Institute *for* Policy Integrity

new york university school of law

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VIA ELECTRONIC SUBMISSION

Environmental Protection Agency
Attn: Mr. Tim Smith, Air Quality Policy Division,
Ms. Sonja Rodman, Office of General Counsel
a-and-r-docket@epa.gov

Subject: Comments on Federal Implementation Plans to Reduce Interstate Transport of Fine Particulate Matter and Ozone, 40 CFR Parts 51, 52, 72, 78, and 97, 75 Fed. Reg. 45,210 (Aug. 2, 2010), Docket ID No. EPA–HQ–OAR–2009–0491

The Institute for Policy Integrity at New York University School of Law submits the following comments on the Federal Implementation Plans to Reduce Interstate Transport of Fine Particulate Matter and Ozone (hereinafter "Transport Rule") released by the Environmental Protection Agency (EPA) on August 2, 2010. These comments do not provide a comprehensive assessment of the proposed regulation, but instead offer a preliminary set of suggestions for EPA.

The Institute for Policy Integrity at New York University School of Law ("Policy Integrity") is a non-partisan think tank dedicated to improving the quality of government decisionmaking through advocacy and scholarship in the fields of administrative law, economics, and public policy. Environmental protection is one particular area of focus for Policy Integrity.

EPA's preferred approach to the proposed Transport Rule will significantly advance the Agency's efforts to address the interstate transport of emissions of nitrogen oxides (NO_x) and sulfur dioxides (SO_2), but the Rule should be modified to improve efficiency and cost-effectiveness, and the Rule's justification should be clarified and strengthened. Specifically,

- EPA's preferred alternative should be modified to create a distinct intrastate assurance allowance trading mechanism to improve compliance with the statutory mandate while increasing flexibility, predictability, and cost-effectiveness;
- The determination of significant contribution should be based solely on the cost-effectiveness of emissions reductions;
- The relationship between significant contribution and variability limits should be clarified;
- An auction-based methodology should be used to allocate emissions allowances; and
- Trading should be allowed between SO_2 group one states and SO_2 group two states, with appropriate trading ratios.

I. Proposed Transport Rule

The Environmental Protection Agency proposes the Transport Rule pursuant to its authority under Clean Air Act (CAA) section 110(a)(2)(D)(i). This section requires states to submit State Implementation Plans (SIPs) that prohibit sources within that state from contributing significantly to nonattainment in, or interfering with maintenance by, any other state with respect to a National Ambient Air Quality Standard (NAAQS).[1]

In 2005, to coordinate fulfillment of this statutory requirement, EPA issued the Clean Air Interstate Rule (CAIR), which established a cap-and-trade program for sulfur dioxide and nitrogen oxide emissions to reduce pollution affecting downwind states.[2] However, in 2008, the U.S. Court of Appeals for the D.C. Circuit overturned CAIR with its opinion in *North Carolina v. EPA*, finding that the rule was "fundamentally flawed."[3]

The D.C. Circuit emphasized that EPA failed to conduct a state-specific analysis of pollution contribution and consequently could not demonstrate that its allocation of state emissions budgets met the statutory mandate. The court held that CAIR lacked reasonable measures in its regionwide trading programs to ensure that upwind states would not emit pollutants that significantly contribute to nonattainment in, or interfere with maintenance by, another state. The proposed Transport Rule is promulgated to replace CAIR.

II. Legislative and Judicial Backdrop for the Proposed Transport Rule

Title I of the Clean Air Act requires that each state adopt a State Implementation Plan (SIP) to meet primary and secondary NAAQS. The statute requires that each SIP contain adequate provisions:

> (i) prohibiting, consistent with the provisions of this subchapter, any source or other type of emissions activity within the State from emitting any air pollutant in amounts which will—
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> > (I) *contribute significantly to nonattainment in, or interfere with maintenance by, any other State* with respect to any such national primary or secondary ambient air quality standard, or
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> > (II) interfere with measures required to be included in the applicable implementation plan for any other State under part C of this subchapter to prevent significant deterioration of air quality or to protect visibility.[4]

EPA has previously issued two other major regulatory actions—the NO_x SIP Call and CAIR—pursuant to its authority under section 110(a)(2)(D) of the Clean Air Act. In response to challenges to these two actions, the D.C. Circuit has interpreted that statutory provision.

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[1] 42 U.S.C. § 7410(a)(2)(D).

[2] CAIR covered 28 states and the District of Columbia, and it sought to reduce power plant emissions of SO_2 by 70 percent and NOx by 60 percent from 2003 levels. EPA estimated that CAIR would prevent 17,000 premature deaths annually. Rule To Reduce Interstate Transport of Fine Particulate Matter and Ozone (hereinafter "Clean Air Interstate Rule" or "CAIR"), 70 Fed. Reg. 25,162 (May 12, 2005).

[3] North Carolina v. EPA, 531 F.3d 896, 929 (D.C. Cir. 2008). The D.C. Circuit initially vacated the rule in its entirety; however, in December 2008, the court reversed itself and remanded CAIR to EPA without vacatur, so that EPA could remedy the rule's flaws consistent with the court's earlier opinion. North Carolina v. EPA, 550 F.3d 1176, 1178 (D.C. Cir. 2008).

[4] 42 U.S.C. § 7410(a)(2)(D) (emphasis added).

In *Michigan v. EPA*, the D.C. Circuit upheld key aspects of the NO_x SIP Call, for which EPA defined "contribute significantly" and assigned emissions budgets for each state.[5] Most importantly, the court upheld EPA's use of cost-effectiveness criteria in defining states' significant contribution to nonattainment.[6]

In 2008, in *North Carolina v. EPA*,[7] the D.C. Circuit reviewed CAIR and found that the rule had "more than a few fatal flaws" and did not satisfy the Clean Air Act's statutory requirements.[8] The court indicated four key problems with CAIR, which any replacement to CAIR must remedy.

> *Trading Programs*: The court found that CAIR's trading programs for SO_2 and NO_x lacked reasonable measures to ensure that upwind states would not emit pollutants that contribute significantly to nonattainment or interfere with maintenance in another state, thereby violating the requirements of section 110(a)(2)(D)(i). The court phrased the statutory duty in the following manner: "EPA is not exercising its section 110(a)(2)(D)(i)(I) duty unless it is promulgating a rule that achieves something measurable toward the goal of prohibiting sources 'within the State' from contributing to nonattainment or interfering with maintenance 'in any other State.'"[9] Further, any rule that is "designed as a complete remedy to section 110(a)(2)(D)(i)(I) problems . . . must do more than achieve something measurable; it must actually require elimination of emission from sources that contribute significantly and interfere with maintenance in downwind nonattainment areas."[10]
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> *Regionwide Measurement*: The court found that by not measuring significant contribution at a state-specific level, and only seeking to ensure that emissions were adequately reduced at a regionwide level, EPA could not ensure that CAIR would achieve its statutory mandate.[11]
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> *Interference with Maintenance*: The court found that EPA failed to provide independent meaning to the "interference with maintenance" prong of section 110(a)(2)(D)(i)(I), and demanded that EPA separately identify which sources interfere with a downwind state's maintenance of air quality standards.[12]
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> *Emissions Budgets*: The court found that CAIR's state emissions budget allocations are arbitrary because they relied on Clean Air Act Title IV[13] allowances as a baseline. EPA failed to explain a correlation between Title IV allowances and the section 110(a)(2)(D) requirement to prohibit significant contribution to nonattainment in, or interference with maintenance by, downwind states with respect to the NAAQS.[14]

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[5] Michigan v. EPA, 213 F.3d 663 (D.C. Cir. 2000).

[6] *Id.* at 679 ("In sum, there is nothing in the text, structure, or history of § 110(a)(2)(D) that bars EPA from considering cost in its application."). Additionally, the court upheld EPA's approach to identifying a state's NO_x emissions that significantly contribute to downwind states' nonattainment, as well as EPA's decision to apply a uniform emissions control requirement to all upwind states despite different levels of contribution. *Id.* at 674.

[7] North Carolina v. EPA, 531 F.3d 896, 901 (D.C. Cir. 2008).

[8] *Id.* at 901.

[9] *Id.* at 907.

[10] *Id.* at 908.

[11] *Id.*

[12] *Id.* at 910.

[13] Title IV allowances use data to address acid raid. *Id.* at 917.

[14] *Id*.

III. Preferred Approach Responds to the D.C. Circuit's Interpretation of the Statute

EPA's preferred regulatory option (hereinafter "preferred approach") establishes state-specific emissions budgets, allocates emissions allowances to specific sources based on those state budgets, and then establishes four separate programs for the trading of those emissions allowances.[15] The preferred approach permits interstate trading of emissions allowances that do not exceed state emissions budgets, within certain specified variability limits.[16] The preferred approach also permits unlimited intrastate trading.[17]

In response to the decision in *North Carolina v. EPA*, the Agency's preferred approach employs state-specific emissions control requirements, as opposed to CAIR's regional cap on emissions that was then divided into state budgets. To determine these state-specific emissions budgets, EPA first uses air quality modeling to identify states that are "linked" to downwind air quality monitoring sites.[18] The Agency then quantifies the portion of each state's contribution that constitutes its significant contribution to nonattainment or interference with maintenance.[19] EPA conducts a similar analysis to determine a state's interference with another state's maintenance of NAAQS.[20]

The preferred approach authorizes two sources of variation in a state's annual emissions: limited interstate trading and allowance banking.

Limited Interstate Trading: The Transport Rule attempts to comply with the D.C. Circuit's interpretation of section 110(a)(2)(D)(i) by limiting interstate trading to ensure that an upwind state does not exceed its emissions budget in a manner that would significantly contribute to nonattainment or interfere with maintenance in a downwind state.[21] However, the Transport Rule recognizes the inherent variability in power system operations and the consequent need for interstate trading and allowance banking to prepare and respond to a source's needs.[22] As a result, in addition to the state-specific emissions budget, the Transport Rule also establishes variability limits that identify the permissible range of emissions by a state.[23] This approach allows for limited

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[15] Transport Rule at 45,214–15. These programs establish trading in annual NO_x emissions allowances, ozone season NO_x emissions allowances, SO_2 "group 1" emissions allowances (for states subject to significant SO_2 reductions), and SO_2 "group 2" emissions allowances (for states subject to moderate SO_2 reductions). Transport Rule at 45,306.

[16] Transport Rule at 45,294.

[17] Transport Rule at 45,305.

[18] States are designated as linked if they contribute one or more percent to the air quality value at the downwind site.

[19] To do so, EPA uses a four step process: (1) identify what emissions reductions are available at what cost, referred to as setting the cost curve; (2) use air quality assessment tools to estimate the impact on downwind monitoring sites of reductions at different cost-per-ton levels; (3) examine the cost and air quality information to identify cost "breakpoints," where there are noticeable changes on the cost curve, and use a multi-factor assessment (including both cost and air quality considerations) to determine the amount of emissions that represent a significant contribution; (4) quantify the emissions reductions available in each linked state at the appropriate cost threshold, to develop a state emissions budget and a variability limit associated with that budget. Transport Rule at 45,270–4.

[20] Transport Rule at 45,274. By undertaking a separate analysis to determine the interference with maintenance of the NAAQS in downwind areas, the Agency has also sufficiently addressed the D.C. Circuit's requirement that the interference with maintenance prong be given independent significance.

[21] Transport Rule at 45,215. The Transport Rule permits unlimited intrastate trading among sources within the state.

[22] Transport Rule at 45,214.

[23] Transport Rule at 45,321. The variability limit is calculated on both a one-year and three-year basis. Transport Rule at 45,321.

interstate trading and thereby provides for flexibility, while ensuring that upwind states do not unlawfully contribute to nonattainment or interfere with maintenance in a downwind state.[24]

Allowance Banking: Allowance banking is another potential source of variability in upwind state emissions. The preferred approach permits banking of emissions allowances from year to year, and in fact, EPA's emissions projections expressly anticipate some allowance banking.[25] Allowance banking should be encouraged because banking allowances increases flexibility in compliance planning, lowers costs, helps reduce market volatility, and creates incentives for early emissions reductions.

However, the preferred approach includes "assurance provisions" to ensure that if a state exceeds its emissions budget due to interstate trading or allowance banking, EPA can require sources within that state to surrender allowances to cover the state's excess emissions.[26] These provisions are designed to address the D.C. Circuit's finding in *North Carolina v. EPA* that CAIR's trading programs lacked reasonable measures to ensure that upwind states do not violate the statute's prohibition on impact on a downwind state.[27]

The preferred approach's overall structure should satisfy the D.C. Circuit requirement that the EPA "include some assurance that it achieves something measurable towards the goal of prohibiting sources 'within the State' from contributing to nonattainment or interfering with maintenance in 'any other State.'"[28] But a clearer definition of "significant contribution" and some programmatic modifications would help EPA hew even more closely to the court's interpretation of statutory language, even while improving the rule's efficiency and predictability.

IV. Consideration of Alternative Approaches

EPA also proposes two alternatives to its preferred approach, both of which are significantly less efficient.

First Alternative Approach: EPA's first alternative approach for the Transport Rule also allocates state-specific emissions budgets, as in its preferred approach, but these allowances are distributed differently due to the concentrated nature of some state power markets. Under this approach, EPA withholds a small portion of allowances allocated to large companies, and makes these allowances available for smaller generators through an annual auction.[29] The auction is designed to ensure that companies with a small market share would be able to initially purchase allowances, rather than purchase allowances from larger companies, which may risk market price manipulation.[30]

The first alternative approach does not create specific variability ranges or permit interstate trading, though it would permit unlimited intrastate trading.[31] This approach also would permit

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[24] Transport Rule at 45,306.

[25] Transport Rule at 45,297.

[26] The provision requires each source to surrender one allowance for each ton emitted over the owner's proportional share of the amount by which state emissions exceed the state budget with the variability limit. Transport Rule at 45,314. Covered sources are also subject to penalties if they fail to comply with the allowance holding requirement. Transport Rule at 45,314.

[27] North Carolina v. EPA, 531 F.3d 896, 908 (D.C. Cir. 2008).

[28] *Id.*

[29] Transport Rule at 45,327.

[30] Transport Rule at 45,327.

[31] This approach creates separate allowance trading programs within each state.

allowance banking from year to year.[32] Consequently, despite the prohibition on interstate trading, this approach would also lead to variability in total state emissions if allowance banking occurred.

EPA's first alternative approach is significantly less cost-effective because is prohibits interstate trading. EPA acknowledges concerns about the first alternative approach and notes that it is less flexible and more resource-intensive.[33] However, this approach is the only option that would include an auction system to allocate emissions allowances, although it would only auction a small portion of allowances. An auction-based method to allocate allowances would ensure the most efficient and fairest distribution of emissions allowances, and this method of allocation should be considered by EPA in its final rule.[34]

Second Alternative Approach: EPA's second alternative approach is a direct command-and-control model that is far less flexible and far less cost-effective than its other approaches. Under this approach, each state is assigned an emissions budget and each individual source is then required to meet a specified average emissions-rate limit.[35]

While on the surface EPA's second alternative approach may be easier to understand and to comply with, it would lead to fewer emissions reductions and a higher cost. EPA acknowledges serious concerns about the inflexibility and lack of cost-effectiveness of this approach, as compared to an approach that permits trading.[36]

V. Recommendations for Improvement of the Preferred Approach

EPA should adopt the preferred approach in its final rulemaking, with the following five specific improvements.

1. Create an Assurance Allowance Mechanism

Problems with the Preferred Approach

EPA's preferred approach permits the use of both intra- and interstate trading. Cap-and-trade economic models provide significant advantages over other forms of regulation by offering flexibility and by achieving emissions reductions in the most cost-effective manner. The extensive limits on trading in the two alternative approaches are inadvisable, because they impose greater costs to achieve the same level of reductions.

Even within the preferred approach, the assurance provisions create an important limit to trading. Under the current assurance provisions, if a state exceeds its total emissions budget plus the assigned variability limit (BVL), the sources within the state will be subject to an allowance surrender requirement. In years when a given state exceeds the BVL, those facilities that emit more than their share of the state BVL (as determined by the initial allocation of allowances) will be

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[32] Transport Rule at 45,326.

[33] Transport Rule at 45,330 ("[T]his option would provide certainty regarding emissions from each state. However, this option would be more resource intensive, more complex, less flexible, and potentially more susceptible to market manipulation than the other options . . . .").

[34] *See* discussion *infra* Part V.3. (explaining the value of an auction-based allocation).

[35] Transport Rule at 45,330–33.

[36] Transport Rule at 45,333 ("[T]he direct control approach described herein restricts compliance options more than a trading approach. EPA generally believes that granting more flexibility to companies in meeting an emissions reductions goal results in the ability of those companies to meet that goal at a lower cost and decreases reliability risks in the electric power system.").

required to surrender an extra allowance for each ton they emit over their proportional share of the BVL.

Therefore, each firm is given an initial allocation of allowances, reflecting a proportional share of the state budget, B_i for firm *i*. The firm is also allocated a proportional share of the budget plus variability limit, BVL_i for firm *i*. As a firm purchases allowances over B_i but less than BVL_i the price of the allowance is Þ. But, if a firm wishes to purchase total allowances for a year over the BVL_i, the effective price is Þ plus the probability that the state will exceed its variability limit times the expected price of an allowance next year: $Þ_0 + PROB_{exceed}*Þ_1$. This mechanism creates a significant degree of uncertainty for firms that are net purchasers of allowances and also has the potential to generate steep cost increases in the neighborhood of BVL_i. This uncertainty is compounded by the existence of separate one-year and three-year variability limits. The current system also puts pressure on EPA to determine B_i correctly, because an initial misallocation of permits will increase the likelihood that firms will be forced to purchase allowances in excess of BVL_i, triggering the uncertainty problem.

Further, in states that are likely to exceed their BVL, the effective price of allowances approaches $Þ_0 + Þ_1$. Any firm whose marginal abatement cost is greater than $Þ_0$ but less than $Þ_0 + Þ_1$ will then reduce its own emissions rather than purchase an allowance. But within the range between $Þ_0$ and $Þ_0 + Þ_1$ (which might be quite large), some firms in the state may have considerably lower marginal abatement costs than others, and yet these firms will not be incentivized to take advantage of such cost differences by trading. Because the current structure does not fully exploit each state's lowest-cost abatement opportunities, it is not as efficient as it could be.

Recommendation: Assurance Allowance Mechanism

EPA should consider a modification that would eliminate many of the uncertainty problems discussed above, while hewing even more closely to the judicial mandate in *North Carolina*. Through the creation of an intrastate *Assurance Allowance Mechanism* that operates in tandem with the interstate emissions trading program, EPA can provide states significant financial incentives to avoid emitting over the variability limit, while increasing predictability and flexibility for complying firms.

Under the *Assurance Allowance Mechanism*, each state would be allocated a total budget of interstate trading allowances (ITAs) for each pollutant category. These ITAs could be traded freely between and within states. States would also be allocated a budget of tradable assurance allowances (TAAs) for each pollutant category. The TAA budget would be defined as the state ITA budget plus a variability limit. TAAs would only be eligible for intrastate trading. Each firm would be required to surrender an ITA and a TAA for each ton of pollution it emits.

For states that are net exporters of ITAs, the price of TAAs will approach zero, because there will be excess supply. For states that are net importers of ITAs, the price of TAAs will increase as excess supply approaches zero.

The fixed number of TAAs will create an absolute assurance that a state will not exceed its variability limit in a given year. This rock-solid assurance will meet the requirements of *North Carolina*, but will also lead to potentially large interstate differences in marginal abatement costs, and the potential for states to "run out" of allowances if firms have not adequately anticipated their emissions requirements. To avoid these problems, EPA can increase flexibility in two ways: banking, and conversion of ITAs to TAAs at fixed conversion rates.

Banking is a preferable method for dealing with inter-year variability, compared to setting different one-year and three-year variability limits. Banking allows firms to determine how best to allocate emission over time, and prices are immediately updated to reflect changing market conditions—providing more information to facilitate planning. By allowing the creation of a reserve of TAAs, banking also helps avoid price spikes if firms have not adequately predicted their needs in a given year.

A second flexibility mechanism would allow firms to convert ITAs to TAAs. At a 1:1 conversion ratio, the maximum price of a ton of emissions would be two times the price of an ITA. This is essentially the same as the maximum price set under EPA's current preferred approach. If EPA chose, it could also increase the conversion factor, or set an increasing scale conversion factor, such that a fixed number of ITAs could be converted to TAAs at a ratio of 1:1, another fixed number of conversions could be made at a ratio of 2:1, and so on. The increasing incremental scale would enhance the financial incentives for firms to reduce in-state emissions, while creating a pressure valve at all levels of emission to avoid extreme price spikes.

This proposal has several distinct advantages over both the preferred approach and the alternative approaches. Because it can be structured to create an absolute guarantee of no emission over the variability limit, while retaining robust interstate trading, it is superior to the two alternatives to the preferred approach. This proposed assurance allowance mechanism allows EPA to home in on the *North Carolina* mandate by creating guarantees and incentives for each state to make actual reductions, even while providing for greater flexibility and lower costs than EPA's preferred approach. Compared to the preferred approach, the assurance allowance mechanism provides better predictability and certainty to firms, avoids intrastate differentials in marginal abatement costs, allows firms to base decisions on allowance prices rather than guesses about the likelihood of the entire state exceeding the variability limit, and relies less heavily on EPA to perfectly predict the proportional share of state emissions for each facility during an initial allocation.

Overall, this proposal better meets the statutory and judicial guidance while lowering costs and increasing predictably and flexibility. EPA should give this alternative close consideration.[37]

2. Cost-Effectiveness and a Clear Methodology Should Determine Significant Contribution

EPA should modify the process by which it determines significant contribution to nonattainment and interference with maintenance by basing that determination solely on the cost-effectiveness of emissions reductions. Determining significant contribution to nonattainment and interference with maintenance based on cost-effectiveness represents the most efficient and rational approach to reducing interstate transport of air pollution, and comports with relevant judicial opinions—including *North Carolina v. EPA*.

In its preferred approach, in order to determine significant contribution and interference with maintenance, EPA states that its "methodology defines each state's significant contribution and interference with maintenance as the emissions that can be eliminated for a specific cost."[38] However, when determining the appropriate cost thresholds, EPA weighs air quality and cost considerations in a "multi-factor assessment" that includes identifying "cost breakpoints" on the relevant emissions reductions cost curves. While this represents a meaningful attempt by the

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[37] *See also* Comments from Environmental Defense Fund on Transport Rule, Oct. 1, 2010 (recommending similar modifications).

[38] Transport Rule at 45,271.

Agency to address the complex set of circumstances surrounding the relationship between upwind and downwind emissions across various air quality districts, this approach is needlessly complicated and, ultimately, arbitrary. Cost breakpoints, which EPA defines as places where there are noticeable changes on emissions reductions cost curves, do not inherently correspond with the point on those cost curves that would provide the most efficient level of emissions reductions. In fact, cost breakpoints may simply reflect limitations in the data used to set the cost curve.

The most appropriate approach to determining significant contribution to nonattainment or interference with maintenance would be based solely on the cost-effectiveness of state-specific emissions reductions. EPA should determine the distribution of emissions reduction burdens between upwind and downwind sources by comparing the cost of those reductions in linked upwind and downwind states. In other words, the Agency should identify the least expensive emissions reductions that would lead to attainment or maintenance of the NAAQS in a particular air quality district, whether or not those emissions reduction opportunities are located in the upwind or downwind state. The upwind state's share of those least-cost emissions reductions should then represent that upwind state's significant contribution to nonattainment in, or interference with maintenance by, the downwind state. This approach would ensure that attainment and maintenance of the NAAQS are achieved in the most cost-effective manner.

A Cost-Effectiveness Criterion Comports with Judicial Opinions

Section 110(a)(2)(D), as well as judicial opinions interpreting that provision of the Clean Air Act, give EPA discretion to determine significant contribution to nonattainment and interference with maintenance based on the cost-effectiveness of emissions reductions in upwind states and linked downwind air quality districts. In fact, interpreting section 110(a)(2)(d) in this way is the most rational approach to reducing interstate transport of air pollution.

Neither the text nor the legislative history of the Clean Air Act Amendments of 1990 provides a clear definition of "contribute significantly." In the congressional findings that introduce the Act, however, Congress provides an important guiding principle—"A primary goal of this Act is to encourage or otherwise promote *reasonable* Federal, State, and local governmental actions, consistent with the provisions of this Act, for pollution prevention."[39] This congressional objective should help elucidate the meaning of the section 110(a)(2)(D) statutory mandate.

Ultimately, "where Congress leaves a statutory term undefined, it makes an implicit 'delegation of authority to the agency to elucidate a specific provision of the statute' through reasonable interpretation." While the word "significant" does not have a single dictionary definition, it generally operates to mean a measurable quantity.[40] According to a recent Supreme Court ruling, terms that "admit[] of degree" (such as "best," "minimize," "significant," or "reasonable") often give

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[39] 42 U.S.C. § 7401(c) (emphasis added).

[40] Defenders of Wildlife v. Norton, 239 F. Supp. 2d 9, 25 (2002) ("the word 'significant' is defined in the dictionary as a 'a noticeably or measurably large amount.") (citing Webster's Ninth Collegiate Dictionary at 1096 (Merriam-Webster Inc. 1990)); *see also* Graphic Communs. Local 1B Health & Welfare Fund "A" v. CVS Caremark Corp., 2010 U.S. Dist. LEXIS 73459 (D. Minn. 2010) ("The word 'significant' is commonly understood as 'meaningful.'") (citing Am. Heritage Dictionary (2d Coll. Ed. 1982)); Mowery v. Heckler, 771 F.2d 966, 972 (6th Cir. 1985) ("To find otherwise is to distort the meaning of the word 'significant' beyond any reasonable interpretation. Webster's Third New International Dictionary (1976) defines 'significant' in pertinent parts: 'having or likely to have influence or effect: deserving to be considered.'").

agencies discretion to consider both the costs and benefits of regulation—"Whether it is reasonable to bear a particular cost may well depend on the resulting benefits."[41]

When a statute requires an agency to achieve a particular set of benefits—in the case of section 110(a)(2)(D), attainment or maintenance of National Ambient Air Quality Standards—the agency should pursue the most cost-effective regulatory option that meets those required benefits. OMB Circular A-4 recognizes that in those situations, cost-effectiveness analysis is a "rigorous way to identify options that achieve the most effective use of resources."[42]

In *Michigan v. EPA*—a case that also dealt with EPA's interpretation of section 110(a)(2)(D)—the D.C. Circuit held that "[i]n some contexts, 'significant' begs a consideration of costs,"[43] and that "the upshot of inserting the adjective 'significant' was a consideration of which risks are worth the cost of elimination."[44] The court has also noted that since the *Benzene* decision, OSHA has interpreted '"significant risk' to require 'cost-effective protective measures.'"[45] The *Michigan* court further concluded, "there is nothing in the text, structure, or history of § 110(a)(2)(D) that bars EPA from considering cost in its application."[46]

The D.C. Circuit further addressed the permissibility of cost-effectiveness in *North Carolina v. EPA*. The *North Carolina* court stated, "EPA may require 'termination of only a *subset of each state's contribution*,' by having states 'cut [] back the amount that could be eliminated with 'highly cost-effective controls.'"[47] Relying on its holding in *Michigan*, the court in *North Carolina* stated, "we held that EPA may 'after [a state's] reduction of all [it] could . . . cost-effectively eliminate[ ],' consider 'any remaining "contribution"' insignificant."[48]

While the court in *North Carolina* cautioned that "EPA can't just pick a cost for a *region*, and deem 'significant' any emissions that sources can eliminate more cheaply,"[49] this is not the suggestion here. Instead, the cost of emissions reductions, and the share of emissions reductions required for each upwind state, should be evaluated at the *state-specific* level. This would satisfy the D.C. Circuit's requirement that significant contribution be determined at the state-specific level and would do so in the most efficient manner.

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[41] *Entergy Corp. v. Riverkeeper, Inc.*, 129 S.Ct. 1498, 1501, 1506 (2009).

[42] OFFICE OF MGMT. & BUDGET, EXEC. OFFICE OF THE PRESIDENT, CIRCULAR NO. A-4, (Sept. 17, 2003) (hereinafter OMB CIRCULAR A-4) at 11. "Generally, cost-effectiveness analysis is designed to compare a set of regulatory actions with the same primary outcome . . . .". *Id.*

[43] Michigan v. EPA, 213 F.3d 663, 677 (D.C. Cir. 2000).

[44] *Id.* (citing Industrial Union Dept., AFL-CIO v. American Petroleum Institute ("Benzene"), 448 U.S. 607, 655 (1980)).

[45] *Id.* (citing Industrial Union Dept., AFL-CIO v. American Petroleum Institute ("Benzene"), 448 U.S. 607, 655 (1980)). *See also* STEPHEN G. BREYER, RICHARD B. STEWART, CASS R. SUNSTEIN & MATTHEW L. SPITZER, ADMINISTRATIVE LAW AND REGULATORY POLICY 65 (4th ed. 1999) ("Can an agency sensibly decide whether a risk is 'significant' without examining the cost of eliminating it?").

[46] Michigan v. EPA, 213 F.3d at 679.

[47] North Carolina v. EPA, 531 F.3d 896, 918 (2008) (quoting Michigan v. EPA, 213 F.3d at 675).

[48] *Id.* at 917 (quoting Michigan v. EPA, 213 F.3d at 677, 679). Further, in addressing EPA's use of "fuel factors" to allocate NO_x budgets, the D.C. Circuit stated, "EPA's notion of fairness has nothing to do with states' section 110(a)(2)(D)(i)(I) obligations to prohibit significant contributions to downwind nonattainment."

[49] *Id.* at 918 (emphasis added).

Methodology Must Be More Transparent

Ultimately, the description in the proposed rule fails to clearly explain the details of the decisionmaking process involved in determining significant contribution to nonattainment or interference with maintenance. It is unclear from the text of the rule just how much weight is given to each of the factors considered by the Agency. In fact, it appears that EPA intends to vary the importance of both air quality and cost considerations on a case-by-case basis.[50] This ad hoc decisionmaking and lack of transparency reduce the legitimacy and effectiveness of EPA's determinations. EPA acknowledges that a key guiding principle of its efforts to reduce interstate transport of air pollution is to "Provide for Cost-Effectiveness."[51] EPA should embrace this principle, by determining significant contribution and interference with maintenance at the state-specific level based solely on a comparison of the cost-effectiveness of emissions reductions in linked states.

If EPA elects not to do so, the Agency should, at the very least, provide a clearer and more detailed description of the process by which significant contribution to nonattainment and interference with maintenance are determined. An explanation of the precise weight given to each factor in the analysis would at least increase the transparency and legitimacy of the Agency's determinations.

3. **Clarification of the Relationship Between Significant Contribution and Variability**

EPA should clarify precisely what is meant by "significant contribution." It is unclear in EPA's preferred approach whether "significant contribution" encapsulates solely the state emissions budget, or whether it also includes variability limits. If it includes only the budget, then it appears that when a state emits more than the budget but still within the variability range, the state would exceed its significant contribution in violation of the statute. However, if EPA defines significant contribution to include the variability limit in addition to the budget, then it is unclear how EPA is authorized to mandate a budget that is lower than the state's significant contribution.

From the lengthy discussion of power sector variability,[52] it appears as though EPA intends for significant contribution to vary in response to the inherent variability of the power sector. If so, it is appropriate for EPA to allocate state budgets that include such variability limits. Yet EPA must be clear about the relationship between a state's significant contribution and the state's budget and variability. Such an explanation is necessary to accurately evaluate whether EPA's preferred approach would satisfy the D.C. Circuit's interpretation of the section 110(a)(2)(D) mandate.

4. **Auction-Based Method of Allocation of Emissions Allowances**

EPA should use an auction-based method to allocate allowances to sources within each state. Under its preferred approach, EPA proposes to base allocations to existing sources on projected emissions, after elimination of some or all significant contribution to nonattainment or interference with maintenance.[53] The allocations would be permanent, because original allocations would not

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[50] Transport Rule at 45,271.

[51] Transport Rule at 45,227 ("Provide for Cost-Effectiveness: EPA believes that is important to keep both cost-effectiveness and air quality objectives in mind in addressing the CAA transport requirements. The air quality objectives of the Transport Rule are the elimination of significant contribution to nonattainment in, or interference with maintenance by, downwind states with respect to the NAAQS.").

[52] Transport Rule at 45,292.

[53] Transport Rule at 45,309.

be updated.[54] Instead, EPA would allocate allowances for several years at once, in order to support trading programs.[55] EPA would also set aside allowances to cover new sources within a state. If a source does not operate for three years, EPA would cease allocating allowances to that source.[56] However, under its first alternative approach, EPA would withhold a small portion of emissions allowances for purchase, in an annual auction, by sources with a smaller share of the generation market within the state.[57] EPA's purpose in relying on an auction for allocation is to limit direct purchase from larger generators—in essence, trading—which EPA finds may lead to market price manipulation.[58]

Auctioning all allowances would lead to the most efficient and equitable method of allocation. Under EPA's preferred approach, significant market inefficiencies would likely occur without an auction, due to inevitable inaccuracies in the initial allowance allocation. The initial allocation is based on projected emissions, which will not be updated to reflect true annual emissions. Such an allocation method is inherently error-prone, and consequently trading would be necessary to remedy the defects in the initial allocation, as some sources will exceed their initial share of the budget.[59] Unfortunately, trading is restricted under the preferred approach's assurance provisions. As explained above (pages 6-7), allocating allowances instead of auctioning them magnifies the inefficiencies and uncertainties created by the current assurance provisions. By contrast, under an annual auction, sources would start each year with a number of permits much closer to the number they will actually need. Instead of relying on trades as a corrective measure for initial misallocations, post-auction trading would mostly just respond to unexpected variability, thus serving the intended purpose of the preferred approach's variability limits: "inherent variability in power system operations."[60]

Under any regulatory alternative—EPA's preferred approach, the modifications suggested in these comments, or some other trading system—an auction is essential to prevent unfair windfalls. As soon as an emissions allowance cap is put in place, the cost of electricity and energy-intensive goods will rise, creating a price signal across the economy to save energy and reduce emissions. This effect will take place regardless of how permits are distributed, because utility companies will account for the market value of the permits, not the purchase price. Whether allowances are freely given away or auctioned off, firms will weigh the costs of reducing emissions against the revenue from selling extra allowances. The only difference is, when firms are given the valuable allowances for free, they are much more likely to pass on the windfall profits from trading to their shareholders than to their consumers, even as consumers see prices go up.[61] By contrast, when allowances are auctioned, the revenue generated can be directed back to consumers or the general public

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[54] Transport Rule at 45,310.

[55] Transport Rule at 45,310.

[56] Transport Rule at 45,310.

[57] Transport Rule at 45,327.

[58] Transport Rule at 45,327.

[59] Jonathan Remy Nash, *Allocation and Uncertainty: Strategic Responses to Environmental Grandfathering*, 36 ECOLOGY L.Q. 809, 834 (2009) ("If trading cannot be relied on to allocate the permits efficiently, the farther the initial allocation is from the efficient allocation, the greater the efficiency cost imposed. An auction will allocate the permits efficiently.").

[60] Transport Rule at 45,316. Further, by utilizing an auction allocation method, allowances would be most accurately priced. In the first alternative approach, EPA recognizes the auction method as its most accurate pricing method, and in its discussion on whether to set direct prices on allowances for smaller generators, EPA notes, "auctions would be better suited for determining the appropriate prices for allowances than EPA would be at setting fixed allowance prices for all trading programs in all states." Transport Rule at 45,327.

[61] The exception to this case is under regulated utilities, where consumers would have to rely on regulators to protect their interests by setting price ceilings.

welfare.[62] A state can direct auction funds to benefit consumers, support energy efficiency projects, or otherwise aid the state in energy investments.[63] While EPA notes its concerns about the use of revenues generated by an EPA-run auction,[64] EPA should consider the creation of incentives to encourage states to adopt auction-based methods to allocate allowances.

5. Trading Between SO_2 Groups

The Transport Rule divides states into two groups based on the significance of their SO_2 emissions to downwind impacts. Under its preferred approach, EPA does not permit trading between the two separate groups. By limiting the size of the marketplace, this restriction will reduce the opportunities to take advantage of the lowest-cost abatement opportunities, without creating any measurable benefit to the environment or public health. Since EPA will already ensure that every state is taking reasonable measures to reduce its significant contribution (either through the current assurance provisions or the modifications recommended in these comments), the prohibition on intergroup trading is not necessary to comply with statutory mandates. To the extent the harms caused by SO_2 emissions vary with geographic origin, trading ratios could be established to account for marginal damage differences, without interfering with a more open and efficient trading scheme. For example, firms operating in group one states might be required to submit two allowances for each ton of emissions, versus only one allowance required in group two states.

Because the prohibition on intergroup trading raises costs without providing benefits, EPA should remove it and allow trading among all states. EPA should also study the potential benefits of using trading ratios to govern trades between states in group one and group two. If trading ratios would increase net benefits at an acceptable administrative cost (because of significant disparity in marginal damages and/or wide variation in marginal abatement costs), EPA should adopt such an approach.[65]

Conclusion

EPA's preferred approach takes a significant step forward in addressing the interstate transport of emissions of nitrogen oxides and sulfur dioxides. But before it finalizes new rules, EPA should reconsider its methodology and provide greater transparency in its approach. In particular, EPA

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[62] There is broad support for allocating emissions allowances by auction within the economics and public policy communities, which recognize the cost-effectiveness and efficiency outcomes created by the auctioning of allowances. "[T]here are compelling arguments for the superiority of auctioned permits. First, auctions are more cost-effective in the presence of certain kinds of transactions costs. Second, the revenue raised by an auction mechanism can be used to finance a reduction in some distortionary tax . . . . Third, auctions provide greater incentives for firms to develop substitutes for regulated products, by requiring firms to pay for permits rather than giving them rents. Fourth, the revenue raised by auctions may provide administrative agencies with an incentive to monitor compliance." Nathaniel O. Keohane, Richard L. Revesz & Robert N. Stavins, *The Choice of Regulatory Instruments in Environmental Policy*, 22 HARV. ENVT'L L.REV. 313, 316 n.19 (1998) (internal citations omitted). *See also* Michael Abramowicz, *The Law-and-Markets Movement*, 49 AM. U. L. REV. 327, 353 n.112 (1999) ("[A]uctions may be both a fairer and an economically more efficient means of distributing pollution entitlements than preservation of the status quo.").

[63] A per capita refund is likely the fairest and preferred method.

[64] Transport Rule at 45,353 (noting that it did not propose using auction revenues to support energy efficiency projects because the requirements of the Transport Rule would be implemented through a Federal Implementation Plan (FIP), rather than a State Implementation Plan (SIP), and that under a FIP, EPA would allocate allowances according to the rule's requirements, whereas under a SIP, states would have flexibility to allocate or auction allowances in their budget and use revenues to support energy efficiency projects).

[65] *See also* Comments from Environmental Defense Fund on Transport Rule, Oct. 1, 2010 (recommending similar modifications).

should consider an assurance allowance mechanism, focus exclusively on cost-effectiveness in its determination of significant contribution and interference with maintenance, clarify the relationship between significant contribution and variability limits, implement an auction-based method of allowance allocation to sources within each state, and permit intergroup trading. These more cost-effective measures would maximize net benefits while ensuring that upwind states would not emit pollutants that significantly contribute to nonattainment in, or interfere with maintenance by, another state.

Respectfully submitted,

Michael A. Livermore
Peter Miljanich
Adrienne Rose
Jason A Schwartz

Institute for Policy Integrity
New York School of Law