

**COMMENTS OF THE
POWER GENERATORS AIR COALITION
ON THE U.S. ENVIRONMENTAL PROTECTION
AGENCY'S FEDERAL IMPLEMENTATION PLAN
ADDRESSING REGIONAL OZONE TRANSPORT
FOR THE
2015 OZONE NATIONAL AMBIENT AIR
QUALITY STANDARD**

87 FED. REG. 20,036 (APR. 6, 2022)

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TABLE OF CONTENTS

	Page
I. BACKGROUND	5
A. EPA’s Interstate Transport Authority under the CAA.....	5
B. Key Provisions of the Proposed Rule for EGUs.....	11
1. The Four-Step Framework and State NOx Budgets	11
2. The Enhancement Provisions.....	14
3. Non-EGU Provisions	19
II. THE PROPOSED RULE WILL RESULT IN THE OVER-CONTROL OF EGUs.....	20
A. EPA Has Not Clearly Measured Significant Contribution or Identified the Action Required to Remedy Significant Contribution.....	21
B. The Proposed Enhancement Provisions Will Result in Over-Control.....	26
1. Dynamic Budgeting	31
2. Bank Recalibration.....	32
3. Daily Backstop NOx Limit	33
4. Assurance Level Backstop.....	34
C. The Proposed Enhancement Provisions Are Inconsistent with the Cooperative Federalism Model of the CAA.	35
D. EPA Does Not Have Authority to Require Source-by-Source Emission Limits Pursuant to the Good Neighbor Provision.....	39
E. EPA’s Proposed Enhancement Provisions Are Otherwise Arbitrary and Capricious and Should Be Eliminated or Revised.....	40
F. EPA’s Over-Control Analysis Does Not Establish that the Proposed Rule Appropriately Addresses Significant Contribution.....	47
G. As-Applied, State-by-State Demonstrations of Over-Control Are Not Necessary Under the Circumstances Presented by the Proposed Rule.....	48
III. THE PROPOSED RULE DOES NOT ACCOUNT FOR RISKS TO ELECTRIC RELIABILITY OR A FUNCTIONING ALLOWANCE MARKET.....	50
IV. EGUs THAT COMMIT TO RETIRE BY A SPECIFIC DATE SHOULD BE EXEMPTED FROM CERTAIN REQUIREMENTS OF THE PROPOSED RULE.....	53
V. THE SHORTENED ALLOCATION PERIOD FOR UNITS THAT SHUT DOWN WILL DISINCENTIVIZE THE RETIREMENT OF OLDER, LESS EFFICIENT EGUs.....	55

TABLE OF CONTENTS
(continued)

	Page
VI. THE NO _x REDUCTION IMPLEMENTATION SCHEDULE FOR 2026 AND BEYOND IS FLAWED.....	55
VII. EPA HAS NOT PROVIDED A REASONED EXPLANATION FOR ITS TREATMENT OF GENERATION SHIFTING IN THE PROPOSED RULE.	57
VIII. CONCLUSION.....	58

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87 FED. REG. 20,036 (APR. 6, 2022)

On April 6, 2022, the U.S. Environmental Protection Agency (“EPA” or the “Agency”) published its proposed “Federal Implementation Plan Addressing Regional Ozone Transport for the 2015 Ozone National Ambient Air Quality Standard” (the “Proposed Rule”).¹ The Power Generators Air Coalition (“PGen”) is pleased to submit the following comments on the Proposed Rule.²

The Proposed Rule is part of a series of regulatory actions that address the interstate transport of air pollution under section 110(a)(2)(D)(i)(I) of the Clean Air Act (“CAA”), which EPA often calls the “good neighbor” provision.³ This new proposal is intended to address interstate transport issues for the 2015 national ambient air quality standards (“NAAQS”) for ozone. The core of the proposed new requirements for the electric utility industry, consistent with previous interstate transport rules, is an emission allowance trading program to control nitrogen oxide (“NOx”) emissions, a key precursor to the formation of ozone. The goal of the trading program is to limit emissions from sources in upwind states that “contribute

¹ 87 Fed. Reg. 20,036 (Apr. 6, 2022).

² Additional information on PGen and its members can be found at PGen.org.

³ Section 110(a)(2)(D)(i)(I) requires states to include in their state implementation plans (“SIPs”) provisions to prohibit their emission sources from “emitting any air pollutant in amounts which will . . . contribute significantly to nonattainment in, or interfere with maintenance by, any other State with respect to” the NAAQS.

significantly” to nonattainment or interfere with maintenance of the 2015 ozone NAAQS in downwind states.

Electric generating units (“EGUs”) have already achieved significant emission reductions pursuant to CAA programs and the sector’s independent efforts to reduce its environmental footprint. Under the interstate transport provisions of the CAA alone, EGUs have reduced their annual NO_x emissions by 41 percent from 2009 to 2016.⁴ EPA’s most recent interstate transport rule, the Revised Cross-State Air Pollutions Rule Update, is expected to further reduce NO_x emissions from EGUs by an additional 17,000 tons in 2021.⁵

EPA’s 2005 Clean Air Interstate Rule (“CAIR”), its 2011 Cross-State Air Pollution Rule (“CSAPR”), and the various revisions to CSAPR have all been implemented through emissions allowance trading programs. PGen agrees with EPA that trading is an efficient and effective tool for achieving emission reductions that fulfill the purpose of the good neighbor provision and will result in attainment of the NAAQS. In general, trading increases compliance flexibility and permits more cost-effective compliance options. That flexibility is especially important early in programs to address interstate transport, while sources design compliance plans and make decisions about where to deploy resources, and where supply bottlenecks can limit the ability of sources to install controls before near-term compliance deadlines. When operating appropriately, a trading program can help to avoid reliability problems by providing pathways for units to run more than anticipated and for EGUs to meet their generation obligations while maintaining

⁴ See The Clean Air Act’s Good Neighbor Provision: Overview of Interstate Air Pollution Control, CONG. RESEARCH SERV. (Aug. 30, 2018), https://www.everycrsreport.com/files/20180830_R45299_84b34dbc43e2c7193b84345c8d4c62683a9c2721.pdf.

⁵ EPA, Revised CSAPR Update Rule Summary, <https://www.epa.gov/csapr/revised-cross-state-air-pollution-rule-update>.

compliance with the CAA. Such programs can also allow affected units to avoid unreasonable costs, especially where plants might otherwise have relatively short remaining useful lives. EPA has relied on all of these considerations in previous rulemakings as support for adopting emission allowance trading as the compliance mechanism for its interstate transport rules.⁶

The compliance flexibility and support for system reliability that emission allowance trading programs provide are especially important for the electric generating industry. Affordable and reliable energy is a public good and a basic need in modern society. Life without it is nearly unconceivable. It is an essential component of everyday home life, community safety, transportation, and communication for individuals and companies. On a broader scale, electricity provides necessary support for medical services, agricultural productivity, and commercial and industrial activities.

Despite its pervasiveness in our daily existence, electricity is unlike almost any other good. To ensure an adequate supply, the operators of the U.S. electric transmission system—three regional, interconnected electric grids—work with electric power generators to produce the right amount of electricity on the grid to instantaneously meet demand. Further, because electricity cannot yet be stored at scale, supply and demand must constantly be balanced.⁷ To keep that balance, grid operators must contend with transmission limits and generators' physical constraints, alongside environmental standards. To manage these constraints, dispatch among generation sources must be planned on multiple scales—yearly, seasonally, monthly, weekly,

⁶ See, e.g., 80 Fed. Reg. 64,966, 64,970 (Oct. 23, 2015) (trading provides compliance flexibility); *id.* at 64,981 (trading facilitates reliability and allows units to run more than anticipated); *id.* at 64,983-84 (trading helps to avoid unnecessary costs and impossibility of compliance).

⁷ See Paul L. Joskow, *Creating a Smarter U.S. Electricity Grid*, 26 J. ECON. PERSP. 29, 33 (2012).

daily, hourly, and even at five-minute intervals. For all of these reasons, PGen supports EPA's continuation of its well-established emissions allowance trading program approach for addressing interstate transport.

In addition to the NOx allowance trading program for electric utilities, the Proposed Rule includes a number of new features applicable to EGUs that EPA refers to as "enhancements."⁸ Unfortunately, these enhancements could considerably limit the flexibility of the program. The Proposed Rule's already much tighter state emission budgets could become unworkably tight, and the market for allowances could cease to function in the manner EPA intends. This could, in turn, have significant ramifications for electric reliability. Additionally, the enhancements, combined with the budgets and EPA's methodology for designing aspects of the EGU program, deviate in key respects from previous versions of EPA's interstate transport rules. These new positions place EPA on a pathway that will inevitably lead to over-control of sources in upwind states. Section II of these comments identifies provisions that will cause over-control and recommends alternative approaches that would avoid this problem. Section II of these comments also addresses other concerns related to the proposed enhancements, including their effects on cooperative federalism, the imposition of source-by-source emission limits, and the inadequacy of the record support for various aspects of the enhancements.

Section III of these comments addresses risks to electric reliability and risks to a functional emissions allowance trading market posed by the Proposed Rule. Section IV addresses the Proposed Rule's requirements and incentives for EGUs that retire early in the course of the revised program. Section V addresses allowance allocations. Section VI addresses the Proposed Rule's compliance deadlines. Section VII addresses generation shifting.

⁸ 87 Fed. Reg. at 20,056.

With appropriate revisions, as discussed in these comments, PGen believes EPA will be able to successfully address significant contribution of upwind states to downwind nonattainment and maintenance issues. PGen looks forward to continued opportunities to work with EPA as the Agency evaluates public comments and prepares a final rule.

I. Background

A. EPA's Interstate Transport Authority under the CAA

EPA's proposed action is a Federal Implementation Plan ("FIP") for 26 states designed to eliminate their significant contribution to nonattainment, or interference with maintenance, for the 2015 ozone NAAQS in downwind states.⁹ The program would be composed, on the one hand, of a NO_x trading program for EGUs in 25 of the 26 states. That program would apply during the ozone season starting in 2023. The program would also consist of NO_x emission limits for certain other industrial stationary sources that would apply in 23 of the 26 states, with an earliest possible compliance date of 2026.¹⁰ These emission limits would apply only during the ozone season.¹¹

EPA has proposed this FIP pursuant to CAA section 110(a)(2)(D)(i)(I), which requires each state to prohibit emissions "in amounts which will ... contribute significantly to nonattainment in, or interfere with maintenance by, any other State with respect to any

⁹ *Id.* at 20,036.

¹⁰ *Id.* The covered source categories are: Reciprocating internal combustion engines in the Pipeline Transportation of Natural Gas source category; Kilns in the Cement and Cement Product Manufacturing source category; Boilers and furnaces in the Iron and Steel Mills and Ferroalloy Manufacturing source category; Furnaces in the Glass and Glass Product Manufacturing source category; and High-emitting equipment and large boilers in the Basic Chemical Manufacturing, Petroleum and Coal Products Manufacturing, and Pulp, Paper, and Paperboard Mills. *Id.* at 20,041.

¹¹ *Id.* at 20,039.

[NAAQS].” EPA first made use of section 110(a)(2)(D)(i)(I) in this manner in its 1998 NOx SIP Call Rule, which established NOx ozone season budgets for 22 states and the District of Columbia.¹² EPA developed those budgets based on the application of what it identified as “highly cost-effective controls” capable of removing NOx at a cost of \$2000 or less per ton.¹³ Various aspects of the rule were challenged in litigation before the D.C. Circuit, and the court largely upheld EPA’s approach to addressing interstate transport, including the establishment of state budgets and the consideration of costs to determine what upwind state contributions are “significant.”¹⁴ Specifically, EPA projected a base case of future emissions in light of expected future growth, and then projected total NOx emissions if the highly cost-effective controls were implemented. “The resulting calculation became the state’s NOx budget, with the difference between the base case and the controlled case being the ‘significant’ contribution.”¹⁵ Budgets for some individual states were, however, remanded for reconsideration as were several provisions that were not presented with adequate notice.¹⁶ In response, EPA undertook a number of additional revisions to the NOx SIP Call.¹⁷

EPA followed that action with the promulgation of the Clean Air Interstate Rule (“CAIR”). CAIR established a regional cap-and-trade program to reduce power sector emissions of sulfur dioxide (“SO₂”) and NOx to address significant contribution of upwind states to downwind nonattainment or interference with maintenance of the 1997 ozone and particulate

¹² 63 Fed. Reg. 57,356 (Oct. 27, 1998).

¹³ *Michigan v. EPA*, 213 F.3d 663 (D.C. Cir. 2000), *cert. denied*, 121 S. Ct. 1225 (2001).

¹⁴ *Id.* at 676.

¹⁵ *Id.* at 682.

¹⁶ *Id.* at 685, 693.

¹⁷ *See* 69 Fed. Reg. 21,604 (Apr. 21, 2004).

matter (“PM”) NAAQS. It did so by establishing emission budgets for 28 states and the District of Columbia.¹⁸ CAIR was challenged in the U.S. Court of Appeals for the D.C. Circuit in the case of *North Carolina v. EPA*, which struck down the rule because emission reductions required by the program were not collectively enough to satisfy the good neighbor provision.¹⁹ One major issue addressed in *North Carolina* was how EPA must determine the amount of emissions that constitutes a “significant contribution” to another state’s nonattainment or maintenance problem.²⁰ As in the NOx SIP Call, EPA used an air quality contribution threshold to determine if upwind states were linked to downwind air quality problems and a “highly cost-effective emissions control” analysis to “determine the quantitative level of emissions reductions required of upwind sources.”²¹ As the court pointed out, however, CAIR would allow sources in a state to completely avoid any emission reductions by purchasing allowances. To comply with the good neighbor provision, EPA had to both measure each state’s significant contribution and “actually require elimination of emissions from sources that contribute significantly and interfere with maintenance in downwind nonattainment areas.”²² The D.C. Circuit also held that CAIR was unlawful to the extent that CAIR’s compliance deadlines were not aligned with the statutory attainment deadlines for downwind states.²³

¹⁸ 70 Fed. Reg. 25,162 (May 12, 2005).

¹⁹ *North Carolina v. EPA*, 531 F.3d 896, 908 (D.C. Cir. 2008).

²⁰ *North Carolina*, 531 F.3d at 903.

²¹ *Id.*

²² *Id.* at 908.

²³ *Id.* at 912.

In response to the remand of CAIR, in 2011, EPA promulgated CSAPR.²⁴ It required 27 states to reduce SO₂ emissions, annual NO_x emissions, and/or ozone season NO_x emissions from the power sector to address three NAAQS: the 1997 annual fine PM (“PM_{2.5}”) NAAQS, the 1997 ozone NAAQS, and the 2006 24-hour PM_{2.5} NAAQS.²⁵ CSAPR took effect in 2015, following a series of cases in the D.C. Circuit and the U.S. Supreme Court.²⁶ In *EME Homer I*, the D.C. Circuit vacated CSAPR.²⁷ The Supreme Court reversed that decision in *EME Homer II*, but it expressly agreed with the D.C. Circuit that the CAA prohibits EPA from requiring “over-control” of upwind states’ emissions:

EPA cannot require a State to reduce its output of pollution by more than is necessary to achieve attainment in every downwind State or at odds with the one-percent threshold [EPA] has set. If EPA requires an upwind State to reduce emissions by more than the amount necessary to achieve attainment in every downwind State to which it is linked, [EPA] will have overstepped its authority ... to eliminate those “amounts [that] contribute ... to nonattainment.” Nor can EPA demand reductions that would drive an upwind State’s contribution to every downwind State to which it is linked below one percent of the relevant NAAQS. Doing so would be counter to step one of the Agency’s interpretation of the Good Neighbor Provision. *See* 76 Fed. Reg. 48236 (“[S]tates whose contributions are below th[e] thresholds do not significantly contribute to nonattainment ... of the relevant NAAQS.”).²⁸

The Supreme Court concluded “wholesale invalidation” of CSAPR was unwarranted but remanded the rule for adjudication of “particularized, as-applied challenge[s]” to address

²⁴ 76 Fed. Reg. 48,208, 48,230 (Aug. 8, 2011).

²⁵ *Id.* at 48,209.

²⁶ *EME Homer City Generation, L.P. v. EPA*, 696 F.3d 7 (D.C. Cir. 2012) (“*EME Homer I*”), *rev’d & remanded*, 134 S. Ct. 1584 (2014) (“*EME Homer II*”), *on remand*, 795 F.3d 118 (D.C. Cir. 2015) (“*EME Homer III*”).

²⁷ *EME Homer I*, 696 F.3d at 37-38.

²⁸ *EME Homer II*, 134 S. Ct. at 1608 (emphasis omitted) (quoting 42 U.S.C. § 7410(a)(2)(D)(i)(I)).

whether CSAPR required over-control of certain individual upwind states.²⁹ That approach was appropriate in that particular case for several reasons. First, the D.C. Circuit's approach did not account for merely incidental over-control (over-control relative to one downwind state that was nevertheless necessary to address significant contribution to another state).³⁰ Second, the D.C. Circuit failed to provide EPA with any leeway to balance over-control with potential under-control.³¹ Third, in a "voluminous record," the challenges to CSAPR only pointed to a few contested instances of unnecessary emission reductions.³² As-applied challenges were, therefore, appropriate under circumstances where the Court determined that EPA's methodology was not on its face arbitrary and capricious or contrary to law.³³

On remand in *EME Homer III*, the D.C. Circuit acknowledged that the Supreme Court's decision foreclosed vacatur of CSAPR as a whole but still found "clear transgressions of the statutory boundaries as set forth by the Supreme Court," and remanded eleven states' ozone-season NO_x budgets and four states' SO₂ budgets because they compelled over-control.³⁴ The court determined that over-control occurred when the downwind states to which an upwind state was linked "would achieve attainment even if less stringent emissions limits were imposed on the upwind States linked to those locations."³⁵

²⁹ *Id.* at 1609.

³⁰ *Id.* at 1608.

³¹ *Id.* at 1609.

³² *Id.*

³³ *Id.*

³⁴ *EME Homer III*, 795 F.3d at 127-32.

³⁵ *Id.* at 127.

Next, in 2016, EPA promulgated the CSAPR Update.³⁶ That rule required EGUs in 22 states to reduce NOx emissions to address the 2008 ozone NAAQS.³⁷ EPA characterized the CSAPR Update as a “partial remedy” because the Agency did not believe that all of the emission reductions necessary to resolve upwind states’ significant contributions could be achieved by the CSAPR Update’s provisions by the rule’s 2017 compliance deadline.³⁸ For that reason, EPA followed the CSAPR Update with the CSAPR Close-Out rule.³⁹ In that proceeding, based on new analysis, EPA determined that the CSAPR Update did in fact fully address upwind state good neighbor obligations for the 2008 ozone NAAQS.

In *Wisconsin v. EPA*, the D.C. Circuit remanded the CSAPR Update.⁴⁰ In that case, the court concluded that the CSAPR Update unlawfully allowed upwind states to continue their significant contributions to downwind air quality problems past the statutory deadlines for attaining the ozone NAAQS.⁴¹ In a separate case, the D.C. Circuit held that the CSAPR Close-Out was also unlawful for the same reason the court remanded the CSAPR Update.⁴² Following these decisions, EPA promulgated the Revised CSAPR Update, requiring additional emission NOx reductions from EGUs in 12 states.⁴³ That rule is the subject of litigation pending before the D.C. Circuit.⁴⁴

³⁶ 81 Fed. Reg. 74,504 (Oct. 26, 2016).

³⁷ The rule also addressed the ozone season NOx budgets remanded by the D.C. Circuit in *EME Homer III*.

³⁸ 81 Fed. Reg. at 74,521.

³⁹ 83 Fed. Reg. 65,878 (Dec. 21, 2018).

⁴⁰ *Wisconsin v. EPA*, 938 F.3d 303 (D.C. Cir. 2019).

⁴¹ *Id.* at 312.

⁴² *New York v. EPA*, 781 F. App’x 4 (D.C. Cir. 2019).

⁴³ 86 Fed. Reg. 23,054 (Apr. 30, 2021).

⁴⁴ *Midwest Ozone Group v. EPA, et al.*, No. 21-1146 (Filed June 25, 2021).

B. Key Provisions of the Proposed Rule for EGUs

EPA’s proposed action is a FIP for twenty-six states⁴⁵ designed to eliminate their significant contribution to nonattainment, or interference with maintenance, for the 2015 ozone NAAQS in downwind states.⁴⁶ This determination is based on projections of contributions in 2023 and 2026.⁴⁷ The program would be composed of, in part, a NOx trading program for EGUs in 25 of the 26 states. That program would apply during the ozone season starting in 2023. The 25 states covered by the utility program are Alabama, Arkansas, California, Delaware, Illinois, Indiana, Kentucky, Louisiana, Maryland, Michigan, Minnesota, Mississippi, Missouri, Nevada, New Jersey, New York, Ohio, Oklahoma, Pennsylvania, Tennessee, Texas, Utah, Virginia, West Virginia, Wisconsin, and Wyoming.⁴⁸ The remainder of the FIP is a regulatory program for non-EGUs.

1. The Four-Step Framework and State NOx Budgets

EPA proposes new NOx emission budgets for the 25 covered states to apply during the ozone season. EPA proposes that these states will enter the Group 3 Trading Program previously established in the Revised CSAPR Update Rule.⁴⁹ To develop the new Group 3 trading program budgets, EPA used the “four-step framework” it has relied on for each of the CSAPR programs. That framework consists of:

⁴⁵ *Id.* The 26 total states covered by the program are Alabama, Arkansas, California, Delaware, Illinois, Indiana, Kentucky, Louisiana, Maryland, Michigan, Minnesota, Mississippi, Missouri, Nevada, New Jersey, New York, Ohio, Oklahoma, Pennsylvania, Tennessee, Texas, Utah, Virginia, West Virginia, Wisconsin, and Wyoming

⁴⁶ 87 Fed. Reg. at 20,036.

⁴⁷ *Id.* at 20,038.

⁴⁸ *Id.*

⁴⁹ *Id.*

- (1) identifying downwind receptors that are expected to have problems attaining or maintaining the NAAQS;
- (2) determining which upwind states contribute to these identified problems in amounts sufficient to “link” them to the downwind air quality problems (i.e., in this Proposed Rule, a contribution threshold of 1 percent of the NAAQS);
- (3) for states linked to downwind air quality problems, identifying upwind emissions that significantly contribute to downwind nonattainment or interfere with downwind maintenance of the NAAQS; and
- (4) for states that are found to have emissions that significantly contribute to nonattainment or interfere with maintenance of the NAAQS in downwind areas, implementing the necessary emissions reductions through enforceable measures.⁵⁰

In step 1, EPA conducted air quality modeling to project ozone concentrations at air quality monitoring sites in 2023, 2026, and 2032 for the purpose of identifying receptors anticipated to have problems attaining or maintaining the 2015 ozone NAAQS.⁵¹ EPA identified 2023 and 2026 as the primary years for evaluation because it determined that those years were the ones in which the various controls under consideration could be upgraded or installed “as expeditiously as practicable,” and because those years include “the last full ozone seasons before the Moderate and Serious area attainment dates for the 2015 ozone NAAQS.”⁵²

In step 2, EPA used the modeling conducted in step 1 to quantify the upwind contribution to downwind receptors, and identified which states met or exceeded a contribution of 1 percent of the NAAQS (0.70 parts per billion).⁵³

⁵⁰ *Id.* at 20,041-42.

⁵¹ *Id.* at 20,042.

⁵² *Id.* at 20,062.

⁵³ *Id.* at 20,042.

In step 3, EPA evaluated costs of various control options and determined which controls would be cost-effective at which timeframes for installation and operation. EPA determined that the following control assumptions would be used to determine EGU NOx budgets:

Control	Cost-Effectiveness	Emission Impact	Selection
Full operation of existing selective catalytic reduction (“SCR”) controls	\$1,600 per ton	Achieving 0.08 lb/mmBtu	Selected for 2023
Full operation of existing selective noncatalytic reduction (“SNCR”) controls	\$1,800 per ton	25% reduction	Selected for 2023
New combustion controls	\$1,200 per ton	Achieving 0.199 lb/mmBtu	Selected for 2024
Installing new SNCR	\$6,700 per ton	25% reduction	Selected for 2026 for coal units less than 100 MW and circulating fluidized bed units
Installing new SCRs	\$11,000 per ton	Achieving 0.05 lb/mmBtu	Selected for 2026 for coal units larger than 100 MW
	\$7,700 per ton		Selected for 2026 for oil/gas steam units greater than 100 MW that have historically emitted at least 150 tons of NOx per ozone season

In addition to applying its cost-effective controls assumptions, EPA also proposes to determine state budgets based on a consideration of “generation shifting,” which it describes as “emissions reduction potential from generation shifting across the representative dollar per ton levels estimated for the emissions controls considered” under the other control options.⁵⁴

⁵⁴ *Id.* at 20,080.

In step 3, EPA further concludes that, even as mass-based reductions required under the Proposed Rule are achieved, the specific NO_x controls EPA has identified “must be implemented” and that “EGUs must continue to achieve NO_x emissions performance in the ozone season commensurate with the level of emissions control stringency the EPA determines appropriate under the multifactor test as set forth in this section.”⁵⁵

In step 4, EPA calculates the state budgets based on the control assumptions identified in step 3. The Proposed Rule provides budgets for 2023 and 2024, and “illustrative budgets” for 2025 and 2026.⁵⁶ Those budgets are illustrative due to the dynamic budgeting EPA proposes, as discussed below.

2. The Enhancement Provisions

In addition to the application of the four-step framework and the proposal of NO_x budgets and allowance trading provisions typical of rulemakings following the CSAPR model, EPA has also proposed four “enhancements” intended to impose additional incentives and requirements on EGUs. EPA explains that although previous CSAPR trading programs “have been effective in achieving overall reductions in emissions, experience has shown that these programs may not fully reflect in perpetuity the degree of emissions stringency determined necessary to eliminate significant contribution in Step 3 and may not adequately ensure the control of emissions throughout all days of the ozone season.”⁵⁷ The purpose of the enhancements, therefore, is to “protect the intended stringency of the trading program against potential erosion caused by EGU fleet turnover and ... better sustain over time the incentives

⁵⁵ *Id.* at 20,095.

⁵⁶ *Id.* at 20,044-45.

⁵⁷ *Id.* at 20,056.

created by the trading program to apply continuously the degree of emissions control the EPA determines is necessary to address states' good neighbor obligations.”⁵⁸ EPA also expects these enhancements to promote “more consistently good emissions performance by individual EGUs [to] help address disparate impacts of pollution on overburdened communities from individual units that might otherwise have chosen not to optimize their emissions performance.”⁵⁹

The first enhancement is dynamic budgeting.⁶⁰ As reflected in the table above, budgets for 2023 and 2024 would be set by the Proposed Rule.⁶¹ Beginning in 2025, however, budgets would be adjusted based on the most recent available information about the composition of the electric generation fleet. For 2025, the year for determining fleet composition would be 2023, with that pattern continuing for future years. EPA explains in this manner:

EPA is proposing to include budget-setting procedures in the regulations that will allow state emissions budgets for control periods in 2025 and later years to reflect more current data on the composition and utilization of the EGU fleet (e.g., the 2025 budgets would reflect 2023 data, the 2026 budgets would reflect 2024 data, etc.). These enhancements would enable the trading program to better maintain over time the selected control stringency that was determined to be necessary to address states' good neighbor obligations with respect to the 2015 ozone NAAQS. In prior programs, where state emissions budgets were static across years rather than calibrated to yearly fleet changes, the EPA has observed instances of units idling their emission controls in the latter years of the program.⁶²

⁵⁸ *Id.* at 20,105.

⁵⁹ *Id.* at 20,106.

⁶⁰ *Id.* at 20,105.

⁶¹ *Id.* at 20,045.

⁶² *Id.* at 20,056.

Along these lines, the Proposed Rule notes that downwind states have suggested reduced pollution control performance due to the availability of allowances after EGU shutdowns “has occurred on the day and preceding day of an ozone exceedance.”⁶³

To accomplish these budget adjustments, EPA would provide public notice of the preliminary calculations and the data used by March 1 of the year preceding the control period and would provide an opportunity for submission of any objections to the data and preliminary calculations before finalizing the budgets for each control period by May 1 of the year before the control period to which those budgets apply.⁶⁴

The second enhancement is recalibration of banked allowances.⁶⁵ Starting with the 2024 control period, EPA would annually recalibrate the number of banked allowances under the program to prevent the amount of allowances carried over from each control period to the next from exceeding the “target bank level,” which would be 10.5 percent of the sum of the state emissions budgets.⁶⁶ Recalibration would take place “shortly after August 1 of that control period, two months after the compliance deadline for the previous control period, making the proposed date of the first recalibration August 1, 2024.”⁶⁷

EPA explains that its proposed bank recalibration is appropriate because a “long-term allowance surplus that reduces allowances prices and weakens the trading program’s incentives to control emissions [make it more likely that] some operators would be more likely to choose not to continuously operate and optimize their emissions controls, imperiling the ongoing

⁶³ *Id.* at 20,108.

⁶⁴ *Id.*

⁶⁵ *Id.* at 20,109.

⁶⁶ *Id.*

⁶⁷ *Id.* at 20,121.

achievement of emissions rate performance consistent with the control strategies defined as eliminating significant contribution to nonattainment and interference with maintenance.”⁶⁸ EPA proposes 10.5 percent as the target bank level because it is one half of the variability limit, and according to the Agency, in past CSAPR rulemakings where it has created initial banks equal to or larger than the variability limit, they have been too large.⁶⁹ EPA also asserts that “year-to-year variability of heat input for the region covered by this proposal suggests that the regional heat input for an individual year can be expected to vary by up to 10.5 percent above or below the central trend with 95% confidence.”⁷⁰ Further, EPA asserts it is logical to rely on “variability analyzed at the level of the overall region to set a target level for a bank, which will apply at the level of the overall program.”⁷¹

The third enhancement is a backstop daily emissions rate for coal steam units greater than or equal to 100 MW in covered states.⁷² The daily rate for NO_x is 0.14 lb/mmBtu.⁷³ The backstop emissions rate will first apply in 2024 for coal-fired steam sources with existing SCRs, and in 2027 for those currently without SCRs.⁷⁴ Penalties for exceeding the daily emissions rate would be a 3:1 allowance surrender. The purpose, according to EPA, is “to offer downwind stakeholders a necessary measure of assurance that they will be protected on a daily basis during the ozone season by continuous operation of installed pollution controls.”⁷⁵

⁶⁸ *Id.* at 20,108.

⁶⁹ *Id.* at 20,121.

⁷⁰ *Id.*

⁷¹ *Id.*

⁷² *Id.* at 20,045.

⁷³ *Id.* at 20,050.

⁷⁴ *Id.*

⁷⁵ *Id.* at 20,045.

This is especially so, EPA says, to prevent sources from ceasing operation of controls, SCRs in particular, on high-ozone days.⁷⁶

The fourth enhancement is the assurance level backstop. The assurance level under CSAPR programs has generally been 121 percent of the state's emission budget and is intended to allow for year-to-year variability in generation needs. If a state exceeds the assurance level, 3:1 allowance surrenders have typically been required from the sources determined to have contributed to the exceedance.

Under this new backstop, additional general EPA penalties could be applied for any source determined to have contributed to an exceedance of the state's assurance level and to have emitted "by more than 50 tons the emissions that would have resulted if the unit had achieved a seasonal average emissions rate equal to the higher of 0.10 lb/mmBtu or 125 percent of the unit's lowest previous seasonal average emissions rate under any CSAPR seasonal NOx trading program."⁷⁷ For the backstop penalty to apply, the unit in question must have operated during at least 10 percent of the hours in the control period.⁷⁸ This penalty would be in addition to the traditional allowance surrender penalty. The penalties would take the form of potential administrative or judicial action and civil penalties and other forms of relief under the CAA's enforcement authorities.⁷⁹

EPA says that this additional penalty is necessary because "[t]he assurance levels exist to ensure that emissions from each state that contribute significantly to nonattainment or interfere with maintenance of a NAAQS in another state are prohibited [and] new evidence of

⁷⁶ *Id.*

⁷⁷ *Id.* at 20,106, 20,112.

⁷⁸ *Id.* at 20,112.

⁷⁹ *Id.*

exceedances of the assurance provisions demonstrate that EPA’s existing approach may not be sufficient to accomplish this statutory mandate.”⁸⁰

3. Non-EGU Provisions

In addition to the EGU trading program and the enhancement provisions, EPA has also proposed NOx controls to address interstate transport for 23 of the 26 states, for non-EGU industrial sources.⁸¹ The covered sources are:

- Reciprocating internal combustion engines in the Pipeline Transportation of Natural Gas source category;
- Kilns in the Cement and Cement Product Manufacturing source category;
- Boilers and furnaces in the Iron and Steel Mills and Ferroalloy Manufacturing source category;
- Furnaces in the Glass and Glass Product Manufacturing source category; and
- High-emitting equipment and large boilers in the Basic Chemical Manufacturing, Petroleum and Coal Products Manufacturing, and Pulp, Paper, and Paperboard Mills source categories.⁸²

EPA says that “taken together, these [EGU and non-EGU] strategies will fully eliminate the covered states’ significant contribution to downwind ozone air quality problems in other states.”⁸³ Similarly, EPA notes that it “proposes this rule to constitute a full remedy for interstate transport for the 2015 ozone NAAQS for the states covered by this proposal; the EPA does not

⁸⁰ *Id.*

⁸¹ *Id.* at 20,039. The covered states for industrial sources are Arkansas, California, Illinois, Indiana, Kentucky, Louisiana, Maryland, Michigan, Minnesota, Mississippi, Missouri, Nevada, New Jersey, New York, Ohio, Oklahoma, Pennsylvania, Texas, Utah, Virginia, West Virginia, Wisconsin, and Wyoming.

⁸² *Id.* at 20,041.

⁸³ *Id.* at 20,038.

anticipate further rulemaking to address good neighbor obligations will be required for these states with the finalization of this rule.”⁸⁴

II. The Proposed Rule Will Result in the Over-Control of EGUs.

The Supreme Court and the D.C. Circuit have established the impermissibility of over-control in upwind states to address interstate transport and significant contribution to downwind nonattainment or interference with maintenance. The courts have also identified standards and guideposts for identifying over-control. The EGU provisions of the Proposed Rule appear to conflict with a number of the courts’ key holdings, but EPA can revise the Proposed Rule to address these issues while still effectively addressing significant contribution.

In *North Carolina v. EPA*, the D.C. Circuit held that, when acting under the good neighbor provision, EPA was required to measure each state’s significant contribution and “actually require elimination of emissions from sources that contribute significantly and interfere with maintenance in downwind nonattainment areas.”⁸⁵ Thus, EPA cannot address interstate transport by requiring a range of emission reductions from an upwind state or by imposing standards that might shift over time. EPA must clearly identify and require action to remedy significant contribution.

The Supreme Court, in *EME Homer II*, also held that EPA must seek to regulate so that it does not over-control or under-control emissions from upwind states.⁸⁶ Noting the complexities and uncertainties inherent in addressing interstate transport, the Court recognized EPA must have some “leeway” and that “[s]light changes in wind patterns or energy consumption” could lead to

⁸⁴ *Id.* at 20,100.

⁸⁵ *North Carolina*, 531 F.3d at 908.

⁸⁶ *EME Homer II*, 134 S. Ct. at 1608 (emphasis omitted) (quoting 42 U.S.C. § 7410(a)(2)(D)(i)(I)).

budgets that are stricter than necessary without necessarily running afoul of the law.⁸⁷

Nevertheless, the court set out some basic parameters for EPA: EPA cannot require a state to reduce emissions by more than necessary to achieve attainment in every downwind state or at odds with the one-percent threshold EPA has set.⁸⁸

On remand from the Supreme Court, the D.C. Circuit concluded that eleven states' ozone-season NO_x budgets and four states' SO₂ budgets compelled over-control.⁸⁹ The court determined that over-control occurred when the downwind states to which an upwind state was linked "would achieve attainment even if less stringent emissions limits were imposed on the upwind States linked to those locations."⁹⁰

The Proposed Rule appears to conflict with each of these court-identified limitations on how EPA can address interstate transport. While the courts have not had the opportunity to address every element of over-control, general principles that can reasonably be drawn from their holdings suggest the Proposed Rule likely raises a number of novel issues of over-control as well. To address these issues, EPA should consider eliminating or at least modifying some of the proposed enhancements or developing additional safeguards to ensure that over-control does not take place, as discussed further below.

A. EPA Has Not Clearly Measured Significant Contribution or Identified the Action Required to Remedy Significant Contribution.

As stated above, the D.C. Circuit in *North Carolina* found that, when acting under the good neighbor provision, EPA must identify each state's significant contribution to downwind

⁸⁷ *Id.* at 1609.

⁸⁸ *Id.* at 1608 (emphasis omitted) (quoting 42 U.S.C. § 7410(a)(2)(D)(i)(I)).

⁸⁹ *EME Homer III*, 795 F.3d at 127-32.

⁹⁰ *Id.* at 127.

nonattainment or maintenance problems and then require action to remedy that significant contribution. As the D.C. Circuit stated, “[i]t is unclear how EPA can assure that the trading programs it has designed ... will achieve section 110(a)(2)(D)(i)(I)’s goals if we do not know what each upwind state’s ‘significant contribution’ is to another state.”⁹¹ Thus, it is imperative that EPA define significant contribution by identifying each state’s emission budget.

EPA has not measured or identified significant contribution in the Proposed Rule. EPA’s analysis instead unfortunately creates confusion. On the one hand, EPA appears to adhere to its traditional CSAPR approach of relying on mass-based NOx budgets to identify each state’s significant contribution to downwind nonattainment or maintenance problems. On the other, EPA introduces new findings that would take a very different emissions control-based approach. Either approach, under the current proposed regulatory language, will create over-control problems, but those problems can be addressed by adhering more closely to the practices EPA established in previous versions of CSAPR.

The lack of clarity as to what constitutes significant contribution in this rulemaking stems from preamble statements that are in tension with one another, and EPA can resolve this issue with additional explanation. For instance, EPA explains that the Proposed Rule constitutes a “full remedy” for the 2015 ozone NAAQS and that no additional rulemaking to address interstate transport for the NAAQS will be needed.⁹² Further, EPA explains that this full remedy will be implemented in two phases:

[A]ll possible emissions reductions ... go into effect beginning in the 2023 ozone season, which is aligned with the next upcoming attainment date of August 3, 2024, for areas classified as Moderate nonattainment under the 2015 ozone standard. Additional emissions reductions that the EPA finds not possible to implement

⁹¹ *North Carolina*, 531 F.3d at 908.

⁹² 87 Fed. Reg. at 20,100.

by that attainment date are proposed to take effect as expeditiously as practicable, with the full suite of emissions reductions taking effect by the 2026 ozone season, which is aligned with the August 3, 2027, attainment date for areas classified as Serious nonattainment under the 2015 ozone NAAQS. This schedule of emissions reductions meets the requirement in the Good Neighbor Provision.⁹³

Thus, EPA projects that its rule will achieve a full remedy through measures to be implemented *by the 2026 ozone season*. Indeed, EPA's assessment of emissions reductions preceding this conclusion focuses on the reductions to be achieved in 2023 and 2026.⁹⁴

Accordingly, the NOx budgets established by the Proposed Rule in 2026 should be sufficient to fully address interstate transport obligations for upwind states, *i.e.*, those emission reductions should eliminate the significant contribution of the upwind states. Such an approach would be consistent with the approach EPA has taken in previous versions of CSAPR. Unfortunately, for reasons described below, budgets for 2026 remain uncertain and undefined at this time.

Accordingly, even assuming that a mass-based approach to identifying significant contribution was EPA's intention, the Agency has not clearly specified significant contribution of the upwind states, as called for in *North Carolina*. It is possible to rectify this by simply establishing 2026 budgets at this time and clarifying that such budgets resolve significant contribution for the 2015 ozone NAAQS. Alternatively, even if EPA refrains from establishing numerical 2026 budgets at this time, the Proposed Rule should at least clarify that the 2026 budgets that would result from the Proposed Rule's budget calculation methodology in 2026 would constitute a full remedy and address all significant contribution obligations of upwind states.

⁹³ *Id.* at 20,099.

⁹⁴ *Id.* at 20,088-89, 20,092-93.

Other statements in the preamble to the Proposed Rule suggest EPA is contemplating a different approach in this proceeding. Specifically, EPA appears to propose that continuous operation in perpetuity of the emission controls it has identified as cost-effective in its analysis should be required to address interstate transport: “EPA finds at Step 3 that so long as the identified NOx emission reduction controls are available and can be implemented (such as optimization of SCRs), they must be implemented, even as total NOx emissions reductions on a mass basis decline.”⁹⁵ To help ensure that these controls will be operated as a result of the Proposed Rule, EPA has proposed several enhancement provisions it has designed to incentivize that operation. One of those enhancements calls for dynamic budgeting, which would have EPA calculate new state-wide budgets each year starting in 2025 to reflect changes in the electric generating fleet. Thus, budgets would rise (or fall) depending on “the latest available information on the composition and utilization of the EGU fleet at the time that emissions budget is determined.”⁹⁶ EPA characterizes these dynamic budgets as “reflect[ing] the stringency of the emissions control strategies selected in the rulemaking” and ensuring the elimination of significant contribution from EGU sources in the linked upwind states.⁹⁷

Setting aside whether this approach will result in over-control or other legal concerns, the Proposed Rule’s failure to identify future years’ emission budgets and, therefore, its failure to identify significant contribution, is contrary to the D.C. Circuit’s decision in *North Carolina*.⁹⁸ The fact that the Proposed Rule provides only illustrative budgets for 2025 and 2026, and no

⁹⁵ *Id.* at 20,095-96.

⁹⁶ *Id.* at 20,045.

⁹⁷ *Id.*

⁹⁸ The issues of over-control and the impacts of EPA’s Proposed Rule on cooperative federalism are addressed in the following subsections of these comments.

certainty for those years or future years, is itself a significant problem. EPA is obliged under *North Carolina* to measure significant contribution. The Proposed Rule's "measurement" could range from the budgets identified for 2023 to zero. Hypothetically, future year budgets could even rise above 2023 levels, although that is plainly not a realistic outcome. This is not an adequate measurement significant contribution. Accordingly, the Proposed Rule's approach to addressing interstate transport does not appear to comply with the D.C. Circuit's ruling in *North Carolina* that EPA must identify the level of significant contribution for each upwind state.

EPA's Proposed Rule is also similar to the interstate transport provisions struck down in *North Carolina* for an additional reason. The emission reductions the Proposed Rule would require are not based on the goals of the good neighbor provision, the elimination of significant contribution. Rather, they are designed to require operation of emission controls regardless of whether significant contribution occurs. In *North Carolina*, the D.C. Circuit found that similarly arbitrary emission limits were inconsistent with the good neighbor provision. There, EPA developed SO₂ limits that were designed to preserve the viability of the Title IV Acid Rain Program and that EPA otherwise deemed equitable. The D.C. Circuit explained:

This goal may be valid, but it is not among the objectives in section 110(a)(2)(D)(i)(I). And if it is somehow compatible with states' obligations to include "adequate provisions" in their SIPs, prohibiting emissions "within the State from ... contribut[ing] significantly" to downwind nonattainment, then EPA should explain how. It has failed to do so.⁹⁹

EPA's role under the good neighbor provision is to identify significant contribution so that states may develop SIPs to address it and so that any EPA FIP remedies it. Failure to identify

⁹⁹ *North Carolina*, 531 F.3d at 918.

significant contribution and instead establishing the unrelated goal of keeping controls in operation does not satisfy the CAA's requirements.

EPA can fix at least one legal flaw in its Proposed Rule by eliminating any finding that operation of specific controls on a continuous basis is needed to eliminate significant contribution regardless of overall mass reductions. EPA should instead adhere to its established approach for identifying significant contribution and address any incentives to encourage operation of controls separate and independent from its significant contribution determination. Such an approach would leave open the possibility of emission reductions consistent with EPA's Proposed Rule while potentially avoiding legal complications.

B. The Proposed Enhancement Provisions Will Result in Over-Control.

The decisions of the Supreme Court and the D.C. Circuit have consistently made clear that when implementing the good neighbor provision to address interstate transport and significant contribution of upwind state emissions to downwind nonattainment or maintenance problems, EPA has an obligation to avoid under-control and over-control—that is, the Agency must seek to identify and remedy each state's significant contribution and to do no more and no less. As explained above, the Proposed Rule is legally flawed because it does not adequately measure or identify the emissions that constitute significant contribution. In addition, however, whether measured against a mass-based target for significant contribution or EPA's alternative emission controls-based approach, the Proposed Rule would also result in over-control due to the adoption of the proposed enhancement measures.

The courts have provided several guideposts as to what will constitute over or under-control. In *North Carolina*, for example, the D.C. Circuit concluded that CAIR unlawfully allowed for under-control, because, under that program's design, upwind states could avoid any emission reductions by purchasing allowances. Accordingly, to avoid under-control or over-

control, EPA’s good neighbor rules must “actually require elimination of emissions from sources that contribute significantly and interfere with maintenance in downwind nonattainment areas.”¹⁰⁰

The Supreme Court provided further clarification on the limits on EPA’s authority and its duty to avoid over-control, holding in *EME Homer II* that EPA cannot use the good neighbor provision to “require a State to reduce its output of pollution by more than is necessary to achieve attainment in every downwind State or at odds with the one-percent threshold [EPA] has set.”¹⁰¹ The D.C. Circuit further explained the Supreme Court’s decision as forbidding over-control in *EME Homer III*, holding that over-control occurred when the downwind states to which an upwind state was linked “would achieve attainment even if less stringent emissions limits were imposed on the upwind States linked to those locations.”¹⁰² Although there are undoubtedly other indicators of over-control, the Proposed Rule would violate each of the guideposts the courts have established to date, and EPA should revise the Proposed Rule to avoid these problems.

The Proposed Rule will result in over-control due to the incorporation of the four enhancements. The general description of the four enhancements explains that their overall purpose is to require emission reductions regardless of and in addition to elimination of significant contribution. This is evident from EPA’s statements. EPA explains that even though previous CSAPR trading programs “have been *effective in achieving overall reductions in emissions*, experience has shown that these programs *may not fully reflect in perpetuity the*

¹⁰⁰ *Id.* at 908.

¹⁰¹ *EME Homer II*, 134 S. Ct. at 1608 (emphasis omitted) (quoting 42 U.S.C. § 7410(a)(2)(D)(i)(I)).

¹⁰² *EME Homer III*, 795 F.3d at 127.

degree of emissions stringency determined necessary to eliminate significant contribution in Step 3 and *may not adequately ensure the control of emissions throughout all days of the ozone season.*”¹⁰³ The Proposed Rule goes on to explain that the purpose of the enhancements is to “protect the intended stringency of the trading program against potential erosion caused by EGU fleet turnover and ... better sustain over time the incentives created by the trading program *to apply continuously the degree of emissions control* the EPA determines is necessary to address states’ good neighbor obligations.”¹⁰⁴ The EPA also expects these enhancements to promote “more consistently good emissions performance by individual EGUs [to] help address disparate impacts of pollution on overburdened communities from individual units that might otherwise have chosen not to optimize their emissions performance.”¹⁰⁵

Accordingly, as the Proposed Rule repeatedly states, the purpose of the enhancements is to require sources to operate emission controls regardless of overall emissions tonnage reductions. In other words, if significant contribution were measured, as in past CSAPR rules, as the amount of emissions eliminated upon meeting the trading program’s goals—here, the 2026 budget—then the enhancements would all work together to require additional reductions beyond that amount. EPA would impose the enhancements here, however, even though CSAPR trading programs have previously eliminated significant contribution and even though there is no reason to think a similar program will not do so now. This is an obvious case of over-control.

The Proposed Rule complicates matters to some degree with its suggestion that the operation of controls in perpetuity, regardless of fleet turnover or other changed conditions, is

¹⁰³ 87 Fed. Reg. at 20,056 (emphasis added).

¹⁰⁴ *Id.* at 20,105 (emphasis added).

¹⁰⁵ *Id.* at 20,106.

what is necessary to remedy significant contribution. This finding is itself incompatible with the statements of the courts on over-control. A rule requiring emission reductions under those circumstances will inevitably require “a State to reduce its output of pollution by more than is necessary to achieve attainment in every downwind State or at odds with the one-percent threshold” for significant contribution, as the Supreme Court warned against. In terms the D.C. Circuit used, such a rule would require reductions even where downwind states would achieve attainment with “less stringent emissions limits.” Thus, even if EPA could legitimately reject its previous interpretations of what might constitute significant contribution, the Proposed Rule’s approach to defining it cannot be reconciled with the CAA. In short, if EPA requires operation of controls regardless of overall tonnage reductions, at some point the Agency’s rule would invariably require reductions below the 1 percent threshold and past the point where states have achieved attainment. An interpretation of significant contribution that results in that outcome is not consistent with the statute.

Put another way, as compared against the tons of NO_x reductions that would be required under 2026 budgets, consistent with past practice, the enhancements would require unnecessary reductions and over-control. To the extent the Proposed Rule identifies emission reductions based on the four enhancements as necessary to address significant contribution, it has erroneously measured significant contribution without reference to what is necessary to achieve attainment in downwind states. For this reason, the Proposed Rule is flawed in the same manner as CAIR: it would not “actually require elimination of emissions from sources that contribute significantly and interfere with maintenance in downwind nonattainment areas.”¹⁰⁶ Whereas CAIR allowed sources to emit and states to contribute emissions above their significant

¹⁰⁶ *North Carolina*, 531 F.3d at 908.

contribution levels, the Proposed Rule would require sources and states to cut emissions well below their levels of significant contribution. The Proposed Rule cannot avoid that result by attempting to define significant contribution in a manner that does not take downwind attainment into account.

EPA's argument that the enhancements are needed because of difficulties projecting the future composition of the electric generating fleet is also misplaced because budgets are established to address significant contribution to downwind nonattainment, not to maintain a consistent set of emission rates from covered sources.¹⁰⁷ Similarly, EPA's position that the enhancements are needed because "over time the emissions budgets may not reflect the intended stringency of the emissions control strategies identified in the rulemaking" fails to recognize—or unreasonably rejects—the premise of an emission trading program to address interstate transport. Requiring operation of specific emission controls or achieving strict emission rate limits at specific sources are methods of emission control that certain CAA provisions may authorize. But a rule to address significant contribution to downwind nonattainment or maintenance problems cannot be squared with that approach, or at the very least not with the approach contained in the Proposed Rule. Maintaining operation of emission controls assumed to be cost-effective under today's conditions, regardless of future emission reductions, is not reasonably connected to downwind nonattainment or maintenance. This may be a goal with policy merit, but it is not an endpoint that can be justified under section 110(a)(2)(D)(i)(I).

A review of each of the four enhancements and their effects on emissions confirms that they will not address significant contribution and are not tied to downwind attainment.

¹⁰⁷ See 87 Fed. Reg. at 20,107.

1. Dynamic Budgeting

The proposed dynamic budgeting provisions would recalculate each state’s annual NOx budget to reflect changes in fleet composition and heat input starting in 2025 and continuing thereafter. The goal is to prevent “industry trends toward more efficient and cleaner resources ... likely lead[ing] to a surplus of allowances” in future years.¹⁰⁸ Thus, EPA’s own description demonstrates that the dynamic budgets are not intended to address significant contribution. They are intended to ensure controls are operated and emission rate limits are achieved even if states have eliminated their significant contributions. The fact that EPA says that these emission reductions are needed to address good neighbor obligations, but that EPA cannot at this time state what these emission reductions will be, demonstrates just how problematic—and inconsistent with section 110(a)(2)(D)(i)(I)—the dynamic budgeting provision is.¹⁰⁹

The disconnect between the dynamic budgeting provision and significant contribution is made most explicit by its effect on states that are projected to resolve their good neighbor obligations by 2023. EPA’s air modeling shows that all receptors to which Alabama, Delaware, and Tennessee are linked in 2023 are projected to be in attainment by 2026. EPA projects that these states will be well below the proposed one percent contribution threshold.¹¹⁰ Therefore, “no additional emissions reductions are proposed for EGUs or non-EGUs in those states beyond the 2023 level of stringency,” nor can they be under the Supreme Court’s holding in *EME Homer II*.¹¹¹ Despite this finding, the dynamic budgeting provision will continue to apply, requiring reductions beyond 2023 levels. The other enhancements will also apply and, if they work as EPA

¹⁰⁸ *Id.* at 20,108.

¹⁰⁹ *See id.*

¹¹⁰ *Id.* at 20,072, Tbl. V.E.1-2.

¹¹¹ *Id.* at 20,098.

projects, will ensure controls operate and unnecessary emission reductions continue. For the reasons the Supreme Court identified, this is over-control.

Of course, the dynamic budgeting provisions could allow a state to emit at levels in excess of the budgets that would otherwise be established for 2026. As with CAIR, that would allow under-control that would also fail to address significant contribution in an appropriate manner. Although far less likely,¹¹² this is just as serious a flaw with the Proposed Rule's design. Accordingly, consistent with the D.C. Circuit's decision in *North Carolina* which prohibited such under-control, EPA should eliminate the dynamic budgeting provision from its final rule.

If EPA decides to retain the dynamic budgeting provisions, it may be possible to develop a safety valve provision that could effectively address the over-control problem raised by unmitigated dynamic budgeting. Such a safety valve would need to be tied to a defined level of significant contribution such that EPA would cease realigning budgets, or take other similarly protective action, once that level was reached. PGen welcomes the opportunity to further work with EPA to develop any such safety valve.

2. Bank Recalibration

The bank recalibration provisions of the Proposed Rule are also intended “to maintain the rule’s selected control stringency and related EGU effective emissions rate performance level as the EGU fleet evolves over time.”¹¹³ EPA says that it “believes” its recalibration provisions will help to achieve this goal, but the record lacks support for this conclusion. Regardless, EPA has not proposed to conclude that a bank recalibration is necessary to prevent sources from emitting in amounts that will exceed the significant contribution threshold. As with dynamic budgeting,

¹¹² *Id.* at 20,107 (noting that industry trends are “driven by factors including lower prices for natural gas and wind and solar generation”).

¹¹³ *Id.* at 20,109.

recalibration is designed to require reductions that cannot be justified on an overall tonnage basis and that would not be necessary to address NAAQS nonattainment or maintenance problems.

EPA might be able to refine its bank recalibration provisions to prevent them from resulting in over-control.¹¹⁴ Rather than automatic annual reductions of banks to 10.5% of variability limits, EPA could engage in an annual review of whether significant contribution remains in each state, and only recalibrate banks in states where significant contribution remains. EPA could include additional safeguards to ensure that bank recalibration will not create compliance problems for individual sources especially where such sources may not be significantly contributing to downwind nonattainment or maintenance problems. PGen would welcome the opportunity to further discuss potential pathways for addressing these matters with EPA.

3. Daily Backstop NO_x Limit

The Proposed Rule explains that the daily backstop NO_x emission limits are necessary to prevent individual sources from idling controls “on the particular days that matter for downwind exceedances of the relevant air quality standard and also have the potential to cause disproportionate adverse impacts on downwind overburdened communities.”¹¹⁵ These policy goals, however meritorious in their own right, do not actually address the issue of significant contribution. Even if they did, the limited record information is not sufficient to establish that the backstop emission limit would have any effect on peak days or overburdened communities.

EPA might be able to revise the daily backstop emission limit requirement to address the over-control problem the Proposed Rule poses. The daily limit could, for instance, be sunset for

¹¹⁴ Whether bank recalibration will result in other problems, such as an illiquid market, is a separate issue addressed in Section III of these comments.

¹¹⁵ *Id.* at 20,110.

units in states that reduce overall emissions to resolve their significant contributions. As described in Sections III.C and II.D, however, there are additional problems with the daily backstop emission rate limit that EPA must also resolve.

4. Assurance Level Backstop

Finally, the proposed assurance level backstop is, like the backstop NO_x emission limit, “intended to improve emissions performance at the level of individual units.”¹¹⁶ The assurance level was itself designed in response to the D.C. Circuit’s decision in *North Carolina* to ensure that, as EPA states, “emissions from each state that contribute significantly to nonattainment or interfere with maintenance of a NAAQS in another state are prohibited.”¹¹⁷ For that reason, EPA proposes to find that “[c]onduct leading to a foreseeable, readily avoidable exceedance of a state’s assurance level cannot be reconciled with the statutory mandate of the CAA’s good neighbor provision that emissions ‘within the state’ significantly contributing to nonattainment or interfering with maintenance of a NAAQS in another state must be prohibited.”¹¹⁸ Accordingly, unlike the other enhancements, “the principal purpose” of the assurance level backstop “is to strengthen the assurance provisions, which apply on a statewide, seasonal basis.”¹¹⁹ Any unit-specific incentive of the assurance level backstop to maintain unit emissions performance at levels consistent with the operation of specific controls would be secondary.¹²⁰

¹¹⁶ *Id.* at 20,112.

¹¹⁷ *Id.*

¹¹⁸ *Id.* It is important to note, as EPA does, that this conduct, if it took place, did not violate any EPA rule.

¹¹⁹ *Id.*

¹²⁰ *Id.*

For this reason, the assurance level backstop may result only in over-control that is incidental to EPA's efforts to ensure that each state eliminates its significant contribution to downwind nonattainment or maintenance issues. Accordingly, EPA should further evaluate this enhancement to determine if it will effectively address potential exceedances of the assurance levels and to show that its primary impact will not be the operation of controls despite overall reductions in NOx emissions that already satisfy upwind states' good neighbor obligations. As discussed in Sections III.C. and III.D of these comments, however, there are additional issues raised by the Proposed Rule's assurance level backstop that EPA must also address.

In sum, the overall effect of the four enhancements is to ensure that controls are operated even when those controls are not needed to eliminate significant contribution. This is inconsistent with the good neighbor provision and the court rulings addressing EPA's interstate transport authority. Accordingly, EPA should reevaluate the need for the four enhancements and eliminate them unless they are demonstrably necessary to address significant contribution. EPA might also attempt to modify the enhancements to eliminate the aspects of them that will cause over-control provided the Agency can develop adequate record evidence that over-control will not result from their implementation. PGen offers its assistance to EPA in revising the Proposed Rule to achieve these objectives.

C. The Proposed Enhancement Provisions Are Inconsistent with the Cooperative Federalism Model of the CAA.

The CAA has been called an “experiment in federalism,”¹²¹ and its approach to regulation is often held up as a model of “cooperative federalism,” wherein states design and

¹²¹ *Virginia v. EPA*, 108 F.3d 1397, 1408 (D.C.Cir.1997) *modified on other grounds*, 116 F.3d 499 (D.C. Cir. 1997) (quoting *Bethlehem Steel Corp. v. Gorsuch*, 742 F.2d 1028, 1036–37 (7th Cir.1984)).

implement requirements based on general federal standards. Under a cooperative federalism approach, states are “free to choose any measures, approaches, or technologies that they deemed appropriate to meet the federal guidelines.”¹²²

The D.C. Circuit explored how cooperative federalism applies in the context of the good neighbor provision in *Michigan v. EPA*. There, the court noted that under the NOx SIP call (and likewise under previous iterations of CSAPR) “[w]hile EPA calculated the budgets using highly cost-effective emission controls, the agency allows the states to choose the control measures necessary to bring their emissions within the budget requirements.”¹²³ The *Michigan* court differentiated the NOx budgets EPA created in the NOx SIP Call from other rules that had exceeded EPA’s authority under section 110. The NOx budgets were not like the motor vehicle rule struck down in *Virginia v. EPA*, for instance, because the *Virginia* rule “in effect set the numerical emissions limitations and mandated the means for the states to achieve the necessary emissions reductions.”¹²⁴ The *Michigan* court also pointed to the Supreme Court’s decision in *Train v. NRDC* that established EPA’s secondary role in enforcing source-by-source emissions limitations.¹²⁵ Under these cases, the *Michigan* court concluded that the determinative question in examining a good neighbor rule is whether the rule triggers “the *Train-Virginia* federalism bar,” which the court described this way:

[The question is] whether the program constitutes an *impermissible source-specific means rather than a permissible end goal*.

¹²² *Am. Lung Ass’n v. EPA*, 985 F.3d 914, 937 (D.C. Cir.), *cert. granted sub nom. N. Am. Coal Corp. v. Env’t Prot. Agency*, 142 S. Ct. 417 (2021), and *cert. granted sub nom. North Dakota v. Env’t Prot. Agency*, 142 S. Ct. 418 (2021), and *cert. granted in part sub nom. Westmoreland Mining Holdings LLC v. Env’t Prot. Agency*, 142 S. Ct. 418 (2021), and *cert. granted sub nom. W. Virginia v. Env’t Prot. Agency*, 142 S. Ct. 420 (2021).

¹²³ *Michigan*, 213 F.3d at 686.

¹²⁴ *Id.* (discussing *Virginia v. EPA*).

¹²⁵ *Id.* at 686-87.

However, the program’s validity also depends on whether EPA’s budgets allow the covered states *real choice with regard to the control measure options* available to them to meet the budget requirements.¹²⁶

The D.C. Circuit determined in *Michigan* that EPA’s clearly stated NOx budgets, intended to remedy significant contribution to downwind nonattainment or maintenance problems, passed the *Train-Virginia* federalism bar for three reasons: (1) the budgets “merely provide[d] the levels to be achieved by state-determined compliance mechanisms;”¹²⁷ (2) “EPA made clear that states do not have to adopt the control scheme that EPA assumed for budget-setting purposes;”¹²⁸ and (3) the “budget program does not mandate a ‘specific, source-by-source emission limitation.’”¹²⁹

Unlike the NOx SIP Call, the Proposed Rule unfortunately has problems on each of these fronts. First, as explained above, EPA has not provided budgets for each compliance year. Thus, states cannot determine for themselves what their compliance plans must achieve. As the D.C. Circuit in *North Carolina* explained, if a state declines to participate in EPA’s interstate trading program, then “the state must limit its emissions to a cap specified by” the applicable trading program.¹³⁰ A state cannot replace EPA’s FIP with a SIP adopting alternative emission control requirements when EPA has failed to supply defined emission budgets.¹³¹ To effectuate the

¹²⁶ *Id.* at 687 (emphasis added).

¹²⁷ *Id.*

¹²⁸ *Id.*

¹²⁹ *Id.* at 688.

¹³⁰ *North Carolina*, 531 F.3d at 904.

¹³¹ It is important to emphasize that the issue of EPA providing clearly articulated budgets to empower states to carry out their statutory role under the CAA is separate from the issue addressed by the Supreme Court in *EME Homer II*, which involved EPA’s obligation to provide budget information *prior to* promulgating a FIP. *EME Homer II*, 134 S. Ct. at 1601. That

cooperative federalism framework of the CAA, the Proposed Rule should be revised to provide states with the tools they need to develop appropriate plans for compliance.

Second, EPA's expressed intention is to require the operation of emission controls regardless of overall emission reduction, effectively mandating a specific control scheme and removing the state's right to adopt alternative compliance mechanisms.

Third, even more clearly, the Proposed Rule would impose source-by-source emission limits. The backstop emissions limit and the assurance level backstop function as "unit-specific secondary emissions limitations."¹³² Those limits are "intended to improve emissions performance at the level of individual units."¹³³

These aspects of the Proposed Rule all conflict with the CAA's cooperative federalism model. To effectively resolve these issues and pass the *Train-Virginia* federalism bar, EPA must do the following:

- Provide budgets that will eliminate significant contribution
- Allow states to meet the goals of the Proposed Rule through a variety of control schemes
- Eliminate source-by-source limits

There might be ways for EPA to retain elements of these enhancements without violating the *Train-Virginia* bar. EPA might be able to make compliance with these provisions optional, but to incentivize sources to adopt the two backstop limits by, for instance, exempting sources

decision involved timing and the CAA's statutory deadlines, not the fundamental issue of EPA and state roles under the Act.

¹³² 87 Fed. Reg. at 20,112.

¹³³ *Id.* at 20,110.

that do so from other requirements of the Proposed Rule. PGen would welcome the opportunity to work with EPA to explore options.

D. EPA Does Not Have Authority to Require Source-by-Source Emission Limits Pursuant to the Good Neighbor Provision.

As discussed above in the context of cooperative federalism, the Proposed Rule oversteps EPA's authority by including source-by-source emission limits. EPA cannot dictate how a state implements section 110(a)(2)(D)(i)(I), and unit-specific performance standards go beyond the scope of that provision. Indeed, these matters are reserved to the states in the first instance.¹³⁴ Consistent with D.C. Circuit and Supreme Court case law, EPA at most can determine what overall emission tonnage level a state must achieve; it may not impose any unit-specific rules or requirements. Nevertheless, EPA concludes that the four enhancements are lawful and will not result in over-control "any more than the permanent imposition of emissions rate standards on individual sources at the time of the rulemaking would constitute overcontrol."¹³⁵ If these rule provisions as proposed are equivalent to permanent emission rate standards on individual sources, as EPA suggests, they exceed the Agency's authority.

EPA should make clear in any final rule that states are not obligated to include the emission rate limits EPA has proposed here in their SIPs. EPA should further provide states with overall emission targets that states can achieve in any manner they deem appropriate.

¹³⁴ See, e.g., *Michigan*, 213 F.3d at 686 ("section 110 left to the states 'the power to [initially] determine which sources would be burdened by regulation and to what extent.'") (quoting *Union Elec. Co. v. EPA*, 427 U.S. 246, 269 (1976)) (alteration and emphases in original); *Virginia*, 108 F.3d at 1408 (same).

¹³⁵ 87 Fed. Reg. at 20,095. This is best illustrated by comparing the trading program approach with the requirements EPA could promulgate for EGUs based on an approach of assigning unit-specific emissions rate limitations.

E. EPA’s Proposed Enhancement Provisions Are Otherwise Arbitrary and Capricious and Should Be Eliminated or Revised.

In addition to the fundamental legal concerns discussed in the subsections above, the record does not adequately establish a basis for the four enhancements. When engaging in rulemaking, an agency “must examine the relevant data and articulate a satisfactory explanation for its action, including a rational connection between the facts found and the choice made.”¹³⁶ In other words, an agency’s declaration of fact that is unsupported by evidence is “insufficient to make the agency’s decision non-arbitrary.”¹³⁷ Rather, an agency must support its conclusion with evidence in the administrative record.¹³⁸ If an agency fails to provide that “minimal level of analysis,” its action is arbitrary and capricious.¹³⁹ Additionally, in some cases, an agency may be required to provide a “more detailed justification” when it proposes a new position that rests upon findings that contradict those which underpinned its prior policy.¹⁴⁰ Without additional support in the record, EPA cannot rationally justify its inclusion of the four enhancements, which would significantly alter the regulation of interstate transport.

As a general matter and applicable to the proposed enhancements as a group, EPA says in the Proposed Rule that the four enhancements are necessary to ensure that EGUs “continue to

¹³⁶ *Motor Vehicle Manufacturers Ass’n v. State Farm Auto Mut. Ins. Co.*, 463 U.S. 29, 43 (1983).

¹³⁷ *Safe Extensions, Inc. v. FAA*, 509 F.3d, 593, 605 (D.C. Cir. 2015).

¹³⁸ *See Sierra Club v. EPA*, 972 F.3d 290 (3d Cir. 2020) (stating that an agency action is arbitrary and capricious when the agency cites “no data whatsoever in support of its decision”); *Am. Petroleum Inst. v. EPA*, 862 F.3d 50 (D.C. Cir. 2017) (explaining that an agency rule must be “justified” by the rulemaking record) (internal citations omitted); *Edison Elec. Inst. v. EPA*, 2 F.3d 438, 446-47 (D.C. Cir. 1993) (holding that no evidence or explanation in the record was present to justify EPA’s decision to subject waste mineral processing waste and electric utility waste to regulation under new rule).

¹³⁹ *Encino Motorcars, LLC v. Navarro*, 579 U.S. 211, 221 (2016).

¹⁴⁰ *FCC v. Fox Television, Inc.*, 556 U.S. 502, 515-16 (2009).

achieve NO_x emissions performance in the ozone season commensurate with the level of emissions control stringency the EPA determines appropriate.”¹⁴¹ EPA goes on to “acknowledge[] that this is an adjustment in its historical approach to eliminating significant contribution although it is consistent with the evolution of the Agency’s thinking.”¹⁴²

The rationale EPA provides to explain the evolution of its thinking is problematic. EPA says that its experience under previous versions of CSAPR is that once “mass-based budgets are achieved and compliance targets are even exceeded,” incentives to further reduce emissions decline.¹⁴³ No other outcome would make sense. There is no policy reason for an allowance trading program to incentivize emission reductions beyond what is needed to address significant contribution, and there is no legal basis for requiring reductions beyond that point. Moreover, as EPA says in the Proposed Rule, past versions of CSAPR without the enhancements have nevertheless “been effective in achieving overall reductions in emissions.”¹⁴⁴ Accordingly, adding the enhancements is less an “adjustment” to EPA’s thinking than it is a sea change. As such, EPA must not only provide a “reasoned analysis for the change” in its policy, but it is also subject to the heightened standard that applies to a new position that contradicts the Agency’s previous policies.¹⁴⁵ This analysis is missing.

The Proposed Rule suggests, for instance, that emissions on peak ozone days might be addressed through its dynamic budgeting provisions. In describing this rationale, EPA notes

¹⁴¹ 87 Fed. Reg. at 20,095.

¹⁴² *Id.*

¹⁴³ *Id.*

¹⁴⁴ *Id.* at 20,056.

¹⁴⁵ *State Farm*, 463 U.S. at 52; *see also Fox Television, Inc.*, 556 U.S. at 515-16 (finding that an agency must provide a reasoned explanation for disregarding facts and circumstances supporting a prior policy).

again that sources subject to a CSAPR trading program may idle controls after emission budgets have been achieved or exceeded and that “[w]hile the EPA has provided analysis indicating that, on average, sources operate their controls more effectively on high electric demand days, it has also identified cases where units fail to optimize their controls on these days.”¹⁴⁶ EPA goes on to say that “[d]ownwind states have suggested this type of reduced pollution control performance has occurred on the day and preceding day of an ozone exceedance.”¹⁴⁷ The record, however, does not establish that sources idle controls on days prior to or during ozone exceedances, that sources idle their controls prior to violations of the NAAQS, or that the idling of controls *cause* a NAAQS exceedance or violation. Most significantly, the record likewise does not link idling of controls to a state continuing to make a significant contribution to downwind nonattainment or maintenance. On the contrary, the record suggests that controls are often operated on high-demand days and that controls would not be idled *until significant contribution was already remedied* by states meeting or exceeding their budgets. Accordingly, this rationale does not support EPA’s adoption of the four enhancements.

Regarding bank recalibration, the Proposed Rule explains that EPA will reset the total quantity of banked allowances for the Group 3 trading program to a target level of 10.5 percent of the sum of the state emissions budgets for the current control period.¹⁴⁸ EPA provides two reasons for selecting this percentage:

First, in the transition from CSAPR to the CSAPR Update, where the EPA set a target bank amount 1.5 times the sum of the variability limits, and in the transition from the CSAPR Update to the Revised CSAPR Update, where the EPA set a target bank amount of 1.0 times the sum of the variability limits, in each case

¹⁴⁶ 87 Fed. Reg. at 20,108.

¹⁴⁷ *Id.*

¹⁴⁸ *Id.* at 20,109.

the initial bank proved larger than necessary, as total emissions of all sources in the program were less than the budgets.¹⁴⁹

Second, an analysis of year-to-year variability of heat input for the region covered by this proposed rule suggests that the regional heat input for an individual year can be expected to vary by up to 10.5 percent above or below the central trend with 95% confidence. This variability analysis is an application to the entire region of the variability analysis EPA has performed for individual states to establish the variability limit of 21 percent for the states in the trading program. When the analysis is performed at the regional level, the data show less year-to-year variation than when the analysis is performed at the individual state level. Within the trading program structure, it is logical to use variability analyzed at the level of individual states to set the variability limits, which apply at the level of individual states, while using variability analyzed at the level of the overall region to set a target level for a bank, which will apply at the level of the overall program.¹⁵⁰

Neither of these points supports the bank recalibration. Whether an initial bank established during a transition period from one program to another is too large does not speak to the need for sources to establish banked allowances for themselves for future use under individualized circumstances. Sources are best able to make those determinations. Moreover, if total emissions of all sources in the program are less than the state budgets, then the availability of additional banked allowances is irrelevant, as significant contribution will have been addressed. Similarly, year-to-year variability does not directly speak to the need for banked allowances. It is an issue to be addressed through the assurance levels. Indeed, it is difficult to understand why EPA would consider it appropriate to address variability analyzed at the state level to set state-wide variability limits, while relying on region-wide considerations to recalibrate allowances held in banks *at the individual source level*.

¹⁴⁹ *Id.* at 20,121.

¹⁵⁰ *Id.*

The Proposed Rule also asserts that bank recalibration is appropriate because it “would not erase the value of unused allowances for the holder,” suggesting that because banked allowances will retain some value, recalibrated banks “can serve all these same purposes whether a banked allowance is of partial value (if the bank needs recalibrating to its target level) or is of full value compared to a newly issued allowance for the next control period.”¹⁵¹ The Proposed Rule does not acknowledge, however, that limiting the value of banked allowances will diminish the policy purposes that they serve. The recalibration provision will surely make early emission reductions less appealing, for instance, given that banked allowances’ future value will be highly uncertain under the proposal. EPA should more fully explore this issue to support its statements regarding bank recalibration.

The Proposed Rule’s backstop daily limit is also unsupported by the record. As with the dynamic budgeting provision, the Proposed Rule suggests that the backstop limits are needed to address peak ozone days. The strongest support EPA offers in this regard, however, is that “downwind stakeholder communities have suggested that operating pollution controls on the highest ozone days (and immediately preceding days) during the ozone season is of critical importance.”¹⁵² This falls far short of the type of record evidence that would be needed to support the backstop limits.¹⁵³ At the very least, EPA would have to demonstrate that lack of control operation on peak days made a significant contribution to nonattainment or maintenance issues. Instead of doing so, the Proposed Rule “suggests this problem could become more prevalent in future years relevant to this action” and that “prophylactic measures” should

¹⁵¹ *Id.* at 20,109.

¹⁵² *Id.* at 20,110.

¹⁵³ *Amerijet Inter., Inc. v. Pistole*, 753 F.3d 1343 (D.C. Cir. 2014) (explaining that “conclusory statements” do not satisfy an agency’s obligation to articulate an explanation for its decisions).

therefore be included in this rule.¹⁵⁴ Adopting present day regulatory requirements to protect against speculative future problems is not reasoned decision-making under applicable legal standards.

Just as important, EPA has not considered the feasibility of the backstop limit. The limit EPA has proposed cannot be met during unit startup or shutdown events. Every source to which it applies would necessarily violate the limit during those times.

Although the backstop limit is not justified by the current record, if EPA ultimately proceeds with its implementation, there are several ways in which the Agency could improve the limit. First, an otherwise supported and lawful backstop limit would be appropriate only if measured based on a 30-boiler-operating day average. If the daily backstop emission limit is retained, EPA should also defer compliance with the limit for SCR-equipped units that share a common stack with non-SCR equipped units until 2027. If not, SCR-equipped units would be required to use inaccurate, overstated emissions data for gauging compliance with the limit.¹⁵⁵ Additionally, PGen supports the Agency's proposal to suspend application of the backstop for EGUs that are committed to retiring by the end of 2028.¹⁵⁶ For further discussion of this issue, see Section IV below.

Finally, the fourth enhancement, the assurance backstop provision, lacks adequate record support. In particular, the Proposed Rule would authorize administrative or judicial action, penalties, and other forms of relief under the CAA's enforcement authorities for any emissions by a unit that exceed its secondary emissions limitation, as calculated under the assurance

¹⁵⁴ *Id.* at 20,110.

¹⁵⁵ *Id.* at 20,133.

¹⁵⁶ *See id.* at 20,122.

backstop provision. The Proposed Rule does not specify how any of the penalties might be calculated or what form enforcement might take. The rationale for adding these penalties is that “[i]n light of the operation of ... [two] Missouri sources, the EPA is doubtful that strengthening the assurance provisions by increasing allowance surrender requirements at the unit, source, or designated representative level would create a sufficient deterrent.”¹⁵⁷ Accordingly, these new penalties would be based on EPA impressions derived from 2 out of “nearly 300 instances where a given state’s compliance with the assurance provisions of a given CSAPR trading program for a given control period has been assessed.”¹⁵⁸ These two instances, as EPA acknowledges, were “not prohibited by the current regulatory requirements.”¹⁵⁹ Nevertheless, EPA presupposes that potentially onerous but undefined penalties are necessary to prevent the recurrence of what is already a very rare incident. This is not sufficient support for EPA’s proposed action. EPA should, at the least, consider less draconian approaches to addressing this issue. The current record, however, does not evaluate other options at all.

The enhancement provisions would be a serious departure from EPA precedent under section 110(a)(2)(D)(I)(i). They would, moreover, impose significant new burdens on states and regulated parties. EPA has not provided strong enough reasons for making these changes. EPA has a well-established approach to addressing interstate transport effectively, and it should not cast that aside lightly.

¹⁵⁷ *Id.* at 20,123.

¹⁵⁸ *Id.*

¹⁵⁹ *Id.*

F. EPA's Over-Control Analysis Does Not Establish that the Proposed Rule Appropriately Addresses Significant Contribution.

EPA performed an over-control analysis based on emission reductions from EGUs and non-EGUs under the Proposed Rule to determine whether:

- (1) the expected ozone improvements would be greater than necessary to resolve the downwind ozone pollution problem (i.e., beyond what is necessary to resolve all nonattainment and maintenance problems to which an upwind state is linked) or
- (2) the expected ozone improvements would reduce the upwind state's ozone contributions below the screening threshold (i.e., 1 percent of the 2015 ozone NAAQS).¹⁶⁰

Assuming for the sake of argument that this two-part test fully addresses instances that could result in over-control,¹⁶¹ EPA's analysis would confirm only that emission reductions expected *by 2023 and 2026* should not result in over-control. In other words, the over-control analysis appears to assess over-control as if the Proposed Rule were a traditional CSAPR-type rulemaking: one that established fixed budgets to address significant contribution based on an assessment of cost-effective controls considered at the fleet as it is projected to look at the time of compliance. The analysis does not attempt to address the impact of the four enhancements, the changes to the generation fleet over time, and how those aspects of the Proposed Rule will work together. Those are, however, the elements of the proposal that will lead to over-control.

At the very least, an over-control analysis designed to evaluate the effects of the four enhancements would have to compare the emission reductions expected under the Proposed Rule beyond 2026, with application of the four enhancements taken into account, to an appropriate

¹⁶⁰ *Id.* at 20,098.

¹⁶¹ It likely does not, as this analysis looks only at the two guideposts identified by the Supreme Court in *EME Homer II* rather than evaluating the issue more fully to consider issues not before the Court in that litigation.

measure of significant contribution. Because EPA’s analysis does not do that, the Proposed Rule has not been adequately evaluated for over-control.

G. As-Applied, State-by-State Demonstrations of Over-Control Are Not Necessary Under the Circumstances Presented by the Proposed Rule.

EPA suggests that it does not need to thoroughly address over-control at this time because the “D.C. Circuit has reinforced that overcontrol must be established based on particularized, record evidence on an as-applied basis.”¹⁶² In *EME Homer II* and *EME Homer III*, the Supreme Court and the D.C. Circuit did indicate that as-applied challenges to individual state budgets based on the issue of over-control were the appropriate course of action with respect to the original CSAPR. But both courts also explained that the reasons for that were tied to specific circumstances not present here.

In *EME Homer II*, the Supreme Court explained that the issue before the Court was whether EPA’s methodology for setting CSAPR’s emission budgets “*left open the possibility* that a State might be compelled to reduce emissions beyond the point at which every affected downwind State is in attainment.”¹⁶³ But, the mere “possibility” of over-control did not warrant the wholesale invalidation of CSAPR.¹⁶⁴ This was especially so because, out of a “voluminous record,” the challenges “point[ed] to only a few instances of ‘unnecessary’ emission reductions.”¹⁶⁵ In support of the as-applied challenge approach it decided upon, the Court

¹⁶² *Id.* at 20,099.

¹⁶³ *EME Homer II*, 134 S. Ct. at 1608 (emphasis added).

¹⁶⁴ *Id.*

¹⁶⁵ *Id.* at 1609.

concluded “[t]he *possibility* that the rule, *in uncommon particular applications*, might exceed EPA’s statutory authority does not warrant judicial condemnation of the rule in its entirety.”¹⁶⁶

On remand in *EME Homer III*, the D.C. Circuit continued this emphasis on the specific circumstances presented by CSAPR’s mere *potential* for over-control.¹⁶⁷ The D.C. Circuit emphasized it again in challenges to the CSAPR Update, finding that a particularized as-applied challenge was appropriate “for challengers who raise the *possibility* of overcontrol *in only a few instances*,” and where petitioners “*speculate*” that EPA’s methodology could lead to over-control.¹⁶⁸

The Proposed Rule does not pose the possibility or potential for over-control in only a few instances or in uncommon particular applications, however. For the reasons explained above, as a result of the four enhancements and EPA’s apparent decision not to specify budgets that will address significant contribution—contrary to its previous actions under the good neighbor provision—the Proposed Rule will certainly result in over-control in almost every conceivable instance.¹⁶⁹ As-applied challenges are not necessary or appropriate in these circumstances.

Moreover, regardless of the merits of addressing over-control through as-applied challenges after promulgation of a final rule, EPA remains bound to engage in reasoned decision-making. It is not sufficient for EPA to promulgate a rule without fully evaluating over-control and to rely instead on subsequent litigation to resolve any regulatory mistakes. EPA is

¹⁶⁶ *Id.* (emphases added).

¹⁶⁷ *EME Homer III*, 795 F.3d at 126.

¹⁶⁸ *Wisconsin v. EPA*, 938 F.3d 303, 325 (D.C. Cir. 2019) (emphases added).

¹⁶⁹ Again, while it is theoretically possible that the Proposed Rule could result in under-control, no one and no record information seriously suggests that is a likely outcome.

obligated now to engage in reasoned decision-making by providing an adequate explanation for its decisions as required under the CAA and the Administrative Procedure Act.¹⁷⁰

III. The Proposed Rule Does Not Account for Risks to Electric Reliability or a Functioning Allowance Market.

Reasoned decision-making dictates that an agency cannot “fail[] to consider an important aspect of the problem.”¹⁷¹ Indeed, an agency’s decision to turn a “blind eye” to relevant information is grounds for finding an agency action arbitrary and capricious.¹⁷² The docket for the Proposed Rule, however, does not appear to contain any substantial analysis of electric reliability impacts or an assessment of how allowance markets are likely to function under the Proposed Rule. Electric reliability is discussed only in passing in reference to the reliability constraints that EPA’s Integrated Planning Model takes into account. Similarly, the Proposed Rule discusses market functionality only in noting that allowance banking generally helps maintain market liquidity.

Even if the Proposed Rule were a relatively straightforward extension of CSAPR and the Revised CSAPR Update programs to cover the 2015 ozone NAAQS without substantive changes to the manner in which these interstate transport programs operate, EPA would nevertheless be well-advised to undertake a more thorough examination of electric reliability and market functionality to support its proposed regulatory action. Considering the ongoing changes to the electric generating fleet and the timeframes for compliance contemplated by the Proposed Rule, electric reliability risks pose real threats.

¹⁷⁰ *State Farm*, 463 U.S. at 52.

¹⁷¹ *Id.* at 43.

¹⁷² *Natural Resources Def. Council v. EPA*, 808 F.3d 556, 574 (D.C. Cir. 2015).

Because the Proposed Rule introduces policies that would reimagine the manner in which interstate transport rules operate, evaluation of electric reliability and market liquidity risks is even more important. Increasingly stringent emission budgets coupled with source-specific emission rate limits could easily impact unit shutdown decisions throughout the new trading program region. It could similarly influence decisions to cease what would otherwise be noncompliant operation despite demand from the grid.

One PGen member, for instance, projects that the Proposed Rule could result in the otherwise unplanned loss of 782 MW of non-SCR generation from their fleet. This projected loss of capacity would place the generator 495 MW below its current minimum summer reserve margin. Based on forecasted load growth, the company estimates that the minimum reserve margin is projected to climb to over 800 MW by 2026. This lack of reserve margin will likely lead to periodic Energy Emergency Alert status per the National Electric Reliability Corporation and ultimately rolling blackouts in the communities it serves.

In order to prevent such situations from occurring, EPA should engage in consultation with the regional transmission organizations (“RTOs”), the Federal Energy Regulatory Commission, the North American Reliability Council, and other experts to help ensure that the Proposed Rule will not negatively impact electric reliability. Such consultation and further evaluation could determine if additional regulatory action is needed, such as a safety valve that would provide additional allowances if reliability were to be jeopardized by allowance market shortages. A safety valve could operate effectively, for instance, by providing regulated sources with certainty that operation deemed essential by RTOs or another appropriate entity would be exempted from the requirement to surrender allowances or meet otherwise applicable emission limits under the Proposed Rule. Including such a provision is not likely to have significant

environmental impacts, and EPA could always reserve the right to require remedial action to address any significant contribution that would result from this sort of emergency operation or to evaluate whether it would be possible to address such operations and emissions pursuant to other CAA authority, like the exceptional events provision.¹⁷³ PGen urges EPA to explore these options and would gladly assist the Agency in its evaluation.

Whether the four enhancements will negatively affect the market for allowances is also an important and unexplored question. The banking recalibration provisions, dynamic budgets, and additional penalties for exceedances could all significantly affect the availability of allowances and incentivize different market behavior than existed under previous versions of CSAPR. Already, the market for Group 2 and Group 3 allowances has seen considerable volatility since the release of the Proposed Rule. In addition to a full evaluation of the likely market to emerge under the Proposed Rule, a safety valve measure of some sort might be needed. Indeed, EPA provided for a safety valve to address market liquidity concerns in the Revised CSAPR Update.¹⁷⁴ In this Proposed Rule, however, EPA merely states that it “is not proposing to create a ‘safety valve mechanism’ in this rulemaking analogous to the safety valve mechanism established under the Revised CSAPR Update.”¹⁷⁵ Although a more effective safety valve than the one provided for in the Revised CSAPR Update may be possible for this Proposed Rule, simply declining to propose such a provision without further explanation or analysis does not provide a sufficient basis for EPA’s decision in this regard.

¹⁷³ CAA § 319(b).

¹⁷⁴ 86 Fed. Reg. at 23,060.

¹⁷⁵ 87 Fed. Reg. at 20,133 n. 293.

As it evaluates the various policies under consideration in this rulemaking, EPA should have a complete picture of these important issues. The functionality of the market is a key premise of the trading program EPA has proposed. Whether that market will support electric reliability is an important consideration for regulated parties, other agencies, and the general public. The Proposed Rule would be better supported if it relied on analysis demonstrating that it includes provisions needed to prevent negative impacts on these important matters of public policy.

IV. EGUs that Commit to Retire by a Specific Date Should Be Exempted from Certain Requirements of the Proposed Rule.

EPA has requested comment on whether sources that plan to retire “shortly after the start of the 2027 ozone season in lieu of investing in new NO_x post-combustion control technology” should be exempted from application of the backstop daily emission rate limit.¹⁷⁶ PGen supports allowing sources with impending shutdown dates to operate without adhering to the proposed daily limit (if those daily limits are retained in a final rule, *see* Section III). PGen further believes that EPA should take additional action to support units that plan imminent shutdowns.

First, as the Proposed Rule acknowledges, the retrofits envisioned under the Proposed Rule to reduce NO_x emissions “in practice may be less environmentally efficient compared to imminent retirement that would potentially yield lower cumulative emissions of NO_x and multiple other pollutants over time.”¹⁷⁷ Unit shutdowns will undoubtedly have more significant environmental benefits than unit retrofits. EPA can therefore reasonably account for these excess emission reductions to provide sources in this situation with some regulatory relief and can

¹⁷⁶ *Id.* at 20,122.

¹⁷⁷ *Id.*

justify that action because of the additional reductions the shutdowns will achieve relative to the reductions that would be achieved under the Proposed Rule.

Second, it is appropriate to exempt units that are not already equipped with the emission controls that the Proposed Rule would assume will be installed from the backstop daily emission limit. There is no practical way for such sources to achieve that limit, and the only realistic outcome will be unplanned, early retirement with all of the system ramifications that would follow. EPA should take action to avoid this scenario.

Third, units that are not already equipped with the Proposed Rule's assumed emission controls should be given relief from other provisions of the Proposed Rule. Requiring them to compete for allowances in an uncertain marketplace when they do not have a realistic option for limiting their own emissions or market exposure imposes an unnecessary hardship. Therefore, PGen suggests allowing sources that commit to retiring by a specified date to borrow against future year emissions budgets to ensure that their emissions are covered by adequate allowances for the relatively short number of years they will continue to operate.¹⁷⁸ Such an approach is not likely to disrupt the allowance market, and it will not result in emissions above the significant contribution threshold as the assurance provisions of the program will continue in effect.

¹⁷⁸ EPA might also achieve this result if it were to make allocations for more than one compliance year at a time. For instance, if EPA were to make allocations in five-year increments without limiting the use of those allowances to compliance in specific years, sources that need additional allowances for early years of the program but that do not expect to need them later could use their allowances in a more efficient manner. EPA could, moreover, consider making such multi-year allocations only once, to cover the early years of the program, thereby effectively setting an outer date for retirements if sources wish to take advantage of this flexibility.

V. The Shortened Allocation Period for Units that Shut Down Will Disincentivize the Retirement of Older, Less Efficient EGUs.

In the Proposed Rule, units that cease operations for two consecutive control periods would receive allocations for only two years, instead of five years under current regulations.¹⁷⁹ EPA believes current market conditions make it such that the continuation of allowance allocations to retiring units “has no more than a de minimis effect” on the consideration of whether a EGU will retire or not.¹⁸⁰ The Agency does not provide any rationale for its assumption.

On the contrary, significantly shortening the allocation period for retired units could disincentivize EGUs from retiring. EGUs may be encouraged to continue running to meet minimum operational standards in order to maintain a steady allocation of allowances, rather than retiring and losing allowances. This might be more likely than under previous versions of CSAPR due to uncertainties regarding the state of the market for the new Proposed Rule. EPA should fully investigate and analyze this possibility, not simply assume that it will not occur.

VI. The NOx Reduction Implementation Schedule For 2026 and Beyond is Flawed.

EPA has selected 2023 and 2026 as the years by which key emissions reductions from EGUs and non-EGUs can be implemented.¹⁸¹ EPA proposes that the EGU NOx mitigation strategies available during the initial three years of the proposal (2023-2025) will consist of optimization of existing post-combustion controls (SCRs and SNCRs) and combustion control

¹⁷⁹ *Id.* at 20,129.

¹⁸⁰ *Id.*

¹⁸¹ *Id.* at 20,062.

upgrades.¹⁸² EPA asserts that the combustion control upgrades it is relying on will generally take six months to be installed.¹⁸³

Budgets would be set at levels reflecting the installation of post-combustion controls (SCR and SNCR) beginning in 2026.¹⁸⁴ EPA proposes to find that this timeframe is realistic because it is consistent with other CAA provisions with three-year deadlines (e.g., section 112(i)(3); section 126; reasonably available control technology requirements). These provisions have nothing to do with what is broadly achievable on a regional basis under a rule that will affect many units and multiple industries. EPA's analysis likewise ignores other provisions of the CAA that allow provide longer deadlines, like the regional haze program's best available retrofit technology requirement, which provides sources with up to five years to comply, and the deadlines for attaining the NAAQS themselves, which can extend for multiple decades.

More importantly, EPA has not attempted to evaluate market conditions and potential bottlenecks specific to this Proposed Rule. It has not considered the complications that will result from current supply chain issues or issues arising from attempting to coordinate multiple retrofits at once over a relatively short time period. Without further analysis, EPA cannot reasonably determine that these deadlines are possible or appropriate.

In addition, EPA suggests that short timeframes for implementation of controls is supported by the fact that the ozone NAAQS were promulgated in 2015. The fact that the Agency has not been able to promulgate an interstate transport rule for the 2015 ozone NAAQS

¹⁸² *Id.* at 20,100.

¹⁸³ *Id.*

¹⁸⁴ *Id.* at 20,101.

before now should not serve as a basis for penalizing states and companies that must now comply with interstate transport requirements.

At a minimum, EPA should permit case-by-case extensions of any final rule’s EGU deadlines, like it proposes to do with non-EGUs.¹⁸⁵ There may be instances where delaying installation is necessary to meet electric demand and reliability, particularly as EGUs may plan to retire in or around 2028, as EPA notes in the Proposed Rule.¹⁸⁶ The significant shift in generation and retirements anticipated in upcoming years will have overall environmental benefits, including for interstate air pollution. At the same time, a shift to renewables like solar and wind will still require the use of fossil fuel-based generation to accommodate peak demand and ensure reliability. EPA should take these factors into consideration and allow EGUs to apply for compliance extensions.

VII. EPA Has Not Provided a Reasoned Explanation for its Treatment of Generation Shifting in the Proposed Rule.

To identify NOx emission budgets to address significant contribution, EPA primarily evaluates the emission reductions that can be achieved at covered EGUs through the operation of cost-effective emission controls on a region-wide basis. In addition, EPA considers “generation shifting,” i.e., the effect of generation moving from higher to lower emitting units at each of the evaluated control stringency levels.¹⁸⁷ The Proposed Rule says that it is reasonable to account for generation shifting because all covered EGUs “participate in highly coordinated, interconnected systems where generation shifting will inevitably occur in response to pollution control

¹⁸⁵ *See id.* at 20,105.

¹⁸⁶ *See id.* at 20,122.

¹⁸⁷ *Id.* at 20,077.

requirements.”¹⁸⁸ Further, EPA asserts that if it did not account for generation shifting, any reductions that result from generation shifting “would potentially substitute for some of the emissions reductions intended through control operation and installation, potentially lessening the implementation of those mitigation strategies.”¹⁸⁹

Setting aside whether the Proposed Rule’s approach to addressing generation shifting is consistent with EPA’s method for addressing the issue in prior interstate transport rulemakings and whether it is appropriate for this rulemaking, it is important to note that the legality of using generation shifting as a basis for establishing emission limits under the CAA is a key issue currently pending before the Supreme Court in *West Virginia v. EPA*, No. 20-1530. Even though the statutory provisions at issue here and in *West Virginia* differ, and even though there are arguably differences in the manner in which generation shifting has been addressed in this rulemaking and the rules at issue there, it is unclear how the Supreme Court may resolve these issues and rule on the scope of EPA’s authority in this regard.

For these reasons, it may be appropriate for EPA to consider removing its reliance on generation shifting from the Proposed Rule or proposing alternative NO_x emission budgets that do not depend on generation shifting to avoid complications that might result from the Supreme Court’s decision.

VIII. Conclusion

PGen appreciates this opportunity to provide comments on EPA’s proposed Good Neighbor Plan for the 2015 ozone NAAQS and recognizes the considerable work that has gone into the development of the Proposed Rule. PGen also recognizes the need to address interstate

¹⁸⁸ *Id.* at 20,081.

¹⁸⁹ *Id.*

transport of ozone precursors and the significant contribution of upwind state emissions to nonattainment and maintenance issues in downwind states. The Proposed Rule continues EPA's historically effective approach to addressing these issues through regional, interstate emissions allowance trading programs, and PGen supports that general approach to addressing upwind state obligation under the good neighbor provision of the CAA.

That being said, EPA needs to be careful not to over-control emissions in upwind states. While the four enhancements that EPA has proposed will undoubtedly achieve emission reductions in addition to those that will be realized under the Proposed Rule's new Group 3 trading program, those reductions are not tied to significant contribution of upwind states to downwind nonattainment. On the contrary, the enhancements will inevitably lead to reductions beyond the level of significant contribution. Further, the record does not adequately support the need for the enhancements, while other serious issues, like electric reliability and market liquidity have hardly been evaluated at all. EPA can address all of these issues by eliminating or modifying problematic aspects of the Proposed Rule and by carrying out further analyses in support of the rulemaking. PGen would appreciate the opportunity to continue to work with the Agency as it develops a final rule.

If EPA has any questions on these comments, it should contact Aaron M. Flynn, McGuireWoods LLP, counsel for PGen, at aaronflynn@mcguirewoods.com or 202-857-2422.