

I. Introduction

On February 28, 2022, the United States Environmental Protection Agency (EPA) Administrator Regan signed a proposed federal implementation plan (FIP) for 26 states, including Arkansas, to address “good neighbor” requirements for the 2015 ozone national ambient air quality standard (NAAQS), just four days after EPA proposed to reject Arkansas’s plan, as well as plans submitted by other states, for addressing the same requirements. The Arkansas Department of Energy and Environment’s Division of Environmental Quality (DEQ) submitted comments on EPA’s proposed “Air Plan Disapproval; Arkansas, Louisiana, Oklahoma, and Texas; Interstate Transport of Air Pollution for the 2015 8-Hour Ozone National Ambient Air Quality Standards” (hereinafter referred to as the “Proposed Disapproval”).^{1, 2} DEQ incorporates these comments by reference in addition to offering the comments herein on EPA’s “Federal Implementation Plan Addressing Regional Ozone Transport for the 2015 Ozone National Ambient Air Quality Standards” (hereinafter referred to as the “proposed FIP”).³

II. Background

Under the Clean Air Act (CAA), Congress established a cooperative framework between the EPA and states for the protection of air quality. Under CAA §109, Congress granted EPA the authority to establish NAAQS for common air pollutants at a level requisite to protect public health and welfare with an adequate margin of safety. Under CAA §110, Congress charged states with the primary responsibility to develop and implement plans for attainment and maintenance of the NAAQS.⁴ States are afforded broad discretion in developing state plans and determining requirements that should be included in plans to meet the state’s obligations under the CAA.⁵ EPA

¹ February 22, 2022. Air Plan Disapproval; Arkansas, Louisiana, Oklahoma, and Texas; Interstate Transport of Air Pollution for the 2015 8-Hour Ozone National Ambient Air Quality Standards: Proposed Rule <https://www.govinfo.gov/content/pkg/FR-2022-02-22/pdf/2022-02961.pdf>

² April 22, 2022. DEQ Comments on EPA’s Proposed Disapproval. [https://www.adeq.state.ar.us/air/planning/sip/pdfs/2015/2015-O3-Transport-Disapproval Comments AR Final 4-22-22.pdf](https://www.adeq.state.ar.us/air/planning/sip/pdfs/2015/2015-O3-Transport-Disapproval%20Comments%20AR%20Final%204-22-22.pdf)

³ April 6, 2022. Federal Implementation Plan Addressing Regional Ozone Transport for the 2015 Ozone National Air Quality Standard: Proposed Rule <https://www.govinfo.gov/content/pkg/FR-2022-04-06/pdf/2022-04551.pdf>

⁴ See also See 42 U.S.C. § 7410(a) (requiring States to submit plans to implement, maintain, and enforce NAAQS); see also *Com. of Va. v. EPA*, 108 F.3d 1397, 1407 (D.C. Cir.), decision modified on rehearing, 116 F.3d 499 (D.C. Cir. 1997) (stating that the CAA “expressly gave the states initial responsibility for determining the manner in which air quality standards were to be achieved.”).

⁵ See *Union Elec. Co. v. EPA*, 427 U.S. 246, 250 (1976) (“Each State is given wide discretion in formulating its plan.”); *Train v. NRDC*, 412 U.S. 60, 79 (1975) (“[EPA] is relegated by the [Clean Air] Act to a secondary role in the process of determining and enforcing the specific, source-by-source emission limitations which are necessary if the national standards it has set are to be met.”); *Fla. Power & Light Co. v. Costle*, 650 F.2d 579, 587 (5th Cir. 1981) (“The great flexibility accorded the states under the Clean Air Act is further illustrated by the sharply contrasting, narrow role to be played by EPA.”)

must review and “shall approve” each state implementation plan (SIP) submission that meets all applicable requirements under CAA §110.⁶ EPA also provides technical assistance to the states by issuing guidance and conducting analyses that states may use during SIP development. If a state fails to submit a SIP or submits a SIP that fails to meet all of the requirements under CAA §110, EPA serves a backstop role to ensure implementation of the NAAQS by issuing a FIP within two years of issuance of a finding of failure to submit a SIP or within two years of finalizing a SIP partial or complete disapproval. The FIP addresses the applicable requirements not satisfied by the SIP until the state submits and EPA approves a SIP revision.

On October 1, 2015, the EPA finalized a revised NAAQS for ozone, setting in motion a three-year timeline of events for each state to develop and submit plans for implementing the revised NAAQS. State plans were due to EPA by October 1, 2018. In January of 2017, EPA released modeling results to help guide states in their policy decisions and data analysis.⁷ EPA followed up with clarifying Memorandums in October 2017,⁸ March 2018,⁹ August 2018,¹⁰ and October 2018.¹¹ The March 2018 guidance included a four-step framework for assessing interstate transport of air pollutants. Arkansas initiated rulemaking associated with the NAAQS revision in September 2018, which became final in September 2019. DEQ submitted a SIP revision for implementing the 2015 ozone NAAQS to EPA on October 4, 2019. EPA made a completeness determination for the SIP submission on November 7, 2019. The completeness determination established a November 7, 2020 deadline for EPA to review and make a proposed action (approval or disapproval) under Clean Air Act §110k. EPA approved the majority of Arkansas’s 2019 SIP submittal for implementing the 2015 ozone NAAQS on February 12, 2021.¹² EPA proposed to disapprove of

⁶ 42 U.S.C. § 7410(k)(3).

⁷ January 2017. Air Quality Modeling Technical Support Document for the 2015 Ozone NAAQS Preliminary Interstate Transport Assessment https://www.epa.gov/sites/default/files/2017-01/documents/air_quality_modeling_tsd_2015_o3_naaqs_preliminary_interstate_transport_assessment.pdf

⁸ September 27, 2017. S. Page Memo: Supplemental Information on the Interstate Transport State Implementation Plan Submissions for the 2008 Ozone National Ambient Air Quality Standards under Clean Air Act Section 110(a)(2)(D)(i)(I) https://www.epa.gov/sites/default/files/2017-10/documents/final_2008_o3_naaqs_transport_memo_10-27-17b.pdf

⁹ March 27, 2018. P. Tsigotis Memo: Information on the 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) https://www.epa.gov/sites/default/files/2018-03/documents/transport_memo_03_27_18_1.pdf

¹⁰ August 31, 2018. P. Tsigotis 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 https://www.epa.gov/sites/default/files/2018-09/documents/contrib_thresholds_transport_sip_subm_2015_ozone_memo_08_31_18.pdf

¹¹ October 19, 2018. P. Tsigotis Memo: Considerations for Identifying Maintenance Receptors 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 https://www.epa.gov/sites/default/files/2018-10/documents/maintenance_receptors_flexibility_memo.pdf

¹² February 12, 2021. Air Plan Approval; Arkansas; Infrastructure for the 2015 Ozone National Ambient Air Quality Standards <https://www.govinfo.gov/content/pkg/FR-2021-02-12/pdf/2021-02760.pdf>

Arkansas’s 2015 Ozone SIP “transport elements” in a February 22, 2022 action.¹³

In the Proposed Disapproval, EPA proposed to disapprove one component of Arkansas’s 2019 plan for implementing the 2015 ozone NAAQS: DEQ’s demonstration that the SIP contains adequate provisions to prohibit emissions sources and emissions activity from within the state from emitting any air pollutant in amounts that “will contribute significantly to non-attainment” or “interfere with maintenance” of the NAAQS in other states. See Clean Air Act §110(a)(2)(D)(i)(I). This component is often referred to as the “interstate transport” or “good neighbor” requirement for implementation of the NAAQS. Throughout the rest of this document, DEQ refers to this component of the 2019 SIP submittal for implementing the 2015 ozone NAAQS as the “Arkansas Transport SIP.” EPA also proposed to disapprove 2015 ozone NAAQS transport SIPs for 22 other states. Subsequently, DEQ submitted comments on the record for the Proposed Disapproval.

Concurrently with these SIP disapprovals, on April 6, 2022, EPA also proposed a federal implementation plan (proposed FIP) for 26 states, including Arkansas, to address Clean Air Act §110(a)(2)(D)(i)(I) based on their own policies in place of the state policies they propose to disapprove.¹⁴ Within this document, DEQ analyzes and respectfully offers comments on the record for the proposed FIP.

III. SIP Approvability

As outlined in DEQ’s comments on EPA’s disapproval of Arkansas’s 2015 Ozone NAAQS Transport Elements, DEQ maintains that the original Arkansas Transport SIP submission is approvable. Those comments are incorporated by reference here, and included as Appendix A to DEQ’s comments on EPA’s proposed FIP. Based on this contention, DEQ’s assessment is that Arkansas should not be subject to the proposed FIP.

IV. Timing

Primarily, the proposed FIP is ill-timed because it was fast-tracked by a consent decree, which does not give states the opportunity to address alleged deficiencies identified by EPA in the Proposed Disapproval before EPA is bound to implement a federal plan. The resulting timeline and framework of this action is incongruent with the intent of the CAA, which is for states to be the primary implementers of air quality programs.

Additionally, the time allotted to the public to review and analyze the mountain of information

¹³ February 22, 2022. Air Plan Disapproval; Arkansas, Louisiana, Oklahoma, and Texas; Interstate Transport of Air Pollution for the 2015 8-Hour Ozone National Ambient Air Quality Standards <https://www.govinfo.gov/content/pkg/FR-2022-02-22/pdf/2022-02961.pdf>

¹⁴ April 6, 2022. Federal Implementation Plan Addressing Regional Ozone Transport for the 2015 Ozone National Ambient Air Quality Standard <https://www.govinfo.gov/content/pkg/FR-2022-04-06/pdf/2022-04551.pdf>

presented in the FIP—a proposal that has the least flexible emissions reductions goals and the highest-cost threshold for controls of any previous Transport action—while “legal,” under the CAA, is grossly inadequate for this specific action. Though EPA’s hand is forced by a consent decree, this does not take into account real-world staffing resources or the complexity and expanse of the information to be analyzed by state implementers.

Finally, while EPA may promulgate a FIP at any time during the two years after a SIP disapproval is finalized; doing so while a proposed SIP disapproval is being considered completely removes states from the process. EPA took several years to act on the states’ submissions. The sudden rush to a FIP at this stage is inappropriate. Arkansas has all other elements of an approved 2015 Ozone NAAQS state plan in place, and if EPA contends that the Arkansas Transport SIP submitted by DEQ is not approvable and finalizes the Proposed Disapproval in current form, then EPA should allow the state adequate time to evaluate the new underlying data upon that EPA is primarily relying to support its proposed Transport SIP disapproval, and should allow adequate time for the state to develop any supplemental demonstrations or revisions to address the new data before finalizing a federal plan.

To further illustrate the inadequacy of the public review and comment period, critical information was posted to EPA’s docket three weeks after the proposed FIP was published (April 26, 2022).¹⁵ With only a 71-day comment period, releasing information this late in the public review stage does not allow sufficient time to digest over one hundred supporting documents EPA has made public.

Therefore, DEQ requests that EPA permit states more time to evaluate the new underlying data upon which EPA is primarily relying to support proposed Transport SIP disapprovals and the proposed FIP. For states with proposed Transport SIP disapprovals, if those become final rules, DEQ requests that EPA allow those states adequate time to develop any supplemental demonstrations or revisions to address the new data before finalizing a FIP for those states.

V. Flawed Modeling

The modeling EPA performed to support the proposed FIP is slapdash, likely due to the rushed timeline EPA agreed to follow under the consent decree. Solid modeling takes months to prepare and QA/QC just the underlying datasets, and in this case, in order for EPA to model sufficiently for interstate transport of emissions such that each state’s sources are individually linked to a specific receptor in another state, the agency would have needed to perform “tagging” at a facility level. A empirically-solid model run of the scale needed to assess the question of linkages and significant contributions *nationwide* would take EPA well over a year to perform, and more likely than not, would require two or more years to complete, simply because of the magnitude of a dataset that would result from “tagging” all U.S. sources of ozone precursors. This is another

¹⁵ Tier 2 Boiler Analysis 0 03-16-2022; All NAICS Units – 2023 Industry Identification Analysis (Attachment), <https://www.regulations.gov/document/EPA-HQ-OAR-2021-0668-0225>

instance in which states are in a far better vantage point to perform modeling or further analysis that is specific to that state's sources; by breaking up the U.S. dataset into state-sized datasets, modeling can be performed faster, with better QA/QC of data inputs, and with more accurate outcomes than EPA's hurried version (which is backed by loose assumptions and ballpark estimations). Undoubtedly, crafters of the CAA understood the limitations of a federal agency to address state-level pollution, and that states have the ability to focus resources on specifics; this gives further justification for EPA to allow states to develop and implement air pollution control programs, rather than encroach on the states' responsibilities and authorities.

EPA's base-case model did not take into account technical feasibility or actual likelihood for control installation at individual sources, and considered each state's emissions sources as a sum. In essence, EPA scaled a state's expected impacts on downwind monitors based on assumptions of their base-case. By EPA's assumptions, one ton of NO_x reduced anywhere in Arkansas affects downwind linked monitors in exactly the same way; however, meteorological conditions and distance to a monitor obviously affect the impact of emissions on a monitor, and common sense dictates that EPA's "anywhere ton" assumption is unacceptably untrue.

This back-of-the-napkin estimation also resulted in gross under accounting of emissions reductions. In one example presented to DEQ by the steel industry in Arkansas during stakeholder outreach, EPA estimated a six-ton reduction in emissions, when in fact, installing controls required by EPA's proposed FIP at Arkansas's steel industrial sites would yield a *few hundred tons* of emission reductions. In Arkansas especially, a state with "linkages" to a single other state in amounts that rank very near the cutoff point resulting in no need to consider additional source emission controls, this magnitudinous underestimation results in gross over control of Arkansas's sources. This is but a single instance from one non-EGU industry sector. Given time to thoroughly analyze the datasets and assumptions made by EPA for all sectors, it has been made apparent to DEQ through initial review of EPA's proposed FIP that the likelihood errors such as this could be discovered and corrected by states in a robust and directed analysis of state emission sources and further analysis would certainly produce more realistic expected results. If EPA only includes emissions reductions from sources emitting >100tpy NO_x in its air quality analysis, EPA should match its applicability criteria for sources for inclusion in a finalized FIP, rather than using surrogates (such as lb/MMBtu, and lb/ton Clinker, etc.).

Beyond EPA's methodology, which is undeniably problematic just on its surface, EPA's analysis is based on technical data that needs corrections.¹⁶ Because the initial data is flawed and missing the all-important QA/QC processing step (which could be satisfied through a NODA and EPA's intake of states' input to correct data points), any subsequent assessments—and especially conclusions—that are based on that data (e.g., control installation assumptions, expectations for efficiency and emissions benefits, cost-per-ton assumptions, linkages to downwind monitors, the magnitude of effect of a state's sources on downwind monitors, etc.) are also unsound. DEQ

¹⁶ See also Arkansas DEQ's comments on EPA's proposed SIP Disapproval addressing modeling data, Attachment A.

suggests that a NODA be issued by EPA and states' input be incorporated for a final version of modeling data, which would expectedly result in better-defined linkages between pollution sources and downwind monitors. It would ultimately make it possible for more robust analysis concerning which sources in linked states are significantly contributing to non-attainment or interfering with maintenance at downwind monitors.

The proposed FIP is such a wide-reaching and significantly costly rule, it is good common sense for states to have input into the modeling on which it is based. States are in a much better position than EPA to provide source-specific information that would provide for more accurate modeling results. Unilateral action by EPA requiring uniform emissions controls for all sources within specific sectors without consideration of states' input undermines the very foundation of the cooperative federalism upon which the EPA-State relationship is based. It is likely that few, if any, specific sources in Arkansas should be subjected to stricter emission controls in order to address downwind impacts, but without improved modeling, that is impossible to determine. It is wholly unreasonable to expect subject sources to expend millions of dollars in investments based on the analyses provided by EPA in the proposed FIP.

DEQ understands the complexity of modeling for downwind impacts, and the importance of controlling the correct set of sources so that downwind impacts are minimized. However, this determination requires "tagging" of facilities and sectors during modeling, and this process can add a month or more to modeling time just for sources in a single state. Undoubtedly, EPA does not have the manpower or technology available to tag every possibly-subject source in the U.S., and EPA was not afforded the time necessary to perform a robust determination through modeling because of the consent decree timeline. This is why the agency performed base modeling and used scaling at a statewide level to determine the "effect" of their proposed control strategy to upwind monitors. However, a restrictive deadline is no excuse for performing conventionally-inept technical analysis to support such an economically aggressive proposal. Because of the immense scope of the proposed FIP, this is precisely the time EPA should have doubled-down on supporting analysis and documentation to be sure the proposal that was produced is defensible through sound science and by reliable reasoning.

To correct these deficiencies, EPA should perform new modeling that takes into account state corrections and EPA should tag individual sources that would be subject to the FIP, not just examine incomplete industry sector emissions reductions anticipated from the states as a whole. EPA should release a NODA when the modeling results are available to allow states to evaluate the impact of sources from within the state on linked downwind monitors and whether the control strategies proposed by EPA are appropriate based on the corrected inventory projections and source/sector contributions (based on source apportionment) from within the state to downwind linked monitors. EPA should ultimately rescind the proposed FIP, and allow to states to develop and implement state plans to address interstate transport, just as the CAA intends.

VI. Significant Contribution Analyses

EPA performed no sector- or source-specific tagging to identify individual significant contributors. EPA instead used large sector data and a generic threshold determination without explanation¹⁷, and then scaled those assumptive findings to determine emissions reduction control needs. This does not provide adequate reasoning to apply costly controls. EPA proposes the same level of categorical control for all fossil-fuel fired EGUs, and Tier 1 and Tier 2 non-EGU NO_x sources in all upwind states that are linked to non-attainment downwind monitors, no matter the magnitude of effect, and without an analysis of which sources are significantly contributing to these monitors. In doing this, EPA indiscriminately includes all sources in an identified industry sector within a state's borders as contributing equally to downwind non-attainment monitors, regardless of actual contributions and prevalent meteorology. According to EPA's updated modeling (2016v2), Arkansas's sources contribute de minimis amounts of emissions to one non-attainment monitor in Texas that is not expected to reattain by 2026. Yet, if the FIP is finalized in current form, Arkansas's EPA-selected sources (EGU and non-EGU) will be required to install the most monumentally costly controls ever proposed, in order to achieve nominal reductions in ozone concentration, at a monitor (Harris County, TX) for which there has been no demonstrated evidence to indicate the facilities are actually contributing significantly to non-attainment.

DEQ does not agree with EPA's proposal that a state with a *statewide* linkage just above EPA's arbitrary 1% threshold to a downwind non-attainment receptor can reasonably be required to implement the same magnitude of controls as a state with sources contributing a higher percentage of emissions to the same downwind receptor. This is not the purpose of the Good Neighbor provision, and is blatant over-control on EPA's part, for not only Tier 2 non-EGUs as EPA has itself stated, but also for any non-EGU (or EGU, for that matter) in Arkansas, until the necessary analysis is done to demonstrate a significant contribution from any one or more of these sources. EPA's methodology does not address the specificity of the Transport Rule's program framework under the CAA, which necessitates a more detailed look at individual sources and robust analyses to determine whether these sources are significantly contributing to downwind monitors that are in non-attainment areas.

In addition to the assumption that all facilities within the selected sectors are contributing equally to downwind receptors, EPA implies that continuous impacts on the five (5) Texas monitors will occur. Although there are outlying events, winds from Arkansas typically move toward the north per predominant wind patterns and not to the south and west. In general, the requirements of the FIP for Arkansas would realistically have little impact on a typical day at the monitors to which EPA has now determined Arkansas is linked. The Court decisions in *EME II*, 572 U.S. at 514-516, 134 S. Ct. 1584 and *EME Homer City II*, F. 3d at 127, explicitly state that the burden of reductions needs to be shared equitably between upwind and downwind states. The proposed FIP clearly

¹⁷ <https://www.epa.gov/system/files/documents/2022-03/nonegu-reductions-ppb-impacts-2015-o3-transport-fip-final-memo.pdf>

places a higher burden on upwind states, and especially those such as Arkansas, with linkages that do not constitute significant contributions.¹⁸ While Arkansas is wholly agreeable to addressing good neighbor obligations, whether EPA contends that linkages exist to monitors in Michigan¹⁹ or in Texas, the State is not inclined (nor legally bound)²⁰ to take responsibility for more than its fair share of emission reductions under the Transport Rule's limited scope of intended control, as EPA has proposed.

Additionally, as is the case with the nonattainment monitor in Harris County, TX (482010055), mobile sources (and Texas point sources) contribute an overwhelming majority of emissions resulting in ozone problems in the area.²¹ 2017 NEI data shows that mobile sources contribute 64% of the NO_x in the counties that are located in the Houston-Galveston-Brazoria, TX nonattainment area (HGB), and this one metropolitan area alone is responsible for nearly 1/5 of all of Texas mobile emissions (19.42%); Harris County, a monitor to which Arkansas is linked, is in this nonattainment area. By contrast, Texas EGUs from these counties only contribute 6% of the NO_x inventory for the area, and industrial boilers only contribute 8%. Mobile sources are obviously the main driver for nonattainment issues in the Houston-Galveston-Brazoria nonattainment area. Further, in Texas attainment plan modeling, mobile sources contribute the largest percentage to ozone concentrations to most area monitors in the HGB nonattainment area. The modeling shows that a few monitors, primarily in the eastern portion of the nonattainment area, have similar contributions from mobile and point sources located within the nonattainment area.²² Comparison of the HGB to Dallas-Fort Worth (DFW) nonattainment area shows a similar pattern of NO_x contribution. The 2017 NEI shows that 70% of NO_x emissions in the DFW nonattainment area are from mobile sources. TCEQ's attainment plan modeling also indicates that mobile sources are the largest contributors to ozone concentrations at area monitors.

The emission reductions expected from obligations proposed for Arkansas's EGU and non-EGU sources impact the Harris County monitor so insignificantly that benefits from those controls could

¹⁸ See also Arkansas DEQ's comments on EPA's proposed SIP Disapproval addressing original and new linkages, and EPA's threshold determinations, Attachment A.

¹⁹ EPA initially identified for Arkansas linkages to monitors in Michigan during SIP development; at the time of the proposed SIP disapproval, EPA removed the Michigan linkage and identified new linkages to monitors in Texas.

²⁰ EPA acknowledges that pursuant to *EME Homer City* decision, it cannot "require [] an upwind State to reduce emissions by more than the amount necessary to achieve attainment in every downwind State to which it is linked" for to do so would be "over-control." 87 Fed. Reg. 200098-99. EPA further states that its current modeling demonstrates weakness in its conclusions regarding Arkansas' linkages, and calls into question inclusion of non-EGUs in the state plan. *Id.*

²¹ 2017 NEI data; <https://www.epa.gov/air-emissions-inventories/2017-national-emissions-inventory-nei-data>

²² REGIONAL AND GLOBAL PHOTOCHEMICAL MODELING FOR THE DFW AND HGB ATTAINMENT DEMONSTRATION SIP REVISIONS FOR THE 2008 EIGHT-HOUR OZONE STANDARD HOUSTON-GALVESTON-BRAZORIA SERIOUS CLASSIFICATION ATTAINMENT DEMONSTRATION STATE IMPLEMENTATION PLAN REVISION FOR THE 2008 EIGHT-HOUR OZONE NATIONAL AMBIENT AIR QUALITY STANDARD, Appendix C:

https://wayback.archive-it.org/414/20210529163349/https://www.tceq.texas.gov/assets/public/implementation/air/sip/hgb/hgb_serious_AD_2019/HGB_AD_SIP_19077SIP_AppendixC_adoption.pdf

be cancelled out with but a few added commutes through the area. DEQ does not find EPA's proposed FIP to be reasonable or equitable for Arkansas, and the state is being required to compensate for emissions that are either beyond EPA's near-term ability to control (i.e., mobile sources) or result from in-state Texas point and area sources.

To accurately demonstrate good neighbor obligations of a state's emission sources, EPA should perform a more robust analysis using tagging and source apportionment to determine the actual level of impact particular sources and emissions activities have at monitors linked to the state and how that impact would change based on the evaluated control strategies.

VII. Flawed Control Assumptions

The proposed FIP imposes uniform controls over a wide range of manufacturing technologies within specific NAICS codes, despite the fact that many types of equipment and manufacturing processes may exist within the same NAICS code. EPA should evaluate specific controls that are compatible with equipment and manufacturing techniques at each affected source. Some types of controls proposed by the FIP are not be feasible for installation at all affected sources. For other affected sources, the control efficiency assumptions are not achievable based on source-specific equipment and operations profiles. Imposing across-the-board controls at every facility subject to the rule is not prudent, and in many cases may prove cost-prohibitive. EPA should provide states and affected sources the opportunity to further evaluate the feasibility, and expected air quality improvements from controls proposed for each facility prior to finalizing the FIP.

Some of the controls recommended by EPA in the proposed FIP are infeasible for certain sources. As one example, the application of SCR and SNCR at one of the facilities that would be subject to the proposed FIP in Arkansas has been reviewed recently during the process of development of a Regional Haze SIP and both technologies have been determined to be unattainable or the anticipated emissions reductions insufficient to justify the cost. Specifically, the application of these controls at Domtar Ashdown Mill's No. 2 Power Boiler and No. 3 Power Boiler have been demonstrated SCR could not be applied due to space requirements and temperature fluctuations and that SNCR, while technically feasible, would provide only de minimis emission reductions that do not justify costs.²³

Some of EPA's assumptions for the impact of installing controls are also incorrect for certain sources. For example, control efficiencies and emissions reductions assumed in the FIP are overblown for batch processes. Many of the non-EGUs do not operate in a steady state as is assumed for the control efficiency calculations and EPA has not demonstrated a relationship between each of the subject sources and high ozone days at downwind receptors. Because EPA

²³ See Arkansas's proposed Regional Haze planning period II SIP, Domtar's control analysis, Appendix H: https://www.adeg.state.ar.us/air/planning/sip/pdfs/regional-haze/AppH_Domtar%20Ashdown%20Mill_4-factor-v9.pdf

does not account for batch processes as is commonly seen in industry, the agency consistently miscalculates industry operations which results in a misrepresentation of real-world processes, control efficiencies, emission reductions, and costs.²⁴

Perhaps the least technical but most impactful aspect of EPA's control assumptions originates as a result of the agency's hard-and-fast deadline for facilities to install emission control devices. EPA asserts that an entire fleet of EGUs and entire sectors of Tier 1 and Tier 2 industries will be able to procure and install the same type of limited-production control equipment at the same time. Simple supply and demand concepts make it apparent that this scenario will result in one or more of several possible negative outcomes that EPA has overlooked: due to supply shortages and a sudden increase in market demand for control devices, the equipment will be more costly (and less cost-effective per ton) than EPA predicts in the proposed FIP; facility-specific engineering and installation services would be expected to follow the same supply-demand curve, with increased prices and decreased availability, which would further stretch timelines for completion. Finally, to assume that the market can even bear such weight is unproven, and at the very least, these limitations will certainly extend EPA's timeline, beyond any control of the states or affected facilities that will be subject to further burden for failure to comply with EPA's half-hatched plan. Because so many of EPA's strategies hinge on installation of SCR or SNCR, it is imperative that EPA take into consideration the challenges presented by the sudden stress the agency's proposed rule, if finalized, will cause to the market, and adjust the expected control-installation timelines that are outlined in the proposed FIP.

Because of the many flaws in logic that have been discovered just on the surface of the proposed FIP, EPA must give states more time to evaluate the new underlying data upon which EPA is primarily relying to support proposed Transport SIP disapprovals and should allow additional time for the states to develop any supplemental demonstrations or revisions to address the new data before finalizing a federal plan. EPA should also perform cost-effectiveness evaluations on individual emission sources that have been identified as subject to the proposed FIP, based on available information such as confirmed retirement dates, corrected emissions reductions assumptions, source-specific cost estimates, etc. Sources for which controls would be overly costly or ineffective at reducing impacts at downwind nonattainment monitors should be exempt from control under any final plan, whether submitted by a state or promulgated by EPA. Finally, EPA must consider the supply and demand limitations that the proposed FIP creates and how the unavailability of highly specific goods and services will impact the agency's related analyses; any final plan from EPA should include adjusted cost-effectiveness estimates and timelines for compliance that reflect EPA's investigation into this aspect of economic impact.

VIII. Cost Effectiveness

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The framework EPA uses to determine cost-effectiveness is flawed: the proposed FIP is only attempting to impose emission limits during the ozone season. Yet, EPA has calculated cost-effectiveness on an annual basis, instead of ozone-season only. This skews results so that many technologies appear much more cost-effective than they are in reality. In particular, if compliance is only required during the ozone season, which should be the case, then it is very unlikely that sources would choose to run post-combustion controls outside the ozone season.

The proposed FIP also considers reasonable cost-effectiveness for control installation at a much higher dollar-per-ton value than in any previous federal program or rulemaking. With some cost-effective figures reaching upwards of \$20,000 per ton, even the average control costs of \$11,000 per ton for SCR at coal-fired EGUs, \$7,700 for SCR at oil- and gas-fired EGUs, and \$7,700 for blanket controls at what EPA defines as Tier 1 and Tier 2 sources, are excessive, unfounded, and will have harsh impacts on both energy production and consumer costs during an unprecedented time of inflation and worldwide economic instability. These costs far surpass the \$1,600 per ton threshold as seen in the Final Revised Cross-State Air Pollution Rule (CSAPR) Update for the 2008 Ozone NAAQS²⁵, the \$1,400 per ton threshold identified in the Cross-State Air Pollution Rule (CSAPR) Update for the 2008 National Ambient Air Quality Standards for Ground-Level Ozone²⁶, and DEQ's compilation of costs deemed acceptable by states and EPA for Regional Haze Planning Period 1.²⁷

While EPA has stated in several actions (particularly Regional Haze, and similar iterative programs) that “low-hanging fruit” will be increasingly harder to find as air pollution control programs develop into the future, and controls will undoubtedly become more costly-per-ton as NAAQS thresholds are ratcheted lower, it is wholly unfounded for EPA to reach as a giraffe does to the topmost branches at this point in time, or under this particular provision of the CAA that is so specifically limited in scope. It is also not the proper clause for such a costly action; because of the limited scope of the provision itself, any proposed limitations or controls should be correspondingly limited to address the provisions of the clause: to prevent emissions from upwind sources that “significantly contribute to non-attainment or interfere with maintenance of a NAAQS in any other state.” EPA's proposed FIP goes far beyond that mandate, and if finalized, will unnecessarily encumber U.S. industries with multi-million dollar investments that do not address the CAA provision for which they were intended.

An EPA memo dated February 28, 2022 found the \$7,500 cost point for non-EGUs. EPA presents a Figure 1 in the memo that shows four cost curves (All, T1+T2, T1, T2). This figure seems to indicate that the first 50,000 tons of NOx removed from T1 will cost \$1,250/ton, but the next 10,000 tons will cost \$6,750/ton. The EPA's definition of “significant contribution” are those parts

²⁵ https://www.epa.gov/sites/default/files/2021-03/documents/revised_csapr_update_ria_final.pdf

²⁶ https://www3.epa.gov/ttn/ecas/docs/ria/transport_ria_final-csapr-update_2016-09.pdf

²⁷ For a detailed compilation of costs deemed “reasonable,” see Appendix J to Arkansas's proposed Regional Haze SIP for Planning Period II https://www.adeg.state.ar.us/air/planning/sip/pdfs/regional-haze/AppJ_DescStats_PP1%20DetermCosts-v9.xlsx

of a linked state's emissions that can be removed with "highly cost effective controls." Increasing the cost threshold by 540% to remove one-sixth of the total emissions is certainly not "highly cost effective."

Additionally, the proposed FIP and underlying data analysis assumes that EGUs with commitments to cease coal combustion in the near future will install costly post-combustion NOx controls in 2026, rather than closing down early. (Entergy White Bluff: units 1 and 2 are scheduled to cease coal-fired operations in 2028; Entergy Independence: units 1 and 2 are scheduled to cease coal-fired operations by December 31, 2030.) This decision by EPA presents unaddressed grid reliability issues, and the agency's assumptions are not practical in the real-world scenario. EPA assumes generation switching in their supporting modeling that the agency lacks expertise to require, manage, or even understand the implications of such actions across the grid, issues raised in the Affordable Clean Energy (ACE) currently before the U.S. Supreme Court. While modeling is intended to paint a reasonable expectation of benefits for air quality, it is simply not integrated enough with energy production process data to predict how the industry will react to this proposed FIP, and to ensure that proposed controls will not result in a distressed energy portfolio nationwide. EPA did not (and likely cannot, from both technical and legal perspectives) adequately demonstrate that the fleet-wide proposed controls for EGUs will be balanced with the nation's requirements for energy generation. The CAA properly delegates air quality program management to states because states are in a better position to communicate with individual stakeholders (energy producers and regional transmission organizations in this instance, with whom state agencies have already cultivated positive working relationships through previous planning efforts) in order to reach equitable and meaningful arrangements in policy and implementation of those programs. States are simply better equipped than EPA to collaborate with local energy cooperatives, RTOs, and state energy regulators to customize controls and production limitations that protect air quality while maintaining national grid reliability.

To remedy these issues, EPA should reconsider the excessive cost-effectiveness thresholds for what is considered "reasonable." At the least, the cost-effectiveness thresholds should be brought into line with previous Clean Air Act actions (in the range between \$3,328/ton for non-EGUs and \$5,086 for EGUs in 2019 dollars) as DEQ proposes in its Regional Haze SIP for the Second Planning Period.²⁸ Specific to the Interstate Transport clause, EPA should consider an additional metric for determining whether a cost-effectiveness threshold is appropriate: \$/ppb reduced at each downwind air quality monitor linked at step 2 to the state where the source is located. This evaluation should include consideration of prevailing wind directions, distance between the source and the monitor, and photochemical reactions that may occur between the source of NOx emissions and the downwind monitor. Photochemical modeling with source-specific tagging would provide the most accurate data for characterization of cost per ozone reduction benefit.

²⁸ <https://www.adeg.state.ar.us/air/planning/sip/regional-haze.aspx#collapse2020SIP>

IX. Over-control

For the first time in Transport Rule history, the proposed FIP pulls in non-EGUs as being “subject” based on EPA’s broad generalities of sector-specific air pollution data. EPA does not further analyze whether specific EGU or non-EGU facilities (based on location, meteorology, and unit-specific emissions) significantly contribute to non-attainment or maintenance at downwind monitors. The proposed standards by EPA exceed the framework and purpose of this program, and this decision by EPA constitutes unsubstantiated over-control.

EPA states in the FIP that implementation of Tier 2 non-EGU controls may constitute over-control for Arkansas.²⁹ In fact, EPA’s own modeling shows only a 0.04 ppb reduction at downwind receptors resulting from imposition of Tier 2 non-EGU controls in Arkansas. The last remaining projected nonattainment receptor to which Arkansas is linked (Brazoria County, TX: 480391004) is expected to attain the NAAQS after application of EGU and non-EGU Tier 1 controls. EPA addresses that Tier 2 controls may constitute over control in Arkansas, as well as Mississippi, as the downwind receptor located in Brazoria County, Texas, is projected to achieve attainment and maintenance after EGU and Tier 1 non-EGU emission reductions. EPA then continues to recommend full application of all emission reduction controls stating that it could otherwise be in non-attainment pending updated emissions inventory and other information.³⁰ If projected values are trusted to a degree that allows for millions of dollars in expenditures, then such values should also be considered dependable enough to determine that the degree of control *is* or *is not* sufficient. In this case, it is clear per the precedent set in *EME Homer II*, as cited by EPA throughout the proposed FIP, that Tier 2 controls in Arkansas would constitute over-control. In addition, if Tier 2 controls were to be implemented, the emission reductions would provide little to no measurable benefit to monitors downwind depending on meteorology: a mere average of .04 ppb improvement, per EPA. (Refer to cost-per-ton values listed above, VIII.)

In its analysis of the issue of over-control, EPA invokes the *EME Homer City* decision to support the agency’s position that the proposal does not constitute over-control. EPA states: “The Court noted that ‘a degree of imprecision is inevitable in tackling the problem of interstate air pollution’ and that ‘incidental over-control may be unavoidable.’” EPA goes on to explain that in the case of Arkansas, the last projected nonattainment receptor to which the state is linked (Brazoria County, TX) is projected to achieve attainment and maintenance after application of proposed EGU reductions and Tier 1 non-EGU reductions in upwind states (and without factoring in emission reductions from Texas, which is also proposed to be subject to the FIP), and that for Arkansas, Tier 2 controls may constitute over-control. EPA mentions that “this downwind receptor only resolves by a small margin after the application of all EGU and Tier 1 non-EGU emissions reductions.”³¹

²⁹ Proposed Good Neighbor FIP, page 20098

³⁰ Proposed Good Neighbor FIP, VI. D. 4. *Over-control Analysis*

³¹ Proposed Good Neighbor FIP, page 20099

While “a degree of imprecision” is certainly expected in predicting future outcomes for attainment, this is not the same as EPA’s generalization of sources and emissions across the nation. EPA’s methodology and resulting FIP proposal is wrought with imprecision, from the initial modeling inputs to the expected benefits of the proposal. "Incidental over-control" would equate to crumbs falling from a piece of bread—a few sources pulled in with emissions that are close to a determining threshold, in close proximity to an affected monitor, or something similar. EPA instead has included the whole loaf by their approximations, i.e., entire industry sectors have been included in the proposed FIP based on imprecise estimations at every step of the process. EPA has interpreted the court’s decision so as to apply it in a very broad manner, and is doing so in an attempt to justify a proposed FIP that is in no way as robust or demonstrative as the Transport SIPs originally submitted by the states. It is classic cherry-picking of the Court’s decision on EPA’s part, and EPA’s proposed FIP certainly does not reflect the intent of the Court (or the CAA)³² for NAAQS transport requirements.

EPA suggests that Tier 2 controls may constitute over-control in Arkansas because this set of sources only resolves "a small margin" of emissions from the downwind receptor; in the case of Arkansas, controls by EGUs and Tier 1 industries also only resolve the downwind monitors to which the state is linked to by a small margin (because AR sources contribute so little to that monitor). DEQ contends that in Arkansas, by EPA’s own reasoning that “small margin” benefits may constitute over-control, controls on EGUs and Tier 1 sources are also over-control on EPA’s part. To the point, at an underestimated total cost of \$22 billion nationwide, EPA predicts only the following meager average air quality benefits to downwind ozone receptors:³³

Existing EGU controls in 2023	0.07 ppb
New EGU controls/Gen. shifting in 2026	0.36 ppb
Non-EGU (Tier 1)	0.18 ppb
Non-EGU (Tier 2)	0.04 ppb
Total	0.64 ppb

Additionally, DEQ maintains that the Arkansas Transport SIP is approvable as originally submitted, as it was based on information and guidance available at the time of SIP development, and that EPA’s sudden switch to new modeling and linkages creates a situational over-control.

³² See *North Carolina v. EPA*, 531 F.3d 896, 923 (D.C. Cir. 2008) (“the text of section 110 . . . establishes the state as the appropriate primary administrative unit to address interstate transport of emissions.”) (citations omitted); see also *Michigan v. EPA*, 213 F.3d 663, 671 (D.C. Cir. 2000).

³³ Proposed Good Neighbor FIP, *Table I.C–1: ESTIMATED MONETIZED BENEFITS, COMPLIANCE COSTS, AND NET BENEFITS OF THE PROPOSED RULE, 2023 THROUGH 2042*, page 20047. See also *Table VI.D.3–1—CHANGE IN AIR QUALITY REDUCTIONS AT RECEPTORS IN 2026 FROM PROPOSED EGU AND NON-EGU EMISSIONS REDUCTIONS*, page 20097.

The over-control in EPA’s proposed FIP is also cumulative, and impacts of the agency’s over-regulation are compounded into the future. The NO_x allocation budgets outlined in the proposed FIP for are dynamic, changing with the changing EGU fleet. There are several near-term retirements of coal-fired EGUs that EPA fails to recognize.³⁴ These retirements will significantly impact emissions in years past 2026. Therefore, control requirements in the near term after the 2026 ozone season will be more than necessary to eliminate significant contributions from implicated states. Excluding these retirement-related reductions in the agency’s forward-looking analyses equates to more pollution “on the board” than will actually emitted. By overestimating actual emissions in this manner, EPA is inflating the magnitude of controls and emission reductions needed to bring linked monitors into attainment, an obvious paradigm of over-control. To compound this by dynamically adjusting budgets downward based on these retirements, further compounds over control issues. EPA has no authority under the Good Neighbor provision of the CAA to require further emission reductions past the point of re-attainment at problem monitors.

In brief, proposed reductions have not been demonstrated to be necessary or reasonable in EPA’s analysis. Before finalizing any Transport FIP or Transport SIP disapproval, EPA should perform source-specific tagging in an updated modeling run to determine which sources or emission activities are “significantly” contributing to downwind non-attainment monitors. EPA should evaluate the pre- and post-control impacts in terms of ppb on each downwind monitor linked to the state in which the source is located. If EPA declines to do source-specific tagging for every potentially subject source, then EPA should perform a Q/D-weighted trajectory analysis to screen for sources that should be subject to control, and then tag those sources with the greatest potential for contribution to each downwind non-attainment monitor to determine significance using photochemical modeling. Any sources that don’t meet the Q/D-weighted trajectory threshold should be exempt from control under a final FIP. At the *very least*, EPA should do sector tagging for each state to identify whether the identified sectors in a state are actually “significantly” contributing to the downwind monitors that are linked to the “upwind” state.

X. Conclusion

Ultimately, EPA’s proposed FIP was rushed to publication, and even the most basic proper data procedures—QA/QC processes—were not followed to completion. To compensate, EPA instead made generalizations and imprecise assumptions at every step, and cut corners in developing a plan to satisfy requirements of the Transport Rule (i.e., to prevent significant contributions to non-

³⁴ In Arkansas, Entergy has committed to cease coal-fired operations at the White Bluff and the Independence plants, by 2028-2029 (units have different retirement dates) and 2030, respectively; Lake Catherine plant is slated to retire in 2027. In Texas, American Electric Power’s (AEP) Pirkey and Welsh power plants committed to retirement in 2023 and 2028, respectively (per NEEDS database for 2022). In Louisiana, Cleco Power and AEP (co-owners) committed to retiring Dolet Hills station in 2022 (per NEEDS database for 2022). Collectively, between Arkansas, Louisiana, Missouri, Oklahoma, and Texas, at least 43 EGU units are expected to retire between 2025 and 2031. See “needs_v6_jan_2022_comment_and_change_log” at <https://www.epa.gov/power-sector-modeling/national-electric-energy-data-system-needs-v6>.

attainment areas and interference with maintenance in recently attaining areas). EPA's hastened timeline to act and the slipshod methodology (an unfortunate necessity for EPA to meet consent decree deadlines) would result in broad over-control that EPA has not demonstrated to be cost-effective or necessary to meet requirements of the CAA. The proposed FIP is not tailored to address specific provisions of the Transport Rule or modeled to reflect circumstances of individual states and monitor linkages. As the entire foundation for the proposed FIP is the modeling and subsequent conclusions resulting from that initial flawed data, EPA's proposal falls completely flat, and the agency should rescind the FIP and relegate planning and implementation for downwind air pollution transport to the states, as envisaged by the CAA. If EPA continues to follow the path to a finalized Transport FIP, the agency should follow suggestions offered by the states during the comment periods for the proposed SIP Disapprovals and the proposed FIP to produce a sound and reasonable plan that demonstratively accomplishes the goals it intends address.

Appendix A Cover Placeholder (DEQ's SIP Disapproval Comments)

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