22-30087

UNITED STATES COURT OF APPEALS
FOR THE FIFTH CIRCUIT

THE STATE OF LOUISIANA, et al.,

Plaintiffs-Appellees,

v.

JOSEPH R. BIDEN, JR. et al.,

Defendants-Appellants.

BRIEF OF *AMICUS CURIAE* INSTITUTE FOR POLICY INTEGRITY AT NEW YORK UNIVERSITY SCHOOL OF LAW IN SUPPORT OF DEFENDANTS-APPELLANTS

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INTEREST OF AMICUS CURIAE

The Institute for Policy Integrity at New York University School of Law ("Policy Integrity") is a nonpartisan, not-for-profit think tank dedicated to improving the quality of government decisionmaking through advocacy and scholarship in the fields of administrative law, economics, and public policy, with a primary focus on environmental issues. All parties consent to the filing of this brief.

Policy Integrity has produced extensive scholarship on the balanced use of economic analysis in agency decisionmaking, much of which has focused on the economic and legal foundations of the social cost of greenhouse gases. Our director, Professor Richard L. Revesz, is the nation's most cited environmental and administrative law scholar,[1] having published more than 100 articles and books in the field.[2] His publications include two articles co-authored with Nobel laureate Kenneth Arrow and other prominent economists on the social cost of greenhouse gases.[3]

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[1] Brian Leiter, 20 Most-Cited Administrative and/or Environmental Law Faculty in the U.S., 2016–2020, The Law Professor Blogs Network (Nov. 8, 2021), https://leiterlawschool.typepad.com/leiter/2021/11/20-most-cited-administrative-andor-environmental-law-faculty-in-the-us-2016-2020.html#.

[2] For a full list of Prof. Revesz's publications, see https://its.law.nyu.edu/facultyprofiles/index.cfm?fuseaction=profile.publications&personid=20228.

[3] Richard L. Revesz et al., *The Social Cost of Carbon: A Global Imperative*, 11 Rev. Env't Econ. & Pol'y 172 (2017); Richard L. Revesz et al., *Global Warming: Improve Economic Models of Climate Change*, 508 Nature 173 (2014).

Harnessing this academic expertise, Policy Integrity regularly participates in administrative and judicial proceedings involving the social cost of greenhouse gases. For instance, Policy Integrity filed amicus curiae briefs in two prominent cases involving agency usage of the social cost of greenhouse gases: *Zero Zone, Inc. v. Dep't of Energy*, 832 F.3d 654 (7th Cir. 2016), which upheld an agency's use of the Interagency Working Group's valuations; and *California v. Bernhardt,* 472 F. Supp. 3d 573 (N.D. Cal. 2020), which rejected an analysis that disregarded those valuations and relied on an assessment of climate impacts that used some of the approaches favored by Plaintiffs. In both cases, the court's opinion was consistent with the arguments in Policy Integrity's brief.

Here, Plaintiffs argue that the Working Group's valuations are arbitrary and unlawful in all applications, including hypothetical applications. Their position conflicts not only with the precedents established in those two cases but also with the extensive economic and scientific support for the Working Group's approach. Policy Integrity's expertise in the social cost of greenhouse gases gives it a unique perspective on Plaintiffs' arguments.

SUMMARY OF ARGUMENT

As Defendants persuasively argue, Plaintiffs' claims are not justiciable. Those arguments compel reversal of the district court's decision. Nonetheless, to aid the Court if it considers the merits of Plaintiffs' claims, this brief offers perspective on the social cost of greenhouse gases.

As this brief explains, the Interagency Working Group developed its climate-damage estimates using the best available science and economics. Its work followed the same basic approach as the George W. Bush administration's Environmental Protection Agency and incorporated research from a range of experts—one of whom, William Nordhaus, won the Nobel Prize in Economics for those efforts. The Working Group's valuations have been praised by independent experts and adopted by some foreign countries. They have also been used in dozens of federal agency actions and judicially upheld.

Despite these precedents, both Plaintiffs and the district court broadly criticize the Working Group's climate-damage valuations, sometimes with minimal analysis. *E.g.* ROA.4062–64. Highlighting alleged inconsistencies with Circular A-4—a 2003 guidance document from a Working Group member designed to assist agencies in conducting regulatory analysis—Plaintiffs and the district court focus primarily on two arguments: 1) that it is unlawful in all possible applications to adopt climate-damage valuations without applying a 7% discount rate; and 2) that it is unlawful in

all possible applications to consider the effects of domestic emissions on climate damages that originate beyond U.S. borders. Neither argument withstands scrutiny, for numerous reasons.[4]

For one, Circular A-4 is an internal guidance document designed to assist agencies in the performance of economic analysis under Executive Order 12,866, *see* Off. of Mgmt. & Budget, Circular A-4: Regulatory Analysis 1 (2003) ("Circular A-4")—not to operate as a straightjacket restricting the exercise of scientific judgment. Compliance with the guidance is not judicially enforceable. *See* Exec. Order No. 12,866 § 10, 58 Fed. Reg. 51,735, 51,744 (Sept. 30, 1993). Nor does the guidance even apply to non-regulatory actions, such as environmental impact analyses, that are covered by the district court's injunction.

In any event, the Working Group consulted Circular A-4 and other relevant precedents, and followed both its recommendations and the best available science. With regard to discounting, the Working Group based its assessment on voluminous economic literature establishing that impacts occurring over long time horizons merit relatively low discount rates. Interagency Working Group, *Technical Support*

[4] Plaintiffs raised several other objections with the district court to the Working Group's valuations, all of which lack merit. For rebuttals to these other arguments, see Richard L. Revesz & Max Sarinsky, *The Social Cost of Greenhouse Gases: Legal, Economic, and Institutional Perspective*, 39 Yale J. on Regul., manuscript at 30–41 (forthcoming 2022), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3903498.

Document: Social Cost of Carbon, Methane, and Nitrous Oxide 16–22 (2021) ("2021 TSD"). Invoking that same body of literature, Circular A-4 recognizes that intergenerational effects such as climate impacts merit lower discount rates. Circular A-4 at 35–36. In fact, most experts support discount rates below 3% for climate effects. 2021 TSD at 20.

Plaintiffs' objections to the Working Group's focus on global damages are similarly unpersuasive. Circular A-4 advises agencies to capture impacts "that accrue to citizens and residents of the United States," Circular A-4 at 15, and as the Working Group explained, again based on extensive scholarship, there are "diverse ways in which U.S. interests, businesses, and residents may be impacted by climate change beyond U.S. borders." 2021 TSD at 15. For one, considering climate damages on a global scale prevents a tragedy of the commons: If all countries narrowly considered domestic climate damages, they would insufficiently curb their own pollution and thereby cause extensive climate harm within the United States. *Id.* at 16. Other nations have in fact adopted the Working Group's global valuations, facilitating reductions in their own transboundary climate pollution.

The use of global damage valuations further captures impacts that accrue to citizens and residents of the United States by including international spillovers and U.S. interests abroad. Due to the interconnected nature of global markets, trade, and migration patterns, climate effects "occurring outside of U.S. borders will have a

direct impact on . . . U.S. citizens and the investment returns on those assets owned by U.S. citizens and residents." 2021 TSD at 15. Climate effects occurring outside U.S. borders also harm global commons such as the oceans and Antarctica that the United States has both an interest and a legal duty to protect. And the use of global damage valuations is consistent with regulatory practice and statutory charges: Courts have endorsed the consideration of transboundary impacts under numerous statutes, *e.g. Zero Zone*, 832 F.3d at 677–79, and agencies routinely consider transboundary economic effects.

For all of these reasons and more, regulators have long acknowledged that climate impacts should be valued using low discount rates and on a global scale. Under the George W. Bush administration, regulators endorsed the use of global valuations using discount rates of 2–3%. Regulating Greenhouse Gas Emissions Under the Clean Air Act, 73 Fed. Reg. 44,354, 44,446 (July 30, 2008). Under the Obama administration, the first iteration of the Working Group applied global valuations using a 3% central discount rate. And under the Trump administration, agencies occasionally used the Working Group's numbers in their central analysis. *E.g.*, Energy Conservation Program: Energy Conservation Standards for Uninterruptible Power Supplies, 85 Fed. Reg. 1447, 1477–80 (Jan. 10, 2020).

In short, the Working Group relied on voluminous and mainstream science to develop its climate-damage valuations. Plaintiffs' attacks disregard expert consensus and misstate regulatory guidance and precedent.

BACKGROUND

Independent research on the social cost of greenhouse gases has been ongoing for decades. Several of the most widely-cited economic models of climate damages—including those later integrated into the Working Group's damage valuations—were first developed in the 1990s. Revesz & Sarinsky, *supra*, at 4.

Recognizing the availability of these damage models, the U.S. Court of Appeals for the Ninth Circuit held that an agency vehicle fuel-efficiency rule was arbitrary and capricious when the agency relied on an otherwise quantified cost-benefit analysis but failed to place a value on the rule's significant climate impacts. *Ctr. for Biological Diversity v. Nat'l Highway Traffic Safety Admin.*, 538 F.3d 1172, 1198–1203 (9th Cir. 2008). Although the court did not endorse any particular climate-damage valuation, available estimates that it pointed to—such as estimates from the National Academies of Sciences—were global in scope. *See id.* at 1199.

Following that decision, several federal agencies began applying climate-damage valuations in their regulatory analyses. Though methodologies differed across agencies, the Environmental Protection Agency under the George W. Bush administration endorsed global valuations and discount rates of 2–3%. Interagency

Working Group, *Technical Support Document: Social Cost of Carbon for Regulatory Impact Analysis* 3 (2010) ("2010 TSD") (*citing* 73 Fed. Reg. at 44,446).

To harmonize valuations across agencies, the federal government under the Obama administration convened an interagency working group with members from twelve agencies and departments. The Working Group released its first estimates in 2010, *id.* at 3, which it updated in both 2013 and 2016. Interagency Working Group, *Technical Support Document: Social Cost of Carbon for Regulatory Impact Analysis* 3 (2016). The Working Group also solicited public comments on its estimates, resulting in a 44-page response. Interagency Working Group, *Response to Comments* (2015) ("Response to Comments"). Additionally, the Working Group's valuations were subject to public comment in dozens of regulatory proceedings in which they were applied.

As its technical support documents explain, the Working Group arrived at its climate-damage valuations through numerous methodologies and analytical tools, incorporating a wide range of expert research. It selected three of the most widely used and cited independent models of climate damages. 2010 TSD at 5. The models were developed by outside experts, published in peer-reviewed economics literature,

and reflected a range of inputs and assumptions.[5] One of the models earned its designer the Nobel Prize in Economics.

The Working Group rigorously integrated various sources of uncertainty into its damage valuations. For instance, the Working Group applied a range of scientific estimates of the impacts of greenhouse gas emissions on the global climate, *id.* at 13 tbl.1, as well as numerous socioeconomic and emissions trajectories from the published literature reflecting a range of possible outcomes for future population growth, economic development, and emissions, *id.* at 15–17 & tbl.2.

The Working Group applied a range of discount rates to account for long-term uncertainty about economic and social conditions. It chose a central discount rate of 3%, which was "consistent with estimates provided in the economics literature" and reflects the social rate of time preference recommended in Circular A-4. *Id.* at 23. Citing extensive scholarship on discounting, particularly in intergenerational contexts, it rejected the use of a 7% rate for assessing climate impacts. *Id.* at 17–23.

The Working Group also focused on global damage estimates rather than attempt to analyze only the share of climate damages that originate within U.S. borders. Justifying this choice, it explained that "there is no bright line between

[5] For instance, Richard Tol has dismissed much of the research behind climate change as "scaremongering" rather than "sound science." Richard S.J. Tol, Econ. & Soc. Rsch. Inst., *Why Worry About Climate Change?* 3, 5 (2009). His model of climate damages is one of the three incorporated by the Working Group.

domestic and global damages," since "[a]dverse impacts on other countries can have spillover effects on the United States, particularly in the areas of national security, international trade, public health and humanitarian concerns." Response to Comments at 31. The Working Group further explained that climate change is a global externality, and so if nations "set policies based only on the domestic costs and benefits of [greenhouse gas] emissions," this would "lead to an economically inefficient level of emissions reductions which could be harmful to all countries, including the United States." *Id.* at 31.

Outside reviewers have widely endorsed the Working Group's methodology. The U.S. Government Accountability Office concluded that the Working Group followed a "consensus-based" approach. Gov't Accountability Office, *Regulatory Impact Analysis: Development of Social Cost of Carbon Estimates* 12–19 (2014). The National Academies of Sciences issued two reports that supported the continued use of the Working Group's estimates, while recommending some areas for improvement.[6] Leading economists—including Nobel laureate Kenneth Arrow—have also endorsed the Working Group's valuations. Revesz & Sarinsky, *supra*, at 8

[6] Nat'l Acads. Scis., Eng'g & Med., *Valuing Climate Damages: Updating Estimation of the Social Cost of Carbon Dioxide* 2–3 (2017) ("NAS 2017"); Nat'l Acads. Scis., Eng'g & Med., *Assessment of Approaches to Updating the Social Cost of Carbon: Phase 1 Report on a Near-Term Update* 1–2 (2016).

n.56. And in 2016, the U.S. Court of Appeals for the Seventh Circuit upheld agency usage of those valuations. *Zero Zone,* 832 F.3d at 677–79.

Nonetheless, in March 2017, President Trump issued an executive order disbanding the Working Group and withdrawing its technical support documents. Exec. Order No. 13,783 § 5(b)–(c), 82 Fed. Reg. 16,093, 16,095–96 (Mar. 28, 2017). Agencies then developed climate-damage valuations that applied all but two of the Working Group's modeling assumptions. Specifically, agencies applied a higher range of discount rates—using a 7% rate that the Working Group had rejected—and attempted to segregate damages originating within U.S. borders. *E.g.* Env't Prot. Agency, *Regulatory Impact Analysis for the Repeal of the Clean Power Plan* 7-1 (2019). The resulting valuations were approximately 7–50 times lower than the Working Group's central estimates. *Compare id.* at 4-4 tbl.4-1 *with* 2021 TSD at 5 tbl.ES-1. The Trump administration did not otherwise seek to update the Working Group's methodology.

Under the Trump administration, agencies normally reported the Working Group's full damage estimates in an appendix, but occasionally applied the Working Group's valuations in their central analysis, *e.g.*, 85 Fed. Reg. at 1477–78. In one regulation in which an agency eschewed the Working Group's valuations in its central analysis, a federal court found the regulation arbitrary and capricious because

the agency rejected "the best available science about monetizing the impacts of greenhouse gas emissions." *Bernhardt,* 472 F. Supp. 3d at 611.

President Biden reconvened the Working Group in January 2021. Exec. Order No. 13,990 § 5(a), 86 Fed. Reg. 7037, 7040 (Jan. 25, 2021). In February 2021, the Working Group re-endorsed, on an interim basis, the valuations that it had previously developed (adjusted for inflation). 2021 TSD at 3. It also commenced a process to update those valuations to reflect scientific and economic advancements. *Id.*; *see also id.* at 36.

ARGUMENT

Despite the extraordinary rigor that went into the Working Group's climate-damage valuations, Plaintiffs argue that those estimates rest on unreliable science and violate regulatory precedent. These arguments do not withstand scrutiny.

As discussed above, the Working Group developed its valuations based on the best available science, using well-established (and, in one case, Nobel Prize-winning) scientific and economic modeling reflecting a range of assumptions about the severity of climate change. Its estimates and assumptions were used in dozens of analyses under administrations of both political parties, and were based on methodologies developed over decades.

In particular, the Working Group applied an appropriate range of discount rates and reasonably assessed damages on a global scale. Plaintiffs' contrary arguments ignore extensive precedent supporting the Working Group's approach.

I. The District Court Inappropriately Treated Circular A-4 as a Straightjacket

In granting its injunction, the district court treated Circular A-4 as binding law, as it "order[ed] Defendants to return to the guidance of Circular A-4" and prohibited the use of climate-damage valuations "that do[] not utilize discount rates of 3 and 7 percent." ROA.4117. As detailed later in this brief, the Working Group's approach is in fact consistent with Circular A-4. Notwithstanding this oversight, the court's treatment of Circular A-4 as binding law was entirely unfounded.

For one, Circular A-4 is merely an internal guidance document meant to assist agencies in performing regulatory analysis under Executive Order 12,866. Circular A-4 at 1. As this Court recognized, "[c]ompliance with Circular A-4 is not required by any statute or regulation and is not binding on any agency." Stay Order 3. Circular A-4 offers recommendations on a range of analytical issues—such as performing a robust distributional analysis, Circular A-4 at 14, and fully evaluating indirect benefits, *id.* at 26—for conducting analysis under Executive Order 12,866. And that Order was "intended only to improve the internal management of the Federal Government and does not create any right or benefit." Exec. Order No. 12,866 § 10, 58 Fed. Reg. at 51,744.

Furthermore, Circular A-4's recommended practices are meant to be flexible, not immutable. It recognizes that "good regulatory analysis" cannot be conducted "according to a formula," and advises agencies to use "professional judgment" to adjust the analysis "depending on the nature and complexity of the regulatory issues." Circular A-4 at 3. It further recognizes that "new [scientific] methods may become available in the future" for "assign[ing] economic value to [] projected outcomes," and that the guidance "is not intended to discourage or inhibit their use" but rather to "stimulate their development." *Id.* at 40, 42. OMB has further acknowledged that Circular A-4 is "a living document" and that agency analyses should "reflect new developments." Response to Comments at 36.

Moreover, Circular A-4 applies only to economic analysis for regulations, *see* Circular A-4 at 1, and is inapplicable elsewhere such as for environmental analysis under the National Environmental Policy Act ("NEPA"), where agencies frequently apply different practices (as discussed below).

In short, compliance with Circular A-4 is not judicially reviewable, the guidance contemplates that agencies will apply new methodological developments, and its scope extends only to regulations and not to the many possible government actions covered by the district court's injunction. Relying on Circular A-4 to prohibit the Working Group's valuations is thus triply unavailing.

II. The Working Group Endorsed an Appropriate Range of Discount Rates

Plaintiffs' arguments fail for another reason: because the Working Group followed the science and grounded its choices in research, evidence, and precedent. This is true with regard to both its choice of geographic scope and, as discussed first in this section, discounting.

In economics, a discount rate is used to place impacts that occur at different times into a common present value. Owing primarily to the fact that individuals have a positive time preference—meaning we value present more than future welfare—a discount rate is used to reduce the value of future impacts. Circular A-4 at 32. Estimating the appropriate discount rate can be complex and uncertain, and economists consult metrics such as returns on government debt and private capital.

The choice of discount rate can have a large effect when applied over long time horizons. When looking just one year into the future, a $1 million damage has a present value of $970,000 using a 3% annual discount rate[7] and $930,000 using a 7% rate[8]—a fairly small percentage difference. But if that $1 million impact occurs 100 years in the future, the difference is large: That damage would be valued at approximately $47,000 using a 3% discount rate,[9] but just $700 (about 67 times less)

[7] $1,000,000 * (.97) = $970,000.
[8] $1,000,000 * (.93) = $930,000.
[9] $1,000,000 * (.97^100) ≈ $47,552.

at a 7% rate.[10] In other words, the 7% rate almost entirely devalues effects on future generations.

Plaintiffs suggest that agencies must always devalue impacts on future generations through a 7% discount rate. But neither economics nor law supports this approach. In fact, Circular A-4 itself endorses the use of lower rates for long time horizons, and over decades, agencies have followed that approach. Outside regulation, moreover, agencies routinely apply lower discount rates or none at all.

A. As Both Circular A-4 and the Working Group Recognized, Economics Supports the Use of Low Discount Rates for Long-Term Impacts

The Working Group cited extensive economic evidence to support its chosen discount rates, highlighting three primary reasons that Circular A-4 provides as bases to reject a 7% rate for the social cost of greenhouse gases.

First, the Working Group explained that Circular A-4 provides different rationales for its default discount rates of 3% and 7%, which establish the lower rate as more applicable here. Specifically, the 3% rate is appropriate "[w]hen regulation is expected to primarily affect private consumption," whereas the 7% rate is appropriate "when a regulation is expected to displace or alter the use of capital in the private sector." 2010 TSD at 19; *see also* Circular A-4 at 33 (stating that the 3% rate, not the 7% rate, is appropriate when regulation "primarily and directly affects

[10] $1,000,000 * (.93^100) ≈ $705.

private consumption"). Because regulations affecting greenhouse gas emissions primarily affect consumption rather than capital, as numerous studies establish, the Working Group concluded that the capital-based 7% rate is not "the correct concept to use in evaluating the benefits and costs of a marginal change in [greenhouse gas] emissions." 2010 TSD at 19.

Second, the Working Group highlighted voluminous economic research finding that uncertainty over long-term conditions counsels for a "discount rate that declines over time," such that using a 7% rate is particularly inappropriate for long-term effects. 2021 TSD at 21. As Circular A-4 explains, a "reason for discounting the benefits and costs accruing to future generations at a lower rate is increased uncertainty about the appropriate value of the discount rate." Circular A-4 at 36. The guidance recommends that discount rates over long time horizons "correspond[] to the minimum discount rate having any substantial positive probability." *Id.* In other words, using high discount rates over long time horizons disregards uncertainty and inappropriately devalues impacts on future generations, further rendering the 7% rate inapposite.

Third, the Working Group highlighted intergenerational equity as another basis to apply lower discount rates over long time horizons, pointing to economic arguments that it is "ethically indefensible" to discount future generations based on intragenerational time preferences. 2010 TSD at 18. As Circular A-4 recognizes,

"[a]lthough most people demonstrate time preference in their own consumption behavior, it may not be appropriate for society to demonstrate a similar preference when deciding between the well-being of current and future generations." Circular A-4 at 35. This provides another reason to reject the 7% rate for climate impacts.

The consumption-affecting nature of climate regulation, long-term uncertainty, and intergenerational equity—all of which are highlighted in Circular A-4 as bases to apply lower discount rates—led the Working Group to reject the 7% rate. The Working Group also provided strong evidence that the 3% rate may be too high: Data from the past two decades, assessed using the exact same methodology applied in Circular A-4, suggests that "the appropriate consumption discount rate should be at most 2 percent." 2021 TSD at 20.[11] For these reasons, "the economics profession generally agrees" that discount rates "below 3 percent" are warranted for valuing climate damages. *Id*. (citing expert elicitations). If anything, therefore, the Working Group's recommended rates are too high—not too low as Plaintiffs claim.

B. The Working Group's Recommended Discount Rates Are Supported by Regulatory Guidance and Precedent

Ignoring the voluminous evidence supporting the use of lower discount rates for long-term impacts, Plaintiffs narrowly read two pages of Circular A-4 to claim

[11] In 2017, the Council of Economic Advisers concluded that "the evidence supports lowering the[] discount rates" recommended in Circular A-4. Council of Econ. Advisers, *Discounting for Public Policy: Theory and Recent Evidence on the Merits of Updating the Discount Rate* 1 (2017).

that disregarding a 7% discount rate is unlawful. But Circular A-4 recognizes that intergenerational time horizons call for lower discount rates, and agencies have previously used lower rates for long-term effects.

As noted above, federal guidance recognizes that intergenerational impacts merit lower discount rates. Circular A-4 at 35–36. Circular A-4 highlights empirical estimates for long-term rates of 1–3%, and recommends using rates in this range to assess "intergenerational benefits or costs." *Id.* at 36. EPA has also long recognized that policies with "significant impacts on future generations" merit lower discount rates. Env't Prot. Agency, *Guidelines for Preparing Economic Analyses* 6-11 to -12 (2010).

On numerous occasions going back decades, agencies have used lower discount rates for long-term impacts. Under the Reagan administration in 1987, EPA devised regulations to protect the ozone layer from chlorofluorocarbons. Although OMB guidance at the time endorsed a 10% discount rate, EPA discounted benefits using a central rate of 2%. Protection of Stratospheric Ozone, 52 Fed. Reg. 47,489, 47,514 (Dec. 14, 1987). As EPA explained, the rule's long time horizon called for a "more refined selection" of discount rates. Env't Prot. Agency, *Regulatory Impact Analysis for the Protection of Stratospheric Ozone* app. at H-20 (1988).[12]

[12] *Available at* https://nepis.epa.gov/Exe/ZyPDF.cgi/9101PLVM.PDF?Dockey=9101PLVM.PDF.

In 2004, under the George W. Bush administration, EPA amended its regulations on refrigerant recycling to further protect the ozone layer from chlorofluorocarbons, and again used a 2% discount rate in its analysis. Protection of Stratospheric Ozone; Refrigerant Recycling; Substitute Refrigerants, 69 Fed. Reg. 11,946, 11,975 (Mar. 12, 2004). Notably, the 2004 regulation was completed after OMB's publication of Circular A-4, by the same administration that had published that guidance. Four years later, an agency under the same administration rejected the 7% discount rate for climate impacts, 73 Fed. Reg. at 44,414—just as the Working Group would do a few years after that.

As these examples illustrate, agencies have long used lower discount rates for long-term impacts. The Working Group's approach follows this precedent.

C. Outside Regulatory Analysis, Agencies Often Apply Discount Rates Far Lower than Those Provided in Circular A-4

Although Plaintiffs focus on Circular A-4, that guidance applies only to regulatory impact analysis conducted pursuant to Executive Order 12,866. Circular A-4 at 1. In other contexts, such as NEPA analysis and procurement, agencies routinely apply lower discount rates.

Starting with NEPA, applicable guidance does not specify a discount rate, and agencies rarely discount in this context. For instance, when agencies estimate economic benefits from proposed projects, they typically do not discuss any discounting of future benefits—applying, in effect, a discount rate of zero. *See, e.g.*,

Off. of Surface Mining Reclamation & Enf't, *Bull Mountains Mine No. 1 Federal Mining Plan Modification Environmental Assessment* G-6 (2018) (quantifying over $1 billion in revenues from coal mining project without mention of discounting). This 0% discount rate for economic benefits is, of course, far lower than the positive rates the Working Group endorsed for climate costs. This means that NEPA analyses applying the Working Group's discount rates would normally undervalue climate relative to economic effects.

The same is true for procurement analysis, where OMB guidance instructs agencies to apply discount rates reflecting real interest rates on Treasury notes, which, according to the most recent federal guidance (from 2020), range from -1.8% to -0.3%. Off. of Mgmt. & Budget, Circular A-94 app. C (Discount Rates for Cost-Effectiveness, Lease Purchase, and Related Analyses) (2020). In other words, agencies have been instructed to apply negative discount rates in procurement analysis. Of course, the Working Group's discount rates for its climate-damage valuations are far higher, further undermining Plaintiffs' claim that that the Working Group's discount rates are too low.

For this additional reason—on top of those discussed above—Plaintiffs fail to demonstrate that the Working Group's chosen discount rates for the social cost of greenhouse gases are necessarily unlawful.

III. The Working Group Endorsed an Appropriate Geographic Scope

Plaintiffs also criticize the Working Group's decision to assess climate effects from a global perspective rather than attempt to segregate the damages that originate within U.S. borders. In effect, Plaintiffs posit that agencies cannot consider impacts that initially occur outside U.S. borders—including those that affect U.S. military or geopolitical interests, harm foreign lands or global commons, or cause reciprocal actions that benefit the United States.

Once again, Plaintiffs are wrong. As the Working Group explained, citing considerable scientific and economic research, the use of global damage valuations is meant to capture critical climate-change impacts that affect the United States but do not originate within it, including economic and geopolitical spillover effects as well as reciprocal emission reductions that U.S. policy helps facilitate. *E.g.*, 2021 TSD at 14–16. Owing to such justifications, the Seventh Circuit upheld the use of the Working Group's global climate-damage valuations, *Zero Zone,* 832 F.3d at 677–78, while the U.S. District Court for the Northern District of California rejected an agency's reliance on estimates that disregarded climate impacts originating beyond U.S. borders, *Bernhardt*, 472 F. Supp. 3d at 611–14.

The use of global climate-damage valuations is also consistent with agency practice and statutory charges. For instance, courts have held that certain key statutes

permit agencies to consider transboundary impacts. And agencies typically assess economic effects on a global scale.

A. As the Working Group Recognized, Assessing Climate Effects on a Global Scale Captures Key Impacts that Accrue to Citizens and Residents of the United States

Relying on extensive economic theory and evidence, the Working Group provided ample justification for its decision to focus on global damages.

The Working Group began by recognizing that Circular A-4 advises agencies to "focus on benefits and costs that accrue to citizens and residents of the United States," Circular A-4 at 15, which "is different than recommending that analysis be limited to the impacts that occur within the borders of the U.S.," 2021 TSD at 15. It further recognized that Circular A-4 advises agencies not to ignore, but rather to report and consider effects beyond U.S. borders. *Id.*; *see also* Circular A-4 at 15. The Working Group then highlighted a number of "the diverse ways in which U.S. interests, businesses, and residents may be impacted by climate change beyond U.S. borders." 2021 TSD at 15.

First, the Working Group recognized that significant costs to trade, human health, and security that originate outside the United States inevitably spill over into the country. 2021 TSD at 15–16. Due to our unique place among countries as both the largest economy and as a military superpower, the United States is particularly vulnerable to effects that will spill over from outside its borders. Use of global

damage valuations accounts for these spillover effects, while a rigid conception of domestic impacts ignores them. *Id.*

As one example, the Department of Defense concluded that climate change will "aggravate stressors abroad such as poverty, environmental degradation, political instability, and social tensions—conditions that can enable terrorist activity and other forms of violence" and threaten U.S. domestic security. U.S. Dep't of Defense, Quadrennial Defense Review 2014 at 8 (2014). Additionally, as the Working Group recognized, climate impacts initially felt abroad harm the United States through "effect[s] on international markets, trade, tourism, and other activities." 2021 TSD at 15. Effects on international supply chains, for instance, often reverberate in the United States.

Second, the Working Group recognized that assessing climate damages on a global scale accounts for "how [domestic] actions may affect mitigation activities by other countries"—activities that "will provide a benefit to U.S. citizens and residents." *Id.* at 16. In fact, numerous countries have adopted the Working Group's climate-damage valuations and account for global impacts when valuing greenhouse gas emissions. Jason Schwartz, Inst. for Pol'y Integrity, *Strategically Estimating Climate Pollution Costs in a Global Environment* 10–11 (2021). If other countries were to ignore the transboundary effects of their emissions, they would weaken their emission-mitigation efforts and thereby exacerbate climate damage within the

United States. Thus, the Working Group recognized, "the only way to achieve an efficient allocation of resources for emissions reduction . . . is for all countries to base their policies on global estimates of damages." 2021 TSD at 16. The President, who enjoys "special constitutionally based authority in matters of foreign relations," *Garcia v. Texas*, 564 U.S. 940, 946 (2011), accordingly concluded that the use of global climate-damage valuations "supports the international leadership of the United States." Exec. Order No. 13,990 § 5, 86 Fed. Reg. at 7040.

Economic literature supports this approach. For instance, research by Yale University economics professor Matthew J. Kotchen, which the Working Group cited, uses economic principles to support the consideration of transboundary climate impacts. Matthew J. Kotchen, *Which Social Cost of Carbon? A Theoretical Perspective*, 5 J. Assoc. Env't & Res. Economists 673 (2018), cited in 2021 TSD at 16. Another analysis that the Working Group highlighted "provides an empirical rationale for the consideration of global benefits," demonstrating that the United States stands to benefit far more from foreign emission reductions than from domestic reductions. Trevor Houser & Kate Larson, Rhodium Grp., *Calculating the Climate Reciprocity Ratio for the U.S.* (2021), cited in 2021 TSD at 16. In fact, one report estimates that the United States stands to gain over $10 trillion in benefits over the next three decades from the potential emission reductions of other nations.

Jason Schwartz & Peter Howard, Inst. for Pol'y Integrity, *Foreign Action, Domestic Windfall* 2 (2015).

Third, the United States has vast extraterritorial interests that domestic-only estimates disregard. These include significant U.S. ownership of foreign businesses, properties, and other assets; U.S. consumption abroad including tourism; and effects on the millions of Americans living abroad. *Bernhardt,* 472 F. Supp. 3d at 613. The United States and its citizens also have an interest—and a legal commitment—in protecting the global commons of the oceans and Antarctica from climate damages, along with wildlife and religious or cultural heritage sites located abroad. For instance, the U.N. Framework Convention on Climate Change—which the Senate ratified thirty years ago—declares that national "policies and measures to deal with climate change should be cost-effective so as to *ensure global benefits* at the lowest possible cost" and commits the United States to "promot[ing] and cooperat[ing] in the conservation and enhancement . . . of biomass, forests and oceans." U.N. Framework Convention on Climate Change arts. 3(3), 4(d), May 9, 1992, 1771 U.N.T.S. 107 (emphasis added). Ignoring these effects by taking a rigid domestic perspective would both undervalue the domestic harm from U.S. climate pollution and overlook Circular A-4's instruction that agencies consider "altruism for the health and welfare of others." Circular A-4 at 22.

As the Working Group explained, by ignoring international spillovers, reciprocity impacts, and extraterritorial interests, estimates of the social cost of greenhouse gases that adopt a rigid domestic perspective substantially "underestimate . . . the share of total damages that accrue to the citizens and residents of the U.S," 2021 TSD at 16, thus violating Circular A-4's recommendation. Others agree, including the National Academies of Sciences, NAS 2017 at 9, a federal court, *Bernhardt,* 472 F. Supp. 3d at 611, and regulators under both the Obama, 2010 TSD at 10–11, and George W. Bush administrations, 73 Fed. Reg. at 44,414–16 (capturing impact of U.S. emissions "requires" a "global analysis" since "international effects of climate change may also affect domestic benefits").

B. Key Statutes Permit Agencies to Consider Transboundary Impacts

While Plaintiffs suggest that the use of global climate-damage valuations is always unlawful, courts have confirmed that various key statutes permit or even compel agencies to consider transboundary impacts.

One example is NEPA. That statute requires agencies to interpret their "policies, regulations, and public laws . . . [to] recognize the worldwide and long-range character of environmental problems" and to "maximize international cooperation" to protect "mankind's world environment." 42 U.S.C. §§ 4332(1), (2)(F). On numerous occasions, courts have held that agencies cannot disregard transboundary impacts in their NEPA reviews. *E.g.*, *Env't Def. Fund, Inc. v. Massey*,

986 F.2d 528, 533 (D.C. Cir. 1993) (finding that "the presumption against extraterritoriality does not apply" because NEPA is "directed at the regulation of agency decisionmaking," particularly when those decisions affect global commons); *Gov't of Man. v. Salazar*, 691 F. Supp. 2d 37, 51 (D.D.C. 2010) ("NEPA requires agencies to consider reasonably foreseeable transboundary effects[.]"). And for over forty years, agencies have assessed transboundary impacts under NEPA. *See* Exec. Order No. 12,114 § 2–3, 44 Fed. Reg. 1957 (Jan. 4, 1979) (instructing agencies to "take into consideration in making decisions" effects of their actions on the environment of foreign nations and global commons).

Another example is the Energy Policy and Conservation Act. Before the Seventh Circuit, industry challengers previously claimed that "EPCA authorizes [the Department of Energy] to conduct only a national analysis," objecting to the use of the Working Group's climate-damage valuations that "look[] to global benefits." Brief for Petitioners at 28–30, *Zero Zone, Inc. v. Dep't of Energy*, 832 F.3d 654 (7th Cir. 2016). The Seventh Circuit rejected this argument, holding that DOE "acted reasonably" in considering the "global benefits" of its energy-efficiency standards, agreeing with the agency that "global effects are an appropriate consideration when looking at a national policy." *Zero Zone*, 832 F.3d at 679.

Since these statutes and others (as well as Circular A-4 and other guidance) permit the consideration of extraterritorial effects, Plaintiffs' suggestion that agencies can never consider transboundary climate damages further fails.

C. Agencies Routinely Consider Transboundary Economic Costs

The Working Group's decision to assess climate damages on a global scale is also consistent with regulatory practice. For one, as noted above, agencies consider transboundary environmental effects under NEPA. Moreover, agencies routinely adopt a global perspective on economic costs in regulatory impact analysis, estimating all costs without attempting to separate those occurring domestically.

Many costs from U.S. regulations "accru[e] to entities outside U.S. borders" due to the globalized economy. Env't Prot. Agency, *Regulatory Impact Analysis for the Proposed Reconsideration of the Oil and Natural Gas Sector Emission Standards for New, Reconstructed, and Modified Sources* 3-13 (2018). For instance, nearly 30% of U.S. corporate debt and 40% of U.S. corporate equity is held by foreigners. Schwartz, *supra*, at 18. Yet agencies do not reduce their estimation of regulatory compliance costs to account for the substantial portion of costs that accrue abroad. *Id.* at 17–18.

If Plaintiffs' claims were accepted, agencies would assess compliance cost globally while inconsistently disregarding climate benefits originating outside U.S. borders. Yet agencies cannot "inconsistently and opportunistically frame[] the costs

and benefits" of regulation, *Bus. Roundtable v. Sec. & Exch. Comm'n*, 647 F.3d 1144, 1148–49 (D.C. Cir. 2011), further justifying the Working Group's approach.

CONCLUSION

For the foregoing reasons—and because this case is not justiciable, as Defendants persuasively argue—this Court should vacate the district court's order and dismiss the complaint.

DATED: May 10, 2022

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CERTIFICATE OF COMPLIANCE

Counsel hereby certifies that, in accordance with Federal Rule of Appellate Procedure 32(a)(7)(C), the foregoing brief contains 6,434 words, as counted by counsel's word processing system, and this complies with the applicable word limit established by the Court. This brief complies with the typeface requirements of Fed. R. App. P. 32(a)(5) and the type-style requirements of Fed. R. App. P. 32(a)(6) because this document has been prepared in a proportionally spaced typeface using Microsoft Word in 14-point Times New Roman font.

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CERTIFICATE OF SERVICE

Counsel hereby certifies that on this 10th day of May 2022, a true and correct copy of the foregoing amicus curiae brief was filed with the Clerk of the United States Court of Appeals for the Fifth Circuit through the Court's CM/ECF system.

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