RECONCILING REGULATORY IMPACT ANALYSES AND AGENCIES' STATUTORY MANDATES FOR ENVIRONMENTAL REGULATIONS UNDER LOPER BRIGHT

By

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Federal administrative agencies frequently undertake regulatory impact analyses to provide the basis for promulgating new regulations and justify the reasonableness of regulations upon judicial review. Using analytical methods, agencies quantify and compare the relative costs and benefits of regulatory alternatives, seeking policies that maximize net societal benefits, subject to statutory constraints. Loper Bright Enterprises v. Raimondo *threatens to upend this methodological check on the rationality of agency action in two distinct ways: first by limiting the permissibility of regulatory impact analysis as a basis for regulation, and second by replacing technical and scientific-informed components of the analysis with judicial interpretations of ambiguous statutory provisions. This threat is most unsettling in the context of environmental regulations, which comprise the greatest share of new federal regulations. The monetization of environmental harms is essential to demonstrate that the benefits of remedial regulations outweigh their costs, and the promulgation of new regulations to confront emerging climatic issues frequently relies on ambiguous statutory provisions. This Article explores the far-reaching effects of* Loper Bright *that go to the analytical foundations of policy analysis and evaluation. It argues that assessing the impact of* Loper Bright *requires consideration not only of the consistency between regulatory policies and the agency's enabling statute but also of the harmony between the underlying justification for regulations and the statutory prescriptions regarding the factors that should be considered in regulatory policy design. The Article concludes that, while judicial review will become more scrutinizing of the compatibility between agencies' statutory mandate and the substantive policies underlying regulatory impact analysis, the regulatory state can—and indeed must—evolve or else risk ossification.*

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I. INTRODUCTION

Federal agencies are constantly required to interpret the meaning of their enabling statutes, their regulations, and various other sources of law in the course of promulgating regulations. For the last four decades, *Chevron*[1] deference—which required judicial deference to an agency's reasonable interpretation of statutory ambiguity in certain circumstances—has functioned as the cornerstone doctrine governing judicial review of agency action.[2] *Loper Bright Enterprises v. Raimondo*[3] overturned *Chevron* deference and replaced the default assumption that statutory ambiguity equates to an implicit congressional delegation of interpretive power to the agency with a much more rigorous, less deferential case-by-case judicial inquiry into the propriety and bounds of agency discretion.[4] Simply, *Loper Bright* will sharpen a reviewing court's focus on the harmony between the agency's statutory mandate and the action taken.[5]

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[1] Chevron U.S.A. Inc. v. Nat. Res. Def. Council, 467 U.S. 837 (1984).

[2] *Id.* at 842–43. *Chevron* has been cited by federal courts more than 18,000 times since 1984. Amy Howe, *Supreme Court Strikes Down Chevron, Curtailing Power of Federal Agencies*, SCOTUSBLOG (June 28, 2024, 12:37 PM), https://www.scotusblog.com/2024/06/supreme-court-strikes-down-chevron-curtailing-power-of-federal-agencies.

[3] 603 U.S. 369 (2024).

[4] *Id.* at 392, 398–99.

[5] *Id.*

The Administrative Procedure Act requires agency action to be reasonable—meaning agencies must account for all relevant factors and demonstrate rational decision making.[6] To justify the promulgation of new regulations, agencies often rely on a regulatory impact analysis (RIA),[7] a procedure involving identifying, quantifying, and comparing the costs and benefits of regulatory alternatives.[8] Thus, judicial review of the reasonableness of agency action, by extension, requires courts to assess the reasonableness of the agency's corresponding RIA.[9]

Multiple executive orders require agencies to perform RIAs for economically significant regulatory actions.[10] The Office of Management and Budget's (OMB) publication, Circular No. A-4 (Circular A-4), provides agencies with guidance on performing the analysis in this context.[11] Once the agency has monetized the expected costs and benefits of regulatory alternatives, they choose the alternative that maximizes net benefits.[12]

Still, the most influential source in agency decision-making is the agency's statutory mandate. Enabling statutes will often dictate whether an agency is permitted to consider costs in promulgating regulations and will lay out other factors the agency must consider.[13] However, many statutes are silent or ambiguous as to these questions, which historically granted deference to the agency's judgment. Now, under *Loper Bright*, the judiciary is the preeminent authority on resolving statutory meaning in the case of silence or ambiguity.[14] Thus, the relationship between an agency's statutory mandate and the policies and procedures underlying

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[6] 5 U.S.C. § 706(2)(A), (C) (2018); Motor Vehicle Mfrs. Ass'n of the U.S. v. State Farm Mut. Auto. Ins. Co., 463 U.S. 29, 43 (1983).

[7] Regulatory impact analysis is a broad term encompassing various types of quantitative and qualitative comparisons of costs and benefits, including cost-benefit analysis and cost-effectiveness analysis.

[8] MATTHEW D. ADLER & ERIC A. POSNER, NEW FOUNDATIONS OF COST-BENEFIT ANALYSIS 2 (2006). *See also id.* at 121 (explaining "regulatory impact analysis" and "cost-benefit analysis" (CBA)).

[9] *See, e.g.*, Nat'l Ass'n of Home Builders v. Env't Prot. Agency, 682 F.3d 1032, 1038 (D.C. Cir. 2012) (explaining the "responsibility" of courts to a "provide reasoned explanation for its action" when promulgating a rule) (quoting FCC v. Fox Television Stations, Inc., 556 U.S. 502, 515 (2009)).

[10] Beginning with President Reagan's Exec. Order No. 12,291, 46 Fed. Reg. 13,193 (Feb. 19, 1981), which was replaced by President Clinton's Exec. Order No. 12,866, 58 Fed. Reg. 51,735 (Oct. 4, 1993). Exec. Order No. 12,866 was then amended by President George W. Bush's Exec. Order No. 13,258, 67 Fed. Reg. 9,385 (Feb. 28, 2002), then replaced by President Obama's Exec. Order No. 13,497, 74 Fed. Reg. 6,113 (Feb. 4, 2009). More recently, President Biden issued Executive Order 14,094, entitled "Modernizing Regulatory Review" which amended Executive Order 12,866. Exec. Order No. 14,094, 88 Fed. Reg. 21879 (Apr. 11, 2023). For simplicity, we reference Executive Order 12,866, which lays the foundation for regulatory review.

[11] *See generally* OFF. OF MGMT. & BUDGET, EXEC. OFF. OF THE PRESIDENT, CIRCULAR A-4: REGULATORY ANALYSIS (2023) (laying out OMB's guidance to federal agencies on regulatory analysis).

[12] ADLER & POSNER, *supra* note 8, at 2.

[13] *See* discussion *infra* Part III. The Regulatory Oversight Context.

[14] *See* discussion *infra* Section II.B. Loper Bright Enterprises v. Raimondo.

the agency's RIA will become more important to judicial review of agency action.

In this context, there are two main questions surrounding the impact of *Loper Bright* that center on the harmonization of agencies' statutory mandates and the substantive policies underlying agencies' RIAs. First, may an agency rely on an RIA to justify the promulgation of a new regulation? Second, if so, what is required of the analysis to allow the regulation to withstand judicial scrutiny? These questions are explored in further depth in the context of environmental regulations—one area likely to be significantly impacted by *Loper Bright*. The fallout of *Loper Bright* in the context of RIA for environmental regulations is especially relevant because these regulations account for the largest share of U.S. regulatory costs.[15]

Part II describes the history of judicial review of agency actions from the conception of *Chevron* deference through *Loper Bright*, exploring the shift in power from regulatory agencies to the judiciary.

Part III explains the regulatory oversight context that gave rise to the use of RIAs as justification for agency actions. This Part also explores a central component of RIAs for environmental regulations: the social cost of greenhouse gases (SC-GHG), which monetizes the harm of greenhouse gas emissions or, alternatively, the benefit of avoided emissions.[16]

Part IV explores how *Loper Bright* will impact agencies' ability to rely on RIA in promulgating regulations. In some instances, the analysis is a statutory requirement; in others, it is statutorily prohibited. Most often, however, the enabling legislation is silent as to the permissibility of balancing costs and benefits and the components of each that may be considered. Likely, *Loper Bright* will alter the scope of agencies' ability to electively engage in RIA.

Part V demonstrates how the contents of RIAs are likely to change post-*Loper Bright*. We explore this shift through three potential areas of conflict between agencies' statutory mandates and RIA procedures: the spatial scope of the analysis, the temporal scope of the analysis, and the accounting of distributional effects. Post-*Loper Bright*, courts are likely to pay increased attention to factors explicitly listed or barred by the statute and will be hesitant to allow for extra-statutory considerations.

Part VI explores the implications of this analysis, both in terms of the environmental regulatory state at large and in the specific context of RIAs. *Loper Bright* will restrict the ability of agencies to promulgate environmental regulations by stagnating the interpretation of

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[15] *See* OFF. OF MGMT. & BUDGET, EXEC. OFF. OF THE PRESIDENT, 2017 REPORT TO CONGRESS ON THE BENEFITS AND COSTS OF FEDERAL REGULATIONS AND AGENCY COMPLIANCE WITH THE UNFUNDED MANDATES REFORM ACT 7–8 tbl.1-1 (2017) (showing relative regulatory benefits and costs of federal regulations).

[16] ENV'T PROT. AGENCY, EPA-HQ-OAR-2021-0317, SUPPLEMENTARY MATERIALS FOR THE REGULATORY IMPACT ANALYSIS FOR THE FINAL RULEMAKING, "STANDARDS OF PERFORMANCE FOR NEW, RECONSTRUCTED, AND MODIFIED SOURCES AND EMISSIONS GUIDELINES FOR EXISTING SOURCES: OIL AND NATURAL GAS SECTOR CLIMATE REVIEW" 1 (2022) [hereinafter REPORT ON THE SC-GHG].

environmental statutes. Additionally, RIAs will face heightened judicial scrutiny for compatibility with the agency's statutory mandate—whether the agency relies on the analysis in promulgating the regulation or not. This Part also offers agencies recommendations for avoiding conflicts with *Loper Bright* in promulgating regulations.

II. JUDICIAL REVIEW OF AGENCY ACTION

A. Pre-Loper Bright: Chevron Deference

For the last four decades, *Chevron* deference functioned as the cornerstone framework governing judicial review of agency action in the context of statutory interpretation.[17] Under the doctrine, courts deferred to an agency's reasonable interpretations of statutory ambiguity or silence.[18] Following the relevant inquiry, a court first asked whether "Congress has directly spoken to the precise question at issue," and, if not, the court would uphold the agency's interpretation.[19] Under *Chevron*, a court could not supplant an agency's reasonable interpretation with its own.[20] Although various justifications for judicial deference to agencies in matters of statutory interpretation exist, perhaps foremost are the political accountability of executive agencies as compared to the judiciary, the congressional grant of authority to the agency to administer the statute, and the relative expertise of agencies in implementing statutes involving highly technical, specialized, and scientific matters.[21]

Two decades after the birth of *Chevron*, the Supreme Court cabined the doctrine's reach to instances where Congress had delegated to the agency the authority to issue regulations with the force of law and the agency action at issue was promulgated under that authority.[22] Whereas rules issued via notice-and-comment rulemaking and formal adjudications carry the force of law and thus received *Chevron* deference,[23] guidance documents, general statements of policy, and interpretive rules—which are produced with less procedural formality—did not receive deference.[24]

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17 *See Chevron*, 467 U.S. 837, 842–43 (1984).

18 *Id.*

19 *Id.*

20 *Id.* at 843; *See also* United States v. Mead Corp., 533 U.S. 218, 229 (2001) ("When circumstances applying such an expectation [of gap filling authority] exist, a reviewing court has no business rejecting an agency's exercise of its generally conferred authority to resolve a particular statutory ambiguity simply because the agency's chosen resolution seems unwise, but is obliged to accept the agency's position if Congress has not previously spoken to the point at issue and the agency's interpretation is reasonable." (citation omitted)).

21 *See Chevron*, 467 U.S. at 843–44, 865–66.

22 *See Mead*, 533 U.S. at 226–27, 229.

23 *Id.* at 229–30.

24 *See id.* at 230, 234. The Court's justification for assessing procedural formality in deciding whether a particular promulgation qualifies for *Chevron* deference is that Congress is more likely to have intended to delegate the agency the power to issue promulgations with

Under the pre-*Loper Bright* regime, should an agency interpretation fall outside the pale of *Chevron*, it could still qualify for some judicial respect via *Skidmore*[25] weight. Under *Skidmore*, a court gives weight to an agency's statutory construction to the extent the interpretation is persuasive and represents the product of an agency leveraging its expertise to interpret a complex regulatory scheme.[26] The weight afforded to the agency's interpretation in a particular case depends on various factors, including the thoroughness of consideration, the validity of the agency's reasoning, the consistency between earlier and later agency pronouncements, and "all those factors which give it power to persuade, if lacking power to control."[27]

An agency's ability to depart from previously announced policies in future promulgations was impacted by whether a court found that deference was due to the agency and the extent of that deference. Importantly, whether an agency's interpretation was upheld under *Chevron* or *Skidmore* engendered divergent outcomes: for an interpretation that would be upheld under *Chevron*, the same interpretation could be either upheld or reversed under *Skidmore*. This is because if a court found the statute ambiguous under *Chevron*, any reasonable agency interpretation could control, implying that multiple permissible interpretations exist, and that the agency had the power to choose between them. Further, under *Chevron*, an agency could change its interpretation of the statute, so long as the new interpretation was still reasonable and the change in policy was acknowledged and well explained.[28] Alternatively, if a court finds the statute ambiguous under *Skidmore*, the court is empowered to determine the single "best" interpretation, with some weight given to the agency's preferred interpretation.[29] Then, the interpretation of the statute is fixed through *stare decisis*, and the agency does not have the power to change it.

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the force of law when it has provided the agency with relatively more formal procedures—like the notice-and-comment rulemaking and formal adjudication contexts. *Id.* at 230; *see also* Christensen v. Harris County, 529 U.S. 576, 587 (2000) ("Interpretations such as those in opinion letters—like interpretations contained in policy statements, agency manuals, and enforcement guidelines, all of which lack the force of law—do not warrant *Chevron*-style deference. . . . [They] are 'entitled to respect,' . . . but only to the extent that [they] have the 'power to persuade.'" (internal citation omitted)).

25 Skidmore v. Swift & Co., 323 U.S. 134, 140 (1944).

26 *Id.* ("We consider that the rulings, interpretations, and opinions of the Administrator under this act, while not controlling upon the courts by reason of their authority, do constitute a body of experience and informed judgment to which courts and litigants may properly resort for guidance.").

27 *Id.* at 139–40 ("[T]he Administrator's policies [at issue in this case] are made in pursuance of official duty, based upon more specialized experience and broader investigations and information than is likely to come to a judge during a particular case.").

28 *See Chevron*, 467 U.S. 837, 857–58 (1984) (describing EPA's changed interpretation of the statute that allowed new air pollution regulatory scheme and outlining agency rationale).

29 *See Skidmore*, 323 U.S. at 139–40 (finding that, when faced with facts not squarely addressed by statute, courts determine proper interpretation, but agency interpretations may provide guidance).

B. Loper Bright Enterprises v. Raimondo

In its simplest form, *Loper Bright* overturned *Chevron* and expanded the application of *Skidmore* to all interpretive contexts, regardless of whether the agency promulgation carries the force of law.[30] At its core, the decision rejected *Chevron*'s underlying assumption that statutory ambiguity equates to an implicit congressional delegation to the agency.[31] Effectively, *Loper Bright* engendered a transition away from judicial deference to agencies' statutory interpretation and toward independent judicial review informed—to some extent—by agency judgments.[32] The extent to which an agency's judgment should receive respect from a reviewing court is unclear, but the Court emphasized that agency interpretations that are "issued contemporaneously with the statute . . . and . . . have remained consistent over time" [33] and interpretations that rest on "factual premises within [the agency's] expertise" may be particularly informative.[34] *Loper Bright* also purported to leave undisturbed previous cases upheld under *Chevron* under statutory *stare decisis*, but the scope of this protection is undefined.[35]

Loper Bright did not dispute that Congress has the constitutional power to delegate *discretionary* (rather than *interpretive*) authority to agencies in the context of the statutes' meaning, but the decision instilled a non-deferential check—in the form of *de novo* judicial review—to ensure that the authority claimed by the agency has indeed been delegated by Congress.[36] Then, according to the Court, the judiciary's role is to "*independently* interpret the statute and effectuate the will of Congress

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[30] *See Loper Bright*, 603 U.S. 369, 412 (2024) (overruling Chevron and holding that courts are responsible for statutory interpretation in all contexts).

[31] *Id.* at 400.

[32] *See id.* at 402 (holding that courts retain authority to interpret statutory matters independently but do so with agency expertise as guidance in certain circumstances).

[33] *Id.* at 394 (citing United States v. Am. Trucking Ass'ns, 310 U.S. 534, 549 (1940)).

[34] *Id.* at 402 (alteration in original) (quoting Bureau of Alcohol, Tobacco & Firearms v. FLRA, 464 U.S. 89, 98 n.8 (1983)).

[35] *Id.* at 412; *see also* Corner Post, Inc. v. Bd. of Governors of the Fed. Rsrv. Sys., 603 U.S. 799, 825 (2024) (holding that the six-year statute of limitations for actions against the United States under the APA does not begin to accrue until the particular plaintiff is injured by a final agency action, suggesting further disruption to previously settled case law). For an example of how *Loper Bright*'s *stare decisis* principles have been applied *in situ*, see *Tennessee v. Becerra*, 117 F.4th 348, 363–65 (6th Cir. 2024) (declining to depart from *Ohio v. Becerra*, 87 F.4th 759 (6th Cir. 2023) in which a 2021 rule of the Department of Health and Human Services was upheld under step two of *Chevron*).

[36] *Loper Bright*, 603 U.S. at 404; *see also* City of Arlington v. FCC, 569 U.S. 290, 327–28 (2013) (Roberts, C.J., dissenting) (highlighting the disagreement between the majority and dissent regarding the requirement that an agency be delegated authority with respect to a particular promulgation) (discussing whether the agency was delegated authority to promulgating binding interpretations of a provision of the Telecommunications Act (47 U.S.C. § 332(c)(7)(B)). *See generally id.* at 296–97 (holding that *Chevron* required judicial deference to an agency's interpretation of statutory ambiguity about the *scope* of the agency's jurisdiction). *Contra Loper Bright*, 603 U.S. at 433 (Gorsuch, J., concurring) (citing *City of Arlington* as an example of when the *Chevron* regime undermined due process of law by allowing executive agencies to "effectively judge the scope of their own lawful powers").

subject to constitutional limits."[37] Accordingly, courts should recognize instances where Congress has explicitly or implicitly delegated discretionary authority to the agency and ensure that the agency's exercise of that authority is within statutory and constitutional bounds.[38] The Court enumerated three possible ways that Congress can delegate discretionary authority to an agency: (1) expressly delegating the power to define statutory terms; (2) allowing agencies to "fill up the details" of a statutory scheme; and (3) empowering regulation subject to intentionally broad terms to allow agencies flexibility.[39]

Grants of definitional power are relatively easy to identify. Many statutes include a command empowering the agency to promulgate regulations to "define" or "delimit" some statutory term.[40] Alternatively, how a statute "empower[s] an agency to prescribe rules to 'fill up the details' of a statutory scheme" is less clear.[41] Notably, this second bucket does not require an *explicit* congressional delegation—as is required by the Major Questions Doctrine when an agency is intervening in an area of great economic or political significance.[42] The difference from *Chevron*, then, may be that "filling up the details" under *Loper Bright* requires a case-by-case evaluation of agency authorization, whereas *Chevron* operated on a background presumption that ambiguity indicated an implicit delegation.[43] Finally, allowing agencies regulatory flexibility by including intentionally capacious statutory terms, such as "appropriate," "necessary," or "reasonable," is a common practice.[44] For example, the Clean Air Act[45] mandates that EPA shall regulate power plants "if the Administrator finds such regulation is appropriate and necessary."[46] The crux of judicial power within these three methods of delegation is that it is the task of the judiciary, upon review of agency action, to ensure the action remains within the scope of the outer bounds of regulatory

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[37] *Loper Bright*, 603 U.S. at 395 (emphasis added); *see also* Marbury v. Madison, 5 U.S. (1 Cranch) 137, 177 (1803) ("It is emphatically the province and duty of the judicial department to say what the law is.").

[38] *Loper Bright*, 603 U.S. at 404.

[39] *Id.* at 394–95.

[40] *Id.* at 395 n.5 (citing 29 U.S.C. § 213(a)(15) and 42 U.S.C. § 5846(a)(2) which, respectively, grants the Secretary of Labor the authority to "define[] and delimit[]" certain terms in the provision by regulation and allows the Nuclear Regulatory Commission to "define[] by regulation[]" when a facility or activity "contains a defect which could create a substantial safety hazard").

[41] *Id.* at 395.

[42] West Virginia v. Env't Prot. Agency, 597 U.S. 697, 721–24 (2022).

[43] *See, e.g.*, Adrian Vermeule, *Chevron By Any Other Name*, SUBSTACK: THE NEW DIGEST (June 28, 2024), https://thenewdigest.substack.com/p/chevron-by-any-other-name (stating that some statutes empower agencies to prescribe rules to "fill up the details" of a statutory scheme. *Chevron* presumed these ambiguities were decided by agencies; *Loper Bright* instead says that they should be decided by judges on a case-by-case evaluation).

[44] *Loper Bright*, 603 U.S. at 395 & n.6.

[45] Clean Air Act, 42 U.S.C. §§ 7401–7671q (2018).

[46] *Loper Bright*, 603 U.S. at 395 n.6 (citing 42 U.S.C. § 7412(n)(1)(A)).

authority as defined by the statute—these bounds are no longer up to the agency to determine.[47]

III. THE REGULATORY OVERSIGHT CONTEXT

Federal regulatory policy is subject to a centralized executive review process. For "significant" rules, Executive Order 12,866 requires agencies to complete an RIA, which involves identifying, quantifying, and comparing the costs and benefits of proposed regulatory alternatives and selecting the alternative that maximizes net benefits, subject to statutory constraints.[48] The Office of Information and Regulatory Affairs (OIRA) within OMB must review and approve the proposed regulation and accompanying RIA before the agency can act.[49]

Circular A-4 provides guidance to agencies in conducting RIAs in compliance with Executive Order 12,866.[50] Intended to standardize and improve regulatory analysis, Circular A-4 includes analytical, technical, and economic information on the methods by which agencies can monetize and scrutinize the costs and benefits of regulatory alternatives.[51] Importantly, Circular A-4 endorses substantive policies—for example, the discount rate used to calculate the costs and benefits of regulations with impacts extending into the future, instances when agencies should contemplate costs and benefits to individuals outside of the United States, and guidance on employing distributional weighting to assess the wealth impacts of policy alternatives.[52] These three substantive policies—the discount rate, the spatial scope of the analysis,

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[47] *See id.* at 400–01 (holding that courts are suited to apply all relevant interpretive tools to resolve statutory ambiguities, that courts are the final authority on statutory interpretation, and that it is "necessary" for a court to impose its own construction).

[48] Exec. Order No. 12,866, 58 Fed. Reg. 51,735 (Oct. 4, 1993). Section 3(f) defines "significant" rules as those that:

> (1) Have 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; (2) Create a serious inconsistency or otherwise interfere with an action taken or planned by another agency; (3) Materially alter the budgetary impacts of entitlements, grants, user fees, or loan programs or the rights and obligations of recipients thereof; or (4) Raise novel legal or policy issues arising out of legal mandates, the President's priorities, or the principles set forth in the Executive order.

Id. at 51,738. Section 6(a)(3)(C) requires a more in-depth analysis for economically "significant" rules. *Id.*

[49] Exec. Order No. 12,866, 58 Fed. Reg. 51,735, 51,740, 51,742 (Oct. 4, 1993); *see also* § 6(b)(1) (outlining OIRA responsibilities regarding "significant regulatory actions").

[50] *See generally* OFF. OF MGMT. & BUDGET, *supra* note 11, at 1.

[51] *Id.* at 2.

[52] *Id.* at 75–81, 7–10, 61–66. The initial iteration of Circular No. A-4 published in 2003 proposed real discount rates of 3% and 7% and did not require substantive policy components such as inclusion of international costs and benefits and distributional weighting, though it did include a discussion of instances when an analysis of distributional effects could be pertinent. OFF. OF MGMT. & BUDGET, EXEC. OFF. OF THE PRESIDENT, CIRCULAR A-4, REGULATORY ANALYSIS 14, 33 (2003).

and distributional weighting—are some of the more controversial components of Circular A-4.[53]

To supplement Circular A-4, many federal agencies and departments have promulgated their own guidance for analyzing regulatory costs and benefits.[54] For example, in promulgating environmental regulations, it is pertinent to monetize the impact of additional emissions of greenhouse gases (GHGs) to ascertain which policies have the highest net benefits. To that end, President Obama assembled the Interagency Working Group (IWG) on the Social Cost of Carbon in 2010.[55] Employing a scientific and economically rigorous process grounded in contemporary theoretical foundations and existing literature, IWG developed a range of estimates for the social cost of carbon (SCC) for use in federal RIAs.[56] Formally, the measure estimates the cost, in dollars, of the damage caused by the emission of each additional metric ton of carbon dioxide.[57] Since its original estimation, IWG has updated the measure and produced social cost measurements for other greenhouse gasses, which are collectively known as the social cost of greenhouse gasses (SC-GHG).[58]

Although intended to be an apolitical measurement grounded in science and economics, the estimation of SC-GHGs is not without controversy. The monetization of climate harms required IWG to make

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[53] *See generally* OFF. OF MGMT. & BUDGET, EXEC. OFF. OF THE PRESIDENT, EXTERNAL PEER REVIEW FOR OMB, PROPOSED OMB CIRCULAR NO. A–4, "REGULATORY ANALYSIS" 2 (2023); OMB CIRCULAR NO. A–4: EXPLANATION AND RESPONSE TO PUBLIC INPUT 3, 9, 32–33 (2023) (reviewing the comments submitted in response to these three substantive policies). The 2023 iteration of the Circular was rescinded by the Trump Administration, eliminating the specification of these components. It has been replaced with the 2003 version of the Circular that requires agencies to present estimates based on higher discount rates of 3 percent and 7 percent and does not include or address distributional weighting or non-domestic costs and benefits. Despite these changes, agencies may still elect to undertake certain analytical strategies embodied by the 2023 Circular A-4 in sensitivity analyses in the RIA—so long as they are not contrary to OMB guidance and are supported in the agency's documentation (i.e., not arbitrary or capricious).

[54] *See, e.g.*, ENV'T PROT. AGENCY, GUIDELINES FOR PREPARING ECONOMIC ANALYSES 1-1 to 1-2 (2014) (updating EPA's policy for cost-benefit analyses to align with updated OMB's Circular No. A-4 policy).

[55] The Interagency Working Group is headed by the Council of Economic Advisers and OMB and includes a range of administrative agencies and departments including: the Council on Environmental Quality; OMB; the Council of Economic Advisors; the Departments of Agriculture, Energy, and Transportation; the Department of the Treasury; EPA; the National Economic Council; the Office of Energy and Climate Change; and the Office of Science and Technology Policy. INTERAGENCY WORKING GRP. ON THE SOC. COST OF CARBON, TECHNICAL SUPPORT DOCUMENT: SOCIAL COST OF CARBON FOR REGULATORY IMPACT ANALYSIS UNDER EXECUTIVE ORDER 12866, at 2–3 (2010), https://costofcarbon.org/files/scc_tsd_2010.pdf.

[56] *Id.* at 1.

[57] *See id.* at 1–2.

[58] *See generally*, INTERAGENCY WORKING GRP. ON THE SOC. COST OF GREENHOUSE GASES, TECHNICAL SUPPORT DOCUMENT: TECHNICAL UPDATE OF THE SOCIAL COST OF CARBON FOR REGULATORY IMPACT ANALYSIS UNDER EXECUTIVE ORDER 12866, at 2, 6–7, 10, 16–17 (2016), https://costofcarbon.org/files/sc_co2_tsd_august_2016.pdf. (issuing estimates for the social costs of carbon, methane, and nitrous oxide).

certain decisions that mirror those in Circular A-4—namely, with respect to modeling climatic futures, the spatial scope of impacts, and the selection of discount rates for future impacts.[59] These choices significantly impact the SC-GHG. For example, the Trump Administration disbanded IWG and rescinded the SC-GHGs, directing agencies to instead promulgate their own estimate relying on Circular A-4 in the case they had to monetize regulations involving greenhouse gasses.[60] This procedural change effectively increased the discount rate and limited the scope to domestic impacts, which lowered the SCC from around $53 during the Obama Administration to as low as $1 during the Trump Administration.[61] President Biden reestablished IWG, which—using a lower discount rate and including global impacts—issued interim estimates for the SC-GHGs.[62] Most recently in 2023, the EPA released its own SC-GHG estimates as a supplementary document to the RIA for its final rule on emissions from the oil and natural gas sector.[63] The EPA's social cost measurements, which use updated methodology, a lower discount rate, and include global costs, estimate a SCC of $190.[64]

RIA components, such as SC-GHGs, are critical because they define the likelihood that regulatory actions will pass OIRA's cost-benefit balancing, which may signal sufficient reasoning and justification for courts to uphold regulations against legal challenges.[65] The elements of

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[59] *Id.* at 17, 20–21.

[60] Exec. Order No. 13,783, 82 Fed. Reg. 16,093, 16,095–96 (Mar. 31, 2017).

[61] Paul Voosen, *Trump Downplayed the Costs of Carbon Pollution. That's About to Change*, SCIENCE (Jan. 22, 2021), https://www.science.org/content/article/trump-downplayed-costs-carbon-pollution-s-about-change.

[62] Exec. Order No. 13,990, 86 Fed. Reg. 7037 (Jan. 25, 2021). The IWG's interim estimate for the social cost of carbon—which was issued in 2021—is $51 per metric ton. INTERAGENCY WORKING GRP. ON THE SOC. COST OF GREENHOUSE GASES, TECHNICAL SUPPORT DOCUMENT: SOCIAL COST OF CARBON FOR REGULATORY IMPACT ANALYSIS 5 (2021), https://www.whitehouse.gov/wp-content/uploads/2021/02/TechnicalSupportDocument_SocialCostofCarbonMethaneNitrousOxide.pdf.

[63] *See* REPORT ON THE SC-GHG, *supra* note 16, at 1.

[64] It is unclear how EPA's estimates impact IWG's progress. In the document reporting its estimates, EPA notes that it "is a member of the IWG and is participating in the IWG's work under E.O. 13990 [but] [w]hile that process continues, this EPA report presents a set of SC-GHG estimates that incorporates numerous methodological updates addressing the near-term recommendations of the National Academies." *Id.* Simultaneously, IWG released a statement that noted "developments in the scientific literature" since the publication of its interim estimates and encouraged agencies to "use their professional judgment to determine which estimates of the SC-GHG reflect the best available evidence, are most appropriate for particular analytical contexts, and best facilitate sound decision-making." MEMORANDUM FROM THE INTERAGENCY WORKING GROUP ON SOCIAL COST OF GREENHOUSE GASES (Dec. 22, 2023) https://www.whitehouse.gov/wp-content/uploads/2023/12/IWG-Memo-12.22.23.pdf.

[65] Coral Davenport, *Biden Administration Unleashes Powerful Regulatory Tool Aimed at Climate*, N.Y. TIMES (Dec. 2, 2023), https://www.nytimes.com/2023/12/02/climate/biden-social-cost-carbon-climate-change.html. It is likely that the EPA will rescind its 2023 Rule positing the $190 SCC with the change in Presidential Administration. The IWG's interim estimates may also be rescinded and replaced with guidance that agencies should rely on Circular A-4 in monetizing regulations involving greenhouse gasses, as was previously done.

an RIA and an agency's ability to rely on these procedures in issuance of regulation are less certain under *Loper Bright*.

IV. PERMISSIBILITY OF REGULATORY IMPACT ANALYSIS AS A BASIS FOR REGULATION

The most influential component in agency decision making is the agency's statutory mandate. Enabling statutes often dictate whether an agency is permitted to weigh costs and benefits in promulgating regulations and delineate the relevant factors an agency must consider. At times, an agency's statutory mandate may conflict with the processes involved in RIA or may preclude an agency from engaging in analytical analysis as a basis for regulation. Consequently, *Loper Bright* provides courts with more power to scrutinize and influence agencies' use of RIA.

A. Prior to Loper Bright

Executive Order 12,866 only requires that agencies engage in RIA "to the extent permitted by law."[66] Therefore, even in instances where an agency is bound by the Order to perform an RIA, the analysis can only form the basis of regulation if permitted by statute.[67] Enabling statutes may dictate the necessity or prohibition of weighing costs and benefits in promulgating regulation, but many are ambiguous as to the

See Trump EPA Announces OOOO b/c Reconsideration of Biden-Harris Rules Strangling American Energy Producers, ENV'T PROT. AGENCY (Mar. 12, 2025), https://www.epa.gov/newsreleases/trump-epa-announces-oooo-bc-reconsideration-biden-harris-rules-strangling-american. However, prior judicial rulings upholding higher estimates of SC-GHG could impede agencies and the new administration from walking back on these estimates. *See infra* note 95. Recissions of rules are still subject to the same legal challenges as the promulgation of rules and thus must be supported by scientific evidence and sufficient reasoning by the agency. *See* KATE R. BOWERS & DANIEL J. SHEFFNER, CONG. RSCH. SERV., R46673, AGENCY RECISSIONS OF LEGISLATIVE RULES 23 (2017) ("In sum, the recission of agency rules that are governed by the APA is generally subject to the same "arbitrary and capricious" standard of judicial review as the promulgation of such rules.").

66 Exec. Order No. 12,866, 58 Fed. Reg. 51,735, 51,735 (Oct. 4, 1993). Furthermore, Executive Order 12,866 limits the availability of judicial review, meaning it does not create a legal right or obligation to question an agency's noncompliance with the Order. *Id.* at 51,744 ("This order is not intended to, and does not, create any right or benefit, substantive or procedural, enforceable at law or in equity by any party against the United States, its departments, agencies, or entities, its officers, employees, or agents, or any other person."). *See also* BLAK Invs. v. Comm'r, 133 T.C. 431, 447 (2009) (holding Executive Order 12,866 precludes judicial scrutiny of whether a regulation is a "significant regulatory action" because "petitioner has no right to challenge compliance with Executive Order 12866").

67 *See generally* RICHARD K. LATTANZIO, CONG. RSCH. SERV., R44840, COST AND BENEFIT CONSIDERATIONS IN CLEAN AIR ACT REGULATIONS (2017). In about half of the sections of the Clean Air Act in which EPA is authorized to set standards the statute explicitly discusses costs, several others imply costs can be considered, but many other authorizing sections are silent as to cost considerations. *Id.* at 3–6. Even in cases where the statute prohibits considerations of cost in setting standards, Executive Order 12,866 requires EPA engage in cost-benefit analysis if the regulation is economically significant. *Id.* at 1.

permissibility of an agency's consideration of these factors. *Loper Bright*'s rejection of reading implicit congressional delegations in ambiguity could thus impact agencies' ability to electively perform RIA as justification for regulation.

Agencies may be required to account for costs and benefits in promulgating regulations by their enabling statute.[68] Some statutes require the weighing of costs and benefits in the agency's determination of *whether* to regulate. For example, the Federal Insecticide, Fungicide, and Rodenticide Act requires the Administrator to regulate as to minimize adverse effects on the environment.[69] "Unreasonable adverse effects on the environment" is further defined by the statute as "any unreasonable risk to man or the environment, taking into account the economic, social, and environmental costs and benefits of the use of any pesticide."[70] Alternatively, some statutes require consideration of costs and benefits in the agency's determination of *how* to regulate. For example, the Toxic Substances Control Act necessitates that, in promulgating rules to regulate a chemical substance that presents an unreasonable risk to human health or the environment, the Administrator must consider "the reasonably ascertainable economic consequences of the rule, including . . . the costs and benefits of the proposed and final regulatory action and of the . . . primary alternative regulatory actions considered . . . ." [71] Further, some statutes forbid the agency from considering economic costs altogether.[72] For example, in deciding whether to list a species, the Endangered Species Act requires the determination solely be based on "the best scientific and commercial data available," and the effort made to protect the species by the relevant authority where the species resides.[73]

A significant proportion of enabling statutes fall into neither of these categories, as they are silent as to the permissibility of an agency considering costs and benefits in promulgating regulation. Historically, under *Chevron*, this statutory ambiguity allowed for an agency's reasonable interpretation of whether costs and benefits should be

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[68] *See, e.g.*, 42 U.S.C. § 6295(o)(B)(i) (2018) (as a criterion for issuing or amending an energy conservation standard, the standard must be economically justified, which is defined as "determin[ing] whether the benefits of the standard exceed its burdens . . . to the greatest extent practicable"); *see also* 42 U.S.C. § 300g-1(b)(3)(C)(i)(III), (IV) (2018) ("When proposing any national primary drinking water regulation that includes a maximum contaminant level, the administrator shall [publish an analysis of] . . . [q]uantifiable and nonquantifiable costs . . . [and] [t]he incremental costs and benefits associated with each alternative maximum contaminant level considered.").

[69] Federal Insecticide, Fungicide, and Rodenticide Act, 7 U.S.C. § 136r-1 (2018).

[70] *Id.* § 136(bb)(1).

[71] Toxic Substances Control Act, 15 U.S.C. § 2605(c)(2)(A)(iv)(II) (2018). However, in determining whether a chemical substance or mixture presents an unreasonable risk of injury to health or the environment, the Administrator may not consider costs. *Id.* § 2605(b)(4)(F)(iii).

[72] *Id.* For an additional example of a statute that implicitly forbids consideration of cost, see Clean Air Act, 42 U.S.C. § 7409(b) (2018).

[73] Endangered Species Act, 16 U.S.C. § 1533(b)(1)(A) (2018).

considered.[74] Then, if the agency determined the consideration of costs and benefits was reasonable, the agency could—but was not required to—rely on an RIA as a basis for regulation.[75] However, not all ambiguous statutes permitted cost-benefit balancing. In 2001, *Whitman v. American Trucking Associations*[76] presented the issue of whether the Clean Air Act's provision relating to the establishment of national ambient air quality standards that are "requisite to protect the public health" with "an adequate margin of safety" allows EPA to consider costs.[77] The Court found that the statutory context made it "fairly clear that this text does not permit the EPA to consider costs in setting the standards," where consideration of costs was explicit in similar provisions of the statute.[78]

B. Post-Loper Bright

Loper Bright restricts an agency's ability to interpret statutory silence to allow for considering costs and benefits except in specified contexts and will likely reduce instances where it is permissible for these considerations to form the basis of regulation. Specifically, *Loper Bright* only maintains an agency's elective decision to consider costs when Congress has delegated the agency discretionary authority as to the statute's meaning.

Under *Loper Bright*, intentionally broad statutory terms drafted to allow an agency flexibility are one way Congress may delegate discretionary authority over statutory meaning to agencies.[79] Thus, in the absence of explicit language requiring consideration of costs and benefits, capacious terms may equate to an implicit requirement. *Michigan v. EPA*[80] is illustrative of this point. In that case, the Court was faced with the issue of whether the Clean Air Act's National Emissions Standards for Hazardous Air Pollutants program requires EPA to consider costs and benefits in deciding whether to regulate power plants.[81] The relevant statutory provision instructs EPA to regulate hazardous air pollutant emissions from power plants if the agency determines that regulation is

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[74] *See*, *e.g.*, Entergy Corp. v. Riverkeeper, Inc., 556 U.S. 208, 225–26 (2009) (concluding that the Clean Water Act's mandate that EPA promulgate national performance standards using the "best technology available" for minimizing environmental impact allowed, and likely encouraged, consideration of cost because, determining "best technology available" typically requires consideration of cost-effectiveness, and the statute's context, which was silent with respect to all potentially relevant factors, supports consideration of cost). For codification of the "best technology available" standard at issue here, see generally Clean Water Act, 33 U.S.C. § 1326(b) (2018).

[75] *Entergy Corp.*, 556 U.S. at 225–26.

[76] Whitman v. Am. Trucking Ass'ns, 531 U.S. 457, 465–66 (2001).

[77] Clean Air Act, 42 U.S.C. § 7409(b)(1) (2018).

[78] *Whitman*, 531 U.S. at 465–66.

[79] *Loper Bright*, 603 U.S. 369, 394–95 (2024).

[80] Michigan v. EPA, 576 U.S. 743 (2015).

[81] *Id.* at 748 (stating that the agency had considered benefits but deemed costs "irrelevant").

"appropriate and necessary."[82] In finding consideration of costs statutorily necessary, the Court reasoned that "appropriate and necessary" logically implies that the regulation's benefits should exceed its costs—a conclusion reinforced by statutory context.[83] Although this case was decided years prior to *Loper Bright*, this particular provision of the Clean Air Act was cited by the Court as an illustration of this method of delegation.[84] Where Congress has not delegated the authority to interpret a particular statutory provision, an agency's interpretation may receive some degree of *Skidmore* respect if the interpretation has been consistent overtime or the issue rests on "factual premises within [the agency's] expertise."[85]

V. POTENTIAL REGULATORY IMPACT ANALYSIS CONTROVERSIES UNDER *LOPER BRIGHT*

A. Judicial Review of Regulatory Impact Analysis Components and Procedures

Judicial review of agency action, by extension, requires courts to assess the validity of the accompanying RIA either directly or indirectly. As a result, the components and methodology of an agency's analysis are particularly important. Judicial review involving RIAs has historically been highly deferential to the technical expertise of agencies.[86] Still, a serious flaw in an agency's RIA could render the agency action so unreasonable that it is overturned upon judicial review.[87] Under *Loper Bright*, courts will be less deferential in reviewing RIAs.

Where an agency relies on an RIA as a basis for regulation, under *Loper Bright*, there will be increased attention to the agency's statutory mandate and whether the policies of the statute match the policies underlying the RIA. Specifically, courts are likely to scrutinize factors explicitly listed or barred by the statute and will be hesitant to allow for

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82 42 U.S.C. § 7412(n)(1)(A).

83 Michigan v. EPA, 576 U.S. at 752–53.

84 *Loper Bright*, 603 U.S. at 395 n.6 (citing 42 U.S.C. § 7412(n)(1)(A)). Of the 67 provisions of the Clean Air Act that authorize the agency to regulate, eight provisions imply cost considerations in this manner (using broad terms such as "reasonably achievable"). *See generally* LATTANZIO, *supra* note 67.

85 *Loper Bright*, 603 U.S. at 402 (alteration in original) (citing Bureau of Alcohol, Tobacco & Firearms v. FLRA, 464 U.S. 89, 98 n.8 (1983)).

86 *See, e.g.*, Off. of Commc'n of United Church of Christ v. FCC, 707 F.2d 1413, 1440 (D.C. Cir. 1983) ("[C]ost-benefit analyses epitomize the types of decisions that are most appropriately entrusted to the expertise of an agency . . . .").

87 *See, e.g.*, Nat'l Ass'n of Home Builders v. EPA, 682 F.3d 1032, 1040 (D.C. Cir. 2012) ("[W]hen an agency decides to rely on a cost-benefit analysis as part of its rulemaking, a serious flaw undermining that analysis can render the rule unreasonable."); City of Portland v. EPA, 507 F.3d 706, 712–13 (D.C. Cir. 2007) ("[N]othing we say in this opinion implies either that agencies may ignore statutorily required procedures or that we will tolerate rules based on arbitrary and capricious cost-benefit analyses.").

extra-statutory considerations. Instances of statutory silence as to the inclusion or omission of a particular factor or utilization of a certain procedure will prove especially difficult where the agency cannot point to a congressional delegation of discretionary authority as to the statute's meaning.[88] The *Loper Bright* Court held that interpretive authority and the agency's interpretation—which is reviewed *de novo*—is only entitled to weight to the extent that the issue falls within the agency's expertise or represents a longstanding interpretation.[89] If the agency can point to a congressional delegation of discretionary authority, on the other hand, the agency's interpretation is reviewed under the less exacting arbitrary and capricious standard.[90] Finally, if an agency does not use the RIA as the basis for regulation, the RIA will be reviewed under the more deferrential substantial evidence standard, where a reviewing court considers the analysis only as evidence that supports or contradicts the agency's action.[91]

As an exploration of how the contents and procedures of RIAs could change, we consider three particularly consequential policies from Circular A-4 that may present an issue under *Loper Bright*.

B. Spatial Scope: Domestic Versus Global Costs

One potential instance of conflict post-*Loper Bright* is the spatial scope of an agency's RIA. The 2023 Circular A-4 provides a default of confining RIAs to a domestic scope but encourages the accounting of impact on U.S. interests and citizens abroad where feasible and appropriate.[92] Additionally, Circular A-4 recognizes instances where consideration of global impacts may be appropriate, including policies that influence GHG emissions due to the inseparability of global and domestic effects, the potential to encourage a cooperative international approach, and the need for a full accounting of U.S. national interests.[93] While perhaps feasible and appropriate in some circumstances,

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88 *Loper Bright*, 603 U.S. at 403–04.

89 *See id.* at 402; *see also* Skidmore v. Swift & Co., 323 U.S. 134, 140 (1944).

90 5 U.S.C. § 706(2)(A) (2018) (requiring the court to set aside agency action that is "arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law"). More specifically:

> [A]n agency rule would be arbitrary and capricious if 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.

Motor Vehicle Mfrs. Ass'n of the U.S., 463 U.S. 29, 43 (1983).

91 5 U.S.C. § 706(2)(E).

92 *See* OFF. OF MGMT. & BUDGET, *supra* note 11, at 7.

93 *Id.* at 8 & n.12.

accounting for global impacts in setting U.S. regulatory policy is controversial—especially in the environmental regulatory context.[94]

Past judicial decisions have upheld the inclusion of global impacts in the SC-GHG and have found it arbitrary and capricious for an agency *not* to include global impacts.[95] However, under *Loper Bright*, the policies of enabling statutes could limit the scope of regulation to domestic considerations, as some environmental statutes explicitly reference a domestic spatial scope.[96] For example, the Clean Air Act notes that "[t]he purposes of this subchapter are . . . to protect and enhance the quality of the *Nation's* air resources so as to promote the public health and welfare and the productive capacity of *its* population."[97] The Clean Water Act[98] and the Toxic Substances Control Act[99] contain similar limitations.[100]

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[94] *See, e.g.*, Ted Gayer & W. Kip Viscusi, *Determining the Proper Scope of Climate Change Policy Benefits in U.S. Regulatory Analyses: Domestic Versus Global Approaches*, 10 REV. ENV'T ECON & POLICY 245, 261 (2016).

[95] *See, e.g.*, Zero Zone, Inc. v. U.S. Dep't of Energy, 832 F.3d 654, 677 (7th Cir. 2016) (consideration of global—rather than solely domestic—costs was neither arbitrary nor capricious); California v. Barnhardt, 472 F. Supp. 3d 573, 613 (N.D. Cal. 2020) (holding the Bureau of Land Management's recission of its 2016 Waste Prevention Rule—which was based on analysis showing the cost of compliance exceeded the policy's benefits—was arbitrary and capricious, taking issue primarily with the agency's reliance on domestic estimate of the social cost of methane and noting the estimates were "riddled with flaws," including ignoring the global impacts of methane emissions and failing to show a "rational connection between the best available science" and the estimates).

[96] Notably, there is presently ongoing litigation in the D.C. Circuit surrounding the legitimacy of EPA utilizing global SC-GHG estimates in the RIA supporting its new methane standards, although EPA did not rely on global SC-GHG in setting the standards themselves. *See generally* Industry Ass'n Petitioners' Motion to Stay, Mich. Oil & Gas Ass'n v. U.S. Env't Prot. Agency, No. 24-1054 (D.C. Cir. May 17, 2024). Petitioners point to the dissonance between the Clean Air Act's stated purpose of improving the air quality of the "Nation" and the social cost of methane's inclusion of global benefits. *Id.* at 12. Respondents explain that in promulgating standards under 42 U.S.C. § 7411(a)(1), EPA has always used cost-effectiveness to determine "the cost of achieving [the relevant] reduction," as required by statute, and that the requirements of formal cost-benefit analysis under Circular A-4 differ from those required by statute in accounting for costs. *See* Respondents' Opposition to Motion to Stay Final Rule, State of Texas, et al v. EPA, et al, No. 24-01054 (D.C. Cir. June 11, 2024). The D.C. Cir. denied consolidated Petitioners' Motion to Stay on July 9, 2024. *See* Per Curiam Order, State of Texas, et al v. EPA, et al, No. 24-01054 (D.C. Cir. July 9, 2024) (mem.).

[97] 42 U.S.C. § 7401(b)(1) (2018) (emphasis added).

[98] Federal Water Pollution Control Act, 33 U.S.C. §§ 1251–1389 (2018).

[99] Toxic Substances Control Act, 15 U.S.C. §§ 1601–2697 (2018).

[100] *See, e.g.*, 33 U.S.C § 1321(c)(1)(A) (providing federal removal authority to mitigate hazardous spills into navigable waters and adjoining shores and hazardous spills "that may affect natural resources belonging to, appertaining to, or under exclusive authority *of the United States*" (emphasis added)); Corrosion Proof Fittings v. EPA, 947 F.2d 1201, 1209 (5th Cir. 1991) ("EPA was not required to consider the effects on people or entities outside the United States. TSCA provides a laundry list of factors to consider . . . including 'the effect [of the rule] on the *national* economy.'" (alteration in original) (emphasis added)).

Regulations promulgated based on RIAs that include global impacts could then be contrary to the agency's statutory mandate.[101]

For its part, EPA defended the inclusion of global impacts in the SC-GHG through reference to the global spillover effects of climate change, the potential for international reciprocity in emissions reductions, and the scientific and economic underpinnings of global estimates.[102] EPA also argued that it would be failing to account for an important aspect of the problem if global impacts were ignored.[103] Under this reasoning, development of policies that reflect global impacts may also advance domestic interests, given the global character of the environmental risk.

C. Temporal Scope: Discount Rate

Another potentially contentious area of RIA is the temporal scope of the analysis, including the decision of the discount rate employed when benefits and costs accrue in the future—which is particularly salient for environmental regulations because of the intertia of climatic systems and the latent nature of environmental harms.[104]

While statutory mandates may determine the relevant time period of the analysis, no statute sets forth the proper discount rate for agencies to use.[105] Selecting the appropriate discount rate is not purely a technical procedure, but rather one that involves inherent value judgments about the impact of current policies on future generations.[106] A higher discount rate will reduce the present value of future benefits—recall the nearly 90% reduction in the SCC when the discount rate changed from 3% to 7% during the Trump Administration.[107] The discount rate is thus consequential in determining the costs and benefits of policies, which may in turn decide the reasonableness of the policy itself. EPA's SC-GHG estimates employ a discount rate of 2%, which matches the rate recommended by OMB in the 2023 Circular A-4.[108] Both estimates are accompanied by significant supportive documentation.[109]

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101 Additionally, courts generally recognize a presumption against extraterritoriality. *See, e.g.*, Morrison v. Nat'l Austl. Bank Ltd., 561 U.S. 247, 265 (2010) (presenting the modern version of this presumption).

102 REPORT ON THE SC-GHG, *supra* note 16, at 12–19.

103 *Id.* at 14–16. Additionally, both Circular A-4 and EPA note that it is factually and methodologically difficult to separate global and domestic effects. *Id.* at 13–16. *See also* OFF. OF MGMT. & BUDGET, *supra* note 11, at 8–9.

104 *See, e.g.*, DANIEL A. FARBER & CINNAMON P. CARLARNE, CLIMATE CHANGE LAW 39 (Saul Levmore et al. eds., 2d ed. 2023) ("Given the dramatic impact of discounting on long-range issues like climate change, it's not surprising that there is considerable controversy about whether the technique is justifiable.").

105 *See* OFF. OF MGMT. & BUDGET, *supra* note 11, at 76–77 (presenting methodology for agency selection of appropriate discount rate).

106 *Id.*

107 *See* discussion *supra* Part III.

108 *Compare* OFF. OF MGMT. & BUDGET, *supra* note 11, at 77 *with* REPORT ON THE SC-GHG, *supra* note 16, at 67.

109 *See, e.g.*, REPORT ON THE SC-GHG, *supra* note 16, at 62–72.

An agency's selection of the discount rate for RIA could be impacted by *Loper Bright*. Historically, courts have recognized that agencies are better positioned than the judiciary to undertake highly technical judgments that involve both a prediction about future rates and an inherent degree of uncertainty.[110] However, past decisions have demanded that the agency's choice be grounded in economic reasoning, supported by the best available evidence, and accompanied by reasoned elaboration.[111] Importantly, it is insufficient for agencies to simply use the discount rate recommended by Circular A-4 without offering their independent reasoning and justifications.[112] Because larger political changes have the potential to increase or decrease the government-wide discount rate, the most prevelant inquiry will be whether the agency provides a credible rationale for the choice.[113]

D. Distributional Analysis

The 2023 Circular A-4 and executive pronouncements under the Biden Administration directed more thorough consideration of the distributional impacts of regulation.[114] Whereas traditional cost-benefit balancing assesses the aggregate impacts of a regulation, a distributional analysis would elucidate the incidence of costs and benefits across different groups.[115] The 2023 Circular A-4 allowed agencies to leverage a system of distributional weights based on income, premised on the assumption that the marginal utility of income falls as income rises and that society is maximizing the sum of the increases in individual utility generated by the policy.[116]

Only one statute—the Regulatory Flexibility Act—explicitly requires agencies to account for the distributional impacts of their regulations.[117]

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110 *See* N. Cal. Power Agency v. FERC, 37 F.3d 1517, 1522–24 (D.C. Cir. 1994) (upholding FERC's discount rate and highlighting consistent and thorough reasoning).

111 *See* Nat. Res. Def. Council, Inc. v. Herrington, 768 F.2d 1355, 1414 (D.C. Cir. 1985) ("The major consequences of the discount rate made it particularly important that DOE fix the rate carefully and explain its decision intelligibly. It did not do these things, and we are accordingly constrained to reject its choice as fatally unexplained.").

112 *Id.* at 1413.

113 See discussion *supra* Part III for examples of how politics can influence the discount rates used by regulatory agencies.

114 *See* OFF. OF MGMT. & BUDGET, *supra* note 11, at 61–66; *see, e.g.*, Modernizing Regulatory Review, 86 Fed. Reg. 7223, 7223 (Jan. 26, 2021) (proposing consideration of distributional consequences of regulations). As aforementioned, these policies are likely to be rescinded and replaced by the incoming Trump Administration. *See* discussion *supra* note 53.

115 *See* OFF. MGMT. & BUDGET, *supra* note 11, at 61 (possible groupings that experience disparate costs and benefits include "income groups, race or ethnicity, sex, gender, sexual orientation, disability, occupation, or geography; or relevant categories for firms, including firm size and industrial sector").

116 *See* OFF. MGMT. & BUDGET, *supra* note 11, at 65–67.

117 5 U.S.C. § 602(a)(1) (2018) (requiring agencies to annually prepare a summary of expected promulgations that are likely to "have a significant economic impact on a substantial number of small entities").

While agencies sometimes endeavor to address the extent to which regulations impact certain groups of people, the consideration of distributional consequences is neither frequent nor rigorous.[118]

Effectively, an analysis employing distributional weights—as suggested by Circular A-4—would drive regulation based on differences in income. Regulatory actions that show net benefits under such an analysis would concentrate benefits on low-income and medium-income households and costs on high-income households.[119] Likely, an agency would be unable to justify a rule based on an RIA employing distributional weighting. A rule produced using distributional weights would incorporate a redistribution policy position that is outside of the scope of most agencies' enabling statutes.

VI. IMPLICATIONS & RECOMMENDATIONS FOR AGENCIES

A. Implications

Perhaps the most significant threat to the regulatory state under *Loper Bright* is ossification caused by the inability of agencies to evolve their interpretations of ambiguous statutes.[120] This danger is particularly great for environmental regulation, where agencies' ability to leverage antiquated, ambiguous statutes to confront emerging climatic issues is one of their most effective tools.[121]

In terms of regulatory analysis, *Loper Bright* is disconcerting for more nuanced reasons. Foremost, the focus of judicial review will be on the compatibility between the text of the agency's enabling statute and the content of the agency's action. RIAs are consistently used to justify new regulations and provide a methodological check on the reasonableness of agency action.[122] *Loper Bright* will continue to allow

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118 *See* Richard L. Revesz, *Regulation and Distribution*, 93 N.Y.U. L. REV. 1489, 1540, 1542 (2018) (noting that less than 10 of nearly 4,000 EPA rules during the Obama administration accounted for environmental justice concerns in their RIA); Lisa A. Robinson et al., *Attention to Distribution in U.S. Regulatory Analyses*, 10 REV. ENV'T ECON. & POL'Y 308, 316 (2016) ("[All 24 regulatory impact analyses reviewed] fail to describe how benefits and costs are distributed . . . suggest[ing] that federal agencies largely ignore, and the OMB does not enforce, the guidance on distributional analysis.").

119 *See* Daniel J. Acland & David H. Greenberg, *Distributional Weighting and Welfare /Equity Tradeoffs: A New Approach*, 14 J. BENEFIT-COST ANALYSIS 68, 69–70 (2023).

120 *See, e.g.*, STEPHEN BREYER, BREAKING THE VICIOUS CYCLE: TOWARD EFFECTIVE RISK REGULATION 49 (1993) (noting that "judicial review has led agencies to adopt complex, time-consuming procedures both for making rules and for changing them," and as a result, agencies are unable to effectively keep pace with scientific advances).

121 *See, e.g.*, Massachusetts v. EPA, 549 U.S. 497, 532 (2007) (holding that EPA has the authority to regulate GHGs because they qualify as an "air pollutant" under the Clean Air Act). The Court also noted, "[w]hile the Congresses that drafted §202(a)(1) might not have appreciated the possibility that burning fossil fuels could lead to global warming, they did understand that without regulatory flexibility, changing circumstances and scientific developments would soon render the Clean Air Act obsolete." *Id.* at 532.

122 *See* ADLER & POSNER, *supra* note 8, at 2.

RIAs to justify regulation in some contexts: where the statute is explicit, where capacious terms are used to allow the agency flexibility, and potentially, where the statute grants broad regulatory power.[123] However, the Court's decision limits an agency's ability to interpret ambiguity as it pertains to the accounting of costs and benefits and will likely constrict instances where these considerations are permissible and thus may form the basis of new regulations.

Finally, increased legal challenges to agency action threaten to effectuate a piecemeal regulatory analysis regime, replacing the technical and scientific pieces of the analysis with judicial judgments of the "best" interpretation of an ambiguous statutory provision. The case in which a statute is truly unambiguous in any given respect is rare. Thus, if an action is subject to legal challenges regarding the consideration of a factor or a procedure employed in RIA and the agency does not possess discretionary authority, the resulting judicial pronouncements bind future agency action under that provision. This could result in a patchwork of RIA procedures. For example, it could result that when promulgating regulation under some statutory provision, the agency can consider global environmental costs, but under another provision within the same statute—and perhaps for the same greenhouse gas—the agency may only consider domestic costs. Inconsistencies in *judicial* interpretation can even emerge from challenges to the same provision in different courts.[124] This piecemeal approach to regulatory analysis would undermine the stated purpose of Circular No. A-4: standardizing the measure and reporting of the benefits and costs of federal regulatory actions by providing guidance on conducting high-quality and evidence-based analyses.[125]

B. Recommendations

First, in terms of considering domestic versus global impacts, we recommend that agencies tether global benefit estimates to domestic considerations to avoid potential statutory limitations on the regulatory scope. Specifically, global estimates can be tied to domestic considerations through channels such as a regulation's impact on U.S. citizens abroad and on U.S. strategic interests—including the potential for inducing strategic reciprocity and the incorporation of altruistic concerns about the welfare of individuals outside of the United States. The inclusion of non-domestic impacts in the promulgation of environmental regulations may continue to be acceptable under *Loper Bright* because past judicial

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[123] However, additional limitations exist in the form of the non-delegation doctrine and major questions doctrine, which further arrogate power to the judiciary and obstruct administrative action.

[124] *See* Howe, *supra* note 2 (discussing the inconsistencies in judicial interpretation that are likely to result from *Loper Bright*'s broad grant of authoritative power to judges without technical expertise).

[125] *See* OFF. OF MGMT. & BUDGET, *supra* note 11, at 2.

decisions have recognized the importance of considering global impacts; however, in light of statutory mandates to the contrary, the inclusion of these impacts may be more vulnerable. Where possible, an RIA should present analyses using both global and domestic impacts.

As before *Loper Bright*, agencies should follow any statutory indications as to the proper temporal scope, ground their choice of discount rate in the best available evidence, and support their choice with meticulous and transparent reasoning. It is not enough for an agency to simply adopt the discount rate in Circular A-4. Instead, an agency must provide independent justification. Because multiple discount rates can have a sound economic basis, agencies should present an analysis that considers multiple alternative rates to substantiate the selection of a particular discount rate.[126]

Finally, it will be difficult for an agency to issue regulation that is supported by an RIA employing distributional weights because redistributive concerns are outside the scope of nearly all statutory mandates. Still, when a regulation has disparate impacts, agencies should elect to perform a distributional analysis to demonstrate the incidence of the policy and to identify target populations that have been overlooked or will be adversely affected.

More generally, there are prevailing principles that agencies should follow to minimize the possibility that regulations are overturned upon judicial review post-*Loper Bright*. Foremost, agencies should recognize the primacy of statutory text as the basis for regulation by engaging with relevant statutory language and explicating why the text supports or requires action. Agencies should emphasize specific congressional delegations of discretionary power over implicit delegations in ambiguous provisions. For truly ambiguous statutory text, agencies should demonstrate that the relevant issue is a factual question within the agency's technical, scientific, or administrative expertise. Further, agencies should highlight analogous prior actions to rebut claims that an action is novel and note past decisions that acknowledge such authority. If an agency must take novel action, it should explain how the action serves to satisfy an existing statutory duty that has gone unfulfilled and should avoid categorizing the action as novel or transformational. Agencies should also justify new regulation through multiple avenues: for example, by demonstrating that analyses using both domestic costs and global costs proves an action is net beneficial.

Many agencies have already implemented these practices in anticipation of *Chevron*'s demise by moving away from relying on deference and towards grounding regulatory actions in congressional

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[126] For example, the 2003 Circular A-4 requires analysis under multiple discount rates, including 3 percent and 7 percent. *See* OFF. OF MGMT. & BUDGET, *supra* note 53, at 76.

delegations of authority.[127] Still, agencies must consider the less obvious impacts of *Loper Bright* on the regulatory process.

VII. CONCLUSION

While the practical impacts of *Loper Bright* remain indeterminate, there are undoubtedly wide-reaching implications that flow from replacing deference to agency interpretations with judicial judgments of highly technical and specialized statutes. Most directly, *Loper Bright* will narrow the ability of federal agencies to interpret the statutes that Congress has charged them with implementing. The effects of *Loper Bright* go to the analytical foundations of policy analysis. Many of the systematic components of regulatory impact analysis are built on well-settled scientific and economic foundations, which ensures rationality and regularity in administrative decision making. Heightened judicial scrutiny of whether the substantive policies underlying regulatory analyses are consistent with the statutory specifications of an agency's purpose will subvert this methodological check on the reasonableness of agency action. As a result, novel legal challenges are likely to arise, including challenges to the spatial, temporal, and distributive scope of analyses. Many factors that serve as critical underpinnings in regulatory impact analysis could change due to judicial interposition. At the very least, the components and procedures of regulatory impact analysis that were previously wildely accepted will need more rigorous justification to survive.

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[127] *See, e.g.*, Dan Farber, *Is the Sky Falling?* Chevron, Loper Bright, *and Judicial Deference*, LEGALPLANET (July 1, 2024), https://legal-planet.org/2024/07/01/what-was-the-chevron-test-what-has-replaced-it.