Environmental Law & Property Rights

EPA's Use of Co-Benefits

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Note from the Editor:

This article is about environmental regulation and the EPA's questionable practice of using co-benefits to justify its regulations. As always, the Federalist Society takes no position on particular legal or public policy initiatives. Any expressions of opinion are those of the author. Generally, the Federalist Society refrains from publishing pieces that advocate for or against particular policies. When we do so, as here, we will offer links to other perspectives on the issue, including ones in opposition to the arguments put forth in the article. We also invite responses from our readers. To join the debate, please e-mail us at info@fedsoc.org.

- Alan Neuhauser, *EPA Power Plant Rule 'Modestly' Lowers Rates, Carbon Emissions*, U.S. News & World Report (May 22, 2015), http://www.usnews.com/news/articles/2015/05/22/epa-power-plant-rule-modestly-lowers-rates-carbon-emissions.
- Adam Liptak and Coral Davenport, *Supreme Court Blocks Obama's Limits on Power Plants*, New York Times (June 29, 2015), http://www.nytimes.com/2015/06/30/us/supreme-court-blocks-obamas-limits-on-power-plants.html? r=2.
- Benjamin Zycher, *President Obama's Clean Power Plan: All Cost, No Benefit*, American Enterprise Institute (August 14, 2015), https://www.aei.org/publication/president-obamas-clean-power-plan-all-cost-no-benefit/.

I. Cost-Benefit Analysis in Environmental Regulation

In keeping with longstanding Executive Orders and guidance from the Office of Management and Budget (OMB), EPA must subject its proposed major rules to cost-benefit analysis in an effort to demonstrate that the regulations will protect Americans' "health, safety, environment, and well-being" and bolster "the performance of the economy," but "without imposing unacceptable or unreasonable costs on society." This practice is consistent with the primary purpose of the Clean Air Act: "to protect and enhance the quality of the Nation's air resources"—not for their own sake—but "so as to promote the public health and welfare and the productive capacity of [the U.S.] population." A regulation that achieved cleaner air at a net cost to national health, welfare, and productive capacity would be inconsistent with this congressional purpose.

II. The Increasing Costs of Environmental Regulation

Thanks to technological advances, our environment is dramatically cleaner today than it was in the early days of EPA. In sector after sector of the American economy, the low-hanging fruit of environmental regulation has largely been picked. An unfortunate result of EPA's early success is a larger and larger EPA making smaller and smaller marginal improvements in the air we breathe, at greater and greater cost to the U.S. economy.

Take two examples of these high costs. First, EPA's proposed Clean Power Plan for regulating greenhouse gas emissions from existing power plants comes with an annual cost of \$5.5 billion by 2020 and \$7.3 billion by 2030, according to the Agency's own estimates. Second, the proposed revision to the National Ambient Air Quality Standard (NAAQS) for ozone will carry an annual price tag of between \$3.9 billion and \$15 billion by 2025, depending on the stringency of the standard

EPA finalizes. As shown below, the corresponding benefits represent a small fraction of these costs.

III. THE CO-BENEFITS TEMPTATION

Faced with the staggering costs of regulation and the requirement of cost-benefit analysis, EPA is under considerable pressure to identify corresponding benefits to outweigh the costs. That is where co-benefits come in. Often a rule designed to reduce emissions of one pollutant claims most of its benefits from incidental reductions of secondary pollutants. Those incidental reductions are known as "co-benefits."

One such co-benefit has proven particularly useful to EPA's costly regulatory agenda. Estimated reductions of particulate matter (PM_{2.5}) and ozone have become a staple of EPA's regulation, with monetized benefits from PM_{2.5} reduction representing the majority of all federal regulatory benefits (not just EPA's) for the past decade. As OMB reported to Congress in 2012, "It is important to emphasize that the large estimated benefits of EPA rules are mostly attributable to the reduction in public exposure to a single air pollutant: fine particulate matter." The vast majority of PM_{2.5} co-benefits (about 98%) come from estimated reductions of premature mortality associated with PM_{2.5} exposure based on EPA's estimated "value per statistical life," which takes no account of the age of the persons whose premature mortality is supposedly avoided. This metric is questionable in itself since, as OMB reported, "significant uncertainty remains" concerning "the reduction of premature deaths associated with reduction in particulate matter and . . . the monetary value of reducing mortality risk."

IV. EPA's MERCURY RULE

For example, although no cost-benefit analysis was required, EPA's recent rule governing mercury emissions from power plants predicted benefits of up to \$90 billion per year, including the avoidance of up 11,000 premature deaths annually, even though only a tiny proportion of those benefits came from reducing mercury emissions. More than 99% of the anticipated benefits were attributable to incidental reductions of $PM_{2.5}$.

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This stark imbalance prompted Chief Justice Roberts to suggest in oral argument that EPA was using its authority to regulate mercury "to get at the criteria pollutants [including PM_{2.5}] that you otherwise would have to go through a much more difficult process to regulate." The Chief Justice questioned whether EPA "ought to consider only the benefits of regulating that" targeted pollutant, rather than "bootstrapp[ing]" a "disproportionate amount of benefit that would normally be addressed under" a separate statutory authority.

V. EPA's CLEAN POWER PLAN

But despite these sensible questions, there is no end in sight for EPA's reliance on PM_{2.5} and ozone co-benefits. Most of the projected benefits that EPA used to justify its proposed regulation of carbon emissions from power plants have nothing to do with climate change—the purported aim of the regulation. Out of \$48 billion in total domestic benefits projected for 2030, for example, \$45 billion (94%) are attributed to ancillary PM_{2.5} and ozone reduction. Only \$3 billion are associated with the climate change benefits of achieving the mandated carbon reductions—an amount far below the rule's annual compliance costs of \$9 billion.

EPA's reliance on co-benefits to justify its new carbon rule is especially problematic because the statutory authority for that rule—section 111(d) of the Clean Air Act—expressly probibits EPA from regulating PM_{2.5}, ozone, and other "criteria pollutants" under that provision. Because sources of air pollution inevitably emit multiple pollutants indiscriminately, air pollution regulations necessarily affect multiple pollutants. The only meaningful way to enforce the prohibition on regulating criteria pollutants through Section 111(d), therefore, is to prohibit EPA from counting PM_{2.5}, ozone, and other NAAQS pollutants as benefits of carbon regulation under that section.

VI. Double Counting

Particulate matter and ozone seem to offer EPA an inexhaustible well of regulatory co-benefits. But PM $_{2.5}$ and ozone are both already directly regulated by EPA's NAAQS to a level "requisite to protect the public health" with "an adequate margin of safety." Thus, whenever EPA counts PM $_{2.5}$ or ozone reductions in its cost-benefit analysis for other rules, it is double-counting reductions already mandated by the NAAQS.

For example, EPA admits that its proposed Clean Power Plan's benefit "estimates include health co-benefits from reducing fine particles in areas with varied concentrations of $PM_{2.5}$, including both areas that do not meet the fine particle standard and those areas that are in attainment, down to the lowest modeled concentrations." And it counts every ton of $PM_{2.5}$ reduction equally, regardless of where it is found.

This is double-counting, plain and simple. As Michael A. Livermore and Richard L. Revesz explained in the N.Y.U. Law Review last year, "[t]o guard against double counting the ancillary benefits, one needs to make sure that after each regulation is promulgated, a new baseline level of pollution is computed. Then, the further benefits from subsequent regulations need to be determined by reference to this baseline." EPA regularly flouts this basic principle of sound regulation by ignoring the PM_{2.5} and ozone reductions it has already mandated, and counting those reductions again as benefits in new rules. The same ton

of pollutant thus serves to justify multiple rules, even though the pollution can only be prevented once.

VII. INFLATED BENEFITS

In regions that have already attained EPA's PM_{2.5} and ozone NAAQS, counting reductions of those pollutants as cobenefits presents a different problem. EPA's NAAQS represent the level of pollution control that the Agency deems "requisite to protect the public health" with "an adequate margin of safety." Reducing PM_{2.5} and ozone emission even further is not "requisite to protect the public health," and therefore cannot possibly produce the health benefits that the proposed rule claims. As a former Chairman of the Texas Commission on Environmental Quality has explained, "[i]f reducing particulate matter had the enormous benefits that EPA's analysis claims, it has a legal responsibility to lower the national ambient standard to a level that is actually protective of human health. The fact that it has not done so suggests that the EPA does not really believe its own numbers."

EPA can only accomplish this sleight of hand by jettisoning the very same evidence, assumptions, and models that it used to justify the PM_{2.5} and ozone standards. In support of its proposed Clean Power Plan, EPA "assumes that the health impact function for fine particles is log-linear without a threshold" and counts PM, 5 mortality benefits all the way down to the lowest measured level. But in its 2013 PM_{2.5} NAAQS, EPA explicitly considered and rejected proposals to mandate a more stringent PM_{2.5} standard, because such a standard "would not be warranted to provide requisite protection that is neither more nor less than needed to provide an adequate margin of safety." EPA declared that it was "not appropriate to focus on" the "uncertain" and "suggestive" evidence of health effects from PM_{2.5} exposure below the mandated level. The proposed rule ignores these conclusions and treats all emissions reductions alike, whether or not they occur below the NAAQS level. Without any explanation for contradicting the assumptions on which it based its own PM25 rule, EPA declares in the Clean Power Plan that it is "unable to estimate the percentage of premature mortality associated with the emission reductions at each PM_{2.5} concentration, as we have done for previous rules with air quality modeling," and admits that it is "less confident in the risk we estimate from simulated PM_{2.5} concentrations that fall below the bulk of the observed data in the [relevant] studies." Yet it is on the basis of these supposed benefits that EPA is justifying a path-breaking greenhouse gas regulation to the American people. The EPA's inflation of its purported regulated benefits appears to be a perfect example of what former OIRA Administrator Susan Dudley describes as the agencies' habit of "perpetuating puffery" in their benefit-cost analyses.

VIII. Nondelegation Implications

EPA's misuse of co-benefits to justify costly regulations is more than just bad policy; it violates the constitutional separation of powers. As I explained in an article in the George Mason Law Review earlier this year, the Supreme Court and D.C. Circuit have repeatedly recognized that statutes must not be construed to allow the agency to impose substantial regulations without evidence that such regulation is actually necessary to prevent "significant" risk of harm. To allow otherwise would be

to "make such a 'sweeping declaration of legislative power' that it might be unconstitutional under" the Court's nondelegation precedents, as Justice Stevens' plurality opinion in the *Benzene Cases* explained. "A construction of the statute that avoids this kind of open-ended grant should certainly be favored," he and his colleagues stressed.

The Court reiterated this approach in *Whitman v. American Trucking Associations*, where it narrowly construed the Clean Air Act's Section 109(b)(1). That statute provides for the establishment of air quality standards that are "requisite" to protect public health. The Court, at Solicitor General Waxman's urging, construed this as authorizing EPA to set standards that are "sufficient, but not more than necessary," to protect public health.

EPA utterly ignores such limits in its counting of PM, 5 co-benefits in the Clean Power Plan. Just two years ago, when EPA updated its NAAQS for PM_{2.5}, the agency specifically found that the "requisite" level of protection was 12 micrograms per cubic meter; beyond that level, EPA could not show significant health impacts. But now, when calculating the supposed co-benefits that the Clean Power Plan would achieve by collaterally reducing PM_{2.5}, the EPA jettisons that conclusion without any justification, and simply claims co-benefits for any PM_{2.5} reductions that might be obtained, even beyond the aforementioned 12 micrograms level, all the way down to the zero level. In other words, EPA now interprets the Clean Air Act as allowing it to regulate PM_{2.5} emissions reductions beyond 12 micrograms, all the way down to zero, even though they have not shown any significant health risks being eliminated by such extreme reductions. EPA is treating the Clean Air Act as a completely open-ended grant of power, precisely as the Supreme Court forbids.

IX. Foreign Co-Benefits

Perhaps EPA's most egregious use of co-benefits is its reliance on the projected global benefits of its regulations. The cost-benefit analysis supporting EPA's Clean Power Plan and other carbon regulations is predicated on an apples-to-oranges comparison of domestic costs and global benefits. This will be a hallmark of all subsequent carbon regulation, thanks to the global "social cost of carbon" (SCC) at the heart of EPA's analysis. Although all of the costs of reducing carbon emissions will be borne by U.S. entities, EPA offsets those costs against a global valuation of the benefit of reducing a ton of carbon. Never mind that the United States' share is only 7 to 10 percent of the global SCC.

EPA's reliance on foreign benefits violates the Clean Air Act, whose purpose is "to protect and enhance the quality of the *Nation's* air resources so as to promote the public health and welfare and the productive capacity of *its* population." Despite EPA's past acknowledgement of "the [Clean Air Act's] stated purpose of protecting the health and welfare of *this* nation's population" in the context of the Agency's greenhouse gas endangerment finding, the Agency now gives equal weight to foreign benefits, without regard to whether they have any measurable impact on the United States.

EPA's use of a global social cost of carbon also violates OMB guidance, which requires a regulatory impact analysis to "focus on benefits and costs that accrue to citizens and residents

of the United States." The Interagency Working Group that produced the SCC noted OMB's guidance, and acknowledged that using a global estimate "represents a departure from past practices, which tended to put greater emphasis on a domestic measure of SCC." Nevertheless, the Working Group—and EPA—expressly declined to follow OMB's instructions.

EPA attempts to justify its reliance on foreign benefits by the observation that "we expect other governments to consider the global consequences of their greenhouse gas emissions when setting their own domestic policies." But of course EPA has no power to control whether foreign countries regulate greenhouse gas emissions at all, much less how they calculate the benefits of their own regulation. As former Administrator of OIRA, Susan Dudley, has explained, "In the absence of . . . reciprocal action by other nations, . . . the global benefits in the SCC cannot be regarded as a legitimate entry in the benefit-cost ledger."

The global SCC has also been defended on the ground that climate change involves global externalities. But all significant U.S. regulations have international externalities, and the global benefits of adopting policies designed to benefit the world at large would invariably outweigh their cost to U.S. citizens. As economists Ted Gayer and Kip Viscusi have observed, the use of global benefits to justify domestic regulations "represents a dramatic shift in policy, and if applied broadly to all policies, would substantially shift the allocation of societal resources." Of course, if Congress wanted EPA to consider global benefits, it could pass a law requiring EPA to do so. But that is a policy judgment only Congress can make.

X. Guiding Principles for the Future

- 1. Maintain Coherence Across Regulations. In cost-benefit analysis of proposed regulations, EPA should not double-count pollution-related benefits that have already been used to justify prior regulations. Nor should agencies be allowed to count reductions of pollutants in areas where they appear below the national standard EPA has already set for those pollutants. EPA should use the best available data and models for calculating the health effects of reducing a given pollutant across all regulations.
- 2. Compare Apples to Apples. The costs of complying with a given regulation should be compared against the social goods that that regulation is authorized to achieve—not incidental cobenefits, especially the reduction of pollutants that are already regulated by separate rules. By the same token, domestic costs should be compared against domestic benefits.
- 3. Justify Regulations Based on American—Not Global—Benefits. Consistent with the Clean Air Act's purpose of improving national air quality and OMB's guidance requiring agencies to focus on domestic benefits, EPA should be prohibited from justifying costs to domestic industry with estimated benefits to the world at large.



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