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U.S. Environmental Protection Agency
Air and Radiation Docket Information Center
Docket ID No. EPA-HQ-OAR-2016-0751
WJC West Building, Room 3334
1301 Constitution Ave. NW
Washington, DC 20004

Electronic submission via <http://www.regulations.gov>

Re: Docket ID No. EPA-HQ-OAR-2016-0751 - Comments on EPA's Notice of Data Availability Regarding Preliminary Interstate Ozone Transport Modeling Data for the 2015 Ozone National Ambient Air Quality Standard (NAAQS), 82 FR 1733, January 6, 2017

On behalf of the Commonwealth of Kentucky, the Kentucky Energy and Environment Cabinet's Division for Air Quality (Division) respectfully submits the following comments in response to the January 6, 2017 Notice of Data Availability (NODA) referenced above. The Federal Register notice solicited comments relating to EPA's preliminary interstate ozone transport modeling data for the 2015 Ozone National Ambient Air Quality Standard (NAAQS). In light of the necessity, purpose, and significant implications associated with the modeled outcomes, the Division strongly recommends that EPA conduct an updated modeling analysis and provide a final contribution assessment prior to August 1, 2017.

Necessity and Purpose of the Interstate Ozone Transport Modeling for the 2015 Ozone NAAQS

On October 26, 2015, EPA published a rule revising the 8-hour ozone NAAQS from 0.075 parts per million (ppm) to a level of 0.070 ppm.¹ As mandated by Section 110(a)(1) of the Clean Air Act (CAA), states are required to submit State Implementation Plans (SIPs) to EPA that provide for the implementation, maintenance, and enforcement of a NAAQS within 3 years of the promulgation of a new or revised standard. The SIPs address the applicable requirements of Section 110(a)(2) of the CAA and are generally referred to as "infrastructure" SIPs. An element of the "infrastructure" SIP is the "Good Neighbor" provision, which requires states to develop SIPs that prohibit any source or other emissions activity within the state from emitting air pollutants in amounts that will contribute significantly to nonattainment or interfere with

¹ 80 FR 65292

maintenance of the NAAQS in another state.² With respect to the 2015 ozone NAAQS, the “infrastructure” and “Good Neighbor” SIPs are due by October 26, 2018.

Considering that EPA’s Preliminary Interstate Ozone Transport Modeling Data for the 2015 Ozone NAAQS and subsequent updates as a result of comments received on this NODA will serve as a basis and determination for control strategies developed and implemented by air pollution control agencies, it is imperative that EPA “...engage in a transparent process that will allow states to have a meaningful opportunity to understand their obligations with regard to reducing emissions that cause or contribute to nonattainment or interference with maintenance in other states through the SIP process.”³ To accomplish the Administrator’s objective, EPA should accept the state’s comments on the NODA, revise the modeling inputs and conduct an updated contribution assessment, and provide a credible, defensible analysis that states can rely upon to satisfy the “Good Neighbor” provision of the “infrastructure” SIPs.

Emissions Inventory Concerns

After careful review of the emissions inventory developed and applied in the preliminary interstate transport modeling, the Division expresses grave concern regarding the inaccurate base year information, as well as the credibility of projected emissions in the 2023 modeled results. Failure to establish quality emissions inventory information will result in inaccurate results that may require the over-control of emissions prohibited by the Clean Air Act.⁴

In a recent brief, EPA illuminated the need to improve the quality of its data. EPA further explained that the information used in the preliminary interstate transport modeling is insufficient:⁵

As a first preliminary step, EPA must take steps to improve the quality of its information regarding the current status of existing controls for the non-EGU inventory and data on potential control devices that could be installed on uncontrolled or under-controlled sources. This information is necessary to quantify potential emissions impacts and reductions from non-EGU sources. If EPA does not gather this information with respect to non-EGUs, the results of EPA’s subsequent analyses might be inaccurate and might result in either over- or under-control of emissions relative to downwind air quality problems, a scenario that is prohibited by 42 U.S.C. § 7410(a)(2)(D)(i). EME Homer City Generation, 134 S. Ct. at 1604.

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² Section 110(a)(2)(D)(i)(I) of the Clean Air Act

³ <https://www.epw.senate.gov/public/cache/files/6d95005c-bd1a-4779-af7e-be831db6866a/scott-pruitt-qfr-responses-01.18.2017.pdf>.

⁴ 42 U.S.C. § 7410(a)(2)(D)(i), EME Homer City Generation, 134 S. Ct. at 1604

⁵ CASE NO. 3:15-cv-04328-JD, “EPA’S OPP. & CROSS-MOTION”, filed December 15, 2016, Page 14

Although the CSAPR Update included a preliminary assessment of non-EGU NO_x emission controls that could be installed for the 2017 compliance year, EPA believes that this information is insufficient to support an evaluation of longer-term NO_x emissions reduction potential for non-EGUs.

The Division agrees with EPA's assessment regarding the necessity of an accurate emissions inventory and a reasonable projection of future emissions to determine significant contribution in 2023. In review of the non-EGU emission projections, the Division found that EPA grew NO_x and VOC emissions from nonpoint oil/gas production in Kentucky by 25,195 and 13,954 tons respectively from 2011 levels.⁶ After reviewing this nonpoint emission category, the Division has not found any credible information that would justify such a significant emissions increase for this nonpoint oil and gas production sector for Kentucky.

On the contrary, the Division's research indicates a decrease in future gas production and a more modest increase in oil production from 2011 to 2023.⁷ The Division requests that EPA review this oil and gas information for Kentucky and work with the Division to ensure that the nonpoint oil and gas production emissions are accurate for Kentucky.⁸ At a minimum given the uncertainty regarding information for this emissions sector, the Division requests that EPA make the Kentucky 2023 nonpoint oil and gas production emissions the same as this emission sector's modeled 2011 Kentucky emissions.

Significance Threshold

Regarding the "significance threshold" applied for identifying interstate transport linkages, the Division finds the 1 percent threshold or 0.7 parts per billion (ppb) to be arbitrary and does not consider previous EPA determinations. In the Federal Register notice, EPA explains:⁹

The agency has historically found that the 1 percent threshold is appropriate for identifying interstate transport linkages for states collectively contributing to downwind ozone nonattainment or maintenance problems because that threshold captures a high percentage of the total pollution transport affecting downwind receptors.

However, in response to a petition filed by the Air Pollution Control District of Jefferson County for interstate pollution abatement under section 126 of the Clean Air Act, EPA concluded that 3% of SO₂ concentrations would neither cause nor contribute to violations of the NAAQS. Ultimately, the Court upheld EPA's decision based upon application of a three (3) percent threshold to determine whether a source of emissions substantially contributed to a violation of the NAAQS.¹⁰

⁶ (See attached County Sector Comparison file)

⁷ <http://oilandgas.ky.gov/Pages/ProductionReports.aspx>

⁸ (See attached County Sector Comparison file)

⁹ 82 FR 1740

¹⁰ 739 F. 2d 1071 - Air Pollution Control District of Jefferson County Kentucky v. United States

After doing additional computer modeling studies, the EPA, ostensibly to comply with the court order, proposed on July 30, 1981 to deny Jefferson County's section 126 petition. 46 Fed.Reg. 38,937. The EPA stated that Gallagher's uncontrolled SO₂ emissions neither cause nor substantially contribute to violations of the SO₂ NAAQSs in Kentucky. Id. According to the EPA modeling studies, Gallagher would contribute approximately three percent to those SO₂ concentrations in Jefferson County which violated the SO₂ NAAQSs.

In a more recent EPA determination, EPA published their 2016 Draft Guidance on Significant Impact Levels for Ozone and Fine Particles in the Prevention of Significant Deterioration Permitting Program and established a Significant Impact Level (SIL) of 1.0 ppb. EPA explained that the SIL "...provides a basis for a permitting authority to conclude that the concentration increases below this SIL do not cause or contribute to violations of the relevant NAAQS or PSD increments."¹¹

Inappropriate modeling produces "absurd results"

By using inaccurate emissions inventories, unreasonable emissions projections, and an arbitrary significance threshold, EPA's Preliminary Interstate Ozone Transport Modeling Data for the 2015 Ozone NAAQS will yield "absurd results" and require unachievable emissions reductions from Kentucky sources. In a recent brief, EPA explains the likely outcome of using a modeling approach similar to the Preliminary Interstate Ozone Transport Modeling Data for the 2015 Ozone NAAQS.¹²

Moreover, such a reduction is not likely achievable in practice because ozone contribution levels are based on the modeled impacts from all anthropogenic (man-made) emissions sources in the state, including EGUs, non-EGUs, and mobile sources. Reducing Kentucky's contributions to the Harford County receptor by this magnitude would likely require a statewide emissions reduction of at least 64% (reducing emission from 2.11 to 0.75 ppb), which is the equivalent of the emissions from all EGUs, non-EGUs, and cars and trucks in the Commonwealth of Kentucky. Dunham Decl. ¶16.

And because there is not a linear relationship between reductions in upwind state nitrogen oxides ("NOX") emissions reductions and reductions in the state's contribution to ozone pollution in other states (e.g., a 64% NOX reduction does not necessarily lead to a 64% reduction in ozone contributions), an even larger NOX emissions reduction would likely be required to reduce Kentucky's contribution to the 1 percent threshold. It is therefore nearly impossible to reduce statewide

¹¹ https://www.epa.gov/sites/production/files/2016-08/documents/pm2_5_sils_and_ozone_draft_guidance.pdf

¹² CASE NO. 3:15-cv-04328-JD, "EPA'S REPLY" – filed February 22, 2017, page 5

emissions by that magnitude within the timeframe that Sierra Club anticipates the EPA can implement emission reductions. Dunham Decl. ¶16.

EPA's explanation of the non-linear relationship between emissions reductions of NO_x and the reduction of ozone concentrations measured at downwind receptors further highlights the technical limitations of interstate transport modeling and questions whether its use is appropriate in determining cost-effective control scenarios. As explained in EPA's brief, the Preliminary Interstate Ozone Transport Modeling Data for the 2015 Ozone NAAQS will require the over-control of Kentucky's stationary sources without providing the desired outcome of the modeling analysis.

In conclusion, the Division finds that Preliminary Interstate Ozone Transport Modeling Data for the 2015 Ozone NAAQS is not sufficient for states to use for the "Good Neighbor" provisions of the "infrastructure" SIPs. The Division requests that EPA elevate the 2015 Ozone NAAQS Transport Modeling Analysis to a top priority. In subsequent modeling, the Division requests that EPA consider the emissions inventory corrections provided by states and provide a revised contribution assessment by August 1, 2017. Additionally, the Division encourages EPA to provide for a more reasonable "significance contribution threshold, such as three (3) percent that was used in previous interstate transport determinations. Finally, the Division requests that EPA allow states to use the Final Interstate Ozone Transport Modeling Data for the 2015 Ozone NAAQS to satisfy the "Good Neighbor" provision of the 2015 Ozone NAAQS "infrastructure" SIP.

To reiterate, the Division greatly appreciates the opportunity to comment on this preliminary modeling and requests EPA's serious consideration of our comments, including the attached spreadsheets.¹³ If you have any questions regarding the Division's comments, please contact Mr. Martin Luther, at (502) 782-6690.

Sincerely,



Sean Alteri
Director

SA:mrl
Attachments

¹³ "County_Sector_Comparison_Kentucky.xlsx", "Omitted_Kentucky_EGUs_for 2023_Kentucky.xlsx", and "Contribution_Compare_2017_2023_Kentucky.xlsx"