The Social Cost of the Social Cost of Carbon

*Grayson Peters**

INTRODUCTION

President Biden has declared that federal environmental regulations addressing the climate crisis should be justified by both quantitative cost-benefit analysis (CBA) and environmental justice principles.[1] These priorities cannot be fully reconciled. CBA, a regulatory approach that dates to the Nixon

DOI: https://doi.org/10.15779/Z38PC2T985

* JD Candidate, University of California, Berkeley School of Law, 2024. I'm grateful to Professor Holly Doremus, TA Karen Chen, and the tireless editors of *Ecology Law Quarterly* for shepherding this Note to completion. I'm also endlessly thankful to my parents for all their support.

1. *See* Modernizing Regulatory Review, 86 Fed. Reg. 7223, (Jan. 20, 2021); Exec. Order No. 14008, 86 Fed. Reg. 7619 (Jan. 27, 2021).

Administration, prizes economic efficiency and is unavoidably insensitive to distributive impacts.[2] But environmental justice's primary focus is distributional equity.[3] This Note explores CBA's incompatibility with environmental justice and its particular unsuitability for climate-related regulatory decisions through the "social cost of carbon," which proponents have touted as a key tool for performing CBA in the climate context.[4]

The Biden Administration has followed the example of previous administrations by upholding quantitative CBA review for proposed regulations. On September 2, 2022, President Joseph R. Biden Jr. nominated Richard Revesz, a champion of environmental CBA,[5] to lead the Office of Information and Regulatory Affairs (OIRA).[6] OIRA is a subunit of the Office of Management and Budget (OMB) tasked with evaluating proposed federal agency rules through CBA.[7] The Senate confirmed Revesz on December 21, 2022.[8]

The Biden Administration has also declared its commitment to environmental justice in environmental rulemaking.[9] President Biden's Executive Order 14008 (Tackling the Climate Crisis at Home and Abroad) requires that all administrative agencies "make achieving environmental justice part of their missions by developing programs, policies, and activities to address the disproportionately high and adverse human health, environmental, climate-related and other cumulative impacts on disadvantaged communities, as well as the accompanying economic challenges of such impacts."[10] In September 2022, the U.S. Environmental Protection Agency (EPA) established a new office of

---

2. Jorge Roman-Romero & Melissa Lutrell, *Modernizing Regulatory Review Beyond Cost-Benefit Analysis*, CTR. FOR PROGRESSIVE REFORM (Oct. 11, 2021), https://progressivereform.org/cpr-blog/modernizing-regulatory-review-beyond-cost-benefit-analysis/.

3. *See, e.g.*, *Environmental Justice Primer for Ports: Defining Environmental Justice*, EPA, https://www.epa.gov/community-port-collaboration/environmental-justice-primer-ports-defining-environmental-justice (last visited May 27, 2023).

4. *See, e.g.*, Richard Revesz & Max Sarinsky, *The Social Cost of Greenhouse Gases: Legal, Economic, and Institutional Perspective*, 39 Yale J. on Reg. 855, 857–58 (2011).

5. *See* Michael Livermore & Richard Revesz, *The Future of Cost-Benefit Analysis*, YALE J. ON REG. (Nov. 1, 2021), https://www.yalejreg.com/nc/symposium-reviving-rationality-part-17/; *see generally* MICHAEL LIVERMORE & RICHARD REVESZ, RETAKING RATIONALITY: HOW COST-BENEFIT ANALYSIS CAN BETTER PROTECT THE ENVIRONMENT AND OUR HEALTH (2008); MICHAEL LIVERMORE AND RICHARD REVESZ, REVIVING RATIONALITY: SAVING COST-BENEFIT ANALYSIS FOR THE SAKE OF THE ENVIRONMENT AND OUR HEALTH (2021).

6. *President Biden Announces Key Nominees*, THE WHITE HOUSE (Sep. 2, 2022), https://web.archive.org/web/20231007222645/https://www.whitehouse.gov/briefing-room/statements-releases/2022/09/02/president-biden-announces-key-nominees-30/.

7. *Regulations and the Rulemaking Process*, OFF. INFO & REGUL. AFFS., https://www.reginfo.gov/public/jsp/Utilities/faq.myjsp (last visited May 27, 2023).

8. Summary page of *PN2637 – Richard L. Revesz – Executive Office of the President*, 117TH CONG. (2022), https://www.congress.gov/nomination/117th-congress/2637.

9. The White House, *Environmental Justice*, https://www.whitehouse.gov/environmentaljustice/; *see generally* Exec. Order 14008, *supra* note 1; Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, Exec. Order 12898 (Feb. 11, 1994).

10. The Order also declares "[w]e must deliver environmental justice in communities all across America" through a "[g]overnment-wide approach." Exec. Order 14008, *supra* note 1, at 7622–23.

environmental justice tasked with reviewing proposed environmental rules from an environmental justice perspective.[11]

Executive agencies employ the "social cost of carbon" (SCC), which aims to quantify the economic harm caused by greenhouse gases (GHGs) to argue that the benefits of proposed rules outweigh the costs. But the SCC demonstrates the limitations of economic CBA in climate policymaking. Despite widespread scholarly attention to and excitement about the SCC, researchers have failed to settle upon a consensus figure of dollar cost per ton of carbon dioxide emitted.[12] Rather, as I will discuss, the SCC's history is one of speculative modeling, back-and-forth debates, and obstructive litigation. Further, the SCC undermines environmental justice by perpetuating executive branch CBA, which obstructs regulations, privileges industry perspectives over advocates, and suppresses value-based policy arguments.

Ultimately, the SCC is a bandage on the executive branch's self-inflicted wound. The executive branch created the mandate that federal agencies' climate rules be cost-benefit efficient, which is a requirement rooted not in any statute, but in executive orders and internal guidance documents.[13] Moving forward, the federal government should orient its climate regulations not towards economic efficiency and value maximization, but towards aggressively serving the aims of environmental justice.

Part I of this Note introduces the executive branch's use of CBA in the rulemaking process. Subpart A within Part I surveys academic debate about the proper role of CBA, both generally and in the environmental law context, and concludes that CBA is a deeply flawed way to evaluate regulations. Subpart B within Part I summarizes the history of executive branch CBA.

Part II explores CBA in the climate context through the SCC. Subpart A within Part II provides an overview of the environmental justice principles most germane to Executive Order 14008's mandate. Subpart B within Part II argues that despite unsuccessful attempts to harmonize CBA and environmental justice, the two remain fundamentally at odds because CBA is not attentive to distributive impacts, prioritizes efficiency over policy arguments, and is biased against regulatory action. Subpart C within Part II traces the SCC's history from intended legal cover for federal climate rules to part of executive cost-benefit regulatory review. Subpart D within Part II illustrates that the development of the SCC rested on mistaken interpretations of federal court decisions and that the SCC is not legally required like agencies may have assumed.

---

11. Coral Davenport, *E.P.A. Will Make Racial Equality a Bigger Factor in Environmental Rules*, N.Y. TIMES (Sep. 24, 2022), https://www.nytimes.com/2022/09/24/climate/environmental-justice-epa.html?action=click&module=Well&pgtype=Homepage&section=Climate%20and%20Environment.

12. *See, e.g.*, Maxine Joselow, *'Seriously flawed': Experts clash over social cost of carbon*, E&E NEWS (Aug. 24, 2021), https://www.eenews.net/articles/seriously-flawed-experts-clash-over-social-cost-of-carbon/.

13. *See, e.g.*, Exec. Order No. 13992, 86 Fed. Reg. 7049, 7049 (Jan. 20, 2021).

Part III offers an alternative framework for regulatory decisions: maximizing climate change mitigation to the furthest extent politically possible (Subpart A within Part III) and prioritizing federal action in historically disinvested communities where other levels of government are least likely to intervene (Subpart B within Part III).

Finally, Part IV reflects on the future of climate regulation and the possibilities of aggressive mitigation and adaptation unconstrained by anti-regulatory structures. In order for federal climate action to be guided by genuine environmental justice commitments, and not economic efficiency, the Executive Branch must move past the cost-benefit justification framework that the SCC serves.

I. COST-BENEFIT ANALYSIS IN FEDERAL RULEMAKING

A. The CBA Debate: Rational Efficiency or Arbitrary Inequality?

Environmental and administrative law scholars are divided on whether CBA is an unqualifiedly valuable tool to rationalize regulatory decision-making, a flawed but important regulatory tool, or an arbitrary metric that entrenches inequality and inappropriately discounts non-quantifiable costs and benefits.

Strong CBA supporters like Cass Sunstein, chair of OIRA under the Obama Administration, describe it as "the best way of capturing human welfare right now."[14] In the regulatory review process, "the right stuff is what cost-benefit analysis says is the right stuff."[15] Traditionally, proponents argue for CBA based on Pareto efficiency or Kaldor-Hicks efficiency.[16] Pareto efficiency refers to an ideal, optimized bargaining situation in which at least one party is better off than it was under the status quo, no party is worse off, and no further transactions can be made without making a party worse off.[17] Kaldor-Hicks efficiency, a refinement of Pareto efficiency developed in the field of welfare economics, is reached when at least some "winners" are better off than they were under the status quo, such that the winners *could* theoretically compensate non-winners, and nobody is harmed.[18] Notably, Kaldor-Hicks efficiency does not predict that the winners will, or even may, redistribute their wins.[19] Even beyond the assumptions of economic theory, Sunstein argues that CBA has a rationalizing

14. Dylan Matthews, *Can Technocracy Be Saved? An Interview with Cass Sunstein*, VOX (Oct. 22, 2018, 9:00 AM), https://www.vox.com/future-perfect/2018/10/22/18001014/cass-sunstein-cost-benefit-analysis-technocracy-liberalism.

15. *Id.*

16. Karl Coplan, *The Missing Element of Environmental Cost-Benefit Analysis: Compensation for the Loss of Regulatory Benefits*, 30 GEORGETOWN ENV'T L. REV. 281, 287 (2018).

17. *Id.* at 287–89.

18. Matthew Adler, *Cost Benefit Analysis*, ENCYCLOPEDIA OF LAW & SOCIETY: AMERICAN & GLOBAL PERSPECTIVES 305 (David Clark ed. 2007); Coplan, *supra* note 16, at 290–91.

19. Coplan, *supra* note 16, at 290.

effect on regulators because "it is exceedingly difficult to choose the appropriate level of regulation without looking at both the benefit and cost sides."[20]

By contrast, qualified proponents of CBA argue that CBA is a necessary—though imperfect—tool for regulatory agencies to compare the effectiveness of proposed regulations. Like Sunstein, these qualified supporters claim that CBA "rationalizes" regulatory decision-making by making pros and cons visible.[21] They argue that CBA can help regulators consider trade-offs and calibrate regulations for maximum benefits.[22] However, the Trump Administration was accused of manipulating the CBA process by emphasizing regulatory costs and concealing benefits to justify deregulation across administrative agencies.[23] In response, qualified CBA supporters argue for a better, more rigorous CBA process.[24] They are optimistic that, particularly with government investment in research, CBA can capture and quantify a greater range of previously unquantifiable costs and benefits to enable more accurate, less politically manipulable outcomes.[25] To the extent that CBA currently fails to account for distributive problems, supporters argue that the process can be amended to better assess the costs and benefits that marginalized groups like low-income people would experience.[26] CBA might at least serve as a "guardrail" to keep agencies from imposing regulatory costs that are grossly disproportionate to benefits.[27]

---

20. Cass Sunstein, *Is Cost-Benefit Analysis for Everyone?*, 53 ADMIN. L. REV. 299, 302 (2001).

21. *See, e.g.*, Michael Livermore, *Rejecting the Trump Anticanon of Regulatory Mismanagement*, REGUL. REV. (Feb. 27, 2021), https://www.theregreview.org/2021/02/17/livermore-rejecting-trump-anticanon-regulatory-mismanagement/; Sally Katzen, *Benefit-Cost Analysis Should Promote Rational Decisionmaking*, REGUL. REV. (Apr. 24, 2018), https://www.theregreview.org/2018/04/24/katzen-benefit-cost-analysis-promote-decisionmaking/.

22. U.S. GOV'T ACCOUNTABILITY OFF., RCED-84-62, COST-BENEFIT ANALYSIS CAN BE USEFUL IN ASSESSING ENVIRONMENTAL REGULATIONS, DESPITE LIMITATIONS 1 (1984).

23. *See, e.g.*, James Goodwin, *Practitioner Insights: Fuzzy Math to Assault Environmental Rules*, BLOOMBERG BNA DAILY ENV'T REP. (Sep. 28, 2017), https://cpr-assets.s3.amazonaws.com/documents/Goodwin_BloombergBNA-DailyEnvironment_Fuzzy_Math_092817.pdf. I would argue that the very possibility of "fuzzy math" and political manipulation in CBA undermines justifications of CBA as a rationalizing process that improves the objectivity of decision-making.

24. *See, e.g.*, Livermore, *supra* note 21; Katzen, *supra* note 21.

25. *See, e.g.*, Richard Revesz, *Quantifying Regulatory Benefits*, 10 Calif. L. Rev. 1423, 1426 (2014); *see also FACT SHEET: Biden-Harris Administration Announces Roadmap for Nature-Based Solutions to Fight Climate Change, Strengthen Communities, and Support Local Economies*, THE WHITE HOUSE (Nov. 8, 2022), https://www.whitehouse.gov/briefing-room/statements-releases/2022/11/08/fact-sheet-biden-%e2%81%a0harris-administration-announces-roadmap-for-nature-based-solutions-to-fight-climate-change-strengthen-communities-and-support-local-economies/ ("Current federal policies and guidance on accounting and analysis can under-value nature-based solutions. The Office of Management and Budget (OMB) is reviewing central guidance on benefit cost analysis (Circulars A-4 and A-94) to help federal agencies more fully account for the value of nature in regulatory and funding decisions. Today, the White House is standing up a new technical working group on Frontiers of Benefit Cost Analysis to support agencies in benefit cost analysis for nature-based solutions and other analysis needs.").

26. *See, e.g.*, John D. Graham, *Incorporating Environmental Justice Into Benefit-Cost Analysis of Federal Rulemakings*, 25 Rich. Pub. Int. L. Rev. 149, 167 (2022).

27. *See generally* Daniel Farber, *Staying within the guardrails*, ENV'T FORUM 40 (Mar.–Apr. 2022).

However, CBA critics argue that, instead of "rationalizing" rulemaking, it narrows decision-making criteria and worsens inequality. To start, Yale Law School's Zachary Liscow argues that CBA functionally ignores distributional analysis and equity despite language in executive orders.[28] Liscow alleges that CBA's narrow focus on efficiency ignores inequality and leads to regulatory decisions that exacerbate inequality.[29] Karl Coplan of Pace University's Elisabeth Haub School of Law is similarly critical of CBA's economic justifications.[30] Coplan writes that Kaldor-Hicks efficiency "tends to favor a regressive allocation to those who already have more goods or money."[31]

Even welfare economists would concede that the same amount of money has greater value to a poor person than to a rich person due to the diminishing marginal utility of money.[32] But, because money is most valuable to those with the least and least valuable to those with the most, CBA fails on its own terms to maximize total value.[33] In maximizing the net number of dollars produced by the economy, CBA fails to allocate benefits to those who would most benefit from them.[34]

Critics also contend that CBA creates an aura of neutrality and rationality that entrenches the notion that only rules that survive CBA—and are evaluated as economically valuable—are worthwhile. University of Michigan Professor Elizabeth Popp Berman emphasizes that "cost-benefit analysis is a convenient fiction that exists to coordinate action and facilitate decision-making."[35] Berman argues that CBA puts "a patina of rationality on what is essentially a moral choice."[36] As such, she says that CBA should ultimately serve regulators' policy goals rather than act as an objective or neutral measurement.[37] Although

28. Zachary Liscow, *Equity in Regulatory Cost-Benefit Analysis*, LAW & POL. ECON. PROJECT (Oct. 4, 2021), https://lpeproject.org/blog/equity-in-regulatory-cost-benefit-analysis/; *see also* Lisa Heinzerling, *Cost Nothing: Analysis: Environmental Economics in the Age of Trump*, 30 COLO. NAT. RES., ENERGY & ENV'T L. REV. 287, 292 (2018) ("Importantly, however, the winners [in CBA] need not actually compensate the losers; the analysis simply needs to show that, in theory, they could do so. Notice, then, that the losers don't need to come out ahead; indeed, they can come out very much behind. Moreover, the winners can be highly concentrated and very few in number. The pie might get bigger, but the pieces all might go to just a few people.").

29. Liscow, *supra* note 28.

30. Coplan, *supra* note 16, at 290–91.

31. *Id.* at 291.

32. *What is the Marginal Utility of Money*?, INVESTOPEDIA (Mar. 26, 2022), https://www.investopedia.com/ask/answers/072815/what-marginal-utility-income.asp ("The diminishing marginal utility of income suggests that as an individual's income increases, the extra benefit to that individual decreases. This is because each subsequent dollar is satisfying less and less urgent wants.").

33. *See id.*

34. *See id.*

35. Elizabeth Berman, *Let's Politicize Cost-Benefit Analysis*, L. & POL. ECON. PROJECT (Oct. 5, 2021), https://lpeproject.org/blog/lets-politicize-cost-benefit-analysis/.

36. *Id.*

37. *See id.*

economic efficiency seems like a technocratic, value-neutral objective, it is itself a value choice.[38]

Additional critics argue that CBA fails to capture a whole host of costs and benefits in the context of environmental regulation. For example, Lisa Heinzerling of Georgetown University Law Center claims that CBA's use of discount rates to project the present reduced value of future costs and benefits[39] is "an affront to values that President Biden has singled out for protection in the regulatory process . . . [T]he farther into the future [environmental stewardship] benefits reach, the more discounting diminishes them."[40] Heinzerling also claims that non-quantifiable values, such as "racial justice, human dignity, . . . equity[,]"[41] "freedom, fairness, and community"[42] are ignored because CBA is so dependent upon monetary valuation.[43] Similarly, Daniel Acland, an economics professor at UC Berkeley Goldman School of Public Policy, criticized President Biden's "Modernizing Regulatory Review" memorandum[44] for presuming that non-quantifiable values including, "safety, economic growth, social welfare, racial justice, environmental stewardship, human dignity, equity, and the interests of future generations" can be quantified and monetized based on consumer willingness-to-pay.[45]

CBA also skews which environmental regulations are likely to be enacted. For instance, because CBA highly values preventing human deaths, regulations more likely to prevent deaths in the short-term are far more likely to survive OIRA review than other regulations with longer-term health benefits, since discount rates decrease the value of costs and benefits the further into the future they are expected.[46] Particulate matter air pollution is very traceable to shorter-term deaths, but toxic water pollution takes longer to kill people through cancer.[47] So, rules limiting water pollution are less likely to satisfy CBA than rules limiting air pollution.[48]

---

38. *See id.*

39. *See* Daniel Farber & Paul Hemmersbaugh, *The Shadow of the Future: Discount Rates, Later Generations, and the Environment*, 46 VANDERBILT L. REV. 267, 277 (1993).

40. Lisa Heinzerling, *Climate Change, Racial Justice, and Cost-Benefit Analysis*, L. & POL. ECON. PROJECT (Sep. 28, 2021), https://lpeproject.org/blog/climate-change-racial-justice-and-cost-benefit-analysis/.

41. *Id.*

42. Heinzerling, *supra* note 28, at 293.

43. *See id.*

44. *See* Modernizing Regulatory Review, *supra* note 1, at 7223–7224. (President Biden's "Modernizing Regulatory Review" memorandum directed his administration to apply CBA, as was done under previous administrations.).

45. Dan Acland, *On Balance: What Should OIRA Do about Equity, Justice, Dignity, and Moral Responsibility?*, SOC'Y FOR BENEFIT-COST ANALYSIS (Aug. 32, 2021), https://www.benefitcostanalysis.org/index.php?option=com_dailyplanetblog&view=entry&year=2021&month=08&day=22&id=84:on-balance-what-should-oira-do-about-equity-justice-dignity-and-moral-responsibility-.

46. Heinzerling, *supra* note 28, at 296.

47. *Id.*

48. *Id.*

Lastly, critics claim that CBA wrongly substitutes an atomized, consumer-level perspective instead of collective, democratic policymaking. Heinzerling and others "argue that a well-functioning democracy should respect the informed judgments of citizens rather than aggregate private consumption choices."[49] But, instead of evaluating people's sense of collective responsibility or values, CBA attempts to quantify individual willingness to pay—how much each consumer would pay for a benefit.[50]

To summarize: Quantitative CBA has full-throated advocates who believe that CBA is the best way to inform regulation for welfare maximization,[51] as well as qualified technocratic supporters who believe that methodological refinement can enable CBA to consider more costs, benefits, and distributional impacts.[52] However, CBA remains a deeply flawed tool. CBA reduces complex regulatory choices to dollar-to-dollar comparisons.[53] In doing so, it elides non-quantifiable values[54] and substitutes theoretical measures of aggregate consumer preferences for the actual will of the voting public.[55]

B. The History of CBA from Nixon to Biden

From its creation under the Nixon Administration to its present role in the Biden Administration, executive branch CBA has grown more entrenched, centralized, and intrusive into agency rulemaking.

The executive branch's use of CBA began during the Nixon Administration following environmental regulations that it perceived as overzealous.[56] In response to the Nixon OMB's concerns that EPA regulations were too expensive to administer and industry complaints about regulatory costs, OMB Director George Schultz issued a 1971 "Quality of Life Review" memorandum, which required that multiple executive branch agencies consider alternative actions and weigh the projected economic costs of proposed regulations against their benefits.[57] However, in practice, Schultz's "Quality of Life Review" process only applied to EPA; OMB officials made no efforts to subject other agencies to cost-benefit review.[58]

---

49. Cass Sunstein, *Cost-Benefit Analysis and the Environment*, 115(2) ETHICS 351, 355 (2005) (citing FRANK ACKERMAN & LISA HEINZERLING, PRICELESS: ON KNOWING THE PRICE OF EVERYTHING AND THE VALUE OF NOTHING (2003)).

50. *See, e.g.*, COLIN PRICE, LANDSCAPE ECONOMICS 138–43 (2017).

51. *See, e.g.*, Matthews, *supra* note 14.

52. *See, e.g.*, Revesz, *supra* note 25, at 1456.

53. Heinzerling, *supra* note 40.

54. *See id.*

55. *See, e.g.*, Sunstein, *supra* note 49, at 355.

56. Edward Fuchs & James Anderson, *The Institutionalization of Cost-Benefit Analysis*, 10 Pub. Productivity Rev. 25, 26–27 (1987).

57. U.S. OFF. OF MGMT. & BUDGET, *Memorandum: Agency regulations, standards, and guidelines pertaining to environmental quality, consumer protection, and occupational and public health and safety* (Oct. 5, 1971), https://thecre.com/ombpapers/QualityofLife1.htm.

58. Fuchs & Anderson, *supra* note 56, at 27.

The Ford Administration tasked OMB with reviewing agencies' "inflationary impact statements," through which agencies were supposed to weigh the economic costs and benefits of proposed rules in the context of fighting inflation.[59] Ford's Executive Order 11821 (1974) provided that "proposals . . . for the promulgation of regulations or rules by any executive branch agency must be accompanied by a statement which certifies that the inflationary impact of the proposal has been evaluated."[60] The Administration directed OMB to consider, among other factors, a proposed rule's "cost impact on consumers, businesses, markets, or Federal, State or local government."[61]

In practice, the Ford Administration's rulemaking was too decentralized to satisfy CBA proponents in OMB since regulatory agencies had the power to decide whether their rules were significant enough to warrant an inflation impact statement.[62] At this point, CBA was not yet fully entrenched in the executive branch; in 1977, the Council of Economic Advisors lobbied unsuccessfully to replace cost-benefit analysis with cost-effectiveness analysis, which instead of influencing agency selection of goals, would have only analyzed methods to achieve those goals.[63] This cost-effectiveness analysis regime, rather than the cost-benefit analysis regime that endured, would have been far less harmful to environmental justice and climate action, since it would not have intruded into agencies' regulatory mandates and policy agendas. However, the Ford Administration's decision to stick with CBA laid the stage for subsequent administrations to expand and centralize CBA review.

President Jimmy Carter further expanded the scope of executive branch CBA as part of his administration's concern about regulatory costs.[64] Executive Order 12044 (1978) directed agencies to perform "regulatory analysis" for proposed rules with "an annual effect on the economy of $100 million or more" or "a major increase in costs or prices for individual industries, levels of government or geographic regions."[65] In practice, "regulatory analysis" meant CBA. So, Executive Order 12044 marked the first time that the executive branch required all rules of a certain economic significance to undergo CBA.[66]

The Carter Administration administered CBA through an interagency group called the "Regulatory Analysis Review Group" (RARG).[67] RARG represented a middle point between earlier, less intrusive attempts at executive branch CBA and OIRA's subsequent, more top-down approach to assessing agency rules. The burden of proof was placed on RARG to show agency rules were not cost-

59. *Id.* at 27–28.
60. Exec. Order No. 11821, 39 Fed. Reg. 41501 (Nov. 27, 1974).
61. *Id.*
62. Fuchs & Anderson, *supra* note 56, at 28.
63. *Id.*
64. *Id.* at 29–30.
65. *See* Exec. Order No. 12044, 43 Fed. Reg. 12661 (Mar. 24, 1978).
66. *See* Fuchs & Anderson, *supra* note 56, at 29.
67. *Id.* at 28–29.

effective, not agencies to demonstrate that their rules were cost-effective.[68] RARG lacked the legal authority to alter or delay rules to "impose minimum economic burdens on the private sector," though it exerted significant influence.[69]

The Reagan Administration centralized CBA and, in doing so, created the architecture of modern executive branch CBA. President Ronald Reagan wanted to provide "regulatory relief" to industry and make it harder for the federal government to promulgate costly regulations.[70] On only his second day in office, President Reagan announced a "Presidential Task Force on Regulatory Relief."[71] Less than a month later, Executive Order 12291 (1981) formalized CBA for "major rules" with an economic effect of over $100 million and, crucially, gave CBA administration to OIRA, where it has remained ever since.[72] Executive Order 12291 gave OIRA significant oversight powers over regulatory actions and moved the burden of proof for compliance to the regulatory agencies.[73]

President Bill Clinton slightly altered, but did not upend, executive branch CBA. Clinton's Executive Order 12866 (1993) continued Reagan's CBA review structure, requiring that OIRA perform CBA for any "significant regulatory action."[74] "Significant" was a higher bar than Executive Order 12291's "major rule" criteria, subjecting fewer rules to CBA.[75] Executive Order 12866 expressly required agencies to include qualitative measures of costs and benefits, while Reagan's approach under Executive Order 12291 had not specified which costs

68. *Id.* at 29.

69. *Id.* at 29–30.

70. *Id.* at 30; President Ronald Reagan, *Remarks Announcing the Establishment of the Presidential Task Force on Regulatory Relief* (Jan. 22, 1981), https://www.reaganlibrary.gov/archives/speech/remarks-announcing-establishment-presidential-task-force-regulatory-relief.

71. Fuchs & Anderson, *supra* note 56, at 30; Reagan, *supra* note 70.

72. Fuchs & Anderson, *supra* note 56, at 30–31; Exec. Order No. 12291, 46 Fed. Reg. 13193 (Feb. 17, 1981).

73. Fuchs & Anderson, *supra* note 56, at 31.

74. "Significant regulatory action," similar to a "major rule" under Executive Order 12291, was defined as any action likely to "[h]ave an annual effect on the economy of $100 million or more or adversely affect in a material way the economy, a sector of the economy, productivity, competition, jobs, the environment, public health or safety, or State, local, or tribal governments or communities; Create a serious inconsistency or otherwise interfere with an action taken or planned by another agency; Materially alter the budgetary impact of entitlements, grants, user fees, or loan programs or the rights and obligations of recipients thereof; or Raise novel legal or policy issues arising out of legal mandates, the President's priorities, or the principles set forth in this Executive order." Exec. Order No. 12866, 58 Fed. Reg. 190 (Sep. 30, 1993); *Summary of Executive Order 12866 – Regulatory Planning and Review*, EPA, https://www.epa.gov/laws-regulations/summary-executive-order-12866-regulatory-planning-and-review (last visited May 29, 2023). President George H.W. Bush, President Clinton's immediate predecessor, continued and did not meaningfully change President Reagan's CBA structure.

75. Susan Dudley, *Happy Birthday, Executive Order 12866*, FORBES (Sep. 24, 2018), https://www.forbes.com/sites/susandudley/2018/09/24/happy-birthday-executive-order-12866/.

and benefits were to be measured.[76] Executive Order 12866 remains the bedrock of modern CBA review.[77]

President George W. Bush carried forward the precedent of Executive Order 12866. In 2003, the Bush OMB promulgated Circular A-4, an internal guidance document, for agencies preparing analysis under Executive Order 12866.[78] Circular A-4 recommends that agencies proposing regulations "discuss the expected benefits and costs of the selected regulatory option and any reasonable alternatives."[79] The document privileges quantitative over qualitative analysis: "Sound quantitative estimates of benefits and costs, where feasible, are preferable to qualitative descriptions of benefits and costs because they help decision makers understand the magnitudes of the effects of alternative actions."[80] Economic pricing is specifically prioritized: "You should monetize quantitative estimates whenever possible."[81]

In the first month of his presidency, President Obama signaled that his administration might finally deviate from the entrenched CBA review apparatus and move towards considering other, more qualitative factors. President Obama's January 2009 "Memorandum on Regulatory Review" directed the OMB to revisit the regulatory review process, including "offer[ing] suggestions on the role of cost-benefit analysis" and "address[ing] the role of distributional considerations, fairness, and concern for the interests of future generations."[82] Yet, two years later, Obama chose to stick with precedent, to the disappointment of some reform advocates.[83] Executive Order 13563 (2011) reaffirmed President Clinton's Executive Order 12866 and directed agencies to "maximize net benefits" and "impose the least burden on society, consistent with obtaining regulatory objectives, taking into account, among other things, and to the extent practicable, the costs of cumulative regulations."[84]

President Donald Trump undermined, but did not overrule, the entrenched CBA regime, establishing an explicitly deregulatory agenda. Executive Order 13771 (2017) capped the total new regulatory costs that agencies could impose

76. Cass Sunstein & Robert Hahn, *A New Executive Order for Improving Federal Regulation? Deeper and Wider Cost-Benefit Analysis*, 150 COASE-SANDOR WORKING PAPER SERIES L. & ECON. n.3 (2002).

77. CONG. RSCH. SERV., IF12058, COST-BENEFIT ANALYSIS IN FEDERAL AGENCY RULEMAKING 1, https://crsreports.congress.gov/product/pdf/IF/IF12058 (2022).

78. *Id.* at 2.

79. U.S. OFF. OF MGMT. & BUDGET, EXEC. OFFICE OF THE PRESIDENT, *Circular A-4: Regulatory Analysis* (2003), https://obamawhitehouse.archives.gov/omb/circulars_a004_a-4/.

80. *Id.*

81. *Id.*

82. Memorandum for the Heads of Executive Departments and Agencies, 74 Fed. Reg. 5977 (Feb. 3, 2009).

83. Heinzerling, *supra* note 28, at 298; Lisa Heinzerling, *Inside EPA: A Former Insider's Reflections on the Relationship Between the Obama EPA and the Obama White House*, 31 PACE ENV'T L. REV. 325, 340–41 (2014).

84. Exec. Order No. 13563, 76 Fed. Reg. 3821 (Jan. 18, 2011).

and mandated that they offset every new regulation with deregulation.[85] It did not explicitly abrogate Executive Order 12866 or Executive Order 13563.[86] A memorandum from Trump's OIRA administrator also instructed agencies to continue following the directives of Executive Order 12866.[87] But, Executive Order 13771 undermined the core of CBA by explicitly looking only at regulatory costs and not benefits.[88] Critics charged that Trump's OIRA only made sure "that the cold quotas of Executive Order 13771 [were] being met, rather [than] serv[ing] as quality control on regulations."[89] Separately, Executive Order 13777 required each federal agency to create a "Regulatory Reform Task Force" charged with identifying burdensome regulations, including those that "impose[d] costs that exceed[ed] benefits."[90]

Finally, the Biden Administration sought to undo the Trump Administration's deregulatory policies by reinstating "good" CBA. On his first day in office, President Biden issued Executive Order 13992 (2021), revoking Trump's Executive Order 13771 and Executive Order 13777.[91] Biden's day-one memorandum, "Modernizing Regulatory Review," reaffirmed the basic principles of Clinton's Executive Order 12866 and Obama's Executive Order 13563 while directing his administration to "ensure that regulatory initiatives appropriately benefit and do not inappropriately burden disadvantaged, vulnerable, or marginalized communities."[92] The memorandum's language suggests that the administration seeks to harmonize CBA with social justice goals like environmental justice.[93] President Biden's OIRA director Richard Revesz proposed and implemented revisions to Circular A-4, carried forward since the Bush administration, which were aimed at improving agency

85. Exec. Order No. 13771, 82 Fed. Reg. 9339, 9339 (Jan. 30, 2017). The Order's statement of purpose read: "It is the policy of the executive branch to be prudent and financially responsible in the expenditure of funds, from both public and private sources. In addition to the management of the direct expenditure of taxpayer dollars through the budgeting process, it is essential to manage the costs associated with the governmental imposition of private expenditures required to comply with Federal regulations. Toward that end, it is important that for every new regulation issued, at least two prior regulations be identified for elimination, and that the cost of planned regulations be prudently managed and controlled through a budgeting process." *Id.*

86. *See id.*

87. U.S. OFF. OF INFO & REGUL. AFFS., M-17-21, GUIDANCE IMPLEMENTING EXECUTIVE ORDER 13771, TITLED "REDUCING REGULATION AND CONTROLLING REGULATORY COSTS" 2 (Apr. 5, 2017), https://www.whitehouse.gov/wp-content/uploads/legacy_drupal_files/omb/memoranda/2017/M-17-21-OMB.pdf.

88. James Goodwin, *Executive Order 12866 is Basically Dead, and the Trump Administration Basically Killed It*, CTR. FOR PROGRESSIVE REFORM (Oct. 1, 2018), https://progressivereform.org/cpr-blog/executive-order-12866-is-basically-dead-and-the-trump-administration-basically-killed-it/.

89. *Id.*

90. Exec. Order No. 13777, 82 Fed. Reg. 12285, 12285–86 (Mar. 1, 2017).

91. Exec. Order No. 13992, 86 Fed. Reg. 7049, 7049 (Jan. 20, 2021).

92. *See* Modernizing Regulatory Review, *supra* note 1, at 7223.

93. *Id.*

consideration of equity.[94] However, as I will discuss, this is neither likely nor feasible.

II. CBA IN THE CLIMATE CONTEXT

After a federal rule was struck down under NEPA by the 9th Circuit for failure to consider the cost of greenhouse gases, the Obama Administration created the social cost of carbon (SCC) to monetize the damages of carbon dioxide emissions in order to have legal justification for environmental regulations. But the federal government's SCC is an imprecise and hotly contested estimate of the economic costs of GHG emissions. Moreover, agency use of the SCC is not strictly necessary under any statute.

CBA is especially unhelpful in informing regulatory decisions in the context of climate policy. Berkeley Law Professor Daniel Farber has argued that CBA has "strikingly limited capacity to provide useful policy guidance regarding climate change."[95] Farber identifies the difficulty of projecting long-term economic models based on imprecisely predicted climate impacts and deciding on a particular discount rate.[96] As he notes, "CBA simply is not capable of generating clear conclusions regarding climate change. Instead, we must turn to other sources of guidance in order to make sensible decisions."[97]

Beyond Farber's criticism of CBA's usefulness in climate policy, CBA also clashes with the Biden Administration's stated goal to pursue environmental justice in climate policy.[98] Unlike CBA, environmental justice focuses on values other than economic efficiency.

A. Overview of Environmental Justice Principles

Environmental justice does not aim to maximize economy-wide wealth generation or efficiency.[99] Indeed, the Principles of Environmental Justice, established at the First National People of Color Environmental Leadership Summit in 1991, reflect concern that economic growth and consumption will lead to environmental harm if left unchecked.[100] The Principles of Environmental Justice include: "the right to be free from ecological

94. Jose Rascon, *Biden's OIRA Nominee Sets Sights on Circular A-4 Changes*, MERITALK (Oct. 5, 2022, 11:21 AM), https://www.meritalk.com/articles/bidens-oira-nominee-sets-sights-on-circular-a-4-changes/; Issuance of Revised OMB Circular No. A-4, "Regulatory Analysis", 86 Fed. Reg. 77615 (Nov. 13, 2023).

95. Daniel Farber, *Rethinking the Role of Cost-benefit Analysis*, 76 UNIV. CHI. L. REV. 1355, 1357 (2009).

96. *Id.* at 1390.

97. *Id.* at 1386.

98. *See generally* Exec. Order No. 14008, *supra* note 1.

99. *See Principles of Environmental Justice*, UNITED CHURCH OF CHRIST, https://www.ucc.org/what-we-do/justice-local-church-ministries/justice/faithful-action-ministries/environmental-justice/principles_of_environmental_justice/ (last visited May 29, 2023).

100. *Id.*

destruction . . . [and] the right to ethical, balanced[,] and responsible uses of land and renewable resources in the interest of a sustainable planet for humans and other living things."[101] Further, the Principles state:

> Environmental justice mandates the right to ethical, balanced and responsible uses of land and renewable resources in the interest of a sustainable planet for humans and other living things . . . opposes the destructive operations of multi-national corporations . . . [and the] exploitation of lands, peoples and cultures, and other life forms . . . [and] requires that we, as individuals, make personal and consumer choices to consume as little of Mother Earth's resources and to produce as little waste as possible.[102]

The 1991 Principles further demand that communities have the right to participate "as equal partners at every level of decision-making including needs assessment, planning, implementation, enforcement and evaluation."[103]

In the context of climate change, environmental justice advocates focus on the disparate impacts that vulnerable communities experience.[104] These include residents of domestic "frontline communities," often distinguished by class and race, and the Global South.[105] Environmental justice, as applied to climate change, is sometimes called climate justice.[106]

EPA defines environmental justice, more conservatively, as "the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation[,] and enforcement of environmental laws, regulations and policies."[107] President Biden's Executive Order 14008 did not explicitly adopt a definition of environmental justice, but it directed agencies to achieve environmental justice by addressing "the disproportionately high and adverse human health, environmental, climate-related and other cumulative impacts on disadvantaged communities, as well as the accompanying economic challenges of such impacts."[108]

---

101. *Id.*

102. *Id.*

103. *Id.*

104. *See, e.g.*, David Schlosberg & Lisette Collins, *From Environmental to Climate Justice: Climate Change and the Discourse of Environmental Justice*, 5(3) WIREs CLIMATE CHANGE 359, 361–62, https://wires.onlinelibrary.wiley.com/doi/epdf/10.1002/wcc.275 (2014); Daisy Simmons, *What is 'climate justice'?*, YALE CLIMATE CONNECTIONS (July 29, 2020), https://yaleclimateconnections.org/2020/07/what-is-climate-justice; *Environmental & Climate Justice*, NAACP, https://naacp.org/know-issues/environmental-climate-justice (last visited May 29, 2023).

105. *What is Climate Justice?*, GLOBAL WITNESS, (Dec. 2, 2021), https://www.globalwitness.org/en/blog/what-climate-justice/.

106. *See, e.g.*, University of California Center for Climate Justice, *What is Climate Justice?*, https://centerclimatejustice.universityofcalifornia.edu/what-is-climate-justice/.

107. *Learn About Environmental Justice*, U.S. ENV'T PROT. AGENCY, https://www.epa.gov/environmentaljustice/learn-about-environmental-justice (last visited May 29, 2023).

108. Exec. Order No. 14008, *supra* note 1, at 7629.

B. CBA and Environmental Justice are Incompatible

Although attempts have been made to reconcile CBA with environmental justice, these two approaches to decision-making in environmental regulation are incompatible.

President Biden's "Modernizing Regulatory Review" memorandum both reaffirmed the quantitative CBA regime and directed agencies to "ensure that regulatory initiatives appropriately benefit and do not inappropriately burden disadvantaged, vulnerable, or marginalized communities."[109] Professor Cass Sunstein, previously OIRA chair under President Obama, called the memorandum's nod to distributional impacts "exceedingly important" and characteristic of "an extra emphasis on fairness and human dignity."[110]

But regulators have not yet managed to harmonize Kaldor-Hicks efficiency—overall wealth maximization—with distributional justice. Professor Heinzerling writes that while presidents "have been careful to give occasional shout-outs to fairness and equity as important considerations in regulatory policy, these considerations almost never play a decisive role once cost-benefit analysis gets rolling."[111] As a result, CBA inevitably "shunts fairness to the side in its pursuit of overall wealth."[112]

Nonetheless, CBA proponents claim that methodological improvements can allow CBA to better analyze costs and benefits to discrete marginalized groups. For example, one possible change to CBA is "equity weighting," which would increase the assessed value of costs and benefits to disadvantaged people, but which would favor deregulation in instances where costs to the poor outweigh benefits.[113] OIRA Administrator Revesz's revision to Circular A-4 urges agencies to consider "distributional weights," which combines information about welfare with information about equity.[114] Perhaps CBA could account for cumulative impacts on vulnerable communities.[115] Or, as Revesz has previously

---

109. *See* Modernizing Regulatory Review, *supra* note 1, at 7223.

110. Cass Sunstein, *Biden Chooses a Pragmatic Path for Regulation*, BLOOMBERG (Jan. 22, 2021), https://www.bloomberg.com/opinion/articles/2021-01-22/regulation-under-biden-cost-benefit-analysis-with-a-new-twist.

111. Heinzerling, *supra* note 28, at 292.

112. *Id.*

113. *See generally* Matthew Adler, *Benefit-Cost Analysis and Distributional Weights: An Overview*, 10 REV. OF ENV'T ECON. & POL'Y. 264 (2016); Daniel Farber, *Equity Weighting: A Brief Introduction*, LEGALPLANET (June 20, 2022), https://legal-planet.org/2022/06/20/equity-weighting-a-brief-introduction/.

114. U.S. OFF. OF MGMT. & BUDGET, EXEC. OFFICE OF THE PRESIDENT, *Circular A-4* (Apr. 6, 2023), https://www.whitehouse.gov/wp-content/uploads/2023/04/DraftCircularA-4.pdf; Dan Acland & David Greenberg, *On Balance: Some Clarifications Regarding Distributional Weighting*, Soc. for Benefit-Cost Analysis (2023), https://www.benefitcostanalysis.org/index.php?option=com_dailyplanetblog&view=entry&year=2023&month=09&day=06&id=103:on-balance-some-clarifications-regarding-distributional-weighting.

115. *See, e.g.* Seth Jaffe, *Can Cumulative Impact Analysis Improve Cost-Benefit Analysis?*, L. & ENV'T (Oct. 19, 2022), https://www.lawandenvironment.com/2022/10/19/can-cumulative-impact-analysis-improve-cost-benefit-analysis/ ("Cumulative impacts are the totality of exposures to

argued, CBA might do away with discount rates that decrease the value of future costs and benefits.[116] Revesz applauded President Biden's "Modernizing Regulatory Review" memorandum for sketching a broader, more proactive role for OIRA to promote equity.[117] Nonetheless, Revesz conceded that "despite the best of intentions, the efforts of the Obama and Clinton administrations to make distributional considerations a serious part of the regulatory review process have not borne fruit."[118]

That two previous administrations with stated commitments to environmental justice[119] and the "best of intentions"[120] did not successfully reform CBA to address distributional impacts better suggests that a third attempt is not likely to succeed.[121] Rather, the examples of the Clinton and Obama administrations, both of which attempted to meet environmental justice commitments while not deviating from CBA, point to a strong status-quo bias within OIRA and the primacy of efficiency considerations within CBA review, even when other considerations like equity are nominally part of the analysis.[122]

Even if it is possible to dramatically reshape OIRA and CBA methodology to consider costs and benefits to discrete, vulnerable groups better, doing so would not address the core inconsistency between CBA and environmental justice. CBA and environmental justice have completely different values and

---

combinations of chemical and non-chemical stressors and their effects on health, well-being, and quality of life outcomes."). *EPA Researchers Release Cumulative Impacts Report, Prioritizing Environmental Justice in New Research Cycle*, EPA (Oct. 11, 2022), https://www.epa.gov/sciencematters/epa-researchers-release-cumulative-impacts-report-prioritizing-environmental-justice.

116. Richard Revesz, *Richard Revesz responds to Lisa Heinzerling, defending cost-benefit analysis*, GRIST (June 5, 2008), https://grist.org/article/a-tool-in-the-toolbox/ ("[D]iscounting is not a necessary part of cost-benefit analysis . . . it is a flawed methodology currently used in the regulatory process—in part, perhaps, because there have been too few environmental voices in support of cost-benefit analysis that does not use discounting"). Agencies use discount rates to account for the fact that costs and benefits that are further in the future are less immediately valuable to people. As an example, applying a discount rate of 5% per year to a cost that is projected to be $100 in 2030 would decrease that $100 cost by 5 percent per year. So, a CBA process that applied this discount starting in 2023 would calculate the 2023 value of the $100 cost in 2030 as $100 x 0.95^7 (applying seven years of 5 percent discount per year), for a total of $69.83. In this example, the discount rate reduces the cost by $30.17 because it is seven years in the future. Without a discount rate, the present value of the 2030 cost would be the full $100. *See, e.g.*, Daniel Farber & Paul Hemmersbaugh, *The Shadow of the Future: Discount Rates, Later Generations, and the Environment*, 46 VANDERBILT L. REV. 267, 277 (1993). Notably, however, Revesz's revised Circular A-4 continues to endorse the use of discount rates. U.S. OFF. OF MGMT. & BUDGET, EXEC. OFFICE OF THE PRESIDENT, *Circular A-4* 74–76 (Apr. 6, 2023), https://www.whitehouse.gov/wp-content/uploads/2023/04/DraftCircularA-4.pdf.

117. Richard Revesz, *A New Era for Regulatory Review*, REGUL. REV. (Feb. 16, 2021), https://www.theregreview.org/2021/02/16/revesz-new-era-regulatory-review/; *see* Richard Revesz & Samantha Yi, *Distributional Consequences and Regulatory Analysis*, 52 ENV'T L. 53, 55–56 (2022).

118. Revesz & Yi, *supra* note 117, at 90.

119. *See, e.g.*, Exec. Order No. 12898, 59 Fed. Reg. 32 (Feb. 11, 1994); *A Big Step Forward on Environmental Justice*, THE WHITE HOUSE (Nov. 16, 2011), https://obamawhitehouse.archives.gov/blog/2011/11/16/big-step-forward-environmental-justice.

120. Revesz & Yi, *supra* note 117, at 90.

121. *See id.*

122. *See* Heinzerling, *supra* note 28, at 292.

objectives. CBA aims to maximize total wealth,[123] while environmental justice aims to provide historically marginalized communities with environmental self-determination and protection from disproportionate environmental impacts.[124] When, under previous presidential administrations, the federal government has attempted to insert value choices into the quantitative CBA process, net wealth maximization has consistently prevailed as the deciding factor in decision-making.[125]

CBA's focus on quantitative measures of costs and benefits as the most "rational" way to make regulatory decisions provides a misleading sheen of neutrality and objectivity and conceals value choices. CBA not only privileges economic efficiency over other values, but it does so in politically unaccountable ways. OIRA is frequently referred to as an "obscure" office; few Americans know of its existence, much less the crucial gatekeeping function it performs for federal rules and the key role that quantitative CBA plays in its decisions.[126] OIRA has not aided transparency. Rather, it has failed to abide by Executive Order 12866's requirement that OIRA publicize relevant documents and abide by deadlines for reviewing rules.[127]

Moreover, OIRA's CBA process is fundamentally undemocratic and weakens the ability of environmentally impacted communities to advocate for effective regulation. Because OIRA is an obscure and nontransparent office, it is more accessible to industry lobbyists seeking to weaken or block environmental regulations than it is to environmental justice advocates or representatives of disproportionately burdened communities.[128] Lobbyists have significant access to, and influence on, OIRA.[129] Between 2001 and 2011, 65 percent of

123. Coplan, *supra* note 16, at 284.

124. *See* UNITED CHURCH OF CHRIST, *supra* note 99.

125. *See* Heinzerling, *supra* note 28, at 292.

126. *See, e.g.*, Jeff Hauser, *The Little Agency That Could (Block All Good Regulations)*, PROSPECT (Sep. 25, 2019), https://prospect.org/day-one-agenda/little-federal-agency-block-regulations-oira/; Donald Arbuckle, *Obscure but Powerful: Who are Those Guys?*, 63 ADMIN. L. REV. 131, 131 (2011) (quoting Senator Richard Durbin as referring to OIRA as "obscure but powerful"); Lisa Heinzerling, *Who is Running OIRA?*, CTR. FOR PROGRESSIVE REFORM (Apr. 30, 2013), https://progressive reform.org/cpr-blog/who-is-running-oira/; Daniel Farber, *The Black Box of OIRA*, LEGALPLANET (Jan. 27, 2022), https://legal-planet.org/2022/01/27/the-black-box-of-oira/.

127. *See, e.g.*, RENA STEINZOR ET AL., CTR. FOR PROGRESSIVE REFORM, BEHIND CLOSED DOORS AT THE WHITE HOUSE: HOW POLITICS TRUMPS PROTECTION OF PUBLIC HEALTH, WORKER SAFETY, AND THE ENVIRONMENT 7–8 (2011), https://cpr-assets.s3.amazonaws.com/documents/OIRA_Meetings_1111.pdf.

128. *See id.* at 8.

129. *See id.*; Simon Haeder & Susan Yackee, *Influence and the Administrative Process: Lobbying the U.S. President's Office of Management and Budget*, 109 (3) AM. POL. SCI. REV. 507 (2015), https://www.cambridge.org/core/services/aop-cambridge-core/content/view/638F34BC73235AB4833C852B24C431AF/S0003055415000246a.pdf/influence-and-the-administrative-process-lobbying-the-us-presidents-office-of-management-and-budget.pdf; *contra* Rachel Potter, *Regulatory lobbying has increased under the Trump administration but the groups doing the lobbying may surprise you*, BROOKINGS (July 11, 2018), https://www.brookings.edu/research/regulatory-lobbying-has-increased-under-the-trump-administration-but-the-groups-doing-the-lobbying-may-surprise-you/ (although industry groups dominated OIRA's meeting lineup during the early Obama

participants in meetings with OIRA represented industry.[130] During that period, the single-most frequent visitor to OIRA, with a total of thirty-nine meetings, was the American Chemistry Council, a chemicals industry trade association.[131] Lobbyists' closed-door meetings with OIRA have a meaningful impact on the content of regulatory outcomes. According to one study that quantified the number of changes between agency draft and final rules, there is a "statistically and substantively meaningful association between interest group lobbying and regulatory policy change during OMB Final Rule review."[132]

Thus, OIRA's obscurity, insulation from popular political pressures, and vulnerability to industry lobbying combine to weaken or block environmental regulations.

OIRA's friendliness to industry contradicts Congress's desire to empower citizens and disempower industry in environmental law. Citizen suit provisions in statutes like the Clean Water Act, Clean Air Act, and Resource Conservation and Recovery Act, which enable private citizens to enforce environmental law, were intended in part to counterbalance the threat that regulatory agencies would be "captured" by regulated industries.[133] And although Congress intended to level the playing field between people and polluters, OIRA has skewed the playing field back in favor of industry under a cloak of "rationality."[134] OIRA has especially interfered with environmental regulations. Like the Nixon Administration's CBA selectively targeted EPA, OIRA disproportionately fixated on EPA rules between 2001 and 2011.[135] During this period, EPA submitted only 11 percent of the rulemaking matters subjected to OIRA review but accounted for 41 percent of OIRA's total meetings, suggesting that OIRA subjects EPA regulations to particularly stringent review.[136]

By requiring agencies to frame their rules in cost-benefit terms, CBA disempowers specific policy arguments for environmental and climate rules. As a result, agencies suppress value-based policy arguments for and against rules in favor of numerical arguments. When deciding whether or not to approve a rule promulgated under the Clean Water Act, for example, OIRA's primary focus is

---

administration and continued to have most meetings with OIRA under Trump, OIRA began to meet with more nonprofits during the Trump Administration).

130. STEINZOR ET AL., *supra* note 127, at 8.

131. *Id*. at 18; *About ACC*, AM. CHEMISTRY COUNCIL, https://www.americanchemistry.com/about-acc (last visited June 25, 2023).

132. Haeder & Yackee, *supra* note 129 at 518.

133. David Adelman & Jori Reilly-Diakun, *Environmental Citizen Suits and the Inequities of Races to the Top*, 92 U. COLO. L. REV. 377 (2021), https://lawreview.colorado.edu/printed/environmental-citizen-suits-and-the-inequities-of-races-to-the-top/#A_The_Scope_and_Mechanics_of_Environmental_Citizen_Suits; Eric Biber & Berry Brosi, *Officious Intermeddlers or Citizen Experts? Petitions and Public Production of Information in Environmental Law*, 58 UCLA L. REV. 321, 345 (2010) (noting that "citizen suit provisions could help to ensure that agencies were not fully 'captured' by regulated entities").

134. *See* Berman, *supra* note 35.

135. Fuchs & Anderson, *supra* note 56, at 27; STEINZOR ET AL., *supra* note 127, at 9.

136. STEINZOR ET AL., *supra* note 127, at 9.

not Congress's declared policy—"to restore and maintain the chemical, physical, and biological integrity of the Nation's waters"[137]—but whether the rule costs more dollars than the value of its benefits. Water pollution rules are less likely than other kinds of rules to pass OIRA review because they have longer-term and, thus, more discounted health benefits.[138] By subordinating Congress's interest in the "chemical, physical, and biological integrity of the Nation's waters" to non-statutory cost-benefit weighing, CBA prevents new regulations and undermines congressional intent.[139]

In this way, CBA is undemocratic because it conditions the implementation of federal statutes, passed by the popularly elected legislature and signed by the elected president, on the approval of unelected technocrats in an obscure office.[140] The Department of Justice's Office of Legal Counsel deemed President Reagan's Executive Order 12291 within the president's authority because "[t]he order does not empower the [OMB] Director . . . to displace the relevant agencies in discharging their statutory functions or in assessing and weighing the costs and benefits of proposed actions."[141] Yet, in practice, OIRA "displaces" the relevant agencies in substituting its policy mandate—economic efficiency—over the agencies' policy mandates.[142] OIRA is not merely an advisory body; it is a gatekeeper.[143]

Finally, because CBA requires that federal rules be economically efficient—and fails to capture a whole range of non-monetizable costs and benefits—it creates an institutional bias against action. In the context of climate policy, this will especially expose vulnerable communities to the impacts of a warming atmosphere, since inadequate environmental regulation will exacerbate climate impacts that will disproportionately fall on marginalized frontline communities.

Contrary to the arguments of CBA proponents that CBA facilitates "rational" regulation,[144] CBA obstructs regulation. Executive branch CBA began in the Nixon Administration during a period of industry and conservative

---

137. 33 U.S.C. § 1251(a).

138. Heinzerling, *supra* note 28, at 296.

139. *See* 33 U.S.C. § 1251(a).

140. *See* Stuart Shapiro, *OIRA Inside and Out*, 63 ADMIN. L. REV. 135, 140 (2011) (Critics charge that "OIRA is a group of unelected bureaucrats with an antiregulatory agenda that is no more, and possibly less, accountable than the agencies they are overseeing.").

141. Exec. Order No. 12291, *supra* note 72; Heinzerling, *Inside EPA: A Former Insider's Reflections on the Relationship Between the Obama EPA and the Obama White House*, *supra* note 83, at 328 (citing 5 Op. OLC at 62S63 (A legal opinion of the Department of Justice's Office of Legal Counsel)).

142. *See* STEINZOR ET AL., *supra* note 127, at 9.

143. *See id.*

144. *See, e.g.*, MICHAEL LIVERMORE & RICHARD REVESZ, RETAKING RATIONALITY: HOW COST-BENEFIT ANALYSIS CAN BETTER PROTECT THE ENVIRONMENT AND OUR HEALTH (2008); MICHAEL LIVERMORE & RICHARD REVESZ, REVIVING RATIONALITY: SAVING COST-BENEFIT ANALYSIS FOR THE SAKE OF THE ENVIRONMENT AND OUR HEALTH (2021).

backlash in response to perceived over-regulation by the early EPA.[145] That anti-regulation philosophy persists even under more progressive, pro-regulation administrations.[146] For example, under the Obama Administration, OIRA director Cass Sunstein believed that his job was to "proliferate veto points on regulatory activity . . . because regulation was an obstacle to economic growth and job creation."[147]

CBA's bias towards inaction is built into the process of OIRA review. By placing the burden of proof on regulators to demonstrate that their rules are economically efficient, CBA presumes that rules are burdensome and not worthwhile.[148] And, as recent litigation demonstrates,[149] the SCC, while initially imagined as a legal shield against challenges to agency rules,[150] has instead become one more potential veto point for opponents.

C. OIRA Hijacked the SCC Following its Creation Under the Obama Administration

The SCC was not created to serve OIRA's CBA,[151] but it has come to serve this purpose. Because the executive branch requires that economically "significant" regulations pass CBA muster, significant regulations seeking to address climate change are more likely to survive regulatory review if they can be justified with economic benefits exceeding costs.[152] The SCC, the most prominent "social cost" of a GHG, is "the cost of the damages created by one extra ton of carbon dioxide emissions."[153] Its purpose is to "quantify the extra costs associated with carbon emissions that are not automatically reflected in market prices."[154]

The impetus for a single, centralized SCC came in August 2008 with the Ninth Circuit's decision in *Center for Biological Diversity v. National Highway*

145. Office of Management and Budget, Memorandum for the Heads of Departments and Agencies, https://thecre.com/ombpapers/QualityofLife1.htm (Oct. 5, 1971); Fuchs & Anderson, *supra* note 56, at 26–27.

146. *See* Robert Kutner, *Reclaiming the Deep State*, THE AM. PROSPECT (Oct. 4, 2022), https://prospect.org/day-one-agenda/oira-reclaiming-the-deep-state/.

147. *Id.*

148. *See id.*

149. Louisiana v. Biden and Missouri v. Biden, discussed in Subpart II.D below.

150. INTERAGENCY WORKING GROUP ON THE SOCIAL COST OF GREENHOUSE GASES, TECHNICAL SUPPORT DOCUMENT — SOCIAL COST OF CARBON FOR REGULATORY IMPACT ANALYSIS – UNDER EXECUTIVE ORDER 12866 9 (2016), https://19january2017snapshot.epa.gov/sites/production/files/2016-12/documents/sc_co2_tsd_august_2016.pdf.

151. Discussed in Subpart II.C, *infra*. *See* INTERAGENCY WORKING GRP. ON THE SOC. COST OF CARBON, TECHNICAL SUPPORT DOCUMENT — SOCIAL COST OF CARBON FOR REGULATORY IMPACT ANALYSIS UNDER EXECUTIVE ORDER 12866 3–4 (2010), https://www.epa.gov/sites/default/files/2016-12/documents/scc_tsd_2010.pdf.

152. Heinzerling, *supra* note 83, at 344–45.

153. Isabella Blackman, *Stanford explainer: Social cost of carbon*, STANFORD NEWS (June 27, 2021), https://news.stanford.edu/2021/06/07/professors-explain-social-cost-carbon/.

154. *Id.*

Transportation Safety Administration.[155] In that case, the Ninth Circuit struck down a light truck fuel economy standard as arbitrary and capricious[156] under the Administrative Procedure Act for failure to consider, qualitatively or quantitatively, the value of carbon emissions reductions in environmental impact analysis under the National Environmental Policy Act (NEPA).[157]

The Center for Biological Diversity, along with other nonprofits and eleven states, challenged the National Highway Transportation Safety Administration's (NHTSA) Corporate Average Fuel Economy standard for being insufficiently aggressive, in part because the NHTSA's "calculation of the costs and benefits of alternative fuel economy standards assign[ed] *zero value* to the benefit of carbon dioxide (CO2) emissions reduction."[158] Under NEPA, federal agencies like the NHTSA are required to take a "hard look" at the environmental impacts of proposed actions.[159] The *Center for Biological Diversity* court concluded that the NHTSA had not satisfied this requirement.[160] Instead, the NHTSA made "vague and conclusory statements" unsupported by any data.[161] The court explained that "[e]ven if NHTSA may use a cost-benefit analysis . . . it cannot put a thumb on the scale by undervaluing the benefits and overvaluing the costs of more stringent standards."[162] NHTSA violated NEPA because it failed "to include in its analysis the benefit of carbon emissions reduction in either quantitative or qualitative form."[163]

The *Center for Biological Diversity* court did not require that the federal government formalize a single, authoritative, and quantitative SCC figure for future NEPA impact assessments.[164] But, in order to insulate future regulations

155. *See* Ctr. for Biological Diversity v. NHTSA, 538 F.3d 1172, 1200 (9th Cir. 2008) (citing Motor Vehicle Mfrs. Ass'n v. State Farm Mut. Auto. Ins. Co., 463 U.S. 29, 43 (1983).

156. An agency action is "arbitrary and capricious when "the agency has relied on factors which Congress has not intended it to consider, entirely failed to consider an important aspect of the problem, offered an explanation for its decision that runs counter to the evidence before the agency, or is so implausible that it could not be ascribed to a difference in view or the product of agency expertise." *Id.* at 1193.

157. *Id.* at 1200; *see also* Mont. Env't Info. Ctr. v. U.S. Off. of Surface Mining, 274 F. Supp. 3d 1074, 1097 (D. Mont. 2017) ("[e]ven though NEPA does not require a cost-benefit analysis, it was nonetheless arbitrary and capricious to quantify the benefits of the lease modifications and then explain that a similar analysis of the costs was impossible when such an analysis was in fact possible.").

158. Ctr. for Biological Diversity v. NHTSA, 538 F.3d 1172, 1181 (9th Cir. 2008) (emphasis added).

159. *Id.* at 1194; *see also* Kleppe v. Sierra Club, 427 U.S. 390, 410 (1976) ("the only role for a court is to insure that the agency has taken a 'hard look' at environmental consequences; it cannot 'interject itself within the area of discretion of the executive as to the choice of the action to be taken.'" (citing Nat. Res. Def. Council v. Morton, 458 F.2d 827, 838 (1972)).

160. Ctr. for Biological Diversity v. NHTSA, 538 F.3d 1172, 1224 (9th Cir. 2008).

161. *Id.* at 1223–24 (citing Great Basin Mine Watch v. Hankins, 456 F.3d 955, 973 (9th Cir. 2006)).

162. *Id.* at 1198.

163. *Id.*

164. *Id.* at 1200.

from legal challenges, the government did.[165] In doing so, the executive branch overreacted.

In 2009, President Obama convened an interagency working group to formalize the social cost of GHG figures, including the SCC.[166] Although there was not yet a centralized, authoritative SCC on a government-wide basis, federal agencies such as EPA and the Department of Transportation used agency-specific SCC estimates in the rulemaking process.[167] These decentralized SCC estimates varied wildly.[168] For example, a 2008 regulation proposed by the Department of Transportation assumed a domestic SCC value of $7 per ton of carbon dioxide (CO2).[169] A Department of Energy regulation finalized in October 2008 assumed a domestic SCC range of $0 to $20 per ton of CO2.[170] The same year, an EPA Advance Notice of Proposed Rulemaking for Greenhouse Gases identified "very preliminary" SCC estimates: global mean values were $68 and $40 per ton of CO2.[171] This variability among federal SCC estimates created demand for uniformity.[172]

The SCC's objective quickly grew beyond simply bolstering agency rules against NEPA challenges like that in *Center for Biological Diversity*.[173] The interagency working group also sought to "ensure consistency in how benefits are evaluated across agencies,"[174] given the wide variation in agencies' prior SCC estimates.[175] Moreover, the SCC was quickly taken over by OIRA and fed into the CBA process. Along with the Council of Economic Advisors, OMB co-chaired the Obama Administration's interagency working group on the SCC.[176] The interagency working group established SCC figures in its February 2010 technical support document, "Social Cost of Carbon for Regulatory Impact Analysis - Under Executive Order 12866."[177] The document's executive summary again cited Executive Order 12866, in which President Clinton formalized the modern CBA regime for "significant regulatory action[s]."[178] It declared "[t]he purpose of the [SCC] estimates . . . is to allow agencies to

165. EPA, EPA FACT SHEET: SOCIAL COST OF CARBON (2016), https://www.epa.gov/sites/default/files/2016-12/documents/social_cost_of_carbon_fact_sheet.pdf.

166. *Id.*

167. INTERAGENCY WORKING GRP. ON THE SOC. COST OF CARBON, *supra* note 151, at 3–4, https://www.epa.gov/sites/default/files/2016-12/documents/scc_tsd_2010.pdf.

168. *Id.* at 3.

169. *Id.*

170. *Id.*

171. *Id.*

172. *See id.* at 4.

173. *See id.* at 3.

174. *Id.* at 4.

175. *Id.* at 3.

176. *Id.*

177. *Id.* at 1.

178. *Id.*; *see* Exec. Order No. 12866, 58 Fed. Reg. 190 (Oct. 4, 1993).

incorporate the social benefits of reducing [CO2] emissions into [CBAs] of regulatory actions that have small, or 'marginal,' impacts on cumulative global emissions."[179] The document did not mention NEPA once.[180]

The Obama interagency group initially selected four 2010 SCC estimates: three set to 5 percent, 3 percent, and 2.5 percent discount rates, and a fourth, representing the ninety-fifth percentile estimate across the prior three models, set to a 3 percent discount rate.[181] For the projected social cost of carbon in 2030, the Obama interagency group's 2010 figures were $9.70, $32.80, $50, and $100 per ton of carbon dioxide.[182] A subsequent update in August 2016 increased the 2030 figures to $16, $50, $73, and $152.[183]

President Trump, an opponent of aggressive climate regulation,[184] worked quickly to undermine the SCC. Trump disbanded the interagency working group on social costs in 2017's Executive Order 13783 ("Promoting Energy Independence and Economic Growth").[185] Executive Order 13783 also revoked the technical documents containing the Obama Administration's SCC figures.[186] The Obama administration's figures had modeled future carbon costs across three discount rates: lowering by 2.5 percent, 3 percent, and 5 percent per year in present-day dollars.[187] But, the Trump Administration increased the discount rates such that its figures dropped in value by 3 percent and 7 percent each year, meaning that costs further in the future were even more discounted.[188] The Trump administration also removed agency consideration of non-domestic GHG damages, which made the total cost estimates seven times lower.[189] In total, the Trump Administration's changes reduced the estimated social cost of carbon in

179. INTERAGENCY WORKING GRP. ON THE SOC. COST OF CARBON, *supra* note 151 at 1.

180. *See id.*

181. *Id.* at 3.

182. *Id.* at 1.

183. INTERAGENCY WORKING GRP. ON THE SOC. COST OF GREENHOUSE GASES, *supra* note 150 at 16.

184. In 2012, President Trump tweeted that climate change was a hoax invented by China to win a trade advantage against the United States. Edward Wong, *Trump Has Called Climate Change a Chinese Hoax. Beijing Says It Is Anything But.*, N.Y. TIMES (Nov. 18, 2016), https://www.nytimes.com/2016/11/19/world/asia/china-trump-climate-change.html.

185. Exec. Order No. 13783, (March 28, 2017), 82 Fed. Reg. 16093 (March 28, 2017).

186. *Id.*

187. INTERAGENCY WORKING GRP. ON THE SOC. COST OF CARBON, *supra* note 151, at 1.

188. EPA, Repeal of the Clean Power Plan; Emission Guidelines for Greenhouse Gas Emissions From Existing Electric Utility Generating Units; Revisions to Emission Guidelines Implementing Regulations, 84 Fed. Reg. 32,520 (Sep. 6, 2019); Abby Husselbee and Caroline Jaschke, *Legal Challenges to President Biden's Social Cost of Greenhouse Gases Estimates*, HLS ENV'T AND ENERGY L. PROGRAM (May 27, 2022), https://eelp.law.harvard.edu/2022/05/legal-challenges-to-president-bidens-social-cost-of-greenhouse-gases-estimates/#_.

189. U.S. GOV'T ACCOUNTABILITY OFF., IDENTIFYING A FEDERAL ENTITY TO ADDRESS THE NATIONAL ACADEMIES' RECOMMENDATIONS COULD STRENGTHEN REGULATORY ANALYSIS 16 (2020), https://www.gao.gov/assets/gao-20-254.pdf.

2030 to only $8 (a 3 percent discount rate)[190] or $1 (a 7 percent discount rate).[191] In response, Democratic senators criticized the Trump Administration for "putting politics over science."[192] In doing so, they correctly identified the alterations as likely to inhibit regulatory action on climate change.[193] However, the Democratic senators also conflated the SCC, an inherently uncertain metric, with rational scientific expertise.[194]

President Biden's Executive Order 13990 ("Protecting Public Health and the Environment and Restoring Science to Tackle the Climate Crisis") reinstated the interagency working group, which quickly issued new interim figures for the social costs of GHGs.[195] The new 2030 SCC figures were $19, $62, $89, and $187 (the ninety-fifth percentile), at 5 percent, 3 percent, 2.5 percent, and 3 percent discount rates, respectively.[196]

Two months later, in the case of *Louisiana v. Biden*, ten states sued President Biden, Cabinet Secretaries, federal agencies, and the Interagency Working Group in the U.S. District Court for the Western District of Louisiana, seeking a preliminary injunction to prevent federal agencies from using the new interim SCC figures.[197] The government argued that blocking federal agencies from using the SCC would frustrate the enactment of various federal rules and policies.[198] These included, for example, a Bureau of Land Management (BLM) rule update governing natural gas and a Federal Transit Administration policy guidance for its Capital Investments Grant program.[199]

---

190. *Id.* at 17.

191. Brad Plumer, *Trump Put a Low Cost on Carbon Emissions. Here's Why It Matters*., N.Y. TIMES (Aug. 23, 2018), https://www.nytimes.com/2018/08/23/climate/social-cost-carbon.html.

192. *GAO Finds Changes in Social Cost of Carbon Dramatically Lower Estimates of Climate Cost*, SENATOR SHELDON WHITEHOUSE (Jul. 14, 2020), https://www.whitehouse.senate.gov/news/release/gao-finds-changes-in-social-cost-of-carbon-dramatically-lower-estimates-of-climate-costs.

193. Then-Senator Kamala Harris stated, "[w]e can't take the bold action necessary to address the climate crisis if we are not adequately accounting for the cost of greenhouse gas pollution." *Id.*

194. "[Whitehouse:] [T]he Trump administration undermined the social cost of carbon, and then stuck its head in the sand when the federal government's top scientists recommended implementing important changes. Shutting off the headlights of science and sound economics makes it more likely that we'll drive straight off a climate cliff . . . [Warren:] We must listen to the scientists and experts and act now to tackle the climate crisis head-on . . . [Harris:] The administration's decision to ignore our country's top scientists threatens our economy and our ability to address the climate crisis." *Id.*

195. Exec. Order No. 13990, 86 Fed. Reg. 7037 (Jan. 20, 2021); INTERAGENCY WORKING GRP. ON SOC. COST OF GREENHOUSE GASES, TECHNICAL SUPPORT DOCUMENT: SOCIAL COST OF CARBON, METHANE, AND NITROUS OXIDE INTERIM ESTIMATES UNDER EXECUTIVE ORDER 13990 (2021), https://www.whitehouse.gov/wp-content/uploads/2021/02/TechnicalSupport Document_SocialCostofCarbonMethaneNitrousOxide.pdf.

196. INTERAGENCY WORKING GRP. ON SOC. COST OF GREENHOUSE GASES, *supra* note 195.

197. Compl. at 54, Louisiana v. Biden, 585 F.Supp.3d 840 (W.D. La. 2022) (No. 2:21-CV-01074).

198. Memorandum in Support of Defendants' Motion for a Stay Pending Appeal at 22–35, Louisiana v. Biden, 585 F. Supp. 893 (W.D. La. 2022) (No. 2:21-cv-01074-JDC-KK); Mancini Decl. 14–15 (Feb. 29, 2022) (2:21-cv-01074-JDC-KK), https://www.washingtonpost.com/context/justice-department-brief-in-louisiana-v-biden/679926c6-f0fe-4aae-b15f-8682af571012/.

199. Memorandum in Support of Defendants' Motion for a Stay Pending Appeal at 27, 28, Louisiana v. Biden, 585 F. Supp. 893 (W.D. La. 2022) (No. 2:21-cv-01074-JDC-KK).

The plaintiff states prevailed.[200] However, on appeal, the Fifth Circuit granted a stay of the District Court's injunction pending appeal.[201] The Supreme Court declined to vacate the Fifth Circuit's stay of the injunction, leaving the federal government free to continue using the social cost figures during the course of the lawsuit.[202] Following the Supreme Court's refusal to reinstate the District Court's injunction, federal regulatory agencies were again able to use the social cost figures, including a current SCC of $51 per ton.[203]

During the thirty-three days between the District Court's preliminary injunction and the Fifth Circuit's stay, EPA revised a proposed Cross State Air Pollution Rule, removing references to the SCC and presenting qualitative harms that the rule would address.[204] These harms included "changes in water supply and quality due to changes in drought and extreme rainfall events," "flooding in coastal areas and land loss due to inundation," and "increases in peak electricity demand and risks to electricity infrastructure."[205] Subsequently, a parallel suit brought by thirteen other states failed to win an injunction against federal agency use of the SCC.[206] The Eighth Circuit affirmed the dismissal.[207]

OIRA Administrator Richard Revesz has described the "social costs" of GHGs as the "best available method to quantify and monetize the climate damages attributable to the emission of an incremental unit of heat-trapping pollution."[208] But, although the executive branch has spent considerable time and resources formulating and defending its interim social cost numbers, they have received criticism from the academic community and EPA.[209] Moreover,

---

200. Order Granting the Motion for Preliminary Injunction, Louisiana v. Biden, 585 F. Supp. 893 (W.D. La. 2022) (No. 2:21-cv-01074-JDC-KK).

201. Louisiana v. Biden, 2022 WL 866282 (5th Cir., Mar. 16, 2022).

202. Louisiana v. Biden, 142 S.Ct. 2750 (May 26, 2022).

203. *See id.*; Lesley Clark & Niina Farah, *Federal agencies can use social cost of carbon — for now*, E&E News (May 27, 2022, 6:41 AM), https://www.eenews.net/articles/federal-agencies-can-use-social-cost-of-carbon-for-now/.

204. Jean Chemnick, *How pausing the social cost of carbon affected regulation*, E&E NEWS (May 26, 2022, 6:16 AM), https://www.eenews.net/articles/how-pausing-the-social-cost-of-carbon-affected-regulation/. The SCC figures were reintroduced in an addendum following the Fifth Circuit's stay of the injunction.

205. *Id.*

206. Missouri v. Biden, 558 F. Supp. 754, 77258 (E.D. Mo. 2021).

207. Missouri v. Biden, 52 F.4th 362, 366 (8th Cir. 2022).

208. Revesz & Sarinsky, *supra* note 4, at 857.

209. *See, e.g.*, Kevin Rennert et al., *Comprehensive Evidence Implies a Higher Cost of CO_2*, RES. FOR THE FUTURE (Sep. 1, 2022), https://www.rff.org/publications/journal-articles/comprehensive-evidence-implies-a-higher-social-cost-of-co2/?mc_cid=9e431ceef3&mc_eid=e0c78aae65. According to Resources for the Future, an environmental research nonprofit, the present SCC should be $185 per ton; over three times greater than the government's number. On November 11th, 2022, the EPA published SCC estimates, calculated with novel methods, of $140, $230, and $380 in 2030. EPA, SUPPLEMENTARY MATERIAL FOR THE REGULATORY IMPACT ANALYSIS FOR THE SUPPLEMENTAL PROPOSED RULEMAKING, "STANDARDS OF PERFORMANCE FOR NEW, RECONSTRUCTED, AND MODIFIED SOURCES AND EMISSIONS GUIDELINES FOR EXISTING SOURCES: OIL AND NATURAL GAS SECTOR CLIMATE REVIEW 3 (2022), https://www.epa.gov/system/files/documents/2022-11/epa_scghg_report_draft_0.pdf. The interagency federal SCC suffers from serious methodological

despite the federal government's aspirations to credibly measure climate change costs consistent with the best available economic and scientific data, the SCC figures have waxed and waned with changes in presidential administrations.[210] Clearly, the SCC is neither a purely scientific measure nor immune to political push-and-pull.[211] The SCC's fundamental manipulability exposes the weakness of the aspirationally "objective" CBA regime applied to climate regulations.

The history of the federal government's SCC highlights the key problems with its use. Although the government describes the SCC as arising out of the Ninth Circuit's NEPA ruling in *Center for Biological Diversity v. NHTSA*,[212] it is clear that, soon after the Obama Administration's interagency working group was convened,[213] the SCC's objective transformed. Instead of merely shielding federal rules against lawsuits,[214] the SCC was fed into OIRA's cost-benefit calculations to determine what rules would be enacted and would not be. Meanwhile, as Subpart D within Part II discusses, it has become clear since 2010 that the SCC does not serve its original primary purpose of hardening agency rules against judicial review.

D. Federal Courts Do Not Require Agencies to Use the SCC when Formulating Climate Rules, Undermining a Key Justification for the SCC

Although federal agencies use the SCC to comply with various statutory mandates that require assessments of environmental costs and benefits, they are not legally required to do so.

Federal agencies' hesitation to abandon quantitative CBA could be a reasonable reaction to the perceived conservative direction of the Supreme Court and the federal judiciary. In *West Virginia v. EPA*, the Court stated that a "major question"—on which Congress could not delegate authority to an administrative agency like EPA without a clear statutory grant—can be defined by "economic . . . significance."[215] So, the Supreme Court may be attuned to economic impacts as a metric to judge whether an agency rule is unreasonable

limitations. *See* Revesz, *supra* note 25 at 1441–42. ("[The SCC] does not account for damages due to noncarbon dioxide greenhouse gas emissions, such as methane. Moreover, it does not sufficiently capture the risk of catastrophic impacts and important but difficult-to-quantify effects such as ocean acidification.").

210. *See* INTERAGENCY WORKING GRP. ON THE SOC. COST OF CARBON, *supra* note 151 at 1; U.S. GOV'T ACCOUNTABILITY OFF., IDENTIFYING A FEDERAL ENTITY TO ADDRESS THE NATIONAL ACADEMIES' RECOMMENDATIONS COULD STRENGTHEN REGULATORY ANALYSIS 16, https://www.gao.gov/assets/gao-20-254.pdf; INTERAGENCY WORKING GRP. ON SOC. COST OF GREENHOUSE GASES, *supra* note 195.

211. *Contra* Geoffrey Miller, *The Social Cost of Carbon is Still the Best Way to Evaluate Climate Policy*, YALE SCHOOL OF THE ENVIRONMENT (Aug. 23, 2021), https://environment.yale.edu/news/article/social-cost-of-carbon-still-best-way-to-evaluate-climate-policy (describing the SCC as "providing a non-partisan path with objective consistency").

212. *See* EPA, *supra* note 165.

213. INTERAGENCY WORKING GRP. ON THE SOC. COST OF CARBON, *supra* note 151 at 2–3.

214. *See id.*

215. *See* West Virginia v EPA, 579 U.S. __, 2022 WL 2347278, *17–18 (2022).

or unlawful.[216] However, given the uniformity with which lower courts have not required usage of the SCC when agencies made a rational choice to assess impacts differently,[217] agencies could more assertively move away from the SCC towards qualitative descriptions of climate change impacts.

Federal courts do not require that NEPA review for federal agency actions with climate effects use SCC, even though the proximate motivation for the interagency working group's SCC was the theory that it would serve this purpose.[218] Rather, federal courts have granted significant deference to agency NEPA analysis of rules with climate impacts without using the SCC so long as those impacts were reasonably described and evaluated.[219] Even where courts struck down rules that did not consider the SCC, their decisions hinged not on agencies' failure to consider the SCC, but instead, on agencies' failure to reasonably justify their choice not to use the SCC.[220]

In *High Country Advocates v. U.S. Forest Service*, for example, the District Court for the District of Colorado held that U.S. Forest Service's Environmental Impact Statement (EIS) for a public lands mining lease was insufficient because the EIS did not explain why the agency did not use the SCC, not *because* it did not use the SCC.[221] The court explained that "the agencies might have justifiable reasons for not using (or assigning minimal weight to) the social cost of carbon protocol to quantify the cost of GHG emissions from the Lease Modifications." But, because the agencies "did not provide these reasons in the EIS," the underlying agency action was arbitrary and capricious.[222] Presumably, the agencies could have simply not used the SCC and explained their decision.[223]

---

216. *See id.*

217. See, e.g., Vecinos para el Bienestar de la Comunidad Costera v. FERC, 6 F.4th 1321, 1329 (D.C. Cir. 2021).

218. *See* CRS REPORTS & ANALYSIS, COURTS EVALUATE HOW FEDERAL AGENCIES PUT A PRICE ON CARBON (2016), https://sgp.fas.org/crs/misc/carbon.pdf.

219. *Id.* at 2.

220. *See id.*

221. High Country Conservation Advocs. v. U.S. Forest Serv., 52 F. Supp. 3d 1174, 1193 (D. Colo. 2014).

222. *Id.*

223. *See id.*; *see also* WildEarth Guardians v. Zinke, 368 F. Supp. 3d 41, 78–79 (D.D.C. 2019) ("BLM here provided reasoned explanations for why it declined to use the social cost of carbon protocol."); s*ee also* Appalachian Voices v. FERC, No. 17-1271, 2019 WL 847199, at *2 (D.C. Cir. Feb. 19, 2019) ("FERC provided an estimate of the upper bound of emissions resulting from end-use combustion, and it gave several reasons why it believed petitioners' preferred metric, the Social Cost of Carbon tool, is not an appropriate measure of project-level climate change impacts and their significance under NEPA or the Natural Gas Act. That is all that is required for NEPA purposes."); s*ee also* W. Org. of Res. Councils v. U.S. Bureau of Land Mgmt., No. CV 16-21-GF-BMM, 2018 WL 1475470, at *14 (D. Mont. Mar. 26, 2018) ("[D]espite the benefits of the social cost of carbon protocol, NEPA does not require a cost-benefit analysis under these circumstances . . . BLM's failure to measure the cumulative impacts of its fossil fuel management by either of Plaintiff's' suggested metrics does not present a "clear error of judgment."); *see also* WildEarth Guardians v. Bernhardt, 501 F. Supp. 3d 1192, 1211–12 (D.N.M. 2020) ("Guardians points to no authority mandating that BLM perform the SCC protocol. There are an infinite number of tests that could be performed, or studies conducted, prior to this sort of transaction. BLM is not required to perform all of them. BLM explained why it chose not to apply the SCC protocol. It further noted in one report that applying the SCC protocol is 'challenging because [the

Similarly, in the 2021 case, *Vecinos para el Bienestar de la Comunidad Costera v. Federal Energy Regulatory Commission*, the D.C. Circuit found that the Federal Energy Regulatory Commission (FERC) had violated NEPA and the Administrative Procedure Act by approving the construction of liquified natural gas terminals despite deficient analysis of climate change impacts.[224] While regulations obligated FERC to apply "some . . . analytical framework, as 'generally accepted in the scientific community,'" to assess climate impacts, it "was not required to use the social cost of carbon protocol."[225]

In contrast, the D.C. Circuit upheld as reasonable a FERC EIS that did not use the SCC because the FERC provided a rational explanation for the choice.[226] "[FERC] acknowledged the availability of the 'social cost of carbon' tool, but, in its opinion[,] concluded that, 'it would not be appropriate or informative to use for this project.'"[227] The court did not conclude that FERC was unreasonable in finding the SCC "inadequately accurate" for environmental review purposes.[228]

It is also unlikely that the SCC is strictly required when agencies promulgate rules under the Clean Air Act. In *Michigan v. EPA*, the Supreme Court interpreted the Clean Air Act's statutory language specifying that EPA rules promulgated under the Act be "appropriate and necessary" as requiring consideration of cost.[229] Justice Scalia, writing for the Court, opined that "[r]ead naturally in the present context, the phrase 'appropriate and necessary' requires at least some attention to cost. One 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."[230] Despite that strong language, the Court ultimately narrowed its holding; the court did not "hold that the law unambiguously required the Agency . . . to conduct a formal cost-benefit analysis in which each advantage and disadvantage is assigned a monetary value" because an agency can decide "(as always, within the limits of reasonable interpretation) how to account for cost."[231]

The Court's apparent grant of wide discretion in cost considerations—including the discretion to not conduct CBA or monetize costs—seems incompatible with its earlier language, suggesting that there must be a reasonable

---

SCC protocol] is intended to model effects at a global scale on the welfare of future generations caused by additional carbon emission occurring in the present.' . . . The methods that BLM used satisfy NEPA, and therefore, it did not err in avoiding the SCC protocol.").

224. Vecinos para el Bienestar de la Comunidad Costera v. FERC, 6 F.4th 1321, 1329 (D.C. Cir. 2021).

225. *Id.* at 1330; *see also* 40 C.F.R. § 1502.21(c) (2020).

226. EarthReports, Inc. v. FERC, 828 F.3d 949, 956 (D.C. Cir. 2016).

227. *Id.*

228. *Id.*

229. Michigan v. EPA, 576 U.S. 743, 752 (2015).

230. *Id.* at 744.

231. *Id.* at 759.

ratio of economic benefits and costs.[232] But, this narrower holding seems consistent with the Ninth Circuit's approach to agency deference in *Center for Biological Diversity v. NHTSA*.[233] In that case, the Ninth Circuit interpreted a statute—NEPA—as requiring some consideration of cost but not prescribing the specific methods of cost consideration.[234]

If agencies do not need to conduct formal CBA and assign monetary values to costs and benefits under the Clean Air Act, then *Michigan* appears to say that the Clean Air Act only requires *some* analysis of cost, which may be expressed qualitatively.[235] Therefore, like NEPA, the Clean Air Act does not appear to require that the SCC be used as a quantitative measure of climate change costs.[236] And even if the Clean Air Act does require agencies to justify their air quality regulations with quantitative cost assessments—and thus requires that agencies use the SCC when rules affect climate change—the Clean Air Act is the exception under which using the SCC is legally required, not the general rule.[237]

In *Louisiana v. Biden*, the federal government argued that blocking the usage of the SCC would obstruct the regulatory review process for a host of in-process rules.[238] But the federal government did not promulgate these threatened rules under statutes that required agency CBA or use of the SCC.

For example, the federal government claimed that the Federal Transportation Administration (FTA)'s Capital Investment Grants (CIG) program relied on consideration of the SCC.[239] But this was not a statutory mandate.[240] Rather, the FTA required environmental analysis, including the use of the SCC, only under its Final CIG Interim Policy Guidance, which was issued pursuant to notice and comment and could be amended following that period.[241] Likewise, the government claimed that the District Court's injunction, which blocked agency use of the SCC, had halted BLM's NEPA analysis of offshore oil and gas extraction permits.[242] However, BLM was not obligated to use the

232. *See id.* at 744.

233. *See id.*

234. *See id.* at 759; Ctr. for Biological Diversity v. NHTSA, 538 F.3d 1172, 1200 (9th Cir. 2008).

235. *See* Michigan v. EPA, 576 U.S. 743, 759 (2015).

236. *See id.*; *see, e.g.*, EarthReports, Inc. v. FERC, 828 F.3d 949, 956 (D.C. Cir. 2016).

237. *See, e.g.*, EarthReports, Inc. v. FERC, 828 F.3d 949, 956 (D.C. Cir. 2016).

238. The federal government asserted that it had identified "approximately twenty-one rulemakings" that would be impacted and approximately eighty-seven records of decision of environmental impact analyses under NEPA that would be impacted. Mancini Decl. 10–11, Feb. 29, 2022, (2:21-cv-01074-JDC-KK), https://www.washingtonpost.com/context/justice-department-brief-in-louisiana-v-biden/679926c6-f0fe-4aae-b15f-8682af571012/; Memorandum in Support of Defendants' Motion for a Stay Pending Appeal at 22–35, Louisiana v. Biden, 585 F. Supp. 893 (W.D. La. 2022) (No. 2:21-cv-01074-JDC-KK).

239. Mancini Decl. 14–15, Feb. 29, 2022, (2:21-cv-01074-JDC-KK), https://www.washingtonpost.com/context/justice-department-brief-in-louisiana-v-biden/679926c6-f0fe-4aae-b15f-8682af571012/.

240. *Id.*

241. *Id.*

242. *Id.*

SCC under NEPA.[243] Instead, BLM chose to use the SCC and to make its NEPA assessment dependent on it.[244]

There are environmental statutes that more clearly require agencies to make economic cost considerations when they promulgate rules, but these statutes are unlikely to be applied in the context of climate change regulation. For example, the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) requires that remedial actions for toxic substance releases be "cost-effective."[245] Other statutes, including the RCRA and the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), also require cost considerations.[246] But, even these mandates—which do not apply to climate regulations—have room for interpretation. CERCLA's statutory language is silent with respect to economic cost-benefit analysis.[247] RCRA is also "generally silent with respect to costs."[248] FIFRA is different insofar as the statute directly addresses economic costs. For example, FIFRA defines "unreasonable adverse effects on the environment" as including "economic, social, and environmental costs."[249] But, none of these statutes expressly require a formalized, purely quantitative CBA process.[250] Crucially, an agency would not look to these statutes when regulating GHG emissions, since they regulate hazardous waste contamination, waste cleanup, and pesticides, and so whether or not they require formal CBA has no bearing on the usefulness of the SCC.

---

243. *See, e.g.*, Vecinos para el Bienestar de la Comunidad Costera v. FERC, 6 F.4th 1321, 1329 (D.C. Cir. 2021).

244. *See* Mancini Decl. 14, Feb. 29, 2022, (2:21-cv-01074-JDC-KK), https://www.washingtonpost.com/context/justice-department-brief-in-louisiana-v-biden/679926c6-f0fe-4aae-b15f-8682af571012/.

245. "The costs of construction and any long-term costs to operate and maintain the alternatives shall be considered. Costs that are grossly excessive compared to the overall effectiveness of alternatives may be considered as one of several factors used to eliminate alternatives. Alternatives providing effectiveness and implementability similar to that of another alternative by employing a similar method of treatment or engineering control, but at greater cost, may be eliminated." 400 C.F.R. § 300.430(e)(7)(iii). EPA has stated that a purpose of revisions to the National Oil and Hazardous Substances Pollution Contingency Plan—which provides guidance for oil and hazardous substance cleanup—was "to ensure prompt, cost-effective response." National Oil and Hazardous Substances Pollution Contingency Plan, 50 Fed. Reg. 47,912 (1985). The Plan shall include a "means of assuring that remedial action measures are cost-effective over the period of potential exposure to the hazardous substances or contaminated materials." 42 U.S.C. § 9605(a)(7).

246. EPA, EPA'S USE OF BENEFIT-COST ANALYSIS: 1981–1986, 3-5–3-6 (1987), https://www.epa.gov/sites/default/files/2018-02/documents/ee-0222-1.pdf.

247. *Id.* at 3-6.

248. *Id.*

249. 7 U.S.C. § 136(bb); *Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) and Federal Facilities*, EPA, https://www.epa.gov/enforcement/federal-insecticide-fungicide-and-rodenticide-act-fifra-and-federal-facilities (last visited June 25, 2023); Headwaters, Inc. v. Talent Irrigation Dist., 243 F.3d 526, 532 (9th Cir. 2001) ("FIFRA registration is a cost-benefit analysis that no unreasonable risk exists to man or the environment taking into account the economic, social and environmental costs and benefits of the use of any pesticide.") (citation omitted).

250. *See generally* 42 U.S.C. § 9601 et seq. (CERCLA), 7 U.S.C. § 136 et seq. (FIFRA), 42 U.S.C. § 6901 et seq. (RCRA).

To conclude, although agencies conducting statutory environmental reviews of climate regulations frequently rely upon the SCC, they are not required to do so by the relevant statutes.[251] Federal courts have repeatedly determined that the SCC is unnecessary under NEPA.[252] The SCC is likely unnecessary to defend rules under the Clean Air Act.[253] Moreover, other environmental statutes that have developed statutory CBA regimes do not apply to the climate context. So, the SCC is not a necessary or especially useful shield for environmental rules challenged in court.

What remains of the SCC, then, is its role in justifying climate rules undergoing OIRA's cost-benefit analyses.[254] The SCC continues to play a central role in federal agencies' justifications to OIRA for why climate regulations are economically worthwhile.[255] To the extent that the SCC helps these regulations through CBA, it ostensibly supports federal action to mitigate GHG emissions and climate change, consistent with Executive Order 14008's environmental justice mandate. In fact, to the extent that the SCC now belongs to the domain of CBA, it cuts against the federal government's stated commitment to environmental justice by reaffirming and legitimizing CBA, which is fundamentally at odds with environmental justice.

III. AN ALTERNATIVE ANALYSIS FOR CLIMATE RULES AND IMPACTS

If the federal government abandons quantitative CBA—including the SCC—to evaluate climate rules and their impacts, it needs an alternative framework. I propose two principles: first, regulatory agencies should seek to mitigate GHG emissions to the maximum extent that mitigation is politically possible; second, agencies should prioritize climate adaptation efforts in neighborhoods and communities that are historically disinvested in and, thus, least likely to be adequately protected by lower levels of government. By adopting this decision-making framework in lieu of CBA, the executive branch would more effectively and equitably address the climate crisis.

---

251. *See, e.g.*, Vecinos para el Bienestar de la Comunidad Costera v. FERC, 6 F.4th 1321, 1329 (D.C. Cir. 2021); Michigan v. EPA, 576 U.S. 743, 759 (2015).

252. S*ee, e.g.*, EarthReports, Inc. v. FERC, 828 F.3d 949, 956 (D.C. Cir. 2016).

253. *See* Michigan v. EPA, 576 U.S. 743, 759 (2015).

254. *See, e.g.*, Mancini Decl. 14–15, Feb. 29, 2022, (2:21-cv-01074-JDC-KK), https://www.washingtonpost.com/context/justice-department-brief-in-louisiana-v-biden/679926c6-f0fe-4aae-b15f-8682af571012/.

255. *See, e.g., id.*

A. Federal Agencies Should Pursue the Maximum GHG Mitigation Politically Feasible

Instead of only pursuing GHG mitigation policies that CBA signals are economically efficient,[256] federal agencies should issue rules that mitigate GHG emissions to the maximum extent that is politically possible. Under the current regulatory regime, agencies across the administrative state could enact a set of possible climate regulations that are politically desirable or tolerable to the voting public and would reduce GHG emissions.[257] However, agencies have not been able to enact these regulations because their measured economic costs outweigh the benefits. This untapped set of potential regulations provides significant opportunities for federal agencies to further "reduce[] climate pollution in every sector of the economy."[258]

A similar decision-making approach to this political feasibility idea is the precautionary principle, which likewise errs on the side of regulatory action. Principle 15 of the United Nations Conference on Environment and Development's 1992 "Rio Declaration" defines the precautionary principle as the idea that "[w]here there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation."[259] By similar logic, federal regulations to mitigate GHG emissions should not hinge on uncertain projections of future economic costs, and agencies should instead err toward maximal mitigation given the clear risk of "serious or irreversible damage" due to climate change.[260]

Cass Sunstein has criticized the precautionary principle as providing insufficient guidance for regulators facing tough decisions.[261] Sunstein argues that it "raises serious problems of its own," including "[h]ow much precaution is the right level of precaution . . . [whether] costs [are] relevant to the answer," whether "reduc[ing] one risk might well increase another risk," whether it is

256. OIRA is likely to obstruct climate regulations that do not pass CBA muster, particularly given its penchant for disproportionately targeting environmental regulations. *See, e.g.*, STEINZOR ET AL., *supra* note 127, at 29–32*;* Heinzerling, *supra* note 83, at 344.

257. For example, suppose that a new GHG regulation from EPA imposed more than $100 million in costs on industry, and was thus subject to OIRA CBA review. If the rule was projected to cost industry $300 million and could only identify $100 million in monetizable benefits, the rule might not survive cost-benefit review. But that rule might nonetheless be politically popular and consistent with the administration's environmental justice goals. Under a political feasibility framework, this potential regulation could be enacted.

258. *See* Exec. Order No. 14008, *supra* note 1.

259. U.N. Conference on Environment and Development, ¶15, *Rio Declaration on Environment and Development*, U.N. Doc. A/CONF.151/26 (Aug. 12, 1992).

260. *See id.*

261. *See, e.g.*, Sunstein, *supra* note 49, at 354 (advocating for CBA in lieu of the precautionary principle).

possible "to take precautions against all risks, rather than a subset," and how regulators should set priorities if all risks cannot be reduced at once.[262]

Sunstein's concerns about the precautionary principle do not apply to climate policy. The "right level of precaution" is the maximum level of precaution that the American public will tolerate to avoid harmful climate change impacts.[263] Costs are relevant to the answer insofar as agencies determine that a given regulatory cost is so intolerable that it is not politically feasible.[264] Simply reducing GHG emissions is unlikely to cause unintended environmental impacts.[265] It is possible to take precautions against "all risks" simultaneously in the climate change context since GHG emission mitigation mitigates the cause of all climate change impacts.[266]

Political considerations would provide an adequate safeguard for those concerned about agency overreach and overregulation under the political feasibility framework. Executive agency heads are appointed by the President and confirmed by the Senate.[267] The Constitution allows the House of Representatives and Senate to impeach and remove "civil officers,"[268] understood to include presidential appointees who lead agencies like EPA.[269] Therefore, the possibility of political repercussions can serve as an effective check on agency overreach.

As early EPA history demonstrates, environmental regulations can, and have, overstepped and inspired political backlash like the private sector furor that inspired the Nixon Administration's introduction of executive branch CBA.[270] Political accountability provides a significant check on those agency rules that could impose considerable financial costs on the economy.[271] Economic indicators meaningfully inform voting behavior, and whether or not a given voter perceives the economy under an administration as benefiting them weighs on

---

262. *Id.* Sunstein supports CBA not only because of CBA's economic justifications, but also because he believes it improves regulators' decisions by requiring them to explicitly consider costs and benefits. *See, e.g.*, Sunstein, *supra* note 20, at 302 ("It is exceedingly difficult to choose the appropriate level of regulation without looking at both the benefit and cost sides.").

263. *See* Sunstein, *supra* note 49, at 354; *see, e.g.*, EPA, *Impacts of Climate Change*, https://www.epa.gov/climatechange-science/impacts-climate-change. Climate change impacts are a salient issue for American voters. A 2020 Pew poll found that 63 percent of Americans agree that "[g]lobal climate change is affecting their local community." Alec Tyson & Brian Kennedy, *Two-Thirds of Americans Think Government Should Do More on Climate*, PEW RESEARCH CENTER (June 23, 2020), https://www.pewresearch.org/science/2020/06/23/two-thirds-of-americans-think-government-should-do-more-on-climate/.

264. *See* Sunstein, *supra* note 49, at 354.

265. *See id.*

266. *See id.*

267. U.S. Const., Art. II, § 2.

268. U.S. Const., Art. II, § 4.

269. JARED COLE & TODD GARVEY, IMPEACHMENT AND REMOVAL 3 (2015), https://sgp.fas.org/crs/misc/R44260.pdf.

270. *See* Fuchs & Anderson, *supra* note 56, at 26–27.

271. *See, e.g.*, Colin Lewis-Beck & Nicholas Martini, *Economic perceptions and voting behavior in US presidential elections*, 7 RSCH. & POL. (2020), https://doi.org/10.1177/2053168020972811.

which candidate that voter chooses on their ballot.[272] So, presidents and their cabinet members have strong incentives, even without formal CBA, to avoid enacting regulations that would excessively burden economic activity.[273]

Because OIRA has significantly constrained agency rulemaking in recent years,[274] it is likely that agencies, freer to enact their policy mandates in the absence of CBA, will be more proactive and productive than they are at present. In practice, how might a federal agency evaluate what action is the maximum mitigation that is politically feasible? To start, agencies will enact those rules already in process or under consideration that no longer need to survive CBA. Then, agencies can start pushing limits.

Under this political feasibility approach, OIRA could push agencies to consider more aggressive alternatives to proposed rules and assess whether the American public would accept them, rather than watering down agency rules. For example, EPA's current Light Duty Vehicle Emissions Standard requires that "Bin 50" vehicles not emit more than 0.05 grams of nitrogen oxide and non-methane organic gases per mile driven.[275] Suppose OIRA determines that lowering the limit to 0.049 grams would make the standard slightly economically inefficient but still broadly popular, while lowering the limit to 0.048 grams would be significantly more costly and less popular. Holistically weighing the degree of polling support and the extent of economic inefficiency, OIRA might determine that 0.049 grams would be a politically feasible decrease from 0.05, whereas 0.048 would be an overreach. Then, the OIRA review process could push EPA to regulate GHG emissions even more stringently than EPA had initially proposed.

To avoid political backlash, agencies might attempt to measure political feasibility. Under this approach, individual agencies or OIRA might conduct internal polling or focus groups to determine the popularity of various proposed rules among the American public, with a finding of popularity weighing heavily in favor of enactment and a finding of unpopularity weighing heavily against enactment. Cost assessments might still be relevant insofar as agencies could ask whether the public would be willing to pay increased costs in exchange for the social benefits of proposed regulatory actions.

Proponents of traditional CBA may challenge the "maximum mitigation that is politically feasible" framework. For example, they might claim that polling results would closely track the results of traditional CBA because it already incorporates "willingness-to-pay" as a monetized measure of

272. *See id.*

273. *See id.*

274. *See, e.g.*, STEINZOR ET AL., *supra* note 127, at 29–32.

275. EPA, *Light Duty Vehicle Emissions*, https://www.epa.gov/greenvehicles/light-duty-vehicle-emissions. "Automakers choose to certify each car model to one of EPA's smog rating standards, also known as 'bins,' but the automaker's fleet as a whole must meet a specified average. Vehicles certified to a specific bin cannot exceed the amount of pollution specified for that bin." *Id.*

preferences.[276] Thus, they may argue that the new framework would be a more costly method of achieving the same results. That would be incorrect.

Although there might be a correlation between theoretical CBA, which considers a single, idealized "willingness-to-pay" value,[277] and actual Americans' preferences, they are not identical. In the real world, CBA fails to capture a whole host of non-quantifiable moral values like "freedom, fairness, and community" that inform people's preferences.[278] Further, the charge that polling and focus groups would be too expensive ignores the administrative cost reductions that would come from streamlining the regulatory review process. Historically, OIRA review based on CBA has lengthened the regulatory process and delayed the publication of rules.[279] These delays impose their own costs on the federal government by wasting workforce power and time.[280]

However, survey designs should ultimately aim to leave behind the atomized, aggregated-consumer model of CBA—which attempts to capture what each individual person would pay for a benefit[281]—and instead move towards a more holistic, values-driven approach. People reveal different preferences when acting out the roles of consumers and voters.[282] The federal government should therefore look to the public's voter preferences above their consumer preferences.[283] These voter preferences, unlike consumer preferences, contain individuals' moral and ethical values.

An anecdote that philosophy professor Mark Sagoff offered is illustrative of this point. When Sagoff asked the students in his environmental ethics class whether they, as individual consumers, would visit a controversial Disney ski resort proposed for construction in the Mineral King Valley,[284] his students unanimously raised their hands.[285] But, when Sagoff asked whether they agreed with the government's decision to give Disney the lease to develop Mineral King, his students were strongly opposed to what they saw as a violation of public trust.[286]

Sagoff explains that CBA techniques "may fail to register ideological or ethical convictions citizens entertain about the very things that interest them as

276. *See, e.g.*, Price, *supra* note 50.

277. *See* Acland, *supra* note 45.

278. *See* Heinzerling, *supra* note 28, at 293.

279. *See, e.g.*, STEINZOR ET AL., *supra* note 127, at 50–53.

280. *Id.*

281. *See* Acland, *supra* note 45.

282. *See, e.g.*, Mark Sagoff, *We Have Met the Enemy and He Is Us or Conflict and Contradiction in Environmental Law*, 12 ENV'T L. 283, 284 (1982).

283. *See id.*

284. This proposed development was the subject of the Supreme Court case *Sierra Club v. Morton*, in which the Court ruled that Sierra Club lacked standing to challenge the Department of the Interior's decision to issue a lease to Disney since Sierra Club did not allege individualized harm to itself or its members. *See* Sierra Club v. Morton, 405 U.S. 727, 739–41 (1972).

285. Sagoff, *supra* note 282 at 283–84.

286. *Id.* at 284.

consumers."[287] Sagoff distinguishes between "consumer interests," which "may be revealed and most effectively satisfied in markets," and "moral values" the "individual entertains" when considering "the common good or the good of the society as a whole."[288]

Modern CBA may provide agencies with a fair representation of aggregated "consumer interest,"[289] but it fails to capture people's "moral values" about the public good.[290] Just as Sagoff's students expressed conflicting sentiments about the Disney ski resort depending on whether they were placed in the role of individual consumers or public-minded voters,[291] the federal regulatory review process may receive different results if it inquired about the public's moral interests rather than individual consumer interests.

If, for example, an OIRA focus group approached participants not as consumers, but as moral political actors, it might ask open-ended value questions, such as "How worried are you about the impacts of climate change?" instead of economic questions like "Would you be willing to pay X dollars for Y environmental benefit?" People are not purely rational economic actors.[292] Nonmathematical considerations such as emotion and culture affect individuals' decisions.[293] So, an information-gathering approach that seeks to test the outer bounds of political feasibility by estimating the public's true preferences would benefit from a more qualitative approach.[294]

B. Federal Agencies Should Further Target Adaptation Efforts Towards Vulnerable and Underinvested Communities

Federal agencies should approach climate change adaptation with targeted rules and investments that focus on protecting those vulnerable and underinvested communities least able to protect themselves or less likely to be adequately protected by a lower level of government.

This approach would be "efficient" in that regulatory agencies would direct their resources where they are most urgently needed, for example by concentrating regulatory attention towards issues that disproportionately affect vulnerable communities. Accordingly, the federal government would better serve environmental justice than under the CBA regime, because agencies would direct their attention toward insufficiently protected communities, and not simply towards communities whose protection is economically efficient. The federal

287. *Id.* at 286.

288. *Id.* at 294.

289. *See id.*

290. *See id.* at 294.

291. *See id.* at 283–84.

292. *See, e.g.*, Dante Urbina & Alberto Ruiz-Villaverde, *A Critical Review of Homo Economicus from Five Approaches*, 78 AM. J. OF ECON. & SOCIO. 63–69.

293. *See id.* at 67.

294. *See id.*

government should focus particularly on communities whose vulnerability results from race, class, and lack of effective political representation.[295]

To determine which communities most need agency protection, agencies could look at several indicia of vulnerability, including household income, municipality tax base, historical patterns of redlining, and residential segregation,[296] as well as which communities have received little or no previous federal investment and regulatory attention. This task would require agencies to have access to a lot of information about specific communities. It would be easier for agencies to identify communities in need if those agencies had mechanisms to interface with disadvantaged communities and activists directly.

The 1991 Principles of Environmental Justice call for greater community involvement in environmental decision-making through a generalized right of self-determination and concrete inclusion at every level of policymaking.[297] Empowering discrete, under-protected communities to appeal to the federal government directly and building an administrative structure that channels their calls for aid into agency decision-making processes would serve these aims.[298]

This community liaison function might be performed by the White House's Council on Environmental Quality[299] or EPA's new Office of Environmental Justice and External Civil Rights Office, which was created by the merger of EPA's Office of Environmental Justice, External Civil Rights Compliance Office, and Conflict Prevention and Resolution Center.[300] The U.S. Commission on Civil Rights, an independent investigative commission[301] that has previously investigated EPA's failures to abide by federal environmental justice policy,[302] could also be involved. Alternatively, in lieu of a single centralized community liaison—which might be easily obstructed if a presidential administration is hostile to environmental justice—the executive branch might instead seed the administrative state with agency-specific environmental justice liaisons.

---

295. *See, e.g.*, Robert Bullard, *The Legacy of American Apartheid and Environmental Racism*, 9 J. OF CIVIL RTS. & ECON. DEV. 449, 451 (1994).

296. *See, e.g.*, Emily Badger, *How Redlining's Racist Effects Lasted for Decades*, N.Y. TIMES (Aug. 24, 2017), https://www.nytimes.com/2017/08/24/upshot/how-redlinings-racist-effects-lasted-for-decades.html.

297. UNITED CHURCH OF CHRIST, *supra* note 99.

298. *See id.*

299. The White House, *Council on Environmental Quality*, https://www.whitehouse.gov/ceq/ (last visited June 25, 2023).

300. Coral Davenport, *E.P.A. Will Make Racial Equality a Bigger Factor in Environmental Rules*, N.Y. TIMES (Sep. 24, 2022), https://www.nytimes.com/2022/09/24/climate/environmental-justice-epa.html; *EPA Launches New National Office Dedicated to Advancing Environmental Justice and Civil Rights*, EPA (Sep. 24, 2022), https://www.epa.gov/newsreleases/epa-launches-new-national-office-dedicated-advancing-environmental-justice-and-civil.

301. *Our Mission*, U.S. COMM'N ON CIVIL RTS., https://www.usccr.gov/about/mission (last visited June 25, 2023).

302. U.S. COMM'N ON CIVIL RTS., ENVIRONMENTAL JUSTICE: EXAMINING THE ENVIRONMENTAL PROTECTION AGENCY'S COMPLIANCE AND ENFORCEMENT OF TITLE VI AND EXECUTIVE ORDER 12,898 (2016), https://www.usccr.gov/files/pubs/2016/Statutory_Enforcement_Report2016.pdf.

Using historical and current levels of disinvestment as criteria when determining where to make climate adaptation investments would enable agencies to advance environmental justice goals without running afoul of the Equal Protection Clause.[303] Race is strongly correlated with government disinvestment and regulatory neglect because white communities are more likely than non-white communities to receive environmental protection.[304] The Biden Administration has thus far been careful to avoid unconstitutionally considering race in its environmental policy. For instance, the Biden Administration's Justice40 Initiative, which aims to direct "40 percent of the overall benefits of certain [f]ederal investments flow to disadvantaged communities that are marginalized, underserved, and overburdened by pollution,"[305] is race-neutral.[306] Given the Supreme Court's recent hostility to race-conscious policies like affirmative action under the Equal Protection Clause of the Fourteenth Amendment, the administration wanted "a tool that will survive."[307] But, prominent environmental justice advocates, including Robert Bullard, the "father of environmental justice," have criticized the administration's color-blind approach, arguing that race correlates more strongly than other variables, like income, with exposure to environmental hazards.[308]

Tracking community disinvestment and neglect from lower levels of government as a criterion could empower federal agencies to thread the needle between the White House's and Bullard's approaches. By not explicitly considering race, executive branches would not make facial race classifications,[309] but agency actions would nonetheless closely track racial lines. If a federal climate rule were promulgated according to this facially race-neutral "disinvestment" approach and subsequently challenged under the Equal Protection Clause, the challenger would need to prove discriminatory intent and

303. Equal Protection under the 14th Amendment applies to the federal government via the Fifth Amendment's guarantee of due process. *See, e.g.*, Bolling v. Sharpe, 347 U.S. 497, 500 (1955).

304. *See, e.g.*, Bullard, *supra* note 295, at 451.

305. *Justice40 Initiative*, THE WHITE HOUSE, https://www.whitehouse.gov/environmentaljustice/justice40/ (last visited June 25, 2023); Lisa Friedman, *White House Takes Aim at Environmental Racism, but Won't Mention Race*, N.Y.TIMES (Feb. 15, 2022), https://www.nytimes.com/2022/02/15/climate/biden-environment-race-pollution.html.

306. Friedman, *supra* note 305.

307. *Id.*

308. *Id.*; Jean Chemnick, *Experts to White House: EJ screening tool should consider race*, E&E NEWS (June 1, 2022, 6:40 AM), https://www.eenews.net/articles/experts-to-white-house-ej-screening-tool-should-consider-race/; Cara Buckley, *At 75, the Father of Environmental Justice Meets the Moment*, N.Y. TIMES (Sept. 12, 2022), https://www.nytimes.com/2022/09/12/climate/robert-bullard-environmental-justice.html.

309. *See, e.g.*, Washington v. Davis, 426 U.S. 229, 242 (1976) ("[A] law, neutral on its face and serving ends otherwise within the power of government to pursue, is [not] invalid under the Equal Protection Clause simply because it may affect a greater proportion of one race than of another. Disproportionate impact is not irrelevant, but it is not the sole touchstone of an invidious racial discrimination forbidden by the Constitution.").

discriminatory impact.[310] Proving discriminatory intent would be a significant hurdle for would-be challengers to that federal rule.[311]

The Biden Administration's Justice40 Initiative is a considerable step toward targeting future regulatory investment for historically underserved communities.[312] The Justice40 Initiative identifies variables that can qualify a community as "disadvantaged"—and thus, eligible for the 40 percent of earmarked federal investments—including poverty, unemployment and underemployment, a history of racial and ethnic residential segregation, disproportionate environmental stressor burden, and disproportionate climate impacts.[313] But, there is room for further investment in environmental justice.

First, the executive branch should increase the percentage of funds reserved for disadvantaged communities beyond the Justice40 Initiative's 40 percent.[314] Increasing funding availability would further serve the aims of environmental justice by concentrating investment and attention toward communities most in need of protection.[315] It would also help avoid a state and municipality moral hazard problem.[316] Without an effective, binding strategy for federal investment, states and cities that could, but do not want to, fund their own efforts to adapt to climate change might neglect to invest in adaptation in favor of relying on federal intervention. However, if a municipal or state government knows that a particular privileged community is unlikely to receive federal support for adaptation because a significant portion of federal funds is reserved for disadvantaged communities, that state or municipality is more likely to take responsibility for adaptation investments since it cannot politically pass the buck.

Second, the executive branch should expand its criteria for "disadvantaged" communities to encompass patterns and histories of government underinvestment and regulatory neglect. Where other levels of government are least likely to protect their citizens from climate impacts, federal action is the greatest value-add—and thus the most "efficient" use of government capacity.

---

310. *See id.* (establishing that facially neutral laws with a racially discriminatory effect but without a racially discriminatory intent do not violate equal protection).

311. *See, e.g.*, McCleskey v. Kemp, 481 U.S. 279, 313 (1987) (rejecting a claim that the death penalty was applied in a racially disparate way absent a showing of discriminatory intent on the part of the jurors or the legislature).

312. *Justice40 Initiative*, *supra* note 305; EXEC. OFF. OF THE PRESIDENT, INTERIM IMPLEMENTATION GUIDANCE FOR THE JUSTICE40 INITIATIVE (2021), https://www.whitehouse.gov/wp-content/uploads/2021/07/M-21-28.pdf.

313. EXEC. OFF. OF THE PRESIDENT, INTERIM IMPLEMENTATION GUIDANCE FOR THE JUSTICE40 INITIATIVE 2–3 (2021), https://www.whitehouse.gov/wp-content/uploads/2021/07/M-21-28.pdf.

314. *See id.*

315. This would be consistent with Executive Order 14008's directive to agencies to address "the disproportionately high and adverse human health, environmental, climate-related and other cumulative impacts on disadvantaged communities, as well as the accompanying economic challenges of such impacts." *See* Exec. Order No. 14008, *supra* note 1, at 7629.

316. *See, e.g.*, Gernot Wagner & Daniel Zizzamia, *Green Moral Hazards*, HARVARD'S SOLAR GEOENGINEERING RSCH. PROGRAM (Jan. 9, 2020), https://geoengineering.environment.harvard.edu/blog/green-moral-hazards (defining moral hazard as a "[l]ack of incentive to guard against risk where one is protected from its consequences.").

Agencies might assess underinvestment and neglect by looking to a broader range of qualitative criteria, including the ineffectiveness of a community's political representation or a community's lack of political power,[317] or to more measurable criteria, such as gerrymandering.[318] Although quantitative evidence of community disadvantage might be useful, agencies should be careful not to overly rely on quantitative metrics, lest they again fall into the trap of serving an arbitrary set of metrics to the detriment of their policy mandate.[319] While community groups may provide some evidence of vulnerability by appealing for federal intervention, executive branch agencies should also perform proactive research, particularly since environmentally burdened communities may have limited capacity to perform research and self-advocate. Such information gathering may include drawing on prior agency work or leveraging research by environmental scholars to establish a list of the most impacted and least protected communities.

Third, federal agencies should not limit these decision-making criteria to targeted investments. Instead, the criteria should also apply to community-level adaptation rulemaking and policy formulation because the communities most threatened by climate change need regulatory attention and expertise. Channeling the executive branch's attention and resources to protect the most vulnerable communities across America would, unlike CBA, provide the greatest marginal benefit to Americans relative to administrative costs.

Fourth and finally, federal agencies enacting climate regulations should create bottom-up structures to interface with frontline community groups, whether individual to each agency or centralized in an entity like the Council for Environmental Quality or EPA's new environmental justice office, neither of which currently has a robust structure for community engagement.

Individual agencies are already confronting climate adaptation problems where they must make the difficult choice to protect some vulnerable communities and not others. For example, the Department of the Interior recently extended grants to help five Native American tribes relocate away from areas threatened by coastal and river flooding brought on by climate change.[320] The grants were part of the Department of the Interior's $45 million Tribal Climate

317. Sheila R. Foster, *The Challenge of Environmental Justice*, 1 RUTGERS J. L. & URBAN POL'Y 1, 5 (2004), https://ir.lawnet.fordham.edu/faculty_scholarship/231 (describing the "disenfrachisement" and "associated political powerlessness . . . felt by residents in poor, and often minority, communities" as industry exposes them to disproportionate environmental impacts).

318. *See* Callia Téllez, *How Gerrymandering Contributes to Environmental Justice*, BRENNAN CTR. FOR JUSTICE (Dec. 6, 2021), https://www.brennancenter.org/our-work/analysis-opinion/how-gerrymandering-contributes-environmental-injustice.

319. As discussed in Part I.A, *supra*.

320. Christopher Flavelle, *In a First, U.S. Pays Tribes to Move Away From Climate Threats*, N.Y. TIMES (Nov. 4, 2022), https://www.nytimes.com/2022/11/04/climate/native-americans-relocate-climate-change.html; *see also* Bureau of Indian Affairs, Branch of Tribal Climate Resilience, *2022 Annual Awards Summary* (Oct. 31, 2022), https://www.bia.gov/sites/default/files/dup/inline-files/award_summary_0.pdf.

Resilience Program to disburse funds under the Biden Administration's Bipartisan Infrastructure Law (the Infrastructure Investment and Jobs Act).[321] Before announcing the awards, the Department of the Interior convened three tribal consultation sessions to inform how it would implement funds.[322] However, more than half of the tribes that applied for relocation funds were denied.[323] When asked by the New York Times, the Department of the Interior "declined to discuss its decision criteria."[324]

Under a targeted adaptation framework, federal agencies should prioritize climate adaptation investments in Native American tribes, as opposed to many other American communities, given the history of federal underinvestment in and insufficient representation of tribes.[325] The Tribal Climate Resilience Program's community outreach elements—including consultation with tribes to inform investment decisions and opportunities for tribes to apply for federal funds—mesh with environmental justice's demand for community participation in environmental policymaking.[326] But, this initiative and others like it would benefit from greater transparency in agency decision making.[327]

CONCLUSION

The social cost of carbon has been crucial to passing GHG-mitigating regulations through cost-benefit analysis since the SCC was established during the Obama Administration.[328] But, as Professor Berman writes, "[w]here CBA seems likely to be irredeemably biased against action, our aim should be to push for alternative forms of evaluation."[329] CBA is indeed irredeemably biased against climate action. It is also a fundamentally arbitrary metric to judge climate regulations aimed at preserving human health, safety, and the environment, and

321. Press Release, Dep't of the Interior, President Biden's Bipartisan Infrastructure Law Supports $45 Million Investment to Build Climate Resilience in Tribal Communities (Nov. 2, 2022), https://www.doi.gov/pressreleases/president-bidens-bipartisan-infrastructure-law-supports-45-million-investment-build; Press Release, Dep't of the Interior, Biden-Harris Administration Highlights Progress on Tackling Climate Change (Oct. 6, 2022), https://www.doi.gov/pressreleases/biden-harris-administration-highlights-progress-tackling-climate-change; The White House, *President Biden's Bipartisan Infrastructure Law*, https://www.whitehouse.gov/bipartisan-infrastructure-law/.

322. President Biden's Bipartisan Infrastructure Law Supports $45 Million Investment to Build Climate Resilience in Tribal Communities, *supra* note 321.

323. Flavelle, *supra* note 320.

324. *Id.*

325. *See, e.g.*, U.S. COMM'N ON CIVIL RTS., BROKEN PROMISES: CONTINUING FEDERAL FUNDING SHORTFALL FOR NATIVE AMERICANS 1–5 (2018), https://www.usccr.gov/files/pubs/2018/12-20-Broken-Promises.pdf; Jeffrey Brooks, *Genuine tribal and Indigenous representation in the United States*, 9:405 HUMANITIES AND SOC. SCI. COMMC'N (2022), https://doi.org/10.1057/s41599-022-01420-0.

326. *See* UNITED CHURCH OF CHRIST, *supra* note 99.

327. *See* President Biden's Bipartisan Infrastructure Law Supports $45 Million Investment to Build Climate Resilience in Tribal Communities, *supra* note 321.

328. *See, e.g.*, Revesz, *supra* note 25, at 1441–42.

329. Berman, *supra* note 25.

one which undermines the federal government's stated commitment to environmental justice.

The way forward is not better cost-justification of climate regulation; it is to assign less importance to cost-justification. To the extent that CBA remains a decision-making criterion in the executive branch's environmental toolbox, it should be one of many, not the decisive factor.

By investing research, time, energy, political capital, and litigation into creating and defending the SCC, the federal government has reified CBA, which is an essentially anti-regulatory system. Rather than justifying its climate rules on a tilted playing field, the executive branch can, and should, change the system. Dethroning the SCC and, with it, CBA for climate regulations, would better enable federal agencies to "combat the climate crisis with bold, progressive action" that "deliver[s] environmental justice."[330] That, not economic efficiency, should be the federal government's primary objective when enacting climate policy through administrative agencies.

330. *See* Exec. Order No. 14008, *supra* note 1.