



John R. Kasich, Governor
Mary Taylor, Lt. Governor
Craig W. Butler, Director

Mr. Robert Kaplan
Acting Regional Administrator
U.S. EPA, Region 5
77 West Jackson Blvd.
Chicago, Illinois 60604

Re: Request for Revision to Ohio's State Implementation Plan (SIP) regarding NOx Budget Trading (NBT) Program Rules and Clean Air Interstate Rule (CAIR)

Dear Administrator Kaplan:

I am writing to request the revision of Ohio's State Implementation Plan (SIP) regarding the NOx Budget Trading (NBT) Program rules in Ohio Administrative Code (OAC) Chapter 3745-14 and the Clean Air Interstate Rule (CAIR) in OAC Chapter 3745-109. This revision is necessary to demonstrate continued compliance by large non-Electric Generating Units (non-EGUs) with the NOx State Implementation Plan (SIP) Call given U.S. EPA's discontinuance of compliance trading options for non-EGUs under the NBT and CAIR programs.

Background

The NOx SIP Call promulgated by U.S. EPA on October 27, 1998 required 22 states and the District of Columbia to submit SIPs to set statewide NOx budgets [63 FR 57356]. In fulfillment of this rulemaking, the Ohio Environmental Protection Agency (Ohio EPA) promulgated OAC Chapter 3745-14, the NOx Budget Trading Program. These rules created an ozone season NOx allowance and trading program for electric generating units (EGUs) and large non-EGUs.

On May 12, 2005, U.S. EPA published CAIR [70 FR 25162]. To meet the requirements of CAIR, Ohio EPA promulgated OAC Chapter 3745-109. This rule established annual and ozone season NOx budgets for large EGUs. Ohio also opted to incorporate large non-EGUs previously regulated under OAC Chapter 3745-14 into Chapter 3745-109 ozone season allowances, in order to meet the obligations of the NOx SIP call through the CAIR trading program.

In July 2008, the D.C. Circuit court vacated CAIR, and issued a subsequent remand without vacatur of CAIR in December 2008. The court then directed U.S. EPA to revise or replace CAIR in order to address those deficiencies identified by the court. On July 6, 2011, U.S. EPA finalized the Cross State Air Pollution Rule (CSAPR) as a replacement for CAIR [77 FR 10342]. CSAPR became effective on January 1, 2015, for SO₂ and annual NOx, and May 1, 2015 for ozone season NOx. Notably, CSAPR did not initially contain provisions to incorporate large non-EGUs. With the replacement of CAIR by CSAPR, those non-EGUs previously regulated under CAIR were again regulated under the NOx SIP Call.

U.S. EPA has indicated non-EGUs are required to show continued compliance with the NOx SIP Call. Although no formal guidance has been issued, U.S. EPA presented several options for this process via a fact sheet¹.

The fact sheet details three options for transitioning non-EGUs back into the SIP Call Program and demonstrating continued compliance with those requirements. Note that the details of each option are directly quoted from the fact sheet.

Option 1: Streamlined demonstration. Demonstrate that total ozone-season NOx emissions from large non-EGU boilers and combustion turbines in the State that were included in the NOx Budget Trading Program but will not be included in the TR ozone-season trading program could not exceed the large non-EGU budget imposed by the NOx SIP Call even if these units were to operate every hour of the ozone season.

Option 2: Demonstrate that the NOx SIP Call reduction obligations for these large non-EGU boilers and combustion turbines are being met through alternative limits on these non-EGUs. As explained in 40 CFR 51.121(f)(2)(i), these alternatives include:

- Imposing a NOx mass emissions cap on each source;
- Imposing a NOx emissions rate limit on each source and assuming maximum operating capacity for every such source for purposes of estimating NOx mass emissions; or
- Imposing other regulatory requirements that the State has demonstrated to EPA provide equivalent or greater assurance that the State will comply with its ozone season NOx budget for large non-EGU boilers and combustion turbines.

Option 3: Demonstrate that additional ozone season NOx emission reductions from other sources covered by the NOx SIP Call have achieved extra reductions, over and above any required for those other sources by the NOx SIP Call, to the degree that overall reduction requirements of the NOx SIP Call have been achieved without any reductions from large non-EGUs.

Subsequently, on October 26, 2016, U.S. EPA published the CSAPR Update rule, which again allowed states to expand the applicability of the CSAPR NOx ozone season trading program to include non-EGUs [81 FR 74504].

Ohio EPA evaluated these options (including expansion of the CSAPR trading program), and benchmarked with other states. Ohio EPA selected the streamlined demonstration option (option 1) from the fact sheet, which demonstrates that the total ozone-season NOx emissions from large non-EGUs could not exceed the large non-EGU budget imposed by the NOx SIP Call, even if these units were to operate every hour of the ozone season.

States must continue to demonstrate existing non-EGUs will meet the NOx SIP Call requirements, as well as have a mechanism to ensure any new non-EGUs would also meet these requirements, including Part 75 monitoring and reporting² requirements. Given this

¹ https://www.epa.gov/sites/production/files/2016-05/documents/fact_sheet_nox_sip_call_transition_for_large_non-egus.pdf

² Part 75 monitoring and reporting requirements are still applicable for large non-EGUs. U.S. EPA's basis for

demonstration showing that Ohio continues to meet the NOx SIP Call statewide budget, Ohio has rescinded provisions of OAC Chapter 3745-14 pertaining to individual unit allocations and trading. Ohio EPA retained provisions in the rules pertaining to applicability, the statewide emissions budget, and Part 75 monitoring and reporting, as well as rules 3745-14-11 and 3745-14-12 regarding portland cement kilns and stationary internal combustion engines. The CAIR rules in OAC Chapter 3745-109 were also rescinded.

This letter demonstrates that large non-EGUs continue to comply with NOx SIP Call, and that the revised rules will not interfere with the attainment of the National Ambient Air Quality Standards (NAAQS) or violate the requirements of Section 110(l) of the Clean Air Act (CAA). Therefore, Ohio EPA is requesting U.S. EPA approve Ohio's request for the revision of Ohio's SIP regarding the NBT Program rules in Ohio Administrative Code (OAC) Chapter 3745-14 and the CAIR rules in OAC Chapter 3745-109.

Streamlined Demonstration (Option 1)

The U.S. EPA FAQs website states the Option 1 streamlined demonstration "should include a determination -- for each of these large non-EGUs -- of the average actual hourly ozone season NOx emission rate (i.e., total actual NOx emissions divided by actual operating hours) for the most recent ozone season of representative operation of the large non-EGU sector in the State, multiplied by the total number of hours in the ozone season (3,672)."

This guidance suggests that an analysis of the most recent ozone season (2015) would be sufficient to characterize the emissions of the large non-EGU sector. Ohio EPA also conducted an expanded analysis including 2013 and 2014 in addition to 2015 data to provide a more conservative estimate of the operation of the large non-EGU sector.

Following the guidance presented by U.S. EPA, Ohio EPA compiled total ozone season NOx emissions and operating times from U.S. EPA's Clean Air Markets Database (CAMD), years 2013, 2014, and 2015 for all large non-EGUs previously regulated by the NBT Program, as well as any additional non-EGUs that were regulated under CAIR. Additionally, Ohio EPA analyzed data from Ohio's Emissions Inventory System to determine if any new large non-EGUs met the applicability criteria of the NBT Program. No new units currently met those criteria, and thus the analysis was limited to those units meeting the above criteria.

Ohio EPA calculated, for each year 2013-2015, the average NOx emission rate, in lbs./hour, for each unit using total ozone season tonnage and the hours of operation for each unit. Using this average emission rate and the number of hours in a full ozone season (3,672), Ohio EPA determined a theoretical tonnage for each unit, for each year 2013-2015. This provides a highly conservative estimate of emissions, whereby each unit is assumed to operate for every hour of the ozone season. It should be noted that Ohio EPA did not consider emissions from units which have permanently shutdown in this analysis, as the inclusion of such units would not be representative of the operation of the large non-EGU sector in Ohio. In addition to considering a theoretical tonnage for each year 2013-2015, Ohio EPA compiled the maximum theoretical tonnage for each unit from amongst the study period to provide a highly conservative demonstration of continued compliance. The results of these analyses are presented in Table 1.

requiring Part 75 monitoring and reporting is the NOx SIP Call requirements at 40 CFR 51.121(i)(4).

Table 1. Ohio Large Non-EGUs: 2013-2015 theoretical NOx emissions based on 3,672 hours of continuous operation

Total Projected NOx Emissions for All Large Non-EGUs: 3672 Hours of Operation (Tons)			
2013	2014	2015	Max 2013-2015
2982.92	2554.36	1817.49	3284.61

The results in Table 1 indicate a theoretical maximum ozone season emission total of 1,817 tons for 2015. This value is well under Ohio's NOx budget of 4,028 tons (45%). A more conservative summation of the theoretical maximum emissions for each unit from amongst the 2013-2015 period yields a highly conservative estimate of 3,285 tons. Even with this approach, Ohio's operating non-EGUs remain well under the 4,028 tons of NOx allocated under the NBT Program. A more detailed accounting and derivation of the theoretical full ozone season emissions as summarized in Table 1 are provided as Appendix A of this submittal.

Ohio EPA will conduct an annual review to ensure most recent ozone season emissions remain below the statewide budget. Ohio EPA will also submit an updated demonstration each time a new large non-EGU is permitted showing large non-EGUs continue to comply with the NOx SIP Call.

Revisions to Ohio Administrative Code (OAC) Chapters 3745-14 and 3745-109

Given the demonstration above showing that Ohio continues to meet the NOx SIP Call statewide budget, Ohio adopted amended and rescinded rules in OAC Chapters 3745-14 and 3745-109 on [DATE]. Ohio rescinded provisions of OAC Chapter 3745-14 pertaining to individual unit allocations and trading. Ohio EPA retained provisions in the rules pertaining to applicability, the statewide emissions budget, and Part 75 monitoring and reporting, as well as rules 3745-14-11 and 3745-14-12 regarding portland cement kilns and stationary internal combustion engines. Table 2 below identifies rules in OAC Chapter 3745-14 (formerly NOx Budget Trading Program, now NOx Budget Program) which have been amended, rescinded, or remain unchanged.

Table 2. Revisions to OAC Chapter 3745-14

Rule Number	Rule Title	Action
3745-14-01	Definitions and General Provisions	Amended
3745-14-02	The NOx Authorized Account Representatives	Rescinded
3745-14-03	The NOx Budget Permit Requirements	Amended
3745-14-04	Compliance Certification	Amended
3745-14-05	NOx Allowance Allocations	Rescinded
3745-14-06	The NOx Allowance Tracking System	Rescinded
3745-14-07	NOx Allowance Transfers	Rescinded
3745-14-08	Monitoring and Reporting	Amended
3745-14-09	NOx Budget Opt-in Units	Rescinded
3745-14-10	Alternative Compliance Plans	Rescinded
3745-14-11	Portland Cement Kilns	No change
3745-14-12	Stationary Internal Combustion Engines	No change

The entirety of the CAIR rules in OAC Chapter 3745-109 were rescinded as they are no longer necessary due to replacement by CSAPR. The revised rules are included as Appendix B of this submittal.

Under the revised rules, large non-EGUs are required to conduct Part 75 monitoring and reporting, and are required to submit compliance certifications indicating they have met the Part 75 monitoring and reporting requirements. These requirements continue to be included in a Title V or non-Title V operating permit. However, non-EGUs no longer receive individual NOx allowances, are part of a trading program, or are required to certify compliance with any allocation or budget. Rather, Ohio will use the Part 75 reporting to perform an annual review to show all existing and new non-EGU NOx SIP Call units continue to meet the statewide budget in accordance with Option 1 above.

EGUs will demonstrate compliance with the NOx SIP Call through the CSAPR trading program. There were no changes to the requirements for portland cement kilns and stationary internal combustion engines.

CAA 110(I) Demonstration

States wishing to revise SIP-approved NBT and CAIR rules must submit a SIP revision to U.S. EPA demonstrating that the revision does not interfere with progress towards any area in the state achieving compliance with any NAAQS. U.S. EPA's draft guidance "Demonstrating Noninterference Under Section 110(I) of the Clean Air Act When Revising a State Implementation Plan", dated June 8, 2005³ was used as the basis for the following demonstration.

Under CAA section 110(I), U.S. EPA cannot approve a SIP revision if it would interfere with attainment of the NAAQS, reasonable further progress toward attainment, or any other applicable requirement of the CAA. Therefore, a SIP revision requesting revisions to SIP-approved NBT and CAIR rules may only be approved if the state has demonstrated that the revision will not interfere with attainment or maintenance with any NAAQS. In evaluating whether a given SIP revision would interfere with attainment or maintenance, as required by section 110(I), U.S. EPA generally considers whether the SIP revision will preserve or improve the status quo in air quality.

In accordance with section 110(I) of the CAA, the analysis below demonstrates that the revision of the NBT Program rules in OAC Chapter 3745-14 and rescission of the CAIR rules in OAC Chapter 3745-109 will not interfere with the attainment or maintenance of the NAAQS.

Statewide NOx and SO₂ budgets established under the NOx SIP Call, CAIR and CSAPR are presented in Table 3.

³ <http://www.4cleanair.org/Oldmembers/members/committee/criteria/110STAPPA.pdf>

Table 3. Statewide Budgets under NOx SIP Call (NBT), CAIR and CSAPR (tons)

Sector	Budget	NOx SIP Call (NBT) ⁴	CAIR	CSAPR
EGUs	NOx annual	N/A	90,556 ⁵	90,258 ⁶
	SO ₂ annual	N/A	233,464 ⁷	142,240 ⁸
	NOx ozone season	45,432	39,945 ⁹	19,522 ¹⁰
Large Non-EGUs	NOx ozone season	4,028	4,030 ¹¹	N/A

As described above, Ohio EPA will continue to demonstrate that large non-EGUs will meet the statewide NOx ozone season budget established under the NOx SIP Call. As the non-EGU CAIR budget was slightly higher, compliance with the NOx SIP Call budget will provide even greater emission reductions across the state and therefore will not interfere with attainment or maintenance of any NAAQS.

EGUs will demonstrate compliance with the NOx SIP Call through the CSAPR trading program. The EGU NOx annual, SO₂ annual and NOx ozone season budgets under CSAPR are each less than that under either NBT or CAIR. Therefore, the CSAPR budgets will provide even greater emission reductions across the state and the SIP revision will not interfere with attainment or maintenance of any NAAQS.

There will be no changes to the requirements for portland cement kilns and stationary internal combustion engines.

NOx and SO₂ emissions contribute to the formation of ozone and particulate matter (PM). While Ohio does have some areas in nonattainment of the ozone, PM_{2.5} and SO₂ NAAQS, the above demonstration shows NOx and SO₂ emissions will be either the same or lower than under the previous rules. Therefore, Ohio EPA has determined that the revision of the NBT rules in OAC Chapter 3745-14 and rescission of the CAIR rules in OAC Chapter 3745-109 will not interfere with the attainment or maintenance of the 8-hour ozone, PM_{2.5} or SO₂ NAAQS, or any other applicable requirement of the CAA. In addition, the SIP revision does not affect attainment or maintenance of the carbon monoxide, nitrogen dioxide or lead NAAQS, as Ohio is currently attaining or designated attainment for these standards.

Summary

Ohio EPA hereby requests the revision of Ohio's State Implementation Plan (SIP) regarding the NBT Program rules in Ohio Administrative Code (OAC) Chapter 3745-14 and the Clean Air Interstate Rule (CAIR) in OAC Chapter 3745-109. Ohio has demonstrated that large Non-EGUs will continue to comply with the statewide NOx ozone season budget established by the NOx

⁴ OAC rule 3745-14-05(A) (http://epa.ohio.gov/portals/27/regs/3745-14/3745-14-05_Final.pdf)

⁵ OAC rule 3745-109-04(A) (http://epa.ohio.gov/portals/27/regs/3745-109/3745-109-04_Final.pdf) and 40 CFR §51.123(e)(1)(iii)(B)(2)

⁶ 40 CFR §97.410(a)(16)(iv)

⁷ 40 CFR §51.124(e)(1)(iii)(B)(2)

⁸ 40 CFR §97.610(a)(11)(iv)

⁹ OAC rule 3745-109-17(A) (http://epa.ohio.gov/portals/27/regs/3745-109/3745-109-17_Final.pdf) and 40 CFR §51.123(q)(1)(iii)(B)(2)

¹⁰ 40 CFR §97.810(a)(16)(i), as amended in CSAPR Update rule (81 FR 74631, October 26, 2016)

¹¹ OAC rule 3745-109-17(A) (http://epa.ohio.gov/portals/27/regs/3745-109/3745-109-17_Final.pdf)

SIP Call, as well as Part 75 monitoring and reporting requirements. In accordance with section 110(l) of the CAA, Ohio EPA has also demonstrated the SIP revision will not interfere with the attainment or maintenance of the 8-hour ozone, PM_{2.5} or SO₂ NAAQS, or any other applicable requirement of the CAA.

Please contact Jennifer Van Vlerah at 614-644-3696 or jennifer.vanvlerah@epa.ohio.gov if you have any questions about this submittal.

Sincerely,

Craig W. Butler
Director

cc: Jennifer Van Vlerah, DAPC

Appendices

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Appendix A

Ohio Large Non-EGUs: 2013-2015 theoretical NOx emissions
based on 3,672 hours of continuous operation

Appendix B

Revisions to OAC Chapters 3745-14 and 3745-109