Climate Regulation and Co-Benefits: The Reality of Co-Benefits in Climate Policy and the Reality We Face Without Them

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I. INTRODUCTION

The United States has long required administrative agencies to conduct Cost-Benefit Analyses ("CBA") in their rulemaking. By conducting CBA, agencies "show their work" to Congress, courts, and constituencies as to why the agency wishes to regulate a certain way and what it would cost to do so.

This Comment will focus on co-benefits, an increasingly divisive component of CBA. Co-benefits, or benefits occurring secondary to the targeted purpose of statutory authority, assist agencies like the Environmental Protection Agency ("EPA") in painting a holistic picture of everything the public has to gain from a rule's passage. In recognizing that value, the Office of Management and Budget ("OMB") and the EPA have included co-benefits, and their counterpart, indirect costs, in their CBA for decades.

However, recent trends present a new challenge to co-benefit accounting in CBA, spurred mainly by a Supreme Court with conflicting attitudes toward co-benefits and cost-focused administrations. Although there has been no official prohibition on their inclusion, co-benefits face considerable skepticism in current jurisprudence. This skepticism is not limited to the judiciary. Multiple practitioners, organizations, and industry leaders have cited the Court's doubts as support for eliminating the EPA's inclusion of co-benefits. This erosion in public trust threatens confusion, inaction, and underinvestment in a time-sensitive era for climate policy.

This Comment will first detail a background analysis of how CBA came to be, then focus on the turning point in the EPA's rulemaking, health and economic co-benefits, and finally the leading policy considerations on both sides of the inclusion argument. Ultimately, the analysis will show that co-benefit inclusion in rulemaking is consistent with years of EPA practice and guidance, is a logical counterpart to widely accepted indirect cost inclusion, and presents significant and accountable gains to public health.

II. BACKGROUND

To aid in lawmaking efficiency, Congress has "created" numerous administrative agencies through statutes since 1887.[1] To create an agency, typically Congress passes statutes authorizing the agency to regulate a certain area of the law, with guidelines, timetables, restrictions, and purposes

1. Susan E. Dudley, *Milestones in the Evolution of the Administrative State*, 150 Daedalus 33, 34 (2021).

to guide the agency in doing so.[2] Generally, the agency then declares an area of law to regulate and the desired regulatory method, develops proposed rules and solicits public comments, adjusts the rules as the agency sees fit, then promulgates final rules that have the force and effect of law.[3] Due to this impactful rulemaking power, the executive branch has long engaged in a series of "checks" to ensure administrative agencies promulgate within their authoritative bounds.[4]

President Reagan's administration was the first to establish the executive branch's oversight in agency rule promulgation when President Reagan issued Executive Order 12291.[5] Executive Order 12291 held that "regulatory action shall not be undertaken unless the potential benefits to society from the regulation outweigh the potential costs to society."[6] Reactions to the Executive Order were split into two camps—for and against. In the first camp, those who desired to stifle a threat of excessive regulation applauded CBA's potential impact.[7] In the second camp, those concerned about hindering an agency's ability to implement important environmental, health, and safety programs opposed formalizing CBA.[8]

The opposition's reasoning foreshadowed the issues the CBA discussion faces today–the existence and threatened exclusion of regulatory co-benefits.[9] Co-benefits, also referred to as ancillary benefits, are favorable impacts of a rule that are "typically unrelated or secondary to the purpose of the action."[10] The opposition believed that a formalized CBA process would disregard the less-tangible benefits associated with efficient regulation,

2. *See* OFFICE OF THE FEDERAL REGISTER, THE RULEMAKING PROCESS, at 2, https://www.federalregister.gov/uploads/2011/01/the_rulemaking_process.pdf [https://perma.cc/6V52-NE2X] (last accessed Oct. 26, 2023).

3. *See id*. at 2–9.

4. *See id*. at 3–4.

5. Philip Shabecoff, *Reagan Order on Cost-Benefit Analysis Stirs Economic and Political Debate*, N.Y. Times, Nov. 7, 1981, https://www.nytimes.com/1981/11/07/us/reagan-order-on-cost-benefit-analysis-stirseconomic-and-political-debate.html [https://perma.cc/L4HA-CCZD].

6. *Id.*

7. *Id.*

8. *Id.*

9. *Id.* ("They also complain that the rule requires assigning dollar values to things that are essentially not quantifiable: human life and health, the beauty of a forest, the clarity of the air at the rim of the Grand Canyon.").

10. OFF. OF MGMT. AND BUDGET, CIRCULAR A-4, REGULATORY IMPACT ANALYSIS: A PRIMER 7 (2003).

especially those concerning environmental impacts, increased life expectancy, and decreased illnesses.[11]

Following the Reagan Administration, CBA continued to be an indispensable component of regulatory action. CBA policies were furthered during the Clinton, Bush, Obama, Trump, and Biden administrations.[12] First, President Clinton maintained and broadened the CBA requirement, directing agencies to "assess both the costs and the benefits of the intended regulation and, recognizing that some costs and benefits are difficult to quantify, propose or adopt a regulation only upon a reasoned determination that the benefits of the intended regulation justify its costs."[13]

Second, President Bush put forth a new Order that placed political appointees in agencies as Regulatory Policy Review Officers, and required agencies to identify market failures before proposing any rules.[14] His purpose was to ensure transparency and executive involvement in regulatory processes.[15]

Third, President Obama also issued his own Executive Order.[16] President Obama's Order encouraged agencies to (1) choose regulatory alternatives that "maximize[d] net benefits" and (2) tailor their regulations "to impose the least burden on society, consistent with obtaining regulatory objectives, taking into account, the costs of cumulative regulations."[17]

Then, without directly repealing President Obama's Executive Order, President Trump tightened CBA significantly in 2017.[18] Here, President Trump established a "one-in, two-out" requirement, directing agencies to "eliminate equivalent costs associated with at least two previously issued rules when issuing a new rule" and created a regulatory budgeting program with cost caps for new rules.[19] This order served to ameliorate concerns of rising compliance costs for the government, businesses, and the general public due to demanding regulations. However, President Biden promptly repealed President Trump's Executive Order.[20] The Biden Administration

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11. Shabecoff, *supra* note 5.

12. Joseph E. Aldy et al., *Co-Benefits and Regulatory Impact Analysis: Theory and Evidence from Federal Air Quality Regulations*, (Res. for the Future, Working Paper No. 20-12, 2020), https://media.rff.org/documents/RFF_WP_20-12_Aldy_et_al19599.pdf [https://perma.cc/NS9T-NMTF].

13. *Id.*; Exec. Order No. 12866, 58 Fed. Reg. 51735 (Sept. 30, 1993).

14. Michael A. Livermore, *Cause or Cure? Cost Benefit Analysis and Regulatory Gridlock*, 17 N.Y.U. ENVTL. L. J. 107, 113 (2009).

15. *Id.*

16. MAEVE P. CAREY, CONG. RSCH. SERV., IF12058, COST BENEFIT ANALYSIS IN FEDERAL AGENCY RULEMAKING 2 (2022).

17. *Id*.

18. *Id*.

19. *Id*.

20. *Id*.

issued a memorandum reaffirming the basic principles of President Clinton's Executive Order.[21]

Today, the OMB, part of the executive branch, is "responsible for reviewing major regulations before they are finalized [and] directs all agencies to account for co-benefits and co-costs in its guidance for agency [Rule Impact Analyses]."[22] Specifically, the OMB requires agencies that are completing CBA to identify "the expected undesirable side-effects and ancillary benefits of the proposed regulatory action and the alternatives . . . added to the direct benefits and costs as appropriate."[23] The EPA independently endorsed this line of thinking, and established guidelines requiring inclusion of both indirect costs and benefits in its CBA analyses.[24] The EPA stated "[a]n economic analysis of regulatory or policy options should present all identifiable costs and benefits that are incremental to the regulation or policy under consideration. These should include directly intended effects and associated costs, as well as ancillary (or co-) benefits and costs."[25]

Finally, though President Biden's repeal of President Trump's cost-centered Executive Order may signal the administration's more liberal approach to regulatory CBA, a strict view on CBA is not limited to the presidency. Due to inconsistencies between presidential administrations and recent jurisprudence from the Supreme Court, the EPA has acted inconsistently when prioritizing and including co-benefits despite a history of inclusiveness in CBA.[26]

A. The EPA's Treatment of CBA in the Trump Era

In 2015, the Supreme Court admonished the EPA for not considering cost in the EPA's initial decision to regulate power plants in 2015.[27] In response, the EPA took action to alter the way it conducts CBA, potentially

21. *Id*.
22. Aldy, *supra* note 12, at 4.
23. *Id*.
24. EPA, GUIDELINES FOR PREPARING ECONOMIC ANALYSIS: PRESENTATION OF ANALYSIS AND RESULTS, 11-2 (2010).
25. *Id.*; Aldy, *supra* note 12.
26. Aldy *supra* note 12, at 6.
27. Brendan K. Collins, *INSIGHT: What's at Stake in EPA's MATS Finding Reversal*, BLOOMBERG LAW (May 26, 2020, 1:01 AM), https://news.bloomberglaw.com/environment-and-energy/insight-whats-at-stake-in-epas-mats-finding-reversal [https://perma.cc/P7RW-24LL]; *see generally* Michigan v. EPA, 576 U.S. 743 (2015).

diminishing the value of co-benefits, to line up with the Trump Administration's stringent attitude toward regulation at the time.[28] For example, in 2018, the EPA proposed limitations to the use of proprietary or confidential health data commonly utilized to quantify and evaluate benefits of improved air quality from removal of particulate matter.[29] The cited concern behind this initiative was confidentiality, but the ancillary effect was the elimination of a major source of quantifiable co-benefit data formerly supporting rule passage.[30]

Following this 2018 rule, the 2019 Affordable Clean Energy Final Rule included two tables in its CBA: one following standard practice reporting costs, climate benefits, and all health benefits, and one excluding the health co-benefits.[31] While this exclusion was not a blanket omission of co-benefits, it foreshadowed doubts about co-benefits' role in the future. Further, this separation ran contrary to standard EPA practice and guidance at the time and framed the Rule as having substantially reduced benefits to unchanged costs.[32]

After the 2019 split-table benefit analysis, a 2020 EPA Proposed Rule suggested that the split method of framing benefits become the standard for future CBA.[33] Under this Proposed Rule, there would also be two tables to govern a potential rule's impact.[34] One table would be all-inclusive of all costs and co-benefits, and the other table would only include those benefit categories "arising from the environmental improvement that is targeted by the relevant statutory provision," exclusive of co-benefits.[35] The EPA doubled down on this proposed two-table standard by reversing the 2020 EPA Mercury and Air Toxics Standards ("MATS").[36]

The EPA determined in 2011 and 2016, after much wavering, that it was still "appropriate and necessary" to regulate mercury and other Hazardous Air Pollutants ("HAPs") secondary to the main target of the statutory authority.[37] In 2020, the EPA then reversed its decision, reconsidering its initial CBA.[38] This time, the EPA omitted its previously stated co-benefits from reducing fine particle matter, including mercury, which accounted for the

28. Aldy, *supra* note 12, at 6.
29. *Id*.
30. *Id*.
31. *Id*.
32. *Id*. at 7.
33. *Id*.
34. *Id*.
35. *Id*.
36. *Id*.
37. *Id.*
38. *Id.*

"vast majority of monetized benefits" in the original CBA.[39] The EPA justified this reversal as a correction to a previously "dishonest" calculation[40] —seemingly referring to the previous inclusion of co-benefits. However, the motivations for the reversal mostly stemmed from Trump's efforts to appease the coal industry, to which he pledged relief despite the industry's imminent decline.[41] This shotgun promise fulfillment at the end of Trump's term put significant pressure on the EPA and likely frustrated the expectations of legislators and energy industries, who had already significantly altered course to regulate the coal industry based on the EPA's original 2016 MATS guidance.

After the MATS reversal in 2020, agencies inconsistently applied the emerging standard of excluding co-benefits from CBA.[42] For example, the EPA and Department of Transportation's Tailpipe CO_2/Fuel Economy Final Rule in 2020 targeted fuel economy and emissions from automobiles, but the EPA's CBA for the Rule expressly included the co-benefits of lowered traffic fatalities and congestion–two benefits not directly called for by the Rule's authoritative statute.[43]

Currently, this "yo-yo" effect of one administration attempting to undo the CBA methods of the prior administration is a continuing issue. For instance, in February 2022, the EPA expressly reaffirmed the original MATS ruling in favor of regulating mercury and disavowed the 2020 reversal at President Biden's request.[44] This reaffirmance is refreshing and suggests renewed support for health co-benefits within the EPA. Indeed, the EPA stated in its reaffirmance press release that the 2020 action was "based on a fundamentally flawed interpretation of the Clean Air Act that

39. *Id*.

40. Collins, *supra* note 27; Elvina Nawaguna, *Trump's EPA readies rollback of industry-backed pollution rule*, ROLL CALL (Feb. 26, 2020, 6:30 AM), https://rollcall.com/2020/02/26/trumps-epa-readies-rollback-of-industry-backed-pollution-rule/ [https://perma.cc/87SZ-JLH7] ("The proposed MATS revisions aim to fix a dishonest accounting mechanism the last administration used that had the effect of justifying any regulatory action regardless of costs." (internal quotations omitted)).

41. Nawaguna, *supra* note 40.

42. Aldy, *supra* note 12, at 8.

43. *Id*.

44. Press Release, EPA, EPA Reaffirms Scientific, Economic, and Legal Underpinnings of Limits on Toxic Emissions (Feb. 1, 2022), https://www.epa.gov/newsreleases/epa-reaffirms-scientific-economic-and-legal-underpinnings-limits-toxic-emissions [https://perma.cc/NWT9-HFYL].

improperly ignored or undervalued vital health benefits from reducing hazardous air pollution from power plants."[45]

While this development is progress for the inclusion of co-benefits, past indecision and recent jurisprudence make reconciling the varying positions on co-benefits difficult. The EPA's actions during the Trump era demonstrate that the EPA believed, at least at one point, that ancillary costs and benefits should be valued differently than their statute-targeted counterparts.[46] However, the EPA did not, and still does not, expressly provide where or how to draw this line, and departs significantly from past practice by attempting to draw it.[47] As demonstrated by the whiplash of opinion on these matters in the past, the recent momentum toward co-benefit inclusion does not necessarily instill confidence that the positive trajectory will persist past a change of administration in 2024 and beyond. This indecision, among other things, continues to influence an era of debate over whether to include or exclude co-benefits in rule promulgation.

III. CO-BENEFITS IN ENVIRONMENTAL POLICY

A. Targeted Benefits vs. Co-Benefits

Certainly, the most contested co-benefits in environmental policy are public health advantages associated with the passage of some regulations. These health co-benefits arise from non-targeted benefits associated with the statutory authority motivating the regulatory action.[48] Health co-benefits often take two different forms: (1) an unrelated public health benefit that occurs outside of the stated statutory objective, or (2) a related public health benefit arising out of a different target's regulation, but still achieving the same statutory objective.

Animal agriculture and automobile regulations present a clear example of the first type of co-benefit. Animal agriculture, while critical for the income, livelihood, nutrition, and ecosystem management of many, also contributes heavily to global warming, deforestation, biodiversity loss, water use, pollution, and soil degradation.[49] Specifically, animal waste can contaminate water sources, contributing to water pollution.[50] Further,

45. *Id.*
46. *Id.*
47. *Id*.
48. *Id*.
49. An M. O. Notenbaert et al., *Tapping Into the Environmental Co-benefits of Improved Tropical Forages for an Agroecological Transformation of Livestock Production Systems*, 5 FRONTIERS IN SUSTAINABLE FOOD SYS. 1, 1 (2021).
50. CONG. RSCH. SERV., RL32948, AIR QUALITY ISSUES AND ANIMAL AGRICULTURE: A PRIMER 1 (2016).

large-scale animal feeding operations emit ammonia, hydrogen sulfide, and volatile organic chemicals, contributing to air pollution.[51]

Unsurprisingly, the primary statutory focus on animal agriculture regulation stems from the Clean Water and Clean Air Acts.[52] However, healthier diets are an unrelated but pertinent public health co-benefit to any regulations reducing animal agriculture. By reducing the amount of animal agriculture, and therefore the dietary dependency on animal-based foods like red meat, society benefits from a lessened risk of some types of cancer, heart disease, and diabetes.[53] While these dietary benefits are outside of the statutory purpose of emissions regulation, the incidental savings in health care from disease prevention still stand as a monetizable benefit in connection with animal agriculture regulations.

Likewise, some regulations that target fuel conservation or automobile emissions incidentally carry with them the positive effects of reduced road fatalities and, thereby, saved lives.[54] For example, the Emergency Highway Energy Conservation Act of 1974 established a speed limit of 55 miles per hour with the intent to achieve fuel savings.[55] While the speed limit did achieve the desired savings, the limit also carried with it a safer, slower roadway with less car accidents—a benefit not directly contemplated in the Act's original purpose.[56] Likewise, a regulatory action that induces less frequent use of automobiles and more frequent use of walking and bicycling for short trips to mitigate greenhouse gas emissions may also carry with it the significant co-benefit of reduced cardiovascular disease and obesity rates from increased physical activity.[57]

The second type of health co-benefit is best demonstrated by the EPA's Clean Air Act regulations from 1997–2019.[58] Direct benefits of the Clean Air Act derive from the Act's stated goals of regulating directly targeted

51. *Id*.
52. *Id*.
53. *Reducing meat consumption good for personal and planetary health*, HARVARD T.H. CHAN SCHOOL OF PUBLIC HEALTH (July 19, 2022), https://www.hsph.harvard.edu/news/hsph-in-the-news/meat-consumption-health-environment/#:~:text=Frequent%20red%20meat%20consumption%20has,%2C%20largely%20plant%2Dbased%20patterns [https://perma.cc/MFM9-GNE6].
54. *See* Aldy, *supra* note 12, at 3.
55. *Id*.
56. *See id*.
57. Neil Maizlish et al., *Health Cobenefits and Transportation-Related Reductions in Greenhouse Gas Emissions in the San Francisco Bay Area*, 103 AM. J. OF PUB. HEALTH 703, 706–07 (2013).
58. Clean Air Act, 42 U.S.C. § 7401.

pollutants.[59] However, sometimes the directly targeted pollutants incidentally carry with them secondary precursor pollutants. Therefore, when abating directly targeted pollutants and obtaining direct benefits, one may also simultaneously abate secondary precursor pollutants and the resulting indirect benefits.[60] This "kill two birds with one stone" approach leads to significant public health co-benefits from the indirect secondary pollutant abatement. Finally, even though the Clean Air Act may not directly contemplate these notable public health co-benefits, the public still reaps the reward of more abated pollutants, and the regulation still achieves the statutory purpose of protecting human health.[61]

B. Health Co-Benefits

Since 1997, the EPA has effectively utilized co-benefits to show great monetizable gains from emissions regulation in connection with the Clean Air Act.[62] In these regulations, the EPA discerns what is targeted and what is ancillary by assessing regulatory measures which directly attack the specifically stated pollutants and which only do so indirectly.[63] For example, the EPA may choose to develop a regulation that applies to emission precursors, like nitrous oxide, to the targeted pollutant, ozone, even though nitrous oxide may not be specifically targeted in the statutory authority.[64] It then follows that benefits occurring as a result of any nitrous oxide regulation, as well as any general benefits outside of those directly contemplated in the statutory authority, would be deemed ancillary, or co-benefits, since these benefits are only indirectly connected to the targeted pollutant.[65]

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59. Aldy, *supra* note 12, at 10 (defining targeted pollutants) ("Each EPA rule describes the relevant statutory authority or authorities that motivate the regulatory action, which can often identify the pollutant or pollutants targeted under the law. The rule and the RIA also describe the specific emissions standards by pollutant, and the identification of each pollutant that must be monitored under the rule is one way to identify those that are targeted.").

60. *Id*. at 5 ("The 1990 CAA Amendments authorized the first cap-and-trade program for power plant SO2 emissions. The primary goal was to reduce the risks posed by acid rain, including the acidification of forests and waterbodies. . . . Most of the monetized benefits, however, have resulted from reducing human exposure to fine [particulate matter] that contributes to premature mortality. In this case, the sizable health benefits caused by the reduction in SO2—an important precursor to [particulate matter] formation—were not fully appreciated or anticipated at the time the regulation was implemented.").

61. *See id*.

62. *Id*. at 18.

63. *Id.* at 3.

64. *Id*. at 10–11.

65. *Id*. at 11 ("We treat ozone as the targeted pollutant because of the rule's clear intent and classify the benefits associated with fine PM and water pollution–which result from the [nitrous oxide] emissions but are distinct from ozone pollution–as co-benefits.").

Emissions regulations present a prime example of monetizable health co-benefit opportunities. The most noteworthy health benefit associated with reducing greenhouse gases via emissions regulation is reduction in disease risk.[66] For example, in a recent study, scientists at Duke University, NASA, and Columbia University estimated that if governments agreed to reduce emissions, countries could prevent "about 4.5 million premature deaths, 1.4 million hospitalizations and emergency room visits, 300 million lost workdays due to heat exposure or pollution-related respiratory illnesses, and 440 million tons of crop losses" by 2030.[67] Further, while these statistics contemplate cooperation by the countries that are parties to the Paris Agreement, the study shockingly provides that around two-thirds of the listed benefits would be realized even if only the United States acted to reduce emissions.[68]

Indeed, in 2020, exposure to air pollution remained "the greatest environmental health risk factor in the United States, associated with 100,000-200,000 excess deaths annually, substantially more deaths than from murders and car crashes combined."[69] Common air pollution-related health risks include respiratory and lung diseases, leukemia and other cancers, birth and immune system defects, cardiovascular problems, neurobehavioral disorders, and ultimately premature death.[70] Therefore, while future benefits may be difficult to project with detailed accuracy, the concerning evidence of past air pollution-related health risks soundly displays that climate change

66. *Emissions Reductions Now Could Yield Dramatic U.S. Health Benefits by 2030*, DUKE NICHOLAS SCH. OF THE ENV'T (Nov. 3, 2021) https://nicholas.duke.edu/news/emissions-reductions-now-could-yield-dramatic-us-health-benefits-2030#:~:text=About%204.5%20million%20premature%20deaths,to%20immediately%20begin%20reducing%20em [https://perma.cc/2UHV-LW7S].

67. *Id*.

68. *Id*.

69. Sumil K. Thakrar et al., *Reducing Mortality from Air Pollution in the United States by Targeting Specific Emission Sources*, 7 ENVTL. SCI. AND TECH. LETTERS 639, 639 (2020).

70. ENVTL. POLLUTION CTRS., *Air Pollution Diseases*, https://www.environmentalpollutioncenters.org/air/diseases/ [https://perma.cc/92G8-ZKXW] (last visited Sept. 4, 2023); *see also AirCompare Tool - Active Outdoors by County*, AIRNOW, https://www3.epa.gov/aircompare/#trends (on hyperlink click on Los Angeles and Anchorage Counties on the Map) [https://perma.cc/2NVD-4TP7] (showing an average of 18–22 unhealthy days for individuals with active outdoor lifestyles in the summer months in Los Angeles County, California compared to an average 0-0.8 unhealthy days in the summer months for the less-polluted Anchorage County, Alaska).

policy in the United States is imperative to altering the course toward healthier futures for the world.

With such a pertinent call to action for the United States, it is no wonder that the primary stated purpose of the Clean Air Act is to "protect human health and the environment from emissions that pollute ambient, or outdoor, air."[71] However, in past years, the scrutiny around co-benefits creates hesitation to consider all of the available health co-benefits inherent in the goal of protecting human health.

The main discrepancy lies in which pollutants the Clean Air Act targets and which ones it does not specifically contemplate. As mentioned earlier, when targeted pollutants are precursors to other secondary pollutants that lead to monetized benefits, those secondary pollutant benefits are deemed as "co-benefits."[72] In fossil fuel regulation, this most commonly occurs when the target pollutant is sulfur dioxide, which is mainly emitted by burning fossil fuels and is a precursor for fine particulate matter.[73] Therefore, in targeting sulfur dioxide with regulatory action, the EPA may also incur the significant monetized benefits associated with reducing fine particulate matter, even if fine particulate matter was not specifically contemplated by the Clean Air Act.[74]

Reductions in fine particulate matter are more than just a bonus to the Clean Air Act's monetizable benefits. While it is true that a generous portion of EPA rules would still have more benefits than costs if only considering the targeted pollutant, co-benefits account for about 46 percent of the monetized benefits on average across all Rule Impact Analyses.[75] Further, reductions in fine particulate matter accounted for a staggering 96 percent of all monetized co-benefits in Clean Air Act regulations from 1997–2019.[76] The EPA has continually included these fine particulate matter reductions as a monetizable benefit in rule promulgations, keeping consistent with the EPA's past practices and OMB guidelines.[77] However, the EPA's trajectory in separating the targeted benefits from co-benefits during the Trump era foreshadows a troubling departure from using co-benefits as a standard inclusion in rulemaking.

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71. CONG. RSCH. SERV., RL30853, CLEAN AIR ACT: A SUMMARY OF THE ACT AND ITS MAJOR REQUIREMENTS 1 (2022); 42 U.S.C. § 740(b)(1) (2023) ("The purposes of this subchapter are (1) 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.").

72. Aldy, *supra* note 12, at 12.

73. *Id*.

74. *Id*.

75. *Id*. at 15–16.

76. *Id*. at 15.

77. *Id*. at 17.

C. Economic Co-Benefits

Though public health co-benefits are often the largest source of monetizable co-benefits associated with environmental regulation, economic co-benefits also provide an opportunity to add to a rule's CBA. For example, in the past, the EPA has cited job support and creation as a benefit in passing a regulation to offset some of the costs associated with regulating, like job loss.[78] Indeed, a 2012 study of the EPA's 2011 final rule regarding national standards for mercury, arsenic, and other toxic air pollutants (also known as the "toxics rule" on the utility industry) predicted that the final rule would "have a modest, positive net impact on overall employment—likely leading to the creation of 84,500 jobs between [2012] and 2015."[79]

Interestingly, one of the cited channels through which the toxics rule affects jobs—increased demand for labor stemming from the construction and installation of pollution abatement and control equipment—is often viewed as a "compliance cost."[80] However, even though a regulated industry must spend to comply with the rule, this form of spending is not necessarily less fruitful for job opportunities than any other kind of spending.[81] For example, rising costs in the implementation of environmental regulations "could include the need to hire more staff to undertake environmental monitoring and compliance, as well as to use new materials to change production processes to make them cleaner."[82] Further, changing the composition of the utility industry to more environmentally-friendly practices is likely more labor-intensive than conventional production, requiring more labor and increasing industry employment.[83]

Skeptics of this positive employment effect argue that this job growth from business spending to meet regulatory standards does not count because the money spent to comply with new standards would have been spent more productively elsewhere absent the regulation, and the foregone spending may destroy jobs as surely as regulation would "create" them.[84] However,

78. Josh Bivens, *The 'toxics rule' and jobs*, ECON. POL'Y INST. (Feb. 7, 2012), https://www.epi.org/publication/ib325-epa-toxics-rule-job-creation/ [https://perma.cc/B38L-M76U].
79. *Id.*
80. *Id.*
81. *Id.*
82. *Id.*
83. *Id.*
84. *Id.* This is known as the "broken window fallacy." It represents the notion that "replacing a shopkeeper's window that has been broken by a stray baseball generates net

these alleged losses do not necessarily mean that the jobs gained through regulatory investment never create net positive job growth.[85] Indeed, compliance costs mobilize idle financial savings, often in the form of massive liquid cash-holdings that U.S. corporations tend to carry, to finance job-creating investments.[86] Additionally, as applied to the utility and energy industry, even if the utilities sector planned to spend the potential compliance cost investment elsewhere, the industry could do both at a minimal cost where interest rates are low.[87] Further, while interest rates were lower during this study and rates now face a potential incline to combat inflation,[88] this only increases the necessity of action sooner rather than later. Therefore, timely investments mobilized by the need to comply with regulation would likely represent a "nearly pure net new addition to economy-wide employment."[89]

Additionally, some international examples of positive employment effects from environmental regulation display the utility of economic co-benefits. For example, a study on the effects of environmental air quality regulations on select companies in China from 2012 to 2017 showed a significant correlation between better air quality and reduced compensation costs for the employer.[90] The study's conductors found, overall, that the higher the air quality, the more non-monetary income or benefits an employee received while working there.[91] By sidestepping the health risks associated with poor air quality in the workplace, employees were more fulfilled and the companies avoided higher salary premiums to compensate for adverse health risks.[92] Finally, regulation-induced savings also led to regional economic development by capitalizing on the healthier employee's work

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new productive employment because the money is spent to replace the broken window…. [however, some say] that notion is a fallacy because the money spent to replace the window could have been spent more productively elsewhere absent the break, and the foregone spending destroys jobs as surely as replacing the broken window creates them." *Id.*

85. *Id.*

86. *Id.*

87. *Id.*

88. Benjamin Storrow, *Clean energy faces its latest test: Rising interest rates*, CLIMATEWIRE, (May 25, 2022, 7:12 AM), https://www.eenews.net/articles/clean-energy-faces-its-latest-test-rising-interest-rates/ [https://perma.cc/3MW8-SXX7].

89. Bivens, *supra* note 78.

90. Kuang-Cheng Chai et al., *Can Environmental Regulation Reduce Labor Costs and Improve Business Performance? Evidence from the Air Quality Index*, 7 FRONTIERS IN PUB. HEALTH 1, 8 (2020), https://www.frontiersin.org/articles/10.3389/fpubh.2019.00398/full [https://perma.cc/7Y7N-F6WR].

91. *Id.*

92. *Id.*

efficiency and motivation, with each significantly improving the company's corporate performance on the whole.[93]

Many studies have found that pollution exposure over time decreases work productivity and cognitive function in employees, creating a lesser output than could be achieved if the environment were healthier.[94] Unfortunately, this decreased productivity often couples with economic disparities; the workers most likely to be affected by long-term pollution exposure often cannot afford to re-locate themselves away from the risk, and need to accept the premium pay.[95] Further, higher-skilled and higher-compensated employees have a larger incentive to flee from polluted areas, potentially creating a loss of valuable human capital in localities with severe pollution.[96] These significant effects of air pollution on regional economic development demonstrate the corporate costs imposed on unregulated environments, the positive economic gains to be had from pollution regulation, and the opportunity for co-benefits to help markets realize gains through regulatory action.

IV. POLICY CONSIDERATIONS SURROUNDING CO-BENEFITS

A. Judicial

Although co-benefits have not been *directly* contemplated by the Supreme Court, recent disputes concerning co-benefits in environmental regulations

93. *Id.* at 9.

94. Tom Chang et al., *Particulate Pollution and the Productivity of Pear Packers*, 8 AM. ECON. J.: ECON. POL'Y 141,142 (2016) (finding that particulate matter exposure to indoor workers, even at levels under the current NAAQ standards for particulate matter, reduces productivity of workers by $0.41 per hour, approximately 6 percent of average hourly earnings); Joshua Graff Zivin & Matthew Neidell, *The Impact of Pollution on Worker Productivity*, 102 AM. ECON. REV. 3652, 3671 (2012) (finding that a 10 ppb change in average ozone exposure results in a significant 5.5% change in agricultural worker productivity in Central California); *see* Tom Chang et al., *The Effect of Pollution on Worker Productivity: Evidence from Call- Center Workers in China*, 11 AM. ECON. J.: APPLIED ECON. 151, 153 (2019) (finding a statistically significant daily productivity decline of workers in a call center for air pollution indexes above 100).

95. Kuang-Cheng Chai et al., *supra* note 90, at 9; *see generally* James Pasley, *Stunning photos show what it's really like to work deep underground in an American coal mine*, BUS. INSIDER (Oct. 5, 2019, 12:30 PM), https://www.businessinsider.com/life-working-in-coal-mines-in-america-photos-2019-10 [https://perma.cc/6PA5-2UHQ] (showing that despite disease rates, dangers, and fatalities associated with working in underground coal mines, coal workers continue to stay in the industry for its high pay and camaraderie).

96. Kuang-Cheng Chai et al., *supra* note 90, at 9.

stem mainly from three Supreme Court cases: *Whitman v. American Trucking Associations, Inc*. (2001), *Michigan v. EPA* (2015), and *West Virginia v. EPA* (2022). All three cases concern the EPA's authority to promulgate rules according to the Clean Air Act, and they all eventually reach the same inquiry—did the EPA overstep the authority Congress granted when the EPA decided to regulate?

First, in 2001, *Whitman v. American Trucking Ass'ns*, confirmed that the EPA had discretion to disregard cost where not explicitly required to by Congress.[97] Here, the relevant portion of the Clean Air Act required the EPA to set ambient air quality standards at levels "requisite to protect the public health" with an "adequate margin of safety."[98] Writing for the majority, Justice Scalia held that the EPA acted properly in not considering costs in setting these air quality standards because this portion of the statute encompassed only health and safety.[99] The Court reasoned that there could not be an implicit authorization to consider costs because Congress did not expressly mention cost consideration in this portion, as it had many times before within the same Act.[100] Thus, where Congress directs the EPA to regulate according to a factor that does not include cost on its face, the EPA is not implicitly allowed nor required to consider cost.[101] Finally, although *Whitman* avoids a relevant discussion of benefits, its holding stands as an important precursor to the narrative around CBA found in *Michigan v. EPA* (2015).

In *Michigan*, Justice Scalia again wrote for the majority, but this time the Court significantly altered course regarding cost consideration compared to the *Whitman* holding. The portion of the Clean Air Act at issue in *Michigan* directs the EPA to "perform a study of the hazards to public health reasonably anticipated to occur as a result of emissions by [power plants] of [hazardous air pollutants]."[102] If the EPA "finds . . . regulation is appropriate and necessary after considering the results of the study," the EPA shall regulate power plants accordingly.[103] In interpreting these provisions, the EPA determined that it was appropriate to regulate because power plants' emissions posed risks to human health and controls existed to reduce these emissions.[104] Further, the EPA deemed the regulation necessary because the Clean Air Act's other requirements did not do

97. Whitman v. Am. Trucking Ass'ns, 531 U.S. 457, 465 (2001); 42 U.S.C. § 7409(b).
98. *Whitman*, 531 U.S. at 465.
99. *Id*.
100. *Id*. at 467.
101. *Id*. at 467–68.
102. Michigan v. EPA, 576 U.S. 743, 748 (2015).
103. *Id*.
104. *Id.* at 749.

enough to mitigate the harmful power plant emissions.[105] However, under this specific grant of authority, the EPA did not consider costs in the initial decision to regulate, which became the main issue before the Court.[106]

In *Michigan*, the Court found that the EPA's omission of an estimated $9.6 billion in potential costs to power plants from the initial decision to regulate was an unreasonable interpretation of what was "appropriate and necessary" under the statute.[107] According to the Court, unlike the "health and safety" factors expressly set out in *Whitman*, a natural reading of the "appropriate and necessary" determination required at least some attention to cost.[108] The Court supported this rationalization by citing the EPA's Rule Impact Analysis, which detailed targeted monetizable benefits of just $4-6 million.[109] The Court stated, "[o]ne would not say that it is even rational, never mind 'appropriate,' to impose billions of dollars in economic costs in return for a few dollars in health or environmental benefits."[110] However, the Court left out a crucial piece of the EPA's Rule Impact Analysis in this rationality standard: the ancillary benefits, or co-benefits, of regulating power plants.[111] In its Rule Impact Analysis, the EPA estimated an additional $37–90 billion in benefits per year from cutting power plants' emissions of particulate matter and sulfur dioxide-nontargeted pollutants for the program at bar.[112]

Unfortunately, because the EPA's position in *Michigan* was that the Rule Impact Analysis, and its CBA, played no role in its initial appropriate and necessary determination to regulate power plants, the Court did not meaningfully address the exclusion of these benefits, though it belabored the exclusion of costs. This unilateral focus on costs simultaneously created a lopsided foundation for assessing all benefits and an incidental hurdle to the legitimacy of co-benefits in the public eye.

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105. *Id*.
106. *Id*.
107. *Id*. at 749–51.
108. *Id*. at 752.
109. *Id*. at 749.
110. *Id*. at 752.
111. *Id.* at 759–60 ("Some of the respondents supporting EPA ask us to uphold EPA's action because the accompanying regulatory impact analysis shows that, once the rule's ancillary benefits are considered, benefits plainly outweigh costs. . . . As we have just explained, however, we may uphold agency action only upon the grounds on which the agency acted. Even if the agency could have considered ancillary benefits when deciding whether regulation is appropriate and necessary–a point we need not address–it plainly did not do so here.").
112. *Id*. at 750.

Michigan presented an interesting tipping point for CBA in the EPA's regulatory actions. If the appropriate and necessary determination to regulate power plants did hinge on the costs, targeted benefits, and co-benefits estimated in the Rule Impact Analysis, the EPA would have a rule that clearly offset high costs to power plants with even higher monetized co-benefits in furtherance of better public health. It is reasonable to say, then, that the Court's dismissal of the co-benefits, in response to the EPA's choice not to use the Rule Impact Analysis initially, was not a harmless decision. Indeed, while the Court chose not to comment in the opinion on whether co-benefits accounting was proper, the Court utilized only the targeted benefits in an argument against the EPA's "appropriate and necessary" determination. In saying that it was not "rational, never mind appropriate" to impose the lofty cost on the power plant industry in return for a "few dollars" of health or environmental benefits,[113] the Court takes a position that co-benefits are less important or less persuasive in off-setting costs.

This succinct take on the EPA's rationality, at best, implies that the Court views the targeted benefits as separate from the co-benefits. At worst, this Comment could imply that the co-benefits of the EPA's rule should not be considered at all despite the estimated profound impact on public health and the environment. Chief Justice Roberts's commentary during oral argument in *Michigan* provides further support for the latter possibility. In response to the monetized proportions of co-benefits to targeted benefits, Chief Justice Roberts stated, "[i]t's a good thing if your regulation also benefits in other ways. But when it's such a disproportion, you begin to wonder whether it's an illegitimate way of avoiding the different–quite different limitations on EPA that apply in the criteria program."[114] This muddled ideology regarding the EPA's discretion in rulemaking formed another foundational layer for the 2022 bombshell case, *West Virginia v. EPA*.

In *West Virginia v. EPA*, the Supreme Court used—for the first time in a majority opinion—the Major Questions Doctrine[115] to reel in the EPA's

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113. *Id*. at 752.

114. Adam Gustafson, *EPA Reconsiders its Use of Co-Benefits in Cost-Benefit Analysis*, THE FEDERALIST SOC'Y (Jan. 16, 2019), https://fedsoc.org/commentary/fedsoc-blog/epa-reconsiders-its-use-of-co-benefits-in-cost-benefit-analysis [https://perma.cc/Z4DZ-7ZCA].

115. Kate R. Bowers, CONG. RSCH. SERV., THE MAJOR QUESTIONS DOCTRINE (2022) ("Under the major questions doctrine, the Supreme Court has rejected agency claims of regulatory authority when (1) the underlying claim of authority concerns an issue of 'vast "economic and political significance,"' and (2) Congress has not clearly empowered the agency with authority over the issue. *Util. Air Regul. Grp. (UARG) v. EPA*, 573 U.S. 302, 324 (2014). In requiring agencies to point to clear congressional authorization for

Clean Power Plan emission cap program and significantly tighten up agency discretion.[116] The Court held that the EPA's plan to require generation shifts from "dirty" sources of power to "cleaner" sources of power, rather than requiring that the source operate more cleanly as the EPA had previously mandated, exceeded the EPA's authority and did not reflect the power Congress granted.[117] Using the Major Questions Doctrine, the Court found that the EPA attempted to "substantially restructure the American energy market" and utilize "unheralded power" in its quest to cap emissions without clear authorization from Congress.[118]

In the wake of the Supreme Court's tightened reins in *West Virginia*, the future of regulatory action, especially pertaining to climate change, is uncertain.[119] With this new limited authority on how the EPA may presently regulate emissions-no more generation shifting requirements to more renewable energy sources-the Biden administration faces a new hurdle in its attempt to reduce emissions to around 50 percent below 2005 levels.[120] Further, the United States' inability to meet this goal, as the world's largest historic emitter, could threaten diplomatic efforts in international climate negotiations.[121] Although the EPA is set to regroup and come back with new regulations in 2023 to achieve the Biden administration's

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their actions in major questions cases, the Supreme Court has further explained that Congress rarely provides an extraordinary grant of regulatory authority through language that is modest, vague, subtle, or ambiguous.").

116. Natasha Brunstein & Donald Goodson, *Unheralded and Transformative: The Test for Major Questions After West Virginia*, WM. & MARY ENVTL. L. & POL'Y REV. (2022), https://policyintegrity.org/publications/detail/unheralded-and-transformative-the-test-for-major-questions-after-west-virginia#:~:text=In%20West%20Virginia%20v.,Protection%20Agency's%20Clean%20Power%20Plan.; Carrie Jenks et al., *Supreme Court Embraces the Major Questions Doctrine as Limiting but Leaving the Door Open for Power Sector GHG Regulations*, ENVTL. & ENERGY L. PROGRAM (July 1, 2022) https://eelp.law.harvard.edu/2022/07/supreme-court-embraces-the-major-questions-doctrine-as-limiting-but-leaving-the-door-open-for-power-sector-ghg-regulations/.

117. Bowers, *supra* note 115. ("The Court concluded that it was unlikely Congress would task EPA with 'balancing the many vital considerations of national policy implicated in deciding how Americans will get their energy,' such as deciding the optimal mix of energy sources nationwide over time and identifying an acceptable level of energy price increases"); West Virginia v. EPA, 142 S. Ct. 2587, 2610 (2022).

118. West Virginia v. EPA, 142 S. Ct. at 2610.

119. Alice C. Hill, *What Does the Supreme Court's Decision in West Virginia v. EPA Mean for U.S. Action on Climate?*, COUNCIL ON FOREIGN REL. (July 19, 2022, 12:19 PM), https://www.cfr.org/blog/what-does-supreme-courts-decision-west-virginia-v-epa-mean-us-action-climate [https://perma.cc/4VJU-WC3B].

120. *Id*.

121. *Id*.

emissions goals, *West Virginia* propels a narrative of skepticism around climate regulation both in the courts and among the public,[122] a narrative that could impede support for the EPA's future discretion in using co-benefits.

B. Public Perception

The exclusion of health co-benefits threatens increased health risks through both chilled rulemaking and society's perception of environmental regulations. A practice of separating co-benefits from targeted benefits, and thus perceiving them as "secondary" to the targeted benefits, dissipates a community's trust in its regulatory bodies. At best, this separation induces some confusion on why co-benefits are classified differently, and at worst, this separation could cast doubt on the rulemaking process and delay climate regulatory action in an urgent era of global warming.

Further, the inclusion of co-benefits can increase public support for imperative climate change action. Indeed, highlighting health co-benefits in climate regulation personalizes the effects of these rules and induces private and public action through political and civic engagement.[123] In framing regulatory actions, many studies have found that the public's sense of urgency and willingness to act increases as the focus of improved public health increases.[124] This demonstrates the preferred "gain-themed" mentality (stopping climate change benefits public health) rather than a "loss-themed" mentality (not stopping climate change threatens public health).[125] Messages with the gain-themed mentality that evoke some fear with eventual hope have a stronger influence on advocacy behavior than those that lack emotional flow or stimulate only fear.[126]

Support for public health efforts has increased greatly in the wake of COVID-19. In fact, many experts and economists argue that COVID-19 "presents an opportunity to address the immediate impact of [the pandemic] along with long term issues of environmental protection and climate change."[127] This shift in climate activism likely stems from the global industrialism halt during COVID-19, which demonstrated large visual

122. *Id*.
123. Jagadish Thaker & Brian Floyd, *Co-benefits associated with public support for climate-friendly COVID-19 recovery policies and political activism*, 20 J. SCI. COMM. 1, 17 (2021), https://jcom.sissa.it/archive/20/05/JCOM_2005_2021_A08 [https://perma.cc/GC9C-BHKT].
124. *Id*. at 5.
125. *Id*.
126. *Id*.
127. *Id.*

improvements in the environment like cleared smog and wildlife returns.[128] Further, the effect of COVID-19 on the world presented a tangible example of a powerful personal experience stemming from a global problem, similar to the issue of climate change.[129] Therefore, the inclusion of co-benefits in regulatory action stands to not only increase public health benefits in the United States, but also public support for time-sensitive policy matters.

Another concern that the public tends to have with co-benefits in environmental regulation is that any cited job creation co-benefits may not equally match the jobs lost from industry compliance.[130] The labor effects of a regulatory action, both positive and negative, are often temporary and have little effect on long-term labor demand.[131] Thus, it is difficult to predict the permanency of the number of roles created or lost.[132] Additionally, although job creation may ultimately create aggregate economic benefits, many worry that this benefit is not realized to the immediately displaced workers in the regulated industry.[133]

However, there are two important notions to consider in evaluating whether job creation truly offsets job losses. First, regulations are poor tools for addressing the negative impacts from jobs shifting from one sector to another, and there may be excess distributional effects.[134] For example, a regulatory initiative that causes layoffs in one industry may also lead to

128. *Id.*
129. *Id*.
130. William F. Shughart II, *How EPA Could Destroy 7.3 Million Jobs*, INDEP. INST. (Nov. 12, 2010), https://www.independent.org/news/article.asp?id=2917 [https://perma.cc/RJ7B-SB8D]; *see, e.g.*, Alana Semuels, *Do Regulations Really Kill Jobs?*, THE ATLANTIC (Jan. 19, 2017), https://www.theatlantic.com/business/archive/2017/01/regulations-jobs/513563/ [https://perma.cc/EFE5-ZWQF].
131. INST. FOR POL'Y INTEGRITY, DOES ENVIRONMENTAL REGULATION KILL OR CREATE JOBS? 2 (2017) [hereinafter DOES ENVIRONMENTAL REGULATION KILL OR CREATE JOBS?].
132. *Id*.
133. Motoko Rich & John Broder, *A Debate Arises on Job Creation and Environment*, N.Y. TIMES (Sept. 4, 2011), https://www.nytimes.com/2011/09/05/business/ economy/a-debate-arises-on-job-creation-vs-environmental-regulation.html [https://perma.cc/W9AQ-A2RS]. When interviewed about the timing and effect of regulations on the economy in the face of massive job loss, University Dean and former White House Office of Information and Regulatory Affairs Consultant John Graham said "[t]hese benefits, which are often quite substantial, tend to be long term before they are incurred. They don't necessarily help in this short-term precarious situation that we're in."
134. DOES ENVIRONMENTAL REGULATION KILL OR CREATE JOBS?, *supra* note 131, at 3.

technical job training in a "greener" field.[135] Therefore, even though a job lost in a regulated industry likely will not be replaced with the exact same role, which statistically reflects a job lost, it may equalize with a job gained in a different industry.

Second, effects on employment are often small compared to the net social benefits of environmental regulation.[136] As previously discussed, pollution-related regulations cite profound monetizable health benefits, both targeted and ancillary, such as reduced fatalities, diseases, and hospitalizations.[137] Further, while some individuals may prefer to risk their own health for employment and abhor governmental interference in that regard, the inquiry is arguably broader than any one worker's interest in autonomy. Recent history squarely displays that in the absence of mandatory regulation during a public health threat, workplace exposures can become "the fulcrum of [an] epidemic"[138] and carry consequences far more severe than an employee's individual desire to stay employed or collect premium pay for the risk. Beyond individual health risk, these harmful consequences also include the likely disparate impact from lack of formal regulation. For example, workers in low-income areas or roles might not have the option to avoid the health risks absent an external mandate on the industry.[139] Thus, any modest changes in labor demand as jobs shift in function and industry to accommodate regulation pales in comparison to the public benefit of pollution-related illness and fatality reduction.

Finally, the EPA has historically displayed accommodation for those businesses that stand to lose the most from regulation. For example, the EPA provided that within renewable fuel regulations small refineries would be exempt from complying with certain regulatory deadlines to avoid disproportionate economic hardship.[140] In fact, the Supreme Court has recently gone to great lengths to protect these exemptions,[141] ensuring

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135. Calvin Hennick, *Retraining American workers for green energy jobs*, U.S. GREEN BLDG. COUNCIL (Sept. 25, 2017), https://www.usgbc.org/articles/retraining-american-workers-green-energy-jobs [https://perma.cc/GH9E-VVGU].

136. DOES ENVIRONMENTAL REGULATION KILL OR CREATE JOBS*?*, *supra* note 131, at 3.

137. Lucas, *supra* notes 66–68; Thrakar, *supra* note 69.

138. Kim Krisberg, *Essential workers facing higher risks during COVID-19 outbreak: Meat packers, retail workers sickened*, THE NATION'S HEALTH (Aug. 2020), https://www.thenationshealth.org/content/50/6/1.1 [https://perma.cc/QU44-EAEV].

139. *See* Kuang-Cheng Chai et al., *supra* note 90, at 9.

140. Jessica Gresko, *High Court expands eligibility for Clean Air Act exemption*, AP NEWS (June 25, 2021), https://apnews.com/article/joebiden-clean-air-act-us-supreme-court business-government-and-politics-7d55fb78bdbbeb174042513aa8375f4c [https://perma.cc/J2AQ-YQ2C].

141. *Id*.

that the interests of small businesses that face the most monetary difficulty in compliance stay represented and safeguarded in the face of lofty emissions goals. Therefore, the brunt of economic hardship in complying with these regulations is likely funneled to those larger refineries that can afford to and should make the changes as industry leaders, as opposed to small business owners.

C. Practitioners, Agencies, and Organizations

The arguments surrounding co-benefits set forth by professionals, organizations, and practitioners divide into two main camps. First, there are those that believe that including co-benefits is logical because of economic efficiency, required accounting of indirect costs, and the impending climate crisis.[142] Second, there are those that believe including co-benefits would unfairly inflate the associated benefits with a rule to impermissibly impose high costs and over-authorize agency discretion in rulemaking.[143]

One of the strongest arguments from the first group in support of including co-benefits is that agencies have long been required to factor indirect costs in their CBA, so it is only logical that indirect benefits, or co-benefits, also be considered.[144] For example, in *American Trucking Ass'ns v. EPA*, the court held that when creating a regulation that would reduce ozone levels in the air, the EPA had to consider "not only how the new standard would reduce tropospheric ozone's negative impacts on respiratory health, but also how it might reduce [ozone's] alleged positive health effects (as shielding from harmful ultraviolet rays) even though the latter effects were not the focus of the rule."[145]

Perhaps an even clearer example is the EPA's effort to ban asbestos-based brakes under the Toxic Substances Control Act, as contemplated in

142. INST. FOR POL'Y INTEGRITY, THE IMPORTANCE OF EVALUATING REGULATORY "CO-BENEFITS" 2 (2017) [hereinafter THE IMPORTANCE OF EVALUATING REGULATORY CO-BENEFITS].

143. C. Boyden Gray, *EPA's Use of Co-Benefits*, THE FEDERALIST SOCIETY (Sept. 24. 2015), https://fedsoc.org/commentary/publications/epa-s-use-of-co-benefits [https://perma.cc/CLL8-9E6K].

144. THE IMPORTANCE OF EVALUATING REGULATORY CO-BENEFITS, *supra* note 142, at 2.

145. Gresko, *supra* note 140; Am. Trucking Ass'ns v. EPA, 175 F.3d 1027, 1051–52 (D.C. Cir. 1999) *rev'd on other grounds sub nom.* Whitman v. Am. Trucking Ass'ns, 531 U.S. 457 (2001).

Corrosion Proof Fittings v. EPA in 1991.[146] In *Corrosion*, the court held that the EPA must consider the "indirect safety harm that could result from the use of substitute, non-asbestos brakes."[147] Where the EPA "failed to study the effect of non-asbestos brakes on automotive safety, despite credible evidence that non-asbestos brakes could increase significantly the number of highway fatalities," the court held that the EPA did not do its due diligence.[148] In its "zeal to ban asbestos," the court posited that the EPA "overlook[ed] . . . credible contentions that substitute products actually might increase fatalities."[149] According to the Court, this oversight was not in line with the EPA's promise to conduct a "balanced consideration of the environmental, economic, and social impact of any action taken by the agency."[150] So one could argue, if this "balanced consideration of the environmental, economic, and social impact" rightfully includes the inadvertent costs associated with an action, why would it not include the inadvertent benefits?

One theory to explain the explicit fascination with costs in courts, industries, and policy surrounding CBA could be the United States' tendency to weigh "negative" rights more heavily than affirmative rights. In other words, the United States government foundationally cares more about what it cannot do to its citizens as opposed to what it must do for its citizens.[151] This stands somewhat in contrast to other countries where there are affirmative legal mandates for the government to provide benefits like jobs, education, and healthcare.[152] As applied to agency action, this creates an imbalanced inquiry. Here, there is more focus on what the EPA cannot impose on industries, individuals, and communities than the benefits and necessary health improvements that the EPA's regulations may bring to those same parties. The first group of supporters deem this imbalance impermissible in the face of logic; if indirect costs are to be accounted for, indirect benefits should be accounted for, too.[153]

Further, in support of co-benefits, the first group also emphasizes the importance of accurately valuing regulations and diminishing the perceived

146. THE IMPORTANCE OF EVALUATING REGULATORY CO-BENEFITS, *supra* note 142, at 2.

147. *Id.*; *see* Corrosion Proof Fittings v. EPA, 947 F.2d 1201, 1225 (5th Cir. 1991).

148. *Corrosion Proof Fittings*, 947 F.2d at 1224.

149. *Id.*

150. *Id.* at 1221.

151. Linda R. Monk, *Constitution USA with Peter Sagal: Negative Rights Versus Positive Rights*, PBS, https://www.pbs.org/tpt/constitution-usa-peter-sagal/rights/ [https://perma.cc/Z5H3-T288].

152. *Id*.

153. THE IMPORTANCE OF EVALUATING REGULATORY CO-BENEFITS, *supra* note 142, at 2.

analytical differences between costs and benefits. This group further maintains that agency overvaluation of costs and undervaluation of benefits places a "thumb on the scale" of regulatory analysis.[154] Oftentimes, costs are far more readily monetizable than benefits in environmental regulations because benefits often take the form of avoided damages to environment and public health,[155] which necessarily includes estimation. Additionally, some of the most pertinent benefits, like clean air, and water, challenge agencies to value arguably priceless factors.[156] In such a situation, some may disregard benefits in preference of more tangible and readily valued cost factors. However, a valuation of regulatory action that does not begin and end with cost presents an opportunity for a more holistic and accurate review of a rule's potential impact.[157] Altogether, the first group holds that a more thorough inclusion of co-benefits would avoid inaccurate undervaluation and thus underinvestment in climate policy.

Conversely, the second group of professionals, organizations, and practitioners believe that CBA including co-benefits would unnecessarily inflate the benefits of a rule. For example, some believe that when the EPA faces staggering cost predictions and desires to pass a rule, the EPA is pressured into coming up with requisite "bootstrapped" benefits.[158] Primarily, the EPA stands accused of "double counting" benefits in air quality regulation because nontargeted pollutants like particulate matter and ozone reduction are already directly regulated by the EPA's National Ambient Air Quality Standards.[159]

However, this contention is incorrect for several reasons. First, there are health risks associated with *any* particulate matter emissions, meaning that further regulation beyond the baseline limits the EPA sets in its National Ambient Air Quality Standards still presents uncounted health benefits ripe for utilization in other rules.[160] Second, the EPA assesses the benefits

154. *Id.*; Ctr. for Biological Diversity v. Nat'l Highway Traffic Safety Admin., 538 F.3d 1172, 1198 (9th Cir. 2008).

155. G.F. Nemet et al., *Implications of Incorporating Co-benefits into Climate Change Policymaking*, 5 ENVTL. RES. LETTERS 1, 2–3 (2010).

156. LUMEN LEARNING, *Environmental Valuation*, https://courses.lumenlearning.com/suny-sustainability-a-comprehensive-foundation/chapter/environmental-valuation/ [https://perma.cc/8HBU-ANY7] (last visited Oct. 19, 2023).

157. Nemet et al., *supra* note 155, at 3.

158. Boyden Gray, *supra* note 143.

159. *Id*.

160. *See* Michael A. Livermore & Richard L. Revesz, *Rethinking Health-Based Environmental Standards,* 89 N.Y.U. L. REV. 1184, 1186–87 (2014) ("Environmental

of its proposed regulations "against a baseline emissions level that assumes 'full compliance with existing and newly enacted (but not yet implemented) regulations.'"[161] Therefore, in its own guidelines for preparing economic analyses, the EPA necessarily precludes any possible double counting of benefits already derived from other rules. What's more, the EPA precludes double counting while assuming an undeniably overinclusive 100% compliance rate of all existing, newly enacted, and not yet implemented rules.[162]

Finally, the second group of individuals disfavoring co-benefits believe that such an inclusion would present catastrophic nondelegation implications by assuming more agency authority than Congress intended.[163] To support this conclusion, the second group often cites the discretionary concerns discussed earlier in *Michigan v. EPA*[164], *Whitman v. American Trucking Associations*[165], and *West Virginia v. EPA*.[166]

However, even the restrictive *West Virginia* opinion leaves room to acknowledge that the EPA still has power to regulate.[167] Although *West Virginia* presented difficulties for emission caps and requires some serious creativity in the future, the opinion steadfastly maintains that the power to regulate greenhouse gas, methane emissions, and all other conventional air pollutants still lies with the EPA, not state legislatures.[168] Additionally, the *Chevron* standard holds that so long as Congress has not spoken directly to the precise issue at question, the Court should defer to the agency's reasonable answer or interpretation of a statute.[169] The Chevron standard further provides that "where legislative delegation to an

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pollutants often lack ambient concentrations below which there is no risk of negative health consequences. As a result, the complete elimination of health risks for these pollutants could be accomplished only by banning all emissions.").

161. THE IMPORTANCE OF EVALUATING REGULATORY CO-BENEFITS, *supra* note 142, at 3; EPA, GUIDELINES FOR PREPARING ECONOMIC ANALYSES 5–9 (2000) ("Assuming full compliance with existing regulations enables the analysis to focus on the incremental economic effects of the new rule or policy without double counting benefits and costs captured by analyses performed for other rules.").

162. EPA, GUIDELINES FOR PREPARING ECONOMIC ANALYSES 5–9 (2000).

163. Boyden Gray, *supra* note 143, at 6–7.

164. Michigan v. EPA, 576 U.S. 743 (2015).

165. Whitman v. Am. Trucking Ass'ns, 531 U.S. 457 (2001).

166. West Virginia v. EPA, 142 S. Ct. 2587 (2022).

167. EARTHJUSTICE & EVERGREEN ACTION, *What Does West Virginia v. EPA Mean for Climate Action*, EARTHJUSTICE (July 6, 2022), https://earthjustice.org/blog/2022-july/what-does-west-virginia-v-epa-mean-for-climate-action [https://perma.cc/WY2EQP7W].

168. *Id*.

169. *Chevron deference*, CORNELL L. LEGAL INFO. INST., https://www.law.cornell.edu/wex/chevron_deference#:~:text=The%20scope%20of%20the%20Chevron,made%20by%20the%20administrative%20agency (last visited Oct. 26, 2023) [https://perma.cc/G3U3-7JGD]; *see* Chevron U.S.A. v. Nat. Res. Def. Council, Inc., 467 U.S. 837, 842–43 (1984).

administrative agency is not explicit but rather implicit, a court may not substitute its own interpretation of the statute for a reasonable interpretation made by the agency."[170]

Still, some practitioners and judges speak out against *Chevron* deference. Critics of the doctrine argue that it "makes judges lazy" by letting them defer to an agency instead of making their own conclusion, and "makes agencies sloppy" by threatening a loss of accountability.[171] However, a judge who defers to an agency's decision may properly avoid "judge made" law by not encroaching onto the legislative powers tasked to handle these matters. Further, the *Chevron* deference's impact extends far beyond a judge's alleged work ethic. In a study conducted in 2022, a group of scholars found that nearly all major federal laws contain delegation to administrative bodies.[172]

Thus, if *Chevron* deference were to be eliminated, and agencies faced more limited interpretive powers, the federal government's ability to promote the health, safety, and welfare of its citizens would be significantly dampened. In the absence of *Chevron* deference for federal rulemaking, regulation could fall to individual locales producing inconsistent regulations across varied jurisdictions. While this local autonomy may be an admirable goal, that goal is especially infeasible when stacked up against a problem like widespread ambient air emissions that do not stay neatly within area codes. Finally, agency deference embodies the purpose of creating a specialized agency like the EPA in the first place: to research, regulate, and enforce areas of the law that Congress is not informed about, equipped for, or interested in regulating directly.

V. CONCLUSION

Although economists, policymakers, practitioners, agencies, and courts all agree that the public health is an important asset worth protecting, the considerable discourse surrounding co-benefits creates an unnecessary

170. CORNELL L. LEGAL INFO. INST., *supra* note 169.

171. Allison Frankel, *The (other) attack on Chevron deference*, REUTERS (Dec. 8, 2017, 2:46 PM), https://www.reuters.com/article/frankel-chevronotc/the-attack-on-chevron-deferenceidUSKBN1E22SM [https://perma.cc/9AUZ-U9F9].

172. David Bernstein, *The Court Could Foster a New Kind of Civil War*, POLITICO (Jun. 14, 2022, 5:00 PM), https://www.politico.com/news/magazine/2022/06/14/supreme-court-civil-war-00039543 [https://perma.cc/F48J-RFK8]; *see generally* Pamela J. Clouser McCann & Charles R. Shipan, *How many major US laws delegate to federal agencies? (almost) all of them*, 10 POL. SCI. RES. & METHODS, 438, 438–44 (2022).

hurdle to protect that asset. Policy change is notoriously slow in the United States, and this poses unique difficulties for agencies, like the EPA, that are in a race against time. For every instance of questioned authority and micromanagement that the EPA encounters in attempting to set forth the regulations Congress tasked the EPA to create, a worsening problem lies in wait. Even a judge's decision to stay regulatory action pending further litigation poses a significant threat–inaction while would-be regulated industries continue emitting as they always have.

Co-benefits are a logical inclusion to regulatory CBA. The inclusion of indirect costs and indirect benefits is consistent with years of precedent, EPA practices and OMB guidelines. Additionally, the co-benefits of the EPA's air quality regulations are much more than mere drops in the bucket of bettered public health. These co-benefits seek to counteract years of proven adverse health effects from worsening pollution. Finally, these vast improvements to public health would also capitalize on a renewed public interest in climate change on the heels of COVID-19.

The concerning trajectory of policymakers and courts casting doubt on co-benefits does more than just cause confusion. Harmfully inaccurate insinuations that the EPA "bootstraps" or double-counts benefits leads to decreased public trust in agency policymaking and threatens undervaluation and underinvestment in climate change mitigation efforts. Additionally, any delay in action from tightened regulatory management presents the United States with fewer opportunities to reach its 2030 emissions goals, thereby reducing bargaining power within international relations. Although the United States is not the only country to contribute to a worsening global climate, as world leaders in both climate policy and emissions, the United States has a clear opportunity and moral obligation to take charge on mitigation and create a healthier world for its citizens. Facilitating the inclusion of co-benefits in regulatory CBA is an efficient way to correctly value regulation, expedite rule passage, increase public trust, better public health, and beat the clock on a global threat.