May 16, 2024

U.S. Environmental Protection Agency
EPA Docket Center
Docket ID No. EPA–HQ–OAR–2023–0402
Mail Code 28221T
1200 Pennsylvania Avenue, N.W.
Washington, D.C. 20460

Submitted electronically via www.regulations.gov.

RE: **Supplemental Air Plan Actions: Interstate Transport of Air Pollution for the 2015 8-Hour Ozone National Ambient Air Quality Standards and Supplemental Federal "Good Neighbor Plan" Requirements for the 2015 8-Hour Ozone National Ambient Air Quality Standards, 89 Fed. Reg. at 12,666 (February 16, 2024), Docket ID No. EPA-HQ-OAR-2021-0663; EPA-HQ-OAR-2021-0668; EPA-HQ-OAR-2023-0402**

Dear Administrator Regan:

The American Public Power Association (APPA) and the National Rural Electric Cooperative Association (NRECA) appreciate the opportunity to provide comments on the proposed rule entitled "Supplemental Air Plan Actions: Interstate Transport of Air Pollution for the 2015 8-Hour Ozone National Ambient Air Quality Standards and Supplemental Federal 'Good Neighbor Plan' Requirements for the 2015 8-Hour Ozone National Ambient Air Quality Standards." (Supplemental FIP or Proposed Rule). The Proposed Rule substantially impacts our members in Arizona, Iowa, Kansas, New Mexico, and Tennessee (the Supplemental States). EPA proposes to summarily deny the Supplemental States' ozone transport state implementation plans (SIPs) and satisfy their statutory Good Neighbor obligations through the unworkable Good Neighbor Federal Implementation Plan (Good Neighbor FIP). EPA should reverse course with respect to both decisions.

APPA and NRECA urge EPA to withdraw the Supplemental FIP pending resolution of litigation related to the disapproval of the State Implementation Plans and the Good Neighbor FIP. The Supplemental States should not be injected into an ozone FIP framework that is flawed, subject to change, and may not ultimately withstand challenge.

Should you have questions regarding the enclosed comments, please contact Carolyn Slaughter (CSlaughter@PublicPower.org), Viktoria Seale (Viktoria.Seale@nreca.coop) and Dan Bosch (Dan.Bosch@nreca.coop).

Sincerely,

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Comments of the American Public Power Association and the National Rural Electric Cooperative Association on the Supplemental Air Plan Actions: Interstate Transport of Air Pollution for the 2015 8-Hour Ozone National Ambient Air Quality Standards and Supplemental Federal "Good Neighbor Plan" Requirements for the 2015 8-Hour Ozone National Ambient Air Quality Standards

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I. Executive Summary.

The American Public Power Association (APPA) and the National Rural Electric Cooperative Association (NRECA) appreciate the opportunity to provide comments on the proposed rule entitled, "Supplemental Air Plan Actions: Interstate Transport of Air Pollution for the 2015 8-Hour Ozone National Ambient Air Quality Standards and Supplemental Federal 'Good Neighbor Plan' Requirements for the 2015 8-Hour Ozone National Ambient Air Quality Standards." (Supplemental FIP or Proposed Rule).[1] The Proposed Rule substantially impacts our members in Arizona, Iowa, Kansas, New Mexico, and Tennessee (the Supplemental States). EPA proposes to summarily deny the Supplemental States' ozone transport state implementation plans (SIPs) and satisfy their statutory Good Neighbor obligations through the unworkable Good Neighbor Federal Implementation Plan (Good Neighbor FIP). EPA should reverse course with respect to both decisions.

In 2022, EPA embarked on ozone transport rulemakings that were and continue to be strongly opposed by the power sector and select industrial sectors. In February 2022, EPA disapproved 19 ozone transport SIPs, changing course on prior guidance and policy positions.[2] States and stakeholders filed challenges to the SIP Disapprovals in many appellate courts across the country. The courts stayed the SIP Disapprovals while the cases proceed on the merits. Despite the stays, EPA released the final Good Neighbor FIP[3] in 2023. The FIP's and this Proposed Rule's foundation is based on many of the legal and technical flaws at issue on appeal.

The final Good Neighbor FIP is the most comprehensive and stringent use of the Clean Air Act (CAA) Good Neighbor provision ever issued. APPA and NRECA commented on that proposed rule, opposing numerous technical, practical and legal aspects of the proposed Good Neighbor FIP.[4] EPA finalized a largely intact Good Neighbor FIP, with only minor revisions. Multiple petitions were promptly filed by industry stakeholders, utility trade groups,[5] and states to challenge the final Good Neighbor FIP.

At present, the Good Neighbor FIP cannot be broadly implemented. The SIP Disapproval stays remain in place in eight federal appellate courts of appeals.[6] EPA itself administratively stayed the application of the Good Neighbor FIP in those jurisdictions in response to the stays. In so doing, EPA recognized that the compliance timelines in the final Good Neighbor FIP may be adjusted.

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[1] 89 Fed. Reg. 12666 (Feb. 16, 2024).
[2] 88 Fed. Reg. 9336 (Feb. 13, 2023) (the SIP Disapprovals).
[3] 88 Fed. Reg. 36654 (June 5, 2023).
[4] APPA Comments, https://downloads.regulations.gov/EPA-HQ-OAR-2021-0668-0394/attachment_1.pdf; NRECA Comments, https://downloads.regulations.gov/EPA-HQ-OAR-2021-0668-0409/attachment_1.pdf.
[5] In 2023, NRECA filed a Petition for Review with other stakeholders in the United States Court of Appeals for the D.C. Circuit.
[6] States, utilities, industry, and others filed petitions for review challenging EPA's disapproval of multiple SIPs in the Fourth, Fifth, Sixth, Eighth, Ninth, Tenth, Eleventh, and D.C. Circuits.

In a rare move, the United States Supreme Court is considering applications to stay the Good Neighbor FIP, even though the United States Court of Appeals for the D.C. Circuit (the D.C. Circuit) opted against a stay. Only in extraordinary circumstances will the Supreme Court even consider upending a lower court decision while the case is still pending. The Supreme Court's move calls into question the legality of EPA's actions, given that, to obtain a stay, challengers must show they are likely to overturn the Good Neighbor FIP. A key legal question raised in Supreme Court briefing and oral argument is the impotence of the Good Neighbor FIP or the severability of its regulatory scheme given that only a handful of states are subject to the FIP. Nevertheless, the Proposed Rule would toss the Supplemental States into the quagmire.

Against this backdrop of unparalleled regulatory and legal uncertainty in ozone transport regulation, EPA released the Proposed Rule despite the myriad of technical comments, implementation concerns, cost considerations, and legal challenges afoot. EPA justifies the five state disapprovals using flawed data sets biased toward lower state budgets. Other modeling errors further underscore the need for revisions. The FIP portion of the Rule includes infeasible project-timing suppositions and overlooks the substantial costs of compliance. The Supplemental FIP also poses major questions, as it will dramatically impact the energy sector, generation mix, and the ability of 91 million Americans to receive reliable electricity.

The reliability of America's grid underpinned APPA's and NRECA's comments on the proposed Good Neighbor FIP. These concerns were not resolved by the Final Good Neighbor FIP. Forty-two gigawatts of capacity are at risk. The Supplemental States add 200 megawatts of capacity at risk. Concurrently, existing reliable and well-controlled generation assets are restricted to their 2021 utilization rates – subjecting them to future derates. These dramatic changes begin for the Good Neighbor FIP now, with the largest changes for the Good Neighbor FIP and Supplemental FIP from 2026-2028 when the program assumes selective catalytic reduction (SCR) technology will be installed fleet-wide – despite project timelines, dwindling contractor resources, and financing considerations.

The Supplemental FIP magnifies the precarious state of grid reliability by expanding the footprint of the Good Neighbor FIP. Irrespective of EPA rulemakings, generation asset changes and coal-unit retirements were already exerting pressure on energy reliability. Reliability events, resulting in power interruptions, have occurred much more frequently, particularly when load swells during summertime extreme heat events or winter temperatures plummet. Transmission infrastructure is aging and needs to be expanded, contributing to this dire situation. How America's power grid can sustain drastic and rapid changes remains unanswered. While EPA has engaged in meetings with energy experts such as the Federal Energy Regulatory Commission (FERC) and regional transmission organizations (RTOs) and independent system operators (ISOs), these meetings have not yielded concrete solutions that align with EPA's regulatory agenda. The Proposed Rule should be based on resolving the CAA Good Neighbor obligations (neither over nor under-control) and ensuring customers have a sustainable, reliable, and affordable electric service.

One in four Americans is served by a member of APPA or NRECA. Our trade association members are predominantly small utilities. Smaller utilities are disproportionately affected by the Supplemental FIP due to the extra time they need to commission replacement generation projects or to install controls. EPA has not provided sufficient time to acquire financing, governmental approvals, third-party engineering, environmental, legal, and construction resources, and permits. The small entity conundrum is further compounded by the other new rulemakings EPA has recently finalized this spring. The cumulative costs of all of these regulations are substantial and may even require staggering projects for debt-heavy entities. It is imperative that EPA recognize and accommodate small entity considerations. With the elimination of the flexibility of the Cross-State Air Pollution Rule (CSAPR) trading program, small entities with a single unit or single plant systems find themselves in an untenable situation. These small utilities cannot shift load to other assets. Smaller state allowance budgets and dwindling banks will end the use of trading as a compliance tool. These comments discuss small entity challenges in more detail for EPA's consideration.

The Supplemental FIP is legally and technically on shaky ground. APPA and NRECA urge EPA to withdraw the Supplemental FIP pending resolution of litigation related to the disapproval of the SIPs and the Good Neighbor FIP. The Supplemental States should not be injected into an ozone FIP framework that is flawed, subject to change, and may not ultimately withstand challenge. The addition of more states to the morass is not the solution.

If EPA goes forward with the Supplemental FIP, Arizona, Iowa, Kansas, New Mexico, and Tennessee should be offered a meaningful opportunity to satisfy their Good Neighbor obligations, with adequate guidance and corrected datasets from EPA. EPA should carefully review, update, and revise its technical analysis, models, and datasets and make corrections. States should be offered a reasonable deadline to submit or resubmit their ozone transport SIPs. In addition, EPA should not incorrectly apply error correction provisions to address wholesale SIP changes.

With respect to the FIP portion of the rulemaking, if the Good Neighbor FIP is deemed legally valid, EPA should consider the following areas of concern with respect to the Supplemental States:

- Additional time is needed to install SCRs on non-SCR units in Arizona; and
- Eliminate unnecessary concepts such as dynamic budgeting, automatic bank recalibrations, and the daily backstop emission rate that result in over-control.

Emissions reductions must be balanced with the power sector's ability to deliver reliable, safe, and affordable electricity. APPA and NRECA appreciate EPA's consideration of the more detailed comments herein.

II. Introduction.

APPA and NRECA members are dedicated to providing affordable, reliable, and safe electricity and are accelerating energy innovation, bringing more renewables to the grid and powering a brighter future. Electric cooperatives and public power utilities are reducing their emissions through a variety of means, including increased use of renewable energy resources, the development of new nuclear power, the addition of distributed energy resources and storage, the adoption of energy efficiency programs, research on carbon capture technologies, and by working to enable electrification against the challenges of increased energy demand reliably. Our members have made significant investments to reduce emissions and comply with air regulations that EPA has promulgated. Many APPA and NRECA members continue to pay for those environmental compliance investments through loan obligations.

APPA and NRECA members share the challenge of continuing to provide affordable and reliable electricity to end users. Our members must balance environmental compliance costs and replacement power project costs with financial opportunities for low-cost loans, debt re-structuring, and grants. Our end users pay this price. Members cannot raise money from shareholders like investor-owned utilities (IOUs) can. The financial burden of the Proposed Rule creates further strain on small entities to maintain financial solvency and achieve compliance obligations with fewer resources. For these reasons, APPA's and NRECA's members often require more time to complete large projects than IOUs.

The following sections describe the portions of the power sector that our members serve. Together, members of APPA and NRECA serve 28% of the country's electricity customers.[7] Our members share a common interest in urging EPA to pursue environmental policies that account for small entity considerations, feasible compliance timelines, reliable delivery of electricity, and cost-effective objectives.

A. About APPA.

APPA is a trade association composed of not-for-profit, community-owned utilities that provide electricity to 2,000 towns and cities nationwide. APPA protects the interests of the more than 49 million people that public power utilities serve, and the 96,000 people they employ. APPA advocates and advises on electricity policy, technology, trends, training, and operations. APPA members strengthen their communities by providing superior service, engaging citizens, and instilling pride in community-owned power. APPA and our members have and continue to be dedicated to clean air in our communities and the protection of the environment.

Many APPA members serve smaller communities. Approximately 1,300 of the nation's 2,000 public power utilities have 10 or fewer employees and serve towns, villages, or counties with fewer than 10,000 people, and all but 144 of the nation's public

[7] APPA, 2024 Public Power Statistical Report at 17, https://www.publicpower.org/system/files/documents/2024-Public-Power-Statistical-Report.pdf.

power utilities would be considered a "small governmental jurisdiction" under the Regulatory Flexibility Act, 5 U.S.C. §§ 601-612 (RFA). Public power utilities operate in 49 states (all but Hawaii) and in five U.S. territories (American Samoa, Guam, the Northern Mariana Islands, Puerto Rico, and the U.S. Virgin Islands).

B. About NRECA.

NRECA is the national trade association representing nearly 900 not-for-profit electric cooperatives and other rural electric utilities. America's electric cooperatives are owned by the people they serve and comprise a unique sector of the electric industry. Electric cooperatives power one in eight Americans and serve as engines of economic development for 42 million people across 56% of the nation's landmass. Electric cooperatives are focused on providing affordable, reliable, and safe electric power in an environmentally responsible manner and support common sense solutions to environmental impacts.

The nation's member-owned, not-for-profit electric cooperatives constitute a unique sector of the electric utility industry. NRECA's member cooperatives include 64 generation and transmission (G&T) cooperatives and 832 distribution cooperatives. Each cooperative is governed by a board of directors elected from its membership. The G&Ts generate and transmit power to distribution cooperatives that provide it to the end of line cooperative consumer-members. Collectively, G&T cooperatives generate and transmit power to nearly 80% of distribution cooperatives, which in turn provide power directly to consumer-members at the end of the line. The remaining distribution cooperatives receive power directly from other generation sources within the electric utility sector. Both distribution and G&T cooperatives share an obligation to serve their consumer-members by providing affordable, reliable, and safe electric service.

Many cooperative consumer-members are among those least able to afford higher electricity rates. Electric cooperatives serve 92% of persistent poverty counties in the United States.[8] One in four households served by electric cooperatives have an annual income below $35,000.[9] In 2022, the average (mean) household income for electric cooperative consumer-members was 12% below the national average.

All but two of NRECA's member cooperatives are "small entities" under the RFA. By virtue of their size and limited resources, small entities such as cooperatives are disproportionately burdened by the cost of regulations in comparison to their larger counterparts. Cost-effective federal regulations that minimize unnecessary burdens are very important to cooperatives' ability to provide affordable, reliable, and safe electricity to their consumer-members.

[8] National Rural Electric Cooperative Association. *Electric Co-op Facts and Figures*. April 19, 2024. Available at: https://www.electric.coop/electric-cooperative-fact-sheet.
[9] *Id*.

III. The Supplemental FIP exacerbates reliability concerns by expanding the FIP to five new states.

The Supplemental FIP threatens available generation capacity by forcing non-SCR unit retirements in Arizona and reducing fossil fuel capacity factors in all five new states by reducing the supply of nitrogen oxides (NOx) seasonal allowances using new "features" incorporated into CSAPR.

A. The Supplemental FIP would remove dispatchable generation from the grid.

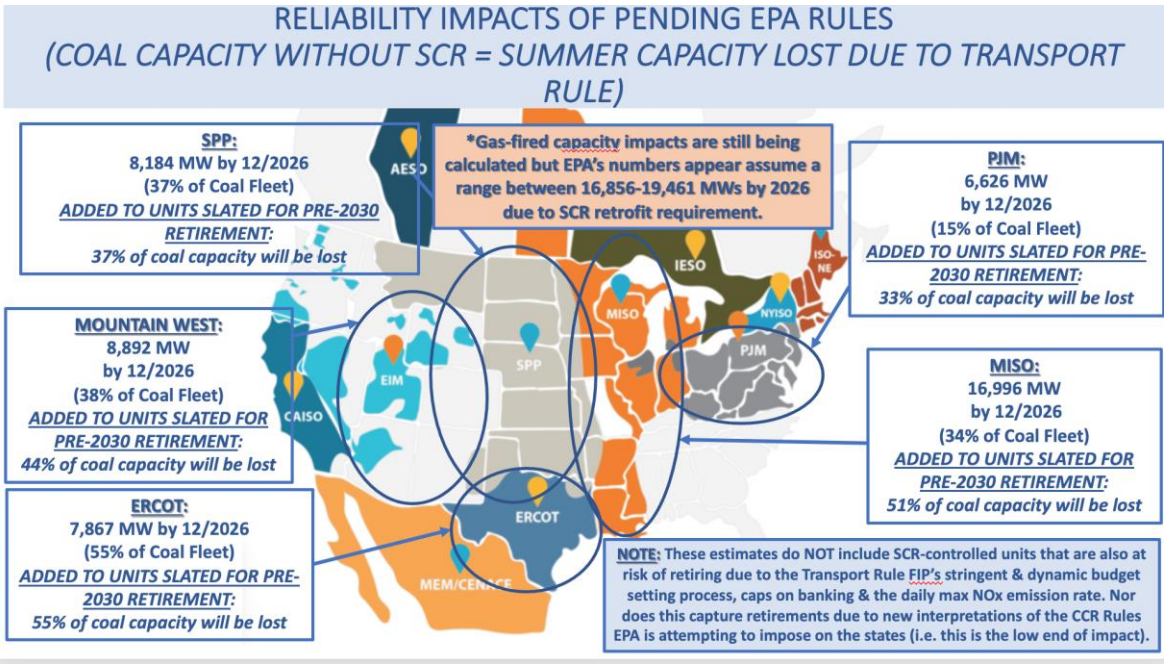
1. Retirement of non-SCR equipped Coal-fired and Gas/Oil-Fired Electric Generating Units (EGUs) in Arizona.

The Supplemental FIP adds Arizona to the states that must install SCRs by 2028 to survive the shrinking Arizona NOx seasonal budget. In our comments on the proposed Good Neighbor FIP, APPA and NRECA separately reported the nationwide impacts expected from the forced retirement of 48.5 gigawatts of capacity from 79 EGUs within a short window. The lost capacity spans state lines and RTOs.

Arizona and Kansas reside in the Southwest Power Pool (SPP) market. Currently Arizona utilities are engaged in the development of energy markets in the west, including day-ahead markets and a resource adequacy programs that are expected to be operational in 2027. The Proposed Rule could interfere with these market by constraining individual entities' ability to dispatch generation resources during times of elevated reliability risk.

The Supplemental FIP's impact on Arizona utilities will further strain the SPP market by threatening to force Arizona non-SCR equipped units to retire prematurely. In its most recent long-term reliability assessment, NERC continued to find Arizona in an area of elevated risk for reliability impacts.[10] The Supplemental FIP compounds an already precarious Arizona grid, crippling the ability of smaller utilities to deliver consistent, reliable, and affordable power to the energy grid.

[10] NERC, 2023 Long-term Reliability Assessment, https://www.nerc.com/pa/RAPA/ra/Reliability%20Assessments%20DL/NERC_LTRA_Infographic_2023.pdf.



**This graphic was filed in the proposed rule docket in June 2022. It is based on the proposed Good Neighbor FIP and uses 2021 data from EIA Form 860 and the EPA NEEDS Summer 2021 reference case. The final Good Neighbor FIP only slightly adjusted SCR build assumptions to provide a partial extra year past 2026. *See* https://www.eia.gov/electricity/data/eia860/ and https://www.epa.gov/power-sector-modeling/results-using-epas-power-sector-modeling-platform-v6-summer-2021-reference

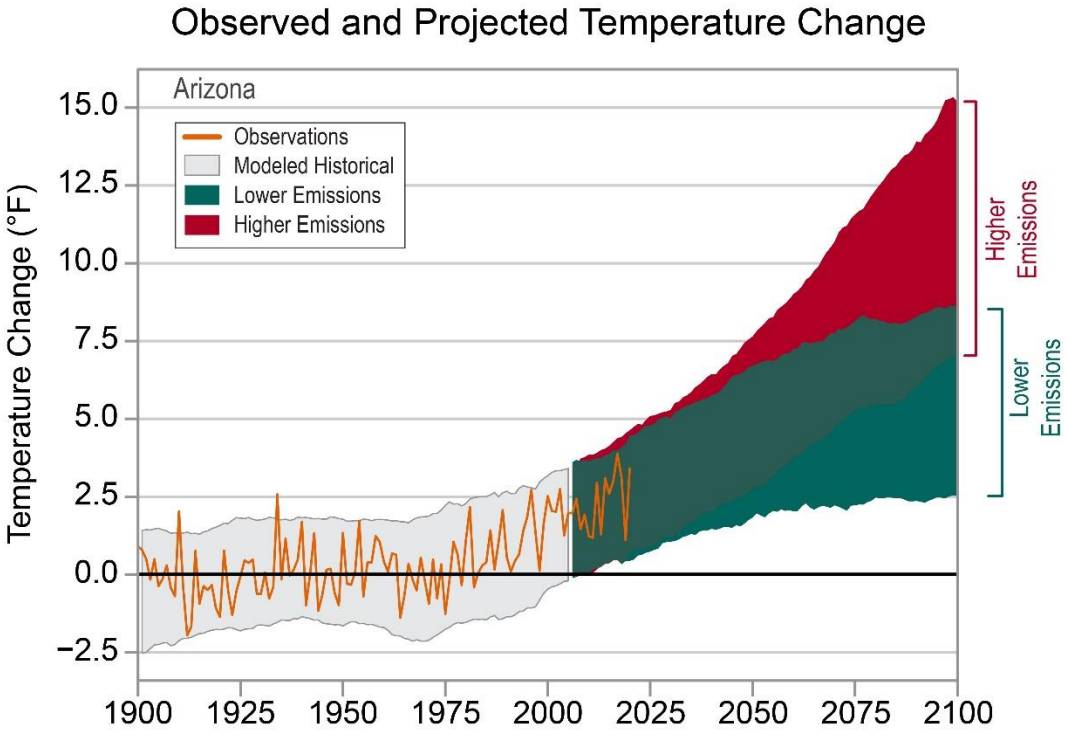
The Proposed Supplemental FIP does not expressly require these retirements. Rather, coal-fired units with capacities of 100 MW or greater must install SCR technology by 2027 because they will not have adequate NOx allocations during the ozone season to continue running. Similarly, gas-fired and oil-fired EGUs greater than 100 MW that emit more than 150 tons of NOx per year are under the same technology installation directive.

For smaller utilities, SCR technology installations are particularly time-consuming and cost-prohibitive. It is highly questionable whether Arizona utilities can achieve EPA's installation timelines, which are even shorter than those finalized in the Good Neighbor FIP. But even if the timelines can be met, smaller utilities will have a difficult task paying for the project. Further, if non-SCR units cannot run from May through September – five months out of the year – the overhead required to run the units for just seven months in the non-ozone season is unlikely to warrant continued operation.

2. Existing SCR-Installed Coal-Fired Generation will operate less.

The Supplemental FIP holds static unit capacity factors for all five states based on the heat input data from Summer 2021. As previously mentioned – and discussed in more detail below – dynamic budgeting will only whittle away at allowances based on

normal fluctuations in unit dispatch. Dynamic budgeting will quickly force capacity factors downward based on future heat inputs – already capped at 2021 levels. Lower capacity factors will increase heat input for units requiring cycling to support renewables. Meanwhile, load is projected to significantly increase. For Arizona utilities, the stakes are high because the extraordinary summer temperatures in the desert southwest require dispatchable generation to protect the health and safety of Arizonans.[11] The National Oceanic and Atmospheric Administration (NOAA) Arizona state climate summary notes that temperatures in Arizona have risen about 2.5 degrees Fahrenheit since the beginning of the 20th century.[12] The record shows that the first 21 years have been the warmest period on record for this century. The below chart illustrates temperature changes from 1900 to 2100.[13] The projected temperature changes in Arizona further amplify the potential increase in Arizona's summer load.



[11] *See* Utility Dive, "Salt River Project seeks 2.5 GW clean power, 1.2 GW peak capacity amid rapid Phoenix-area growth" (Feb. 15, 2024), https://www.utilitydive.com/news/srp-seeks-1200-MW-peak-capacity-phoenix-growth/707633/ (discussing the extraordinary demand growth in Phoenix, AZ); Reuters, "Arizona power demand breaks records during heatwave" (July 18, 2023), https://www.reuters.com/business/energy/arizona-power-demand-breaks-records-during-heatwave-2023-07-18/ (discussing record heat wave and meeting summer demands of extreme temperatures in Arizona).
[12] 2022 NOAA State Climate Summaries: Arizona, https://statesummaries.ncics.org/chapter/az/.
[13] *Id*.

3. The New "Features" of the Good Neighbor FIP Create a Technology-Forcing Inflexible Approach.

The Supplemental FIP leverages new "features" that whittle away at the trading benefits of prior iterations of the CSAPR program, discussed in more detail in Section VII. The result threatens the ability of utilities to serve load during the ozone season. To drive down NOx emissions, smaller utilities are faced with the choice of installing expensive NOx controls at a breakneck pace or ceasing to run these units. EPA has opted to limit the ability of utilities to use allowance banks through bank recalibration. The result minimizes the use of the bank as a rainy-day safety net in the event of a reliability event. In addition, due to their naturally low heat input ratio compared to the large boilers, many smaller combustion turbines are not given enough allowances in budgets to cover utilization even in normal years. Many utilities have had to rely on banked allowances or purchased allowances to cover utilization of these units. The dynamic budget setting will further ratchet down state budgets beginning in 2030 for the Supplemental States. SCR-equipped coal-fired units would see reductions in their share of state budgets. EPA's unit-specific daily backstop rates are not achievable and are not necessary to meet Good Neighbor obligations. Ultimately, EPA's hodgepodge of requirements in the Supplemental FIP leaves no room for operational flexibility needed to serve load in the Supplemental States. To ensure a change in the generation mix, EPA forces change too soon for the grid to catch up with no reliability mechanisms. SPP's Grid of the Future Report states "As the resource mix shifts, current methodologies must evolve for evaluating resource adequacy and sufficient resource capacity. Current approaches that focus primarily on reserve margin determinations will need to become more sophisticated, considering the need for energy and grid services not just during peak load hours but also during critical hours throughout the year and during extreme events."[14]

B. Lost Dispatchable Fossil Generation will cause grid failures – particularly creating exposure for small entities seeking to meet demand.

The Supplemental FIP extends the problematic reliability effects to the Supplemental States. These states will see reductions in the number of megawatts delivered by dispatchable fossil generation in a relatively short time frame. Damages from a grid failure can be readily quantified. EPA should engage in further study and coordination with other federal agencies, states, RTOs, and utilities to evaluate the lasting consequences that a power failure would have. This Section outlines potential damages at stake if EPA does not reverse course.

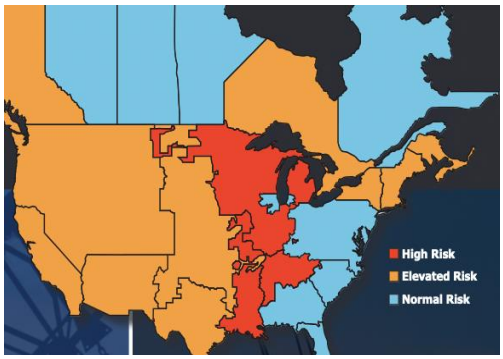
Grid Failure During Extreme Weather Events

The grid's reliability is particularly strained during extreme weather events. Hotter summer temperatures, hurricanes, and drought conditions tax the grid, causing

[14] Southwest Power Pool," Grid of the Future", April 11, 2023. page 6 https://www.spp.org/documents/69220/spp%20future%20grid%20report.pdf.

increased demand, while equipment involved in the delivery of power is more likely to fail.[15]

NERC, 2023 Long-term Reliability Assessment.



NERC's latest long-term assessment identified all five states affected by the Supplemental FIP as within an area of elevated or high reliability risk. Tennessee is in a high-risk area, while Arizona, New Mexico, Iowa, and Kansas are in elevated risk areas. In the recent past, America's grid has seen challenges. Grid failures are no longer hypothetical. The Electric Reliability Council of Texas (ERCOT) has seen a similar impact. For example, on May 13, 2022, extreme temperatures caused 2,900 megawatts (MW) of capacity to trip offline. Unseasonably hot weather drives high demand.

Winter temperatures caused the most recent large reliability event. On December 23-25, 2023, Winter Storm Elliott caused an "unprecedented amount of unplanned generation outages" in the PJM territory.[16] The storm and the rapid onset of cold temperatures heavily impacted natural gas production that supplies gas-fired generation in the PJM footprint. Roughly 47,000 MW of generation (of all fuel types) was unavailable during portions of the event.

Winter Storm Uri in 2021 impacted Kansas and other states in SPP and Texas (ERCOT), which ordered 20,000 MW of rolling blackouts to prevent grid collapse. "This represents the largest manually controlled load shedding event in US history. More than 4.5 million people in Texas lost power – some as long as four days, causing more than 200 deaths in Texas."[17] The November 2021 FERC/NERC final report on Uri found that 75 percent of the unplanned outages, derates, and failures to start were caused by freezing issues and fuel issues.[18]

EPA has not adequately considered the social and economic costs to Americans that would result from a reliability event caused by this Proposed Rule. Specifically,

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[15] The map, below, is from NERC's 2023 Long-Term Reliability Assessment at https://www.nerc.com/pa/RAPA/ra/Reliability%20Assessments%20DL/NERC_LTRA_Infographic_2023.pdf. EPA's analysis applies the NERC reliability analysis from 2022 that does not show the elevated risks for some of the Supplemental States. EPA should update its analysis with the most recent reliability data. *See* Technical Support Document (TSD) for the Proposed Supplemental Federal "Good Neighbor Plan" Requirements for the 2015 8-hour Ozone National Ambient Air Quality Standard, Docket ID No. EPA-HQ-OAR-2023-0402 at D2, https://www.epa.gov/system/files/documents/2024-01/resource-adequacy-tsd.pdf.

[16] PJM, Winter Storm Elliott, Event Analysis and Recommendation Report, July 17, 2023, https://www.pjm.com/-/media/library/reports-notices/special-reports/2023/20230717-winter-storm-elliott-event-analysis-and-recommendation-report.ashx.

[17] The February 2021 Cold Weather Outage in Texas and the South Central united States| FERC, NERC and Regional Entity Staff Report, November 2021, https://www.ferc.gov/media/february-2021-cold-weather-outages-texas-and-south-central-united-states-ferc-nerc-and.

[18] *Id*. at 15.

affected communities must contend with extreme weather events without climate control. In the summer, hot temperatures cause health risks and death in vulnerable populations such as the infirm[19] and elderly. Key medical services could not be provided without power. Communities would incur economic costs of lost leisure time, lost work time, and associated stress. Financial costs would be incurred due to property damage, such as damage to real estate and food spoilage.[20] Businesses suffer from power outages because they must suspend production. There are also indirect or macroeconomic costs to downstream businesses/consumers who might depend on the products from a company that experiences a power outage.

APPA and NRECA request that EPA factor reliability consequences into the impact analysis and policy-making for the Proposed Rule.

IV. The Proposed Rule Improperly Uses the New Modeling Data to Determine that the Five New States have not satisfied their Good Neighbor obligations.

A. Concerns with Use of New Modeling Data (2016v3).

EPA applied the 2016v3 Modeling platform to arrive at air quality modeling and contribution results. This platform updates the prior 2016v2 Modeling platform that was applied during the development of the Good Neighbor FIP. EPA released air quality modeling using the 2016v2 Modeling platform in 2018 to project ozone design values and contributions in 2023 and 2026. This prior platform was used in proposed ozone SIP actions for Arizona and Tennessee.

EPA claims it updated its 2016v2 modeling in response to "critiques . . . provided by commenters."[21] For example, EPA highlights that its new modeling addressed "an apparent under-prediction problem [of the 2016v2 modeling] particularly in the Upper Midwest."[22] EPA claims the 2016v3 modeling "better incorporate[s] the effects of biogenic emissions sources, lightning, and international/boundary conditions on ozone levels" to improve under-prediction from 19% to 6.9% in the Upper Midwest—which EPA believes explains Iowa's and Kansas's linkages to Upper Midwest states.[23] In addition to the updated modeling, after finalizing its approval of Iowa's and Kansas's SIPs, EPA developed what it calls "the violating-monitor receptor methodology," which expands the definition of a maintenance receptor to include an additional "violating monitor" category.[24] This category includes receptors that are projected to be in attainment in 2023 but exceeded the NAAQS in 2021 and 2022.[25] Thus, EPA determined there is "a

[19] Residents on breathing machines or dialysis are at risk during power interruptions.
[20] Will Gorman, "The Quest to Quantify the Value of Lost Load: A Critical Review of the Economics of Power Outages," The Electricity Journal Volume 35, Issue 8, October 2022, https://www.sciencedirect.com/science/article/pii/S1040619022001130
[21] 88 Fed. Reg. 36654, 36674 (Aug. 4, 2023).
[22] 89 Fed. Reg. at 12693.
[23] *Id.*
[24] *Id.*
[25] *See* 88 Fed. Reg. 9336, 9349 (Feb. 13, 2023) (more precisely, these receptors had "measured 2021 and preliminary 2022 design values and 4th high maximum daily 8-hour average (MDA8) ozone in both 2021 and 2022 (preliminary data) that exceed the NAAQS" (emphasis in original)).

reasonable expectation that an ozone nonattainment or maintenance problem will persist" at these monitors in 2023 and is treating these "violating monitors as an additional type of maintenance-only receptor."[26] Without this new category of monitor, EPA would, seemingly, not be proposing to disapprove Kansas's SIP, as EPA's new modeling does not link Kansas to any traditional nonattainment or maintenance monitors above 0.7 ppb. EPA's updated modeling and new maintenance monitor category are not lawful bases for the proposed SIP disapprovals. Section V.E., *infra*, provides a brief summary of air quality modeling defects and offers re-calculated state budgets.

The Kansas City Board of Public Utilities (BPU) has identified several errors that the EPA should review and correct related to the EPA's Integrated Planning Modeling (IPM) files before finalizing the Supplemental proposal. Specifically, EPA should correct the unit coordinates; EPA used the general facility locations. Correct stack coordinates are integral in EPA modeling and may eliminate a facility's contribution to receptor(s), specifically those receptors showing minimal contribution. We further request that the EPA provide the 2023 IPM parsed files for the Supplemental FIP so that affected sources can verify the utility-specific details.

B. The Supplemental States did not have a meaningful opportunity to correct SIP errors.

EPA's actions with respect to the Supplemental States are contrary to the cooperative federalism framework that Congress laid out to address states' good neighbor obligations. Congress envisioned for states to have a legitimate opportunity to partner with EPA.[27] The states' role is to craft plans to address CAA Section 110(a)(2)(D)(i)(I). The Supplemental States were not given a fair opportunity to fulfill this obligation.

In 2018, EPA released three guidance documents to instruct and direct states on addressing their Good Neighbor obligations. Without the guidance, and particularly without EPA's modeling results, states were completely handicapped. They required this information to submit a compliant SIP.[28] Relying on EPA's guidance and modeling

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[26] *Id.*

[27] Congress gave the States "'wide discretion' in formulating their SIPs, including the 'broad authority to determine the methods and particular control strategies they will use to achieve the statutory requirements.'" *Luminant v. EPA*, 714 F.3d 841, 845 (5th Cir. 2013) (quoting *Union Elec.*, 427 U.S. at 250). Meanwhile, the CAA "confines the EPA to the ministerial function of reviewing SIPs for consistency with the Act's requirements." *Id.* at 846 (citing 42 U.S.C. § 7410(k)(3)).

[28] *See* Tsirigotis memo, "Information on Interstate Transport State Implementation Plan Submissions for the 2015 Ozone National Ambient Air Quality Standards Under Clean Air Act Section 110(a)(2)(D)(i)(I)" dated March 27, 2018 (https://www.epa.gov/sites/default/files/2018-03/documents/transport_memo_03_27_18_1.pdf); Tsirigotis memo, "Analysis of Contribution Thresholds for Use in Clean Air Act Section 110(a)(2)(D)(i)(I) Interstate Transport State Implementation Plan Submissions for the 2015 Ozone National Ambient Air Quality Standards" dated August 31, 2018 (EPA Contribution Thresholds 2018 Memo) (https://www.epa.gov/sites/default/files/2018-09/documents/contrib_thresholds_transport_sip_subm_2015_ozone_memo_08_31_18.pdf); Tsirigotis

data, the following Supplemental States submitted SIPs: Arizona (September 24, 2018), New Mexico (July 27, 2021), and Tennessee (September 13, 2018). From 2019 through 2021, EPA provided no guidance or modeling data to any state. EPA also declined to respond to SIP submittals by states that relied on these 2018 guidance documents. States had absolutely no indication of the future reversal of position that was to occur.

On February 22, 2022, EPA rejected 19 good neighbor SIPs based on 2018 guidance for the 19 states that submitted them (the SIP Disapprovals).[29] EPA followed up with the proposed Good Neighbor FIP on February 28, 2022. The Supplemental States were not part of the SIP Disapprovals.

The SIP Disapprovals were equivalent to a bait and switch.[30] States relied on 2018 EPA modeling, contribution thresholds (dictating which states must submit SIPs), and EPA's guidance regarding the overall SIP approach.[31] States had no data or notice to respond to EPA's policy change. Multiple states challenged their lack of a meaningful opportunity to fulfill their obligations afforded by the CAA statutory framework, among other defects, in Courts of Appeals nationwide. In particular, the Court of Appeals for

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memo, "Considerations for Identifying Maintenance Receptors for Use in Clean Air Act Section 11 0(a)(2)(D)(i)(I) Interstate Transport State Implementation Plan Submissions for the 2015 Ozone National Ambient Air Quality Standards" (https://www.epa.gov/sites/default/files/2018-10/documents/maintenance_receptors_flexibility_memo.pdf).

[29] Air Plan Disapproval; Maryland; Interstate Transport Air Pollution for the 2015 8-Hour Ozone National Ambient Air Quality Standard. 87 Fed. Reg. 9463 (Feb. 22, 2022); Air Plan Disapproval; New York and New Jersey; Interstate Transport Air Pollution for the 2015 8-Hour Ozone National Ambient Air Quality Standard. 87 Fed. Reg. 9484 (Feb. 22, 2022); Air Plan Disapproval; Kentucky; Interstate Transport Air Pollution for the 2015 8-Hour Ozone National Ambient Air Quality Standard. 87 Fed. Reg. 9498 (Feb. 22, 2022); Air Plan Disapproval; West Virginia; Interstate Transport Air Pollution for the 2015 8-Hour Ozone National Ambient Air Quality Standard. 87 Fed. Reg. 9516 (Feb. 22, 2022); Air Plan Disapproval; Missouri; Interstate Transport Air Pollution for the 2015 8-Hour Ozone National Ambient Air Quality Standard. 87 Fed. Reg. 9533 (Feb. 22, 2022); Air Plan Disapproval; Alabama, Mississippi, Tennessee; Interstate Transport Air Pollution for the 2015 8-Hour Ozone National Ambient Air Quality Standard. 87 Fed. Reg. 9545 (Feb. 22, 2022); Air Plan Disapproval; Arkansas, Louisiana, Oklahoma, and Texas; Interstate Transport Air Pollution for the 2015 8-Hour Ozone National Ambient Air Quality Standard. 87 Fed. Reg. 9798 (Feb. 22, 2022); Air Plan Disapproval; Illinois, Indiana, Michigan, Minnesota, Ohio, Wisconsin; Region 5 Interstate Transport Air Pollution for the 2015 8-Hour Ozone National Ambient Air Quality Standard. 87 Fed. Reg. 9838 (Feb. 22, 2022). EPA rejected more good neighbor SIPs after the Proposed FIP was released. *See, e.g.,* 87 FR 31495 (May 24, 2022) (Wyoming SIP); 87 FR 31470 (May 24, 2022) (Utah SIP); 87 FR 31485 (May 24, 2022) (Nevada SIP).

[30] EPA both fails to express what type of analysis would have been sufficient (if any) and disavows its own prior August 2018 and March 2018 guidance, which was utilized by Iowa and Kansas to support their use of the 1 ppb threshold. *See id.* at 12680. Curiously, EPA has *not* withdrawn or rescinded this guidance, therefore, it stands to reason that states may still draw from it.

[31] For example, Iowa submitted its SIP revision for the 2015 Ozone NAAQS on November 30, 2018. Iowa SIP Revision, Docket ID No. EPA-R07-OAR-2021-0870-0012 (Nov. 2018). Iowa's SIP relied on modeling conducted by EPA and included in a "March 2018 memorandum," in which the data was used to "identify[] potential downwind air quality problems with respect to the 2015 ozone NAAQS at step 1 of the four-step interstate transport framework," as well as help states identify their potential impact on downwind air quality problems at step 2 of the framework. 87 Fed. Reg. 9477, 9479 (Feb. 22, 2022). Similar to Iowa, Kansas's SIP analyzed the modeling included in EPA's March 2018 memorandum and considered the use of a 1 ppb versus a 1% contribution threshold. 87 Fed. Reg. 19390 (Apr. 4, 2022).

the Fifth Circuit found EPA's behavior "disingenuous." The Court condemned EPA's "surprise switcheroo" finding it a clear error of judgment for EPA to issue guidance upon which states relied, lie in wait for years, collect more data, remodel, and then issue guidance policies.[32]

EPA's actions with respect to the Supplemental States is similarly unfair. EPA notes that the Supplemental States have had more notice of EPA's new approach since 2022 but have not acted. This position suggests that states had the ability to change their fate. Rather, in reality, EPA has locked into an inflexible framework that has usurped states' ability to propose solutions to satisfy their Good Neighbor obligations. The Fifth Circuit further condemned mandating EPA's position to the 4-Step framework. In fact, New Mexico tried to engage EPA regarding its ozone transport obligations by submitting a letter regarding its SIP analysis.[33] But New Mexico finds itself in a disapproval position nonetheless.

EPA claims it "is not proposing to disapprove any State's submission in this action based on the State's choice of modeling, but . . . based on the EPA's evaluation of the entire record."[34] Yet, EPA treats the Supplemental State FIPs in a cursory manner. For example, EPA spends a paltry one paragraph in the preamble discussing both Kansas's and Iowa's SIP submittals[35] and summarily concludes that neither submission contained "an appropriate analysis of receptor specific information that could justify the application of a higher Step 2 screening threshold of 1 ppb."[36] Instead, what is supposed to be a proposed disapproval reads exclusively like a proposed FIP, skipping over the necessary step of determining whether the state's SIP complies with the CAA. In doing so, EPA disregards the cooperative federalism framework of the Act and usurps states' roles in crafting their own SIPs.

In summary, EPA did not provide the Supplemental States a meaningful opportunity to fulfill their obligations afforded by the CAA statutory framework. While it is true that EPA can act at any time to issue a FIP within the two years after EPA determines a SIP is inadequate, states relied on prior guidance and were not given a fair chance to provide their input into the process.[37] States must craft their SIPs based on the best information about their emissions available to them at the time of submission. This is what the Supplemental States did. Further, judicial decisions have already cast doubt on the entire SIP development and disapproval process. For these reasons, APPA and NRECA ask EPA to thoughtfully consider the issues raised in judicial decisions regarding the SIP Disapprovals and in this comment docket. Each state deserves an individual opportunity to defend its SIP and propose a solution via a

[32] *Texas v. EPA*, No. 23-60069 (5th Cir.) at 20-21.
[33] July 5, 2023, from Michelle Minano, New Mexico Environmental Department, Environmental Protection Division Director to EPA Region 6 Associate Director of Air Programs.
[34] 89 Fed. Reg at 12676.
[35] *Id*.
[36] *Id.* at 12695.
[37] *Homer City*, 572 U.S. 489, 507-08 (2014). "The Clean Air Act regulates air quality through a federal-state collaboration." *Homer City*, 795 F.3d 118, 124 (D.C. Cir. 2015).

new SIP submittal. EPA's one-size-fits-all approach to defining and resolving Good Neighbor obligations should not be rigidly applied.

C. EPA's new, inflexible interpretation of SIP adequacy is flawed.

EPA should not disapprove these SIPs because it has not shown that the submissions fail to satisfy the requirements of the CAA. The Supplemental SIP revisions satisfy the CAA and conform with EPA's own guidance memorandums and modeling that were available at the time of submittal. The CAA requires that states craft state plans with "adequate provisions prohibiting" sources in the state from "emitting any air pollutant in amounts which will . . . contribute significantly to nonattainment in, or interfere with maintenance by, any other State."[38] This task is specifically delegated to the states, and EPA is left with the "ministerial"[39] role of approving a state's plan as long as it meets the criteria in the CAA.[40] Because the CAA does not mandate that states use a particular framework to address their "good neighbor" obligation, nor define "contribute significantly," and because EPA has not adopted any regulatory standards governing the requirements for Section 110(a)(2)(D)(i)(I) interstate transport SIPs for the 2015 ozone NAAQS,[41] states have "wide discretion"[42] in crafting their SIPs. Given the states' "primary responsibility for ensuring that the ambient air meets the NAAQS,"[43] it is inappropriate for EPA to disapprove these SIPs based *solely* on its preferred "4-step interstate transport framework," its preferred modeling, and its preferred contribution threshold.

D. EPA erred by improperly using the statutory "error correction" mechanism to reverse SIP approvals for Iowa and Kansas.

EPA improperly proposes to partially disapprove Iowa's and Kansas's SIPs based on an "error correction" of its prior approvals of each state's SIP. The error correction provision of the CAA is not applicable here and, therefore, cannot be employed to reverse EPA's prior approvals of both Iowa's and Kansas's SIPs. EPA's proposed disapprovals of Iowa's and Kansas's SIPs are also procedurally deficient.

EPA approved Iowa's ozone transport SIP in 2022, after issuing two proposed rules to approve the SIP.[44] Likewise, EPA approved the Kansas SIP in 2022.[45] EPA now takes unprecedented action to undo these final rules using error correction. The only plausible reason is to circumvent the CAA framework to speed-up the rulemaking.

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[38] 42 U.S.C. § 7410(a)(2)(D)(i)(I).
[39] *Texas v. EPA*, 829 F.3d 405, 411 (5th Cir. 2016).
[40] 42 U.S.C. § 7410(k)(3) (EPA "*shall* approve such [SIP] . . . if it meets all of the applicable requirements of this chapter" (emphasis added)).
[41] Notably, EPA has established regulatory standards for other NAAQS. *See* 40 C.F.R. §§ 51.123-.124.
[42] *Union Elec. Co. v. EPA*¸ 427 U.S. 246, 250 (1976).
[43] *Ala. Env't Council v. EPA*, 711 F.3d 1277, 1280 (11th Cir. 2013).
[44] EPA published a final approval of Iowa's SIP on April 15, 2022. 87 Fed. Reg. 22463 (Apr. 15, 2022).
[45] EPA published a final approval of Kansas's SIP on April 4, 2022. 87 Fed. Reg. 19390 (Apr. 4, 2022).

EPA utilizes the "error correction" provision under Section 110(k)(6) of the CAA to undo its final approvals of both states' SIPs. This provision, however, is limited to *errors* in the Agency's prior action – not simply for times when EPA changes its mind – and therefore should not be applied here, where the Agency is basing its reversal on a wholly new analysis. Specifically, Section 110(k)(6) provides:

> (6) Correction. Whenever the Administrator determines that the Administrator's action approving, disapproving, or promulgating any plan or plan revision (or part thereof), area designation, redesignation, classification, or reclassification was in error, the Administrator may in the same manner as the approval, disapproval, or promulgation revise such action as appropriate without requiring any further submission from the State. Such determination and the basis thereof shall be provided to the State and public.[46]

By its plain language, Section 110(k)(6) provides for the "correction" of "errors" made in a FIP or SIP approval or disapproval. While EPA is correct that the CAA does not define what constitutes an "error,"[47] EPA provides no support for its conclusion that the error correction provision should be read so broadly as to allow EPA to reverse its prior action based on entirely new information. The CAA framework ensures that EPA follows procedural steps to allow the public to comment on proposed rules. Error correction should be not used to abrogate procedural processes.

There are several reasons why new modeling and a newly created category of maintenance monitor should not be considered "errors" that may be fixed "without requiring any further submission from the State." First, contrary to EPA's assertion that an "error" means any or "all . . . wrong actions," *id.*, Representative Henry A. Waxman, a principal author of the CAA, explained that Section 110(k)(6) "is included to enable EPA to deal promptly with *clerical* errors or *technical* errors. It is not intended to offer a route for EPA to reevaluate its policy judgments."[48] EPA's reversal here is clearly not based on a clerical or technical error but based on new information not in existence at the time of the SIP submissions and approvals. Relatedly, as then-Judge Kavanaugh explained in his dissent in *Texas v. EPA*, 726 F.3d 180 (D.C. Cir. 2013), Section 110(k)(6) allows EPA to revise an action when that action "*was* in error"—past tense. Thus, "[S]ection 110(k)(6) can be used to retroactively disapprove a SIP only if the SIP was out of compliance with the Act or EPA regulations *when the SIP was originally approved*."[49] Here, both Iowa's and Kansas's SIPs were valid when approved and remain valid based on the modeling and EPA guidance available at the time of approval. A subsequent change in policy or modeling is not an "error" that EPA may correct via Section 110(k)(6).

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[46] 42 U.S.C. § 7410(k)(6).
[47] 89 Fed. Reg. at 12694.
[48] Henry A. Waxman, et al., *Roadmap to Title I of the Clean Air Act Amendments of 1990: Bringing Blue Skies Back to America's Cities*, 21 Envtl. L. 1843, 1924-25 (1991) (emphasis added).
[49] *Id.* (emphasis added).

Importantly, the CAA already provides a mechanism for state plan revisions based on substantive inadequacies—the SIP call provision at Section 110(k)(5). Therefore, expanding the scope of Section 110(k)(6) to allow for substantive changes would render the SIP call provision superfluous.[50] While Section 110(k)(6) provides EPA with an avenue for correcting inadvertent clerical or technical errors in a FIP or SIP, Section 110(k)(5) provides a separate and distinct avenue for correcting substantive issues with attaining or maintaining the NAAQS. EPA's reading of Section 110(k)(6) to allow EPA to "correct" its previous plan approvals on any basis, years after implementation, would drain Section 110(k)(5) of meaning, while conveniently allowing EPA to proceed with its FIP on an expedited timeline.

Finally, EPA cites cases and *Federal Register* notices to support its position that the error correction provision can be used. However, each of these is distinguishable or an inappropriate use of the error correction provision. For instance, the Kentucky SIP error correction was the result of two decisions by the D.C. Circuit,[51] which invalidated the basis of the approval of Kentucky's SIP.[52] Nothing has invalidated the basis for the approval of Iowa's or Kansas's SIPs—the modeling that EPA relied on has been updated, but the prior version has not been withdrawn or found invalid by a court, and EPA has not invalidated other SIPs based on prior modeling where the 2016v3 modeling did not find any downwind linkages.[53] The Delaware SIP error correction EPA cites was a proposal which was withdrawn and never finalized but was likely not a proper application of Section 110(k)(6).[54] And, EPA's error correction following the D.C. Circuit's vacatur of the Clean Air Interstate Rule (CAIR) in *North Carolina v. EPA*, 550 F.3d 1176 (D.C. Cir. 2008) is distinct because it was based on a *court decision* which "deemed CAIR to be an invalid effort to implement the requirements of the good neighbor provision [and], that ruling meant that the initial approval of the CAIR SIPs was *in error at the time it was done*."[55] Here, there was no "fatal flaw"[56] in EPA's approval of Iowa's and Kansas's SIPs at the time it was done, nor is EPA's error correction the result of a court's vacatur.

If EPA is allowed to use error correction to disapprove already-approved SIPs every time it updates its modeling, the result would be a never-ending cycle of SIP revisions and error corrections, where states and the regulated community have no certainty as to the finality—or even validity—of SIPs. This was clearly not intended under the cooperative federalism structure of the Act. While EPA attempts to defend itself by stating "it does not view all modeling results as subject to obligatory . . .

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[50] *See United States. v. Velez*, 586 F.3d 875, 877 (11th Cir. 2009) (A court "must not read 'any provision, or even any word, of a statute so as to make it superfluous.'").
[51] *Wisconsin v. EPA*, 938 F.3d 303 (D.C. Cir. 2019); *New York v. EPA*, 781 Fed. App'x 4 (D.C. Cir. 2019).
[52] *See* 86 Fed. Reg. 23056, 23057 (Apr. 30, 2021).
[53] *See, e.g.*, 87 Fed. Reg. 61249 (Oct. 11, 2022) (approving Colorado's SIP based on the 2016v2 modeling).
[54] *See* 87 Fed. Reg. 20036, 20041 (Apr. 6, 2022) (proposing an error correction on the basis that EPA's "more recent technical evaluation of air quality modeling" found "Delaware has unresolved interstate transport obligations").
[55] *EME Homer City Generation, L.P. v. EPA*, 795 F.3d 118, 133 (D.C. Cir. 2015) (emphasis added).
[56] *Id.* at 134.

revisions under error correction authority,"[57] if these disapprovals are any indication, it is unclear under what circumstances EPA would find revisions unnecessary. Furthermore, EPA's view of these error corrections as "obligatory" further cements its misapprehension of its secondary role in reviewing states' SIP.

Based on these proposed disapprovals, EPA simultaneously proposes to apply a FIP in both states. Although EPA has the authority to issue a FIP "at any time,"[58] in this case, it is inappropriate for EPA to propose to disapprove Iowa's and Kansas's SIPs and propose to FIP the states in the same action because the basis for EPA's disapprovals is unlawful and arbitrary and capricious. As set forth above, EPA's proposed disapprovals undermine the cooperative federalism structure of the CAA and usurp the states' role in determining downwind contributions. APPA and NRECA recommend that EPA reverse course. EPA should provide Iowa and Kansas with time to revise their SIPs to account for EPA's change in modeling and new maintenance monitor classification.

V. EPA's state budget models for the Supplemental States should be revised to correct flaws that result in deflated state budgets and to account for demand growth.

A. The Supplemental State Budget Base Cases Rely only on 2021 Emissions.

Use of a single ozone season base case to "lock in" unit runtime nationwide is erroneous. EPA uses the Summer 2021 EGU inventory for its model base case for 2023 and into the future. The model plugs in unit-level heat input data from 2021 for use in state budgets. EPA presumes 2021 heat inputs are appropriate as a representative year of consumer demand. In so doing, the model caps heat inputs for all future years. There are no adjustments in state budgets to account for future generation demands.

Although EPA has deference in its modeling choices, its model must bear a rational relationship to the characteristics of the data to which it is applied.[59] Otherwise, use of the model is arbitrary and capricious. Here, using the Summer 2021 EGU inventory leads to results divorced from the reality of power demands between 2023 through 2032 and for maintenance of attainment beyond.

EPA's model fails to account for future power sector demands. In a 2021 study by the National Renewable Energy Laboratory (NREL),[60] future electricity demand will

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[57] 89 Fed. Reg. at 12695.
[58] *EPA v. EME Homer City Generation, L.P.*, 572 U.S. 489, 508 (2014).
[59] *EME Homer City Generation, L.P. v. EPA*, 795 F.3d 118, 135 (D.C. Cir. 2015) (citing *Appalachian Power Co. v. EPA*, 135 F.3d 791, 802 (D.C. Cir. 1998)).
[60] NREL, Electrification Futures Study: Scenarios of Power System Evolution and Infrastructure Development for the United States (NREL 2021 Study), https://www.nrel.gov/docs/fy21osti/72330.pdf at 6.

increase dramatically based on demand scenarios. Future power sector demands are modeled to grow by 20% and 35% under NREL's medium and high scenarios, respectively, largely due to impacts such as electrification of transportation and building sectors. In fact, the high demand scenario would require a doubling of generation capacity in all regions in the country by 2050.[61]

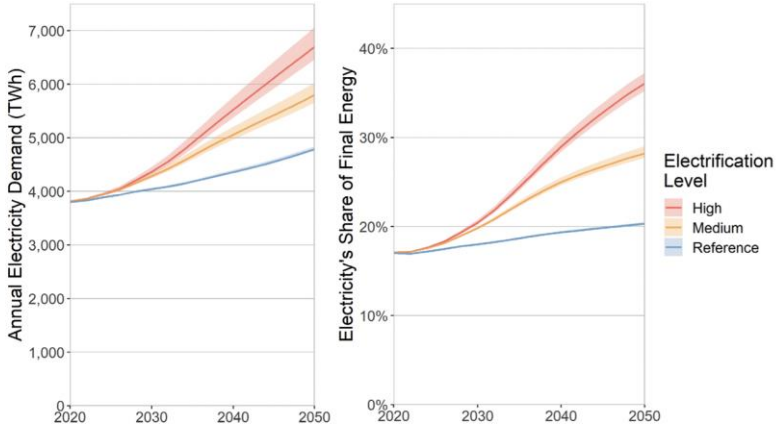

Figure 2. Annual end-use electricity demand (left) and electricity's share of final energy (right) for the three electrification levels evaluated in this study (thick solid lines).

Demand is projected to increase beyond 2021 levels, but EGUs will not be able to respond during the peak summer season. State budgets will limit units from meeting greater demands. Dynamic budgeting will not correct this problem because it is set at a ceiling. If units operate more, increased combustion results in additional NOx emissions. However, units cannot practically emit above 2021 heat inputs due to scarcity of allocations, state budget size, and resulting assurance features in the Supplemental FIP. Dynamic budgeting will only decrease budgets, which will not account for increased demand. EPA should correct this modeling flaw because it departs from the reality of rapidly changing electrification as sectors depart from combustion of fossil fuels for transportation, heating, appliances, and industrial processes.[62] EPA should build in a demand growth factor into the budgets beginning in 2026, at the latest. APPA and NRECA request that EPA revise its methodology for calculating the Supplemental State budgets to account for future demand growth.

B. The Base Case for the State Budgets in the Proposed Rule contains errors.

Due to omissions and errors, the state budgets calculated by EPA need to be revised to prevent reliability concerns beginning in 2025. The state budgets for the Supplemental States rely on inaccurate public information that must be corrected. EPA developed state emission budgets for each of the five states for 2025 to 2029. These

[61] NREL 2021 Study at ix.
[62] NREL 2018 Study at x-xi.

state budgets purport to be based on known public information and air quality modeling. However, the budgets contain errors outlined in detail within the attached Marchetti Technical Evaluation Memorandum (Supplemental FIP Technical Report).[63] The errors grossly underestimate the state budgets for the Supplemental States. APPA and NRECA ask EPA to correct these errors and consider adopting the recalculated state budgets based upon corrected information and data, as discussed in the Supplemental FIP Technical Report.

The Supplemental FIP Technical Report outlines the primary flaws identified upon evaluation: Unit errors and omissions, incorrect unit retirement assumptions, incorrect control technology assumptions, and reliability shortfalls caused by the Proposed Rule.

With respect to retirement errors,[64] the table below reflects the recommendations in the Supplemental FIP Technical Report and contains a summary of the errors:

Retirement Date Errors in the States Identified in the Supplemental FIP Proposed Rule

State	Unit	EPA Budget Error	Change Requested Based on Verified Information
KS	Lawrence 4	Retired in 2024	To be retired in 2028
KS	Lawrence 5	Retired in 2024	To be retired in 2028
NM	Cunningham 2	Retired in 2025	To be retired in 2027
NM	Maddox 1	Omission by EPA	To be retired in 2028
NM	Rio Grande	Retired in 2024	To be retired in 2025
TN	Kingston 7	Retired in 2026	To be retired in 2027
TN	Kingston 8	Retired in 2026	To be retired in 2027
TN	Kingston 9	Retired in 2026	To be retired in 2027

[63] J. Marchetti Memorandum, "Evaluation of the State Budgets of the Proposed Supplemental Interstate Transport Rule (EPA-OAR-2023-0402)" (May 15, 2024), at Attachment A.
[64] Supplemental FIP Technical Report at Section 3.1.1.

The Report provides more details regarding the errors and how these units should be reflected in a revised budget. Each premature retirement assumption removes NOx tons from the base budgets that should be restored.

With respect to other errors, the Supplemental FIP Technical Report identifies errors in the control device technology assigned to certain units and with respect to the non-operation of units in the 2021 control period.[65] Each error results in an inappropriate deduction of allocations from state budgets. APPA and NRECA request review of the following units:

Springerville 1 (Arizona): This unit will retire in 2027. There will be no further NOx emissions from Springerville 1 after it retires in 2027. For budget setting purposes the 2027 control period, Springerville 1's emissions should be based upon the average of the 2019 through 2021 control period NOx rate of 0.178 lb/mmBtu. This will increase the Arizona State Budget by 81 tons in 2027. The error to be corrected is due to an assumption this unit is impacted by the new SCR phased budget setting emission rates in 2027.

Springerville 2 (Arizona): This unit has a technology-related error due to an incorrect NOx control assumption. The unit is equipped with Separated Overfired Air (SOFA) controls, which is a NOx combustion control. NOx combustion modifications are set for 2024, and not 2023. SOFA should be accounted for in 2026 and not 2025.[66] By correcting for this accounting error, the Arizona State Budget will increase by 69 tons in 2025.

Summit Lake 1G & 2G (Iowa): Both units operated in 2019, 2020, 2022, and 2023. They did not report NOx tons in ozone season 2021. No tons are in the Iowa budget for these units. The Iowa State Budget should be increased by 34 tons, based upon the average ozone season (OS) NOx emissions for 2019 and 2020 for each unit.

Gallatin GT2 (Tennessee): This unit did not report any OS NOx emissions in 2021 but operated in 2019, 2020, and 2023. The Tennessee State Budget should be increased by 9 tons, based upon the average OS NOx emissions for 2019 and 2020 for the unit.

Apache 3 (Arizona): This unit has an existing selective noncatalytic reduction (SNCR) retrofitted with a new SCR beginning in 2027 in the state budget setting process. See Table A-2 – *Reduction strategies available to EGUs at each cost threshold* on page 5 of the *Ozone Transport Policy Proposed Supplemental Rule TSD.* The table illustrates that a $11,000/ton threshold should be applied for units installing a new SCR on a coal unit greater than 100 MW and lacks post combustion controls.[67] However, Apache 3 has an existing SNCR, a post-

[65] Supplemental FIP Technical Report at 3.1.2.
[66] Good Neighbor FIP at Table 3.
[67] EPA, *Ozone Transport Policy Proposed Supplemental Rule TSD,* December 2023.

combustion NOx control technology. Consequently, EPA erroneously applied a new SCR retrofit on Apache 3 in the Arizona state budget setting process for the years 2027 to 2029. According to EPA's own calculations the marginal costs for Apache 3 is $12,600/ton, which is above threshold of $11,000/ton.[68] This marginal cost is measured from the optimized SNCR emission rate, which for Apache 3 is 0.185 lbs/mmBtu, and is the correct point to compute the $/ton removal. In that same file, EPA computed the marginal costs for four other coal units that were assigned a new SCR retrofit with an existing SNCR, these costs ranged from $12,600/ton to $38,415/ton.[69] To correct for this budget setting error, Apache 3's OS emission rate for 2027 to 2029 should be set at 0.185 lbs/mmBtu, which will result in the Arizona State Budget increasing by 226 tons in 2027 and by 452 tons in both 2028 and 2029.

C. Some existing and new units are not properly included in state budgets in some states.

The Arizona Supplemental State Budget is in error because it fails to include existing units that are currently in operation and new units that are under construction or have received full regulatory approvals to operate.[70] The error likely occurred because these units have not reported emissions to Clean Air Markets Division (CAMD). Specifically, EPA failed to account for six CTs listed in EIA-860 (December 2023) that are under construction or received full regulatory approval. These units have entered commercial operation or will be coming on-line before the 2025 control period and should be included in the 2025 budget year.

Those units listed in the New Units tab for Arizona are existing units, many of which came on-line in the 1970s and are listed as new units because they do not report emissions in Clean Air Markets Division's CAMPD files. With respect to the Arizona units that should be included in the existing source budget, the following table lists the unit, on-line date in parentheses and the calculated tons that should be added into the Arizona State Budget.

[68] See in Docket EPA-HQ-OAR-2021-0668 file titled *NOx Control Retrofit Cost Tool Fleetwide Assessment for Proposed CSAPR 2015 NAAQS* (EPA-HQ-OAR-2021-0668-0113_content – Tab - SCR_Horz (SNCR to SCR only)

[69] *Id*.

[70] *See Appendix A of the Ozone Transport Policy Final Rule TSD for the Federal Good Neighbor Plan,* New Units tab, which does not contain the units at issue.

Table 3-2. New Units in Arizona

State	Unit	Include in Control Period
AZ	Agua Fria AF7	Existing unit (2022) to be included in 2025 AZ Budget – 14 tons
AZ	Agua Fria AF8	Existing unit (2022) to be included in 2025 AZ Budget – 14 tons
AZ	Desert Basin CTG4	Existing unit (2022) to be included in 2025 AZ Budget – 14 tons
AZ	Desert Basin CTG5	Existing unit (2022) to be included in 2025 AZ Budget – 14 tons
AZ	Apache Station GT5	New Unit (2024) to be included in the 2025 AZ Budget – 11 tons
AZ	Apache Station GT6	New Unit (2024) to be included in the 2025 AZ Budget – 11 tons

All six units should be identified as existing units with existing unit allocations in the Arizona budget.[71]

D. The Proposed Rule State Budgets should be recalculated to correct retirement assumptions.

EPA should correct the Supplemental State budgets to address base case errors. The focus of these adjustments should reflect: (1) changes in retirement dates, (2) technology-related issues, and (3) failure to incorporate new units. The Supplemental FIP Technical Report recalculates the budgets based on the information described in Section 3.1 for ozone seasons 2025 through 2029. Table 3-3, below, compares the Proposed Preset State Budget developed by EPA in the Proposed Rule with a Recalculated State Budget. Each revised state budget increases in NOx tons, ranging between a few tons (New Mexico, 10 tons) to over 700 tons (Arizona, 756 tons).

[71] EIA-860 – December 2023 Generator File.

Table 3-3. Recalculated State Budgets: 2025 and 2029

State	Year	Proposed Rule Preset State Budget (Ozone Season Tons)	Recalculated State Budget (Ozone Season Tons)
AZ	2025	8,195	8,342
	2026	5,814	5,892
	2027	4,913	5,299
	2028	3,949	4,479
	2029	3,949	4,479
IA	2025	9,752	9,786
	2026	9,713	9,747
	2027	9,713	9,747
	2028	9,713	9,747
	2029	9,077	9,111
KS	2025	4,763	5,484
	2026	4,763	5,484
	2027	4,763	5,484
	2028	4,763	5,484
	2029	4,763	5,029
NM	2025	2,211	2,268
	2026	2,008	2,211
	2027	2,008	2,211
	2028	2,008	2,008
	2029	2,008	1,919
TN	2025	3,983	3,992
	2026	3,983	3,992
	2027	2,666	2,924

	2028	2,130	2,139
	2029	1,198	1,207

APPA and NRECA request that EPA review and adjust all Supplemental State budgets beginning with budget year 2025, as specified in our comments herein.

E. EPA should recalculate Arizona's Budget Due to Faulty Air Quality Modeling Assumptions.

There have been some air quality modeling issues identified by the Arizona Utility Group and Ramboll.[72] If these air quality modeling issues are resolved the SCR budget setting step could be removed from the Arizona State Budget for the 2027, 2028 and 2029 control periods. By removing this SCR budget setting the Arizona the state budget would increase by 978 tons in 2027 and by 1,718 tons in both 2028 and 2029. Table 3-4 below illustrates the effect of recalculating the Arizona State Budget, without the SCR budget setting step.

Table 3-4. Arizona Proposed Preset State Budget and Recalculated State Budget with no SCR Retrofits

State	Year	Proposed Preset State Budget (Ozone Season Tons)	Recalculated State Budget – No SCR Retrofits (Ozone Season Tons)
AZ	2025	8,195	8,342
	2026	5,814	5,892
	2027	4,913	5,891
	2028	3,949	5,667
	2029	3,949	5,667

F. Budget shortfalls would cause reliability concerns.

APPA and NRECA are concerned about system reliability and how this Proposed Rule will exacerbate an already tenuous situation. For this reason, we examined whether the future state budgets for Arizona and Kansas, as example states, would allow generators within those states to meet future demand. The attached

[72] Review of Arizona's Ozone Contribution in the 2023 Final Good Neighbor Rule for the 2015 Ozone NAAQS" (Ramboll 2024).

Supplemental FIP Report concluded that many electric generating units are unlikely to be able to comply with their allowance allocations as early as 2025.[73] Tables 3-5 and 3-6 illustrate this conclusion, based on the generation forecast from publicly-available information.

Table 3-5. Arizona OS Emissions-Allowance Allocations: 2025, 2026 and 2028

Year	OS Emissions (tons)	Allocations	Deficit/Excess
2025	6,695	8,195	1,500
2026	5,326	5,814	488
2028	4,645	3,949	-696

Table 3-6. Kansas OS Emissions-Allowance Allocations: 2025, 2026 and 2028

Year	OS Emissions (tons)	Allocations	Deficit/Excess
2025	6,273	5,763	-510
2026	6,380	4,763	-1,617
2028	6,494	4,763	-,1731

Note: The 2025 allocations include 1,000 converted Group 2 allowances, based upon the state's 2025 budget limit of 21 percent.

The Supplemental FIP is likely to exacerbate generation shortfalls that have already been projected in some areas of the country. To avoid this consequence, the budget-setting methodology should be revised to account for increased demand – rather than locking in generation assumptions to 2021.

VI. Arizona sources cannot install a SCR in the abbreviated project timeline proposed by the Supplemental FIP.

EPA has selected SCR installation as the Step 3 technology on which to base the Arizona budget in 2027 for units that are 100 MW or larger. The other four Supplemental States are not linked in 2026. Their budgets from 2027 and beyond are not based on SCR emission rates. APPA and NRECA request that EPA extend the time for SCR installation in Arizona to allow for realistic SCR project timelines and to include additional time for smaller utilities to complete this substantial project on-time.

A. Small entities face significantly longer time frames to conduct major outage projects than investor-owned utilities.

Small entities face challenges that result in the need for more time to perform large projects. The timeline to obtain financing is often the driver. Since most APPA and NRECA members are small entities, a major control upgrade project may have a price tag that is substantial in proportion to the total net worth of the entity or

[73] Allowance allocations are based upon each state budget for the years 2025, 2026 and 2028.

municipality. Financing is essential to permit these projects to occur. However, an entity's outstanding debt (often affected by other earlier environmental compliance projects) is a significant factor in obtaining financing and overall project timing. For municipalities, often, bonds and income from power purchase sales are used to finance outage projects. For cooperatives, the U.S. Department of Agriculture (USDA) Rural Utilities Service (RUS) has historically been a primary source of funding for cooperatives.[74] RUS financing entails a multi-step process that involves compliance with the National Environmental Policy Act (NEPA) and RUS project approval with extended time frames.[75]

EPA should factor in additional time for small entities for financing. Municipalities, public power, and cooperatives cannot simply go to investors to obtain funding. EPA should factor in at least an additional 18 months on top of the projected time frames to allow small entities to obtain financing for a large control device installation project such as an SCR.

B. Installation of SCRs by 2027 is not achievable given past project data, construction timelines, and available third-party resources.

EPA's time frame to install a SCR by ozone season 2027 or in 32 months[76] is unworkable. EPA blows past the fact that the Supplemental FIP provides an even shorter time frame than the Good Neighbor FIP that offered 36 months. Numerous utilities filed project timeline information in the docket to illustrate that the time frame in the Good Neighbor FIP is not sufficient.

Real project installation times do not support SCR installations in 36 months and certainly not in 32 months. Data from past SCR installations shows that only two units completed SCR installations in close to 30 months. Most SCR installations took 40 months or more (12 of 18 installations).[77] Five projects took 50 or more months. A recently completed SCR installation project began in 2015, with engineering and

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[74] For more information about RUS and its essential role for the cooperative community, see https://www.rd.usda.gov/about-rd/agencies/rural-utilities-service ("The Electric Program provides funding to maintain, expand, upgrade and modernize America's rural electric infrastructure. The loans and loan guarantees finance the construction or improvement of electric distribution, transmission, and generation facilities in rural areas. The Electric Program also provides funding to support demand-side management, energy efficiency and conservation programs, and on-and off-grid renewable energy systems. Loans are made to cooperatives, corporations, states, territories, subdivisions, municipalities, utility districts and non-profit organizations.").

[75] The USDA's Environmental Policies and Procedures regulations found at 7 C.F.R. Part 1970 establish the policies and procedures for compliance with NEPA and other environmental requirements that apply to actions financed by RUS.

[76] Thirty-two months assumes that this rule would be issued in final by August 31, 2024, and the SCR would need to be installed by May 1, 2027.

[77] J. Edward Cichanowicz, James Marchetti, Michael C. Hein, and Shirley Rivera, "Technical Comments on Electric Generating Unit Control Technology Options and Emission Allocations Proposed by the Environmental Protection Agency in Support of the Proposed 2015 Ozone NAAQS Transport Rule" (June 17, 2022) (Good Neighbor FIP Technical Report), at Figure 5-5. The Good Neighbor FIP Technical Report, available at Docket ID No. EPA-HQ-OAR-2021-0668-0409, is incorporated herein by reference.

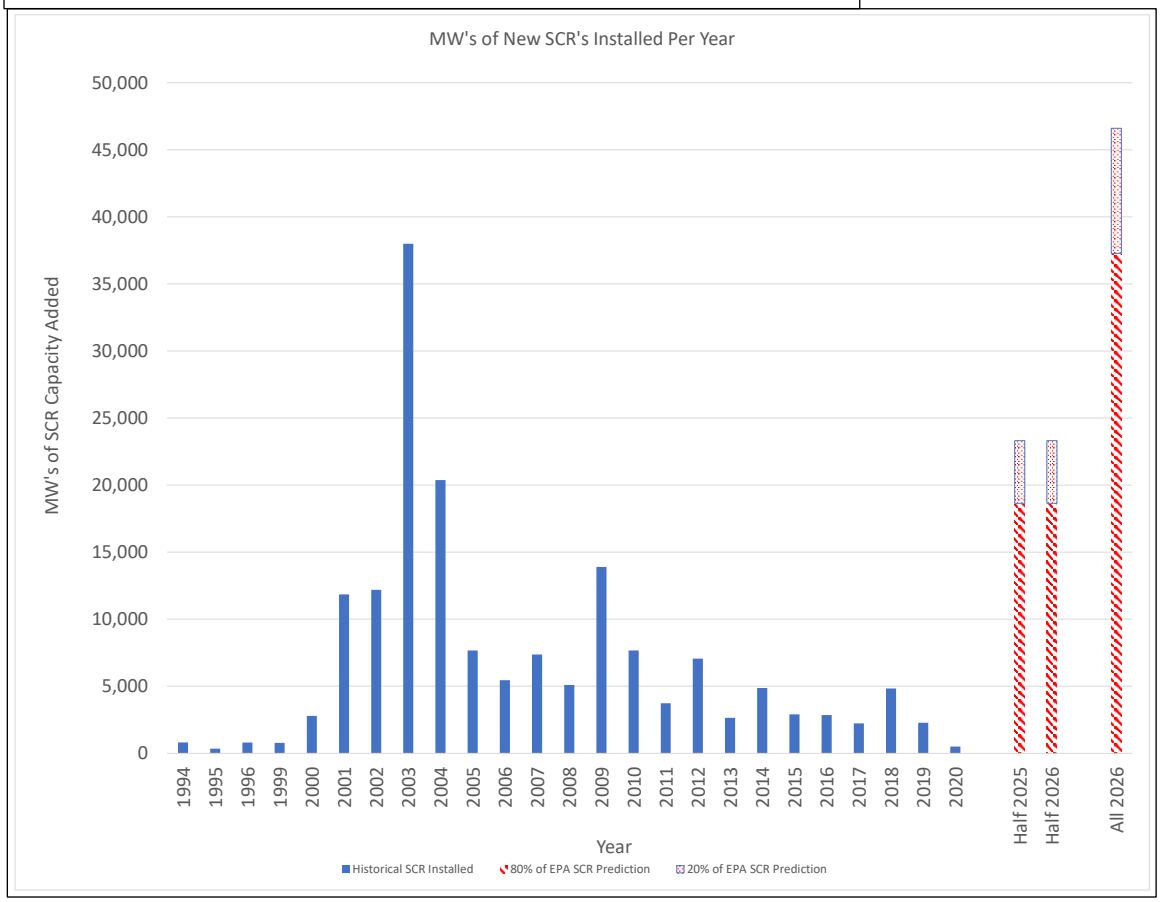
procurement taking place until 2017. Construction began in September 2016. The SCR project was completed in June 2019. Therefore, actual construction took 33 months, but the entire project took 53 months.[78]

It is striking that these project data points happened when third-party contractor availability was plentiful. In today's world, boilermaker availability is scarce. The number of contractors in the business has dwindled as coal units have retired. It is not reasonable to assume projects can be completed in 40 months – and certainly not in a meager 32 months.

To illustrate, historically the industry saw the largest number of SCR installations in 2003, totaling over 35,000 MWs of capacity. The Supplemental FIP aligns its SCR installations with the same ozone season as the states in the Good Neighbor FIP. The total tons of capacity that would need SCRs for the Supplemental FIP and the Good Neighbor FIP exceeds 45,000 MWs of capacity in the time frame of 2026-2028. EPA has not adequately considered the practical aspects of completing all of these projects during this abbreviated time frame. This volume of installations requires more time.

[78] For more information regarding the installation of the SCR at Laramie River Unit 1, see https://www.power-eng.com/emissions/laramie-river-station-to-receive-350-million-in-emission-controls/#gref; https://www.youtube.com/watch?v=y08g-KTEOTA.

Figure 5-5: Capacity (MW Basis) of SCR Retrofits Since 1994



At least 40-45 months is needed for SCR installations.[79] EPA should also consider additional lead time for small entities to obtain financing -- an additional 18 -24 months. SCR installations for Arizona sources should not be expected until the 2029 ozone season, at the very earliest, which is still a fast time frame for small entities to meet.

VII. The new features of the Good Neighbor FIP result in overcontrol.

EPA proposes to apply the same CSAPR Group 3 trading program design elements that it finalized in the Good Neighbor FIP for sources in Arizona, Iowa, Kansas, New Mexico, and Tennessee.[80] APPA and NRECA continue to oppose these enhancements to the CSAPR trading program, consistent with our comments in the Good Neighbor FIP docket.[81] The application of these design elements is no less flawed as applied to the Supplemental States than it is to the other states in the Good Neighbor FIP program.

[79] Good Neighbor FIP Technical Report, Figure 5-5.
[80] 89 Fed. Reg. at 12706.
[81] Good Neighbor FIP Comments of APPA and Comments of NRECA are incorporated herein by reference.

Specifically, problematic elements[82] of the Good Neighbor FIP program include (1) the use of dynamic state emission budgets, (2) the annual recalibration of the Group 3 allowance bank, and (3) the unit-specific backstop daily emission rate. This section further elaborates on the practical implementation concerns of these elements. In addition, these elements were not properly factored into the overcontrol analysis. EPA discounted these features by failing to recognize that they will – by themselves – cause emissions reductions not considered by EPA.

Curiously, these new "features" are not necessary to make EPA's control case in the rule. Emissions reductions from dynamic budgeting, bank recalibration, and daily averages are not factored into EPA Step 3 analysis. Unit retirements are unnecessary to achieve the goals of CAA Section 110(a)(2)(D)(i)(I). Where EPA "requires an upwind State to reduce emissions by more than the amount necessary" to resolve downwind nonattainment and maintenance issues, "the Agency will have overstepped its authority, under the 'good neighbor' provision, to eliminate those 'amounts [that] contribute . . . to nonattainment.'"[83] The Good Neighbor FIP and this Supplemental FIP ignore this important boundary on the Agency's authority because the design elements have the effect of directly controlling how sources operate, thereby causing further emissions reductions.

A. Dynamic Budgeting.

EPA's dynamic budgeting process will lead to overcontrol. Although EPA has amended the dynamic budgeting methodology set forth in its proposed Good Neighbor FIP to provide for a preset emissions budget "floor" for 2026-2029 for these five states, as well as incorporated a 3-year average for determining state budgets, these modifications do not go far enough to address the issue of overcontrol. Beginning in 2030, the preset budgets will expire. Dynamic budgeting will proceed without a floor to protect against ratcheting effects and loss of allowances due to normal fluctuations in unit dispatch.[84] These losses will result in overcontrol. For the following reasons, APPA and NRECA advocate for the removal of dynamic budgeting:

- <u>Dynamic budgeting is not necessary</u>. The CSAPR framework already contains components to address federally enforceable changes to state inventories (e.g., retirements, repowering) via new unit set-asides and removal of allocations for retirements. Since other CSAPR design elements address fleet changes, program stringency will be maintained without dynamic budgeting.

- <u>Emissions reductions from dynamic budgeting are not necessary to attain or maintain NAAQS in downwind states</u>. Based on our analysis of the

[82] Our Good Neighbor FIP comments cover other features, which we incorporate by reference herein. These comments cover the most impactful features for the Supplemental States.
[83] *EPA v. EME Homer City Generation*, 572 U.S. 489, 521 (2014).
[84] The state-level data used to determine the overall state-level heat input for computing a state's dynamic budget is a three-year average (e.g., 2022–2024 state-level data will be used in 2025 to set the 2026 dynamic budgets). 88 Fed. Reg. at 36765 n.294.

Supplemental FIP, as well as the Good Neighbor FIP, EPA's model does not appear to have included NOx reductions from dynamic budgeting. Consequently, dynamic budgeting is not a concept that is required to achieve EPA's projected attainment at downwind receptors and produces an overcontrol scenario.

- Dynamic budgets already put downward pressure on fluctuations in statewide emissions. The addition of an assurance backstop further exacerbates and limits a generation plants utilization.

- Maintaining a flexible generation mix is essential to grid reliability. Dynamic budgeting will over time cap capacity factors for coal-fired units because they emit more NOx than most gas-fired turbines. Budgets for coal-units will have a downward trend – losing allocations if the fuel pricing or other factors affect summer dispatch. Yet, dynamic budgeting dictates a "must use it or lose it" framework. Utilities will not have enough allocations to dispatch coal units when needed for economic, demand, or reliability purposes. Even using a 3-year average to determine budgets, budgets will still see a ratcheting-down effect based on heat input over time, which would restrict these units in the following years. Coal-fired units would not have the flexibility to respond to the demand without sufficient NOx allocations. Without these baseload resources, there is a substantial risk to grid reliability.

APPA and NRECA advocate for the removal of dynamic budgeting. Mechanisms are already built into CSAPR to adjust allocations with changes in the nationwide fleet. Dynamic budgets essentially remove asset switching flexibilities needed to maintain reliability.

B. Allowance Bank Recalibration.

Bank recalibration amounts to EPA "taking" allowances from banks above a target level of 21% of the sum of all state emissions budgets for the current control period. EPA justifies bank recalibration "to prevent allowance surpluses from accumulating and adversely impacting the ability of the trading program in future control periods to maintain . . . emissions control stringency."[85] However, routine bank recalibration is not necessary to maintain the stringency of the CSAPR program, and, in reality, it will result in overcontrol. For the following reasons, APPA and NRECA oppose bank recalibration:

- Routine bank recalibration is not necessary to maintain the stringency of the CSAPR Program. It is unlikely there will be any allowance surpluses, especially at an amount that would allow changes in control device operation. Many states will face allocation shortfalls, not surpluses, and any surpluses will be minor. Enforceable permit requirements require continuous operation of SCRs and

[85] 88 Fed. Reg. at 36788.

SNCRs at optimized rates, regardless of allowance shortages. Any banked allowances will be needed to make up for projected budget shortfalls.

- Annual removal of banked allowances fails to incentivize utilities to improve NOx emissions. Removing banked allowances disincentivizes utilities from improving NOx emissions. Past transport trading programs allowed banking as a benefit to encourage operators to explore means to reduce NOx to "save" allowances for a rainy day. EPA acknowledged this benefit in the Federal Good Neighbor Plan.[86] In the Revised CSAPR Update Rule, EPA praised the capability of a mass-based trading program to provide flexibility.[87] Bank recalibration reduces this flexibility.

- Routine bank recalibration was not used in past ozone transport programs. EPA found other means of addressing bank stringency on an as needed basis. For example, EPA "recalibrated" allowance banks with each program iteration. The Program was last recalibrated in summer 2021 and, before that, was recalibrated in 2017. These periodic recalibration events removed accumulated banked allocations. These past events have already depleted the excesses of banks. Further reductions would result in overcontrol.

- Routine bank recalibration will cause emission reductions that are not necessary to attain or maintain the 2015 Ozone NAAQS in downwind states. Like dynamic budgeting, EPA's model does not include reductions due to bank recalibration. Bank recalibration is unnecessary to achieve the goals of this rulemaking and creates another overcontrol scenario.

EPA also proposes a bank recalibration revision specific to the Supplemental States. EPA proposes to create an allowance bank for sources in the five states at issue by converting banked Group 2 allowances to Group 3 allowances for the 2025 control period. EPA explains that this initial bank creation would result in up to 21 percent of the newly added states' emissions budgets. For this reason, EPA proposes to defer bank recalibration for the Supplemental States until 2026. EPA seeks "to exclude the five newly added states' 2025 budgets when calculating the bank ceiling target used to determine whether any bank recalibration for the 2025 control period will occur."[88] This change defers bank recalibration for the Supplemental States until the following year – unlike the other states subject to the Good Neighbor FIP that must comply in 2025 with bank recalibration. Although APPA and NRECA are opposed to automatic bank recalibration as a concept in general, we agree with EPA that bank recalibration of the Supplemental States in 2025 would be nonsensical. Initial banks

[86] 88 Fed. Reg. at 36766 ("trading and banking of allowances in the CSAPR trading programs . . . continuously incentiviz[es] sources to reduce their emissions even when they already hold sufficient allowances to cover their expected emissions for a control period").
[87] 86 Fed. Reg. at 23094 ("Furthermore, because the emission reduction obligation is implemented through a mass-based trading program, these sources (and all others in the newly established Group 3 trading program) have abundant flexibility to choose other means of complying with their emission budget.").
[88] *See* 89 Fed. Reg. at 12709.

would have just been created. An almost immediate recalibration would be unnecessary, duplicative, and would cause uncertainty in the program.

In summary, APPA and NRECA support removal of routine bank recalibrations from the Proposed Supplemental FIP in general. Automatic recalibration is not necessary to assure program stringency or to reduce upwind states contribution to a level below the appropriate threshold, especially given the CSAPR framework. In any event, the Supplemental States should not be subject to a bank recalibration in 2025.

C. Daily Backstop Emission Rates.

The unit-specific daily backstop emission rates should be eliminated from the proposal because they would result in overcontrol. Under the Supplemental Proposal, units with existing SCRs in all five states would be subject to a unit-specific backstop daily emissions rate of 0.14 lb/mmBtu beginning in 2026. Non-SCR units in Arizona would be subject to backstop rates either during the 2030 ozone season, or during the second control period after a SCR is installed, whichever comes first, while units without existing SCR controls in Iowa, Kansas, New Mexico, and Tennessee would not be subject to backstop rate provisions if the unit does not exceed the daily emission rate of .0.14 lb/mmBtu. If a unit exceeds the daily rate, the unit must surrender allowances at a 3 for 1 ratio.

As previously set out in comments on the Good Neighbor FIP, there are several issues with introducing a daily backstop rate into the CSAPR program and with the stringency of EPA's proposal. These issues would now impact sources in the Supplemental States. A summary of the issues presented in the Good Neighbor FIP that now apply to the Supplemental States follows.

- <u>The daily NOx rate is not achievable based on EPA's own analysis</u>. EPA recognizes that past data shows that 0.14 lbs/mmBtu can be met on 95% of days during the ozone season.[89] Not only does this acknowledge that EPA has not factored in a typical margin of compliance, but the daily rate is not achievable on all days. The rate must be adjusted so that all SCR-controlled units can meet the rate. The daily rate is a one-size-fits-all approach for all coal-fired units that cannot be consistently achieved by all unit-types under all circumstances.

- <u>Technical analysis demonstrates that the Daily Rate is not consistently achievable</u>. APPA and NRECA prepared a technical analysis (Good Neighbor FIP Technical Report) filed in the Good Neighbor FIP docket that discusses how the daily backstop rate is unworkable for the SCR-equipped coal-fired boiler population. The Good Neighbor FIP Technical Report demonstrates that even units with well-run SCR processes cannot achieve 0.14 lbs/mmBtu consistently, mostly due to unavoidable startup operations. The dataset in the Good Neighbor FIP Technical Report included 110 SCR-equipped EGUs, which emit less than 0.08 lbs/mmBtu. Using past data, the daily NOx emission rate was calculated to

[89] 88 Fed. Reg. at 36769.

determine the feasibility of meeting the daily rate. Only 36 of the 110 units do not experience any operating days emitting above 0.14 lbs/mmBtu. Many units emitted more than 0.14 lbs/mmBTU for multiple days, and 11 units operated above the daily rate for three days. Five units exceeded that rate for 7 days.[90] In summary, the technical data show that the daily rate of 0.14 lbs/mmBtu cannot be consistently achieved by most SCR-equipped units.[91]

- Unit startups cannot be avoided and must be factored into EPA's analysis. The Supplemental FIP and Final FIP ignore how SCR technology works during startup. Startup cannot be avoided. Units must have regular outages for safety and reliability and even the best maintained unit will have equipment failures that force outages. As presented below, a unit must reach around 580° F for subbituminous coals and 620°F for some bituminous coals before the SCR can function. This key temperature varies based on many factors such as fuel composition and associated sulfur content. Once the SCR reactor reaches the minimum temperature then ammonia reagent can be injected. Post-combustion NOx removal begins but is only at a partial level until the unit comes up to full load.[92]

- The daily rate may actually increase NOx emissions. Some units require the flexibility of operating at low loads, when greater capacity is not needed. Load less than 50% will frequently reduce the boiler outlet gas temperature below the minimum operating temperature for a SCR. Ammonia cannot be injected without possible catalyst damage from excess residual ammonia emissions. A daily backstop rate will eliminate unit flexibility to run at lower loads – emitting fewer NOx tons. Units will be forced to operate at full load to achieve maximum SCR removal rates. If units can no longer "turn down" to avoid startups, more NOx may be emitted overall. The daily rate decreases flexibility in operating conditions that may exacerbate operational and reliability concerns.

- The daily rate does not take malfunctions into account. The daily backstop rate provides no provision for malfunctions of either the boiler – requiring reduction in load – or SCR equipment. Ammonia injection fails are not considered by the inflexible backstop provisions. A bright-line malfunction exception should be applied to the daily rate.[93]

- EPA did not consider daily emission rates in the Good Neighbor FIP's estimated NOx emission reductions for the 2026 attainment case on the downwind monitors. Emission reductions attributable to the daily rate are not folded into

[90] Good Neighbor FIP Technical Report at Section 7.2.
[91] Good Neighbor FIP Technical Report at Table 7-1. Table 7-1 from the Good Neighbor FIP Technical Report illustrates that extending the daily average to a three-day average is not an effective solution. EGU rates above 0.14 lbs/mmBtu decrease but are not eliminated. A three-day averaging period still shows 24 units that have 62 instances in which the daily rate is not achieved.
[92] Good Neighbor FIP Technical Report at Section 7 and Figure 7-1.
[93] *See* Good Neighbor FIP Technical Report at Section 7.3, discussing the impacts of malfunctions on the daily rate concept.

EPA's air quality model. The daily rates will cause a tangible emissions reduction. Since daily rates are not an essential part of EPA's strategy to reduce ozone transport, there is no legal basis for an unnecessary requirement when attainment can be achieved based on modeling of the state budgets. In any event, EPA is statutorily obligated not to overcontrol.[94]

APPA and NRECA support eliminating the daily backstop rate from the Supplemental Rule for the reasons identified above. Putting aside our view that the daily rate is unnecessary, an alternative to fix the issues resulting (startups, malfunctions, low load needs, and variability among units, fuels, and capacities) from applying the daily rate is not apparent. A uniform daily rate is not a fit for all coal-fired unit types and applications.

D. Treatment of Retiring Units.

The Good Neighbor FIP revises several important rules with respect to retiring units. The Good Neighbor FIP shortens allocation retention to "only two full control periods of non-operation."[95] These revisions reduce flexibility and tighten allowance budgets. The result is overcontrol. APPA and NRECA suggest that EPA retain the following approach as to the Supplemental States:

- EPA should retain the prior CSAPR program's retired allocation approach of five years (2 consecutive control periods of nonoperation plus three years).
- A unit considered "retired" should be based on *annual* heat input rather than performance during the *ozone season*. Nonoperation during the ozone season is not the same as retirement. Idling may occur for various reasons such as changes of ownership or market conditions.

VIII. EPA's Regulatory Flexibility Act Analysis is Flawed

The RFA, as amended by the Small Business Regulatory Enforcement Fairness Act, requires federal agencies to assess the impacts of rules on small businesses, small not-for-profit organizations, and small governmental jurisdictions (collectively, "small entities"). If EPA determines that a proposed rule will have a "significant economic impact on a substantial number of small entities," it must convene a Small Business Advocacy Review (SBAR) panel[96] before the rule is proposed and prepare an initial regulatory flexibility analysis ("IRFA").[97] If the EPA determines the proposed rule will not have a "significant economic impact on a substantial number of small entities," the EPA Administrator may certify to such a conclusion and need not prepare an IRFA.[98] The

[94] *See* Clean Air Act section 110(a)(2)(D)(i)(I) (Good Neighbor provision), which the U.S. Supreme Court interprets to mean that "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 the Agency has set." Otherwise, "overcontrol" takes place. *Homer City*, 572 U.S. 489, 522 (2014).
[95] 88 Fed. Reg. at 36805.
[96] 5 U.S.C. § 609(b).
[97] 5 U.S.C. § 603.
[98] *Id*. at § 605(b).

certification statement must include a "factual basis for the certification."[99] Agency certifications of final rules are subject to judicial review.[100]

In order to determine if a rule will have a significant economic impact on a substantial number of small entities, EPA conducts "screening analysis" to determine if it can certify the rule.[101] The four steps in EPA's screening analysis, include: 1) determine which small entities are subject to the rule's requirements; 2) select appropriate measures for determining economic impacts on these small entities and estimate those impacts; 3) determine whether the rule many be certified as not having a significant economic impact on a substantial number of small entities; and 4) document the screening analysis and include the appropriate RFA statements in the preamble.[102]

EPA has certified the Supplemental FIP stating that only four EGUs owned by small entities are affected and none are estimated to have costs greater than 1 percent of revenues.[103] EPA's screening analysis is flawed and suffers from several infirmities. EPA has not accurately identified the affected small entities. The underlying spreadsheet, which lists 4 EGUs that EPA has identified as small, fails to include two affected electric cooperatives and two additional public power utilities, that are small entities. EPA must reanalyze the affected small entities using current U.S. Small Business Administration ("SBA") small business size standards, which were updated in February 2023.[104] It appears that in part, EPA's failure to correctly identify the affected small entities is due to its reliance on outdated size standards.[105]

In addition, EPA hides the true impacts of the Supplemental FIP by only looking at one year of costs. In particular, EPA only looks at costs for units that see +/- 1 percent change in summer NOx emissions, summer generation, or summer fuel use in 2028. This is an inappropriate means of determining which units will be affected, particularly given that the Agency has estimated the Supplemental FIP's costs for calendar years 2025-2044 in the Economic Impact Assessment. EPA should consider costs incurred in 2025-2044 for all units, not just those expected to have a +/- 1 percent change in the three areas mentioned above in 2028, to accurately assess the economic impacts.

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[99] *Id*. A certification at the proposed rule stage does not mean the agency is entitled to certify at the final rule stage. Data and information obtained during the notice and comment process may compel an agency to reconsider its decision to certify. If sufficient data and information is submitted to the agency that demonstrates there will be a "significant economic impact on a substantial number of small entities," the agency is required to prepare a final regulatory flexibility analysis.

[100] *Id*. at § 611.

[101] EPA'S ACTION DEVELOPMENT PROCESS: FINAL GUIDANCE FOR EPA RULEWRITERS: REGULATORY FLEXIBILITY ACT AS AMENDED BY THE SMALL BUSINESS REGULATORY ENFORCEMENT FAIRNESS ACT 9-30 (2006), available at https://www.epa.gov/system/files/documents/2021-07/guidance-regflexact.pdf.

[102] *Id*. at 12.

[103] 89 Fed. Reg. at 12724.

[104] https://www.sba.gov/document/support-table-size-standards.

[105] EPA used 2022 SBA size standards for the utility sector in its Regulatory Impact Analysis for the Good Neighbor FIP. Regulatory Impact Analysis for the Final Federal Good Neighbor Plan Addressing Regional Ozone Transport for the 2015 Ozone National Ambient Air Quality Standard 261 (2023), https://www.regulations.gov/document/EPA-HQ-OAR-2021-0668-1115.

Given these flaws, EPA does not have the requisite factual basis to certify the Supplemental FIP. EPA must redo its screening analysis and, if necessary, publish an IRFA for public comment.

IX. Conclusion.

Thank you for your consideration of our comments on the Proposed Supplemental FIP. We look forward to further engagement with EPA on these points. Should you have questions regarding these comments, please contact Carolyn Slaughter (CSlaughter@PublicPower.org), Viktoria Seale (viktoria.seale@nreca.coop) and Dan Bosch (Dan.Bosch@nreca.coop).

ATTACHMENT 1:
Supplemental Federal Implementation Plan Technical Report

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May 16, 2024

TO: American Public Power Association
National Rural Electric Cooperative Association

FROM: J. Marchetti

SUBJECT: PROPOSED SUPPLEMENTAL GOOD NEIGHBOR PLAN: EVALUATION OF THE STATE BUDGETS (EPA-HQ-OAR-2023-0402)

1.0. Summary of Flaws in EPA's Approach

The following is an abbreviated summary of flaws in the Environmental Protection Agency's (EPA) analysis to support the Supplemental Air Plan Actions: Interstate Transport of Air Pollution for the 2015 8-Hour Ozone National Ambient Air Quality Standards (NAAQS) and Supplemental Federal "Good Neighbor Plan" Requirements for the 2015 8-Hour Ozone NAAQS, which are described in detail in the remainder of this report.

EPA Needs to Revise the State Budgets. Due to omissions and errors, the state budgets calculated by EPA need to be revised to prevent reliability concerns beginning in 2025.

Arizona Air Quality Modeling Issues Could Impact Arizona State Budget. If these air quality issues are resolved, the selective catalytic reduction (SCR) budget setting step could be removed from calculating the Arizona State Budget for the 2027 to 2029 control periods.

Supplemental Notice and Reliability. States may experience allowance shortfalls as early as 2025, potentially resulting in constraining the operation of fossil-generating units and negatively affecting reliability.

2.0. Introduction

The EPA is proposing to add five states – Arizona, Iowa, Kansas, New Mexico, and Tennessee – to its Good Neighbor Plan in a notice titled "Supplemental Air Plan Actions: Interstate Transport of Air Pollution for the 2015 8-Hour Ozone National Ambient Air Quality Standards and Supplemental Federal 'Good Neighbor Plan' Requirements for the 2015 8-Hour Ozone National Ambient Air Quality Standards" (Supplemental Proposal).[1]

[1] 89 Fed. Reg at 12,666 (February 16, 2024) EPA-HQ-OAR-2023-0402.

As a part of this Supplemental Proposal, EPA developed state emission budgets for each of the five states for 2025 to 2029. EPA claims to base the development of these state budgets on known public information and air quality modeling; however, much of the public data used by EPA is inaccurate, and some aspects of the air quality modeling are problematic. These errors grossly underestimate the state budgets for several states. Therefore, this report identifies those errors and recalculates state budgets based on corrected information and data.

3.0. State Budgets, Emissions, Allocations and Reliability

Section 3 addresses issues related to the state budgets for the five states in the Supplemental Proposal and the impact of assigned state budgets on allowance allocation and reliability.

3.1. State Budget Setting Process

EPA's state budget-setting process under the Supplemental Proposal contains numerous errors and omissions and adopts incorrect assumptions about unit retirements, technology related issues, and new units.

The state budget setting process employs data at one point – 2021 – to project state budgets for 2025 and beyond. This approach is flawed as future electric utility operations based upon one historical year will not represent volatility in fuel prices and demand that have or will occur between 2021 and 2025, a four-year period. This static approach does not account for changing dispatch conditions and unit performance, specifically changes in load. For example, a unit may meet EPA's mandated emission rate at a particular point in time, based on historical heat input which will not reflect future unit operations in 2025 – which could be compromised due to greater operating duty at minimum load.

An alternative approach may be to develop a baseline based upon the average of the three highest years of heat input (e.g., 2017 to 2021) for each unit, much in the same way allowance allocations are done for each existing unit.

3.1.1. Identification of Unit Retirement Errors

EPA incorrectly assumes several unit retirement dates, which significantly affect state budgets. Table 3-1 lists corrections required to remedy errors in retirement dates.

Table 1-1. Retirement Date Changes in the States of the Supplemental Notice

State	Unit	Change
KS	Lawrence 4	To be retired in 2028
KS	Lawrence 5	To be retired in 2028
NM	Cunningham 2	To be retired in 2027
NM	Maddox 1	To be retired in 2028
NM	Rio Grande 7	To be retired in 2025
TN	Kingston 7	To be retired in 2027
TN	Kingston 8	To be retired in 2027
TN	Kingston 9	To be retired in 2027

Lawrence 4 & 5 will not be retired in 2024 as EPA has indicated in its state budget setting spreadsheets. Specifically, Lawrence 4 will be retired in 2028, and Lawrence 5 will retire in 2028 and transition to natural gas in 2029.[2] Therefore, for state budget setting purposes both units will operate as coal units through 2028 and increase the Kansas State Budget by 722 tons between 2025 and 2028. Then, in 2029, the Kansas State Budget will increase by 266 tons, when Lawrence 4 has been retired and Lawrence 5 is operating on gas.

Cunningham 2 will not be retired in 2025 as EPA has indicated in its state budget setting spreadsheets. Cunningham 2 will be retired in 2027.[3] By operating Cunningham 2 through 2027, the New Mexico State Budget will increase by 203 tons each year between 2026 and 2027.

Maddox 1 is to retire in 2028, and the loss of 89 tons in 2029 will impact the New Mexico State Budget.[4] EPA did not identify the retirement of Maddox 1.

Rio Grande 7 has an operational issue, specifically as it relates to its retirement date. The U.S. Energy Information Administration's EIA – 860 lists Unit 7 retiring at the end of 2025.[5] EPA implies retirement date of 2024 because there are no 2025 emissions in the NM state budget for this unit. By retiring this unit in 2025, New Mexico's State Budget will increase by 57 tons in 2025. This is a one-year increase.

[2] Evergy, *2024 Integrated Resource Plan Update,* April 1, 2024.
[3] Southwestern Public Service Company, *2023 Integrated Resource Plan for New Mexico,* October 13, 2023.
[4] Xcel Energy, Case No. 23-00073-*UT In the Matter of Southwestern Public Service Company's 2023 Integrated Resource Plan for New Mexico,* October 13, 2023.
[5] EIA, EIA-860 – December 2023 Generator File.

Kingston 7 – 9 will not be retired in 2026 as EPA has indicated in its state budget setting spreadsheets. Kingston 7 – 9 will be retired in 2027 along with the 6 other Kingston units.[6] By operating Kingston 7 – 9 through 2027, the Tennessee State Budget will increase by 249 tons in 2027.

3.1.2. Identification of Technology Issues

Springerville 1 plans to retire in 2027 and the Arizona State Budget should not be impacted by the new SCR phased budget setting emission rates in 2027. There will be no further NOx emissions from Springerville 1 after it retires in 2027. For budget setting purposes, in the 2027 control period, Springerville 1's emissions should be based upon the average of 2019 to 2021 NOx rate of 0.178 pounds per million British thermal units (lbs/mmBtu). This will increase the Arizona State Budget by 81 tons in 2027.

Springerville 2 has a technology related error regarding to EPA's combustion modification (Separated Overfire Air (SOFA)) budget setting step. For state budget setting purposes, the SOFA should be accounted for in 2026 and not 2025, based upon the deployment schedule outlined in the Final Good Neighbor Federal Implementation Plan. Specifically, Table 3 on page 5 in the *Good Neighbor Federal Implementation Plan* indicates NOx combustion modifications are set for 2024, and not 2023.[7] This is also illustrated in *Appendix A Final State Emission Budget Calculations and Engineering Analytics* (see Kentucky for Mill Creek 1-2 and Shawnee 6-9). By correcting for this accounting error, the Arizona State Budget will increase by 69 tons in 2025.

Summit Lake 1G & 2G did not report any ozone season (OS) NOx emissions in 2021; however, both units operated in 2019 and 2020, as well as in 2022 and 2023. The Iowa State Budget should be increased by 34 tons, which is based upon the average ozone season (OS) NOx emissions for 2019 and 2020 for each unit.

Gallatin GT2 did not report any OS NOx emissions in 2021; however, the unit operated in 2019 and 2020, as well as in 2023. The Tennessee State Budget should be increased by 9 tons, which is based upon the average OS NOx emissions for 2019 and 2020 for the unit.

Apache 3 has an existing selective noncatalytic reduction (SNCR) retrofitted with a new selective catalytic reduction (SCR) beginning in 2027 in the state budget-setting process. Table A-2 – *Reduction strategies available to EGUs at each cost threshold* on page 5 of the *Ozone Transport Policy Proposed Supplemental Rule TSD* illustrates that a $11,000/ton threshold should be applied for units installing a new SCR on a coal unit greater than 100 MW *and* lacks post-combustion controls.[8] However, Apache 3 has an existing SNCR a post-combustion NOx control technology. Consequently, EPA erroneously applied a new SCR retrofit on Apache 3 in the Arizona state budget setting process for the years 2027 to 2029. According to EPA's own

[6] TVA, *Kingston Fossil Plant Retirement – Final Environmental Impact Statement,* February 2024.

[7] EPA, *Good Neighbor Federal Implementation Plan – Final Rule, Signed, March 15, 2023*, Rev 2-17-23- Pre-publication Version.

[8] EPA, *Ozone Transport Policy Proposed Supplemental Rule TSD,* December 2023. EPA-HQ-OAR-2023-0402-0022.

calculations the marginal costs for Apache 3 is $12,600/ton, which is above the threshold of $11,000/ton.[9] This marginal cost is measured from the optimized SNCR emission rate, which for Apache 3 is 0.185 lbs/mmBtu, and is the correct point to compute the $/ton removal. In that same file, EPA computed the marginal costs for four other coal units that were assigned a new SCR retrofit with an existing SNCR, these costs ranged from $12,600/ton to $38,415/ton.[10]

To correct for this budget setting error, Apache 3's OS emission rate for 2027 to 2029 should be set at 0.185 lbs/mmBtu, which will result in the Arizona State Budget increasing by 226 tons in 2027 and by 452 tons in both 2028 and 2029.

3.1.3. EPA's Failure to Include Some Existing and New Units

EPA failed to account for six new combustion turbines (CTs) that have either entered commercial operation (2022) or will be coming online before the 2025 control period and should be included in the 2025 budget year, as described on page 9 of the *Ozone Transport Policy Proposed Supplemental Rule TSD* The new units are listed in EIA-860 (December 2023) and are either operating, under construction or have received full regulatory approvals.[11] None of these new CTs were identified in the New Units tab in *Appendix A of the Ozone Transport Policy Final Rule TSD for the Federal Good Neighbor Plan*.[12]
The table below lists the unit, the online date in parentheses, and the calculated tons that should be added to the Arizona State Budget. The methodology to determine the calculated tons is discussed in Appendix A.

[9] See in Docket EPA-HQ-OAR-2021-0668 file titled *NOx Control Retrofit Cost Tool Fleetwide Assessment for Proposed CSAPR 2015 NAAQS* (EPA-HQ-OAR-2021-0668-0113_content – Tab - SCR_Horz (SNCR to SCR only)
[10] Ibid.
[11] EIA, EIA-860 – December 2023 Generator File.
[12] Those units listed in the New Units tab for Arizona and New Mexico are existing units, many of which came online in the 1970s and are listed as new units because they do not report emissions in the Clean Air Markets Division's Clean Air Markets Program Data (CAMPD) files. These units are also listed in Table VII.A.1-1 of the preamble of the Supplemental Notice. The total OS NOx emissions from these units – 756 tons in Arizona and 10 tons in New Mexico are included in their respective state budgets.

Table 3-2. New Units in Arizona

State	Unit	Include in Control Period
AZ	Agua Fria AF7	Existing unit (2022) to be included in 2025 AZ Budget – 14 tons
AZ	Agua Fria AF8	Existing unit (2022) to be included in 2025 AZ Budget – 14 tons
AZ	Desert Basin CTG4	Existing unit (2022) to be included in 2025 AZ Budget – 14 tons
AZ	Desert Basin CTG5	Existing unit (2022) to be included in 2025 AZ Budget – 14 tons
AZ	Apache Station GT5	New Unit (2024) to be included in 2025 AZ Budget – 11 tons
AZ	Apache Station GT6	New Unit (2024) to be included in 2025 AZ Budget – 11 tons

3.2. Recalculation of State Budgets

Based upon issues and omissions identified, EPA should review and adjust all state budgets beginning with budget year 2025. The focus of these adjustments should reflect (1) changes in retirement dates, (2) technology issues, and (3) failure to incorporate new units.

The recalculated budgets for the five states shown in Table 3-3 below were based upon the information described in Section 3.1 for the years 2025 through 2029. This table compares the Proposed Preset State Budget developed by EPA in the proposal to a Recalculated State Budget. Since there is no publicly reported operational data for those units listed in Table VII.A.1-1 of the preamble of the Supplemental Proposal, the recalculated state budgets for both Arizona (756 tons) and New Mexico (10 tons) do include EPA's estimated emissions for these units.

As you can see from the table below, by recalculating the state budgets based upon the errors and omissions outlined in Section 3.1, each state budget will increase. These increases can range between a very few tons to over 700 tons.

Table 3-3. Recalculated State Budgets: 2025 to 2029

State	Year	**Proposed Preset State Budget** (Ozone Season Tons)	**Recalculated State Budget** (Ozone Season Tons)
AZ	2025	8,195	8,342
	2026	5,814	5,892
	2027	4,913	5,299
	2028	3,949	4,479
	2029	3,949	4,479
IA	2025	9,752	9,786
	2026	9,713	9,747
	2027	9,713	9,747
	2028	9,713	9,747
	2029	9,077	9,111
KS	2025	4,763	5,484
	2026	4,763	5,484
	2027	4,763	5,484
	2028	4,763	5,484
	2029	4,763	5,029
NM	2025	2,211	2,268
	2026	2,008	2,211
	2027	2,008	2,211
	2028	2,008	2,008
	2029	2,008	1,919
TN	2025	3,983	3,992
	2026	3,983	3,992
	2027	2,666	2,924
	2028	2,130	2,139
	2029	1,198	1,207

The EPA's state budgets for Iowa, Kansas, New Mexico, and Tennessee for 2025 to 2029 are based upon optimizing existing controls, retirements, and new combustion controls. They do not consider any new SNCR/SCR retrofits in the 2027 and 2028 period. Only Arizona's state budget reflects new SCR controls in 2027 and 2028.

3.3. Impact of Air Quality Modeling on Arizona's State Budget

There have been some air quality modeling issues identified by the Arizona Utility Group and Ramboll.[13/14]

If these air quality modeling issues are resolved the SCR budget setting step could be removed from the Arizona State Budget for the 2027, 2028 and 2029 control periods. By removing this

[13] The Arizona Utilities Group*, Initial Thoughts on EPA's Proposed NOx Good Neighbor FIP for Arizona*, February 12, 2024.
[14] Ralph Morris, *Analysis for the Arizona Utility Group, 2023 Final Good Neighbor Rule (GNR) for the 2015 Ozone NAAQS*, Ramboll, December 11, 2023.

SCR budget setting the Arizona the state budget would increase by 978 tons in 2027 and by 1,718 tons in both 2028 and 2029. Table 3-4 below illustrates the effect of recalculating the Arizona State Budget, without the SCR budget setting step.

Table 3-4. Arizona Proposed Preset State Budget and Recalculated State Budget with no SCR Retrofits

State	Year	**Proposed Preset State Budget** (Ozone Season Tons)	**Recalculated State Budget – No SCR Retrofits** (Ozone Season Tons)
AZ	2025	8,195	8,342
	2026	5,814	5,892
	2027	4,913	5,891
	2028	3,949	5,667
	2029	3,949	5,667

3.4. Emission Allowances and Reliability

The major concern of electric generators in both Arizona and Kansas beginning in 2025 is their ability to meet demand and ensure system reliability under the proposed rule's state allowance allocation system. As shown in Tables 3-5 and 3-6, many electric generating units may not be able to comply with their allowance allocations beginning as early as in 2025.[15]

The generation forecast was based upon publicly available information from the affected utilities on their future coal- and gas-fired generation. Appendix B lists those data sources used in forecasting electrical generation in both Arizona and Kansas, along with several technology assumptions that were incorporated into the emission forecast.

3.4.1. Arizona

The analysis suggests Arizona OS emissions could begin to outstrip its allocations beginning in 2027 but would be offset by the banked allowances from 2026. Estimated 2028 OS emissions continue to exceed its allocations by 696 tons but should be offset by banked allowances. This annual allowance deficit continues through 2029; however, by this time, the Arizona allowance bank is estimated to be depleted and face an allowance shortfall. The timing of this shift from excess allowances to allowance deficit coincides with Arizona's 2.4 percent annual growth in electric demand beginning in the late 2020s and early 2030s.[16] Fossil generation in Arizona during the OS is projected to increase by 3.8 percent between 2026 and 2028.

[15] Allowance allocations are based upon each state budget for the years 2025, 2026 and 2028.
[16] The Arizona Utilities Group, *Initial thoughts of EPA's Proposed NOx Good Neighbor FIP for Arizona*, February 12, 2024.

Table 3-5. Arizona OS Emissions-Allowance Allocations: 2025, 2026 and 2028

Year	OS Emissions (tons)	Allocations	Deficit/Excess
2025	6,695	8,195	1,500
2026	5,326	5,814	488
2028	4,645	3,949	-696

3.4.2. Kansas

Kansas will have a Group 2 allowance carryover of 1,000 allowances for the 2025 control period. Even with these banked allowances, Kansas will still experience an allowance deficit beginning in 2025. This allowance deficit will increase to 1,617 allowances in 2026 and by 2028 the allowance deficit would be 1,762 allowances. This allowance deficit is partially attributed to EPA's failure to include Lawrence 4 & 5 as operable coal units through 2028 in the state budget setting process. This omission cost Kansas utilities an additional 722 allowances each year between 2025 and 2028.

Table 3-6. Kansas OS Emissions-Allowance Allocations: 2025, 2026 and 2028

Year	OS Emissions (tons)	Allocations	Deficit/Excess
2025	6,273	5,763	-510
2026	6,380	4,763	-1,617
2028	6,494	4,763	-1,731

Note: The 2025 allocations include 1,000 converted Group 2 allowances, based upon the state's 2025 budget limit of 21 percent.

Some utilities may have to constrain the operation of coal and gas units, possibly by idling during the ozone season or operating at limited output. These limitations on unit operations can be traced to how the state budgets are determined, such as employing a single year to predict the future thereby locking units into a specific capacity factor. Any limits on unit operation due to allowance shortfalls - with already tight reserve margins – will prompt reliability issues.

Finally, reliability concerns – discussed subsequently - have been identified. The Supplemental Proposal could exacerbate these issues beginning with the 2025 ozone season. Specifically:

- The Southwest Power Pool (SPP) planning reserve margin will shrink to 13.6 percent in the summer of 2027.[17] Concerned about the increasing penetration of renewables, SPP has decided to raise the reserve margin to 15 percent to provide a wider buffer between available capacity and peak demand.

[17] Antoine Lucas, *Planning Reserve Margin Recommendation for Regional State Committee*, Southwest Power Pool.

- In a move to improve grid reliability, SPP proposes renewable and thermal accreditation reforms. These reforms will allow SPP to have a better understanding which resources will be available, when needed based upon past performances.[18]

- The Kansas Corporation Commission indicated in its 2023 Biennial Report, that System Peak Responsibility will exceed Total System Capacity in 2031.[19]

- Thermal resources retiring in Arizona require more than a one-for-one replacement by renewable resources. For example, Arizona Public Service must rely on a suite of thermal generating and renewable resources to meet demand over a 24-hour period.[20]

- Diversification is critical to a reliable energy supply. A rule that forces changes in the retirement Salt River Project's existing fossil resources creates reliability constraints and exponentially increases costs.[21]

- The North American Electric Reliability Corporation (NERC) has classified the Midcontinent Independent System Operator (MISO) as a "High Risk Area" because MISO does not meet certain resource adequacy criteria. Specifically, NERC is projecting a 4.7 GW shortfall in 2028.[22]

A revision to EPA's budget-setting methodology is required to address the potential negative impact on reliability.

[18] Letter to the Honorable Debbie-Anne Reese, FERC, from the Southwest Power Pool*, Submission of Tariff Revisions to Implement Effective Load Carrying Capability Methodology and Performance Based Accreditation*, Docket ER 24- -000, February 23,2024.
[19] Kansas Corporation Commission, *2023 Electric Supply & Demand Biennial Report*
[20] Arizona Public Service*, APS Comments on the Proposed Rule* – Docket No. EPA-HQ-OAR-2023-0072, August 8, 2023.
[21] Salt River Project, *SRP Comments in Response to EPA's Proposed New Source Performance Standards and Emission Guidelines for Greenhouse Gas Emissions from New and Existing Fossil Fuel-Fired Electric Generating Units* - Docket No. EPA-HQ-OAR-2023-0072, August 8, 2023.
[22] NERC, *2023 Long-Term Reliability Assessment*, December 2023.

APPENDIX A

New Unit Emission Methodology

To determine the expected OS NOx emissions for each of these new units, the methodology described on page 9 of Ozone Policy TSD was followed, as best as possible. Specifically, identifying all similar units that came on-line between 2015 and 2019. For CTs it was units with a nameplate capacity of 48 to 73 MW. Below are the emission metrics that were developed and used to compute the OS NOx emissions for each unit based upon 2019 seasonal averages. These data were developed from the CAMPD files and used 3,648 hours for the ozone season (May 1 to September 30).

Metric	CT
OS Heat Rate (Btu/kWh)	10,002
OS Capacity Factor	0.283
OS NOx Rate (lbs/mmBtu)	0.053

APPENDIX B

Arizona Data Sources

Arizona Public Service – *2023 Integrated Resource Plan* (November 2023) – The Preferred Selected Plan.

Salt River Project – *SRP's 2023 Integrated System Report* - Desert Boom Scenario - Total Generation and Generation Mix.

Tri-State Generation and Transmission Association – *2023 Electric Resource Plan – Phase I* (December 1, 2023) – Projected Annual Capacity Factors for Thermal Resources (Scenario 2 – IRA).

Tucson Electric Power – *2023 Integrated Resource Plan* (November 1, 2023) – Preferred Portfolio (PO2 – Balanced Portfolio).

Kansas Data Sources

Evergy – *2024 Integrated Resource Plan Update* (April 1, 2024) and *Evergy Kansas Central and Evergy Metro – 2023 Annual Update* (June 2023).

Compliance Assumptions

In predicting future generation and emissions, some compliance and technology related assumptions were incorporated, and they are as follows:

- Coal retirements without a specific month assumes operation through the calendar year.
- The emission rate for Coronado 1 in the 2025 OS not reflective of a SCR, which is to be installed in December 2025. Beginning in 2026, the Coronado emission is reflective of an operational SCR during the OS of 0.065 lbs/mmBtu.
- No backstop rate provision is applied.
- New units (post-2023) were incorporated into the forecast that would be entering commercial operation by 2028, based those modeled in the above-mentioned resource plans.