



August 3, 2020

**Board of Directors**

Gilonne d'Origny  
Robert Glicksman  
Michele Janin  
Alice Kaswan  
Thomas McGarity  
Joel Mintz  
Laurie Ristino  
Sidney Shapiro  
Amy Sinden  
Robert R.M. Verchick

Administrator Andrew Wheeler  
U.S. Environmental Protection Agency  
1200 Pennsylvania Avenue, NW  
Washington, D.C. 20460

RE: Comments on Notice of Proposed Rulemaking on Increasing Consistency and Transparency in Considering Benefits and Costs in the Clean Air Act Rulemaking Process, Docket Number EPA–HQ–OAR–2020–00044

Dear Administrator Wheeler:

Thank you for the opportunity to comment on the Environmental Protection Agency's (EPA) Proposed Rulemaking on "Increasing Consistency and Transparency in Considering Benefits and Costs in the Clean Air Act Rulemaking Process" (RIN: 2060-AU51) [hereinafter the "Proposal"].

**Advisory Council**

Patricia Bauman  
Frances Beinecke  
Eula Bingham  
W. Thompson Comerford, Jr.  
Sally Greenberg  
John Passacantando  
Henry Waxman  
Robert Weissman

We, the undersigned, are Member Scholars and staff with the Center for Progressive Reform (CPR), a non-profit research and educational organization that works to build thriving communities on a resilient planet. We have expertise in environmental and administrative law and regulatory policy. Collectively, we have spent the last several decades studying and writing on the topic of cost-benefit analysis and its application to environmental regulation in the form of dozens of books, journal articles, reports, op-eds, and speeches, testimony, and other public presentations.

CPR's mission is to educate, collaborate and advocate with the goal of driving public policy reform through rigorous and accessible legal analysis. CPR operates with a network of more than 60 Member Scholars who are leaders in various legal academic fields, and a professional staff of policy analysts, communication experts, and others. We work together to advance the idea that government safeguards and other regulations are key to social justice and planetary health. Our website may be found at

[www.progressivereform.org](http://www.progressivereform.org). Responses to the comments below may be sent to James Goodwin at [jgoodwin@progressivereform.org](mailto:jgoodwin@progressivereform.org).

As explained in detail below, we have several concerns with both the form and substance of this Proposal. On the basis of these concerns, and in light of the EPA's limited budgetary resources, we conclude that the agency should abandon this rulemaking.

## Overview

The Proposal's provisions are conspicuously aimed at further rigging the EPA's cost-benefit analysis against the kind of robust environmental and public health protections that Congress has charged the agency with implementing under statutes like the Clean Air Act. In this regard, the Proposal would build on a decades' long strategy devised by opponents of regulations to use the cost-benefit analysis methodology as a tool for blocking or weakening vital safeguards.

Nearly all of the Proposal's provisions are aimed at creating an elaborate and excessively burdensome set of procedures for completing cost-benefit analysis that would be practically impossible for the agency to satisfy and would be prohibitively costly to complete. Some of the more objectionable of these provisions are those relating to defining the analytical baseline and characterizing uncertainty in the analysis. Another set of concerning provisions relate to the issue of quantifying health endpoints. By mandating that the scientific studies meet arbitrary and impossible-to-satisfy standards before they are eligible to be considered by the agency, these provisions would likely prevent the EPA from using high-quality, cutting-edge science to support its estimates of public health benefits. All of these provisions would have the effect, if not the intent, of changing the EPA's methodology for conducting cost-benefit analysis in ways that would (1) make it harder to use these analyses' results to support stronger regulations and/or (2) make it easier for regulated industry to challenge stronger regulations on the basis of those analyses.

At the same time, the Proposal ignores obvious opportunities for improving the EPA's cost-benefit analysis in ways that would have the effect of supporting stronger rules. Such "best practices" might include better accounting tools for qualitatively described benefits or new analytic approaches that would give greater attention to cumulative burdens suffered by historically marginalized groups and other similar distributional concerns.

At the heart of the Proposal's provisions is the unrealistic assumption that the EPA has ready access to extensive comprehensive and granular data on the precise impacts to human and ecological health caused by each of the hundreds of pollutants it regulates. This assumption has no grounding in reality, however. Indeed, a close review of the EPA's past cost-benefit analyses makes immediately apparent the large data gaps

under which the agency must operate if it is to fulfill its statutory mandates to protect people and the environment.<sup>1</sup> Congress was well aware of the data gaps the EPA will face in measuring regulatory impacts when it wrote the original Clean Air Act as well as the later updates. That is why Congress chose to build the statute around a distinctly precautionary approach, as recognized in *Ethyl Corp. v. EPA*, 541 F.2d 1 (D.C. Cir. 1976). By adopting its myopic focus on quantification and monetization, the Proposal thus flies in the face of that conscious policy choice by Congress and undermines the precautionary approach embedded in the Clean Air Act. Despite these clear data gaps, the Proposal nonetheless blithely assumes that complete quantification and monetization is the norm and that departures are the rare exception.

Additionally, the proposed rule threatens the quality and scientific integrity of EPA's risk assessment practices. The Proposal states that it seeks to mold agency risk assessments so that they better serve as "inputs" "for use in BCAs [cost-benefit analyses]," and sets forth "best practices" accordingly. But cost-benefit analysis, with its insistence on aggregation of individual impacts is an inappropriate lodestar for EPA risk assessments under the Clean Air Act. Such assessments should instead seek to present a fulsome analysis of adverse human health impacts (mortality and morbidity) to all individuals, accounting for their varying susceptibilities and exposures. Although the Proposal purports to direct the preparation of risk assessments merely for purposes of a "procedural" requirement – one that is to be performed as part of the cost-benefit analyses that the EPA is required to present alongside its significant Clean Air Act regulations – it is difficult to imagine that the rule will not have the effect of shaping risk assessment practices and regulatory choices based on them as a substantive matter as well.

Even more troubling, the Proposal goes against the specific recommendations of the National Academies of Sciences, Engineering and Medicine (NAS) with respect to best practices for risk assessment, while purporting only to follow NAS advice. As recounted – selectively – in its Rationale and Summary of the Proposed Requirements, the proposed rule "include[s] elements that are responsive to" and "build[] off" the recommendations of the NAS regarding risk analysis, including those that resulted in the issuance of the White House Office of Management and Budget's (OMB) and Office of Science and Technology Policy's (OSTP) 2007 *Updated Principles of Risk Analysis*.<sup>2</sup> However, the Proposal *also* includes several elements that were flatly denounced by the NAS in its review of the precursor to the 2007 *Updated Principles*; the NAS ultimately recommended that this precursor document, OMB's 2006 *Proposed Risk Assessment Bulletin*, be rejected because of flawed provisions like these. For example, the proposed rule revives a requirement that expected benefits be determined based on "the central tendency of risk," a requirement that the NAS had explicitly cited as among the

---

<sup>1</sup> Amy Sinden, *The Problem of Unquantified Benefits*, 49 ENVTL. L. 73 (2019).

<sup>2</sup> Increasing Consistency and Transparency in Considering Benefits and Costs in the Clean Air Act Rulemaking Process, 85 Fed. Reg. 35612, 35618 (proposed June 11, 2020) (to be codified at 40 C.F.R. pt. 83).

problems with the OMB's 2006 OMB *Proposed Risk Assessment Bulletin*.<sup>3</sup> This and other specific provisions are discussed at greater length below. It is notable and ironic, however, that in a proposed rule supposedly designed to enhance transparency, the EPA misrepresents the NAS's support for its requirements.

Tellingly, the Proposal's preamble does not and cannot identify any concrete examples of the EPA's previous cost-benefit analyses that were so fundamentally deficient or flawed as to threaten the agency's effective and efficient achievement of the Clean Air Act's goals. Over the course of several *Federal Register* pages, the preamble lays out the familiar legal and policy arguments in support of performing cost-benefit analyses as part of regulatory development. Yet, nowhere does it explain how any of the EPA's previous cost-benefit analyses have fallen short of any applicable legal requirements or failed to deliver on their purported policy benefits. Nor does it attempt to make the case that such shortcomings are so widespread among the EPA's cost-benefit analysis practices that the Proposal is necessary and would succeed as a corrective measure.

More to the point, nowhere does the preamble make the case that there has been any pattern of *inconsistency* or *inadequate transparency* that actually plagues the EPA's historic practice of cost-benefit analysis, which one might expect to see in a rule that is entitled "Increasing Consistency and Transparency in Considering Benefits and Costs in the Clean Air Act Rulemaking Process." In the more than the three years that the EPA has devoted to developing this rulemaking, it is revealing that the agency is unable to identify even a single cost-benefit analysis that merits this regulatory response – indeed, that there is any "problem" that this Proposal would actually solve. To the contrary, among its sister agencies, the EPA is generally regarded as the "gold standard" for the quality of its regulatory cost-benefit analyses.

At best, the preamble alludes indirectly to the 2016 "appropriate and necessary" finding for the EPA's Mercury and Air Toxics Standard (MATS) rule. In that finding, the EPA relied in part on the significant enormous co-benefits that the MATS rule was expected to generate by reducing particulate matter pollution to support its conclusion that the Clean Air Act's unique statutory trigger for regulating mercury and other toxic air pollutants from fossil-fueled power plants had been satisfied. Despite the fact that the EPA had used co-benefits in this manner consistently and transparently for over a decade, the Trump administration manufactured a controversy out of this particular instance. Of course, few outside of the Trump administration share the view that there is anything wrong with the manner in which co-benefits were used in the MATS rule "appropriate and necessary" finding, and fewer still would use the episode as a basis for indicting the EPA's entire approach to the methodology.

---

<sup>3</sup> NAT'L ACAD. SCI., ENGINEERING, & MED., SCIENTIFIC REVIEW OF THE PROPOSED RISK ASSESSMENT BULLETIN FROM THE OFFICE OF MANAGEMENT AND BUDGET, ch. 5 (2006), available at <https://www.nap.edu/read/11811/chapter/7> [hereinafter "NAT'L ACAD. SCI., ENGINEERING, & MED., SCIENTIFIC REVIEW"].

Worse still, this controversy had the unfortunate effect of distracting from a much larger shortcoming in the EPA's cost-benefit analyses – namely, its failure to properly account for significant benefits categories that can only be described in qualitative terms, as noted above. The MATS rule is paradigmatic case of this problem, due to the inability of cost-benefit analysis to account in quantitative terms for anything but a fraction of a fraction of the direct benefits that the rule would generate. The “appropriate and necessary” finding could only account for a tiny subset of the benefits that would result from reduction in mercury pollution, and it likewise failed to account entirely for the full range of benefits that would result from reductions in several other non-mercury hazardous air pollutants, including arsenic, lead, and cadmium.

All of this makes clear that the real purpose of the Proposal is to advance the Trump administration's broader effort to weaken the EPA rather than a good faith effort to improve the agency's regulatory impact analysis.

Even assuming the Proposal does represent a good faith effort at pursuing the otherwise admirable goal of improving the EPA's ability to understand the impacts of its future Clean Air Act regulations, the approach it takes is fundamentally misguided. It is unlikely that compliance with the Proposal's procedures would appreciably improve the quality of the EPA's Clean Air Act rules. And even if the procedures did lead to better quality regulatory decision-making, the benefits that result would be minuscule compared to the costs of complying with this rule's procedures, including the harms imposed on society by delay of beneficial regulations. *In short, the Proposal itself would not pass a cost-benefit test.*

Consideration of regulatory costs and benefits is a complex, context-sensitive enterprise that cannot be codified in a one-size-fits-all formula. Guidance documents provide a much more appropriate forum for setting out best practices for cost-benefit analysis. That is precisely the approach previous administrations have taken in both OMB's *Circular A-4* and EPA's own *Guidelines for Preparing Economic Analysis*. Indeed, EPA is currently in the process of updating its *Guidelines*. A better, more flexible, and efficient approach to accomplishing the Proposal's purported goals would be instead to simply consolidate the Proposal into the *Guidelines* update.

As the forgoing makes clear, the Proposal solves no real problem. Thus, in light of the other pressing challenges that the EPA faces related to accomplishing its statutory mission under the Clean Air Act, and in light of the significant and persistent resource constraints under which the EPA must operate, the agency should abandon this unnecessary and wasteful rulemaking altogether. If the EPA feels compelled to address this issue at all, it should instead focus its efforts on the currently ongoing process to update the agency's *Guidelines for Preparing Economic Analysis*. In particular, the agency should seek to update these *Guidelines* to better account for distributional

concerns, disproportionate cumulative burdens on historically marginalized communities, and qualitative assessments of non-market goods, as described in our comments below.

### **The Clean Air Act Does Not Authorize the EPA to Issue the Proposal**

The EPA claims to find authority for the Proposal in the Clean Air Act's "housekeeping" provision, which authorizes the EPA administrator to "prescribe such regulations as are *necessary* to carry out his functions under this chapter." 42 U.S.C. 7601(a)(1) [emphasis added]. In interpreting similar housekeeping provisions in other statutes, the federal courts have been clear that these provisions do not offer agencies carte blanche to issue any regulations they wish. Two recent decisions from the U.S. Court of Appeals for the D.C. Circuit have construed similar housekeeping provisions to identify and enforce significant restrictions on their use. In both cases, the court vacated the rules at issue after finding these actions had exceeded the authority granted the agencies by their respective housekeeping provisions.

First, *Merck vs. HHS*, No. 19-5222 (D.C. Cir. June 16, 2020) involved the Social Security Act's housekeeping provision, which similarly authorizes the Secretary of the Department of Health and Human Services to "make and publish such rules and regulations, not inconsistent with [the Social Security Act], as may be *necessary* to the efficient administration of the functions with which [the Secretary] is charged" [emphasis added]. The court held that for a particular regulation to be "necessary" to the administration of a program, the agency needed to "demonstrate an actual and discernible nexus" between the two.<sup>4</sup> In contrast, the absence of such a nexus would weigh heavily against finding that an agency had the authority to issue the rule in question: "[T]he further a regulation strays from truly facilitating the 'administration' of the Secretary's duties, the less likely it is to fall within the statutory grant of authority."<sup>5</sup>

Second, *New York Stock Exchange v. SEC*, No. 19-1042 (D.C. Cir. June 16, 2020) involved the housekeeping provision of the Securities Exchange Act of 1934, which gives the Securities and Exchange Commission (SEC) "power to make such rules and regulations as may be *necessary or appropriate* to implement the provisions" [emphasis added] of the Act. As a preliminary matter, the court explained that such housekeeping provisions do not function as grants of novel rulemaking authority beyond what the statute provides.<sup>6</sup> The court also faulted the SEC's rule in that case because the agency failed to identify any concrete problem the rule was meant to solve. As the court put it, rules issued pursuant to housekeeping provisions ordinarily "are not adopted in search of regulatory problems to solve; they are adopted to correct problems with existing regulatory requirements that an agency has delegated authority to address."<sup>7</sup>

---

<sup>4</sup> *Merck*, No. 19-5222, at 12.

<sup>5</sup> *Id.* at 13.

<sup>6</sup> *New York Stock Exchange*, No. 19-1042, at 25.

<sup>7</sup> *Id.* at 27.

Each of these principles weighs heavily against finding that the Proposal constitutes a legitimate exercise of the EPA's rulemaking authority under its housekeeping provision. To begin with, the Proposal is in no way "necessary" for carrying out the Clean Air Act. If anything, the cost-benefit analysis procedures it mandates are at best superfluous and at worst expressly prohibited by some of the statute's provisions.

As noted above, when Congress wrote the Clean Air Act and subsequent updates, it well understood that systematic data gaps would render impossible the meaningful use of cost-benefit analysis to guide regulatory decision-making. As a result, it deliberately chose to build the law's provisions on a precautionary foundation instead so that such data gaps would not artificially block its implementation. Congress specifically sought to accomplish this by directing the EPA to use feasibility standards for virtually all the standard setting called for by the Act. Such feasibility standards allow for rational decision making in the absence of comprehensive data on the impacts of pollutants on human and ecological health. The Proposal flies in the face of that conscious policy choice by Congress and undermines the precautionary approach embedded in the Clean Air Act.

To be sure, there is some utility to having an honest accounting of the potential impacts that a rule under development might have. But this alone is not sufficient to establish an "actual and discernible nexus" between the Proposal and the effective implementation of the Clean Air Act. The Proposal's complex and burdensome requirements go well beyond accomplishing this modest objective. More to the point, ample experience has shown that the EPA is more than capable of promoting sound regulatory impact analysis through the use of guidance documents, rather than through the use of enforceable rules. Thus, it is clear that this Proposal "strays" very far from "from truly facilitating" the implementation of the Clean Air Act.

In addition, the preamble fails to define what problem the Proposal is even meant to solve. It points to no examples of flawed cost-benefit analyses. Nor does it explain how the EPA's previous attempts to conduct cost-benefit analyses have been marked by insufficient "consistency" or "transparency." In short, the Proposal has all the trappings of a rulemaking "adopted in search of regulatory problems to solve." For this reason, too, the Proposal exceeds the bounds of the authority granted to the EPA through the Clean Air Act's housekeeping provision.

## **Criticisms of Specific Provisions**

### **Codification of Cost-Benefit Analysis Procedures**

As a threshold matter, we are gravely concerned about the Proposal's attempt to codify in the form of a judicially enforceable regulation an elaborate and burdensome set of one-size-fits-all requirements that the EPA must satisfy when conducting cost-benefit

analyses for all of its “significant” Clean Air Act rules. The language of the Proposal makes it clear that the EPA is obliged to follow these procedures in developing its cost-benefit analysis. While the preamble uses the more anodyne term “best practices,” the actual text of the rule places these provisions under the subtitle “What *requirements* apply to EPA’s preparations of Benefit-Cost Analyses (BCAs) under the Clean Air Act?” [emphasis added] In addition, the mandatory term “must” is used consistently throughout these provisions instead of a discretionary term like “may.”

The likely negative consequences of this aspect of the Proposal are clear. The elaborate requirements of the Proposal will give regulated industries no shortage of avenues for challenging future rulemakings, potentially tying them up in wasteful and time-consuming litigation. Future rulemakings will be delayed significantly as the EPA seeks to address every imaginable detail in the required analyses and procedures in order to “bulletproof” the rule against these inevitable legal challenges.

If the burden of complying with these requirements proves too great or entails too much legal risk, the agency may even engage in “self-censorship” – that is, artificially reducing the protections afforded by a rule to minimize or avoid those burdens or risks. In short, the procedures imposed by this Proposal risk deterring the EPA from faithfully carrying out its responsibilities under the Clean Air Act.

Several of the Proposal’s requirements will cause delay and promoting wasteful litigation, including those relating to defining the right “baseline scenario” for the analysis, the procedures for “quantifying health endpoints,” and the requirements for “uncertainty analysis.” Another troubling feature of the Proposal in this regard is the repeated requirement that the EPA provide a “reasoned explanation” for any departures from the procedural analytical requirements. The Proposal does not make clear what would constitute a “reasoned explanation,” and it seems likely that the EPA’s future attempts to satisfy this requirement will become frequent targets of litigation.

Another negative consequence of the Proposal’s codification approach is that it would tie up future efforts by the EPA to update its cost-benefit analysis practices to fine tune them or to account for innovations in the methodology. To do so, the agency would have to resort to the cumbersome rulemaking process.

All of these concerns regarding the codification of detailed cost-benefit analysis practices in an enforceable rulemaking reinforce our contention that any good faith objectives of the Proposal – that is, improvements in the EPA’s regulatory impact analysis practices – would best be accomplished through a guidance document.

## Cost-Benefit Analysis ‘Best Practices’

### Statement of Need

We disagree with Proposal’s attempt to frame the “statement of need” for a regulation in terms of market failures. To be sure, many of the problems that the Clean Air Act seeks to address do arise from market failures, most notably externalities. But even in these cases, it is fundamentally misleading to characterize the problem strictly in terms of market failures for the purposes of implementing the Clean Air Act. Doing so risks prejudging the appropriate regulatory response in a way that runs counter to the clear goals and requirements of the Clean Air Act. The Clean Air Act was not written as a “market failure” statute,” and it reflects a conscious decision by Congress not to make efficiency the lodestar for standard setting.

Instead, the Clean Air Act is better thought of as a statute of “social regulations” that seeks to promote the general welfare through enhanced public health and environmental protection. A Proposal that directed the EPA to define its statement of need with reference to how a particular regulation would advance the relevant social goals of the Clean Air Act would be more consistent with the statute.

Indeed, because the Clean Air Act is principally concerned with social goals, it grants the EPA the authority to regulate even in the absence of a demonstrated market failure. Thus, to force the EPA to identify a market failure as a precondition to regulating under the statute would serve to artificially circumscribe the authority delegated to the agency by Congress.

In sum, we urge the EPA to remove any reference to market failures from its requirements relating to the preparation of a “statement of need” for cost-benefit analyses.

### Defining the Baseline Scenario

We agree that defining the baseline scenario is one of the most important elements of a regulatory impact analysis. We also agree that the three factors that the Proposal specifically directs the EPA to consider as part of its baseline analysis – exogenous economic conditions, the impacts of other regulations, and the prevalence of compliance with those regulations – are all important to that task. But we contend that these provisions epitomize the folly of the Proposal’s basic design, which involves an attempt to reduce this kind of complex analysis to a rigid, one-size-fits-all formula made enforceable through regulatory codification.

For example, potentially relevant exogenous economic conditions could be seemingly boundless or inherently unknowable. No matter what kind of good faith effort the EPA makes to satisfy this element of analysis, no matter how far EPA takes it speculative inquiries regarding these matters, a creative industry attorney will always be able to find something the agency missed, or find some way to second guess a good faith judgment

by the EPA on some subjective issue, such as a change in consumer preference. The other two listed factors are similarly marked by indeterminacy and subjectivity. Moreover, all of these factors are dynamic and constantly changing. This will also open the EPA's judgments to good faith errors and provide still more opportunities for second-guessing by industry challengers.

In short, this requirement will prove impossible to satisfy in practice. No matter how many resources the EPA expends on its pursuit, and no matter how long its future Clean Air Act rulemakings become delayed, regulated industries will still likely be able to find defects in the EPA's analytical baseline. This will give them seemingly endless opportunities to tie up future rules in endless litigation.

The presence of provisions like this supports our broader call for the EPA to abandon its efforts to codify agency cost-benefit analysis procedures in rigid terms that would be judicially enforceable. To the extent that the EPA wishes to ensure a proper baseline analysis in its cost-benefit analysis, it would be better achieved through discretionary terms presented in the form of a guidance document that would permit the agency to adjust the analysis to the unique characteristics of the particular pollutant and Clean Air Act rule at issue.

### Measuring Costs

We oppose the Proposal's attempt to frame the concept of regulatory costs in terms of opportunity costs. We find this framing particularly misleading because the Proposal describes these opportunity costs in terms of "divert[ing] resources from activities with a higher net return in private markets alone." This conception of opportunity costs assumes that businesses spared regulatory costs will make productive use of that money such as investments in capital or hiring instead of using the money for non-investment purposes, such as stock buybacks or corporate mergers. Recent experience with corporate tax cuts provides ample evidence of how unrealistic this assumption is, as many corporations have used their tax savings, for example, to fund stock buybacks while making only modest increases in hiring and capital investments.<sup>8</sup> Moreover, where compliance costs are passed on to consumers, those costs do not impact investments. In addition, the extent to which regulations or taxes impair total private investments is sensitive to assumptions made in macroeconomic modeling.

The practical effect of this false assumption is to systematically overestimate regulatory costs by making the opportunity costs look bigger than they really are. In turn, overestimates of regulatory costs would skew the results of the EPA's cost-benefit analysis against stronger Clean Air Act rules.

---

<sup>8</sup> Damian J. Troise, *US Companies' Tax Windfall Fuels Record Share Buybacks*, AP, Apr. 4, 2019, <https://apnews.com/438fae12f9204b1fbd8e8b1985ae554f> (last visited Aug. 3, 2020).

### Benefits Estimates

We reject as arbitrary and biased the Proposal's default choice to adopt willingness-to-pay (WTP) as the "correct measure" for regulatory benefits. The adoption of a WTP default in cost-benefit analysis has long generated controversy in regulatory policy debates for the bias it introduces into cost-benefit analysis. As compared to willingness-to-accept (WTA) measures, WTP systemically underestimates the value of regulatory benefits because it is constrained by individuals' ability to pay. The WTP bias is even more pronounced for regulations that uniquely benefit low-wealth individuals, and especially those from historically marginalized communities, and thus has the pernicious effect of introducing social injustice and structural racism into the results of cost-benefit analysis. Yet, nowhere does the Proposal acknowledge this controversy with WTP measures, much less grapple with it in defending its choice to adopt this measurement approach.

We urge the agency to abandon the WTP approach and adopt a WTA approach to measuring regulatory benefits instead.

### Measuring Health Endpoints

The Proposal threatens the quality and scientific integrity of the EPA's risk assessment practices. Myriad elements of the Proposal would arbitrarily depart from scientific norms, bias the outcome of agency risk assessments, and undermine their usefulness for Clean Air Act rulemakings.

First, the Proposal inappropriately winnows the health endpoints to be considered. It eschews long-standing, scientifically accepted principles for considering and evaluating the evidence of risk from environmental contaminants. It does this by limiting analysis to "endpoints for which the scientific evidence indicates there is a (a) clear causal or likely causal relationship between pollutant exposure and effect, and subsequently, (b) an anticipated change in that effect in response to changes ... as a result of the regulation under analysis,"<sup>9</sup> or, alternatively, to "endpoints for which there is a positive WTP conditional on the scientific literature."<sup>10</sup> Additionally, it would introduce outcome-driven bases for selecting among and considering concentration-response functions. For example, it would provide that "[d]ecisions about whether and which changes in health benefits should be quantified should be informed by the Agency's evaluation of ... the nature of the concentration-response function."<sup>11</sup> Further, it would stipulate that "[w]hen selecting among multiple concentration-response functions, ... [d]ecisions should also consider the sensitivity of net benefits to the choice of concentration-response functions."<sup>12</sup> The NAS has long urged that risk assessments remain separate from and

---

<sup>9</sup> Increasing Consistency and Transparency in Considering Benefits and Costs in the Clean Air Act Rulemaking Process, 85 Fed. Reg. at 35620.

<sup>10</sup> *Id.*

<sup>11</sup> *Id.*

<sup>12</sup> *Id.* at 35621.

not be beholden to risk management or policy designs.<sup>13</sup> Similarly, the EPA's *Framework for Human Health Risk Assessment to Inform Decision Making* states that "the Framework does not allow for the manipulation of the risk assessment to support predetermined policy or management choices."<sup>14</sup>

Second, the Proposal significantly and arbitrarily restricts the scientific data that the EPA may consider, again departing from accepted scientific norms and potentially excluding valid scientific information. On questionable grounds, the Proposal cabins the studies that the EPA may consider, imposing particular limitations on epidemiological studies. Among other things, the Proposal inappropriately requires that "the pollutant analyzed in the study matches the pollutant of interest in the regulation," and, for epidemiological studies, further stipulates that "the study location must be appropriately matched to the analysis," and that "the study population characteristics must be sufficiently similar to those of the analysis."<sup>15</sup>

The Proposal's terms (e.g., "matches," "appropriately matched," and "sufficiently similar") are vague and not scientifically defined; they are therefore susceptible to manipulation. They set the stage for rejecting scientifically valid studies that would be relevant under ordinary scientific risk assessment principles. Among other things, these terms suggest bases for excluding studies focused on particular locations (e.g., "fenceline" or downwind communities), lifestages (e.g., children, pregnant women, or older adults), and/or circumstances of exposure (e.g., high-end consumers of fish contaminated via deposition of air pollutants) – ultimately undermining the EPA's ability to consider impacts to sensitive populations.

At the same time, the Proposal mandates consideration of studies that reach a particular result. Specifically, the Proposal directs the EPA to include those "studies that do not find a significant concentration-response relationship" when there are multiple studies that satisfy its criteria for consideration.<sup>16</sup> This directive, too, is at odds with established scientific practice.

In a related vein, the Proposal directs the EPA to consider the "age of the air quality data,"<sup>17</sup> as opposed to the *quality* of the air quality data. This provision appears to take aim at the older, seminal studies that underpin many of our nation's most effective air quality regulations, but to do so on grounds other than their scientific validity.

---

<sup>13</sup> NAT'L ACAD. SCI., ENGINEERING, & MED., *SCIENCE AND DECISIONS: ADVANCING RISK ASSESSMENT* (2009), available at <https://www.nap.edu/catalog/12209/science-and-decisions-advancing-risk-assessment>.

<sup>14</sup> U.S. ENVTL. PROTECTION AGENCY, *FRAMEWORK FOR HUMAN HEALTH RISK ASSESSMENT TO INFORM DECISION MAKING* (EPA/100/R-14/001, 2014), available at <https://www.epa.gov/sites/production/files/2014-12/documents/hhra-framework-final-2014.pdf>.

<sup>15</sup> Increasing Consistency and Transparency in Considering Benefits and Costs in the Clean Air Act Rulemaking Process, 85 Fed. Reg. at 35620-21.

<sup>16</sup> *Id.* at 35621.

<sup>17</sup> *Id.*

In sum, these requirements for studies' "standards" and "attributes" depart from accepted scientific principles for evaluating scientific evidence and thus undermine, rather than enhance, scientific integrity.

Third, the Proposal sets forth methods and definitions that substantively and controversially alter accepted risk assessment practice under the guise of merely "presenting" an effects estimate. The Proposal directs the EPA to "pool" or "combine" the results of studies with differing concentration-response relationships,<sup>18</sup> where possible. Such broad-brush "pooling," however, is not supported by established scientific principles and is likely to misrepresent the available evidence. For example, "pooling" across studies is likely to dilute the import of one or a few high-quality studies demonstrating effects of concern (e.g., recent studies demonstrating that particulate matter follows a non-threshold concentration-response function, with effects even at very low levels), where there are more numerous studies finding little effect. In this example, the high-quality studies ought to be given greater weight in accordance with these established principles for considering the breadth and weight of scientific evidence. Similarly, "pooling" results can flatten out or obscure from view greater effects experienced by sensitive populations or in particular locations. For ozone and particulate matter, for example, evidence suggests that adverse health effects (including mortality, cardiovascular effects, and respiratory effects) are more pronounced at levels below the current National Ambient Air Quality Standards (NAAQS) for the elderly, children, low-income individuals, and African Americans.<sup>19</sup>

The Proposal also directs the EPA to report "probability distributions" for expected benefits, and where this is not feasible, use "measures of central tendency of risk," emphasizing that "[u]pper-bound risk estimates must not be used unless they are presented in conjunction with lower bound and central tendency estimates."<sup>20</sup> Relatedly, the proposed rule language defines "expected value" as

[a] measure of the central tendency of a set of data . . . usually the average or mean of the data. For a variable with a discrete number of outcomes, the expected value is calculated by multiplying each of the possible outcomes by the likelihood that each outcome will occur and then summing all of those values.<sup>21</sup>

---

<sup>18</sup> *Id.* at 35621, 35626.

<sup>19</sup> Qian Di, et al., *Air Pollution and Mortality in the Medicare Population*, 376 *NEW ENG. J. MED.* 2513 (2017), available at <https://www.nejm.org/doi/full/10.1056/NEJMoa1702747>; U.S. Env'tl. Protection Agency, *Integrated Science Assessment (ISA) for Ozone and Related Photochemical Oxidants (Final Report)* (EPA/600/R-20/012, 2020), <https://cfpub.epa.gov/ncea/isa/recordisplay.cfm?deid=348522> (last visited Aug. 3, 2020).

<sup>20</sup> Increasing Consistency and Transparency in Considering Benefits and Costs in the Clean Air Act Rulemaking Process, 85 *Fed. Reg.* at 35621.

<sup>21</sup> *Id.* at 35625.

Again, these mandates undermine the EPA's ability to consider and protect sensitive populations and environmental justice communities, whose susceptibility and exposure circumstances are often most accurately described by composites of "upper-bound" inputs, and the risk to whom is underestimated by "lower-bound," "mean," or "central tendency" estimates of risk. In fact, as noted above, the NAS took the OMB to task for precisely this concern in 2006, when OMB had similarly attempted to insist upon the use of such "central tendency" inputs and estimates in its *Proposed Risk Assessment Bulletin*, and on this and other bases recommended that it be withdrawn as flawed. As the NAS explained, the OMB's "strong emphasis on central estimates . . . means that the most vulnerable people in a population—who, almost by definition, lie in the tails of the probability distribution—might be underrepresented."<sup>22</sup> This emphasis "could be viewed as restricting use of data from the tails of the probability distribution on the grounds that such information might generate risk estimates considerably higher than central tendency or general population estimates" with the result that "decision-makers could be deprived of risk-related information on vulnerable segments of the population."<sup>23</sup> Despite the NAS having expressed its disagreement in no uncertain terms, the EPA's Proposal attempts to revive these controversial risk assessment practices through a back-door constraint on the evaluation and presentation of risk for use in cost-benefit analyses.

### Uncertainty Analysis

We agree that understanding the sources of uncertainty is an important component of cost-benefit analysis. Indeed, one of the major criticisms of the use of cost-benefit analysis is that its results are so riddled with uncertainty as to render them unusable for regulatory decision-making. In fact, this essential criticism is one of the major reasons why Congress rejected cost-benefit analysis in favor of health-based or feasibility approaches when it wrote the Clean Air Act.

However, the Proposal's call for extensive uncertainty analysis repeats issues that we have identified elsewhere and illustrates our overarching concern with the Proposal's attempt to dictate rigid, judicially enforceable analytical requirements. The Proposal requires seemingly endless layers of analyses, directing that multiple facets of uncertainty be quantitatively characterized (e.g., the EPA must analyze "the uncertainties that have the largest potential effect on benefits or cost estimates" and characterize "how the probability distributions of the relevant input assumption uncertainty would impact the resulting distribution of benefit and cost estimates") and mandating that sources of uncertainty be considered "independently as well as jointly" as much as possible. The Proposal also imposes numerous explanatory burdens, stipulating that the EPA "must include a reasoned explanation for the scope of the uncertainty analysis" and must justify departures from the proposed preference for quantitative analyses.

---

<sup>22</sup> NAT'L ACAD. SCI., ENGINEERING, & MED., SCIENTIFIC REVIEW, *supra* note 3, at 79-80.

<sup>23</sup> *Id.* at 80.

Additionally, the Proposal potentially imports substantive constraints and judgements under the guise of characterizing uncertainty. For example, in directing that “BCAs characterize how the probability distributions of the relevant input assumption uncertainty would impact the resulting distribution of benefit and cost estimates,” the Proposal dictates that the EPA enlist “probability distributions for relevant input assumptions” where these “are available, characterize significant sources of uncertainty in the assessment, and can be feasibly and credibly combined.” In a related vein, in its request for additional comments, the EPA asks whether it should impose additional requirements to assess “uncertainty in risk analyses (e.g., . . . requirements relating to the use of probabilistic risk analysis for reducing uncertainty in risk analysis)?” For the reasons discussed above in our comments on the Proposal’s approach to “Measuring Health Endpoints,” such requirements are reductionist and often inaccurately reflect actual risks experienced by sensitive populations, including those with increased susceptibility and/or exposure to air pollutants.

At best, these analytical requirements are excessively burdensome and wasteful, with the proverbial tail of uncertainty analysis wagging the dog of EPA rulemaking. The EPA will have to expend considerable time and resources attempting to satisfy the Proposal’s dictates or justify departures from them – lest it leave itself vulnerable to litigation by those seeking any opportunity to challenge the agency’s work. The unsurprising result will be fruitless delays in rulemakings under the Clean Air Act, undermining its efficient implementation. Alternatively, the proposed analytical requirements will influence substantive outcomes, as the EPA either enlists its prescribed methods (e.g., probabilistic risk analysis and combined probability distributions) or engages in strategic self-censorship to avoid the legal risks of more protective rules. Here again the result would be to defeat the Clean Act Act’s goals.

## Presentation of Results

### Co-Benefits

The Proposal’s requirement that the EPA present a second chart that excludes co-benefits from the total cost/benefit tally flies in the face of economic theory and common sense. This requirement is fundamentally at odds with the economic theory on which the EPA’s practice of cost-benefit analysis purports to rest. Economic theory justifies cost-benefit analysis as a tool for maximizing the welfare of all individuals in society in the aggregate. As such, it makes no distinction between direct and indirect benefits. Rather, economic theory treats all benefits as equally important. Indeed, OMB’s *Circular A-4* requires the agency to count co-benefits.<sup>24</sup>

---

<sup>24</sup> See WHITE HOUSE OFF. OF MGMT. & BUDGET, CIRCULAR A-4, 26 (Sept. 17, 2003), available at <https://www.whitehouse.gov/sites/whitehouse.gov/files/omb/circulars/A4/a-4.pdf> (“Your analysis should look beyond the direct benefits and direct costs of your rulemaking and consider any important ancillary benefits and countervailing risks.”).

Moreover, this provision will often require an artificial disaggregation of the real-world effects of a single regulatory measure, such as where control equipment designed to capture emissions of one pollutant *also* captures emissions of other (non-target) pollutants.<sup>25</sup> And, in fact, it will sometimes be impossible to disaggregate benefits from co-benefits: Many air pollutants to which people are exposed in concert in the real world have synergistic interactions, such that, by definition the effects of the whole are greater than the sum of the parts. For example, Huang, et al., document the synergistic effects of fine particulate matter and NO<sub>2</sub>, and cite previous research finding that “nearly half of the epidemiological studies that examined interaction between ozone and other pollutants reported synergistic interactions.”<sup>26</sup> It is not possible to somehow assign some portion of such synergistic effects to be a “benefit” of regulating a target pollutant with the remainder to be designated a “co-benefit.”

Yet, the Proposal’s presentation requirement would conspicuously relegate co-benefits to a kind of “second-class status” by excluding them from the new required table. In their political advocacy and legal arguments, industry groups opposed to Clean Air Act regulations would seek to elevate this new required table ahead of the comprehensive account that has traditionally been used and that comports with basic textbook economics. This would serve to inappropriately exclude relevant information in a way that is deliberately biased against stronger protections.

This requirement also serves no legitimate purpose. There is no “consistency” problem as the EPA has used the same presentation methodology for indirect benefits for decades. Indeed, if consistency were really the agency’s concern, it would require the new table to also omit “indirect costs” along with “indirect benefits.” Conspicuously, the Proposal makes no mention of indirect costs.

The EPA may also want to consider whether this provision will hamper its own efforts to rely on co-benefits to justify rules, as the agency did recently in its recently issued Boiler National Emission Standards for Hazardous Air Pollutants (NESHAP).<sup>27</sup>

---

<sup>25</sup> See, e.g., Connor Raso, *Examining the EPA’s Proposal to Exclude the Co-Benefits of Mercury Regulation*, (April 1, 2019), <https://www.brookings.edu/research/examining-the-epas-proposal-to-exclude-co-benefits-of-mercury-regulation/> (noting in the context of the MATS rule that while entities such as the Cato Institute argued that the EPA should only have “counted” the benefits of mercury reductions and not the co-benefits of particulate matter reductions, they ignored the reality that the same control measure captured both pollutants and observing that “Cato [did] not point to an alternative means by which EPA could reduce mercury without also reducing particulate matter”) (last visited Aug. 3, 2020).

<sup>26</sup> Yuh-Chin T. Huang et al., *Synergistic effects of exposure to concentrated ambient fine pollution particles and nitrogen dioxide in humans*, 24 *INHALATION TOXICOLOGY* 790 (2012) (finding synergistic effects between fine particles and nitrogen dioxide and citing Mauderly and Samet (2009)’s findings regarding ozone and other pollutants).

<sup>27</sup> U.S. Evtl. Protection Agency, National Emissions Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters, EPA-HQ-OAR-2002-0058, RIN 2060-AU20 (Pre-Publication Federal Register Notice, Signed July 8, 2020), available at [https://www.epa.gov/sites/production/files/2020-07/documents/frn\\_boiler\\_mact\\_nprm\\_20200629\\_admin.pdf](https://www.epa.gov/sites/production/files/2020-07/documents/frn_boiler_mact_nprm_20200629_admin.pdf). See also *In Remand Rule, EPA Tightens Boiler MACT with Reliance on Co-Benefits*, INSIDE EPA, July 9, 2020.

Far from increasing “transparency,” this requirement would likely only promote confusion, as it would force the EPA to include in its final rule preambles a pair of dueling cost-benefit analysis tables. Such confusion would likely be prevalent among key stakeholders with less sophistication on complex cost-benefit analysis matters, including, most notably, regulatory beneficiaries and reviewing judges.

In contrast, only the most sophisticated of readers of these rules would know how to understand and interpret the relative significance of these tables, including attorneys and economists employed by corporate interests. Corporate interests would be well-positioned to exploit the confusion that these presentation requirements would be sure to cause in order to support specious legal attacks against Clean Air Act rules. The experience of the MATS rule illustrates how industry groups have been able to deploy this tactic to provide a misleading portrayal of a rule’s regulatory impacts that is based on the disparagement of the rule’s co-benefits and an inappropriate disregard of the significant categories of the rule’s direct benefits that can only qualitatively described.<sup>28</sup>

In light of these concerns, we urge the EPA to eliminate this requirement from the Proposal.

### Calculation of Net Benefits

One place where the Proposal’s unrealistic and unwarranted assumptions about the EPA’s ability to monetize regulatory benefits are particularly apparent is in its provision codifying a requirement that the agency present a calculation of net benefits in each rule’s preamble. Obviously, net benefits cannot be meaningfully calculated unless all significant costs and benefits can be expressed in monetary terms. Yet, as noted above and explained in more detail below, that kind of complete monetization is rare to nonexistent in EPA rulemakings. Accordingly, a codified requirement that the agency present a net-benefits calculation for every significant rule would only serve to further deemphasize and obscure the many important categories of regulatory benefits that the EPA is only able to describe in qualitative terms.

## Other Considerations

### Role of Cost-Benefit Analysis in Decision-making

The Proposal “solicits comment on how the Agency could take into consideration the results of a BCA in future rulemakings under specific provisions of the CAA,” including whether the Proposal should be amended to include a mandate that certain significant rules only be promulgated if a cost-benefit analysis demonstrates either that the their

---

<sup>28</sup> See Letter from Center from Progressive Reform Member Scholars and Staff to EPA on “Proposed Rulemaking on “National Emission Standards for Hazardous Air Pollutants: Coal- and Oil-Fired Electric Utility Steam Generating Units – Reconsideration of Supplemental Finding and Residual Risk and Technology Review” (Apr. 17, 2019), available at <https://cpr-assets.s3.amazonaws.com/documents/cpr-comments-epa-mats-rule-final-041719.pdf>. See also Catherine O’Neill, *Monetization, Myopia, and MATS*, CPRBLOG, Mar. 26, 2015, <https://progressivereform.org/cpr-blog/monetization-myopia-and-mats/> (last visited Aug. 3, 2020).

“benefits justify . . . costs” or their “benefits exceed the costs.” We urge the EPA to reject any such mandate. To the extent that these analyses are performed at all, their use should be strictly limited to providing information regarding a rule’s predicted impacts.

Cost-benefit analysis should play no role in informing the EPA’s decision-making under the Clean Air Act because it is either antithetical to or explicitly prohibited by the statute.

It is important to recognize that rejecting a role for cost-benefit analysis not tantamount to “ignoring” regulatory impacts altogether. To the contrary, the democratically elected members of Congress made the choice for how regulatory costs and benefits should be considered and accounted for, and when Congress wrote the Clean Air Act it gave the EPA very specific instructions for doing so. Tellingly, Congress could have instructed the EPA to pursue decision-making that accords with the ideal of Kaldor-Hicks efficiency that underlies cost-benefit analysis, but it explicitly rejected this approach. The EPA cannot use this rulemaking to substitute its own judgment for how Clean Air Act standards should be set, and to require the use of cost-benefit analysis to inform its decision-making under the Act in any would clearly defy Congress’s considered policy choices in enacting the law. Congress provided carefully articulated standards, sometimes based on risk and sometimes based on nuanced technology requirements. Use of cost-benefit analysis would collapse these diverse statutory standards into a single inflexible test.

Even in those rare circumstances where the use of some of cost-benefit analysis to inform decision-making might be permissible under the Clean Air Act, it should still be rejected on policy grounds. When used as the ultimate standard controlling regulatory decisions, cost-benefit analysis raises a host of unresolved theoretical difficulties that have been catalogued in a vast and long-standing literature: It flattens the variety of human experience into a monetary metric;<sup>29</sup> undercounts the preferences of the poor vis-à-vis the rich;<sup>30</sup> devalues the lives of our children and grandchildren;<sup>31</sup> ignores distributional inequities;<sup>32</sup> fails to account for low-probability catastrophic outcomes;<sup>33</sup>

---

<sup>29</sup> ELIZABETH ANDERSON, VALUE IN ETHICS AND ECONOMICS 55-59 (1993); MARK SAGOFF, THE ECONOMY OF THE EARTH: PHILOSOPHY, LAW, AND THE ENVIRONMENT 1-7 (1988); Cass R. Sunstein, *Incommensurability and Valuation in Law*, 92 MICH. L. REV. 779, 841-42 (1994).

<sup>30</sup> RICHARD A. POSNER, ECONOMIC ANALYSIS OF LAW 13 (5th ed. 1998); C. Edwin Baker, *The Ideology of the Economic Analysis of Law*, 5 PHIL. & PUB. AFF. 3, 6 (1975); Duncan Kennedy, *Cost-Benefit Analysis of Entitlement Problems: A Critique*, 33 STAN. L. REV. 387, 422-44 (1981); Arthur A. Leff, *Economic Analysis of Law: Some Realism About Nominalism*, 60 VA. L. REV. 451, 478-79 (1974).

<sup>31</sup> Lisa Heinzerling, *Discounting Our Future*, 34 LAND & WATER L. REV. 39, 40-41 (1999); Douglas A. Kysar, *Discounting . . . on Stilts*, 74 U. CHI. L. REV. 119, 119-20 (2007); Richard L. Revesz, *Environmental Regulation, Cost-Benefit Analysis, and the Discounting of Human Lives*, 99 COLUM. L. REV. 941, 955-86 (1999).

<sup>32</sup> Amy Sinden, *Cost-Benefit Analysis*, in EDWARD ELGAR ENCYCLOPEDIA OF ENVIRONMENTAL LAW, VOL II, ENVIRONMENTAL DECISION MAKING (Glicksman & Paddock eds.).

<sup>33</sup> Daniel A. Farber, *Uncertainty*, 99 GEO. L.J. 901 (2011); Martin L. Weitzman, *On Modeling and Interpreting the Economics of Catastrophic Climate Change*, 91 REV. ECON. & STAT. 1 (2009).

and rests on a vision of human nature and behavior that has been shown to have many empirical flaws.<sup>34</sup>

Even putting aside the myriad theoretical difficulties, it is simply unworkable as a standard for decision given the current state of scientific knowledge. Most of the time, cost-benefit analysis leaves significant categories of benefits out of the equation entirely because we simply do not have the data and/or scientific understanding to quantify the consequences of environmental degradation to human and ecological health. Where significant benefits or costs can't be monetized and thereby compared in a common metric, any advantages cost-benefit analysis might seem to possess over other common tools for environmental standard setting (like the feasibility and health-based standards Congress primarily used in the Clean Air Act) evaporate. It becomes an intuitive apples-to-oranges comparison to ensure costs are disproportionate to benefits. In that form, it can conceivably act as a "secondary" filter or check on standard-setting decisions that have been initially made using other tools. But it cannot purport to locate the "efficient" level of regulation.<sup>35</sup>

### Alternative Approaches to Presenting Results

In soliciting comments on "on alternative approaches to increasing transparency," the Proposal specifically inquires about whether it should "require a separate presentation of all factors (e.g., particular benefit or cost categories, or other impacts) that are specifically listed as factors that the Administrator must consider in making a regulatory decision pursuant to the statutory provision(s) under which the regulation is being promulgated." It goes on to explain that this "presentation would include a presentation of quantitative results for those factors that have been quantitatively assessed, and a qualitative discussion of any factors that were not quantified."

If we understand this alternative correctly, this approach to regulatory impact analysis would be much more useful and would more successfully promote the goals of transparency and consistency in the development and use of these analyses than the traditional cost-benefit analysis called for in the Proposal. One of the major objections to cost-benefit analysis is that it distracts from statutory standards by elevating its own decision-making factors (*i.e.*, the direct comparison of benefits and costs, which have been quantified and artificially converted into dollar figures to permit direct comparison) over the specific decision-making factors laid out in authorizing statutes. Most of the standards in the Clean Air Act are health-based standards or feasibility standards, which involve their own unique set of factors to consider.

Consequently, the better a regulatory impact analysis tracks with those factors the more effective it is in (1) supporting agency decision-making that is consistent with law and

---

<sup>34</sup> DANIEL KAHNEMAN & AMOS TVERSKY, CHOICES, VALUES, AND FRAMES (2000); Amartya Sen, *The Possibility of Social Choice*, 89 AM. ECON. ASS'N 349 (1999); Tuba Tuncel & James K. Hammitt, *A New Meta-Analysis on the WTP/WTA Disparity*, 68 J. ENVTL. ECON. & MGMT. 175 (2014).

<sup>35</sup> Sinden, *supra* note 1.

(2) communicating how those decisions were made to public stakeholders. We believe this approach is preferable to cost-benefit analysis for the purposes of understanding the impacts of Clean Air Act regulations and would urge the EPA to consider adopting this approach instead.

This statutory factors-based approach sounds conceptually similar to a form of regulatory impact analysis known to as “pragmatic regulatory impact analysis,” which has been proposed as an alternative to cost-benefit analysis. It was first described in article by legal scholars Sidney A. Shapiro and Christopher H. Schroeder called “Beyond Cost-Benefit Analysis: A Pragmatic Reorientation.”<sup>36</sup> We urge the EPA to review this article and consider revising its Proposal to align with the proposed pragmatic regulatory impact analysis it describes. We have appended a copy of the article to these comments.

### Retrospective Review

The Proposal “requests comment on whether EPA should include a requirement for conducting retrospective analysis of significant CAA rulemakings.” Such a requirement is unnecessary and should not be included in the Proposal.

As it is, the EPA already faces a large and growing number of duplicative and wasteful “lookback” or “retrospective review” requirements that serve to inhibit effective implementation and enforcement of its statutory authorities. The Regulatory Flexibility Act requires agencies to review every rule that has “a significant economic impact upon a substantial number of small entities” within 10 years after the final rule is published. Further, Executive Order 12866 requires agencies to develop a program “under which the agency will periodically review its existing significant regulations to determine whether any such regulations should be modified or eliminated.” President Obama’s Executive Order 13563 builds on this requirement by adding still more time-consuming and resource-intensive procedures for carrying out the lookback program on an ongoing basis.

In addition, retrospective review is baked into the Clean Air Act itself. The EPA is obliged to review and update its NAAQS every five years. After issuing a Maximum Achievable Control Technology Standard for addressing hazardous air pollutants from targeted industrial facilities, the EPA is required to conduct within eight years a “Risk and Technology” review of the standard to determine whether any residual risk remains and needs to be addressed by tightening the applicable requirements.

Indeed, in many cases, the EPA reviews its existing regulations even when it is not mandated by a particular program – that is, because it has independently recognized that such a review is a good idea in certain circumstances. As Michelle Sager, the

---

<sup>36</sup> Sidney A. Shapiro & Christopher H. Schroeder, *Beyond Cost-Benefit Analysis: A Pragmatic Reorientation*, 32 HARV. ENVTL. L. REV. 433 (2008).

Director of Strategic Issues at the U.S. Government Accountability Office (GAO), testified before the U.S. Senate Committee on Homeland Security and Governmental Affairs, “Reviews mandated by requirements in statutes or executive orders and related OMB memorandums were sometimes the impetus for reviews, but agencies more often exercised their own discretionary authorities to review regulations.” Significantly, according to Ms. Sager’s testimony, the GAO found that “[a]gencies noted that discretionary reviews generated additional action more often than mandatory reviews, which most often resulted in no changes.”<sup>37</sup>

More retrospective review programs are not needed. If anything, there are too many, and some should be eliminated since they create wasteful barriers to effective implementation of regulatory protections. Given that discretionary reviews seem to work best, it seems that a better approach would be to give the EPA the maximum flexibility to perform such reviews for its Clean Air Act rules, rather than mandating a new requirement as part of this Proposal.

### **Transparency of Third-Party Models and Data**

The Proposal requests “comment on whether this rule should allow the Agency to use models offered by a third party only where the third party makes its models and assumptions publicly available (or allows the EPA to do so) to the extent permitted by law.” We have no view on whether the EPA should use third-party models. If, however, the EPA does permit the use of such models, we agree that the models and assumptions should be made publicly available to allow for independent evaluation and verification.

To enhance this transparency requirement, we would also urge that the EPA include in the Proposal a mandate requiring the disclosure of all sources of funding that sponsored any third-party models it uses. The Occupational Safety and Health Administration’s (OSHA) 2013 proposal on Occupational Exposure to Respirable Crystalline Silica offers a model for what such a requirement might look like. There, OSHA included the following instructions in the proposal:

If you submit scientific or technical studies or other results of scientific research, OSHA requests (but is not requiring) that you also provide the following information where it is available: (1) Identification of the funding source(s) and sponsoring organization(s) of the research; (2) the extent to which the research findings were reviewed by a potentially affected party prior to publication or submission to the docket, and identification of any

---

<sup>37</sup> Michelle Sager, Director, Strategic Issues, U.S. Gov’t Accountability Off., Testimony Before the Subcomm. on Efficiency & Effectiveness of Fed. Programs & Fed. Workforce, S. Comm. on Homeland Security & Gov’t Affairs, 113th Cong., Hearing on a More Efficient and Effective Government: Improving the Regulatory Framework, Mar. 11, 2014, available at <http://www.hsgac.senate.gov/subcommittees/fp/w/hearings/a-more-efficient-and-effective-government-improving-the-regulatory-framework> (follow hypertext link “Download Testimony (217.7 KB)” to download testimony).

such parties; and (3) the nature of any financial relationships (e.g., consulting agreements, expert witness support, or research funding) between investigators who conducted the research and any organization(s) or entities having an interest in the rulemaking.<sup>38</sup>

We also want to carefully distinguish between mandating disclosure of third-party models and third-party data. That is because the Proposal also requests “comments as to whether the proposed criteria regarding data, assumptions, and study selection reflect the Agency’s commitment to be consistent and transparent.” Here we want to emphasize that the Proposal should *not* require full disclosure of raw data as part of its study selection process.

We oppose a data disclosure requirement because it is unnecessary to assure data quality. Well-established scientific practices and norms already exist for assessing the quality of raw data that do not involve disclosure and betrayal of confidentiality agreements. The EPA can thus assure the quality of the data it uses through these means, rather than relying on arbitrary transparency requirements that would do more harm than good.<sup>39</sup>

Nor would assurances of the use anonymizing methodologies or other techniques to protect Personally Identifiable Information (PII) persuade us to support a data disclosure requirement. Even if such methodologies or techniques were used, such a requirement would still serve to exclude earlier seminal studies, in which the human subject participants were promised that the data would not be made publicly available and signed informed consent agreements to that effect. The authors of those studies could not feasibly go back and alter those consent agreements or otherwise reacquire the same raw data. Such a requirement similarly would exclude new studies that use previously gathered human health information.<sup>40</sup>

Finally, anonymizing techniques would not address the chilling effect that a data disclosure requirement would have on securing participants for future health studies, particularly from within tribal, immigrant, and environmental justice communities.<sup>41</sup> Members of these communities are often already understandably wary of the research

---

<sup>38</sup> Occupational Exposure to Respirable Crystalline Silica, 78 Fed. Reg. 56273, 56274 (proposed Sept. 12, 2013) (to be codified at 29 C.F.R. pts. 1910, 1915, & 1926), available at <https://www.govinfo.gov/content/pkg/FR-2013-09-12/pdf/2013-20997.pdf>.

<sup>39</sup> See Letter from Center for Progressive Reform Member Scholars and Staff to EPA on the “supplemental notice to the proposed rule for Strengthening Transparency in Regulatory Science” (May 18, 2020), available at <https://cpr-assets.s3.amazonaws.com/documents/Goodwin-Minovi-Comment-EPA-Censored-Science-Rule-051820.pdf>.

<sup>40</sup> Anita Desikan, *The EPA’s Rule to Restrict Science Could Compromise Your Confidential Research Data*, [BLOG] UNION OF CONCERNED SCIENTISTS, Mar. 5, 2020, <https://blog.ucsusa.org/anita-desikan/epas-rule-to-restrict-science-could-compromise-research-data> (last visited Aug. 3, 2020).

<sup>41</sup> See generally Anna Harding et al., *Conducting Research with Tribal Communities: Sovereignty, Ethics and Data-Sharing Issues*, 120 ENVIRONMENTAL HEALTH PERSPECTIVES 6 (2012), available at <https://ehp.niehs.nih.gov/doi/full/10.1289/ehp.1103904>.

establishment, given historical abuses (e.g., experienced by American Indian people and African American people) and ongoing discrimination. Worse still, there could be ripple effects that would extend beyond the data-gathering that informs environmental standard-setting, if the resulting distrust were to undermine efforts to address public health deficits in these communities more generally. Given that there is no need warranting the Proposal's data disclosure requirements, such harmful effects as these would be especially intolerable.

### **Real Shortcomings in Cost-Benefit Analysis that the Proposal Fails to Address**

As stated, the EPA should abandon the Proposal and instead focus on its ongoing efforts to update its existing *Guidelines for Preparing Economic Analysis*. The *Guidelines* provide a better vehicle for instituting those aspects of the Proposal that we have highlighted as potentially useful. We therefore urge the EPA to focus its attention on incorporating those measures into that document as part of its revisions process.

To sum up our objections, the Proposal consistently proposes problematic provisions that are offered as improvements to the EPA's cost-benefit analysis methodologies, but which have the effect and the likely intent of skewing the agency's cost-benefit analyses against protective safeguards. In other words, the Proposal does not appear to be a good faith effort at improving the EPA's cost-benefit analysis.

There's also another aspect of the true intent of the Proposal: It ignores several real shortcomings in its cost-benefit analysis methodologies that should have been addressed in its provisions. Conspicuously, though, reforms to address these real shortcomings would likely have the effect of generating cost-benefit analyses that are more supportive of stronger regulatory protections. We suspect that that is why the Proposal has ignored these reforms. Below we outline some suggested changes that would actually improve the EPA's cost-benefit analysis methodologies that the agency should incorporate into its revisions to the *Guidelines for Preparing Economic Analysis*. The failure of the EPA to address these problems would be a real missed opportunity for improving the quality and usefulness of its regulatory impact analyses in a way that supports its effective implementation of the Clean Air Act.

### **The Problem of Significant Benefits Categories That Cannot Be Quantified or Monetized**

The single biggest practical obstacle to the EPA's use of cost-benefit analysis is lack of adequate data to quantify and monetize most of the benefits categories its rules are anticipated to generate. Yet, the Proposal doesn't just ignore this problem; it actively assumes that such availability of such data is the norm and the lack of data is the rare exception that must be explained and justified by the agency.

The Proposal inhabits a fantasy land in which the EPA has access to extensive comprehensive and granular data on the precise impacts to human and ecological health caused by each of the hundreds of pollutants it regulates.

That is not the real world.

For all but a handful of the pollutants it regulates, the EPA is completely incapable of quantifying any of the regulatory benefits associated with reducing their levels in the ambient air. Indeed, there is only one pollutant – particulate matter – for which the EPA has data that one could fairly characterize as extensive. But even for particulate matter, the EPA’s ability to quantify health impacts leaves out cancer and other long-term health effects that are far more difficult to study. Meanwhile, for other air pollutants specifically targeted by the Clean Air Act, such as Hazardous Air pollutants, the EPA’s ability to quantify regulatory benefits has been limited to non-existent. With only one very limited exception, for example, EPA has been completely unable to quantify the benefits of reducing the 189 Hazardous Air Pollutants (HAP) specifically listed in the Act.<sup>42</sup>

These data gaps are glaringly obvious if you look closely at the EPA’s recent cost-benefit analyses. A recent empirical study of 45 cost-benefit analyses that EPA conducted for major rules between 2002 and 2015 found that 80 percent had excluded categories of benefits that the agency itself described as “important,” “significant,” or “substantial” because they were unquantifiable due to data limitations.<sup>43</sup> With respect to the 33 Clean Air Act rules in the sample, 15 quantified only particulate matter benefits, even though, in each instance, the rule was also expected to reduce multiple other harmful pollutions – including ozone, sulfur dioxide, oxides of nitrogen, volatile organic compounds, and/or hazardous air pollutants. Of the 15 rules in the sample specifically aimed at the control of HAPs, only two quantified any HAP benefits at all, and even those numbers clearly represented only a narrow slice of the total HAP benefits. Indeed, to the extent EPA was able to produce monetized benefits estimates for the HAP rules at all, they were virtually all attributable to particulate matter co-benefits.<sup>44</sup> A copy of this article has been appended to these comments.

As a result of these pervasive data gaps, monetized benefits attributable to particulate matter reductions tend to dominate the EPA’s cost-benefit analyses. Indeed, in the study described above, over 93 percent of the total quantified benefits across all major EPA rules issued between 2002 and 2015 were attributable to particulate matter. No doubt that is why one of the most significant provisions in the Proposal – those

---

<sup>42</sup> The one exception is mercury, for which EPA has generated monetized estimates of a very narrow slice of the total benefits pollution reduction. Sinden, *supra* note 1, at 113-114.

<sup>43</sup> Sinden, *supra* note 1

<sup>44</sup> *Id.* at 111-14

governing the agency's presentation of co-benefits – is focused on obfuscating the benefits of particulate matter reductions.<sup>45</sup>

Despite these practical barriers, the Proposal nevertheless persists in defining the ideal of cost-benefit analysis in terms of net benefits maximization. But net benefits cannot be meaningfully calculated, let alone maximized in the absence of complete monetization of both costs and benefits. In fact, as above data show, complete monetization is virtually non-existent in the EPA's cost-benefit analyses, and for good reason. The relevant scientific disciplines of epidemiology, toxicology, ecology and so on have to date been unable to produce anywhere near the data that would be necessary for such a monumental undertaking. This means that the Proposal's repeated admonitions that any departures from the complete monetization ideal have to be extensively explained and justified will impose enormous burdens on the agency, resulting in further delay and ossification of agency rule making.

As the EPA continues its work revising the *Guidelines for Preparing Economic Analysis*, it should carefully consider this problem and begin identifying workable solutions. Solutions might include having the EPA identify as a threshold matter whether sufficient data even exists for conducting a cost-benefit analysis. In the vast majority of the cases where the EPA lacks such data, the Guidelines should direct the agency to employ alternative approaches to regulatory impact analysis, such as the proposal for pragmatic regulatory impact analysis described above. Or it might direct the agency to pursue a much more modest version of cost-benefit analysis that sets out to perform a more limited function. For example, the EPA might use a more informal, apples-to-oranges comparison of costs and benefits aimed at ensuring costs aren't grossly disproportionate to benefits as a "secondary" filter or check on decisions initially made using other tools.

### **Cumulative Harms on Disproportionately Burdened Populations**

Many of public health harms that the Clean Air Act was designed to address fall disproportionately on historically marginalized communities, including working poor families and people of color. Recent research demonstrates that Black and Lantinx communities have higher levels of air pollution than their White counterparts.<sup>46</sup>

Compounding these harms is the fact that these communities have less voice in the political processes that determine siting for polluting facilities, suffer inequitable access to healthcare services, and face other race-based aggravating health concerns.

---

<sup>45</sup> Amy Sinden, *The Cost-Benefit Boomerang*, THE AMERICAN PROSPECT, July 25, 2019, <https://prospect.org/economy/cost-benefit-boomerang/> (last visited Aug. 3, 2020). A copy of this article has been appended to these comments.

<sup>46</sup> Jonathan Lambert, *Study Finds Racial Gap Between Who Causes Air Pollution And Who Breathes It*, NPR, Mar. 11, 2019, <https://www.npr.org/sections/health-shots/2019/03/11/702348935/study-finds-racial-gap-between-who-causes-air-pollution-and-who-breathes-it> (last visited Aug. 3, 2020).

As currently practiced, the EPA's cost-benefit analyses ignore such underlying conditions of injustice. The problem is that by ignoring them, it effectively treats such injustices as just another neutral feature of the baseline. As such, the results of the cost-benefit analyses reflect and amplify them.

Cost-benefit analysis can and should be a tool for identifying and redressing structural sources of racism. It can do so by properly accounting for cumulative harms that are suffered by historically marginalized populations. We urge the EPA to focus great attention on addressing this problem with its cost-benefit analyses as part of its ongoing work revising its *Guidelines for Preparing Economic Analysis*.

### **Distributional Concerns**

A related shortcoming of the EPA's cost-benefit analyses is their failure to address underlying distributional concerns. While the burdens of air pollution tend to fall disproportionately on the poor and people of color, their "benefits" tend to be disproportionately enjoyed by Whites and wealthier members of society. For example, the same recent research on racial disparities in the burdens of air pollution also finds that Whites are disproportionately responsible for causing such air pollution in the first place.

In short, air pollution illustrates not just how one group shifts the costs of its actions to another; it does so in a way that reinforces and exacerbates underlying injustices in our society. Thus, measuring the benefits of air pollution regulation in such cost-shifting terms fails to capture the justice benefits that they produce as well. The EPA's cost-benefit analyses methodologies can and should be revised to properly account for the benefits of distributional justice they produce. The failure to do so systematically undervalues these regulations, creating the risk that these rules will not be as strong as they should be to fulfill their potential of promoting social justice.

We urge the EPA to focus great attention on addressing this problem with its cost-benefit analyses as part of its ongoing work revising its *Guidelines for Preparing Economic Analysis*.

### **Accounting for Other Values That are Central to the Clean Air Act**

As noted above, the Clean Air Act is not merely a "market failure" statute aimed at producing socially optimal level of air pollution. To the contrary, it was intended to advance broad social goals of public health and environmental protection. Foundational American values such as equity, fairness, human dignity, and justice lie at the heart of these social goals. The EPA's cost-benefit analyses systematically fail to acknowledge, must less account for these values. As such, they give short shrift to the benefits of Clean Air Act regulations, and thus work to defeat the fulfilment of the Act's basic objectives.

It is far from clear that cost-benefit analysis could ever effectively account for such values. That is one of the inherent flaws of the methodology. Nevertheless, we urge the EPA to focus great attention on addressing this problem with its cost-benefit analyses as part of its ongoing work revising its *Guidelines for Preparing Economic Analysis*.

## Conclusion

For the reasons discussed above, we call upon the EPA to abandon this misguided and problematic Proposal. The Proposal likely exceeds the EPA's statutory authority, it solves no real problem with the EPA's cost-benefit analyses for its Clean Air Act rules, it ignores important opportunities to improve these analyses, and its conspicuous effect would be to impair not promote the EPA's ability to issue the regulations necessary to implement the Clean Air Act. In light of the other pressing challenges that the EPA faces implicating its congressionally-mandated mission under the Clean Air Act, and the severe budget constraints under which it currently operates, the continued pursuit of this Proposal at this time would represent a grievous waste of the agency's scarce resources.

The EPA is already engaged in a process to update its *Guidelines for Preparing Economic Analysis*. If indeed the true intent of this Proposal is to improve the EPA's cost-benefit analyses for its Clean Air Act rulemakings, then that process undeniably offers a better vehicle for doing so. We thus urge the EPA to limit its focus to updating its *Guidelines* and to address our suggestions above as part of that process.

We appreciate your attention to these comments.

Sincerely,

**James Goodwin**

Senior Policy Analyst  
Center for Progressive Reform

**Darya Minovi**

Policy Analyst  
Center for Progressive Reform

**Catherine O'Neill**

Environmental Scholar & Adjunct Professor  
of Law  
Lewis & Clark Law School

**Amy Sinden**

Professor of Law  
Temple University Beasley School of Law

**Sidney Shapiro**

Frank U. Fletcher Chair in Administrative Law  
Wake Forest University School of Law