Air Stewardship Coalition Comments on Federal Implementation Plan Addressing Regional Ozone Transport for the 2015 Ozone National Ambient Air Quality Standard, 87 Fed. Reg. 20,036 (Apr. 6, 2022); Docket No. EPA-HQ-OAR-2021-0668

The Air Stewardship Coalition (ASC)[1] submits these comments on the U.S. Environmental Protection Agency's (EPA) proposed "Federal Implementation Plan Addressing Regional Ozone Transport for the 2015 Ozone National Ambient Air Quality Standard." 87 Fed. Reg. 20,036 (Apr. 6, 2022) ("Proposed Rule"). The ASC appreciates the opportunity to comment on the Proposed Rule and looks to meaningfully engage with EPA in this rulemaking.[2]

ASC members include industries that EPA proposes to regulate for the first time in an interstate transport rule, including cement manufacturing, chemical and petrochemical manufacturing, petroleum refining, transportation of natural gas, and specialty steel manufacturing. These industries are highly regulated under federal and state law to control air emissions and have already taken measures to reduce emissions under Clean Air Act (CAA) regulations and state implementation plans (SIPs). Under the Proposed Rule, hundreds of units in facilities within these industries across 23 states would be subject to costly emissions control measures on an unrealistic timeframe. Accordingly, the ASC has a substantial interest in this rulemaking process and provides the following comments to support its overarching request to EPA that the Agency respectfully reconsider its proposal to impose controls on the industrial sources covered by the Proposed Rule.

Summary

The Proposed Rule uses EPA's 4-step framework to assess whether upwind state emissions "contribute significantly" to nonattainment with the 2015 National Ambient Air Quality Standard (NAAQS) for ozone in a downwind state such that controls must be imposed on an upwind source or type of activity. CAA § 110(a)(2)(D)(i)(I). In the 4-step process, EPA: 1) identifies downwind receptors with non-attainment or maintenance issues with the NAAQS in a relevant future year; 2) determines whether an upwind state is "linked" (i.e., contributes above a certain threshold amount) to those relevant downwind receptors; 3) identifies upwind sources or types of emissions activities that contribute significantly to a downwind issue and evaluates whether highly cost-effective control measures are available to address the downwind issue; and, if so, 4) promulgates a rule for states to adopt necessary measures within the state. As described in these comments and the attached expert report, EPA's approach to this 4-step process in the Proposed Rule is flawed and warrants reconsideration.

EPA's proposal to regulate industrial sources is an extraordinary step that the ASC urges EPA to reconsider. EPA has long promulgated interstate transport rules that restricted emissions

[1] Members of ASC include: American Chemistry Council, American Fuel & Petrochemical Manufacturers, American Petroleum Institute, Portland Cement Association, Steel Manufacturers Association, Specialty Steel Industry of North America, and Holcim (US) Inc.

[2] Ramboll, Evaluation and Critique of EPA's Proposed Good Neighbor Plan for the 2015 Ozone NAAQS (June 2022) (Ramboll Report), submitted in support of these ASC comments (attached hereto, Attachment A).

of electric generating units (EGUs) in upwind states and has done so, in part, through an upwind state emissions trading program; however, this is the first transport rule since the 1998 nitrogen oxides (NOx) SIP call to propose controls for categories of industrial sources (i.e., non-EGUs). In the 2011 Cross State Air Pollution Rule (CSAPR) and 2016 CSAPR Update, EPA focused on NOx emissions from EGUs that EPA found impacted compliance with the 2008 ozone NAAQS. In the CSAPR Update Rule, EPA explained there was uncertainty with its assessment of non-EGU NOx mitigation and that it needed more time to improve non-EGU point source data and emissions control assumptions, as well as that the Agency did not believe significant, certain, and meaningful non-EGU NOx reduction was feasible for the relevant ozone season. While the D.C. Circuit in *Wisconsin v. EPA* ruled that the practical obstacles EPA identified did not rise to the level of "impossibility" and that EPA had to make a higher showing of uncertainty before declining to regulate, on remand, EPA issued the 2021 Revised CSAPR Update, which evaluated and ultimately declined to regulate non-EGUs. Thus, in April 2021, the Agency determined there were no highly cost-effective controls for non-EGUs that could meaningfully reduce transport emissions to downwind receptors by the next attainment deadline (2023) for the 2008 ozone NAAQS.

Less than one year from the date EPA finalized the 2021 Revised CSAPR Update Rule, based on the same emissions inventory and models, EPA issued the Proposed Rule which comes to a wholly different conclusion for non-EGUs. EPA proposes to reach this conclusion, in part, based on changes within its screening assessment of non-EGUs, without a reasonable explanation for breaking with past practice and policy. In addition, the record does not support EPA's proposed conclusion for non-EGUs at Step Three, as evidenced by issues identified in these comments and the data gaps and lack of understanding of non-EGU controls and operations reflected in the Proposed Rule. Further, crucial data was not made fully available to the public in time to provide meaningful comments, and EPA refused to grant adequate time for comments, despite requests for extensions by members of Congress, upwind states, and other stakeholders, as well as ASC in this docket and in a docket for a related proposed consent decree.[3] As such, these comments are based on the best of our ability to assess the information provided and analyzed in the abbreviated time afforded.

Overall, the ASC respectfully urges EPA to reconsider the Proposed Rule and engage in a robust rulemaking process to address transport emissions under the 2015 ozone NAAQS. Specifically, these comments and the attached expert report provide the following recommendations:

- EPA should stay action on its Proposed Rule with respect to non-EGUs in order to collect sufficient data, conduct updated analyses, and allow stakeholders time to consider and evaluate the modeling on which EPA has relied upon.

[3] *See* https://www.regulations.gov/docket/EPA-HQ-OAR-2021-0668; *see also* https://www.regulations.gov/docket/EPA-HQ-OGC-2021-0692 (in particular, consider the comments of Oklahoma DEQ, Wyoming DEQ, Tennessee DEQ, and the Midwest Ozone Group, which suggested the agreed timeline was insufficient and infeasible, including the need for time for review and comment on modeling prior to a proposal).

- EPA should defer action under Step One of its 4-Step Framework until the ongoing attainment designation process for the 2015 ozone NAAQS concludes.

- EPA should address overstated upwind contributions in the Proposed Rule by conducting a new Step Two analysis based on an appropriate ozone source apportionment tool and applying the 1 ppb threshold consistent with peer-reviewed statistical analysis and EPA's own guidance.

- EPA should reevaluate its flawed non-EGU screening assessment at Step Three, in which EPA fails to follow its own guidance in using a "simplified" air quality assessment tool, erroneously aggregates distinct sources and types of emissions activities using industry NAICS codes, applies arbitrarily low thresholds that fail to reasonably demonstrate highly cost-effective controls for addressing significant contribution, and ignores feasibility issues and current economics that limit sources' ability to comply by the attainment deadline.

- EPA should revisit the proposed controls on non-EGUs at Step Four, which fail to follow a reasonable framework for addressing transport, lack sufficient support in the record, exclude reasonable options for sources to comply, and lead to overcontrol of some upwind states.

I. EPA Should Stay Action on its Proposed Rule with Respect to Non-EGUs to Collect Sufficient Data, Conduct Updated Analyses, and Allow Stakeholders Time to Consider and Evaluate the Modeling That EPA Has Relied Upon.

As an initial matter, we urge EPA to defer action on assessing whether to regulate non-EGUs until the Agency has collected and considered current emissions and controls data and incorporated that current data in updated air quality modeling to project future emissions. This information and updated analyses should be subject to public notice and comment before the Agency proceeds with a potential final rulemaking. Further, EPA failed to provide commenters sufficient time to independently assess whether non-EGUs "contribute significantly" to downwind receptors or EPA's proposed controls for non-EGUs cost-effectively result in meaningful emissions reductions at downwind receptors. EPA should defer action on regulating non-EGU sources because the Agency failed to timely and fairly provide to the public the source apportionment modeling files of central relevance to EPA's analysis of non-EGU contributions which would allow for meaningful comments during the comment period. Additional time is needed to consider and evaluate this and other information that EPA has relied upon in the Proposed Rule.

a. EPA's Proposed Rule is based on outdated and incomplete information and analyses, which should be updated and subject to public comment before proceeding with this rulemaking.

Major aspects of EPA's non-EGU screening assessment are based on outdated and incomplete information and analyses, which EPA should update and subject to public comment before advancing an interstate transport rulemaking regulating non-EGU sources. For non-EGU

sources, in its Step 1 and Step 2 analyses, EPA relies upon a 2016 emissions inventory that is in turn based in part on emissions data from 2014 and earlier.[4] Of course, much has changed in the world since then, including other federal and state restrictions on NOx emissions and industrial source NOx emissions reductions, and the most current emissions should be accounted for when projecting emissions several years into the future. Updated actual emissions data is available for non-EGU sources (e.g., data from sources subject to monitoring and reporting under 40 C.F.R. Part 75) and should be compiled and used for a rulemaking with the broad and unprecedented reach of the Proposed Rule, rather than relying on projections of data from almost a decade ago at these key stages.[5] EPA should also issue a Notice of Data Availability that allows sufficient time for parties to review and provide feedback on the data and modeling to be used by the Agency.

Likewise, EPA has relied on modeling analyses from prior transport rules that are not appropriate for use in the Proposed Rule.[6] While EPA relied on the 2021 Revised CSAPR Update Rule modeling for some aspects of the Proposed Rule, the Agency also characterized such analyses as presenting "challenges" for purposes of the screening assessment for non-EGUs in 2026.[7] Indeed, in screening the non-EGU sources, the Agency expressly acknowledged it used past "air quality modeling for this screening assessment because the air quality modeling for this proposed rule was not completed in time to support the assessment."[8] EPA must realize it should conduct a separate assessment for this rulemaking as the Agency indicated updated modeling work – designed for the Proposed Rule – was underway. It is only sensible and prudent to hold off on proposing a new rule across non-EGU sources until the air quality modeling for the rule is completed.

As a practical matter, EPA's failure to account for updated emissions and all effective controls in the future has the potential to result in overcontrol of non-EGUs in several upwind states. One of the primary sources of information on the installation of controls EPA relies upon in the Proposed Rule is more than 25 years old, from the 1998 NOx SIP Call.[9] The efficacy and timelines for controls based on 25-year-old data is undoubtedly an example of outdated

[4] E.g., 87 Fed. Reg. at 20,064 col. 2 (non-EGU emissions inventory based on data submitted in 2016 and others "projected from 2014 to 2016").

[5] It appears that EPA may have used the 2019 emissions inventory for the 2026 non-EGU emissions in its Step 3 emissions reduction and cost analysis, because EPA believed it was a more accurate projection of future emissions. If that was in fact the case, it only highlights the need to use the most current data throughout its analytical approach for the Proposed Rule in order to make these critical decisions.

[6] E.g., 87 Fed. Reg. at 20,062 col. 3.

[7] Technical Memorandum, Screening Assessment of Potential Emissions Reductions, Air Quality Impacts, and Costs from Non-EGU Emissions Units for 2026, at 6 (Feb. 28, 2022) ("Non-EGU Screening Assessment Memorandum").

[8] 87 Fed. Reg. at 20,082 col. 3 n.161.

[9] Non-EGU Sectors Technical Support Document, U.S. Env't Prot. Agency, Office of Air and Radiation, at 87 (Dec. 2021).

information EPA used that, if updated, would change the results of EPA's assessment.[10] In other areas of the assessment, EPA relies on information in the 2016 CSAPR Update Non-EGU TSD, then elsewhere finds such information in the same TSD is "not complete or sufficient to serve as a foundation" for a different part of the rule.[11] Such inconsistencies and data gaps confirm that the Agency should take a pause and obtain the best available data before taking the step of regulating non-EGUs across 23 states.

EPA also concedes it lacks information regarding existing controls on non-EGUs across multiple sectors. As a result, EPA is still seeking foundational information on existing NOx controls installed at non-EGU sources on which EPA is proposing to require controls.[12] Instead of reaching conclusions based on inadequate information, EPA should first engage in information gathering from states and sources to ascertain the current level of controls through a Notice of Data Availability (NODA) or other mechanism. It is unreasonable – and again a rush to judgment – to propose to mandate controls, without knowing whether controls are currently installed and already will be controlling future emissions.

Given the outdated information and data gaps regarding non-EGUs, EPA should not proceed to regulate non-EGUs in a final rule. At a minimum, we urge the Agency to prepare an updated analysis and supplemental notice relying on current data and completed air quality modeling before proposing to regulate non-EGU sources.

b. EPA has failed to timely and fairly provide access to the data and analyses on which it relied upon in the Proposed Rule.

Aside from the incomplete modeling that EPA has conducted, EPA failed to *timely* provide *full and complete* information to the public. As a result, the Agency has failed in its legal obligation to meet the basic principles of due process afforded to any stakeholder in an administrative proceeding, as required by the Administrative Procedure Act and the Clean Air Act, to consider the record on which an agency has based its proposed rule. Indeed, because of the "complex scientific issues involved in EPA rulemaking" Congress established more rigorous requirements under the CAA for making information available for public scrutiny. *E.g., Small Ref. Lead Phase-Down Task Force v. EPA,* 705 F.2d 506, 518 (D.C. Cir. 1983). Hence, the CAA mandates that "[a]ll data, information, and documents … on which the proposed rule relies *shall* be included in the docket on the date of publication of the proposed rule." CAA § 307(d)(3) (emphasis added); *see Kennecott Corp. v. EPA,* 684 F.2d 1007, 1018 (D.C. Cir.) (CAA § 307(d)(3) requires EPA to place in the docket "the factual data on which the proposed regulations are based").

[10] *See* Comments from Portland Cement Association to U.S. EPA (June 21, 2022) (EPA's assumed 2-year timeline for the installation of SNCR NOx emissions controls on a sector-wide basis was based on an evaluation conducted prior to current economic circumstances and supply chain disruptions, and without consideration of the process of New Source Review).

[11] Non-EGU Screening Assessment Memorandum at 2, n.6 ("Note that information on control installation timing as detailed in the 2016 CSAPR Update Non-EGU TSD is not complete or sufficient to serve as a foundation for timing estimates for this proposed FIP.").

[12] 87 Fed. Reg. at 20,097 col. 1-2.

Here, the Proposed Rule is about the transport of emissions hundreds if not thousands of miles – and EPA relies on projections of those emissions over time using complex photochemical modeling to draw connections between upwind sources and downwind receptor.[13] Yet, the CAMx 2023 and 2026 source apportionment modeling files that EPA relied upon in its proposal were not "in the docket" when EPA published the rule. In fact, the modeling files are still not accessible in the docket, but only available upon request.[14] Stakeholders had to request the data from the EPA – and then needed to physically ship a hard-drive to the government in order for EPA to upload and then return the hard-drive with the data.[15]

More importantly, even if a stakeholder requested the data, EPA did not have a process to timely provide the data. The ASC's expert, Ramboll U.S. – who developed the CAMx source apportionment model on which EPA relies – requested the foundational modeling files *three weeks before* EPA published the Proposed Rule – but did not even receive the data until *the original public comment period was nearly half over.*[16] It was a fundamental failure by EPA to not make these modeling files accessible to the public at the time the proposal was published.

ASC therefore asked EPA to extend the deadline through August – specifically due to the failure to timely provide these modeling files. And although EPA never responded to ASC's specific concern, it only provided a 15-day extension of the comment deadline.[17] EPA offered no meaningful explanation – and faced no immediate deadline compelling the rush to judgment. Yet, this brief 15-day extension offered no real relief, as the time provided to stakeholders was grossly insufficient to provide non-EGU sources the ability to evaluate the nexus alleged by EPA in the Proposed Rule. The ASC explained this challenge in a subsequent request for an extension of the comment period, which EPA denied just one business day before the comment period closed.[18] While EPA's response referenced certain information made available prior to publication of the Proposed Rule, the Agency failed to address the ASC's primary point – the source apportionment modeling files, which are fundamental to evaluating the alleged contribution of non-EGU sources, were not previously made available.

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[13] As discussed, *infra*, EPA failed to use photochemical modeling in a core part of its assessment of the contribution of non-EGU sources, contrary to its established guidance.

[14] See e.g., Non-EGU Screening Assessment Memorandum at 3 n.9 ("The air quality contribution data and the R code that processed these data are available upon request.").

[15] *See* Ramboll Report at 15-17 (summarizing the multiple steps and layers of EPA Ramboll had to navigate in order merely to obtain the necessary modeling files); *see also* Letter from ASC to Hon. Administrator Regan (May 2, 2022) Docket No. EPA-HQ-OAR-2021-0668-0231.

[16] Ramboll Report at 16-17. Ramboll submitted request to EPA on March 17, 2022. The proposed rule published in the Federal Register on April 6, 2022, with a comment period originally scheduled to conclude on June 6, 2022. Ramboll received all the requested data by May 3, 2022.

[17] *See* 87 Fed. Reg. 29,108 (May 12, 2022).

[18] *See* Letter from ASC to Hon. Administrator Regan (June 1, 2022) Docket No. EPA-HQ-OAR-2021-0668-0258; *see also* Letter from U.S. EPA to ASC (June 17, 2022).

The modeling files included over *37 Tb of data.*[19] It takes several days just to copy and set up the files of this size so that a stakeholder could use the data and conduct a proper review. Then, to conduct a standard analysis of the source apportionment modeling would require a minimum of an additional 80 days of computer time on a high performance computer just in order to assess the results.[20] None of this can be done within the brief additional time granted by EPA – particularly since EPA failed to place these "factual data on which the proposed regulations are based" in the docket or make those data available to the public in any timely way.

Further, this is not a minor harmless missing piece of data, but a "serious" error, because the CAMx 2023 and 2026 source apportionment emissions inputs and outputs are "matters of … central relevance" to the Proposed Rule. CAA § 307(d)(8). As the Proposed Rule states, "EPA used CAMx photochemical source apportionment modeling to quantify the impact of emissions in specific upwind states on downwind nonattainment and maintenance receptors."[21] This modeling, as EPA acknowledges, "track[s] the formation and transport of ozone from specific emissions sources and calculates the contribution of sources and precursors to ozone for individual receptor locations. The benefit of the photochemical model source apportionment technique is that all modeled ozone at a given receptor location in the modeling domain is tracked back to specific sources of emissions and boundary conditions to fully characterize culpable sources."[22]

The source apportionment analysis purports to provide the connection between each upwind "source and type of emissions activity" and downwind receptors, which is the specific statutory requirement at issue in CAA § 110(a)(2)(D)(i). Thus, the source apportionment modeling is a foundational element of the proposal and information of "central relevance" that Congress expected would be available for timely and complete public review. Indeed, the need for complete and timely data availability is particularly crucial here, given that the U.S. Supreme Court has made clear that EPA may not "overcontrol" sources under the Good Neighbor provision.[23] Hence, EPA may not hide behind a notion of deference with the Proposed Rule, as it is essential to provide complete data to evaluate whether a proposal meets this elemental requirement established by the Supreme Court. The fact that other data may have been available is entirely beside the point and in no way minimizes the serious error EPA is making by not providing the public adequate time to obtain, download, analyze and review this core modeling data.[24]

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[19] This is an enormous volume of data, as 10 Terabytes is equivalent to the entire printed collection of the U.S. Library of Congress; *see* https://www.teradata.com/Glossary/What-is-a-Terabyte.

[20] Ramboll Report at 16-17.

[21] 87 Fed. Reg. at 20,070, col. 2.

[22] *Id*. EPA has refused to acknowledge its failure to timely provide the source apportionment modeling, a glaring omission in its response to Senator Capito's request that EPA extend the comment period. *See* Letter from J. Goffman, EPA to Hon. Senator Capito (June 3, 2022).

[23] *EPA v. EME Homer City Generation, L.P.*, 572 U.S. 489, 523 (2014).

[24] Other critical data was posted on EPA's website well after the comment period began, further limiting the time for stakeholders to review. For instance, EPA only posted the Tier 2 non-EGU industry data files in the rule docket on April 27. https://www.regulations.gov/document/EPA-HQ-OAR-2021-0668-0225 (providing data related to EPA's

As such, the Agency has not provided the public a meaningful opportunity to comment on the Proposed Rule and should, at a minimum, make all the data and information relied upon publicly available and provide sufficient time for review and analysis – before closing the comment period.

II. EPA's First-Step of the 4-Step Framework is Premature Until the Designation Process Concludes

At Step One, EPA identifies those downwind receptors with nonattainment or maintenance issues in a future year. In the Proposed Rule, EPA's Step One determination that downwind receptors present non-attainment or maintenance issues with the 2015 ozone NAAQS in 2023 and 2026 may be premature. EPA is still in the process of making attainment designations and classifications that have direct implications for EPA's analysis, including the very states and non-EGU sources that EPA is proposing to regulate in this proposal. EPA should await the final designations and reclassifications, and consider fully the reductions in emissions from the 2021 Revised CSAPR Update Rule, before moving ahead to implement yet further regulation for the 2015 ozone NAAQS.

Indeed, state implementation plans (SIP) are designed to address a final designation, and states subject to a reclassification lead to SIP revisions and changes to corresponding deadlines.[25] In this case, moderate nonattainment areas have an attainment date of 2024, serious nonattainment areas have an attainment date of 2027, and severe nonattainment areas have an attainment date of 2033. As the Courts have upheld, the attainment deadlines in which states and EPA are required to address interstate transport through SIPs and FIPs flow from the specific designation attainment dates of the downwind state.[26] Thus, until downwind state attainment deadlines are fully determined, EPA cannot reasonably assess potential significant contribution to downwind attainment issues by a particular deadline.

Since the date EPA publicly released the Proposed Rule, the Agency has taken several actions with respect to designations and classifications under the 2015 ozone NAAQS that the Agency should await final action and reassess its four-step transport framework before proceeding with such haste to promulgate a FIP. As one example, on March 28, 2022, EPA proposed determinations of attainment for six areas, including at least one that EPA considered as having a nonattainment/maintenance receptor for purposes of the Proposed Rule.[27] Thus, EPA's assumed linkage, contribution and proposed controls to address air quality issues at this receptor in the

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"Screening Assessment of Potential Emissions Reductions, Air Quality Impacts, and Costs from Non-EGU Emissions Units for 2026") (posted Apr. 27, 2022). Such an ad hoc, belated approach to providing the public access to the information on which it relied well after the comment period has started short-circuits the public's ability to meaningfully comment on the Proposed Rule in the time afforded.

[25] CAA § 110(a)(1); 42 U.S.C. § 7410(a)(1).

[26] *North Carolina v. EPA*, 531 F.3d 896 (D.C. Cir. 2008), *Wisconsin v. EPA*, 938 F.3d 303 (D.C. Cir. 2019), and *Maryland v. EPA*, 958 F.3d 1185 (D.C. Cir. 2020).

[27] 87 Fed. Reg. 21,842 (Apr. 13, 2022). The six areas include: Atlanta, GA; Manitowoc County, WI; Southern Wasatch Front, UT; Amador County, CA; San Francisco Bay, CA; and Yuma, AZ.

Proposed Rule may be null if EPA finalizes this determination. On May 18, 2022, EPA published a proposed redesignation of the Indiana portion of the Louisville, Indiana – Kentucky area from nonattainment to attainment with the 2015 ozone NAAQS, and approved Indiana's SIP.[28] Yet, EPA's non-EGU screening assessment for the Proposed Rule included a cement plant covered under the approved SIP.[29] Had EPA waited to develop the Proposed Rule until the designations were final, EPA could have avoided the potential overcontrol of sources that would have otherwise been excluded from EPA's assessment.

Further, EPA has not factored in the NOx emissions reductions taken under the recently finalized 2021 Revised CSAPR Update Rule. In that rule for the 2008 ozone NAAQS, EPA has expressly acknowledged that reductions achieved by the 2021 rule would have the effect of aiding attainment and maintenance with the 2015 ozone NAAQS.[30] EPA went so far as to say that the reductions under that rule could incidentally improve ozone levels at receptors evaluated under the 2015 ozone NAAQS.[31] Since the 2021 Revised CSAPR Update has a compliance deadline of this year, EPA should wait until those measures have been implemented and then assess whether non-EGUs need to be included in a proposal for the 2015 NAAQS.

III. EPA's Second-Step of the 4-Step Framework Uses a Flawed Screening Threshold to Link Upwind States to Downwind Air Quality Issues

EPA should revisit its analysis at Step Two and rely on EPA's own guidance to apply a statistically significant threshold of not less than 1 ppb to evaluate the link between upwind states and downwind receptors under the 2015 ozone NAAQS. At Step Two, EPA determines if the upwind state is "linked" to the downwind receptor(s) by contributing above a certain threshold amount to the downwind attainment issues. In the Proposed Rule, EPA identifies 27 "linked" upwind states to downwind air quality problems with the 2015 ozone NAAQS by applying a 1% threshold (i.e., 0.7 ppb) of contribution to downwind receptors and declined to provide an alternative contribution threshold. For the first time, EPA identified the western states of Nevada, Utah, and Wyoming as upwind states, as well as California. EPA's modeling and policy choices underpinning this proposed linkage raises several technical challenges and lacks a reasonable basis for departing from Agency policy. Thus, we urge EPA to reconsider its decision to solely rely upon a 1% screening threshold and recommend EPA use a statistically significant threshold of not less than 1 ppb for the reasons described below.

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[28] 87 Fed. Reg. 30,129 (May 18, 2022).

[29] Non-EGU Screening Assessment Memorandum at 15.

[30] 86 Fed. Reg. 23,054, 23,064 (Apr. 30, 2021) col. 2-3.

[31] *Id*. ("Nonetheless, the emission reductions and associated improvement in ozone levels achieved by this action are beneficial toward reducing ozone for purposes of the 2015 ozone NAAQS and its associated attainment planning and good neighbor requirements. In some cases, the reductions necessary to address significant contribution or interference with maintenance at receptors identified in this action for purposes of the 2008 ozone NAAQS will have the effect of incidentally improving ozone levels at potential receptors under the 2015 ozone NAAQS.").

a. EPA's analysis of significant contribution at Step Two is based on an inflated upwind state contribution to downwind receptors.

At Step Two, EPA's analysis was based on tools, assumptions, errors and omissions that overstated upwind state contributions at downwind receptors. For instance, NOx emissions from lightning and excess methane emissions were missing from EPA's analysis.[32] Had EPA considered such emissions the corresponding upwind state contribution to downwind receptors would have been reduced. In addition, EPA's use of coarse grid resolution and coarse grid meteorological inputs understated ozone contributions due to local sources, which led to an overstated upwind contribution to downwind receptors.[33] EPA's use of the Anthropogenic Precursor Culpability Assessment (APCA) probing tool similarly added to overstated upwind state contribution by accounting for ozone formed from both anthropogenic NOx emissions and biogenic VOC emissions.[34] This is problematic for two reasons. First, had EPA used a true ozone source apportionment tool, instead of the APCA, biogenic emissions would not have been allocated in this manner. Second, the inclusion of these combined anthropogenic and biogenic emissions raises concerns over potential double-counting of ozone. EPA failed to adequately address these issues in the Proposed Rule. Moreover, an independent evaluation – conducted in the very limited time EPA provided – of the input and output files relied upon in the Proposed Rule, demonstrated an overstatement of upwind state ozone contributions in 2023 and 2026.[35] Thus, EPA should improve its analysis at Step Two and use an appropriate ozone source apportionment tool to conduct an updated analysis of upwind state contribution and allow adequate time for public review and independent evaluation before proceeding with a final rule.

b. EPA Failed to Follow Agency Guidance in Selecting a Screening Threshold

Separate from the technical issues associated with EPA's analysis of upwind contribution to downwind receptors, the screening threshold EPA applied failed to follow Agency guidance and lacked a sufficient technical basis for the threshold selected.[36] This has resulted in a minimum of nine states where non-EGU sources should not be covered by the proposed regulation. Specifically, EPA applied a 1% of the NAAQS threshold to screen upwind states that may contribute significantly to downwind receptors. EPA failed to explain its decision to depart from its own agency procedures in which a peer-reviewed analysis found 1 ppb was the appropriate screening threshold for evaluating whether a state contributes significantly to downwind emissions under the 2015 ozone NAAQS. EPA's use of a 1% threshold – which is not supported by peer reviewed data - and without sufficient explanation for departing from its existing guidance, is

[32] Ramboll Report at 48.

[33] *Id*. at 48-49.

[34] *Id*. 50.

[35] *Id*. at 50-52.

[36] *Id*. at 61-64.

arbitrary and capricious.[37] Moreover, as a result of using a 1% screening threshold, EPA erroneously included non-EGUs in nine upwind states in its four-step transport framework.

In 2018, EPA conducted a statistical analysis to demonstrate that if two ozone design values (DV) differ by less than 1 ppb, that difference is not statistically significant.[38] EPA did that analysis to define the 1 ppb ozone Significant Impact Level (SIL) that is used as part of the Prevention of Significant Deterioration (PSD) permitting process to define an ozone level "for the permitting authority to conclude that the proposed source will not cause or contribute to a violation of a NAAQS."[39] That is exactly the type of analysis at issue in this EPA proposal. Further, EPA made clear that this statistical analysis is not limited to PSD permitting. Rather, as EPA stated in the statistical analysis report:

> The statistical methods and analysis detailed in this report focus on using the conceptual framework of statistical significance to calculate levels of change in air quality concentrations that have a 'significant impact' or an 'insignificant impact' on air quality degradation. Statistical significance is a well-established concept with a basis in commonly accepted scientific and mathematical theory. This analysis examines statistical significance for a range of values measured by air quality monitors. The statistical methods and data reflected in this analysis may be applicable for multiple regulatory applications where EPA and state agencies seek to quantify a level of impact on air quality that they consider to be either 'significant' or 'not significant'.[40]

Thus, EPA's statistical analysis "result[s] in a SIL value for the ozone 8-hour ozone NAAQS of 1.47%. This corresponds to 1.0 ppb at the level of the 2015 ozone NAAQS (70 ppb)."[41] A peer review of EPA's statistical method for determining that an ozone contribution of less than 1 ppb "will not cause or contribute to a violation of the applicable NAAQS" was conducted by three

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[37] *See Morton v. Ruiz*, 415 U.S. 199, 235 (1974) (agency's failure to follow its own guidance documents is arbitrary and capricious).

[38] Technical Basis for the EPA's Development of the Significant Impact Thresholds for PM2.5 and Ozone. U.S. Environmental Protection Agency, Office of Air Quality Planning and Standards, Air Quality Assessment Division, Research Triangle Park, NC. EPA-454/R-18-001 (Apr. 2018), https://www.epa.gov/sites/default/files/2018-04/documents/ozone_pm2.5_sils_technical_document_final_4-17-18.pdf.

[39] EPA, P. Tsirigotis, Director Office of Air Quality Planning and Standards, U.S. Environmental Protection Agency, Guidance on Significant Impact Levels for Ozone and Fine Particles in the Prevention of Significant Deterioration Perming Program (Apr. 17, 2018) ("April 2018 Tsirigotis Memo"), https://www.epa.gov/sites/production/files/2018-04/documents/sils_policy_guidance_document_final_signed_4-17-18.pdf.

[40] EPA, Office of Air Quality Planning and Standards, Air Quality Assessment Division, Research Triangle Park, Technical Basis for the EPA's Development of the Significant Impact Thresholds for PM2.5 and Ozone, EPA-454/R-18-001, at 5 (Apr. 2018), https://www.epa.gov/sites/default/files/2018-04/documents/ozone_pm2.5_sils_technical_document_final_4-17-18.pdf .

[41] *Id*.

independent economic statisticians on faculty of major U.S. universities.[42] The peer reviewers confirmed the methods, presentation, and results in EPA's determination that a contribution of less than 1 ppb does not contribute significantly to the 2015 70 ppb ozone NAAQS threshold.

EPA's own peer review analysis thus clearly applies to the evaluation of upwind contribution to downwind compliance with the ozone NAAQs. Moreover, on August 31, 2018, EPA released a Memorandum that evaluated significant contribution thresholds of 1 ppb and 2 ppb in addition to 1 percent of the NAAQS and supported the use of a 1 ppb threshold for SIPs addressing the 2015 ozone NAAQS.[43] This endorsement is in fact the only technically justifiable choice among the options evaluated, given the peer-reviewed, statistical analysis EPA itself conducted established that 1 ppb was the right threshold to find a "proposed source will not cause or contribute to a violation of a NAAQS,' *and* that two ozone DVs that differ by 1 ppb or less are not statistically significantly different from each other.

EPA discussion of the 1% threshold in the Proposed Rule fails to provide a legitimate reason for departing from the 1 ppb threshold supported by existing guidance and peer-reviewed statistical analysis. EPA essentially only asserts that its selection of 1% is consistent with the threshold it has used in other transport rules.[44] Yet, that surely does not justify ignoring existing EPA guidance that provided a rational and scientific basis for setting a different threshold for the 2015 ozone NAAQS. The mere fact that EPA may have used a certain metric in past transport rules *before* it analyzed the metric and subjected it to peer review is not a rational reason to continue to rely on it. That EPA used the metric before is simply not a rational basis to continue to use it – especially when EPA's own peer reviewed scientific analysis has found 1 ppb to be the preferred approach.

In all events, EPA's use of the 1% threshold in more recent transport rules is distinguishable. For example, while EPA retained the 1% threshold in the 2021 Revised CSAPR Update rule, in response to public comments objecting to the threshold, EPA said it was not "reopening" the threshold in the update rule because that rule was being issued in response to the *Wisconsin* remand and the threshold was not at issue in that case.[45] As such, EPA did not independently evaluate the appropriateness of using a 1% threshold, it simply reapplied the threshold used for the original rule subject to the remand. Therefore, the use of the 1% threshold in the 2021 Revised CSAPR is not a meaningful precedent to rely on for this Proposed Rule.

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[42] April 2018 Tsirigotis Memo at 17.

[43] EPA, Analysis of Contribution Thresholds for Use in Clean Air Act Section 110(a)(2)(D)(i)(I) Interstate Transport State Implementation Plan Submissions for the 2015 Ozone National Ambient Air Quality Standards. Memorandum from Peter Tsirigotis, Director Office of Air Quality Planning and Standards (Aug. 31, 2018) ("August 2018 Tsirigotis Memo").

[44] 87 Fed. Reg. at 20,073 col. 1.

[45] 86 Fed. Reg. at 23,085 col. 2 (Apr. 30, 2021) ("the Agency is not reopening the use of the 1 percent threshold in this action"). In addition, prior transport rules included an evaluation of an alternative screening threshold, which EPA did not consider as part of the Proposed Rule. For instance, the 2011 CSAPR analyzed three thresholds (i.e., 0.05%, 1%, and 5%).

EPA incorrectly asserts in the Proposed Rule that a 1% threshold provides a better approach for a nationally consistent policy and for tracking a declining NAAQS.[46] First, if EPA's goal is to use a nationally consistent ozone transport threshold, then it should use the 1 ppb metric, which is fixed and does not vary. Second, EPA provides no technical support for its assertion that a consistent percentage threshold is preferred. To the contrary, the 2018 memorandum declared that an appropriate threshold for one NAAQS may not be appropriate for another NAAQS.[47] Indeed, a 1% threshold (i.e., 0.7 ppb) is already below the 1 ppb level EPA found to be sound statistically. Thus, to suggest that a 1% threshold would be appropriate for future and potentially even lower ozone NAAQS could lead to a screening threshold that is immeasurable by reference monitors.

Moreover, the use of a 1 ppb significant ozone contribution threshold instead of 1 percent of the NAAQS has an effect on the number of states identified in Step Two as having a significant contribution. The following states had 2023 ozone contributions between the 1 percent of the NAAQS and 1 ppb thresholds so were included in the Proposed Rule, even though applying EPA's peer-reviewed analysis they had an "insignificant" contribution to an ozone Design Value (DV) at a downwind state nonattainment/maintenance receptor: AL (0.88 ppb), KY (0.88 ppb), MN (0.97 ppb), NV (0.89 ppb), TN (0.94 ppb) and WY (0.81 ppb). In addition, the following states have 2026 ozone contributions between the 1% of the NAAQS and 1 ppb thresholds: MS (0.90 ppb), OK (0.72 ppb) and OR (0.98 ppb).

Thus, if EPA proceeds to a final rule, we request that the Agency follow its own 2018 guidance and apply a 1 ppb screening threshold and eliminate states that do not contribute emissions above that level. Based on the data EPA has provided to date, that would eliminate Kentucky, Minnesota, Mississippi, Nevada, Oklahoma, Oregon, and Wyoming from evaluation under Step Three and proposed controls on non-EGU sources in those states under Step Four for 2026.[48] Removing these states from the Step Two analysis would also require EPA conduct a new non-EGU screening assessment at Step Three, subject to public comment, prior to finalizing the rule.

c. EPA Step Two Screening is Premised on the Premature Disapproval of 19 Upwind States Good Neighbor SIPs.

EPA's Step Two screening included states that already had Good Neighbor SIPs for the 2015 ozone NAAQS, which EPA prematurely disapproved in conjunction with the Proposed Rule. We understand that under current law EPA generally may issue a FIP following EPA's disapproval of a SIP or determination that a state failed to submit a complete SIP. However, the circumstances here are distinguishable in that EPA released this Proposed Rule before the Agency issued final disapprovals – let alone proposed disapprovals for states that EPA proposes to cover with this FIP.

EPA acknowledges this tension and said that it will not finalize the Proposed Rule for any state for which it has not taken final action on its SIPs. Yet, it appears EPA is rushing to take final

[46] 87 Fed. Reg. at 20,073, col. 2.

[47] August 2018 Tsirigotis Memo at 2.

[48] Ramboll Report at 63.

action as EPA on February 22, 2022, proposed to disapprove 19 Good Neighbor SIP submissions. EPA also issued proposed findings of failure to issue a complete SIP for NM, PA, UT, and VA. The proposed FIP essentially prejudges the outcome of those pending SIP actions and, in the event EPA takes a different action on those SIPs than contemplated in this proposal, it would be required to conduct a new assessment and modeling of contribution and subject those findings to public comment.

EPA's approach on those 19 SIPs defies the cooperative federalism framework rooted in the Clean Air Act, and particularly the Good Neighbor provision. For EPA to gridlock its co-regulatory state partners and affected stakeholders with a flood of transport proposals at the same time not only raises concerns with adherence to principles of administrative law and due process, but is just plain wrongheaded. Accordingly, we urge EPA to stay action on these proposals and to coordinate with the states and affected stakeholders to appropriately sequence these actions.

IV. EPA should reevaluate its non-EGU screening assessment at Step Three

At Step Three, EPA uses a multi-factor analytical framework for non-EGUs that relies on outdated and inaccurate information, applies approaches that are inconsistent with past agency policy, and fails to reasonably identify non-EGU significant contribution to downwind receptors or highly cost-effective controls to address such contribution. In addition, this multi-factor test utilizes several arbitrary, unjustified, and outcome-determinative elements that invalidate EPA's basis for the screening assessment and Step Three analysis for non-EGUs. For the reasons described below, we urge EPA to collect the necessary information, conduct the proper analysis, and reevaluate its non-EGU screening assessment for public input before proceeding with this rulemaking.

To analyze non-EGUs at Step Three, EPA conducted a screening assessment to determine the upwind emissions that contribute significantly to downwind receptors, including evaluating whether highly cost-effective control measures are available to eliminate such contribution at a downwind receptor. EPA's screen aggregated projected 2023 emissions data by industries defined by 4-digit NAICS code. Next, EPA identified industries it characterized as having potentially controllable emissions that could have the greatest impact on downwind air quality. Finally, EPA selected industries it found to purportedly have the most emissions reductions that would make "meaningful air quality improvements" at downwind receptors at a marginal cost threshold the Agency established along with control efficacy information.

As described below, EPA's non-EGU screening assessment (1) warrants additional information and analysis; (2) erred in relying on the Air Quality Assessment Tool; (3) inappropriately groups sources by NAICS code; (3) arbitrarily lowered the emissions threshold of sources screened; (4) utilizes an unjustifiably new level of emissions deemed significant; (5) applies an exorbitantly high cost threshold; and (6) fails to consider feasible controls to be installed in the time evaluated. Accordingly, we urge EPA to reconsider and modify its Step Three screening assessment for non-EGUs.

a. EPA's Screening Assessment of Non-EGUs Warrants Additional Information and Analyses.

Many of the information gaps discussed above – current emissions data, controls cost and timeline information, and basic air quality modeling – are integral to EPA's screening assessment of non-EGUs at Step Three. As outlined, EPA should remedy these deficiencies by collecting the necessary information, using updated datasets, and taking the time and resources to finish the updated modeling of non-EGU sources that the Agency has indicated is underway – and then complete its analysis for public review and comment.[49]

This is particularly critical for EPA's proposal to regulate non-EGUs, given EPA's acknowledged gaps in information necessary for this rulemaking on these industries. Moreover, the affected non-EGUs EPA proposed to cover are very different than the EGUs that the EPA has long regulated under the Good Neighbor provision; EPA acknowledges this distinction in the Proposed Rule, stating:

> "Since the NOx SIP Call, EGUs have consistently been regulated under ozone transport rules. These units operate in a coordinated manner across a highly interconnected electric grid. Their configuration and emissions control strategies are relatively homogenous, and their emissions levels and emissions control opportunities are generally very well understood due to longstanding monitoring and data-reporting requirements. Non-EGU sources, by contrast, are relatively heterogeneous, even within a single industrial category, and have far greater variation in existing emissions control requirements, emissions levels, and technologies to reduce emissions."[50]

Accordingly, EPA should first gather sufficient information about non-EGUs, and then conduct the proper updated analysis to determine whether, and if so, how to regulate those sources. This is particularly the case at Step Three where modeling is integral to the non-EGU screening assessment and multi-prong Step Three analysis, but "was not completed in time to support the assessment."[51] EPA should not finalize this proposal until it has completed its updated modeling, conducted a new screening assessment at Step Three, and provided an opportunity for public comment.

[49] *See* Section I, *supra*.

[50] 87 Fed. Reg. at 20,076, col 3.

[51] 87 Fed. Reg. at 20,082 col 3 n.161.

b. EPA Erred in Relying on the Air Quality Assessment Tool (AQAT) for Evaluating Non-EGUs at Step Three.

A further concern at Step Three is EPA's use of an Air Quality Assessment Tool (AQAT), a simplified Excel spreadsheet, to make significant decisions regarding non-EGU sources.[52] EPA should revisit this and instead conduct proper photochemical modeling analysis, providing stakeholders sufficient time to evaluate the modeling, rather than rushing to judgment and imposing new controls on non-EGU sources. First, EPA erred in using AQAT for this purpose. EPA air-quality modeling guidelines direct EPA to use a model with a photochemical mechanism for this type of air quality analysis, not a simplified spreadsheet. Further, EPA seeks to use AQAT to a degree of precision it is not designed for or capable of achieving. Indeed, as EPA acknowledges, it used AQAT only for expediency, not because it provides the optimal analysis of these complex air-quality issues. Moreover, EPA erred in how it applied the AQAT spreadsheet. In AQAT, rather than using the CAMx source apportionment analysis, EPA redefined the 2026 baseline emissions. This resulted in Step 3 results that are inconsistent with Step 1 and 2 of the Proposed Rule – which necessarily results in an overcontrol of non-EGU sources.

1. EPA Should Revise the Modeling to Use Standard Peer-Reviewed Tools Based on EPA's Own Guidance.

As developed here by EPA, AQAT collects and relates state-specific NOx emission changes to corresponding changes in ozone DV contributions from each state and receptor analyzed in the proposed Transport Rule. AQAT was developed for use in Step 3 of EPA's four-step transport framework to evaluate ozone DV changes in response to state NO_X emissions changes for several purposes, including (1) assess the potential of overcontrol, (2) assess the level of ozone improvements at receptors due to NO_X controls at various control and cost thresholds, (3) the screening analysis for non-EGU sources, and (4) additional air quality analyses (e.g., impactful boilers).

However, using what EPA describes as a "simplified" AQAT tool for these purposes is contrary to EPA's modeling guidelines.[53] EPA's guidelines specifically recommend that evaluating ozone impacts due to single source or groups of sources should be based on "more sophisticated case-specific chemical transport models … (e.g., photochemical grid models) …" [54] Indeed, EPA's guidance for modeling ozone and secondary $PM_{2.5}$ stresses the need that a model for ozone contain a photochemical mechanism because *"a realistic characterization of chemistry*

[52] EPA, Technical Support Document (TSD) for the Proposed Federal Implementation Plan Addressing Regional Ozone Transport for the 2015 Ozone National Ambient Air Quality Standard, Ozone Transport Policy Analysis Proposed Rule TSD at 31-60 (Feb. 2022) ("Proposed Rule TSD").

[53] EPA, Revisions to the Guideline on Air Quality Models: Enhancements to the AERMOD Dispersion Modeling System and Incorporation of Approaches to Address Ozone and Fine Particulate Matter, 82 Fed. Reg. 5,182 (Jan. 17, 2017).

[54] 82 Fed. Reg. at 5,192, col.3.

surrounding the project source is important for estimating secondary impacts."[55] Yet, the AQAT spreadsheet tool not only does not include a photochemical mechanism – it does not even satisfy the requirements of a Tier 1 screening tool from EPA's ozone single source ozone modeling guidelines as it has not been "published in the peer-reviewed literature." [56]

Rather, EPA's ozone modeling guidance[57] and guidelines recommend a series of procedures for applying an ozone model that includes selecting a model that has been peer-reviewed, developing a Modeling Protocol and conducting a Model Performance Evaluation (MPE). EPA recommends that at a minimum an operational MPE be performed that compares the ozone model with concurrent observations, but also recommends a diagnostic evaluation, as well as a dynamic evaluation that evaluates how the ozone model responds to changes in emissions. Yet, *none* of these standard steps in an ozone model application was done for the AQAT tool used in the Proposed Rule.

2. AQAT is Used to an Accuracy and Precision for Non-EGU Sources That Has Never Been Established.

Not only has EPA erred by not following its own guidance, but it is seeking to use AQAT in a way that goes beyond any reasonable use of this simplified tool. EPA is using AQAT to define the ozone contributions due to changes in NO_X emissions from state(s) for a variety of levels of NO_X emission levels and purposes. For non-EGU sources in particular, EPA is using AQAT to allegedly identify whether the change in NO_X emissions causes extremely small ozone changes (e.g., 0.10 and 0.01 ppb) at downwind receptors, which assumes that AQAT has a level of accuracy that EPA has never demonstrated. Since EPA never evaluated AQAT against observed ozone concentrations or independent CAMx simulations, its accuracy and reliability have never been demonstrated to achieve the purpose for which EPA claims to use the tool. That is a fundamental precept for any model to assess its reliability for any purpose, but especially one that is used for so dramatic a purpose as EPA has used the AQAT here. In any case, *AQAT cannot achieve the necessary level of accuracy and reliability.* This is because ozone formation is nonlinear – and that is why EPA's guideline and guidance provides that EPA will use a model with a photochemical mechanism to simulate ozone. As such, AQAT fails a basic "fit for purpose" test as it does not include a photochemical mechanism.

EPA admits that its "simplified" AQAT tool is not the "optimal" approach for evaluating downwind ozone. EPA expressly acknowledges that "air quality modeling would be the optimal way to estimate the air quality impacts at each cost threshold level from EGUs and non-EGUs

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[55] EPA, Guidance on the Use of Models for Assessing the Impacts of Emissions from Single Sources on the Secondarily Formed Pollutants: Ozone and $PM_{2.5}$. EPA-454/R-16-005, at 13 (Dec. 2016), https://www.epa.gov/sites/default/files/2019-02/documents/singlesources2016.pdf

[56] 82 Fed. Reg. at 5,192 col. 3.

[57] EPA, Modeling Guidance for Demonstrating Air Quality Goals for Ozone, PM2.5, and Regional Haze. U.S. Environmental Protection Agency, EPA 454/R-18-009 (Nov. 29, 2018), https://www.epa.gov/sites/default/files/2020-10/documents/o3-pm-rh-modeling_guidance-2018.pdf.

emissions reductions."[58] Nonetheless, EPA claims that it had to use a simplified tool because "due to time and resource limitations EPA was unable to use photochemical air quality modeling for all but a few emissions scenarios."[59] Instead, due to these alleged constraints, EPA explained:

> [I]n order to estimate the air quality impacts for the various levels of emission reductions and to ensure that each step of its analysis is informed by the evolving emissions data, EPA used a *simplified* air quality assessment tool (AQAT). The simplified tool allows the Agency to analyze many more levels of NOX control stringency as implemented through emission budgets than would otherwise be possible. EPA recognizes that AQAT is not the equivalent of photochemical air quality modeling but in the Agency's view is adequate to this purpose. [60]

That is the full and complete defense of EPA's use of the sub-optimal, simplified tool, to determine whether to regulate non-EGU sources in an ozone transport rule. Although EPA asserts that AQAT is "adequate to this purpose," the Agency *presents no credible evidence* to this effect. There is no evaluation of AQAT against measurements or evaluation against independent photochemical model simulations. There is no independent peer-review of AQAT or any peer-reviewed papers on AQAT that was used the Proposed Rule. Nothing is presented in the Proposed Rule to support EPA's opinion that AQAT is "adequate" to estimate the ozone impacts due to a state's NO_X emissions. By contrast, EPA's own air quality modeling guidelines and guidance state than ozone models are required to have a photochemical mechanism that AQAT *does not possess* and lays out procedures for applying an ozone model *that EPA did not follow*. While EPA *asserts* that AQAT is *"adequate"* – it provides no evaluation or technical justification, just that they needed some way to do the analysis faster. This rulemaking schedule was never realistic, as communicated by technical experts, states, affected sources, and the ASC.[61] EPA dismissed those comments and retained this untenable schedule; yet EPA's established guidelines, guidance, and technical justification should take precedence over expediency.

EPA's claim in the development of AQAT is that "a significant portion of the nonlinearity is accounted for by using the calibration factors and having the air quality estimates occur at levels of emissions between the 2026 base case and the other case used in the calibration (which were both modeled in CAMx)."[62] That is likewise invalid. The reasons why EPA's claim fails are explained in the Ramboll Report.[63]

Specifically, first, one can certainly try to depict a linear expression by using the calibration factors as equivalent to the linear fit between two points. In one case the endpoints are the emissions and contributions between the 2023 and 2026 CAMx simulations, in the other

[58] Proposed Rule TSD at 32.

[59] Proposed Rule TSD at 32.

[60] Proposed Rule TSD at 32 (emphasis added).

[61] *See* discussion, *supra* at Section I.

[62] Proposed Rule TSD at 33, n.42.

[63] Ramboll Report at 20.

the endpoints correspond to 2026 base case and EPA's asserted "calibration case" (the 2026 30% EGU and non-EGU NOX reduction CAMx simulation). That however shows nothing, as it is entirely implausible that these calibration factors suddenly could account for all the nonlinearities of ozone formation using a linear equation – and EPA has provided no calculations or analysis to support this claim.

Moreover, second, the EPA assertion that it calibrated its use of AQAT by "having the air quality estimates occur at levels of emissions between the 2026 base case and the other case used in the calibration" is simply wrong. On the contrary, EPA's own data show that EPA largely did not use the levels of emissions ***between*** the CAMx 2026 base case and the CAMx "calibration" case – where, again, the "calibration" case has reduced EGU and non-EGU NOx emissions to ***less than*** the base case by 30%. Rather, when EPA established the 2026 Engineering Analysis Baseline that it used in the Step 3 AQAT analysis, EPA adjusted the emissions so that 39 states ***exceeded*** the modeled NOx emissions for the CAMx 2026 base case.[64] That means the AQAT application to NOx emission increases in the 2026 Engineering Analysis baseline fall ***well above*** the calibration range EPA claims it used to calibrate its AQAT model. And these assumed EGU NOx emission increases were substantial, ranging to more than ***100% more*** than the CAMx 2026 base case and far above the emissions in the asserted calibration range – which, again was supposed to be as much as ***30% less than*** the CAMx base case. Thus, contrary to EPA's assertion it never calibrated its AQAT model as it claimed, and the Agency could never have addressed one of the core failings of using AQAT – that its "simplified" method does not account for the complexities of the chemistry of ozone formation.

In sum, EPA's use of AQAT outside of its calibration range is improper and leads to flawed results in the Step Three control analysis.

3. AQAT Redefined the 2026 Baseline Emissions Making Step 3 Results Inconsistent with Step 1 and 2 of the Proposed Transport Rule

Beyond these clear reasons for EPA to revisit its use of AQAT, EPA applied the tool in a way that masks the clear overcontrol of non-EGU sources at Step 3. This likewise is an independent reason for EPA to use the proper photochemical-grid model to evaluate non-EGU source contributions.

As detailed in the Ramboll Report, EPA redefines the AQAT 2023 and 2026 baseline emissions to be different than what was used in the CAMx 2026 modeling in Step 1 (determination of the nonattainment/maintenance receptors) and Step 2 (determination of Linked Upwind States) of the four-step transport framework. Redefining the 2023 and 2026 baseline emissions in the AQAT analysis makes Step Three inconsistent with baseline emissions used in Step One and Two of the Proposed Rule. Moreover, these are not minor emission adjustments from the CAMx modeling used in Steps One and Two to the AQAT analysis used in Step Three.[65] As noted above, 39 states (80%) saw their NOx emissions go up in the AQAT 2026 baseline compared to the CAMx

[64] Ramboll Report at Table 3-1.

[65] *See* Ramboll Report at 20.

2026 base case. Using different 2026 emissions in the Step Three vs. Steps One and Two analysis of the Proposed Rule raises significant questions concerning the validity of the analysis. Most importantly, while there was insufficient time for the public to assess modeling files, including if the CAMx 2026 base case emissions are correct, then the Step Three AQAT cost-effectiveness and overcontrol analysis is invalid and overstated. This is because by creating a new, higher baseline in 2026, EPA makes it more likely for non-EGU sources to exceed the (arbitrary .10 and .01 ppb) thresholds it set.[66]

c. EPA's grouping of non-EGU sources by NAICS code is fundamentally flawed.

Further, EPA's decision to group non-EGU sources by NAICS code is fundamentally flawed and has led to overcontrol of sources. We urge EPA to consider carefully whether by using the NAICS code, EPA has swept in non-EGU sources that, when evaluated separately, do not warrant control under this proposed rule.

EPA's non-EGU screening assessment claims to identify "industries that could have the greatest air quality impact at downwind receptors" by aggregating underlying projected emissions inventory data into "industries" defined by 4-digit NAICS code.[67] This led EPA to identify 41 "industries" by NAICS code, which it narrowed down to seven.[68] However, by using this method, EPA has grouped together sources that are distinct types of emissions activities and do not contribute significantly to downwind receptors, if considered separately.

For example, consider NAICS 3241, where EPA's analysis erroneously included steel mills in its review of for the Petroleum and Coal Products Manufacturing. EPA's non-EGU screening assessment evaluated ten facilities and identified ten boilers that EPA asserted were associated with NAICS 3241 and that EPA relied on for its proposed determination that boilers within NAICS 3241 for Petroleum and Coal Products Manufacturing met its Tier 2 non-EGU threshold (i.e., the industry had (1) a maximum contribution to any one receptor greater than or equal to 0.10 ppb but contribute greater than or equal to 0.01 ppb to fewer than 10 receptors or (2) a maximum contribution less than 0.10 ppb but contribute greater than or equal to 0.01 ppb to at least 10 receptors).[69] However, a review of the corresponding Tier 2 industry spreadsheet in the rulemaking docket revealed that the boilers that were actually associated with NAICS 3241 did *not* meet the Tier 2 threshold. As depicted in the screenshot of the Tier 2 industry spreadsheet below, four of the ten boilers that EPA had listed under NAICS 3241 are not at Petroleum and Coal Products Manufacturing facilities, but are actually at two steel mills associated with NAICS 3311. The six remaining boilers at facilities that actually fall under NAICS 3241 do not meet EPA's Tier 2 threshold.

[66] *See* Ramboll Report at 19.

[67] 87 Fed. Reg. at 20,082-83.

[68] *Id*. at 20,083, col. 2-3.

[69] Non-EGU Screening Assessment Memorandum at 10, Table 2.

Facility Name	Existing NOx Control?	Ozone Season Emissions Reductions (tons)	Max PPB Improvement	Total PPB Improvement	Number of Receptor Impacted>= .005
US Steel - Gary Works	N	284	0.026	0.148	8
Citgo Petroleum Corp - Lake Charles Manufacturing Complex	N	288	0.016	0.029	2
Arcelormittal Monessen LLC/Monessen Coke Plt	N	98	0.005	0.018	0
Citgo Petroleum Corp - Lake Charles Manufacturing Complex	N	83	0.004	0.008	0
US Steel - Gary Works	N	41	0.004	0.021	0
US Steel - Gary Works	Y	38	0.003	0.020	0
Citgo Petroleum Corp - Lake Charles Manufacturing Complex	N	61	0.003	0.006	0
Citgo Petroleum Corp - Lake Charles Manufacturing Complex	N	44	0.002	0.004	0
BP Products North America Inc Whiting R	Y	25	0.002	0.013	0
Torrance Refining Company LLC	N	68	0.002	0.008	0

Thus, there is no basis in the record for facilities under NAICS 3241 to "contribute significantly" at Step Three and accordingly the proposed limits on facilities under NAICS 3241 reflect overcontrol and should be removed from any final rule.

Beyond this plain error, EPA's rigid application of a NAICS code as a means of identifying non-EGUs with significant contributions to downwind receptors has no basis in the Good Neighbor provision of the Clean Air Act. Clean Act Air Section 110 requires SIPs and FIPs to control "any source or other type of emissions activity." A NAICS code classification does not define a source or type of emissions activity. According to the U.S. Census Bureau, NAICS codes provide a standard for classifying business establishments for statistical analyses—they are not established based on the nature or scope of emissions from sources and have no relation to the Clean Air Act whatsoever.[70] In contrast, for decades EPA has developed categories of industries by emissions activity under the Clean Air Act, such as New Source Performance Standards (NSPS) that have been established for individual industrial or source categories – or National Emission Standards for Hazardous Air Pollutants (NESHAP), which likewise set emission standards for defined source categories.[71] In the Proposed Rule, EPA does not explain why it is relying rigidly on a NAICS code instead of considering longstanding categories of emissions activities. EPA should conform any non-EGU screening analysis to established sources or other types of emissions activities as specified in the CAA, not the NAICS code.

Indeed, the use of the 4-digit NAICS code without careful consideration of how there are different sources and types of activities is problematic because NAICS codes are aggregated at a very high level that cover activities with different operations and thus have very different emissions profiles. For example, NAICS 3259 for Other Chemical Product and Preparation Manufacturing covers "establishments primarily engaged in manufacturing chemical products,"

[70] United States Census Bureau, Introduction to NAICS ("The North American Industry Classification System (NAICS) is the standard used by Federal statistical agencies in classifying business establishments for the purpose of collecting, analyzing, and publishing statistical data related to the U.S. business economy."), https://www.census.gov/naics/#:~:text=The%20North%20American%20Industry%20Classification,to%20the%20U.S.%20business%20economy (June 5, 2022).

[71] 42 U.S.C. §§ 7411-7412.

printing ink producers and explosives manufacturers.[72] Clearly printing ink manufacturers making inkjet inks and cartridges are dramatically different from explosives manufacturers, yet they fall under the same NAICS code. In the Proposed Rule, this level of aggregation can lead to overcontrol of sources that simply share the same broad NAICS code, but would not otherwise meet EPA's thresholds for significant contribution.

As an example, consider NAICS 3311 for the Iron and Steel Mills and Ferroalloy Manufacturing. EPA identified facilities associated with NAICS 3311 as a Tier 1 non-EGU industry (i.e., the industry had (1) a maximum contribution of 0.01 ppb to at least 10 receptors and 0.10 to at least one receptor). For NAICS 3311, nearly all the linked contributions identified in EPA's screening assessment were from Integrated Iron and Steel facilities—not Electric Arc Furnace (EAF) mills, yet because EPA grouped facilities by NAICS, EAF mills within NAICS 3311 are subject to the proposed controls. Specifically, the only two EAFs identified in the assessment did not contribute 0.01 ppb to either no receptor or just one receptor, and thus, EAFs would have been screened out if examined as a "type of emissions unit" consistent with the NESHAP or NSPS programs. Instead, the Proposed Rule would control a discrete and readily identifiable sector that does not "contribute significantly" under EPA's own threshold.

Accordingly, at a minimum, EPA must evaluate closely its grouping of non-EGUs by NAICS code to ensure that disparate sources or types of emissions activity are not included – either in error or because the code incorrectly folds in distinct types of sources that must be evaluated separately. Further, we urge EPA to revisit its grouping of non-EGUs by NAICS code and to conduct a new screening assessment with proper consideration to the "type of emissions activity" addressing transport, subject to public comment.

d. EPA's screening of potential non-EGU sources was arbitrarily lowered from 150 tons to 100 tons per year

EPA should likewise return its screening threshold to the 150 tons per year level applied to EGU sources and that EPA has traditionally applied to non-EGU sources. EPA's multi-prong test at Step Three identifies sources that may contribute significantly to downwind receptors by screening out sources that annually emit NOx below a certain threshold. In the Proposed Rule, EPA applied a lower threshold of 100 tons per year (tpy) of NOx emissions instead of the longstanding threshold of 150 tpy.[73] EPA made this change without providing a rational basis for abandoning the 150 tpy threshold, despite the additional costs and burdens imposed on smaller NOx sources. Because the record does not support this change, we urge EPA to revert to its traditional screening threshold assessment for non-EGU sources and provide for public comment on its revised analysis.

[72] North American Industry Classification System (2022), https://www.census.gov/naics/reference_files_tools/2022_NAICS_Manual.pdf.

[73] For boilers from Basic Chemical Manufacturing, Petroleum and Coal Products Manufacturing, and Pulp, Paper, and Paperboard Mills, EPA used a boiler design capacity of 100 mmBtu/hr as a proxy for the selection of 100 tpy used in the non-EGU screening assessment.

EPA failed to justify in the Proposed Rule its change in longstanding position to screen potential sources at 150 tpy. For three decades, EPA's transport rules have screened EGUs at 25 megawatts (MW), which the Agency explained corresponds to 150 tpy of NOx. This longstanding position dates back to the Acid Rain rule in 1993, where EPA excluded sources below 25 MW because their emissions, including NOx emissions, were "de minimis" and the "collective emissions from small sources were relatively small" while "the administrative burden to the states and regulated entities of controlling such sources was likely to be considerable."[74] For this reason, when the Agency previously evaluated EGUs and non-EGUs, such as in the Clean Air Interstate Rule (CAIR) and in each of the Cross State Air Pollution Rules, the Agency has consistently screened out non-EGU sources that emitted less than 150 tpy of NOx to have parity with the same threshold as EGUs. Most recently, EPA used the same reasoning and applied a 150 tpy threshold for non-EGUs in the 2021 Revised CSAPR Update Rule.[75]

While the Agency acknowledges – in a footnote – that prior rules applied this 150 tpy threshold to non-EGU sources, EPA offers no legitimate basis for departing from the 150 tpy threshold. EPA simply asserts it lowered the threshold to "broaden[] the scope" of potential sources to "uncontrolled sources or sources that could be better controlled at reasonable cost."[76] This unsubstantiated assertion is not a sufficient basis for changing approach, as EPA provides no data or analysis to support the suggestion that there are sources emitting between 100 to 150 tpy of NOx that are uncontrolled or could be better controlled at reasonable cost. Moreover, this change is plainly at odds with EPA's 25 MW threshold for EGUs in the Proposed Rule and presents an inequitable approach to control non-EGU sources that EPA fails to acknowledge or explain. Indeed, EPA offers no data to support why, under the Proposed Rule, non-EGU sources emitting below 150 tpy should be subject to controls while similarly situated EGUs would not.[77]

Using a lower threshold of 100 tpy of NOx also brings in smaller sources that would be disproportionately affected by costly controls. In the Proposed Rule, EPA notes that it historically excluded from the interstate transport rules EGU units of less than or equal to 25 MW, because of the low potential reductions, relatively high cost per ton of reduction, and high monitoring and other compliance burdens for that size unit.[78] Those same concerns necessarily apply to non-EGU sources below the corresponding 150 tpy threshold – indeed, EPA has offered no data to suggest otherwise. Moreover, EPA acknowledges this burden with smaller sources that emit less than 100 tpy of NOx, explaining that "reductions from these smaller units are likely to be more costly," but

[74] 87 Fed. Reg. at 20,084-85.

[75] 86 Fed. Reg. 23,054, 23,098 (Apr. 21, 2021) (in Revised CSAPR Update Rule, "EPA assessed potential emission reductions associated with applying controls to emissions units with 150 tons per year (tpy) or more of pre-control NO_X emissions in 2023, which is an emissions threshold that represents a comparable unit size to 25 MW for EGUs used in prior interstate transport rulemakings.")

[76] 87 Fed. Reg at 20,083 col. 1, n.163.

[77] By contrast, EPA has looked at the data and retained the 25 MW threshold for EGU. 87 Fed. Reg. at 20,085, col.1 ("EPA's 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 Resources as part of this rule.").

[78] 87 Fed. Reg at 20,084, col. 3.

offers no data, analysis or other technical justification for why non-EGUs that emit between 100 to 150 tpy of NOx would not face these exact same burdens.[79]

EPA has compounded its error to lower the threshold by relying on the 2021 Revised CSAPR Update TSD, which analyzed non-EGUs at 150 tpy, for its non-EGU screening assessment. The non-EGU screening assessment memo does not address this mismatch or clearly articulate how the TSD was applied to each analytical step of the assessment for the Proposed Rule in light of this policy change. This was not a minor adjustment, as the non-EGU data EPA provided in the docket, which is depicted in the table below, reveals 120 facilities fell within the 100 to 149 tpy threshold in 2026, representing 18% of all non-EGU facilities evaluated at Step Three.[80] More than half of these facilities (i.e., 66) are associated with one of the seven non-EGU industry NAICS codes, NAICS 4862, which covers Pipeline and Transportation of Natural Gas.[81] This additional burden on a particular non-EGU industry underscores the need for a reasoned explanation based on actual data, for this change.

Table 1. Non-EGU facility count by NAICS code for different NOx screening threshold in tons per year based on CSAPR 2016v2 emissions summary data in docket.

	2016		2023		2026	
NAICS	100 to 149	>=150	100 to 149	>=150	100 to 149	>=150
4862	60	179	63	191	66	193
3221	1	57	2	54	2	54
3241	8	95	8	92	8	92
3251	22	86	21	88	22	89
3273	1	49	3	46	3	46
3311	14	36	14	35	14	35
3272	9	39	6	40	5	41

[79] EPA, Screening Assessment of Potential Emissions Reductions, Air Quality Impacts, and Costs from Non-EGU Emissions Units for 2026 at 3 n.8 (Feb. 28, 2022) ("We believe that emissions units that are smaller [than 100 tpy of NOx] may already be controlled and reductions from these smaller units are likely to be more costly.")

[80] Ramboll Non-EGU facility count by NAICS for different NOx screening threshold (in tons/year). Eyth, A., Vukovich, J., Farkas, C., & Godfrey, J. (2022). Technical Support Document (TSD): Preparation of Emissions Inventories for the 2016v2 North American Emissions Modeling Platform, EPA-454/B-22-001, https://www.epa.gov/system/files/documents/2022-03/2016v2_emismod_tsd_february2022.pdf.

[81] *Id*.

For these reasons, we recommend EPA revert to the longstanding, reasonable threshold of 150 tpy and to conduct a new screening assessment at this threshold, subject to public notice and comment.

e. EPA's approach to screening Tier 1 and 2 non-EGU sources fails to adequately demonstrate "significant contribution."

After screening for non-EGU sources that emit or have the potential to emit above 100 tpy of NOx, EPA then applied a novel framework to identify non-EGU "meaningful" air quality improvements at downwind receptors. We urge EPA to reconsider its approach, as it fails to reasonably demonstrate that non-EGU sources "contribute significantly" to downwind non-attainment or maintenance issues.

First, the data gaps and modeling issues already identified are compounded by EPA's inclusion of sources based on the potential to emit.[82] The Step Three analysis was designed to evaluate sources that contribute significantly, relying upon a potential to emit for certain sources and not others calls into question the validity of the link. Particularly when evaluating units at such low levels of emissions, it is inappropriate for EPA to rely upon a potential to emit in the Proposed Rule.

EPA identified the number of contributions to downwind receptors greater than or equal to 0.01 ppb for each NAICS code and created two tiers of industries, based on NAICS codes. Tier 1 have a maximum contribution of greater than 0.10 ppb to any one downwind receptor ***and*** contribute greater than or equal to 0.01 ppb to at least 10 receptors.[83] Tier 2 industry thresholds, described above, were lower.[84] These arbitrarily established and extremely low "Tier 1" and "Tier 2" thresholds for non-EGU sources are highly problematic and not tethered to the CAA. Rather, EPA has created a novel term –"meaningful" air improvements – that is used in this step of EPA's non-EGU assessment that has no basis in the statute. As noted, CAA § 110(a)(2)(D)(i) authorizes SIPs or a FIP to control only a "source or type of emissions activity" that contributes significantly. That means that EPA must assess the significance of contributions – not just at the state-level – but by the source or type of emissions activity. While the CAA did not define "contribute significantly," it is well established that contributions must be "measurable."[85] Yet, EPA's selection of 0.01 ppb cannot actually be measured at a monitor.[86] Moreover, even if EPA relies upon its modeling for purposes of screening, it has provided no data demonstrating the reliability

[82] 87 Fed. Reg. at 20,148. ("EPA reviewed the projected 2026 emissions data to identify large boilers within the Tier 2 industries, defined as boilers projected to emit more than 100 tons per year in 2026").

[83] *Id*. at 20,083, col. 2. Tier 1 industries include 1) pipeline transportation of natural gas; 2) cement and concrete product manufacturing; 3) iron and steel mills and ferroalloy manufacturing; and 4) glass and glass product manufacturing.

[84] *Id*. Tier 2 industries include 1) Basic Chemical Manufacturing; 2) Petroleum and Coal Products Manufacturing; 3) Metal Ore Mining; 4) Lime and Gypsum Product Manufacturing; and 5) Pulp, Paper, and Paperboard Mills

[85] *Michigan v. EPA*, 213 F.3d 663, 684 (D.C. Cir. 2000) ("EPA must first establish that there is a measurable contribution. Interstate contributions cannot be assumed out of thin air.")

[86] Ramboll Report at 67.

of these metrics as a basis for a contribution that is significant.[87] Moreover, 0.01 ppb reflects a 0.014% contribution to the 2015 ozone NAAQS. Courts may have sustained EPA's discretion in prior transport rules to assess statewide contributions at the 1% threshold, but 0.014% is far from that level and is wholly unreasonable. Thus, EPA should reconsider this threshold and adequately explain the threshold selected and how it fulfills the Agency's obligation to address significant contribution.

Further, EPA took this low threshold even lower with its effort to refine the Tier 2 non-EGUs by identifying "potentially impactful boilers" at a threshold EPA acknowledges exceeds the precision of its tools. EPA identified those boilers with greater than 100 tpy NOx emissions that had any contribution to downwind receptors and then applied three criteria to each boiler to identify a subset: (1) maximum contribution at any one receptor of greater than or equal to 0.0025 ppb or an estimated total contribution across downwind receptors of greater than or equal to 0.01 ppb; (2) available controls up to $7,500 per ton; and (3) maximum air quality improvement at an individual receptor of greater than or equal to 0.001 ppb.[88] EPA noted the estimated contribution and improvements at downwind receptors from the impactful boiler assessment "were not based on modeling of individual emissions units or emissions source sectors," they were derived from the AQAT. Further, EPA said, "[t]he results indicate a level of precision not supported by the underlying air quality modeling. The results were intended to provide an indication of the relative impact across sources."[89]

Moreover, concerns with these low thresholds are compounded by the outdated data EPA relied upon to evaluate whether a non-EGU source met the threshold. For 2023, EPA used the 2016v2 inventory and projected 2023 emissions inventory from the 2021 Revised CSAPR Update rule. For 2026, EPA elected not to use the 2023 emissions inventory and instead used the 2019 inventory, which doesn't account for unit-specific emissions changes and EPA acknowledged "could be over- or under-estimating the emission reductions and their ppb impacts."[90]

f. EPA's initial screening of cost-effective controls for non-EGUs at $7,500 per ton departs from past practice and is unjustifiably high

We further urge EPA to reconsider its $7,500 per ton average marginal cost-effectiveness threshold that departs from past practice and is unjustifiably high. EPA used data to plot curves for Tier 1, Tier 2, and Tier 1 and 2 industries, for which EPA asserts it identified a "knee in the curve" at approximately $7,500 per ton.[91] This approach marks a major departure from prior transport rules, which EPA failed to explain.

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[87] Moreover, given that EPA has relied on apportioning emissions to sources based its modeling, it only serves to highlight why EPA's failure to timely provide the CAMx source apportionment data is a serious error of a matter of critical relevance to this proposal. *See* discussion *supra*.

[88] 87 Fed. Reg. at 20,084.

[89] *Id*.

[90] Non-EGU Screening Assessment Memorandum at 6-7, n.21.

[91] 87 Fed. Reg. at 20,083, col. 3.

EPA dramatically increased its proposed average marginal cost-effectiveness threshold for all non-EGUs to $7,500 per ton with little to no explanation. The Agency's sole analysis is that there was a "knee in the curve" that identified $7,500 per ton, but that is not obvious to a reviewer. There is no noticeable difference around $7,500 in the plotted line for Tier 1 industries, instead the Tier 1 line reflects a break around the $1,600 mark.[92] While the Tier 2 and combined Tier 1 and 2 lines show some difference around $7,500 mark, there is no explanation for EPA's reliance on a "knee in the curve" as opposed to past transport rules that have relied upon a "clear break point" at this step.[93] Further, EPA has provided no explanation for why the Tier 1 and 2 industries were subject to different contribution thresholds, as described above, yet they were combined when developing the cost-effective control threshold.

In addition, EPA fails to explain why the threshold departs from prior transport rule cost-effectiveness thresholds for non-EGUs. In particular, less than one year before EPA released the Proposed Rule, in the 2021 Revised CSAPR Update Rule, EPA said the non-EGU data demonstrated "a clear break point" (versus a "knee in the curve") at approximately $2,000 (in $2016) per ton.[94] According to EPA, EPA adopted "that analysis using the best available current data," including the "identified available control technologies," their "costs and potential emissions reductions," and "the information it has regarding control technology implementation timeframes, including information on such timeframes provided by commenters on the proposed rule."[95] Further, to identify levels of control for non-EGUs, EPA used the Control Strategy Tool (CoST) and the projected 2023 inventory from the 2016v1 modeling platform, just as EPA has done in this Proposed Rule. Indeed, there is no indication in the Proposed Rule that EPA collected any new information on costs or technologies or implementation timelines that differed in any material way from the information it analyzed in the Revised CSAPR Update Rule.

As such, almost *a 4-fold increase* in the alleged cost-effectiveness threshold for non-EGU sources cannot reasonably be supported, given that EPA is applying the same historical information in this proposal as in the rule this EPA issued and this Administrator signed only 14 months ago. To the contrary, every economic indicator would suggest that technology would be more costly today and there is nothing in the record to suggest that the control technologies have changed in any material way. Thus, we urge EPA to revert to and apply its already finalized metric in evaluating non-EGU sources in this proposal, unless and until it gathers new and more current information. In the Revised CSAPR Update, this threshold was used to correctly exclude certain sources, such as industrial boilers, since controls necessary to reduce transport emissions from industrial boilers were more than the $1,900 threshold.[96] Had EPA retained the same cost-effective threshold that it used in the 2021 Revised CSAPR Update, only three controls would be deemed

[92] *See* Non-EGU Screening Assessment Memorandum at 4, Figure 1.

[93] *Compare* 87 Fed. Reg. at 20,083, col. 3, *with* 86 Fed. Reg. at 23,098, col. 3.

[94] 86 Fed. Reg. at 23,098, col. 3.

[95] *Id*. at 23,098, col. 2.

[96] Moreover, the $1,900 per ton that EPA applied 14 months ago was consistent with previous interstate transport rules. The NOx SIP Call set a cost-effectiveness threshold for non-EGUs at $2,000 per ton and the 2016 CSAPR Update had a $1,400 per ton threshold.

cost-effective for Tier 1 industries and none for Tier 2 industries.[97] Thus, absent further explanation for the change, it appears EPA arbitrarily combined the Tier 1 and 2 industries and selected a high cost threshold in order to pull in as many industrial sources as possible.

The $7,500 per ton threshold for non-EGUs also deviates from the threshold applied to EGUs in 2023, which may be considered contrary to the Supreme Court's holding in *Homer City* that reinforced the use of a uniform cost-effectiveness threshold to address transport.[98] While EPA proposes a higher threshold for EGUs in 2026, EPA should still explain how it reconciles the *Homer City* decision with its disparate threshold in 2023 as well as 2026. Indeed, if EPA were to assert it is permissible to apply different thresholds for non-EGUs and EGUs, the Agency should further explain whether this rationale would extend to the different non-EGU industries.

Further, EPA adopted the same $7,500 per ton cost-effectiveness threshold it calculated for 2023 – for 2026 – without any explanation or analysis.[99] Given that EPA is properly recognizing that non-EGUs cannot meet any new requirements in 2023, it must prepare a cost-effectiveness analysis specific to 2026. While we certainly would not find a higher threshold to be reasonable for 2026, the Agency cannot be excused from its duty to explain its decision. Indeed, if EPA were able to adopt a cost threshold with no analysis or explanation, there may presumably be no limit on the cost threshold the Agency would set.

EPA's $7,500 per ton is also well above approved state RACT cost controls. Based on 2018$, EPA guidance for states setting presumptive RACT limits for NOx reflects a cost per ton range up to $2,200.[100] A sample of several states covered by EPA's proposal have average cost per ton RACT controls that range from $2,500 to $5,000.[101]

EPA also failed to explain how $7,500 itself is reasonable, particularly given the Supreme Court in *Homer City* reinforced the importance of costs in the transport framework and found it was reasonable for EPA to select the less costly approach to address significant contribution.[102]

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[97] *See* Non-EGU Screening Assessment Memorandum at 19, Table 7. According to EPA's analysis, of the 14 control technologies evaluated, only three would fall below the historic cost-effective threshold (i.e., non-selective catalytic reduction at $585/ton; Oxygen enriched air staging at $764/ton; and Selective non-catalytic reduction at $1,485/ton) – none of these control technologies are available for Tier 2 industries.

[98] *EPA v. EME Homer City Generation, L.P.*, 572 U.S. 489, 493 (2014) (finding EPA's approach of uniform cost thresholds on regulated States to be equitable).

[99] 87 Fed. Reg. at 20,084, col. 2; *see also* Non-EGU Screening Assessment Memorandum at 6.

[100] ASC Comments to U.S. Env't Prot. Agency on New York Section 126 Petition (Sept. 24, 2018), Docket No. EPA-HQ-OAR-2018-0170-0008, Attachment B, Ramboll RACT Analysis at 3. EPA's 1994 guidance to use a cost range of $160 - $1,300 per ton of NOx removed for RACT is equivalent to an inflation adjusted cost range of $270 - $2,200 in 2018, using the Consumer Price Index (CPI) information available through the Bureau of Labor Statistics (BLS) to adjust for inflation.

[101] *Id*. E.g., Wisconsin used $2,500; Illinois $2,500 to $3,000; Pennsylvania used $3,500; Maryland $3,500 to $5,000; and Ohio $5,000 per ton NOx.

[102] *EME Homer City Generation, L.P.*, 572 U.S. at 493.

EPA must reasonably explain why this cost is reasonable for determining contribution and the subsequent controls.

g. EPA should revisit its list of available emissions controls and conduct a proper feasibility analysis of controls across the sectors – based on current economics and realistic timeline for installation.

EPA's screening assessment includes flawed assumptions regarding the feasibility of emissions controls on certain non-EGU units, and thereby inflates the amount of assumed emissions reductions to be achieved by the attainment deadline. Even EPA admits the non-EGU screening assessment "is not intended to be, nor take the place of, a unit-specific detailed engineering analysis that evaluates the feasibility of retrofits for the emissions units, potential controls, and related costs."[103] Yet, EPA provides no explanation for why such an analysis is not necessary for determining whether cost-effective controls that can address contribution by intended date.

EPA has further failed to collect sufficient data and understanding on these facilities. For instance, EPA solicits information from these sectors on NOx controls already installed at these units, which suggests that EPA has not conducted a thorough review of the units to know whether or not they are already controlling emissions. Indeed, if units are already controlling emissions and that was not factored into EPA's analysis of their significant contribution to upwind receptors, EPA's whole analysis of contribution is vulnerable to potential over-control.

In other cases, EPA has put forward controls for facilities that are just plain infeasible – that is, the type of control EPA proposes were not designed for and could not be installed on the unit. As one example of infeasible controls considered in the Proposed Rule, EPA presumes EAFs under the Tier 1 non-EGU NAICS 3311 will achieve a 40% reduction using selective catalytic reduction (SCR). SCR has never been used on an EAF and have not been demonstrated to be feasible, for various technical reasons.[104] Likewise, at a modern cement kiln under the Tier 1 non-EGU NAICS 3273, the SCR would need to be placed after a baghouse that runs at a much lower temperature, resulting in the exhaust gases needing to be reheated after the baghouse and before entering the SCR. Re-heating the kiln exhaust gas is energy intensive (natural gas fired), more costly than EPA has assumed, and counterproductive to greenhouse gas reductions efforts.[105] For instance, one projection of the cost-effectiveness of installing SCR at a cement plant was estimated to be $16,000 per ton of NOx – more than double the threshold EPA applied.[106] These examples

[103] 87 Fed. Reg. at 20,084 at n.173.

[104] *See* Comments from Steel Manufacturers Association and Specialty Steel Industry of North America to Hon. Michael Regan at 37 (June 21, 2022).

[105] *See* Comments from Portland Cement Association to EPA (June 21, 2022) (EPA evaluated SCR technology on coal-fired boilers – not cement kilns, which have increased sulfur and particulate matter concentrations and lower flue gas exhaust temperatures that make SCR technology challenging to operate).

[106] *Id*. (Lehigh Hanson evaluated installing SCR at a plant in 2017 and found it would require capital costs of $101 million and annual operating costs of $15 million in 2022 dollars and result in 1,605 tons of post-SCR installation NOx reductions).

highlight the need for EPA to evaluate fully across the non-EGU sources – and with updated data – which controls are feasible, before imposing new restrictions on non-EGUs.

More broadly, we urge EPA to consider the current economics in evaluating the cost of controls. As mentioned above, in evaluating the cost of controls, EPA relied on data from prior rules that date back five years and in some cases much longer.[107] The economics of today are very different, not the least of which include the highest inflation rate in more than 40 years.[108] Yet, EPA presented the estimated costs of controls in 2016 dollars, which effectively gives the appearance of lower costs than if presented in present day dollars. When applying the most recent Consumer Price Index for April 2022, the $7,500 in 2016 dollars is actually $9,063 per ton in today's dollars.[109] EPA has applied more recent dollar figures in major air rules, for example, the October 2021 proposed oil and natural gas NSPS used 2019 dollars.[110] For full transparency and accurate accounting of the costs to non-EGUs, EPA should have reported more recent dollar figures, including the costs of the controls accounted for in the assessment.

We also strongly urge EPA to conduct an updated analysis based on a realistic timeline for installing the assumed controls. EPA relied on data from prior rules that assumed availability of raw materials, equipment, production speeds and a supply chain that preceded the COVID-19 pandemic and the market disruptions caused by the Russian invasion of Ukraine.[111] It is unreasonable for any federal agency to rely on pre-2020 analysis, when the disruption in the supply timelines are well known. It is incumbent on the agency promulgating the rule to demonstrate the validity of its assumptions that are central to its proposal that would impose large new economic burdens across the U.S. economy. An updated analysis must be performed – and done in a manner that allows the public the ability to comment on the revised analysis.

V. EPA's proposed controls on non-EGUs at Step Four fail to follow a reasonable framework for addressing transport and are vulnerable to overcontrol.

In the Proposed Rule, at Step Four EPA proposes permanent and enforceable emissions rate limits and work practice standards, and associated compliance requirements, on several types of combustion units across several non-EGU industrial sectors for 2026.[112] These proposed controls on non-EGUs are based on the elements of EPA's Step Three analysis that we ask EPA

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[107] *See* discussion, *supra*.

[108] *See* R. Wile, Inflation hits 40-year high of 8.5 percent because of war in Ukraine, rent hikes, NBC News (Apr. 12, 2022), https://www.nbcnews.com/business/consumer/inflation-march-2022-hits-record-high-data-stats-details-rcna23654.

[109] *See* U.S. Bureau of Labor Statistics, https://www.bls.gov/data/.

[110] 86 Fed. Reg. 63,110, 63,122, col. 1 (Nov. 15, 2021).

[111] *See* J. Hossain, Where Does the Supply Chain Crisis Stand Now?, Morning Star (May 26, 2022), https://www.morningstar.com/articles/1096095/where-does-the-supply-chain-crisis-stand-now.

[112] We agree with EPA's conclusion that there are no highly cost-effective controls available for non-EGUs that could be installed and address significant contribution to downwind receptors by 2023. Thus, for purposes of comments on Step Four, the ASC focuses on those proposed controls for 2026.

to reconsider.[113] Thus, we urge EPA not to proceed with finalizing the proposed controls for non-EGUs and, at a minimum, conduct a reassessment at Step Three and reevaluate the applicable sources and highly cost-effective available controls for non-EGUs, subject to additional notice and public comment.

a. EPA's proposed controls for non-EGUs fail to follow the required equitable framework for transport rules and lead to potential overcontrol.

As an initial matter, the Agency should refrain from proceeding to Step Four, until it has completed a proper Step Three analysis for non-EGU sources. Since EPA's choice of controls at Step Four relied upon the same information and analysis as at Step Three, the controls equally do not pass muster.

We further urge EPA to reconsider its approach at Step Four, because the Agency has not followed the required equitable framework the Supreme Court reinforced for the Good Neighbor provision, in *Homer City*. There, the Supreme Court reinforced it was reasonable for EPA, when deciding which "amounts" among otherwise equal transport emissions to address, to "reduce the amount easier, *i.e.,* less costly, to eradicate."[114] The Court further explained in upholding EPA's methodology in CSAPR:

> Efficient because EPA can achieve the same levels of attainment, i.e., of emission reductions, the proportional approach aims to achieve, but at a much lower overall cost. Equitable because, by imposing uniform cost thresholds on regulated States, EPA's rule subjects to stricter regulation those States that have done less in the past to control their pollution.[115]

In line with the Court's direction, in the 2021 Revised CSAPR Update in which EPA declined to regulate non-EGUs, EPA concluded with respect to non-EGUs:

> Relatively fewer emission reductions available [for non-EGUs] at a cost threshold comparable to the cost threshold selected for EGUs. In EPA's reasoned judgment, the Agency concludes such reductions are estimated to have a much smaller effect on any downwind receptor in the year by which EPA finds such controls could be installed. For these reasons, EPA is finding that limits on ozone season NOx emissions from non-EGU sources are not required to eliminate significant contribution or interference with maintenance under the 2008 ozone NAAQS.

For the reasons described further below, EPA has inexplicably applied a different logic in the Proposed Rule and puts forward a proposal that lacks the parity and equitable distribution and

[113] *See* Section IV, *supra*.

[114] *EME Homer City Generation, L.P.*, 572 U.S. at 493.

[115] *Id*.

discussion of balance with respect to non-EGUs reductions as compared to EGUs and among the different non-EGU sources. We ask EPA to reconsider this inequitable approach.

At a high-level, the way in which EPA grouped industries and set such a high cost threshold across non-EGUs fails to provide an equitable distribution of responsibility to reduce transport emissions across upwind states. States with greater transport emissions may bear an overall higher burden to reduce those emissions; however, the Supreme Court reinforced that the methodology for distributing that burden must be done equitably. For this reason, EPA's approach for evaluating highly cost-effective controls from EGUs at a uniform cost per ton was upheld and has continued to be the standard. In the case of the non-EGU controls in the Proposed Rule; however, EPA's grouping of totally disparate industries by NAICS code and selection of such a high cost per ton threshold across these industries has created a framework whereby the cost per ton of EPA's proposed controls across the upwind states is neither uniform nor equitable. For instance, according to the Proposed Rule, the proposed controls for Tier 1 non-EGUs would impose an average annual cost per ton of $5,213 in Kentucky but $1,571 in Wisconsin.[116] This wide range in the cost per ton to control transport emissions from Tier 1 non-EGU sources does not reflect an equitably designed framework for addressing contribution. The average cost-per-ton for the control of the "source and emissions activity" should be commensurate across upwind states. Because EPA's proposed controls would lead to such disparate cost-per-ton of controls across upwind states, EPA must revisit this inequitable framework for controlling transport emissions from non-EGUs.

EPA's proposed controls for non-EGUs also apply an inconsistent approach across sources that are not sufficiently explained. For example, while all seven of the non-EGU industries would be subject to the proposed NOx emissions limits, cement kilns under the Tier 1 non-EGU industry NAICS 3273 is the only non-EGU industry that would inexplicably be subject to an additional source cap limit expressed in a ton per day of NOx for each plant under the proposed § 52.42 requirements.[117] Not only does the record fail to support the source cap limit, EPA has failed to explain how such controls for one industry within the same designed grouping is considered equitable. This example further displays the inconsistent approach EPA has taken with respect to non-EGUs in which the Agency fluctuates between a sector-specific focus and that of high-level grouping by tier, NAICS, or more generalized non-EGU umbrella. Indeed, in its rush to issue the Proposed Rule less than a year since the last transport rule was finalized, EPA has poorly constructed a proposed non-EGU framework that fails to follow the required equitable framework for transport rules.

In addition, EPA's proposed controls for non-EGUs include those that are infeasible and would lead to overcontrol. As explained above, in the case of EAFs, EPA proposed the installation of SCR which has never been used on an EAF and is impossible to apply at EAFs. EPA also proposed controls for sources that were not even subject to the non-EGU screening assessment because of the ill-defined grouping by NAICS code, and are clearly overcontrolled. For example, EPA has advised that its proposed controls for the pipeline and transportation of natural gas

[116] Non-EGU Screening Assessment Memorandum at 14, Table 4a.

[117] 87 Fed. Reg. at 20,179 col. 3.

industry under NAICS 4862 apparently include gathering and boosting lines; yet gathering and boosting lines are under NACIS code 2212 for natural gas distribution, and thus, were not factored into the non-EGU screening assessment.[118] As such, EPA has not established that these sources "contribute significantly to nonattainment in, or interfere with maintenance" under EPA's approach, which by definition render the proposed limits on gathering and boosting to be overcontrol. This is just one example identified in the limited time provided to review and comment on the Proposed Rule and calls into question other potential areas of oversight by EPA's rush to issue this rulemaking.

Lastly, EPA's proposed controls for non-EGUs do not have parity with the controls on EGUs. Specifically, EPA did not address how the Agency addresses significant contribution without overcontrol of non-EGUs in relation to EGUs. EPA estimated average air quality improvements at downwind receptors in 2026, relative to EGUs, was an average 0.18 ppb for Tier 1 industries and only an average 0.04 ppb for Tier 2 industries—compared to an average combined 0.43 ppb improvement from EGUs. In other words, EGUs were estimated to achieve nearly double the amount of improvements than non-EGUs. A breakdown of EPA's estimated improvements to each downwind receptor from the proposed EGU and non-EGU controls follows a similar trend in which EGUs provide more than double the improvements to downwind receptors than non-EGUs, and the estimated improvements from Tier 2 industries in particular are at levels immeasurable by reference method monitors and within the margin of error under the AQAT model EPA used. This begs the question of whether the Agency is overcontrolling non-EGUs. Indeed, less than a year from the release of the Proposed Rule, EPA determined that even cost-effective non-EGU controls that could be installed in time and provided a 0.03 ppb improvement compared to a 0.28 ppb improvement from EGU controls, was not a significant improvement to justify mandating controls.[119] Overall, EPA provides little discussion of how the Agency justifies these controls given the insignificant level of improvement to downwind receptors compared to EGUs.

In regards to cost comparisons, EPA makes the broad statement that despite the differences between EGUs and non-EGUs, the Agency identified cost-effective controls and reduction opportunities "at relatively commensurate cost per ton levels."[120] As discussed above, EPA's cost-effective threshold for non-EGUs is fundamentally flawed due to errors in its screening assessment, including assumed controls for sources that are impossible to install and estimated costs of controls that were not accurate, which is not the case for the well-established understanding of the available controls and data for EGUs. Even assuming EPA's estimated costs were accurate, the Agency's statement that costs are commensurate between the two is not true. To ensure EPA is following the equitable framework required to address transport emissions, EPA must provide a more thorough explanation of the manner in which it has balanced controls between EGUs and non-EGUs.

[118] 87 Fed. Reg. at 20,176; col. 3.

[119] 86 Fed. Reg, 23,054, 23,110, col. 2-3.

[120] 87 Fed. Reg. at 20,055 col. 2.

b. EPA Should Consider Options for Multi-Unit Emissions Averaging for non-EGUs

In addition, in any final rule or revised proposal, EPA should include provisions that allow states and sources the flexibility in how they achieve asserted emission reduction goals, rather than impose rigid requirements. As one example, the proposal does not provide for flexibility in the form of averaging of emissions across multiple covered units that may be at a particular site in order to achieve the same level of reductions, in lieu of the command and control on each and every covered unit. That is a common and now basic approach to compliance across states – and would be consistent with an approach of meeting the asserted goals as efficiently and cost-effectively as possible. There are, for example, state reasonable available control technology (RACT) rules that allow single site averaging on NOx and that should have been included as an option. Should EPA proceed with a rule for non-EGUs, we strongly recommend the Agency consider such flexibilities and provide a range of options for stakeholders to review.

c. EPA's proposed limits for non-EGU sources should not be more stringent than counterpart new source performance standards

Any emission limits EPA may establish for existing sources should generally not be more stringent than those under the NSPS because of the higher costs associated with retrofitting existing sources and the reduced remaining useful life of existing sources. For example, the Proposed Rule would set the NOx limits on some engines in the Pipeline Transportation of Natural Gas industry that are more stringent than NSPS JJJJ. As depicted in the table below, four-stroke rich burn and lean burn natural gas-fired spark-ignition engines have proposed limits of 1.0 g NOx/hp-hr and 1.5 g NOx/hp-hr, respectively, whereas the NSPS JJJJ limits are 1.0 to 2.0 g/hp-hr depending on the date of the engine manufacture.

Table 2. Comparison of Proposed Rule Limits and Existing NSPS for Engines in the Pipeline Transportation of Natural Gas Sector

	Proposed Rule	**NSPS JJJJ Engines, 60.4233(e) and Table 1**
NG-fired Four-Stroke Rich Burn, >1,000 hp	1.0 g NOx/hp-hr	2.0 g NOx /hp-hr 1.0 g NOx/hp-hr (on or after July 1, 2010)
NG-fired Four-Stroke Lean Burn, >1,000 hp	1.5 g NOx /hp-hr	2.0 g NOx /hp-hr 1.0 g NOx /hp-hr (on or after July 1, 2010)

In the non-EGU TSD, EPA claims that newer engines are already required to meet more stringent limits in NSPS JJJJ, and as such, the Proposed Rule targets an emission limit that older engines,

not subject to NSPS JJJJ, could still meet. However, this claim ignores the subset of NSPS JJJJ engines manufactured before July 1, 2010, which were built to meet the 2.0 g NOx/hp-hr limit. For those manufactured after this date, unless these engines are in a state subject to more stringent RACT emission limits, these engines would not comply with the limits in the Proposed Rule. Retrofitting such engines to meet the proposed emission limits would be less cost-effective because they are already controlled to NSPS JJJJ and, thus, would provide less emission reduction potential. EPA should instead propose emission limits no more stringent than the NSPS. Under this approach, potential transport limits would serve as a backstop to turnover older engines not subject to NSPS JJJJ, if they do not naturally; and the subset of NSPS JJJJ engines manufactured before July 1, 2010, would continue to operate cleaner than older engines and naturally turnover to the more stringent NSPS emissions limit over time. Alternatively, EPA should consider exempting engines already subject to NSPS JJJJ.

d. EPA should apply a consistent emissions threshold for non-EGUs and provided units an applicability mechanism similar to a "synthetic minor" source.

We urge that if EPA proceeds to a final rule the Agency take two steps regarding non-EGU sources. First, all categories should be subject to an emissions threshold, not a capacity or other threshold. For the Basic Chemical Manufacturing, Petroleum and Coal Products Manufacturing, and Pulp, Paper, and Paperboard Mills Industries, the proposal sets the applicability based on the design capacity. E.g., Proposed Rule 52.45(b) (for "*Applicability.* (1) The requirements of this section apply to each new or existing boiler with a design capacity of 100 MMBtu/hr. or greater fueled by coal, residual oil, distillate oil, or natural gas…"). The proposal based this on EPA's "review of the potential emissions from industrial boilers of various fuel types, we find that use of a boiler design capacity of 100 MMBtu/hr. reasonably approximates the selection of 100 tpy used within the Non-EGU Screening Assessment memorandum." 87 Fed. Reg. at 20,148. However, as the issue EPA asserts it is seeking to address in the Proposed Rule is the actual transport of emissions and imposing a control or restriction based on potential or capacity and not actual emissions presents the likelihood of overcontrol and should be eliminated.

Second, for all sources, EPA should confirm that sources have the ability to minimize their emissions (or their capacity or other metric that EPA may retain for applicability) and thereby avoid the control requirements. Specifically, EPA has used a screening threshold of 100 tpy – and limited the applicability of regulatory requirements under this proposal in certain non-EGU categories to those sources that have the potential to emit more than 100 tpy of emissions. E.g., Proposed Rule 52.42(b) ("(b) *Applicability*. You are subject to the requirements of this section if you own or operate a new or existing cement kiln that emits or has the potential to emit 100 tons per year or more of NOX and is located within any of the States listed in § 52.40(a)(1)(ii), including Indian country located within the borders of any such State(s)."). Sources should be allowed to demonstrate that the rule does not apply to their operations by showing their potential to emit is below the applicability threshold, including by accepting enforceable limits on emissions in the form of a "synthetic minor" permit. This is a commonly used tool across the Clean Air Act for which there is ready guidance at the federal and state levels. EPA should confirm that the same option should be available to any source that would otherwise be potentially covered by the restrictions imposed by this transport regulation.

e. EPA's proposed requirement for CEMS from non-EGUs is overly burdensome and infeasible for certain sources.

In its discussion of control requirements, EPA proposes to require the use of a continuous emissions monitoring systems (CEMS) for measuring NOx emissions and either O_2 or CO_2 unless EPA has approved an alternative compliance method under 40 C.F.R. Part 75.[121] In its associated discussion, the Agency takes comment on the practical aspects associated with the installation and operation of CEMS at non-EGUs without NOx emissions monitors.[122] On this point, before imposing any CEMS monitoring requirements, the Agency should consider that the installation of CEMS can present a variety of technical challenges depending on the physical layout of the applicable facility and emissions source. For example, facilities may operate multiple boilers burning fuel mixtures of natural gas, hydrogen, and process vent gasses, all of which may vent through one stack. In these situations, there are significant technical challenges associated with differentiating and determining which emissions source is actually meeting the standard when multiple sources vent through the same stack, which can further impact the technical operation of the CEMS and create potential compliance concerns.. These challenges should be considered fully for each source, before imposing a CEMS requirement. At a minimum, EPA should allow states substantial flexibility to evaluate whether a CEMS is necessary or appropriate, given the existing facility capacity and additional burdens, and to allow for alternative monitoring methods, including predictive emissions monitoring systems (PEMS).

EPA also requests comment on whether monitoring techniques other than CEMS would be sufficient for certain non-EGU facilities, e.g. predictive emissions monitoring systems, and if so, what types of facilities would operate these systems.[123] Although the current proposed regulatory text does not specifically include a PEMS option, Proposed §52.45(f)(2) states that emissions should be "measured or predicted." As proposed, it appears that a facility owner/operator would need to demonstrate that its NOx emissions are less than 0.056 lbs/MMBtu and then request approval to use a PEMS. We believe that PEMS are a generally suitable alternative to CEMS and support EPA's incorporation of PEMS as an option if the Agency issues a final rule. Given the technical difficulties associated with installation and operation of CEMS, PEMS can, where appropriate, provide a practical alternative to achieve comparable emissions monitoring. Indeed, many facilities already successfully operate PEMS on their applicable units for compliance with separate requirements that may include good maintenance/combustion procedures and periodic monitoring, testing, and reporting.

There is precedent for EPA's acceptance of PEMS as a compliance option alternative for monitoring requirements. For example, EPA accepts PEMS for compliance with the 40 C.F.R. 60 Subpart Db New Source Performance Standards (NSPS) for large industrial boilers, allowing

[121] Proposed § 52.45(e)(2).

[122] 87 Fed. Reg. at 20,104.

[123] *Id*.

facility owners/operators to use a PEMS for these units.[124] In that rule, EPA approved the use of a PEMS for boilers for compliance purposes as documented in its Broadly Applicable Approved Alternative Test Methods resource on its website.[125] If EPA proceeds with the proposed rulemaking here, it should expressly provide for PEMS as an acceptable alternative for CEMS to satisfy Proposed §52.45(e) Monitoring Requirements.

f. EPA should maintain the exemption for cogeneration units.

Likewise, in any final rule, EPA should maintain the exclusion for cogeneration units that do not meet the applicability criteria for the trading program for EGUs. As EPA acknowledges, retaining this exclusion would be "consistent with prior transport rules," which did not extend regulations to these smaller cogeneration units.[126] Indeed, as recognized in the Proposed Rule, the Agency "has not historically identified substantial emissions reductions or air quality gains from these units."[127] Nor has EPA provided sufficient data for the public to consider that would support a different approach, as EPA did not specifically quantify in the screening assessment the potential emissions reductions from cogeneration units. Hence, absent new analyses and compelling reasons to deviate from the Agency's longstanding position on such units, EPA should not impose additional regulatory burdens on these types of cogeneration systems, which "can offer considerable environmental benefit as they often require less fuel to produce a given energy output." [128] If EPA were to consider an alternative approach, it should allow stakeholders the opportunity to provide comments on any new data, new cost information and other analysis and any draft regulatory language, before any new regulation is finalized.

g. EPA should not expand the scope of fuels for industrial boilers that may be subject to controls.

Notwithstanding the shortcomings with EPA's screening assessment for industrial boilers at the Tier 2 industries, if EPA proceeds with restrictions on emissions from boilers, the ASC discourages EPA from expanding the scope of industrial boilers to other types of fuels. The record before the agency does not provide a foundation for expanding this scope and EPA should not do so in any final rule. Nor should EPA expand the definition of "natural gas," beyond the common definition provided in the proposed emissions limits for the pipeline transportation of natural gas sector. Proposed 40 C.F.R. § 52.41 (defining natural gas to exclude "the following gaseous fuels: Landfill gas, digester gas, refinery gas, sour gas, blast furnace gas, coal-derived gas, producer gas, coke oven gas, or any gaseous fuel produced in a process which might result in highly variable CO2 content or heating value.").[129] As EPA properly acknowledges, "the majority of boilers

[124] 40 C.F.R. § 60.48b(g)(2).

[125] *See* ALT-075 – Approval of Alternative Monitoring Procedures for Subpart Db. https://www.epa.gov/emc/broadly-applicable-approved-alternative-test-methods.

[126] 87 Fed. Reg. at 20,086

[127] 87 Fed. Reg. at 20,084.

[128] *Id*.

[129] 87 Fed. Reg. at 20,176.

covered by this section of the FIP will combust one of the fuels for which we have proposed emissions limits."[130] There is no demonstrable air quality reason to add complexity and burden to an already burdensome regulation to expand the scope to cover alternative fuels. Indeed, EPA has provided no examples of refinery fuel gas or other industrial process gas among the units evaluated in the tables in the Proposed Rule, the TSD for non-EGU sources, or the non-EGU screening assessment. Hence, at a minimum, if EPA considers changing this approach, it should conduct a separate analysis of such boilers under Step Three and allow stakeholders the opportunity to provide comments on any new data, new cost information or other analysis and the draft regulatory language, before any new regulation that expands the scope of fuel sources is finalized.

VI. EPA should evaluate, consistent with the standard put forward in *Wisconsin*, whether it would effectively be impossible for non-EGUs to achieve the requirements and corresponding emissions reductions by the 2026 deadline.

Lastly, EPA should evaluate fully whether it is possible for non-EGUs to address the proposed requirements by the 2026 deadline. As the D.C. Circuit in *Wisconsin* acknowledged, extensions of compliance deadlines to address transport emissions are permitted under the Good Neighbor provision.[131] In the Proposed Rule EPA suggests a one year extension of the 2026 deadline for non-EGUs may be appropriate and solicits comment on the criteria and process to be used to evaluate such extensions.[132] EPA also recently approved New York's SIP revision that provides for a two-year extension for newly required NOx controls.[133] Thus, should EPA proceed with a rule for non-EGUs, we recommend the Agency consider a timeline beyond the one-year extension contemplated in the Proposed Rule.

While the D.C. Circuit did not find EPA's reasons for excluding non-EGUs from the transport rules in the past to rise to the level of "impossibility," the current circumstances related to the Proposed Rule are extraordinary. In particular, as noted, EPA should systematically collect and evaluate current information to assess current costs and timelines for non-EGUs to install the proposed controls by 2026. The ability to meet any deadline is limited by the supply chain disruptions that would burden the timely delivery of necessary equipment, particularly given that much of these types of emission controls and related equipment are sourced overseas, particularly in China.[134] These are due to extraordinary and unprecedented changes in the market caused by a global pandemic, soaring inflation, and a war in Europe. None of these global disruptions have been considered – and must be considered in recognizing the impossibility of even the 2026

[130] 87 Fed. Reg. at 20,149.

[131] *Wisconsin*, 938 F.3d at 320.

[132] 87 Fed. Reg. at 20,104, col. 3.

[133] 87 Fed. Reg. 33,438, 33,439-40 (June 2, 2022).

[134] *See* Comments from Portland Cement Association to U.S. EPA (June 21, 2022) (significant delays expected for sector-wide modifications at roughly 64 plants to be conducted in the same time frame due to issues such as staff shortages, limited consulting help, and supply chain disruptions that would impair the delivery of necessary equipment and technology sourced from China).

deadline for non-EGU sources across the economy.[135] Moreover, there is no consideration in a time of stressed state budgets for the additional time required to obtain the necessary permits across these multiple sectors of the economy represented by the non-EGUs regulated by the proposal. Indeed, as EPA acknowledges, in some cases NSR permits would be required, which are typically multi-year efforts that are routinely appealed, further delaying the ability to commence construction on any reasonable timeline.

Conclusion

The CAA obligates states, and where necessary, EPA, to address interstate transport of emissions to ensure attainment and maintenance of air quality standards such as the 2015 ozone NAAQS. However, in fashioning a federal plan to achieve this, EPA must adhere to the statute, the administrative process, and the rule of reason, which we submit has not been done in this proposal. Less than one year ago EPA finalized the Revised CSAPR Update rule to address transport under the 2008 ozone NAAQS. The Agency evaluated non-EGUs and determined not to regulate transport emissions from such sources. EPA has not collected any new data or information, nor has it completed the updated modeling for the Proposed Rule, yet the Agency inexplicably comes to a completely different conclusion for non-EGUs. This conclusion is not rooted in a sound record or reasoned explanation, and is based on an approach that leads to potential overcontrol. Accordingly, we urge EPA to halt action on the Proposed Rule to collect necessary information, complete updated modeling, follow its own peer-reviewed guidance, conduct a new four-step framework analysis, and engage potentially affected states and sources, including a meaningful opportunity to comment.

[135] At a minimum, in recognition of these unusual circumstances, should EPA proceed with a final rule we urge the Agency to establish a reasonable framework for states and sources to obtain additional time to achieve required deadlines.