozone. CSAPR is updated regularly to align with the current ozone National Ambient Air Quality Standard (NAAQS). In response to various legal challenges and to update CSAPR with respect to the 2008 ozone NAAQS, EPA amended CSAPR in 2016. In 2019, the D.C. Circuit in *Wisconsin v. EPA* found that EPA's 2016 amendment only partially addressed downwind contributions from upwind states. Because upwind states were continuing to contribute to the inability of downwind states with moderate nonattainment areas to meet the July 2018 attainment date for the 2008 ozone NAAQS, the D.C. Circuit remanded the rulemaking and required EPA to revisit required reductions of upwind contributors.

In response to the D.C. Circuit's order, EPA recently published its proposed Revised Cross-State Air Pollution Rule Update for the 2008 ozone NAAQS (the Proposed Rule). Unlike past iterations of CSAPR, the Proposed Rule prescribes emissions reductions that are likely to significantly impact electric generation unit (EGU) operation, electricity costs, and may affect non-EGUs. Comments were due on December 14, 2020. The proposal drew a large array of commenters, from the usual suspects (eNGOs and consortiums of EGUs) to states, trade associations, and companies representing non-EGU interests, such as the American Chemistry Council, the American Petroleum Institute, the Portland Cement Association, and the American Forest and Paper Association.

Proposed Rule Summary

The Proposed Rule addresses the contributions of upwind states to downwind state ozone attainment of the 2008 NAAQS of 75 ppb. Notably, this rulemaking does not address possible future adjustments that

may result from the final 2015 ozone NAAQS, which has a lower attainment benchmark of 70 ppb. The Proposed Rule dictates NO_x reductions exclusively from EGUs. However, it contemplates contributions from non-EGU sources because it requested comment on information gaps and the cost and ability of non-EGUs to employ certain NO_x reduction technologies. EPA has a court-ordered deadline of March 15, 2021 for final rule signature.

The Proposed Rule seeks to implement the requirements ordered by the court. It proposes substantial NO_x seasonal emission reductions for EGUs in 12 states beginning in the 2021 ozone season through 2024. These upwind states are Illinois, Indiana, Kentucky, Louisiana, Maryland, Michigan, New Jersey, New York, Ohio, Pennsylvania, Virginia, and West Virginia. EPA found that 10 states that previously were determined to be "upwind" are no longer linked to downwind receptors. EPA identified the 12 upwind states because those states' projected 2021 emissions contribute at or above a threshold of 1% of the 75 ppb NAAQS to the identified nonattainment and/or maintenance problems in downwind states. Seasonal NO_x budget reduction amounts and timelines are based on existing controls on EGUs, such as existing selective catalytic/noncatalytic reduction (SCR/SNCR) controls and installation or upgrade of low NO_x burners and SCRs/SNCRs.

The Proposed Rule also imposes a one-time conversion of allowances banked between 2017 and 2020 from the Group 2 to the Group 3 Trading Program. The conversion is set to occur no later than 180 days after publication of the Final Rule, which is anticipated prior to the 2021 Ozone Season that begins on May 1, 2021. Data analysis from third party sources suggests that the banked emissions reductions will be at least 7:1.

What's the Fuss?

1. Could the Final Rule require non-EGUs to reduce NO_x emissions? EPA concluded that emissions reductions at non-EGUs were too expensive versus options for EGUs. EPA solicited comment on the cost and feasibility of emissions reductions. Non-EGU trade associations responded with support for no non-EGU emissions reductions, arguing that reductions would be too expensive. It is uncertain if EPA will agree.

2. Current unit emissions budgets are aggressive and are unprecedented Coal units are likely to be forced to operate less during the ozone season. Calculations of the emissions budgets show that higher NO_x emitters, even those with SCRs, will not have enough allowances to operate at higher capacity factors if called upon by regional transmission organizations.

3. The Proposed Rule calls for erosion of allowance bank cushions that could be a fallback should a hot summer require additional generation. EGUs that have been low NO_x emitters have been allowed to bank allowances. Those banks will be reduced, removing the incentives these units earned by installing and using SCRs and SNCRs. With less in the banks, units will not have any cushion should a hot summer require additional run-time.

4. Coal units will be held at lower capacity factors due to the state budgets based on 2019 and the five-year unit allocation baseline (2015-2019) used by EPA. Coal units have been dispatched less frequently in the last five years due to less expensive natural gas prices. EPA's methodology holds

coal units to past utilization rates by decreasing state budgets and determining unit allocations using low-emitting baseline years. As a result, the Proposed Rule caps coal fleet generation even though future demand and economics (pricing changes) may otherwise dispatch these units in the future.

5. The Proposed Rule has a bias against small generation systems that do not have the option of generation shifting. With allowance budgets so tight, EGUs with large generation systems will survive better than EGUs that own fewer assets. Large systems can dispatch lower NOx emitters when emissions from coal-fired assets begin to eclipse budgets. In contrast, many systems serving rural communities are served by municipalities and electric cooperatives that do not own many EGUs. Without options, smaller system owners will likely be forced to purchase power if owned assets exceed CSAPR budgets. These costs will be passed along to customers.

6. The Proposed Rule removes allowances from retired units but does not let EGUs make up that generation formerly supplied by those units. When units retire, their allocations will sunset from the state budget. The result is a decreasing state budget, although customer demand will not decrease. It is unclear how the lost generation can be made up if the state budget does not allow for allocations to be re-distributed.

Conclusion

Electricity will become more expensive in the 12 upwind states. Why? State budgets are tight. If an EGU exceeds its NOx seasonal allocation budget, it must purchase allowances. Allowances are expected to quadruple in cost, which will be passed along to customers in rates. EGUs will also have the choice of purchasing power. However, purchased power costs will be added to costs to maintain and pay off owned asset debt. For instance, if an EGU is paying off debt incurred due to adding a SCR on a coal unit, that debt must still be paid off, even if the unit cannot run due to the Final Rule updating CSAPR. Either way, electricity costs will increase due to the scarcity of seasonal NOx allowances. Those increases will be borne by the customers.

The Final Rule is likely to have a substantial impact on EGU generation in the 12 upwind states beginning in May 2021. EGUs and non-EGUs will be tracking the outcome of the rulemaking in the first quarter of 2021. Meanwhile EPA will have the tall task of wading through the 86 public comments, developing the final rule, obtaining OMB approval, and finalizing the rule in only four months.

Revised Cross-State Air Pollution Rule Update, 85 Fed. Reg. 68964 (Oct. 30, 2020).

Wisconsin v. EPA, 938 F.3d 303 (D.C. Cir. 2019).

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