Kentucky Energy and Environment Cabinet Comments Supporting EPA’s Proposed Action and Response to Clean Air Act Section 126(b) Petition From New York (Docket ID No. EPA–HQ–OAR–2018–0170)

Executive Summary

On behalf of the Commonwealth of Kentucky, the Energy and Environment Cabinet (Cabinet) respectfully requests the Administrator of the United States Environmental Protection Agency (EPA) to finalize its proposed denial of the Clean Air Act (CAA) section 126(b) petition filed by the state of New York. In its petition to EPA filed on March 12, 2018, the state of New York alleges that emissions sources located in nine states, including Kentucky, are interfering with attainment or maintenance of the 2008 and 2015 ozone National Ambient Air Quality Standards (NAAQS). Under Section 126 of the CAA, the petitioner bears the burden of establishing a technical basis for the specific finding request.1

On May 20, 2019, EPA proposed to deny the petition filed by the state of New York and explained its rationale to do so.2 After evaluating the petition, EPA found that “material elements in the petition’s assessment of whether the sources may be further controlled through implementation of cost-effective controls are insufficient and, thus, New York has not met its . . . burden to demonstrate that the named sources currently emit or would emit in violation of the good neighbor provision with respect to the relevant ozone NAAQS.”3 The Cabinet concurs with EPA’s determination that New York has not met its statutory burden to demonstrate that sources located in Kentucky emit in violation of the “good neighbor” provision found in section 110 of the CAA.

It is important to note that the petition filed by New York lacks a technical analysis to support the requirement for additional air pollution controls beyond what is already required by law. The U.S. Supreme Court and the United States Court of Appeals for the District of Columbia Circuit have both held that EPA may not require emissions reductions greater than necessary to achieve attainment and maintenance of the NAAQS in downwind areas.4 Currently, all of the ozone monitors in New York measure compliance with the 2008 ozone NAAQS. Requiring emissions sources in Kentucky to further reduce their alleged impact in New York relative to the 2008 ozone NAAQS would contradict the Supreme Court’s decision in EME Homer City.

The Supreme Court decision also directs EPA to evaluate costs and benefits when determining obligations under the good neighbor provision.5 New York’s 126(b) petition did not evaluate impacts from individual emissions sources, the air pollution controls already installed and operated at those facilities, and the estimated costs of any additional air pollution controls sought by their petition. Thus, the material elements of New York’s analysis are technically deficient and

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1 New York v. EPA, 852 F.2d 574, 577-78 (D.C. Cir. 1988).
3 Id. at 88789.
5 Homer City, 572 U.S. at 519.
insufficient to support New York’s conclusions. Without adequate technical justification, EPA appropriately exercised its discretion when it denied New York’s petition under Section 126(b) of the Clean Air Act (CAA).

I. EPA’s Current Cross-State Air Pollution Rule Update renders New York’s 126(b) petition moot

Currently, all quality-assured ambient air monitors measuring ozone in New York achieve compliance with the 2008 ozone NAAQS. Compliance with the ozone NAAQS is, in part, attributed to the implementation of the Cross-State Air Pollution Rule (CSAPR).

To specifically address the 2008 8-hour ozone NAAQS, EPA published the CSAPR Update on October 26, 2016, and modified the NOx ozone season allowance trading program established under the original CSAPR. The rule reduces ground-level ozone in twenty-two (22) eastern states found to have ozone season NOx emissions potentially affecting the ability of downwind states to attain and maintain the 2008 ozone NAAQS. The final rule became effective on December 27, 2016, and applies to all electric generating units (EGUs) located at Kentucky sources, including those that New York requests a finding under Section 126(b) of the CAA.

As required by 40 CFR 52.940(b)(1) and (b)(2), the owner and operator of each source located in Kentucky and subject to CSAPR must comply with the CSAPR NOx Ozone Season Budget. As such, the owner and operator of each source and each unit located in Kentucky are subject to the requirements set forth under the CSAPR NOx Ozone Season Group 2 Trading Program in 40 CFR 97 Subpart EEEE with regard to emissions occurring in 2017 and in each subsequent year. These applicable requirements are federally-enforceable and can be relied upon to satisfy the good neighbor provision.

In 2015 and 2016, EPA allocated Kentucky a NOx ozone season budget of 36,167 tons through CSAPR. As a result of the CSAPR Update, EPA reduced Kentucky’s 2017 NOx ozone season budget to 21,115 tons, a 42% reduction. Implementation of CSAPR and the CSAPR Update successfully reduces NOx emissions during the ozone season; thus, prohibiting Kentucky emissions from significantly contributing to nonattainment, or interfering with the maintenance, of downwind states, including New York, with respect to the 2008 ozone NAAQS.

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6 Attachment A – AMP480
8 Id.
9 Id.
10 40 C.F.R. § 52.940(b)(1),(2).
11 40 C.F.R. § 97.510(a)(8)(i).
12 40 C.F.R. § 97.810(a)(8).
Without question, EPA’s CSAPR update significantly reduces emissions of NOx during the ozone season and addresses the good neighbor provision found at Section 110(a)(2)(D)(i)(I) of the CAA. Therefore, EPA should deny New York’s request for a finding under 126(b) of the CAA.

II. EPA’s proposed denial of New York’s 126(b) petition is consistent with recent actions related to the 2008 Ozone NAAQS interstate transport SIP requirements

Contrary to New York’s technical assessment included with its 126(b) petition, EPA’s recent technical interstate transport analysis modeled reductions of NOx emissions resulting from the CSAPR update. As discussed in more detail below, EPA issued a memorandum to provide supplemental information for the 2008 ozone NAAQS interstate transport obligations on October 27, 2017. EPA concluded that modeling results demonstrate that no monitoring sites, outside of California, are projected to have nonattainment or maintenance problems with respect to the 2008 ozone NAAQS of 75 ppb in 2023.

Then, on March 27, 2018, EPA issued a similar memorandum to assist states in their efforts to develop SIPs to address their interstate transport obligations for the 2015 ozone NAAQS. The memo also provided EPA’s most recent technical analysis, which also determined that all monitoring sites, outside of California, will achieve the 2008 ozone NAAQS.

Most recently, EPA approved Kentucky’s SIP revision addressing the 2008 Ozone NAAQS Interstate Transport SIP Requirements. In the Federal Register published on July 17, 2018, EPA took final action to approve Kentucky’s SIP revision and concluded that “Kentucky is not required to make any further reductions, beyond those required by the CSAPR Update, to address its statutory obligation under CAA section 110(a)(2)(D)(i)(I) for the 2008 ozone NAAQS.”

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13 Ozone Season NOx emissions data obtained from EPA’s Air Markets Program Data https://ampd.epa.gov/ampd/
15 Id. at 9.
EPA’s proposed denial of New York’s 126(b) petition is consistent with recent EPA actions. EPA’s updated technical analysis supports its proposed denial of New York’s 126(b) petition, and EPA should take final action in a consistent manner.

a. EPA’s final action approving the Kentucky SIP as it relates to the 2008 Ozone NAAQS interstate transport SIP requirements

On February 28, 2018, Kentucky submitted a proposed SIP revision for EPA review and approval to address the good neighbor provision of the 2008 Ozone NAAQS. Specifically, the SIP revision addressed the CAA requirements known as the good neighbor provision under Section 110(a)(2)(D)(i)(I) for the 2008 ozone NAAQS. As stated previously, the CAA good neighbor provision requires that each state’s SIP must address the transport of emissions across state lines that contribute to nonattainment, or interfere with maintenance, of a NAAQS in any other state.

After evaluating Kentucky’s submittal, EPA published a final rule approving the revision to the Kentucky SIP addressing the 2008 Ozone NAAQS transport requirements on July 17, 2018. Importantly, EPA found that Kentucky does not need to make any additional emissions reductions beyond those required by the 2016 CSAPR Update Rule to meet its statutory obligations for the good neighbor provision of the 2008 ozone NAAQS under the CAA.

As such, EPA should deny the petition New York’s petition, as Kentucky does not contribute to nonattainment areas or interfere with maintenance of the 2008 Ozone NAAQS in New York or any other state.


On October 27, 2017, EPA Air Quality Planning and Standards Director Stephen Page issued a memorandum to air agency directors within all EPA regions. The memorandum provided supplemental information for the 2008 ozone NAAQS under Clean Air Act Section 110(a)(2)(D)(i)(I). In the memo, EPA stated that the objective was “to assist states in their efforts to develop, supplement or resubmit Good Neighbor SIPs for the 2008 ozone NAAQS to fully address their interstate transport obligations.”

The memorandum predicted future year ozone design values and contribution modeling outputs for monitors in the United States based on updated air quality modeling (for 2023) and monitoring data. EPA’s updated modeling indicated that there are no monitoring sites, outside of California,
that are projected to have nonattainment or maintenance problems with respect to the 2008 ozone NAAQS of 75 ppb in 2023.\(^{24}\)

EPA’s supplemental modeling addressed several concerns raised by state agencies, including inconsistencies with emissions inventories. Although New York acknowledges EPA’s most recent modeling in their petition, the information it provides is misleading:

> While EPA released additional air quality modeling in October 2017 to serve as the basis for good neighbor SIPs for the 2015 NAAQS, DEC has significant concerns about the assumptions and results of this modeling – for example, the expectation that uncontrolled EGUs will greatly reduce their emission rates in the absence of enforceable limits, and the treatment of model cells containing a land/water interface.\(^{25}\)

This inaccurate statement describes the limits as unenforceable. However, as stated above, the allocations established in the 2017 CSAPR Update are federally enforceable limitations that reduce ozone precursors. Further, the grid cells used in EPA’s 2017 modeling better account for land/water interface.

Based upon EPA’s updated technical analysis, EPA should deny New York’s 126(b) petition.


Consistent with its October 27, 2017 memorandum, EPA issued a memo designed to assist states in determining their interstate transport obligations under Section 110(a)(2)(D)(i)(I) of the CAA for the 2015 Ozone NAAQS.\(^{26}\) EPA explained how it used the Comprehensive Air Quality Model with Extensions (CAMx v6.40) to model emissions in 2011 and 2023, taking into account updated information from states and other interested parties.\(^{27}\)

EPA’s updated modeling results accompanying its March 27, 2018 memorandum determined that all monitoring sites, outside of California, will achieve the 2008 ozone NAAQS. Thus, New York’s 126(b) petition is unnecessary, and EPA should finalize its disapproval.

**III. New York’s petition lacks a proper technical analysis**

Courts have historically afforded controlling weight to an administering agency’s construction of an ambiguous statute.\(^{28}\) EPA has consistently followed the same four-factor test when rulemaking

\(^{24}\) Id. at 9.

\(^{25}\) NEW YORK DEP’T OF ENTL. CONSERVATION, NEW YORK STATE PETITION FOR A FINDING PURSUANT TO CLEAN AIR ACT SECTION 126(B), at 10, (2018), https://www.dec.ny.gov/docs/air_pdf/sips126petition.pdf.

\(^{26}\) U.S. ENVTAL. PROT. AGENCY, supra note 16.

\(^{27}\) Id. at 8.

\(^{28}\) Homer City, 572 U.S. at 512-13 (citing Chevron, 467 U.S. at 837).
under the good neighbor provision and Courts have consistently upheld this process as permissible.29 As EPA explained in its proposed denial, it evaluated New York’s petition by applying the four-step regional analytic framework utilized in previous interstate transport regulatory strategies when determining whether to grant the Section 126(b) petition.30

Regarding the first step of the analysis, EPA determined that New York’s petition failed to identify, and EPA did not independently find, relevant air quality problems in Chatauqua County with respect to the 2008 or 2015 ozone NAAQS or in the New York Metropolitan Area with respect to the 2008 ozone NAAQS.31 EPA did identify relevant downwind air quality problems in the New York Metropolitan Area with respect to the 2015 Ozone NAAQS, so it proceeded to steps two and three.32

At step 3 EPA determined “material elements in New York’s assessment of step 3 are insufficient, such that EPA cannot conclude that any source or group of sources in any of the named states will significantly contribute to nonattainment or interfere with maintenance in Chatauqua County or the [New York Metropolitan Area] relative to the 2008 and 2015 ozone NAAQS.”33 EPA’s analysis is sound: New York’s petition fails to include a technical assessment consistent with EPA’s regional analytic framework. Additionally, New York’s technical assessment utilizes outdated emissions platforms for point source emissions, as well as mobile sources. And finally, New York’s evaluation fails to conduct a significant contribution analysis for the 350 sources identified in its 126(b) petition.

For these reasons, EPA should deny New York’s 126(b) petition.

a. New York’s analysis is inconsistent with previous EPA methodology

As EPA notes in its proposed denial of New York’s 126(b) petition, EPA evaluated the petition consistent with the same four-step regional analytic framework that the EPA applied in previous regulatory control strategies addressing regional interstate ozone transport.34 EPA’s four-step regional analytic framework includes the following elements:

(1) Identifying downwind air quality problems;
(2) Identifying upwind states that contribute enough to those downwind air quality problems to warrant further review and analysis;
(3) Identifying the emissions reductions necessary to prevent an identified upwind state from contributing significantly to those downwind air quality problems; and
(4) Adoption of permanent and enforceable measures needed to achieve those emissions reductions.

29 Id. at 518-520.
31 Id. at 22800-011.
32 Id. at 22801.
33 Id. at 22802.
34 Id. at 22795-96.
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Because New York’s petition fails to include a technically-sound assessment, EPA should deny New York’s 126(b) petition.

b. New York’s evaluation is based on inaccurate emission inventories

New York’s technical analysis used outdated emissions inventories as the baseline and failed to account for significant emissions rate decreases resulting from EPA’s most recent rulemaking that addressed regional emissions ozone contributions. According to the Appendix B that accompanied New York’s 126 petition, New York’s model used a projected emission rate of 1,359.8 tons in 2017 from the William C. Dale EGU located in Kentucky. Importantly, it should be noted that the William C. Dale EGU officially retired in 2015. This gross error highlights one example of New York’s flawed technical analysis.

Although New York is critical of EPA’s modeling efforts without merit, EPA worked diligently to ensure that the best available scientific information was applied in its 2017 modeling. In response to EPA’s Notice of Data Availability Regarding Preliminary Interstate Ozone Transport Modeling Data for the 2015 Ozone National Ambient Air Quality Standard (NAAQS), issued on January 6, 2017, Kentucky submitted a comment letter on April 6, 2017. Specifically, Kentucky noted, “[i]n review of the non-EGU emission projections, the Division found that EPA grew NOx and VOC emissions from nonpoint oil/gas production in Kentucky by 25,195 and 13,954 tons respectively from 2011 levels.” The comment letter explained that “the Division’s research indicates a decrease in future gas production and a more modest increase in oil production from 2011 to 2023” and requested that EPA review the oil and gas information and “work with the Division to ensure that the nonpoint oil and gas production emissions are accurate for Kentucky.”

EPA subsequently addressed the error and has updated the 2011 modeling platform through Version 6.3. EPA’s latest modeling platform, 2011 Version 6.3, provides inventories with updates based on public comments that also support preliminary interstate transport modeling for the ozone NAAQS. However, New York failed to utilize these more accurate, updated emissions inventories.

Since New York’s modeling utilized inaccurate emissions inventories, EPA should find New York’s technical analysis flawed. And, consequently, EPA should deny New York’s 126(b) petition.

35 NEW YORK DPT’ OF ENVTL. CONSERV., supra note 25 at App. B.
37 Id. at 3.
38 Id.
IV. Current Emissions Trends for Kentucky electric generating units—NOx Emissions from Kentucky sources are declining

Although VOC and NOx emissions both contribute to the formation of ground-level ozone, ozone is far more sensitive to NOx emissions than VOC emissions in the southeastern United States.40 In the 2011 FIP ruling for Interstate Transport of Fine Particulate Matter and Ozone, EPA stated that “[a]uthoritative assessments of ozone control approaches have concluded that, for reducing regional scale ozone transport, a NOx control strategy is most effective, whereas VOC reductions are generally most effective locally, in more dense urbanized areas. . . . EPA continues to believe that the most effective regional pollution control strategy for mitigation of interstate transport of ozone remains NOx emission reductions.”41 Therefore, controlling NOx emissions is a more effective strategy in reducing ozone levels than controlling VOC emissions.

The chart below illustrates the decline in NOx emissions from Kentucky electric generating units. In addition to the emissions reductions resulting from the CSAPR update, several coal-fired electric generating units have announced future retirements. For example, Owensboro Municipal Utilities (OMU) announced in 2015 their plans to retire Unit 1 at the Elmer Smith Plant by 2019.42 In March 2017, OMU announced that they will also retire Unit 2, which will effectively close the Elmer Smith Plant in its entirety before 2023. These retirements were not accounted for in New York’s technical analysis.

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40 Odman, M Talat et al., Quantifying the sources of ozone, fine particulate matter, and regional haze in the Southeastern United States, 90 Journal of Environmental Management 3155-3168 (2009).
2008 – 2017 Ozone Season NO\textsubscript{x} Emissions for Kentucky EGUs (tons)

Data obtained from EPA’s Air Markets Program Data: https://ampd.epa.gov/ampd/

To further illustrate the significant reduction of NO\textsubscript{x}, the satellite images below contrast the emissions from 2016 and 2005.
Instead of using current satellite images, New York’s petition included an outdated image from 2011 (see below). By using outdated images, New York purposely misleads impacts from upwind states, including from Kentucky.

2011 NO₂ Concentrations
As demonstrated, the continued reduction of NOx emissions from Kentucky electric generating units further supports EPA’s updated technical analysis and determination that Kentucky does not need to make any additional emissions reductions beyond those required by the 2016 CSAPR Update Rule to meet its statutory obligations for the good neighbor provisions for the ozone NAAQS under the CAA.

V. New York’s emissions significantly influence its air quality

Notably absent from the New York’s petition is any discussion of local factors contributing to its purported ozone nonattainment challenges. Although ambient monitoring data demonstrates that all of the areas in the New York are in compliance with the 2008 ozone NAAQS, data also demonstrates that any air quality problems stem from emissions within their own state rather than from upwind states.

New York fails to recognize that mobile sources create the most significant impact on ozone concentrations at problem monitors. In 2014, the total vehicle miles traveled in the New York Metro area was estimated to be over 120 billion miles, and mobile source emissions constituted more than 42% of all NOx emissions in the New York – Northern New Jersey – Long Island nonattainment area. The 2014 National Emissions Inventory (NEI) data clearly demonstrates that on-road emissions contributed the highest amount of NOx emissions in the New York-Northern New Jersey-Long Island nonattainment area. By comparing violating ozone monitors with heavily congested corridors, there is a consistent pattern of violating monitors located along the I-95 corridor. In the map below, the majority of monitors are depicted in red because their results are in violation of the 2015 ozone NAAQS. The majority of monitors not significantly impacted by I-95 traffic are not in violation and are depicted in green. New York’s petition fails to acknowledge or address this relationship.

45 Id.
46 Id. at 36.
Another contributing factor to the local air quality problem is the number of peak demand generators operating during High Electrical Demand Days (HEDD). HEDD occur on the hottest days of the summer due to the increased demand of electricity, primarily from air conditioning. \(^{47}\) The operation of peak demand generators during HEDD coincide with days that have the highest monitored ozone levels. \(^{48}\) As New York explained in its attainment demonstration for the New York Metro Area, “HEDD units include EGU's that typically operate on peak ozone days when demand for electricity is very high. These peak-demand units can be among the dirtiest in the region.” \(^{49}\)

In fact, the New York Department of Environmental Conservation (NYDEC) found that peaking units used on HEDD were a significant contributor to NO\(_x\) emissions. \(^{50}\) NYDEC performed an emissions analysis on peaking units and found that they can contribute 4.8 parts per billion (“ppb”) of ozone on high ozone days. \(^{51}\) Again, New York’s petition fails to acknowledge these localized impacts from peak demand electric generators. Additional emissions reductions beyond existing and planned controls are not required to mitigate any upwind state contributions and to comply with the CAA.

VI. The definition of “group of stationary sources” does not encompass over 350 facilities across nine states

New York’s petition requests a finding that over 350 facilities in nine states emit or would emit air pollutants in violation of the good neighbor provision. This far exceeds Congress’ intention when it included the phrase “group of stationary sources” in section 126 of the CAA. Because the

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\(^{47}\) Id. at 38.

\(^{48}\) Id.


\(^{50}\) Id. at 13-3.

\(^{51}\) KY. ENERGY AND ENV’T CABINET, supra note 43, at 39.
phrase “group of stationary sources” is ambiguous, it is proper to look to the drafters’ intent.\textsuperscript{52} If that is not clear, then it is appropriate to defer to EPA’s interpretation.\textsuperscript{53} Congress does not directly define the phrase “group of stationary sources,” but it can be inferred that Congress did not intend that the phrase encompass over 350 facilities across nine states. EPA should deny New York’s petition because it fails to identify any nexus between the facilities beyond the amount of their emissions.

When Section 126(b) was initially enacted in 1977, it read “[a]ny State or political subdivision may petition the Administrator for a finding that any major source emits or would emit any air pollutant in violation of the prohibition of [the good neighbor provision].”\textsuperscript{54} The statute did not allow states or political subdivisions to petition EPA for a finding that more than one major source violated the good neighbor provision. In 1990, Congress amended section 126 to insert the phrase “or group of stationary sources” following “major source.”\textsuperscript{55} For the first time states or political subdivisions could petition EPA for a finding that more than one source emits or would emit in violation of the good neighbor provision. Simultaneously, Congress also amended the definition of major source in section 112 to read “any stationary source or group of stationary sources located within a contiguous area and under common control . . .”\textsuperscript{56} New York’s overreach is simply not supported by the plain language of the statutory enactments.

The current language of section 126 also supports denial of New York’s petition. Section 126 only uses the word “sources” in two sections: (a)(2) and (b).\textsuperscript{57} The rest of the statute, including section c that provides the remedy under a petition, refers to “source” in the singular. Notably, section c allows EPA to “permit the continued operation of a source . . . beyond the expiration of such three-month period if such source complies with such emission limitations and compliance schedules . . . as may be provided by the Administrator . . .”\textsuperscript{58} It is clear that section 126 contemplates a tailored and individualized emissions limitation and compliance schedule for each source, not a blanket emissions limitation imposed on over 350 facilities in nine states. Consequently, EPA should reject New York’s erroneous and unsupported interpretation of Section 126.

Conclusion

After evaluating EPA’s proposed denial, the Cabinet concurs with EPA’s determination that New York has not met its statutory burden to demonstrate that sources located in Kentucky emit in violation of the “good neighbor” provision found in Section 110 of the CAA. In closing, the Cabinet appreciates the opportunity to provide technical comments and rationale to support EPA’s proposal to deny New York’s 126 petition.

\textsuperscript{52} Chevron, 467 U.S. at 842-43.
\textsuperscript{53} Homer City, 572 U.S. at 512-13; Chevron, 467 U.S. at 843.
\textsuperscript{54} PL 95-95 Aug. 7, 1977. 91 Stat 685
\textsuperscript{55} PL 101-549, Nov. 15, 1990, 104 Stat 2399
\textsuperscript{56} Id. (emphasis added).
\textsuperscript{57} See 42 U.S.C. § 7426(a)(2), (b).
\textsuperscript{58} Id. at § (c).