Enhancing the Social Benefits of Regulatory Review

Rethinking OIRA for the Next Administration

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Table of Contents

Executive Summary

For almost four years, the Trump Administration has distorted the practice of regulatory analysis and has eroded the integrity of the federal government's regulatory review structure as coordinated by the Office of Information and Regulatory Affairs (OIRA). The result has been a torrent of deregulatory actions that have worked against the best interests of the American people and their health, safety, environment, and financial well-being, costing the public billions of dollars in lost benefits.

The antidote to the biased approach to regulation that the Trump Administration has exercised over the last four years, however, is not to jettison the entire system for regulatory analysis and review. Rather, the path forward is first to surgically excise recent distortions, and then to reaffirm the best principles and practices from the past, while simultaneously adding corrections and enhancements that will refocus the regulatory system back on maximizing the welfare of the American people. In fact, cautionary tales of when analysis and review have been skipped or undermined—and especially the attempts to cut corners during the past four years—drive home the reasons why reaffirming and enhancing OIRA's roles is critical if the next administration wants to issue welfare-enhancing regulations that will prove resilient to inevitable challenges in the courts, in Congress, and by future administrations.

The next presidential administration should first reaffirm its commitment to rational decisionmaking, based on regulatory analysis and centralized regulatory review (**Recommendation 1.A**). Simultaneously, the next administration must rescind President Trump's problematic Executive Orders that have distorted the regulatory review process—like the biased order requiring two regulatory repeals for each new regulation—as well as any associated policies implemented by agencies (**Recommendations 1.B and 1.C**).

OIRA should then spearhead new efforts to tackle two long-neglected issues in regulatory analysis: distributional analysis, especially of impacts to disadvantaged, vulnerable, or marginalized communities; and unquantified benefits. Distributional analyses, when conducted at all, far too often do not carry enough weight to influence regulatory decisions in any meaningful way. OIRA should convene an Interagency Working Group on Distributional Impacts to develop standardized definitions, methodologies, and metrics for assessing the significance of distributional impacts; to review the quality of agencies' analyses and stakeholder engagement; to assess cumulative distributional impacts across agencies; and to recommend appropriate measures to mitigate any significantly disproportionate effects (**Recommendation 2**). Distributional impacts are also one important group of effects that far too often remain unquantified. Failure to quantify key effects can lead to inefficient, inequitable, and otherwise unfortunate regulatory outcomes. Therefore, OIRA should identify key unquantified effects and encourage research to quantify them (**Recommendation 3.A**). OIRA should then issue more detailed guidance to agencies on how to assess the significance of unquantified effects, how to disclose unquantified effects in a salient way, and how to conduct breakeven analysis to apply a more formal structure to agencies' assessment of unquantified effects (**Recommendation 3.B**).

Additional substantive reforms should begin with the tools OIRA already has. OIRA's longstanding guidance, *Circular A-4* still reflects many best practices, and there are benefits from *Circular A-4*'s longevity: courts, for example, are comfortable citing to the document. But, over the years, some key points from *Circular A-4* have become misinterpreted or overlooked, and some simplifying default recommendations from *Circular A-4* have been mistakenly transformed into rigid rules at the expense of analysts' good judgment and best practices. Yet *Circular A-4* was always intended to be a "living document."

OIRA should issue supplemental guidance to clarify some key best practices for regulatory analysis and address modern regulatory realities. For example, OIRA should clarify that default recommendation on discount rates can be overridden, given the most up-to-date data on discount rates, and especially in special cases, like climate change (**Recommendation 4.A**). OIRA should instruct agencies not ignore the international effects of their regulations, especially when those effects spill back to U.S. interests (**Recommendation 4.B**). OIRA should remind agencies that they should often consider more than just three alternatives (**Recommendation 4.C**), and OIRA should clarify that insights from behavioral economics can provide the justification for the regulation (**Recommendation 4.D**). After issuing these initial clarifications, OIRA should convene a longer-term, independent process to consider bigger updates and additions to *Circular A-4* (**Recommendation 4.E**). OIRA should also quickly reconvene the Interagency Working Group on the Social Cost of Greenhouse Gases (**Recommendation 5.A**) and then begin work on regular updates and improvements to those government-wide estimates of climate damages (**Recommendation 5.B**).

Finally, OIRA should do more to encourage the public's engagement in the regulatory process in ways that will help maximize social welfare. OIRA should support public petitions for rulemaking by collecting summary statistics from agencies on outstanding petitions, and by considering the issuance of prompt letters to encourage agencies to act on petitions that are validated by balanced cost-benefit analysis (**Recommendation 6.A**). OIRA also still has work left to do to ensure that all regulatory-review documents to which the public is entitled are actually made available online as soon as possible (**Recommendation 6.B**). And OIRA can further increase its transparency, especially around any delays in regulatory reviews (**Recommendation 6.C**).

All these recommendations for reforms and enhancements will draw on OIRA's resources, but OIRA's current staff levels are barely adequate to fulfill its existing myriad responsibilities in a timely fashion, let alone take on new duties. The next presidential administration should give OIRA the resources it needs to efficiently help agencies develop welfare-maximizing regulations: specifically, through secundments of qualified staff in the short term, and budget increases in the near future (**Recommendation 7**).

There are, of course, many additional recommendations for improvement that this report could have just as easily explored, from building a more lasting culture around retrospective review of existing regulations, to minimizing the burdens while maximizing the benefits to the public when agencies collect or disclose information. OIRA should continually try to improve itself, and to that end should regularly call for public comments on ideas for broader reforms to the process of regulatory analyses and review.

After almost four years of distortions by the Trump Administration, the American people do not currently have the regulatory system they deserve: a system that works for them and their health, safety, environment, and financial well-being. Implementing the reforms recommended in this report will put OIRA back on the path toward helping agencies once again use regulations to maximize net social welfare.

I. Refocus Regulatory Review on Maximizing Social Welfare

President Clinton's Executive Order 12,866—which, ever since it was issued in October 1993, has provided the backbone for the federal government's system for regulatory analysis and review—began with this broad pronouncement:

> ***The American people deserve a regulatory system that works for them, not against them: a regulatory system that protects and improves their health, safety, environment, and well-being and improves the performance of the economy without imposing unacceptable or unreasonable costs on society. . . . We do not have such a regulatory system today.***[1]

Twenty-seven years later, that pronouncement is now once again deeply and tragically true. For almost four years, the Trump Administration has distorted the practice of regulatory analysis and has eroded the integrity of the federal government's regulatory review structure. The Trump Administration has ordered agencies to deregulate without concern for the forgone benefits of the health, safety, environmental, and welfare regulations being repealed;[2] has tried to cover up analyses that reveal the inconvenient economic truths behind such irrational deregulations;[3] has treated substantial benefits as if they were worthless simply because they cannot yet be fully quantified;[4] has attacked the sound science underlying key regulatory protections;[5] has inconsistently undermined the consideration of many indirect benefits, even while touting and inflating other indirect effects that support its preordained regulatory decisions;[6] has trivialized potentially catastrophic future climate damages;[7] and has manipulated the treatment of transfer payments and distributional effects, among many other distortions.[8]

The end result has been a torrent of deregulatory actions that have worked against the best interests of the American people and their health, safety, environment, and financial well-being. A partial tally places the price tag of just eight out of the hundreds of deregulatory actions at nearly $26 billion in lost benefits to consumer protections, workplace safety, public health, and environmental effects,[9] with billions of dollars more in annual benefits at risk from countless other deregulatory actions.[10] And regrettably, as we have recently begun to learn, far too many of these deregulations have even likely exacerbated our country's collective risk for contracting and dying from Covid-19.[11]

The antidote to the biased approach to regulation that the Trump Administration has exercised over the last four years, however, is not to jettison the entire system for regulatory analysis and review. Because recent court precedents increasingly demand some degree of rational regulatory analysis, and because presidents require some process to prioritize and harmonize regulatory actions across agencies, some centralized system is necessary. Therefore, the path forward is first to surgically excise recent distortions, and then to reaffirm the best principles and practices from the past, while simultaneously adding corrections and enhancements that will refocus the regulatory system back on maximizing the welfare of the American people. The structure for regulatory review that existed before the Trump Administration certainly was not perfect or immune from criticism.[12] Crucial reforms are needed, for example, to direct meaningful attention to how regulations—or the lack of regulations—may hurt or fail to sufficiently help various disadvantaged,

vulnerable, or marginalized communities, especially in currently hard-to-quantify ways (*see infra*, Sections II.A-B). But the framework for regulatory analysis and the coordinated inter-agency reviews that existed before the Trump Administration often helped improve both the quality and defensibility of regulatory decisions.

Though antecedents of today's regulatory review system emerged during the Nixon, Ford, and Carter administrations, President Reagan's Executive Order 12,291 created the essential architecture for a centralized regulatory process, including oversight of agencies' regulatory cost-benefit analyses and an inter-agency review lead by the White House Office of Information and Regulatory Affairs (OIRA).[13] While President Clinton had very different regulatory priorities than the Reagan Administration, he recognized the potential benefits of a centralized review system to introduce a broader perspective into the rulemaking process. President Clinton's Executive Order 12,866 instructed agencies to assess not just quantitative costs and benefits, but unquantified effects and distributional impacts as well; the Clinton order also set deadlines for OIRA reviews and made OIRA's functions more transparent to the public.[14] President George W. Bush made only a few short-lived tweaks to the Clinton Administration's approach.[15] President Obama's Executive Order 13,563 reaffirmed the principles of Executive Order 12,866, while making a few improvements to the consideration of equity and human dignity, increasing public participation in the rulemaking process, and reiterating the call for retrospective review of existing rules.[16] And despite all of President Trump's distortions to the process, the Trump Administration has kept in place the underlying structures established by Executive Orders 12,866 and 13,563.[17]

Thus, recent distortions notwithstanding, for many years and across administrations of both political parties, OIRA's role in the regulatory process had been largely stable. One reason that the structure for regulatory analysis and centralized review has endured is because, when conducted in a rational and balanced manner, this process has helped administrations of both political parties to improve the quality and defensibility of their regulatory decisions. By contrast, when regulations have failed to follow best practices for rational regulatory analysis, as has happened repeatedly in recent years during the Trump Administration, courts have often viewed such regulations with extreme skepticism. The next subsection details these points.

I.A. The Benefits of Regulatory Analysis and Centralized Review

OIRA's responsibilities include coordinating an inter-agency review of regulations, inspecting agencies' analyses of the costs and benefits of their regulatory proposals and alternatives, promoting consideration of public comments, checking compliance with the legal requirements for rulemaking, and ensuring consistency with presidential priorities.[18] And though OIRA's activities in the years before the Trump Administration certainly were not always perfect or immune from criticism, a number of welfare-enhancing regulatory outcomes have been attributed over time both to the requirement for agencies to conduct cost-benefit analyses of significant rulemakings, and to the system of centralized regulatory review.

Cost-benefit analysis and centralized regulatory review have contributed to numerous societal improvements from regulatory actions, including:

- A high-quality cost-benefit analysis helped save the Environmental Protection Agency (EPA)'s regulatory phase-down of the lead content in gasoline from deregulation during the Reagan administration, and in fact prompted an accelerated phase-out of lead from gasoline.[19]
- By conducting a thorough cost-benefit analysis that considered multiple alternatives, the Department of Energy was able to discover an efficiency standard for refrigerators that produced $200 more in net benefits per refrigerator over the least attractive option.[20]
- OIRA prodded the Food and Drug Administration (FDA) to finish a long-stalled regulation labeling trans-fat content in food.[21]
- OIRA and EPA deployed a cost-benefit analysis to convince a skeptical Bush Administration to preserve and expand the regulation of emissions from diesel engines.[22] According to former OIRA administration John Graham: "In the absence of the favorable information on benefits and costs and the support from OIRA, I doubt whether the EPA would have issued this rule promptly, if at all."[23]
- Centralized and retrospective review, led by OIRA, prompted the Department of Treasury in 2010 to finally switch to direct, electronic payments for Social Security, Supplemental Security Income, and veterans;[24] and prompted the Department of Agriculture to automatically grant children eligibility for free school lunches, based on information the government already has available, thus reducing paperwork and making it easier for 270,000 children to get free school meals.[25]
- Similarly, centralized and retrospective review, led by OIRA, prompted the Occupational Safety and Health Administration (OSHA) to align its previously outdated rules for identifying hazardous chemicals with the current international standards, thus making it easier for U.S. workers to understand the hazards of the chemicals they face in the workplace.[26]
- OIRA review also played a role when the Department of Transportation issued a rule requiring airlines to disclose to consumers the entire price they will pay for a ticket, including fees for optional services.[27]
- And—of particular relevance during the coronavirus pandemic—years ago OIRA's calls for retrospective review prompted the Department of Health and Human Services (HHS) to change rules that were blocking hospitals from using telemedicine, thus helping rural areas in particular to open new access to telemedicine.[28]

This handful of examples of past success stories only begins to hint at the many ways in which a smart and balanced system of regulatory analysis and centralized review can help the next presidential administration increase net social benefits. In fact, it is the cautionary tales of when analysis and review have been skipped or undermined—and especially the attempts to cut corners during the past four years—that really drive home the reasons why reaffirming and enhancing OIRA's roles is critical if the next administration wants to issue welfare-enhancing regulations that will prove resilient to inevitable challenges in the courts, in Congress, and by future administrations.

- **Major rules supported by thorough and balanced cost-benefit analyses fare better in the courts.** In a growing list of recent decisions, courts have found that a complete failure to consider important categories of costs and benefits can render a rule illegally arbitrary,[29] that putting a thumb on the scale by emphasizing certain costs or benefits over others can render a rule illegally arbitrary,[30] and that failing to follow best economic practices in an

attempt to reach a preordained regulatory outcome can render a rule illegally arbitrary.[31] Courts are more likely to defer to an agency's expertise when its rules are supported by a thorough and balanced cost-benefit analysis,[32] while many of the Trump Administration's sloppy analyses conducted in support of its deregulatory efforts have led to losses in the courts.[33] Balanced cost-benefit analysis and a careful but expeditious centralized review will help the next administration forestall any errors in regulatory analysis that could come back to haunt agencies during inevitable litigation.

- **Cost-benefit analysis is a powerful tool to help reverse recent, sloppily-issued deregulatory actions, while simultaneously providing some protection against future repeals.** In caselaw going back decades, courts have recognized that the preparation of a formal cost-benefit analysis, including review and clearance by OIRA, becomes a key part of the baseline record against which courts will review future agency actions.[34] In other words, "Although courts typically give deference to agency CBAs in the first instance, any new CBA will be judged against a prior CBA in the administrative record."[35] If a recent deregulatory action was supported by a cost-benefit analysis, the next administration will need to grapple with that analysis to reverse the deregulation. Fortunately, if the prior analysis was sloppy, it will be relatively easy to deploy a new and more balanced analysis to help explain to courts the need for the agency to reverse course. At the same time, new regulations supported by balanced cost-benefit analyses will raise the bar on any attempts by future administrations to repeal those regulations. The cost-benefit analysis for those rules will set the baseline status quo, and any future deregulatory efforts will need to justify the change in costs or benefits of moving to a new policy.[36]

> "Relying on a high-quality CBA to support its policy is one way an agency can protect against future unwarranted abandonment of the policy."
>
> Caroline Cecot, Assistant Professor of Law, George Mason University[37]

- **Poor, unbalanced cost-benefit analyses can attract scrutiny from Congress, the media, and the public.** In recent years, both Congress and the public have paid attention to the quality of cost-benefit analyses, aided by media coverage. For example, when the story leaked that the Department of Labor had conducted—but then hidden—an unfavorable analysis of its new regulation on allowing employers to pool and redistribute tips among certain workers, Congress took note and passed an appropriations rider blocking part of the agency's regulatory plans.[38] Similarly, when stakeholders uncovered just how riddled with errors the Trump Administration's initial economic justification was for rolling back fuel efficiency standards for passenger vehicles, the agencies were sent scrambling back to the drawing board, which substantially delayed the deregulatory effort.[39] The next administration can help itself avoid a similar fate before the court of public opinion or in the halls of Congress by conducting balanced cost-benefit analyses from the start.

- **Smart and balanced regulatory analysis and review increases the net social benefits of regulation.** Contrary to a common attack, the practice of balanced cost-benefit analysis does not deter the issuance of net-beneficial regulation.[40] To the contrary, in some notable air quality rulemakings where caselaw prohibits using a cost-benefit analysis to set the standards, the result has been neither more protective standards nor more transparent decisionmaking; rather, when "EPA cannot openly consider costs," the agency instead "engages in surreptitious and uninformed cost guesswork when deciding what is sufficient to protect health," and ultimately has often chosen standards that are "less protective than [those] that CBA would justify."[41] If analysis is conducted in a balanced manner, if enough regulatory alternatives are considered, and if analysis is completed early enough to

be factored into decisionmaking, then the next administration can use regulatory analysis not only to increase net social benefits of the rules it issues, but to improve the distributional fairness of those regulatory benefits as well.

- **Centralized review is essential to ensure consistent regulatory approaches across the entire administration.** Even if all federal agencies are working to advance the interests of the American people, different agencies have different missions, portfolios, and expertise, which can result in intra-administration clashes. For example, imagine that EPA wants to increase emissions standards for particulate matter and require states to reduce their ambient air concentrations of the pollutant. While HHS may support the new rule as an easy way to advance public health, the Department of Transportation may be worried that states could lose their federal highway funding, which is tied to compliance with national ambient air quality standards. The Department of Labor may have some conflicting priorities, simultaneously worried about potential temporary employment displacements that may result, even as the agency wants to improve occupational health for workers. And finally, the Treasury Department may be worried about potential tax repercussions of incentivizing energy portfolio shifts, as different industries come with their own tax rates and subsidies. A President needs a centralized inter-agency review process, informed by cost-benefit analysis, to juggle all these competing viewpoints, to guide inter-agency discussions, and to help reach a final regulatory decision.

Thus, to develop efficient, welfare-maximizing regulations that will be more resilient to inevitable challenges, the next presidential administration should reaffirm its commitment to rational decisionmaking, based on regulatory analysis and centralized regulatory review.

Recommendation 1(A): Reaffirm the principles of rational decisionmaking from President Clinton's Executive Order 12,866 and President Obama's Executive Order 13,563.

The principles articulated in these executive orders have been endorsed and adopted by OIRA administrators of both political parties stretching back decades.[42] A new Executive Order reaffirming these principles can be the same one that also revokes President Trump's misguided orders (as described in the next subsection, Section I.B). Alternatively, a memorandum from the President's Chief of Staff could quickly reaffirm Executive Orders 12,866 and 13,563. The reaffirmation could also consider endorsing some additional orders from the Obama Administration, including Executive Orders 13,579 (which encouraged independent agencies to follow best practices for cost-benefit analysis and retrospective review), 13,609 (which encouraged international regulatory cooperation), 13,610 (which established a more detailed process for retrospective review), and 13,707 (which encouraged agencies to apply insights from behavioral sciences and economics in their regulatory decisions)—though these orders are all still operational, and recent distortions during the Trump Administration did not directly undermine any of these additional orders.

I.B. Undoing Problematic Recent Distortions of the Regulatory Review Process

Recommendation 1(B): Repeal President Trump's problematic Executive Orders on the regulatory process—especially 13,771, 13,777, and 13,783—and any associated policies.

President Trump's first Executive Order on the regulatory process, number 13,771, was his most biased. The order required agencies to designate two rules for repeal in exchange for any new regulation issued, and set a cap on annual regulatory costs—all without consideration of the regulatory benefits being sacrificed.[43] That action was quickly followed by Executive Order 13,777, which created a politicized position within agencies called "regulatory reform officers," who were charged with reviewing new and existing regulations with a one-way ratchet to deregulate any policies deemed to be too costly or to negatively affect jobs[44]—again without any consideration of the potential benefits, including employment benefits, of new regulations. Additionally, Executive Order 13,893 claimed to "reinvigorat[e] administrative PAYGO" by requiring agencies to offset any increase in mandatory spending resulting from a discretionary administrative action.[45] If implemented, this recent order would likely discourage certain discretionary administrative actions without consideration of the forgone social benefits. (Note also that Executive Order 13,843, which exempted Administrative Law Judges from the competitive service, and Executive Order 13,892, which created new procedures for administrative enforcement and adjudication, are outside the scope of this report, but they have been flagged by numerous stakeholders as making problematic changes to the structure of the administrative state.[46])

There are no redeeming features to these Executive Orders, and they should be revoked outright, along with any orders, rules, guidelines, or policies issued by the Office of Management and Budget (OMB), OIRA, or agencies to implement or enforce these orders. That includes the various OMB and OIRA memoranda issued to implement the orders.[47] Before fully disbanding the position of the regulatory reform officer established by Executive Order 13,777, it may be useful to require those designated agency employees to identify any actions that the agencies undertook since January 2017 to change their approaches to rulemaking or regulatory analysis. But other employees in the agencies, such as general counsels or the "regulatory policy officers" as designated under Executive Order 12,866,[48] could also help identify any such changes and help design appropriate actions to reverse course and return to best regulatory practices.

Several of President Trump's additional Executive Orders called for specific deregulatory actions or interfered with regulatory analysis. In particular, Executive Order 13,783 disbanded the federal Interagency Working Group on the Social Cost of Greenhouse Gases; set up the repeals of President Obama's Clean Power Plan rule and various regulations of methane emissions from the oil and gas sector; withdrew the federal coal leasing moratorium; and withdrew the Council on Environmental Quality's guidance on considering greenhouse gas emissions.[49] Similarly, Executive Order 13,778 set up the repeal of the "Waters of the United States" rule,[50] and Executive Order 13,868 called for specific changes to rules relating to energy infrastructure, and in particular the regulation of liquified natural gas.[51] A common feature of all these orders was a failure to consider the forgone benefits of the rules being targeted for repeal. The next administration should revoke all of these orders, and simultaneously direct agencies to review any deregulatory activities they undertook pursuant to these biased orders, so that agencies can instead reevaluate their regulations and make any changes, consistent with statutory requirements, that will better maximize net social welfare. Furthermore, as part of revoking Executive Order 13,783, the incoming President also should authorize the reconvening of the Interagency Working Group on the Social Cost of Greenhouse Gases and should explicitly reinstate all of the former Working Group's technical support documents as again being representative of governmental policy (*see infra*, Section II.D, for more details).

Recently, during the coronavirus pandemic, President Trump issued two Executive Orders (numbers 13,924 and 13,927) that generally instruct agencies to consider a range of deregulatory actions in a misguided attempt to support economic recovery.[52] Of course, not only is it a myth that regulations systematically impede job creation or economic growth—they can, in fact, support both[53]—but the Trump Administration's long deregulatory campaign also almost certainly exacerbated the Covid-19 pandemic in the United States.[54] These orders should be revoked, and any agency actions to modify, waive, temporarily repeal, or permanently repeal regulations pursuant to these orders should be promptly reviewed by the new administration.

Several other Executive Orders contain stray anti-regulatory language, such as Executive Orders 13,853 and 13,878 (which assume, respectively, that regulations somehow either discourage investment in economically distressed communities or create barriers to affordable housing, without considering how regulations may also be necessary to promote affordable housing); Executive Order 13,874 (which assumes that a "modern" regulatory framework for agricultural biotech requires "streamlin[ing]" of existing regulations, rather than the creation of new, smart regulations); and Executive Order 13,855 (which assumes that "interagency regulatory burdens" are hindering, rather than helping, proper management of federal lands). Especially if these orders are already targeted for revocation for other reasons, such revocations should also include language reminding agencies instead that smart regulations can, in fact, promote economic growth.

Finally, there are a few changes to the administrative process introduced under President Trump that the next presidential administration should carefully reevaluate and potentially adjust, if not necessarily revoke outright. Executive Order 13,789, entitled "Identifying and Reducing Tax Regulatory Burdens," directed OIRA to reconsider the longstanding exemption under which most tax regulations did not undergo centralized review through the process established by Executive Order 12,866. A memorandum of agreement between OIRA and the IRS followed, spelling out a new process for analysis and review of tax regulations.[55] Initial reports from the Government Accountability Office suggest that OIRA is mostly meeting its review deadlines following the memorandum of agreement.[56] While the next administration should ensure that OIRA has sufficient staff with relevant expertise if centralized review of tax regulations is to continue, there may be reasons why the next President may want to preserve at least some of this new memorandum of agreement between OIRA and IRS.[57]

Similarly, Executive Order 13,891 established new, more rigid procedures for issuing agency guidance documents, including OIRA review of "significant" guidance.[58] This followed an earlier memorandum from OMB and OIRA that extended the application of the Congressional Review Act to any "major" guidance documents likely to have an annual effect on the economy of $100 million or more or to significantly and adversely affect particular segments of the U.S. economy.[59] In that memorandum, OIRA claimed authority to review regulatory actions not otherwise submitted through the normal Executive Order 12,866 process (including guidance documents) to determine whether they are "major" under the Congressional Review Act.[60] However, OIRA review of significant guidance documents is not exactly a new development. President George W. Bush had also issued an executive order requiring review of significant guidance documents,[61] and though President Obama revoked that order, OIRA continued the practice since 2009 under a memorandum issued by President Obama's OMB director.[62] While adding too many formal requirements to the issuance of guidance documents can discourage such guidance in ways that will create costly uncertainty for regulated entities, the next administration may not necessarily want to revoke all efforts to bring more centralized review to guidance documents. Rather, the next administration should balance the goal of centralized review against the concern for discouraging helpful guidance and the limitations of OIRA's capacity to review additional actions.

Finally, in its new memorandum on the scope of the Congressional Review Act, OIRA observed that the Congressional Review Act applies to all independent agencies.[63] Consequently, while independent agencies had long been exempted from the requirements of Executive Order 12,866, this new OIRA memorandum claims authority to review potentially all actions from independent agencies to assess whether they are "major" under the Congressional Review Act. Furthermore, the memorandum would effectively require independent agencies to comply with *Circular A-4* and conduct regulatory impact analyses sufficient to allow a review of whether or not the action is "major."[64] This memorandum would thus accomplish a major change in the structure of the administrative state, bringing independent agencies squarely within the scope of OIRA review. Several administrative law experts and former OIRA leaders have long recommended extending OIRA review to independent agencies, especially in light of recent caselaw in which courts have struck down regulatory actions from independent financial agencies for failures to adequately consider the costs or benefits of their actions.[65] The next presidential administration, therefore, may wish to continue this new coverage of regulatory actions from independent agencies,[66] though in that case it will be critical to ensure that OIRA has sufficient staff with relevant expertise to carry out this new function (*see infra*, Section IV).

Recommendation 1(C): Identify all problematic agency-level changes to cost-benefit analysis and the regulatory process, especially at EPA and the Departments of Transportation and Energy

Several agencies have enacted, or begun to enact, problematic changes to their own rules or guidance on the regulatory process and regulatory analysis.

The Department of Transportation issued a comprehensive revision of its regulations on rulemaking.[67] Though some of the changes incorporated in that revision may be relatively minor, others—like a new suite of burdensome procedural hurdles to clear for so-called "high-impact rulemakings"—reflect problematic anti-regulatory biases.[68] Because of the anti-regulatory biases embedded in this revision, the new rule should be repealed. The Department of Education has also recently proposed an "interim final rule" with similarly problematic language creating new obstacles for so-called "high-impact" rules.[69]

The Department of Energy is instructed by statute to weigh the costs and benefits of its energy efficiency standards. The Department has finalized a new "process rule" that introduces biased changes in how it will approach costs and benefits for these rulemakings.[70] The new "process rule" grew out of Executive Orders 13,771, 13,777, and 13,783.[71] Together with a new rule on evaluating statutory factors to determine when an energy conservation standard is "economically justified," the Department's new approach would block the issuance of otherwise cost-benefit-justified energy conservation standards simply if they fall below an arbitrary threshold for "significance."[72] The revised process would also allow the Department to arbitrarily give controlling weight to any single adverse impact and so deem a standard to be not "economically justified," even if the standard otherwise would overwhelmingly pass a cost-benefit test.[73] These regulations introduce biased and inconsistent practices for cost-benefit analysis, and should be repealed. If any of the Department's other planned actions implementing Executive Order 13,783 are still pending, those actions should be halted and reversed as well.[74]

EPA has proposed but (as of early October 2020) has not yet finalized several problematic regulatory changes as well. EPA's proposed rule to change the standards for cost-benefit analysis of regulations under the Clean Air Act breaks from longstanding best practices in several detrimental ways, especially by undermining the consideration of co-benefits and by repeatedly setting higher bars for the consideration of benefits than for compliance costs.[75] The proposed rule on "transparency in regulatory science" is similarly designed to undermining the scientific basis for existing and future

regulations.[76] If either proposal is finalized before the next President takes office, the next administration should repeal any such rule; if these proposals or any new proposals along similar lines are still pending, they should be withdrawn.[77]

Several agencies have begun to issue new regulations to govern their processes for developing guidance document, pursuant to Executive Order 13,891.[78] Depending on the approach the next administration takes toward the review of guidance documents, those new agency regulations may need to be reviewed as well.

Finally, the next presidential administration should instruct all agency economists to stop work on any regulatory impact analyses that may be based on anti-regulatory guidance developed during the Trump Administration. These instructions should be part of the stop-work order that the incoming Chief of Staff is likely to issue more generally for all pending regulatory actions leftover from the outgoing administration. OIRA should then work with agencies' economists, lawyers, or regulatory policy officers to identify any internal agency guidance on regulatory analysis that may have been changed during the Trump Administration and so may require a review.

II. Give Agencies Supplemental Guidance on How to Maximize Social Welfare

OIRA's key guidance document to federal agencies on how to conduct their regulatory analyses in order to "maximize net benefits"[79] is *Circular A-4*, which was issued in 2003 under George W. Bush's administration.[80] *Circular A-4* provides guidance on justifying the need for regulatory action, selecting alternatives, setting a baseline, quantifying and monetizing costs and benefits, discounting future monetized effects to compare to present-day values, assessing unquantified effects, handling uncertainty, and considering distributional effects, among other topics.[81]

Under President Obama's administration, OIRA issued a "*Primer*" that summarized the requirements of *Circular A-4* but not did update or substitute any of those requirements, thus confirming that *Circular A-4* remained the best available guidance to agencies during the Obama Administration.[82] Agencies and OIRA during the Trump administration have continued to rely on *Circular A-4* as well.[83] For nearly two decades, under administrations of both political parties, *Circular A-4* has provided consistent and valuable guidance. Courts are comfortable citing to it as well.[84] There is value in *Circular A-4*'s longevity.

That said, over the years some key points from *Circular A-4* have become misinterpreted or overlooked, and some simplifying default recommendations from *Circular A-4* have been mistakenly transformed into rigid rules at the expense of analysts' good judgment and best practices. Yet as *Circular A-4* itself notes early on:

> [Y]ou cannot conduct a good regulatory analysis according to a formula. Conducting high-quality analysis requires competent professional judgement. ***Different regulations may call for different emphases in the analysis, depending on the nature and complexity*** of the regulatory issues and the sensitivity of the benefit and cost estimates to key assumptions.[85]

Similarly, in 2015, OIRA explained that "*Circular A-4* is a living document."[86] Therefore, OIRA should first issue supplemental guidance to clarify some key best practices for regulatory analysis. Then, as a longer-term endeavor, OIRA should develop a transparent, expert-driven process to assess whether any more formal updates or revisions are warranted.

First, *Circular A-4*'s introduction could be misinterpreted to imply that the guidance applies only to regulatory analyses of so-called "economically significant regulatory actions," and not to other assessments of regulatory costs and benefits.[87] But while it is true that many rulemakings that do not pass the threshold for "economic significance" may not require a full, formal, and rigorous cost-benefit analysis, Executive Order 12,866 requires that for all regulations, to the extent permitted by law, agencies "shall assess both the costs and the benefits . . . and . . . propose or adopt a regulation only upon a reasoned determination that the benefits of the intended regulation justify its costs."[88] The principles enshrined in *Circular A-4* are important for agencies to consider whenever they assess regulatory costs and benefits, even if they are not conducting a full, rigorous cost-benefit analysis. OIRA should clarify that *Circular A-4*'s principles should inform all assessments of costs and benefits, while simultaneously confirming that the rigor of the analytical approaches should vary in proportion to the overall significance of the rule and magnitude of its likely effects.[89]

Second, OIRA should point agencies toward other available guidelines. Some agencies have developed their own sophisticated guidelines for economic analysis that more specifically address key issues that repeatedly come up in particular regulatory contexts. Of particular note, EPA's *Guidelines for Preparing Economic Analyses* are currently undergoing a review by the agency's Science Advisory Board,[90] and the Department of Health and Human Services last updated its *Guidelines for Regulatory Impact Analysis* in 2016.[91] Some agencies might find these more tailored documents relevant to their own regulatory analyses and useful as additional supplements to *Circular A-4*.

The rest of this section contains recommendations in several targeted subsections: (a) OIRA should supplement its often-overlooked guidance on **distributional analysis**, to make that analysis meaningful and consequential; (b) OIRA should supplement its guidance on unquantified effects, to encourage more efforts to quantify the most important **unquantified effects** and to increase the salience of presentations of unquantified effects; (c) OIRA should supplement its guidance on cost-benefit analysis to address **modern regulatory realities**, such as climate change; and (d) OIRA should reconvene the Interagency Working Group on the Social Cost of Greenhouse Gases, to restore and update the guidance on weighing the **climate effects** of government action.

II.A. Make Distributional Analyses Meaningful and Consequential

Executive Orders 12,866 and 13,563 already require agencies to assess the distribution of regulatory costs and benefits and assess implications for equity,[92] and *Circular A-4* contains a few paragraphs of guidance on distributional effects and transfers.[93] Additional statutes and Executive Orders require additional, specific distributional analyses, such as assessing small business impacts under the Regulatory Flexibility Act[94] and environmental justice impacts under Executive Order 12,898.[95]

Yet historically, most distributional analyses, and especially environmental justice analyses, get little attention and carry little weight. Distributional impacts often are not quantified, and the analysis often does not influence the regulatory decision in any meaningful way.[96] Some agencies routinely fail to consider certain distributional impacts at all.[97] One notable exception is the small business analysis, which often does result in special exemptions or waivers for small businesses, or sometimes delays or blocks a regulatory proposal from proceeding altogether.[98] The fact that the federal Small Business Administration has an Office of Advocacy that can weigh in on regulations during the inter-agency review process, and the fact that a statute requires the convening and early participation of small business stakeholder panels in many key regulatory processes, have been credited with the special, narrow influence of this particular process.[99]

> "The time has come to make distributional consequences a core concern of the regulatory state; otherwise, future socially beneficial regulations could well encounter significant roadblocks."
>
> Richard L. Revesz, Lawrence King Professor of Law & Dean Emeritus, NYU School of Law[100]

Recommendation 2: Convene an Interagency Working Group on Distributional Impacts to develop guidance on making distributional analysis more meaningful and consequential.

OIRA should convene an interagency working group on distributional issues.[101] The working group should then develop guidance on conducting distributional analysis that will supplement the existing sections in *Circular A-4*. The additional guidance should provide agencies with clear definitions of relevant groups and distributional consequences, tools

for quantification, metrics for assessing the significance of distributional impacts, and recommendations on how to summarize quantitative and qualitative descriptions of distributional impacts in salient ways in both the tables and text of rulemaking notices. EPA's *Technical Guidance for Assessing Environmental Justice in Regulatory Analysis* may provide a useful jumping off point for some of this work.[102]

Once a set of best practices is established by the interagency working group, it will become less costly for agencies to conduct their distributional analyses, because they can refer back to established practices rather than trying to reinvent a new methodology each time. The interagency working group should carefully consider the range of existing requirements for distributional analysis and seek to establish, to the extent possible, a single methodology that would satisfy all such requirements. For example, the new distributional analysis methodology should cover requirements to analyze environmental justice impacts under Executive Order 12,898, impacts to children under Executive Order 13,045, and small business impacts under the Regulatory Flexibility Act.

A standardized methodology, including common definitions of subgroups to focus on and metrics for quantification, will also help make different agencies' distributional analyses interoperable, so that they can be compared and also aggregated. The interagency working group should help OIRA aggregate summaries of collective distributional impacts across regulations and across agencies, to include in OIRA's annual reports to Congress.

The interagency working group should review both the quality of the distributional analysis being conducted by individual agencies, as well as the quality of agencies' stakeholder engagement. The working group should develop ways to flag potential distributional impacts early in the regulatory process, perhaps through agencies' submissions to OIRA of their semiannual regulatory plans for the unified agenda, to alert interested stakeholders of the opportunity to engage on regulations that may disproportionately impact them.

The interagency working group should also review the individual distributional impacts of key rules, as well as collective impacts across rules, and recommend appropriate measures to mitigate any significantly disproportionate effects. Possible mitigation options would include rule changes or other actions from the executive branch that may compensate the disproportionately affected group.[103] The need to consider opportunities to mitigate distributional consequences is a key reason for agencies to consider additional regulatory alternatives in their cost-benefit analyses (*see infra*, Recommendation 4(C)).

Finally, because many key distributional impacts currently cannot be fully quantified,[104] the interagency working group should be integrated into OIRA's efforts to prioritize unquantified effects for research, as described in the next subsection.

II.B. Ensure That Important Unquantified Effects Do Not Count as Zero

Too often—even among agencies with relatively sophisticated cost-benefit practices like EPA and the Department of Health and Human Services—many key regulatory effects remain unquantified.[105]

Prominent categories of frequently unquantified effects include, for example:[106]

- The health benefits of avoiding non-fatal morbidity endpoints, such as birth defects, neurodevelopmental effects, and non-fatal cardiovascular diseases;[107]
- The environmental, economic, and health benefits of preserving or promoting ecosystem services, like flood control, soil formation, aesthetic beauty, and genetic diversity, as well as water quality;[108]
- The benefits of reducing fear, anxiety, and stress, such as the anxiety medical professionals experience while waiting for test results on whether a failure of their personal protective equipment exposed them to a pathogen;[109]
- Improvements to the quality of life;[110]
- The option value of delaying extraction of natural resources;[111] and
- Myriad distributional effects, as well as equity, fairness, and human dignity,[112] and especially many environmental justice effects.[113]

Failure to quantify key effects can lead to inefficient, inequitable, and otherwise unfortunate regulatory outcomes. For example, when key categories of regulatory benefits remain unquantified, decisionmakers are more likely to ignore or give less weight to those qualitative-only assessments of benefits,[114] resulting in inefficiently weak regulations. Regulations with only qualitative benefits may be especially vulnerable to deregulatory attacks by subsequent administrations,[115] and may have a harder time surviving litigation.[116] Similarly, when distributional effects are not quantified, they either tend to be effectively ignored (as with many environmental justice effects[117]) or given outsized importance at the expense of broader social welfare (as when minor costs to small businesses are used to justify large regulatory exemptions for small businesses[118]).

OIRA should pursue the following goals: first, encourage quantification and monetization of more categories of key benefits; second, issue more detailed guidance to agencies on how to quantify effects, how to assess and disclose the significance of unquantified effects, and how to conduct "breakeven analysis," through which analysts can test how small or large the unquantified effect would have to be to alter the outcome of the cost-benefit analysis.

Recommendation 3(A): Identify key unquantified effects and encourage research to quantify them.

Many unquantified effects are currently a type of "unknown unknown," in that the federal government does not track which categories of unquantified effects are most frequent or most salient in rulemakings. Any individual agency may not realize, for example, that certain unquantified effects that it occasionally sees in its rulemakings in fact frequently crop up in rulemakings across the entire federal government.[119] OIRA should spearhead the twin efforts first to translate these effects into "known unknowns" by identifying which key effects across all federal rulemakings are currently unquantified, and then to translate them into "known knowns," by encouraging research to quantify them.

Working with agencies, as well as with public stakeholders and outside experts, OIRA should catalogue the most important regulatory effects that are currently unquantified. There are multiple potential mechanisms for this effort, including convening an interagency working group on unquantified effects;[120] issuing notices and requests for information to solicit public comments; and requiring agencies to flag important unquantified effects when submitting their regulatory plans and individual rulemakings to OIRA for review, so that OIRA can catalogue the effects in its annual reports to Congress on the benefits and costs of federal regulations. OIRA is required to report annually to Congress on regulatory benefits and costs, "including . . . nonquantifiable effects," and also to make recommendations for reform.[121] These annual reports, therefore, can be a repository for the efforts to catalogue important unquantified effects.

Once the most important unquantified effects have been identified, OIRA should encourage research to quantify and monetize any of those effects that can be quantified and monetized with sufficient additional data. The federal government has historically served at least two crucial roles in quantifying and monetizing new categories of regulatory effects, both through its own direct research efforts and as a research funder.[122] OIRA should help the government reprise both those roles, as well as adding a third: using disclosure as a communications tool to coax outside funding and research.

OIRA's annual reports to Congress can help OIRA fill all three of those roles. First, after identifying the most important unquantified effects in the reports, OIRA can make recommendations to agencies and coordinate them in direct efforts to engage in additional research to quantify and monetize some of these effects. OIRA can supplement this coordination effort, if necessary, with "prompt letters" calling on specific agencies to conduct research relevant to regulatory analyses, as OIRA has occasionally done in the past.[123] OIRA should also require agencies to reach out to stakeholders, and in particular to disadvantaged, vulnerable, or marginalized communities that may have access to data, or may be able to help agencies collect data, on the regulatory costs and benefits borne by these communities that have not yet been quantified.[124] And when agencies or government-funded researchers reach out to the public to collect the data necessary to quantify additional regulatory effects, OIRA should ensure that its reviews under the Paperwork Reduction Act (PRA) are prioritized and expeditious.

Though OIRA already has developed a memorandum on advancing scientific research more quickly through the Paperwork Reduction Act review process,[125] and though some information collection requests certainly are processed quickly,[126] other requests still take a while. For example, in July 2013, EPA proposed a willingness-to-pay survey for salmon recovery in the Willamette Watershed. Only one public comment was received on the proposal, but then it took EPA until October 2014 to formally submit the information collection proposal to OIRA (at which time only one additional public comment was received).[127] It then took OIRA from October 2014 until May 2015 to approve the information collection,[128] even though the 30-minute survey only sought to contact 1000 people in Oregon, participation was voluntary, and there was little personal information and no sensitive information being collected.[129] OIRA's mandate under the Paperwork Reduction Act is not only to minimize the paperwork burdens placed on the American people by the government, but also to maximize the utility of the information being collected.[130] To that end, OIRA should ensure that when it receives information collection requests aimed at filling in gaps in knowledge about regulatory effects, those requests should be processed expeditiously—even as OIRA also works to ensure that the information collection instrument is designed as well as possible to help quantify and monetize additional regulatory effects.

In addition to the first role of directly supporting research, OIRA should also facilitate government's second historical role in helping to quantify new regulatory effects: namely, funding. OIRA should use its annual reports to make recommendations to Congress on the need for additional research funding, so that the National Science Foundation (NSF) and other research-funding agencies can direct grants toward these research priorities. Far too often, NSF and

other government grant-makers favor the most novel and innovative research, whereas generating the data needed to quantify and monetize more regulatory effects may instead require, for example, a decidedly un-novel application of existing methodologies to conduct yet another willingness-to-pay survey for a slightly distinct regulatory effect. Such research may not always be novel, but it is crucial and deserves funding. OIRA should also work with OMB to find room in the president's annual budget proposals for such research needs.

And third, OIRA should create public-facing materials that academic institutions, think tanks, and foundations can access to learn of the government's most pressing research needs in the field of regulatory analysis. Through smart communication efforts that connect these research needs to the promise of more efficient and more defensible regulations, OIRA can help direct outside efforts toward the government's research priorities.

Recommendation 3(B): Issue more guidance on how to quantify uncertain effects and how to assess the significance of unquantified effects.

OIRA should remind agencies, as *Circular A-4* already specifies, that all important regulatory effects that can be quantified and monetized *should be* quantified and monetized, and that agencies must explain their reasons for failing to do so. In particular, OIRA should more explicitly caution agencies against assuming that the public's willingness to pay to avoid a less-than-certain risk is either zero or unquantifiable—especially since treating such a risk as unquantifiable often has the effect of treating it as zero.

Take, for example, the risk of cardiovascular diseases associated with arsenic in drinking water. Existing science may find only a "suggestive" association between arsenic and cardiovascular diseases, rather than a conclusive causal link, and as such EPA may be inclined not to monetize any willingness to pay to avoid this slightly uncertain risk. However, failing to monetize the risk may result in decisionmakers assuming there is no real benefit from reducing the cardiovascular risks associated with arsenic in drinking water. To the contrary, the exposed populations most likely have a real, positive willingness to pay to avoid this potential threat, despite the slight uncertainty about the magnitude of the risk.[131] OIRA should supplement its existing guidance to ensure that agencies do not use uncertainty as an excuse to fail to even attempt to quantify or monetize important regulatory effects. Sensitivity analysis can be a useful tool to handle the uncertainty around quantifying and monetizing key effects, and also to reveal the importance of not leaving these effects unquantified.

Even after such renewed efforts to quantify more effects as described above, some important categories of regulatory effects will continue to be not readily quantifiable or monetizable, because of insufficient scientific or economic data. Agencies need more guidance on how to weigh the significance of such unquantified effects. *Circular A-4* currently reminds agencies to discuss un-monetized or unquantified effects in as much qualitative detail as possible, including an explanation for why the effects could not be quantified or monetized, the strengths and limits of the qualitative information available, and how important the unquantified effects are in the overall analysis.[132] *Circular A-4* also spends one sentence describing a tool to assess the significance of unquantified effects: namely, "breakeven analysis," in which analysts ask "How small could the value of the non-quantified benefits be (or how large would the value of the non-quantified costs need to be) before the rule would yield zero net benefits?"[133] A 2011 supplement to *Circular A-4* added one additional paragraph on breakeven analysis.[134]

Despite OIRA's existing guidance, how agencies currently treat unquantified effects leaves much to be desired. Far too few agencies employ breakeven analysis in a useful way to weigh significant unquantified effects against those effects that are monetized.[135] Agencies otherwise at best typically list unquantified effects in a table, or else bury them in a brief

description. Even if a proposed rule's monetized benefits do not alone outweigh its monetized costs, agencies may not always be explicit about whether they are relying on major unquantified benefits to justify the rule.[136] It is often difficult for the public, Congress, or the courts to assess how significant the unquantified effects are, which has left some major regulations—like EPA's Mercury and Air Toxics Standards—vulnerable to the misguided attack that these regulations are unjustified, when in fact the regulations' unquantified health effects are likely vast.[137]

OIRA should develop and recommend to agencies additional tools for weighing and highlighting the significance of the most important unquantified effects. OIRA may again consider convening an interagency working group on unquantified effects to generate ideas, or may issue a call for public comments. OIRA should also consider working with the Council on Environmental Quality (CEQ), given the charge under the National Environmental Policy Act for "all agencies" to consult with CEQ as they "develop methods and procedures . . . [to] insure that presently unquantified environmental amenities and values may be given appropriate consideration in decisionmaking."[138]

One approach, praised by some U.S. regulatory experts in the past[139] and deployed in some regulatory analyses for the European Commission,[140] uses a three-point scale to assign stars to unquantified effects depending on how significant the unquantified effect is expected to be. OIRA should apply its own guidelines to agencies on smart regulatory disclosures and consider how more graphical presentations and more standardized presentations across agencies could increase the salience of significant unquantified effects.[141] Finally, OIRA should offer agencies more concrete examples of how to conduct a meaningful and rigorous breakeven analysis, sharing details from some of the most successful recent uses of breakeven analysis in regulatory decisionmaking. [142]

Example of a Star Rating System to Assess the Significance of Unquantified Effects[143]

Effect	Preliminary rating
Health	
Ozone: chronic effects on mortality and morbidity	★★
SO_2: chronic effects on morbidity	★
Direct effects of VOCs	★
Social impacts of air pollution on health	★★
Altruistic effects	★★
Materials	
Effects on cultural assets	★★
Crops	
Indirect air pollution effects on livestock	★
Visible injury following ozone exposure	★
Interactions between pollutants, with pests and pathogens, climate...	★★
Forests	
Effects of O_3, acidification and eutrophication	★★★
Freshwaters	
Acidification and loss of invertebrates, fish, etc.	★★★
Other ecosystems	
Effects of O_3, acidification and eutrophication on biodiversity	★★★
Visibility	
Change in amenity	★
Groundwater quality and supply of drinking water	
Effects of acidification	★

II.C. Supplement Guidance on Cost-Benefit Analysis to Address Modern Regulatory Realities

Since *Circular A-4* was written in 2003, several modern regulatory circumstances have emerged that warrant clarifications and supplemental guidance, particularly on discount rates, international effects, alternatives, and behavioral economics.

Recommendation 4(A): Clarify that *Circular A-4*'s default recommendations on discount rates can be overridden, given updated data and especially in special cases like climate change.

> "*Circular A-4* is a living document."
>
> Office of Information and Regulatory Affairs (2015)[144]

While *Circular A-4* tells agencies generally to use both 3% and 7% discount rates for typical rules,[145] the guidance does not intend for default assumptions to produce analyses inconsistent with best economic practices. For example, in 2015, OIRA explained that "*Circular A-4* is a living document. . . . [T]he use of 7 percent is not considered appropriate for intergenerational discounting. There is wide support for this view in the academic literature, and it is recognized in *Circular A-4* itself."[146] OIRA should explicitly reaffirm that *Circular A-4*'s default discount rate recommendations can be overridden. This is especially true and necessary in specific regulatory cases, such as climate change; but, given the most recent data, moving away from high rates like 7%, and toward a declining discount rate framework, may make sense more generally.

There are several reasons why discounting at a 7% discount rate may be inappropriate, particularly in the case of climate change. First, basing the discount rate on the consumption rate of interest is the correct framework for analysis of climate effects; a discount rate based on the private return to capital is inappropriate. *Circular A-4* does suggest that 7% should be a "default position" that reflects regulations that primarily displace capital investments; however, the Circular explains that "[w]hen regulation primarily and directly affects private consumption . . . *a lower discount rate is appropriate.*"[147] The 7% discount rate is based on a private sector rate of return on capital, but private market participants typically have short time horizons. By contrast, climate change concerns the public well-being broadly. Rather than evaluating an optimal outcome from the narrow perspective of investors alone, economic theory requires analysts to make the optimal choices based on societal preferences and social discount rates. Moreover, because climate change is expected to largely affect large-scale consumption, as opposed to capital investment,[148] a 7% rate is inappropriate. The Council of Economic Advisers[149] and the National Academies of Sciences (NAS)[150] have drawn similar conclusions. Other specific regulatory contexts beyond climate change—like water quality standards for lead, where the benefits largely fall to future generations and the costs are largely borne by publicly owned water systems rather than private market actors—may also call for lower-than-default discount rates.[151]

Second, uncertainty over the long time-horizon of climate effects should drive analysts to select a lower discount rate. As an example of when a 7% discount rate is appropriate, *Circular A-4* identifies an EPA rule with a 30-year timeframe of costs and benefits.[152] By contrast, greenhouse gas emissions generate effects stretching out across 300 years. As *Circular A-4* notes, while "[p]rivate market rates provide a reliable reference for determining how society values time within a generation, but for extremely long time periods no comparable private rates exist."[153] *Circular A-4* discusses how uncertainty over long time horizons drives the discount rate lower: "the longer the horizon for the analysis," the greater the "uncertainty about the appropriate value of the discount rate," which supports a lower rate.[154] *Circular A-4* cites the

work of renowned economist Martin Weitzman and concludes that the "certainty-equivalent discount factor corresponds to the minimum discount rate having any substantial positive probability."[155] The NAS makes the same point about discount rates and uncertainty.[156] Again, a long time-horizon for regulatory costs and benefits is perhaps most common with—but not unique to—climate regulations; other regulations, like standards for persistent toxic chemicals, may also feature similar considerations.[157]

Third, a 7% discount rate ignores catastrophic risks and the welfare of future generations. When it comes to climate change and measuring the social cost of a greenhouse gases, a 7% discount rate effectively assumes that present-day Americans are barely willing to pay anything at all to prevent medium- to long-term catastrophes. This assumption may violate various agencies' statutory duty to protect the future needs of Americans.

Fourth, a 7% discount rate may be based on outdated data and biased assumptions. *Circular A-4* requires that assumptions—including discount rate choices—are "based on the best reasonably obtainable scientific, technical, and economic information available."[158] Yet *Circular A-4*'s own default assumption of a 7% discount rate was published 17 years ago and was based on data from decades ago.[159] *Circular A-4*'s default guidance on discount rates may no longer reflect the best obtainable information, as the Council of Economic Advisers detailed after reviewing the best available economic data and theory:

> The discount rate guidance for Federal policies and projects was last revised in 2003. Since then a general reduction in interest rates along with a reduction in the forecast of long-run interest rates, warrants serious consideration for a reduction in the discount rates used for benefit-cost analysis.[160]

In addition to recommending a value below 7% as the discount factor based on private capital returns, the Council of Economic Advisers further explained that, because long-term interest rates have fallen, a discount rate based on the consumption rate of interest "should be at most 2 percent."[161] The latest OMB updates to Circular A-94, the document on which *Circular A-4* based its discount rates,[162] also show that more up-to-date long-run discount rates are historically low. In the December 2019 update to Circular A-94's discount rates, the OMB found that the real, 30-year discount rate is 0.4 percent,[163] the lowest rate since the OMB began tracking the number.[164] By contrast, in 2003, when *Circular A-4* was adopted, the real, 30-year rate was 3.2%.[165] Notably, OMB also shows that the current real interest rate is negative for maturities less than 10 years.[166]

These low interest rates further confirm that applying a 7% rate to a context like climate change would be wildly out of step with the latest data and theory. Similarly, recent expert elicitations—a technique supported by *Circular A-4* for filling in gaps in knowledge[167]—indicate a growing consensus among experts in climate economics around a discount rate between 2% and 3%; 5% represents the upper range of values recommended by experts, and few to no experts support discount rates greater than 5% being applied to the costs and benefits of climate change.[168] Based on current economic data and theory, the most appropriate discount rate for climate change is 3% or lower.

More broadly, a 7% discount rate was only ever an approximation of the marginal social return to capital, as based on the average private return to capital. But there are various reasons why the appropriate discount rate to use in regulatory analysis may diverge from private rates of return.[169] Namely, imperfect capital markets, difference between private and social risk, and environmental externalities can all decrease the social return on capital relative to the private return of capital.[170] In other words, the 7% rate is an estimate that, for various reasons, was biased upward, and may actually best be treated as an upper bound on the appropriate discount rate, rather than a default rate that must be used every time.[171]

Circular A-4 does recommend that agencies consider additional discount rates besides 3% and 7% as sensitivity analyses, especially in the case of intergenerational effects.[172] However, agencies typically interpret these instructions as still requiring them to use both 3% and 7% discount rates as defaults in the first place. Yet elsewhere in *Circular A-4*, OIRA has actually made clear that agencies should not rigidly apply all available assumptions regardless of plausibility. *Circular A-4* instructs agencies to depart from default assumptions when special issues "call for different emphases" depending on "the sensitivity of the benefit and cost estimates to the key assumptions."[173] More specifically:

> If benefit or cost estimates depend heavily on certain assumptions, you should make those assumptions explicit and carry out *sensitivity analyses using plausible alternative assumptions*. If the value of net benefits changes from positive to negative (or vice versa) or if the relative ranking of regulatory options changes with alternative plausible assumptions, you should conduct further analysis to determine **which of the alternative assumptions is more appropriate**.[174]

In other words, if using a 7% discount rate would fundamentally change the agency's decision compared to using a 3% or lower discount rate, the agency must evaluate which assumption is most appropriate. OIRA should issue supplemental guidance that clarifies when and how agencies may reasonably depart from reliance on a default discount rate of 7%—particularly in the case of climate change, but in other appropriate regulatory contexts as well given recent theoretical work and empirical evidence that call the 7% rate into question. OIRA should also encourage agencies to explore declining discount rate frameworks, especially in the context of climate regulations.

Recommendation 4(B): Clarify that *Circular A-4* does not require an exclusively domestic-only focus on costs and benefits, particularly when international effects will affect U.S. interests.

President Trump's Executive Order 13,783 instructed agencies to ensure that their estimates of climate damages were "consistent with . . . *Circular A-4*" on the issue of "the consideration of domestic versus international impacts."[175] Multiple agencies mistakenly interpreted these instructions as a prohibition against considering global climate damages in their regulatory analyses.[176] To the contrary, OIRA should clarify that considering global climate damages is consistent *Circular A-4* and best practices.

To follow *Circular A-4*'s instruction to analyze all significant effects that "accrue to [U.S.] citizens," agencies must at times look beyond "the borders of the United States"—especially in the case of climate change. For one, because of our world's interconnected financial, political, health, security, and environmental systems, climate impacts occurring initially beyond the geographic borders of the United States cause significant costs that accrue to U.S. citizens and residents. Second, for global externalities like climate change, if the United States fails to account for how its emissions damage other countries, other countries might reciprocate and ignore how their emissions damage the United States, leading to globally suboptimal regulations that will directly harm the United States. And third, U.S. citizens have direct interests in climate-related impacts that will occur overseas, including those affecting citizens living abroad or harming international habitats or species that U.S. citizens value.[177]

Furthermore, many regulatory analyses implicitly already count compliance costs or cost savings that will accrue to entities outside U.S. borders. All industry compliance costs ultimately fall on the owners, employees, and customers of regulated and affected firms. At a minimum, many if not all regulated and affected firms that are public companies have significant foreign ownership of stock and corporate debt. Other regulated entities may have direct or indirect foreign consumers. Agencies do not typically separate out any share of compliance costs or cost savings that will ultimately

accrue to foreign owners or customers of U.S.-based regulated entities. It is therefore inconsistent and arbitrary to fail to count costs and benefits from significant climate effects that happen to occur outside U.S. borders, especially when those costs and benefits may ultimately fall back to bear on U.S. interests.

Notably, in July 2020, the U.S. District Court for the Northern District of California ruled that the Bureau of Land Management's use of an "interim," domestic-only estimates for the social cost of methane in its justification to rescind the 2016 Waste Prevention Rule was arbitrary and capricious.[178] The court found that not only did BLM "revers[e] [its] prior position" about the proper Social Cost of Carbon value without sufficient justification,[179] but also that the domestic-only social cost of greenhouse gases is methodologically flawed and inappropriate for use by federal agencies. And by omitting global effects, BLM's

> analysis ignores impacts on 8 million United States citizens living abroad, including thousands of United States military personnel; billions of dollars of physical assets owned by United States companies abroad; United States companies impacted by their trading partners and suppliers broad; and global migration and geopolitical security.[180]

"Focusing solely on domestic [climate] effects has been soundly rejected by economists as improper and unsupported by science."

U.S. District Court for the Northern District of California[181]

OIRA should clarify that consideration of such impacts is not only consistent with, but required by, *Circular A-4*.

Recommendation 4(C): Clarify that *Circular A-4* may require consideration of more than just three alternatives.

Circular A-4 directs agencies that if "there is a 'continuum' of alternatives for a standard (such as the level of stringency), you generally should analyze at least three options: the preferred option; a more stringent option that achieves additional benefits (and presumably costs more) beyond those realized by the preferred option; and a less stringent option that costs less (and presumably generates fewer benefits) than the preferred option."[182] Far too often, this language has been interpreted by agencies as giving them license to consider only three alternatives.[183] In fact, *Circular A-4* requires analysts to exercise professional judgment in determining the "number and choice of alternatives selected for detailed analysis,"[184] recommends assessing a "reasonable" number of alternatives for each of the rule's individual "key attributes or provisions,"[185] and praises an example where an agency examined over twenty distinct alternatives.[186] Considering more than the three minimum alternatives is particularly important when distinct provisions within a broader regulation have their own distinct benefits and costs,[187] and when different alternatives may affect the distribution of benefits and costs among important and vulnerable groups.[188] OIRA should clarify for agencies that three alternatives is the *minimum* number typically required for analysis, and regulations with multiple distinct provisions may likely necessitate consideration of more than three alternatives.

Relatedly, agencies sometimes fail to disclose the costs and benefits of any alternatives when their "preferred" course of action is to maintain the status quo. This situation often comes up when agencies are required by statute to periodically review the stringency of their standards, as with EPA's national ambient air quality standards or the Department of Energy's energy conservation standards for appliances. At times, both agencies have announced a determination not to increase the stringency of the standards for various reasons but without disclosing the potential costs and benefits of alternatives to that course of action.[189] In fact, *Circular A-4* already contains guidance relevant to this situation: "When a

statute establishes a specific regulatory requirement and the agency is considering a more stringent standard, you should examine the benefits and costs of reasonable alternatives that reflect the range of the agency's statutory discretion, including the specific statutory requirement."[190] OIRA should clarify that even when an agency may prefer not increasing the stringency of an existing standard, it should still examine alternatives and disclose the costs and benefits.

Recommendation 4(D): Clarify that internalities and insights from behavioral economics can provide the justification for the need for federal regulation.

In recent years, federal agencies have questioned whether regulations can really generate private benefits, as when an energy efficiency standard saves consumers money or when tobacco regulation helps consumers stop smoking. Since consumers could already choose on their own, absent any regulatory intervention, to buy more efficient vehicles or appliances and so save money, or to stop smoking and so gain health benefits—and yet they choose not to do so—some agencies have wondered whether the regulations are depriving the consumers of some intangible welfare that wholly offset the private regulatory benefits.[191]

In fact, there is an extensive literature that supports that by correcting internalities and behavioral market failures, such regulations generate real and significant private benefits.[192] OIRA should clarify that such benefits should be fully counted.

Recommendation 4(E): Convene a longer-term, public-facing, expert-driven review of guidelines for cost-benefit analysis.

After issuing these initial clarifications, OIRA should convene a longer-term, independent process to consider bigger updates and additions to *Circular A-4*. This process must be seen as neutral and driven by economic experts relying on the best available literature, such that it will not simply be reversed by a future administration with a different political orientation. OIRA could consider partnering with the non-partisan Administrative Conference of the United States on this endeavor.

As part of this longer-term process, OIRA might also consider offering comments to agencies on their individual internal guidelines for economic analysis. Such comments might also focus on increasing the consistency of analyses across agencies. For example, currently EPA, the Department of Transportation, and HHS all have internal guidelines that recommend different measurements for the value of time, despite there being no justification for this inconsistency.[193]

II.D. Reconvene the Interagency Working Group on the Social Cost of Greenhouse Gases

The social cost of carbon (commonly abbreviated as the SCC, and one of a broader set of estimates called the social cost of greenhouse gases) has sometimes been called "the most important figure you've never heard of."[194] The social cost of carbon estimates the marginal damages that each additional ton of carbon dioxide contributes to the economic, environmental, health, and welfare harms caused by climate change. From 2009 through 2016, the federal Interagency Working Group on the Social Cost of Greenhouse Gases coordinated the efforts of twelve federal agencies and White House offices to harmonize the estimates used in federal policymaking. The Interagency Working Group's central estimate, of around $50 per ton of carbon dioxide, was used across the federal government in nearly 100 rulemaking and environmental impact statements,[195] was reviewed and supported by the National Academies of Sciences[196] and the U.S. Government Accountability Office,[197] and was upheld as reasonable by federal courts.[198] And even though

the Interagency Working Group's central estimate of around $50 per ton of carbon dioxide was widely believed to be a conservative estimate that omitted many key damage categories that could not yet be monetized (like wildfires),[199] expert economists continued to recommend using those values as the best available numbers.[200]

In the 2017 Executive Order 13,783, President Trump disbanded the Interagency Working Group, withdrew its technical support documents, and left individual agencies with little guidance on how to continue to value climate damages.[201] What resulted—the so-called "interim" estimates of the social cost of carbon and methane that were used by EPA,[202] BLM,[203] NHTSA,[204] and the Department of Energy[205]—made a number of economically unsound and legally arbitrary changes that decimated the prior estimates, from around $50 per ton of carbon dioxide down to as little as $1 per ton.[206] To reach that decimated valuation, the Trump administration agencies broke from best economic practices to try to replace the Interagency Working Group's estimate of global damages with a so-called "domestic-only" estimate (but which really omitted myriad significant climate impacts to U.S. interests). The "interim" estimates also grossly devalued the weight given to climate damages to future generations by applying a high discount rate, and agencies cited the uncertainty over more catastrophic damages and tipping points as a reason to cast doubt on the estimates, rather than as a reason to think even $50 per ton is almost certainly an underestimate.[207] Finally, under the Trump administration, agencies universally refused to use the social cost of greenhouse gas estimates in their environmental assessments conducted under the National Environmental Policy Act (NEPA) on, for example, federal leases for oil and gas development or approval of interstate pipelines.[208]

In July 2020, a federal district court found that the interim, domestic-only estimate of the social cost of methane arbitrarily failed to value key categories of climate damages that matter to U.S. interests, and broke from the best available economics and science.[209] The same month, the U.S. Government Accountability Office also found that the interim estimates—in sharp contrast to the Interagency Working Group numbers—did not reflect best science.[210] Meanwhile, multiple states have continued to use the Interagency Working Group numbers in their own policymaking, continuing to rely on them as the best available estimates.[211]

Recommendation 5(A): Quickly reconvene and expand the Interagency Working Group, and restore the 2016 estimates as minimum values for the social cost of greenhouse gases.

Executive Order 13,783 should be immediately revoked through a new presidential order that explicitly reinstates the Interagency Working Group's past technical support documents as "representative of governmental policy."[212] OIRA should spearhead the reconvening of the federal Interagency Working Group on the Social Cost of Greenhouse Gases. In addition to the agencies and offices that participated in the past, OIRA should invite the Federal Energy Regulatory Commission and the Army Corps of Engineers to join the Interagency Working Group. Such additions would be appropriate both because those agencies have expertise relevant to the calculation of the social cost of greenhouse gases (namely, FERC's expertise on the costs relating to changes in energy demand and impacts to energy infrastructure, and the Corps' expertise on costs to military infrastructure and to coasts and waterways) and also because both those agencies should be using the social cost metrics in their environmental impact statements and other policy analyses.

The reconvened Interagency Working Group should also establish a mechanism for offering states advice on how best to use the social cost metrics in their own policymaking. A growing number of states are using or considering use of the social cost of greenhouse gases in evaluating their electricity policy decisions,[213] but may need guidance on proper application of the figures. The outreach to states should be a two-way dialogue, so that the federal Interagency Working Group can learn about states' needs and concerns and incorporate that input into future updates and guidance.[214]

The reconvened Interagency Working Group should quickly restore the 2016 estimates as minimum values, replacing the flawed "interim" estimates. At the same time, the Interagency Working Group should issue some important clarifications to the 2016 estimates:

- Translate the estimates into 2020$. Continuing to present the estimates in 2007$ has long created confusion for agencies, stakeholders, and states. Going forward, the estimates should be regularly adjusted for inflation.
- Clarify that the estimates are valid for use in—and, indeed, may be necessary for use in—environmental assessments under NEPA, as well as in other policy decisions. The titles of the Interagency Working Group's past technical support documents misleadingly implied that perhaps the numbers were designed for use only in regulatory impact analysis. In fact, nothing about the social cost metrics are unique to regulatory impact analysis. Several courts have found that monetizing climate damages may be required in environmental assessment under NEPA if a project's alleged benefits have been monetized,[215] and that just quantifying greenhouse gas emissions without contextualizing their contributions to actual climate damages is insufficient under NEPA.[216] Similarly, it is entirely appropriate to use the social cost of greenhouse gas metrics in making decisions under, for example, the Natural Gas Act.[217]
- Clarify that the 2016 estimates are consistent with *Circular A-4*. Executive Order 13,783 wrongly implied that the Interagency Working Group's past estimates were not consistent with *Circular A-4*, especially with respect to the consideration of global damages and the focus on a 3% or lower discount rate. Though OIRA and the Interagency Working Group did explain in 2015 that both those methodological choices were entirely consistent with *Circular A-4*,[218] given the recent confusion created by the Trump administration's rhetoric around its "interim" estimates, it would be valuable to reconfirm that focusing on global damage estimates using a 3% or lower discount rate is consistent with *Circular A-4*.
- Clarify the appropriate use of the Interagency Working Group's range of four estimates. The fact that the Interagency Working Group produced not just a central estimate (calculated at a 3% discount rate), but two additional estimates at different discount rates (2.5% and 5%)—as well as a "high-impact" estimate that captured low-probability but high-damage, catastrophic, or irreversible outcomes, tipping points, and risk aversion[219]—has created some confusion for federal agencies and states using the estimates. During the Obama Administration, some agencies applied the full range of four estimates, while others focused on just the central estimate.[220] However, those government decisionmakers who are still resistant to using the social cost of greenhouse gas metrics—including agencies like the Federal Energy Regulatory Commission during the Trump Administration—have cited the range of estimates as evidence that there is no consensus around key methodological choices like the discount rate, and as evidence that the numbers are too uncertain to be useful.[221] The Interagency Working Group should clarify that it is acceptable, at least in the immediate future, for federal agencies to focus on using the central estimates, as there is a strong consensus that a 3% or lower discount rate is appropriate for weighing future climate damages. The Interagency Working Group should also express the growing consensus favoring application of a declining discount rate framework and, as such, should indicate that agencies may select to focus on the estimates calculated at a 2.5% discount rate as a proxy for a declining discount framework,[222] so long as the agencies conduct a sensitivity analysis using the 3% discount rate estimates. Finally, the Interagency Working Group should remind agencies of the value of including the "high-impact" estimates in a sensitivity analysis. Overall, the Interagency Working Group should clearly explain that the range of estimates in no way casts doubt on the validity of the methodology, and that uncertainty over the precise valuation tends to point toward even higher estimates of the social cost of greenhouse gases.

Recommendation 5(B): Develop a transparent process to regularly update the social cost of greenhouse gas estimates.

The National Academies of Sciences included a detailed list of recommendations for improving and updating the social cost of greenhouse gas estimates.[223] The Interagency Working Group should move to begin implementing these recommendations. While past estimates of the social cost of greenhouse gases were sometimes not made available for public comment until they were first used by federal agencies in a proposed rulemaking,[224] the Interagency Working Group should take public comments on its updates.

As the Interagency Working Group moves forward with the National Academy of Sciences recommendations, it should also bear in mind the other recommendations of this document. In particular, the Interagency Working Group should identify the most important categories of climate damages that are currently unquantified and so omitted from the social cost estimates, and OIRA, the Council on Environmental Quality, and agencies should work together—as explored above—to promote efforts to quantify these omitted damage categories. For those significant damage categories that still cannot yet be quantified or monetized, the Interagency Working Group should recommend to agencies ways to increase the salience of their presentations of additional unquantified climate effects, such as through the star-rating system described above. The Interagency Working Group should also consider the distributional aspects of climate damages and work to better quantify and disclose distributional climate impacts.

Finally, the Interagency Working Group should continue to develop specific estimates for additional species of greenhouse gases. Given the regulatory activity around hydrofluorocarbons, for example, a hydrofluorocarbon-specific set of estimates may be warranted.[225] The Interagency Working Group may also want to address how best to value the climate change contributions of black carbon. The Interagency Working Group should also reassess how considering relative global warming potentials on various time scales—such as a twenty-year time horizon in addition to a hundred-year time horizon—may affect some of the assumptions underlying its estimates, such as the estimates of the social cost of methane.

III. Support Public Participation to Help Maximize Social Welfare

Once criticized as "the regulatory black hole,"[226] OIRA undertook a number of improvements during the Clinton and Obama Administrations and, in many ways, had become one of the more publicly engaged federal entities. OIRA discloses on its website when it has begun deliberating on a rule, it logs all meetings with non-governmental entities, and it makes certain interagency communications with top-level officials available to the public.[227] And when OIRA has in the past called on federal agencies to undertake new rulemakings or engage in regulatory research, it has sometimes made these calls for action public through its publication of "prompt letters."[228]

OIRA has also in recent years made it easier to submit an online request for a meeting on a rule under OIRA's review, and has during the Covid-19 pandemic made it easier to schedule a teleconference meeting, rather than an in-person meeting.[229] OIRA should expand on these efforts by providing video conference-based meeting options in the future for stakeholders who may not be able to travel to Washington, D.C. for an in-person meeting, even after the Covid-19 pandemic ends.

Nevertheless, despite some past improvements on transparency and accessibility, OIRA can and should do more to support the public's engagement in the regulatory process.

Recommendation 6(A): Collect summary statistics from agencies on public petitions for rulemakings and consider issuing new prompt letters based on well-supported petitions.

The public has the right—enshrined in the Constitution as well as the Administrative Procedure Act—to petitions agencies for new rulemakings. However, historically many public petitions have languished at many agencies, often unanswered or even entirely unconsidered.[230]

OIRA has authority to collect information from both executive branch agencies and independent agencies on the matters that will be "under review" during the coming year.[231] OIRA should use this authority to collect summary statistics from agencies about any still pending or recently resolved petitions. These statistics could then be incorporated into existing OIRA publications, such as the unified regulatory agenda or the annual reports to Congress on regulatory activity.[232]

Publishing annual statistics will improve transparency, increase public confidence, allow agencies to take credit for the significant work they do reviewing petitions, and enable agencies to justify their timelines for review. The report will alert Congress to agencies' need for additional resources to meet their statutory obligations to respond to petitions, and will more generally enable Congress to weigh in on prioritization decisions. At the same time, stakeholders will gain clearer insight into agencies' petition processes, including likely timelines for review and chances of success. Simply having a system in place to track agencies' overall progress in reviewing petitions should spur agencies to review petitions as expeditiously as possible (given their constrained resources).

Moreover, for any petitions submitted with credible cost-benefit analyses, OIRA should (if given sufficient resources) help agencies review the merits of the petitions. If OIRA finds a strong case for regulation based on such petitions,

OIRA could either try to mediate between the agency and the petitioner, or else consider issuing a prompt letter to the agency to encourage it to take up the proposed rulemaking. Minimally, OIRA can revive the practice of flagging key underregulated areas in its annual reports to Congress, as it did, for example, in listing childhood obesity in 2010 as a critical problem deserving more regulatory attention.[233]

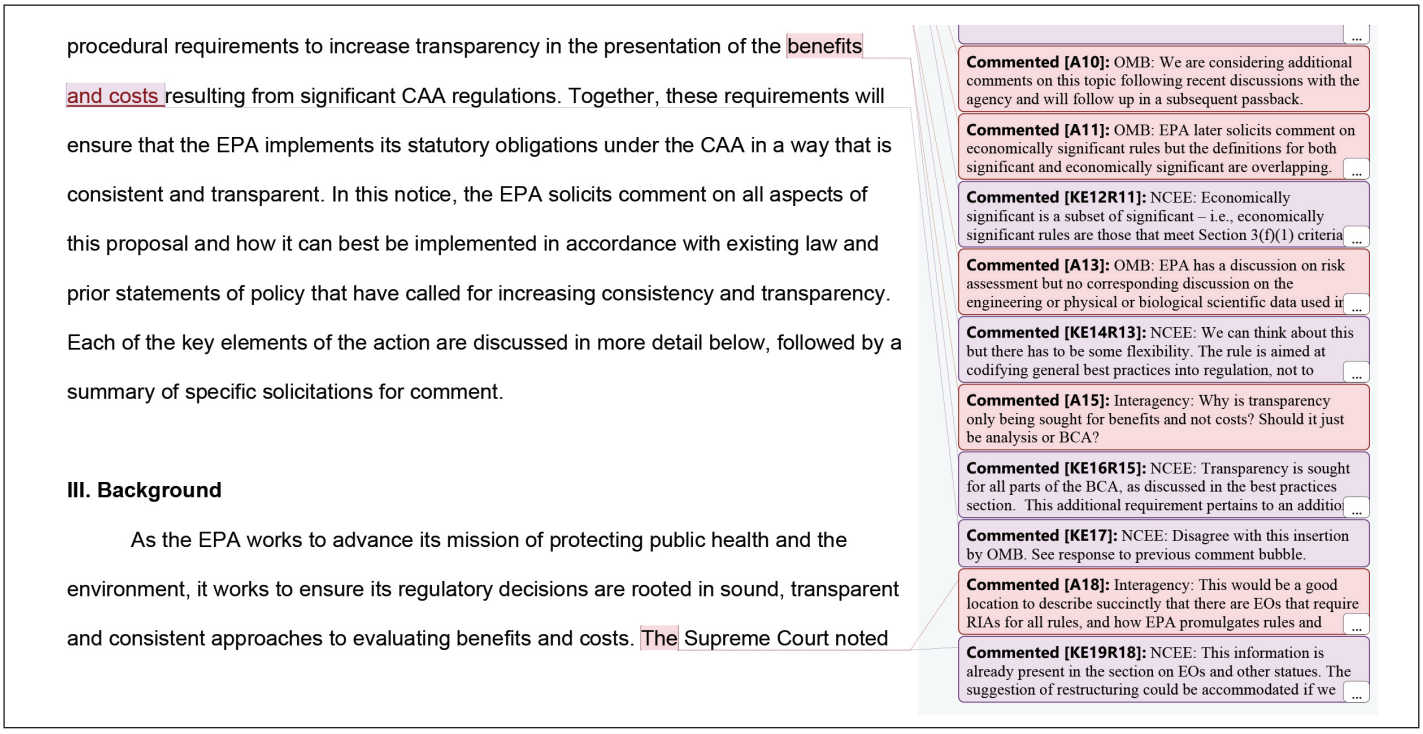
By reviewing public petitions in this way, OIRA can provide a check against agency inaction. Several legal experts and former OIRA leaders have recommended some combination of OIRA review of public petitions[234] or the revival of the practice of OIRA prompt letters.[235]

Recommendation 6(B): Ensure that all regulatory-review documents to which the public is entitled are made available online as soon as possible.

Though Executive Orders require OIRA to make public all exchanges with agencies during the regulatory review process,[236] and require agencies to "provide . . . timely online access to . . . all pertinent parts of the rulemaking docket, including relevant scientific and technical findings,"[237] such information is not always made available online and in a readily accessible format. In fact, the United States continues to score relatively worse than many other countries on metrics of process transparency of regulatory impact assessments, such as online availability and prompt publication.[238]

For example, when OIRA's communications with agencies are made available online through regulations.gov, a PDF of a Word Document with track changes and comment bubbles may be the only such entry that is made readily available. However, often only the first two or three lines of presumably extensive comment bubbles may be visible to the public through the PDF version of the document.[239] In effect, most of the comments sent to the rulemaking agency from OIRA or through the interagency process are not easily viewable to the public in an online format. There should be a straightforward technological solution to this problem.

Example of How PDFs on Regulations.Gov Abridge Inter-Agency Comments[240]



procedural requirements to increase transparency in the presentation of the benefits and costs resulting from significant CAA regulations. Together, these requirements will ensure that the EPA implements its statutory obligations under the CAA in a way that is consistent and transparent. In this notice, the EPA solicits comment on all aspects of this proposal and how it can best be implemented in accordance with existing law and prior statements of policy that have called for increasing consistency and transparency. Each of the key elements of the action are discussed in more detail below, followed by a summary of specific solicitations for comment.

III. Background

As the EPA works to advance its mission of protecting public health and the environment, it works to ensure its regulatory decisions are rooted in sound, transparent and consistent approaches to evaluating benefits and costs. The Supreme Court noted

Commented [A10]: OMB: We are considering additional comments on this topic following recent discussions with the agency and will follow up in a subsequent passback.

Commented [A11]: OMB: EPA later solicits comment on economically significant rules but the definitions for both significant and economically significant are overlapping.

Commented [KE12R11]: NCEE: Economically significant is a subset of significant – i.e., economically significant rules are those that meet Section 3(f)(1) criteria

Commented [A13]: OMB: EPA has a discussion on risk assessment but no corresponding discussion on the engineering or physical or biological scientific data used in

Commented [KE14R13]: NCEE: We can think about this but there has to be some flexibility. The rule is aimed at codifying general best practices into regulation, not to

Commented [A15]: Interagency: Why is transparency only being sought for benefits and not costs? Should it just be analysis or BCA?

Commented [KE16R15]: NCEE: Transparency is sought for all parts of the BCA, as discussed in the best practices section. This additional requirement pertains to an additio

Commented [KE17]: NCEE: Disagree with this insertion by OMB. See response to previous comment bubble.

Commented [A18]: Interagency: This would be a good location to describe succinctly that there are EOs that require RIAs for all rules, and how EPA promulgates rules and

Commented [KE19R18]: NCEE: This information is already present in the section on EOs and other statues. The suggestion of restructuring could be accommodated if we

For numerous other "significant" and "economically significant" regulations that have undergone interagency and OIRA review, the regulations.gov dockets may contain no communications from OIRA or from the interagency review process.[241] OIRA should work with agencies to ensure that all regulatory review communications to which the public is entitled are made available on regulations.gov in an accessible format and in a timely fashion.

A similar issue comes up with timely access to regulatory impact analyses. For major regulations, agencies sometimes post pre-publication versions of the proposed rulemakings long before any supporting documents or analyses are made available to the public on regulations.gov. For example, EPA's proposed standards for greenhouse gas emissions from aircraft was signed as a pre-publication version on July 21, 2020, on soon thereafter available online.[242] Yet it took over a month for the proposed rule to be published officially in the Federal Register, and the technical support document was not posted on regulations.gov until August 20, 2020, despite having been finalized in July.[243] The public could have easily had an extra month to review the technical support document, but instead was deprived of that extra time to review the only document in which EPA disclosed the alternative regulatory standards it had considered, and the costs and benefits of those alternatives—none of which appeared in the text of the proposed rule. There is no reason the public could not have had access to this crucial document sooner. Indeed, other agencies do occasionally release their regulatory impact analyses in advance of the *Federal Register* publication of the notice of proposed rulemaking: for example, the Department of Energy posted on regulations.gov its preliminary cost-benefit analysis of its efficiency standards for warm air furnaces some two weeks before the notice of the proposed rule was published.[244]

Finally, OIRA has a track record of missing deadlines when finalizing its annual reports to Congress and compiling the annual unified regulatory agendas.[245] These reports and agendas are important public-facing documents that stakeholders rely upon to track the federal government's regulatory efforts. OIRA should make efforts to publish these documents on time.

Recommendation 6(C): Improve transparency around any delays in regulatory reviews.

Due to the highly technical nature of many rulemakings, and because OIRA must both undertake its own review of the regulatory analysis and also coordinate an interagency review, sometimes conducting an effective regulatory review will take longer than the 90 days allotted by Executive Order 12,866. The costs of these delays must be balanced against the potential benefit that additional review may produce better rules.[246] If the review process requires more than the 90-day period, the public should be informed of the reason. Unjustified delay can harm the public, the agency, and OIRA's reputation.

Undue delay in the regulatory review process imposes costs on the public. In cases where OIRA is slow to reject a regulation that will not be ultimately justified through the cost-benefit analysis, then it is preventing the promulgating agency from developing a better, more efficient rule. If regulatory review delays the release of regulations that are cost-benefit justified, then intended beneficiaries will not receive the benefits of the regulation.[247] Delay in the regulatory review process also creates costly uncertainty for regulated entities.[248] Moreover, delay can damage public perception of OIRA. Though OIRA has greatly improved its track record for transparency, the public may perceive unexplained regulatory delay as undermining that track record.

There are times when OIRA will need to spend more than 90 days reviewing a rule. Extended review time may sometimes be unavoidable to ensure thorough and thoughtful centralized regulatory review. However, OIRA could take steps to ameliorate the negative impacts of regulatory delay:

- If insufficient information is causing delay, OIRA should either announce a timeline for acquiring the necessary information or return the rule to the agency to collect more data. If insufficient information makes it impossible for OIRA to complete its review, OIRA should send the rule back to the promulgating agency or otherwise announce the steps it will take, in coordination with the agency, to acquire sufficient information. The agency could issue a public request for information, and send the rule back to OIRA when there is sufficient information to support cost-benefit analysis and regulatory review. By sending the rule back to the agency or announcing an information-collection process, the public can participate in the regulatory process and rulemaking can continue.
- If complexity or prolonged inter-agency review is causing delay, OIRA should set a new timeline for review. Complex rules with many elements or difficult methodological problems may have particularly complicated cost-benefit analyses. Significant rules may attract attention from multiple agencies, and coordinating a comprehensive inter-agency review may create logistical complications. In such instances, OIRA may not be able to complete the review in the usual 90-day period. When this is the case, OIRA should publicly acknowledge the delay and explain the need for additional time. Reasons for delay should be as specific as feasible. If possible, OIRA should provide a real and achievable updated timeline for completing review. Such a policy would increase transparency and make it clear to the public that OIRA has not lost track of the rule and is not merely delaying the rule without reason.
- If insufficient resources are causing delay, OIRA should disclose the shortfall to the public and to Congress. If OIRA cannot complete a review in a timely manner due to lack of resources, OIRA should inform the public and Congress of its shortage. A lack of resources may be temporary due to staff turnover, or longer lasting, as in the case of a constrained OIRA budget. Publicizing these situations would increase transparency and allow the public an opportunity to support additional monetary and staff resources for OIRA to carry out its review duties.
- While there may be other reasons for delays in OIRA review, it is unacceptable to hold rules indefinitely at OIRA for political reasons or due to pressure from special interests. Politically motivated delays undermine the credibility both of OIRA as a neutral reviewing body and of cost-benefit analysis as a neutral tool for evaluating regulatory policies. Such delays particularly erode OIRA's credibility given its particular institutional history.

IV. Give OIRA the Staff Needed to Support Agencies in Maximizing Social Welfare

In 1981, soon after OIRA was first charged by the Paperwork Reduction Act with reviewing the government's information collection requests in addition to its regulatory review responsibilities, OIRA had 77 staff members.[249] By 1997, OIRA staff had declined to only 48 employees, of whom 22 focused at least partly on reviewing the paperwork collection requests.[250] In 2011, OIRA had about 30-40 desk officers and branch chiefs responsible for reviewing both 500-700 significant regulations each year and upwards of 3,000 or more information collection requests each year.[251] As of 2020, OIRA reports having around 45 full-time staff to manage all of OIRA's many duties.[252]

This level of staffing is widely believed to be inadequate to meet OIRA's growing list of responsibilities.[253] Besides its crucial reviews of hundreds of regulatory actions each year—including the coordination of inter-agency reviews—OIRA is responsible for reviewing all agencies' information collection activities, reducing paperwork burdens, developing government-wide statistics standards and policies, facilitating interagency data-sharing, promoting e-government services, overseeing agencies' information and peer review practices, guiding agencies on privacy and confidentiality policy, supervising agencies' retrospective reviews, participation in regulatory flexibility reviews, monitoring agency compliance with the Unfunded Mandates Reform Act, and spearheading international regulatory coordination efforts.[254] OIRA has been criticized in the past for delaying the promulgation of new regulations, and though at times the thorny interagency coordination process—and not OIRA staff themselves—may have been at least partly to blame for postponing the otherwise speedy promulgation of certain regulations,[255] at other times OIRA's inadequate staffing levels may have also been partly responsible for delays.[256]

Given its existing duties, any additional reforms to the regulatory review process—as proposed in this report—will be less likely to succeed unless OIRA's staff is increased to adequate levels. In addition, it is critical that OIRA continue to diversify the expertise of its staff, to cope with the growing complexity and scientific rigor of cost-benefit analysis, and to better tackle new reforms like spearheading an effort to make distributional analysis more meaningful and consequential, as proposed above. Furthermore, increasing OIRA's staff levels may help to ensure that OIRA is able to review regulations both expeditiously and thoroughly. Enabling OIRA to help agencies in a timely fashion to improve their regulatory analysis and decisionmaking will better ensure that final regulations can survive judicial review and are more resilient to possible deregulatory efforts of a subsequent administration.[257]

Recommendation 7: Supplement OIRA staff with secundments until budget proposals can adequately increase OIRA staff.

In the short term, OIRA should use secundments of qualified staff from within the Executive Office of the President (such as the Council of Economic Advisors) and even from agencies themselves to help buttress OIRA's existing staff.[258] Then, in the incoming president's first budget proposal, OMB should prepare a budget that prioritizes hiring more staff with relevant expertise for OIRA.

Conclusion: OIRA Must Continue to Improve Its Efforts to Maximize Social Welfare

This report has explored a number of ways in which OIRA can refocus and enhance its role in helping agencies to design regulations that will maximize social welfare. The next presidential administration should excise the most problematic recent Executive Orders that have distorted the regulatory review process and added anti-regulatory biases. OIRA should return to its traditional roles of coordinating interagency review and improving the quality of regulatory analyses in ways that will ensure that regulations maximize net social welfare as much as possible and are as resilient as possible to challenges in the courts, in Congress, or by future administrations. OIRA should also give agencies more guidance on modern-day regulatory challenges, on making distributional analysis meaningful and consequential, and on ensuring that unquantified regulatory effects are not ignored. OIRA should reconvene the Interagency Working Group on the Social Cost of Greenhouse Gases, so that agencies are prepared to face one of the most pressing regulatory challenges of our times: climate change. And OIRA should facilitate broader public engagement in the rulemaking process, including by reviewing public petitions for rulemaking and prompting agencies to act on neglected regulatory priorities. Successfully implementing many of these recommendations may require that OIRA is provided with additional staff and resources.

There are, of course, many additional recommendations for improvement that this report could have just as easily explored. Retrospective review of existing regulations, for example, is a perennial favorite target for advice on how to improve OIRA's processes. Every administration since President Carter has developed some program to modify, streamline, or expand existing regulations, and there is no shortage of advice on how to make the process run more efficiently.[259] Yet, despite a few notable one-off successes from past retrospective review efforts,[260] no past retrospective review campaign has ever truly succeeded in creating a long-term culture of retrospective review or of prospectively embedding into new regulations a process for data collection and pre-set targets for future lookbacks. Any future efforts around retrospective review, therefore, should be clear-eyed about past failures.

A close cousin to retrospective review, paperwork reduction is another recurring target that, despite ample sets of thoughtful recommendations,[261] is a problem that never seems to be fully resolved. OIRA could consider convening an Interagency Working Group on Paperwork and Disclosures, to tackle the twin issues of how regulatory agencies can best collect information from the public and disclose useful, consistent information to the public, through regulatory labels and the like.

Indeed, there are any number of issues that may be ripe for future Interagency Working Groups.[262] As part of its annual reports to Congress, OIRA should continue to call for public comments on ideas for broader reforms to the process of regulatory analyses and review. OIRA should continually make efforts to improve itself, because "[t]he American people deserve a regulatory system that works for them, not against them: a regulatory system that protects and improves their health, safety, environment, and well-being."[263] Though because of recent distortions, we once again may not have such a regulatory system today,[264] implementing the reforms recommended in this report will put OIRA back on the path toward helping agencies use regulations to maximize net social welfare.

Endnotes

[1] Exec. Order No. 12,866, 58 Fed. Reg. 51,735, 51,735 (Oct. 4, 1993).

[2] *E.g.*, Exec. Order No. 13,771 §§ 2-3, 82 Fed. Reg. 9339, 9339-40 (Feb. 3, 2017) (requiring the repeal of two regulations for each new regulation, and setting a cap on regulatory costs without regard for corresponding benefits).

[3] *See, e.g.*, Ben Penn, *Labor Dept. Ditches Data Showing Bosses Could Skim Waiters' Tips*, Bloomberg Law (Feb. 1, 2018) ("Labor Department leadership scrubbed an unfavorable internal analysis from a new tip pooling proposal."); Ben Penn, *Mulvaney, Acosta Override Regulatory Office to Hide Tips Rule Data*, Bloomberg Law (Mar. 21, 2018).

[4] *E.g.*, Oil and Gas; Hydraulic Fracturing on Federal and Indian Lands; Rescission of a 2015 Rule, 82 Fed. Reg. 61,924, 61,939 (Dec. 29, 2017) (claiming forgone benefits are "marginal" because they could not be quantified); Policy Integrity Amicus Br., *Sierra Club v. Bernhardt*, No. 4:18-cv-00524 (N.D. Cal. June 29, 2019) (explaining how an agency arbitrarily assumed that forgone benefits were insignificant simply because they could not be quantified).

[5] *See, e.g.*, Policy Integrity, Comments on Strengthening Transparency in Regulatory Science, Supplemental Notice (May 14, 2020), https://www.regulations.gov/document?D=EPA-HQ-OA-2018-0259-11911; Madison E. Condon, Michael A. Livermore & Jeffrey G. Shrader, *Assessing the Rationale for the U.S. EPA's Proposed "Strengthening Transparency in Regulatory Science" Rule*, 14 Rev. Envtl. Econ. & Pol'y 131 (2019).

[6] *See* Richard L. Revesz, Op-Ed, *Trump Shows His Cards on Environmental Protections—or a Lack Thereof*, The Hill, Apr. 30, 2020 (comparing the inconsistent exclusion or inclusion of co-benefits as it suited EPA's purposes).

[7] Policy Integrity, How the Trump Administration Is Obscuring the Costs of Climate Change (2018), https://policyintegrity.org/files/publications/Obscuring_Costs_of_Climage_Change_Issue_Brief.pdf.

[8] For more on all these points, *see generally* Michael A. Livermore & Richard L. Revesz, Reviving Rationality: Saving Cost-Benefit Analysis for the Sake of the Environment and Our Health (forthcoming 2020). *See also* Stuart Shapiro, *OIRA's Dual Role and the Future of Cost-Benefit Analysis*, 50 Envtl. L. Rep. 10,385, 10,390-91 (2020) (cataloguing some key examples of sloppy rulemaking during the Trump Administration).

[9] Bethany A. Davis Noll & Iliana Paul, *What We Lose When They "Save": The Trump Administration's Misleading Claims about Deregulatory Cost Savings* at 5 (Policy Integrity Report, 2020), https://policyintegrity.org/files/publications/What_We_Lose_When_They_Save.pdf.

[10] Policy Integrity, *Health & Environmental Benefits under Threat from Recent Environmental Deregulatory Actions* (last updated March 5, 2019), https://policyintegrity.org/documents/Benefits_at_Stake.pdf.

[11] Jason A. Schwartz, *Weakening Our Defenses: How the Trump Administration's Deregulatory Push Has Exacerbated the Covid-19 Pandemic* (Policy Integrity Report, 2020), https://policyintegrity.org/files/publications/Weakening_Our_Defenses_Covid_Deregulation_Report.pdf.

[12] *See, e.g.*, Richard L. Revesz & Michael A. Livermore, *Fixing Regulatory Review: Recommendations for the Next Administration* (Policy Integrity Report No. 2, 2008), https://policyintegrity.org/files/publications/FixingRegulatoryReview.pdf (making recommendations, for example, on how to increase transparency and fight the biases that favor agency inaction).

[13] Exec. Order No. 12,291, 46 Fed. Reg. 13,193 (Feb. 17, 1981). OIRA was created in 1980 under the Paperwork Reduction Act, Pub. L. 96-511.

[14] Exec. Order No. 12,866, 58 Fed. Reg. 51,735 (Oct. 4, 1993).

[15] *See* Exec. Order No. 13,497, 74 Fed. Reg. 6,113 (Jan. 30, 2009) (revoking Bush's Exec. Order No. 13,422).

[16] Exec. Order No. 13,563, 76 Fed. Reg. 3,821 (Jan. 21, 2011). Retrospective review was not a new invention of the Obama Administration; it has been tried, with varying success, in some form by every administration since President Carter.

[17] *See* Exec. Order No. 13,771 § 3 (preserving order 12,866 and not rescinding order 13,563).

[18] *See generally* Exec. Order No. 12,866 (detailing OIRA's responsibilities); Cass R. Sunstein, *The Office of Information and Regulatory Affairs: Myths and Realities*, 126 Harvard L. Rev. 1838, 1842 (2013).

[19] John Graham, *Saving Lives through Administrative Law and Economics*, 157 U. Penn. L. Rev. 395, 453 (2008); *see also id.* (also crediting cost-benefit analysis with EPA's phase-out of ozone-depleting chemicals).

[20] Office of Mgmt. & Budget, *Circular A-4* at 16 (2003).

[21] Graham, *Saving Lives*, *supra* note 19, at 461.

[22] *Id.* at 468.

[23] *Id.* at 469; *see also id.* at 478 (crediting OIRA with helping to convince the Bush Administration to prioritize net social gains and billions in consumer savings over protecting two American car manufacturers from financial strain).

[24] OMB, 2010 Report to Congress on the Benefits and Costs of Federal Regulation at 44-45 (2010), https://perma.cc/J4HJ-FYJD [hereinafter 2010 Annual Report].

[25] OMB, 2011 Report to Congress on the Benefits and Costs of Federal Regulation at 53 (2011), https://perma.cc/Y9QC-ZUNX. [hereinafter 2011 Annual Report].

[26] OMB, 2010 Annual Report, *supra* note 24, at 45.

[27] OMB, 2012 Report to Congress on the Benefits and Costs of Federal Regulation at 78 (2012), https://perma.cc/Q723-6RJS [hereinafter 2012 Annual Report].

[28] *Id.* at 65. *See also* HHS, *Plan for Retrospective Review of Existing Rules* (Aug. 22, 2011), https://wayback.archive-it.org/org-745/20141203143033/http://www.hhs.gov/open/execorders/13563/hhs_final_retrospective_review_plan_8-19-11_4.pdf ("CMS provides for access to care for beneficiaries in rural and critical access areas through telemedicine. . . . This change will improve the ability of rural and critical access hospitals to provide a broader spectrum of care and services to their patients and, by not requiring providers to be credentialed at by every facility in which they are providing a service via telemedicine, it will reduce provider burden. CMS estimates that roughly $13.6 million in net savings will result from this initiative, which it published as a final rule on May 5, 2011.").

[29] Michigan v. EPA, 135 S. Ct. 2699, 2707 (2015) ("No regulation is 'appropriate' if it does significantly more harm than good."); *see also* California v. BLM, 277 F. Supp. 3d 1106, 1123 (N.D. Cal. 2017); Sec. Indus. & Fin. Mkts. Ass'n v. CFTC, 67 F. Supp. 3d 373, 430-31 (D.D.C. 2014); U.S. Chamber of Commerce v. SEC, 412 F.3d 133 (D.C. Cir. 2005); Pub. Citizen, Inc. v. Mineta, 340 F.3d 39, 56-58 (2d Cir. 2003); Timpinaro v. SEC, 2 F.3d 453, 455 (D.C. Cir. 1993); Richard L. Revesz, *Cost-Benefit Analysis and the Structure of the Administrative State: The Case of Financial Services Regulation*, 34 Yale J. Reg. 545 (2017).

[30] *See, e.g.*, Ctr. for Biological Diversity v. NHTSA, 538 F.3d 1172, 1198 (9th Cir. 2008); Bus. Roundtable v. SEC, 647 F.3d 1144 (D.C. Cir. 2011); California v. U.S. Dep't of the Interior, No. C 17- 56948 SBA, 2019 WL 2223804 (N.D. Cal. Mar. 29, 2019) (finding repeal arbitrary due in part to agency's flawed economic impact assessment).

[31] *See, e.g.*, California v. Bernhardt (N.D. Cal. July 15, 2020); American Equity Investment Life Insurance Co. v. SEC, 613 F.3d 166, 168 (D.C. Cir. 2010).

[32] *See* Caroline Cecot & W. Kip Viscusi, *Judicial Review of Agency Benefit-Cost Analysis*, 22 Geo. Mason L. Rev. 575, 592-605 (2015); Jonathan S. Masur & Eric A. Posner, *Cost-Benefit Analysis and the Judicial Role*, 85 U. Chi. L. Rev. 935 (2018).

[33] *See* Policy Integrity, Roundup: Trump-Era Agency Policy in the Courts, https://policyintegrity.org/trump-court-roundup.

[34] Graham, *Saving Lives*, *supra* note 19, at 454-55 (summarizing State Farm).

[35] Caroline Cecot, *Deregulatory Cost-Benefit Analysis and Regulatory Stability*, 68 Duke L. J. 1593, 1598 (2019).

[36] *Id.* at 1619.

[37] *Id.* at 1631.

[38] *See* Policy Integrity Comments on Tip Regulations under the Fair Labor Standards Act (Dec. 9, 2019), https://policyintegrity.org/documents/Policy_Integrity_Tip_Pooling_Submission.pdf.

[39] *See* Bethany A. Davis Noll, Peter Howard, Jason A. Schwartz & Avi Zevin, *Shortchanged: How the Trump Administration's Rollback of the Clean Car Standards Deprives Consumers of Fuel Savings* at 7-9 (Policy Integrity Report, 2020), https://policyintegrity.org/files/publications/Clean_Car_Standards_Rollback_and_Fuel_Savings_Report.pdf.

[40] Cecot, *supra* note 35, 68 Duke L. J. at 1605.

[41] *Id.* at 1613, citing Michael A. Livermore & Richard L. Revesz, *Rethinking Health-Based Environmental Standards*, 89 N.Y.U. L. Rev. 1184, 1232-33 (2014).

[42] *See* Policy Integrity, *Strengthening Regulatory Review* (2016), https://policyintegrity.org/documents/RegulatoryReview_Nov2016.pdf (summarizing the views of past OIRA administrators).

[43] Exec. Order No. 13,771 §§ 2-3, 82 Fed. Reg. 9339 (Feb. 3, 2017); *see* Sally Katzen, *Benefit-Cost Analysis Should Promote Rational Decisionmaking*, Reg. Rev., Apr. 24, 2018, https://perma.cc/C542-NVWP; Caroline Cecot & Michael A. Livermore, *The One-In, Two-Out Executive Order Is a Zero*, 166 U. Pa. L. Rev. Online 1 (2017).

[44] Exec. Order No. 13,777 §§ 2-3, 82 Fed. Reg. 12,285 (Mar. 1, 2017).

[45] Exec. Order No. 13,893, 84 Fed. Reg. 55,487 (Oct. 16, 2019).

[46] *E.g.*, Marilyn Zahm, Op-Ed, *Do You Have a Social Security Card? Then Take This Executive Order Personally*, Wash. Post, July 18, 2018 (op-ed of the president of the Association of Administrative Law Judges, calling on Congress to block implementation of Executive Order 13,843); Ari Natter, *Trump Order Targets Rules from 'Unaccountable Bureaucrats'*, Bloomberg, Oct. 8, 2019 (quoting Amit Narang, Public Citizen's regulatory policy advocate, in opposition to the executive order, which he said would, for example, make it harder for the FDA to take action against unsafe vaping products).

[47] Most notably, the following memoranda should be withdrawn: OIRA, M-17-21, *Guidance Implementing Executive Order 13771* (Apr. 5, 2017), https://perma.cc/3QDN-E9WC; OIRA, *Interim Guidance Implementing Section 2 of the Executive Order of January 30, 2017* (Feb. 2, 2017), https://perma.cc/G7JU-4Z6J; OIRA, M-17-24, *Guid-*

ance for Section 2 of Executive Order 13783 (May 8, 2017), https://perma.cc/UGG3-85WL.

[48] Exec. Order No. 12,866 § 6(a)(2) ("The Regulatory Policy Officer shall be involved at each stage of the regulatory process to foster the development of effective, innovative, and least burdensome regulations and to further the principles set forth in this Executive order.")

[49] Exec. Order No. 13,783, 82 Fed. Reg. 16,093 (Mar. 31, 2017).

[50] Exec. Order No. 13,778, 82 Fed. Reg. 12,497 (Mar. 3, 2017).

[51] Exec. Order No. 13,868, 84 Fed. Reg. 15,495 (Apr. 15, 2019). Another Executive Order, number 13,772, Core Principles for Regulating the United States Financial System, led to a series of reports (*see, e.g.*, https://perma.cc/SDJ3-9QPK). The scope of those reports is beyond this report, but the next administration should review them.

[52] Exec. Order No. 13,924, Regulatory Relief to Support Economic Recovery, §§ 4, 7, 85 Fed. Reg. 31,353 (May 19, 2020) (calling for all agencies to "identify regulatory standards that may inhibit economic recovery" and consider any modifications, including permanent rescission to "promot[e] job creation and economic growth" and calling all agencies to review any temporary regulatory relief granted during the public health emergency and consider making them permanent); Exec. Order No. 13,927, Accelerating the Nation's Economic Recovery from the COVID-19 Emergency by Expediting Infrastructure Investments and Other Activities, 85 Fed. Reg. 35,165 (June 9, 2020) (calling more generally to use "regulations . . . to facilitate the Nation's economic recovery").

[53] *See* Policy Integrity, *Regulatory Red Herring: The Role of Job Impact Analyses in Environmental Policy Debates* (2012), https://policyintegrity.org/files/publications/Regulatory_Red_Herring.pdf.

[54] Schwartz, *Weakening Our Defenses*, *supra* 11.

[55] Dept. of Treasury & OMB, Memorandum of Agreement: Review of Tax Regulations under Executive Order 12866 (Apr. 11, 2018), https://perma.cc/V3PA-K4L6.

[56] Govt. Accountability Office, GAO-20-103, *Considerable Progress Made Implementing Business Provisions, but IRS Faces Administrative and Compliance Challenges* at 28 (2020), https://perma.cc/662W-AVW2 ("OIRA took an average of about 38 calendar days to review 25 TCJA business and international regulations."); *see also id.* at 62 (discussing requests for expedited reviews).

[57] *See* Stuart Shapiro, *Which of Trump's Regulatory Reforms Are Likely to Last?*, The Reg. Review, Apr. 25, 2019.

[58] Exec. Order No. 13,891, Promoting the Rule of Law through Improved Agency Guidance Documents, 84 Fed. Reg. 55,235 (Oc. 15, 2019).

[59] Russell T. Vought, Acting Dir. OMB, Memorandum for the Heads of Executive Departments and Agencies: Guidance on Compliance with the Congressional Review Act, M-19-14 (Apr. 11, 2019), https://perma.cc/S69Q-BHZN.

[60] *Id.* at 3.

[61] Exec. Order No. 13,422, 72 Fed. Reg. 2763 (Jan. 23, 2007).

[62] Peter R. Orszag, OMB Dir., M-09-13, Memorandum for the Heads and Acting Heads of Executive Departments and Agencies, Guidance for Regulatory Review (Mar. 4, 2009), https://obamawhitehouse.archives.gov/sites/default/files/omb/assets/memoranda_fy2009/m09-13.pdf.

[63] OMB, M-19-14, *supra* note 59, at 3 n.16 & 4.

[64] *Id.* at 5, 6-7.

[65] *E.g.*, Revesz, *Cost-Benefit Analysis and the Structure of the Administrative State*, *supra* note 29; *see also Strengthening Regulatory Review*, *supra* note 42 (summarizing the views of a bipartisan group of former OIRA leaders).

[66] *See* Shapiro, *supra* note 57.

[67] 84 Fed. Reg. 71,714 (Dec. 27, 2019).

[68] For high-impact rules, a number of new hurdles are erected. First, advanced public notices are required, unless excused by law or by the regulatory reform task force. Second, a specific goal must be set and metrics for achieving progress must be identified; final rules cannot deviate from the metrics identified in the proposed rule, and the final rule must be the least costly alternative that achieves the objectives. Third, formal hearings are often required: anyone can petition for a formal hearing on an economically-significant rule, and for high-impact rules, formal hearings are mandatory if a petitioner makes a prima facie showing that the rule depends on scientific, technical, or economic facts that are in dispute and that bear on either the cost/benefit estimates or the statutory purpose. Fourth, high-impact rules are retrospectively reviewed every five years, instead of every ten.

[69] 85 Fed. Reg. 62,597 (Oct. 5, 2020).

[70] 85 Fed. Reg. 8626 (Feb. 14, 2020); *see also* Energy Conservation Program for Appliance Standards: Procedures for Evaluating Statutory Factors for Use in New or Revised Energy Conservation Standards, 85 Fed. Reg. 50,937 (Aug. 19, 2020).

[71] 85 Fed. Reg. at 8700; *see also* Dept. of Energy, *Final Report on Regulatory Review under Executive Order 13,783* (2017), https://perma.cc/L8NR-CRW6.

[72] *See* Policy Integrity Comments on Proposed Procedures for use in New or Revised Energy Conservation Standards and Test Procedures for Consumer Products and Commercial/Industrial Equipment (May 6, 2019), https://policyintegrity.org/documents/DOE_Process_Rule_Comments_2019.5.6_final.pdf.

[73] Policy Integrity Comments on Supplemental Notice of Proposed Rulemaking on Procedures for Evaluating Statutory Factors for Use in New or Revised Energy Conservation Standards (Mar. 16, 2020), https://www.regulations.gov/document?D=EERE-2017-BT-STD-0062-0170.

[74] *See* Dept, of Energy, *Final Report on Regulatory Review under Executive Order 13,783*, *supra* note 71.

[75] Joint Comments of Policy Integrity et al., on Notice of Proposed Rulemaking for "Increasing Consistency and Transparency in Considering Benefits and Costs in the Clean Air Act Rulemaking Process" (Aug. 3, 2020), https://policyintegrity.org/documents/EPA_CBA_under_CAA_Joint_Comments_2020.08.03.pdf.

[76] Policy Integrity Comments on January 2020 Meeting of the Chartered Science Advisory Board, Consideration of the Scientific and Technical Basis of EPA's Proposed Rule *Strengthening Transparency in Regulatory Science* (Jan. 10, 2020), https://policyintegrity.org/documents/Policy_Integrity_Comments_on_SAB_Draft_Report_on_Science_Transparency_Rule_%28signed%29.pdf.

[77] EPA Administrator Wheeler has also called for the offices of Chemical Safety, Water, and Land and Emergency Management to revise their approaches to cost-benefit analysis, though no proposals have been issued as of early October 2020. Andrew R. Wheeler, Memorandum on Increasing Consistency and Transparency in Considering Benefits and Costs in the Rulemaking Process (May 13, 2019), https://perma.cc/SJF8-JMMN.

[78] *E.g.*, 85 Fed. Reg. 32,296 (May 29, 2020) (Dept. of Defense), 85 Fed. Reg. 52,515 (Aug. 18, 2020) (HHS), 85 Fed. Reg. 53,163 (Aug. 28, 2020) (Dept. of Labor).

[79] Exec. Order No. 12,866 § 1(a).

[80] OMB, *Circular A-4* at 1 (Sept. 17, 2003).

[81] *See generally Circular A-4*.

[82] OIRA, *Regulatory Impact Analysis: A Primer* 1 (2011), https://www.reginfo.gov/public/jsp/Utilities/circular-a-4_regulatory-impact-analysis-a-primer.pdf ("The purpose of this primer is to offer a summary of the requirements of OMB *Circular A-4*. The primer is not meant to be a substitute for the more detailed description in that Circular. Nothing in this primer is intended to alter existing requirements or policy.").

[83] *See* Dominic J. Mancini, Acting Admin. OIRA, M-17-21, Memorandum for Regulatory Policy Officers, Guidance Implementing Executive Order 13771 at 13 (Apr. 5, 2017), https://perma.cc/3QDN-E9WC ("[A]gencies must continue to assess and consider both benefits and costs and comply with all existing requirements and guidance, including but not limited to those in EO 12866 and OMB *Circular A-4*.").

[84] *See, e.g.*, California v. Bernhardt, 2020 WL 4001480 at *29 n.31 (N.D. Cal. July 15, 2020) (citing to *Circular A-4* to support the proposition that an agency "was obligated to weigh health impacts before claiming that the costs of [the rule that the agency was attempting to repeal] outweighed its benefits"); Ctr. for Biological Diversity v. NHTSA, 538 F.3d 1172, 1200 n.48 (9th Cir. 2008) (citing to *Circular A-4* when noting the agency's failure to monetize climate damages).

[85] *Circular A-4* at 3 (emphasis added).

[86] In November 2013, OMB requested public comments on the social cost of carbon. In 2015, OMB, along with the rest of the Interagency Working Group on the Social Cost of Carbon, issued a formal response to those comments. Interagency Working Group on the Social Cost of Carbon, Response to Comments: Social Cost of Carbon for Regulatory Impact Analysis under Executive Order 12,866, at 36 (2015) [hereinafter "OIRA, 2015 Response to Comments"] (emphasis added), https://obamawhitehouse.archives.gov/sites/default/files/omb/inforeg/scc-response-to-comments-final-july-2015.pdf.

[87] *Circular A-4* at 1 ("This Circular is designed to assist analysts in the regulatory agencies by defining good regulatory analysis—called either 'regulatory analysis' or 'analysis' for brevity—and standardizing the way benefits and costs of Federal regulatory actions are measured and reported. Executive Order 12866 requires agencies to conduct a regulatory analysis for economically significant regulatory actions as defined by Section 3(f)(1)."). *See, e.g.*, Maeve P. Carey, Cong. Res. Serv., *Cost-Benefit and Other Analysis Requirements in the Rulemaking Process* at 15 (CRS R41974, 2014), https://fas.org/sgp/crs/misc/R41974.pdf (noting that "Executive Order 12,866 and OMB *Circular A-4* . . . cover all rules with a $100 million annual "effect on the economy," perhaps thereby implying that the principles of *Circular A-4* do not apply to rules that are not "economically significant").

[88] Exec. Order 12,866 § 1(b)(6); *see also id.* at § 6(a)(3)(B) (requiring an "assessment of the potential costs and benefits of the regulatory action" for all "significant regulatory actions," and not just for the "economically significant" ones).

[89] *See, e.g., Circular A-4* at 41 (recommending that the rigor of approaches for uncertainty analysis should vary with the overall consequences of the rules).

[90] EPA, *Draft Guidelines for Preparing Economic Analyses: Review Copy Prepared for EPA's Science Advisory Board's Economic Guidelines Review Panel* (Apr. 3, 2020), https://yosemite.epa.gov/sab/sabproduct.nsf//LookupWebProjectsCurrentBOARD/30D5E59E8DC91C2285258403006EEE00/$File/GuidelinesReviewDraft.pdf.

[91] Office of the Asst. Sec'y for Planning & Evaluation, HHS, *Guidelines for Regulatory Impact Analysis* (2016), https://aspe.hhs.gov/system/files/pdf/242926/HHS_RIAGuidance.pdf.

[92] Exec. Order No. 12,866 § 1(a) (requiring consideration of "distributive impacts" and "equity" when selecting rules that maximize net benefits); *see also id.* § 1(b)(5); Exec. Order No. 13,563 § 1(c) (reminding agencies to consider "values that are difficult or impossible to quantify, including equity, human dignity, fairness, and distributive impacts").

[93] *Circular A-4* at 14.

[94] 5 U.S.C. §§ 601–612.

[95] Exec. Order No. 12,898, 59 Fed. Reg. 7629 (Feb. 16, 1994); *see also* EPA, *Technical Guidance for Assessing Environmental Justice in Regulatory Analyses* (2016), https://perma.cc/KB2S-PRGP.

[96] Richard L. Revesz, *Regulation and Distribution*, 93 N.Y.U. L. Rev. 1489 (2018); Natalie Punchak, *The Role of Distributional Impacts in Cost-Benefit Analysis*, Reg. Rev., Apr. 24, 2014, https://www.theregreview.org/2014/04/24/24-punchak-distributional-impacts-in-cba/.

[97] For example, since IRS regulations have become subject to OIRA review, Treasury has excluded any analyses of distributional effects due to changes in tax liability, including effects on tax revenue collection. *See* GAO, GAO-20-103, *supra* note 56, at 22-23.

[98] *See* Policy Integrity, Letter on Suggested Improvements to the Implementation of the Regulatory Flexibility Act (Feb. 24, 2012), https://policyintegrity.org/documents/Policy_Integrity_Letter_to_SBA_on_RFA.pdf (giving examples).

[99] *E.g.*, Stuart Shapiro, *Can Analysis of Policy Decisions Spur Participation?*, 9 J. Benefit-Cost Analysis 435, 456 (2018).

[100] Revesz, *Regulation and Distribution*, *supra* note 96, at 1489.

[101] Note that there already is an Interagency Working Group focused specifically on environmental justice. *See* https://perma.cc/W2QT-4DV6.

[102] EPA, *Technical Guidance for Assessing Environmental Justice in Regulatory Analysis*, *supra* note 95.

[103] Revesz, *Regulation and Distribution*, *supra* note 96, at 1572 ("[T]he appropriate regulatory action could be within the statutory jurisdiction of a different agency. Both in this latter situation and where mitigation is the preferred response, coordinated executive branch action is necessary."); *see also* Graham, Saving Lives, *supra* note 19, at 518-24 (calling for either blocking rules with a disproportionate impact on the lowest income populations, or else mitigating the impacts).

[104] *See* EPA, *Technical Guidance*, *supra* note 95, at 63 (identifying data gaps for incorporating environmental justice in regulatory analysis).

[105] *See, e.g.*, Stuart Shapiro & John F. Morrall, III, *The Triumph of Regulatory Politics: Benefit-Cost Analysis and Political Salience*, 6 Reg. & Governance 189 (2012) (analyzing 109 economically significant regulations issued between 2000-2009 and finding that many did not monetize all benefits and costs); Jonathan S. Masur & Eric A. Posner, *Unquantified Benefits and the Problem of Regulation under Uncertainty*, 102 Cornell L. Rev. 87, 89 (2016) ("[I]n many cases regulators refuse to report a monetized value for the benefits of a rule that they issue: sometimes, they report no monetized value; at other times, they report a monetized value but also state that not all benefits have been quantified."); *id.* at 136 ("[B]etween 2010 and 2013, agencies promulgated only two major regulations with fully quantified benefits and costs and more than 100 regulations without.").

[106] *See, e.g.*, Revesz, *Quantifying Regulatory Benefits*, 102 Cal. L. Rev. 1423, 1442-50 (2014).

[107] Though some agencies at times use a "cost of illness" approach for some of these non-fatal endpoints, according to EPA's *Guidelines*, even imperfect estimates of willingness-to-pay to avoid, for example, minor respiratory illnesses, can often be up to four times greater than the associated "cost of illness," and there is no broadly available scaling factor that relates cost of illness to willingness to pay. EPA, *Draft Guidelines for Preparing Economic Analyses*, *supra* note 90, at 7-15 (citing Alberini and Krupnick, 2000). Development of a conservative scaling factor could be one preliminary path forward on this front. *See also* Al McGartland, Richard Revesz et al., *Estimating the Health Benefits of Environmental Regulations*, 357 Sci. 6350 (2017), available at https://perma.cc/ZWF8-YC25.

[108] *See Circular A-4* at 27 (listing water quality as a potentially hard to monetize effect, and listing ecological gains and aesthetic beauty as hard to quantify).

[109] Revesz, *Quantifying Regulatory Benefits*, *supra* note 106, at 1445.

[110] *Circular A-4* at 27 (listing improvements to the quality of life as a hard to quantify effect). *Circular A-4* also lists some hard-to-quantify costs, like if a regulation restricts the decisions of production facilities to shift to new products. *Id.*

[111] *See* Michael Livermore, *Patience is an Economic Virtue: Real Options, Natural Resources, and Offshore Oil*, 84 U. Colo. L. Rev. 581 (2013).

[112] Exec. Order No. 13,563 §1(c) (listing equity, human dignity, fairness, and distributive impacts as "difficult or impossible to quantify").

[113] *See* EPA, *Technical Guidance*, *supra* note 95, at 63 (identifying data gaps for incorporating environmental justice in regulatory analysis, including "lack of monetized benefits for some health endpoints; finer resolution air quality data and alternative ways to collect them; vehicle fleet composition across communities; emissions rates and activities across sources; product usage by demographic characteristics; housing distance from highways; characteristics of workers by industry; drinking water quality across communities; data on subsistence fishers and where they live; and information on non-monitored areas").

[114] Revesz, *Quantifying Regulatory Benefits*, *supra* note 106, at 1434-35, 1442.

[115] For example, the U.S. District Court for the Northern District of California deferred to the Bureau of Land Management in weighing the alleged cost savings against the unquantified forgone benefits of repealing a regulation on hydraulic fracturing operations. California v. BLM, 4:18-cv-00521, at 22 (N.D. Cal. Mar. 27, 2020). Notably, the underlying benefits of the original rule issued during the Obama Administration had not been quantified or monetized. Note, however, that Policy Integrity strongly disagrees with the district court's ruling, having written an amicus brief in the case. *See* https://policyintegrity.org/documents/BLM_Fracking_Amicus_2019.06.29.pdf.

[116] Revesz, *Quantifying Regulatory Benefits*, *supra* note 106, at 1428-36.

[117] Revesz, *Regulation and Distribution*, *supra* note 96, at 1526-43.

[118] *See* Policy Integrity, Letter on RFA, *supra* note 98.

[119] Graham, *Saving Lives*, *supra* note 19, at 525 ("Some items that do not appear repeatedly at one agency may recur at other agencies.").

[120] OIRA may also help regulatory agencies engage with non-regulatory agencies, like the CDC. *See* EPA, *Technical Guidance*, *supra* note 95, at 64 (recommending partnering with the CDC on long-term research priorities).

[121] Regulatory Right-to-Know-Act, Pub. L. 106-554 § 1(a)(3) (2000).

[122] Revesz, *Quantifying Regulatory Benefits*, *supra* note 106, at 1450-56.

[123] For example, OIRA has in the past issued prompt letters to research advanced diesel technology as a compliance alternative for fuel economy standards, and to review the relative toxicity of various species of particulate matter. Graham, Saving Lives, *supra* note 19, at 460 n.288-89.

[124] *See* Federal Interagency Working Group on Environmental Justice & NEPA Committee, *Promising Practices for EJ Methodologies in NEPA Reviews* at 5-6, 16 (2016), https://perma.cc/TCC4-Q34G.

[125] Cass R. Sunstein, OIRA Admin., M-11-07, *Memorandum on Facilitating Scientific Research by Streamlining the Paperwork Reduction Act Process* (2010), https://perma.cc/K92X-WN3L.

[126] *E.g.*, OMB, OMB Control Number History: 2080-0084, https://www.reginfo.gov/public/do/PRAOMBHistory?ombControlNumber=2080-0084 (renewal of willingness-to-pay survey to evaluate recreational benefits of nutrient reductions in coastal New England waters approved with changes after just 12 days; original new collection request approved within 4 months).

[127] *See* https://www.regulations.gov/docket?D=EPA-HQ-ORD-2013-0448.

[128] *See* https://www.reginfo.gov/public/do/PRAViewICR?ref_nbr=201410-2080-001.

[129] 79 Fed. Reg. 64,591 (Oct. 30, 2014); *see also* https://www.regulations.gov/document?D=EPA-HQ-ORD-2013-0448-0004; https://www.regulations.gov/document?D=EPA-HQ-ORD-2013-0448-0009.

[130] 44 U.S.C. § 3501 ("The purposes of this subchapter are to (1) minimize the paperwork burden for individuals . . . resulting from the collection of information by or for the Federal Government; (2) ensure the greatest possible public benefit from and maximize the utility of information created [or] collected . . . by or for the Federal Government; (3) coordinate . . . Federal information resources management policies and practices . . . (4) improve the quality and use of Federal information to strengthen decisionmaking . . . in Government . . . (11) improve the responsibility and accountability of the Office of Management and Budget . . . for implementing the information collection review process . . . .").

[131] Al McGartland, Richard Revesz, et al., *supra* note 107, at 458 ("The best quantitative weight for these less-certain health effects is not zero."). Similarly, EPA recently cited uncertainty when it failed to monetize the cardiovascular benefits from reducing lead in drinking water, despite the fact that EPA knows the risk is not zero but rather is simply uncertain about the specific magnitude of the risk. *See* Policy Integrity Comments on National Primary Drinking Water Regulations: Lead and Copper Rule Revisions (Feb. 12, 2020), https://policyintegrity.org/documents/EPA_Lead_Copper_Rule_Comments_2020.02.11.pdf.

[132] *Circular A-4* at 2, 27.

[133] *Id.* at 2.

[134] OIRA, *Regulatory Impact Analysis: A Primer* 13 (2011).

[135] For example, even when FDA used breakeven analysis to justify cigarette warning labels, it still stopped short of using that analysis to make explicit conclusions regarding the value of information conveyed by its enhanced warning labels. *See* Policy Integrity Comments to FDA on Required Warnings for Cigarette Packages and Advertisements, at 6 (Oct. 15, 2019), https://policyintegrity.org/documents/PolicyIntegrity_CommentsonFDAWarningLabels_2019.10.15.pdf.

[136] *See, e.g.*, Policy Integrity Comments on National Primary Drinking Water Regulations: Lead and Copper Rule Revisions, *supra* note 131.

[137] *See, e.g.*, Policy Integrity Amicus Br., *Michigan v. EPA,* No. 14-16, 14-47, 14-49, at 12-13 (S.Ct. Mar. 4, 2015), https://policyintegrity.org/documents/SCOTUS_brief_MATS_March2015.pdf (responding to the unfounded criticism that the Mercury and Air Toxics Standards were not cost-benefit justified and explaining the significance of the unquantified health effects).

138 42 U.S.C. § 4332(2)(B).

139 Graham, *Saving Lives*, *supra* note 19, at 525, n. 558; Revesz, *Quantifying Regulatory Benefits*, *supra* note 106, at 1451 (citing Graham).

140 *See, e.g.*, AEA Technology, *Cost-Benefit Analysis of Air Quality Related Issues, in particular in the Clean Air for Europe (CAFE) Programme: Methodology for the Cost-Benefit Analysis for CAFE: Vol. 1: Overview of Methodology* at 17-18 (prepared for the European Commission DG Environment) (2005), https://perma.cc/Y3C5-44HQ.

141 *See* OMB, 2009 Report to Congress on the Benefits and Costs of Federal Regulations at 38 (2010), https://perma.cc/D2QA-MJZ5 (noting the benefits of graphical displays) [hereinafter "OMB, 2009 Annual Report"]; OMB, 2010 Annual Report, *supra* note 24, at 55 (recommending scales and five-star ratings); Cass R. Sunstein, Memorandum for the Heads of Executive Departments and Agencies, Informing Consumers through Smart Disclosures at 5-6 (Sept. 8, 2011), https://perma.cc/4DFD-7W4N (on standardization and interoperability).

142 *See* Cass R. Sunstein, The Limits of Quantification, 102 Cal. L. Rev. 1369, 1372 (2014) (advocating the use of breakeven analysis); Masur & Posner, Unquantified Benefits, *supra* note 105, at 124-25 (comparing their approach to breakeven analysis).

143 AEA Technology, *supra* note 140, at 19, table 4.

144 In November 2013, OMB requested public comments on the social cost of carbon. In 2015, OMB, along with the rest of the Interagency Working Group on the Social Cost of Carbon, issued a formal response to those comments. OIRA, 2015 Response to Comments, *supra* note 86, at 36.

145 *Circular A-4* at 36 ("For regulatory analysis, you should provide estimates of net benefits using both 3 percent and 7 percent . . . . If your rule will have important intergenerational benefits or costs you might consider a further sensitivity analysis using a lower but positive discount rate in addition to calculating net benefits using discount rates of 3 and 7 percent.").

146 OIRA, 2015 Response to Comments, *supra* note 86, at 36.

147 *Circular A-4* at 33.

148 Maureen Cropper, *How Should Benefits and Costs Be Discounted in an Intergenerational Context?*, 183 Resources 30, 33. ("There are two rationales for discounting future benefits—one based on consumption and the other on investment. The consumption rate of discount reflects the rate at which society is willing to trade consumption in the future for consumption today. Basically, we discount the consumption of future generations because we assume future generations will be wealthier than we are and that the utility people receive from consumption declines as their level of consumption increases. . . . The investment approach says that, as long as the rate of return to investment is positive, we need to invest less than a dollar today to obtain a dollar of benefits in the future. Under the investment approach, the discount rate is the rate of return on investment. If there were no distortions or inefficiencies in markets, the consumption rate of discount would equal the rate of return on investment. There are, however, many reasons why the two may differ. As a result, using a consumption rather than investment approach will often lead to very different discount rates.").

149 Council of Econ. Advisers, *Discounting for Public Policy: Theory and Recent Evidence on the Merits of Updating the Discount Rate* at 1 (CEA Issue Brief, 2017), *available at* https://obamawhitehouse.archives.gov/sites/default/files/ page/files/201701_cea_discounting_issue_brief.pdf ("[I]n *Circular A-4* by the Office of Management and Budget (OMB) the appropriate discount rate to use in evaluating the net costs or benefits of a regulation depends on whether the regulation primarily and directly affects private consumption or private capital.)" In theory, the two rates would be the same, but "given distortions in the economy from taxation, imperfect capital markets, externalities, and other sources, the SRTP and the marginal product of capital need not coincide, and analysts face a choice between the appropriate opportunity cost of a project and the appropriate discount rate for its benefits." *Id.* at 9. The correct discount rate for climate change is the social return to capital (i.e., returns minus the costs of externalities), not the private return to capital (which measures solely the returns).

150 Nat'l Acad. Sci., *Valuing Climate Damages: Updating Estimates of the Social Cost of Carbon Dioxide* 28 (2017); *see also* Kenneth Arrow et al., *Is There a Role for Benefit-Cost Analysis in Environmental, Health, and Safety Regulation?*, 272 Science 221 (1996) (explaining that a consumption-based discount rate is appropriate for climate change). In addition to the CEA and NAS reports, *see*, for example, this article by the former chair of the NAS panel on the social cost of greenhouse gases: Richard Newell, *Unpacking the Administration's Revised Social Cost of Carbon*, https://perma.cc/3EF7-HMQD (Oct. 10, 2017).

151 *See* Policy Integrity Comments on National Primary Drinking Water Regulations: Lead and Copper Rule Revisions, *supra* note 131.

152 *Circular A-4* at 34. *See also* OIRA, 2015 Response to Comments, *supra* note 86, at 21 ("While most regulatory impact analysis is conducted over a time frame in the range of 20 to 50 years.").

153 *Circular A-4* at 36.

154 *Id.*

155 *Id.*; *see also* Council of Econ. Advisers, *supra* note 149, at 9 ("Weitzman (1998, 2001) showed theoretically and Newell and Pizer (2003) and Groom et al. (2007) confirm empirically that discount rate uncertainty can have a large effect on net present values. A main result from these studies is that if there is a persistent element to the uncertainty

in the discount rate (*e.g.*, the rate follows a random walk), then it will result in an effective (or certainty-equivalent) discount rate that declines over time. Consequently, lower discount rates tend to dominate over the very long term, regardless of whether the estimated investment effects are predominantly measured in private capital or consumption terms (*see* Weitzman 1998, 2001; Newell and Pizer 2003; Groom et al. 2005, 2007; Gollier 2008; Summers and Zeckhauser 2008; and Gollier and Weitzman 2010).").

156 Nat'l Acad. Sci., *supra* note 150, at 27.

157 *See* Policy Integrity Comments on National Primary Drinking Water Regulations: Lead and Copper Rule Revisions, *supra* note 131.

158 *Circular A-4* at 17. CEQ regulations implementing NEPA similarly require that information in NEPA documents be "of high quality" and states that "[a]ccurate scientific analysis . . . [is] essential to implementing NEPA." 40 C.F.R. § 1500.1(b).

159 The 7% rate was based on a 1992 report; the 3% rate was based on data from the thirty years preceding the publication of *Circular A-4* in 2003. *Circular A-4* at 33.

160 Council of Econ. Advisers, *supra* note 149, at 1; *id.* at 3 ("In general the evidence supports lowering these discount rates, with a plausible best guess based on the available information being that the lower discount rate should be at most 2 percent while the upper discount rate should also likely be reduced."); *id.* at 6 ("The Congressional Budget Office, the Blue Chip consensus forecasts, and the Administration forecasts all place the ten year treasury yield at less than 4 percent in the future, while at the same time forecasting CPI inflation of 2.3 or 2.4 percent per year. The implied real ten year Treasury yield is thus below 2 percent in all these forecasts.").

161 *Id.* at 1.

162 *Circular A-4* at 33.

163 OMB, Circular A-94 Appendix C (2019), https://perma.cc/YJC2-X8D6.

164 *See* OMB, *Budget Assumptions: Nominal Treasury Interest Rates for Different Maturities* (Nov. 5, 2019), https://perma.cc/7KPN-AP3N.

165 *Id.*

166 OMB, Circular A-94 Appendix C, *supra* note 163.

167 *Circular A-4* at 41.

168 Peter Howard & Derek Sylvan, *The Economic Climate: Establishing Expert Consensus on the Economics of Climate Change* 33-34 (Policy Integrity Working Paper, 2015), https://policyintegrity.org/files/publications/ExpertConsensusReport.pdf; M.A. Drupp, et al., *Discounting Disentangled: An Expert Survey on the Determinants of the Long-Term Social Discount Rate* (London School of Economics and Political Science Working Paper, May 2015) (finding consensus on social discount rates between 1-3%). Pindyck, in a survey of 534 experts on climate change, finds a mean discount rate of 2.9% in the climate change context and this rate drops to 2.6% when he drops individuals that lack confidence in their knowledge. R.S. Pindyck, *The Social Cost of Carbon Revisited* (No. w22807, National Bureau of Economic Research, 2016). Unlike Howard and Sylvan (2015), Pindyck (2016) combines economists and natural scientists in his survey, though the mean constant discount rate drops to 2.7% when including only economists. Again, this further supports the finding that the appropriate discount rate is between 2% and 3%.

169 These are in addition to taxation, which tends to increase the social return on capital relative to the private return.

170 *See* Council of Econ. Advisers, *supra* note 149, at 2 ("There are no regular private forecasts of the economywide rate of return. In addition, even if we did have a precise measure or forecast of the economywide rate of return it could differ from the true value of the social opportunity cost of capital—the concept underlying benefit-cost analysis—because of unpriced externalities, market power that leads to supernormal returns, the incorporation of market risk, and taxation.") *See also id.* at 11 ("Moreover, even to the degree it was measured and projected accurately the market return on capital such as that based on the NIPA calculations could differ from the social return for a variety of reasons. For example, some element of profit could reflect unpriced externalities (positive or negative). . . . Third, market rates of return may also diverge from the SOC because private returns include both the pure time value of money and a risk premium, and some or all of that risk premium may not be relevant to government decisions.").

171 *See* Policy Integrity Comments to SAB Panel on EPA's Draft Economic Guidelines 11-25 (May 12, 2020), https://policyintegrity.org/documents/SAB_Econ_Guidelines_Review_Panel_Addn_Comments_Batch_1_2020.05.12-signed_copy_.pdf.

172 *Circular A-4* at 35-36.

173 *Id.* at 3.

174 *Id.* at 42.

175 Exec. Order 13,783 § 5(c).

176 *E.g.*, 85 Fed. Reg. 24,174, 24,733 (Apr. 30, 2020); Dep't of Energy, Technical Support Document: Energy Efficiency Program for Consumer Products and Commercial and Industrial Equipment: Room Air Conditions 14-1 (June 2020).

177 *See* Peter Howard & Jason A. Schwartz, *Think Global: International Reciprocity as Justification for a Global Social Cost of Carbon*, 42 Columb. J. Envtl. L. 203 (2017).

178 *State of California v. Bernhardt*, 2020 WL 4001480 (N.D. Cal. July 15, 2020), at *28.

179 *Id.* at *18.

180 *Id.*

[181] *Id.* at *27.

[182] *Circular A-4* at 16.

[183] *See, e.g.*, Cross-Media Electronic Reporting, 70 Fed. Reg. 59,848 (Oct. 13, 2005) ("EPA considered both a more stringent and a less stringent alternative to the regulatory approach taken in this rule."). Similarly, in EPA's recently proposed revisions to its lead and copper standards for drinking water, the agency failed to consider any alternatives to the stringency for the threshold level for action—arguably the most important provision of the standards. *See* "focusing solely on domestic effects has been soundly rejected by economists as improper and unsupported by science."

[184] *Circular A-4* at 7.

[185] *Id.* at 16.

[186] *Id.*

[187] *Id.* at 17; *see also id.* at 7 (requiring agencies to "explore modifications of some or all of a regulation's attributes or provisions to identify appropriate alternatives"); *id.* at 16 ("You should carefully consider all appropriate alternatives for the key attributes or provisions of the rule.").

[188] *Id.* at 8; *see also id.* at 14 ("You should be alert for situations in which regulatory alternatives result in significant changes in treatment or outcomes for different groups.").

[189] *See, e.g.*, 84 Fed. Reg. 71,626, 71,633 (Dec. 27, 2019) ("[B]ecause DOE has concluded amended standards for GSILs would not be economically justified [based largely on financial considerations alone] . . . DOE did not conduct . . . [an] emissions analysis."); 85 Fed. Reg. 24,094, 24,139 (proposed Apr. 30, 2020) ("Because this action does not propose to change the existing NAAQS for PM, it does not impose costs or benefits relative to the baseline of continuing with the current NAAQS in effect. Thus, the EPA has not prepared a Regulatory Impact Analysis for this action.").

[190] *Circular A-4* at 7.

[191] *E.g.*, 85 Fed. Reg. at 24,612 ("If either case is true—that the analysis is incomplete regarding consumer valuation of other vehicle attributes or discount rates used in regulatory analysis inaccurately represent consumers' time preferences—no market failure would exist."); *see also* Policy Integrity Comments on the "Deeming Tobacco Products" Proposed Rule (Aug. 8, 2014), https://policyintegrity.org/documents/Policy_Integrity_Comments_on_FDA_Tobacco_Deeming_Rule.pdf (discussing FDA's choice to discount public health benefits to account for assumed lost consumer welfare).

[192] *E.g.*, OMB, 2009 Annual Report, *supra* note 141, at 35-40; Policy Integrity, Shortchanged, *supra* note 39, at 17-20 (summarizing the literature); Cass R. Sunstein, *Internalities, Externalities, and Fuel Economy* (Harv. Pub. L. Working Paper No. 20-10, 2020).

[193] *See* Policy Integrity Comments to SAB on Draft EPA Economic Guidelines, *supra* note 171, at 26-27.

[194] John Wihbey, *Understanding the Social Cost of Carbon—and Connecting It to Our Lives*, Yale Climate Connections (Feb. 12, 201)5, https://perma.cc/DJA7-NP9N (quoting Michael Greenstone, former Chief Economist of President Obama's Council of Economic Advisors); *accord.* Michael Greenstone & Cass R. Sunstein, Op-Ed, *Donald Trump Should Know: This Is What Climate Change Costs Us*, N.Y. Times (Dec. 15, 2016).

[195] Peter Howard & Jason A. Schwartz, *Think Global: International Reciprocity as Justification for a Global Social Cost of Carbon*, 42 Colum. J. Envtl. L. 203, 219 & App. A (2017).

[196] Nat'l Acad. Sci., *Valuing Climate Damages: Updating Estimates of the Social Cost of Carbon Dioxide* 3 (2017), https://www.nap.edu/catalog/24651/valuing-climate-damagesupdating-estimation-of-the-social-cost-of; Nat'l Acad. Sci., *Assessment of Approaches to Updating the Social Cost of Carbon: Phase 1 Report on a Near-Term Update* 1 (2016), https://www.nap.edu/catalog/21898/assessment-ofapproaches-to-updating-the-social-cost-of-carbon.

[197] U.S. Gov't Accountability Office, GAO-14-663, *Regulatory Impact Analysis: Development of Social Cost of Carbon Estimates* (2014).

[198] Zero Zone, Inc. v. DOE, 832 F.3d 654, 678–79 (7th Cir. 2016).

[199] Policy Integrity, *A Lower Bound: Why the Social Cost of Carbon Does Not Capture Critical Climate Damages and What That Means for Policymakers* (2019), https://policyintegrity.org/files/publications/Lower_Bound_Issue_Brief.pdf.

[200] *E.g.*, Richard L. Revesz et al., Best Cost Estimate of Greenhouse Gases, 357 Science 655 (2017) (co-authored with economists Michael Greenstone, Michael Hanemann, Peter Howard, and Thomas Sterner).

[201] Exec. Order. No. 13,783 § 5(b), 82 Fed. Reg. 16,093 (Mar. 28, 2017).

[202] *E.g.*, 85 Fed. Reg. 3492, 3510-11 (Jan. 21, 2020).

[203] *E.g.*, 82 Fed. Reg. 58,050, 58,057 (Jan. 8, 2018).

[204] 85 Fed. Reg. 24,174, 24,733 (Apr. 30, 2020).

[205] Dep't of Energy, Technical Support Document: Energy Efficiency Program for Consumer Products and Commercial and Industrial Equipment: Room Air Conditions 14-1 (June 2020).

[206] Policy Integrity, *How the Trump Administration Is Obscuring the Costs of Climate Change*, *supra* note 7.

[207] *See, e.g.*, Joint Comments to EPA on the Flawed Monetization of Benefits in the Proposed Federal Implementation Plan, (Mar. 23, 2020), https://policyintegrity.org/documents/Flawed_Monetization_of_Benefits_in_the_Proposed_Federal_Implementation_Plan.pdf.

[208] *See, e.g.*, Policy Integrity Amicus Br., Vecinos para el Bienestar de la Comunidad Costera v. FERC, No. 20-1045 (D.C. Cir., filed June 18, 2020), https://policyintegrity.org/documents/Amicus_Brief_of_Institute_for_Policy_Integrity_06.18.20.pdf.

[209] California v. Bernhardt, No. 18-5712, 2020 WL 4001480, at *24–28 (N.D. Cal. July 15, 2020).

[210] U.S. Gov't Accountability Office, *Social Cost of Carbon* (2020), https://www.gao.gov/assets/710/707776.pdf.

[211] *See* States Using the SCC, The Cost of Carbon Pollution, https://costofcarbon.org/states.

[212] *See* Exec. Order 13,783 § 5(b) (listing various documents). All the relevant documents continue to be housed at https://obamawhitehouse.archives.gov/omb/oira/social-cost-of-carbon.

[213] *See generally* costofcarbon.org (cataloguing state use of the social cost of greenhouse gas metrics).

[214] For example, California's Public Utility Commission has expressed special concern that key climate damages wildfires are not yet valued in the Interagency Working Group's central estimate, and California has suggested it might focus on the Interagency Working Group's "high-impact" estimates instead for that reason. *See id.*

[215] Mont. Envtl. Info. Ctr. v. U.S. Office of Surface Mining, 274 F. Supp. 3d 1074, 1096–99 (D. Mont. 2017); High Country Conservation Advocates v. U.S. Forest Serv., 52 F. Supp. 3d 1174, 1190 (D. Colo. 2014).

[216] Bernhardt, 2020 WL 4001480, at *36–37.

[217] *See* Jayni Hein, Jason Schwartz & Avi Zevin, *Pipeline Approvals and Greenhouse Gas Emissions* 32-37 (Policy Integrity Report, 2019), https://policyintegrity.org/files/publications/Pipeline_Approvals_and_GHG_Emissions.pdf.

[218] OIRA, 2015 Response to Comments, *supra* note 86, at 36.

[219] *See, e.g.*, Interagency Working Group on the Social Cost of Carbon, *Technical Support Document: Social Cost of Carbon for Regulatory Impact Analysis* 1, 29-30 (2010), https://obamawhitehouse.archives.gov/sites/default/files/omb/inforeg/for-agencies/Social-Cost-of-Carbon-for-RIA.pdf [hereinafter "2010 TSD"].

[220] *See* Howard & Schwartz, *Think Global*, *supra* note 195, at App.A.

[221] *See* Policy Integrity Amicus Br., *supra* note 208, responding to these arguments.

[222] *See* 2010 TSD, *supra* note 219, at 23, explaining how the 2.5% discount rate can be a proxy for the declining framework.

[223] *See supra* note 196.

[224] This was true, for example, of the Interagency Working Group's 2010 estimates, and of the Trump Administration's "interim" estimates.

[225] *See, e.g.*, Joint Comments to EPA on the Failure to Monetize the Value of Forgone Emission Reductions from Revisions to the Refrigerant Management Program's Extension to Substitutes (Nov. 15, 2018), https://policyintegrity.org/documents/Refrigerant_Substitutes_SCC_Comments_2018.11.15-final.pdf.

[226] *See* Richard L. Revesz & Michael A. Livermore, *Fixing Regulatory Review: Recommendations for the Next Administration* at 3 (Policy Integrity Report, 2008), https://policyintegrity.org/files/publications/FixingRegulatoryReview.pdf; Molly Redden, *New Republic: OIRA Antagonizing Environmentalists*, Nat'l Pub. Radio (Jan. 12, 2012), http://www.npr.org/2012/01/12/145095539/new-republic-oira-antagonizing-environmentalists.

[227] *Strengthening Regulatory Review*, *supra* note 42, at 14.

[228] *See* Graham, *Saving Lives*, *supra* note 19, at 460 n.288-89.

[229] OIRA, Schedule an E.O. 12866 Meeting, https://www.reginfo.gov/public/do/eo/neweomeeting (last visited Oct. 1, 2020).

[230] *See generally* Jason A. Schwartz & Richard L. Revesz, *Petitions for Rulemaking: Final Report to the Administrative Conference of the United States* (2014), https://perma.cc/D6PA-M987.

[231] Exec. Order No. 12,866 § 4(b). Arguably, any pending petition for rulemaking not yet denied by an agency could be "under review."

[232] Calls for summary reports have frequently appeared in previous sets of recommendations on petitions for rulemaking. *See, e.g.*, American Bar Association, House of Delegates, *Resolution on Petitions for Rulemaking* (1988) ("recommends that administrative agencies implement the right to petition for rulemaking . . . by . . . including in the Annual Regulatory Program of the President a list of pending petitions for rulemaking"); Attorney General's Committee on Administrative Procedure, Final Report: Administrative Procedure in Government Agencies, S. Doc. No. 8, 77th Cong., 1st Sess. at 120-21 (1941) (recommending that agencies report on petitions to Congress; "Congress and the public are, however, entitled to know of the rulemaking activities of administrative agencies. The progress of the law which these agencies are developing should be recorded and submitted for information and criticism in such a way as to give an over-all view of what is being done, rather than mere information of isolated instances. Not only new regulations adopted but unaccepted proposals for change in existing regulations or for additions to them, emanating from outside the agencies, are of importance."); Michael D. Sant'Ambrogio, *Agency Delays: How A Principal-Agent Approach Can Inform Judicial and Executive Branch Review of Agency Foot-Dragging*, 79 Geo. Wash. L. Rev. 1381, 1434-35 (arguing for agencies to tell OIRA about matters they are not actively pursuing because of resources and other priorities).

[233] OMB, 2010 Annual Report, *supra* note 24, at 57-60.

[234] Richard L. Revesz & Michael A. Livermore, Retaking Rationality: How Cost-Benefit Analysis Can Better Protect the Environment and Our Health 174 (2008); Michael A. Livermore & Richard L. Revesz, *Regulatory Review, Capture, and Agency Inaction*, 101 Geo. L. J. 1337, 1382-83 (2013); Schwartz & Revesz, *supra* note 230, at 83-84; Graham, Saving Lives, *supra* note 19, at 533 (adopting Professor Hsu's approach to the "citizen prompt letter").

[235] Graham, *Saving Lives*, *supra* note 19, at 532; Cass R. Sunstein, *On Neglecting Regulatory Benefits* at 10 (SSRN, "preliminary draft" dated Feb. 20, 2020).

[236] Exec. Order No. 12,866 § (6)(b)(4)(D).

[237] Exec. Order No. 13,563 § 2(b); *see also* OMB, 2010 Annual Report, *supra* note 24, at 50-51 (calling to put all data online, with 60 days for comment).

[238] *See* Christiane Arndt et al., *2015 Indicators of Regulatory Policy Governance: Design, Methodology and Key Results* (Org. for Econ. Cooperation & Dev. Working Paper No. 1, 2015), https://www.oecd-ilibrary.org/docserver/5jrnwqm3zp43-en.pdf?expires=1552233713&id=id&accname=guest&checksum=9D8225B01B6B7B35131EE2C8C0FF2A2A.

[239] *See, e.g.*, https://www.regulations.gov/document?D=EPA-HQ-OAR-2020-0044-0074.

[240] *Id.*

[241] *See, e.g.*, HUD, Rulemaking Docket for AFFH, https://www.regulations.gov/document?D=HUD-2020-0011-0001 (listing no interagency review documents on this "significant" rule); CEQ, Rulemaking Docket for Update to the Regulations Implementing the Procedural Provisions of the National Environmental Policy Act, https://www.regulations.gov/docket?D=CEQ-2019-0003 (listing no interagency review documents on this "economically significant" rule).

[242] *See* https://perma.cc/7FT7-SV84 (pre-publication version dated July 21, 2020).

[243] *See* https://www.regulations.gov/document?D=EPA-HQ-OAR-2018-0276-0024.

[244] The preliminary cost-benefit analysis was posted on Regulations.gov two weeks before the notice of proposed rulemaking. *See* https://www.regulations.gov/docket?D=EERE-2013-BT-STD-0021.

[245] *See* Cheryl Bolen, *White House Releases Delayed Regulatory Data Sought by Democrats*, Bloomberg, Dec. 12, 2019.

[246] *See* Sant'Ambrogio, *supra* note 232, at 1381, 1401-02.

[247] *Id.* at 1399-1400. *See also* Policy Integrity Letter to OIRA on Delays in Regulatory Review of Occupational Safety and Health Administration Rules (Mar. 20, 2013), https://policyintegrity.org/documents/Policy_Integrity_Letter_to_OIRA_on_Delay.pdf (providing an example based on the delayed review of rules to prevent workplace exposure to silica); *see also* Policy Integrity Letter on ACUS's Draft Statement for Improving the Timeliness, Transparency, and Effectiveness of OIRA Regulatory Review (Nov. 14, 2013), https://policyintegrity.org/documents/Policy_Integrity_Nov_13_Comments_on_ACUS_Project_on_OIRA.pdf.

[248] Sant'Ambrogio, *supra* note 232, at 1400-01; Policy Integrity Letter on Delays, *supra* note 247, at 2.

[249] Cong. Res. Serv., *Federal Rulemaking: The Role of the Office of Information and Regulatory Affairs* at 2 (2011), https://www.everycrsreport.com/files/20110321_RL32397_a87c7bfa21b8c5295a686d5b964c2e410bf1b25c.pdf (of whom about half worked at least partly on information collection requests).

[250] *Id.* at 2 & n.7.

[251] *Id.* at 30; *but see* OIRA, Q&A's, https://obamawhitehouse.archives.gov/omb/OIRA_QsandAs (published Nov. 2009) (reporting "about 50 full-time professionals").

[252] OMB, Information and Regulatory Affairs, https://www.whitehouse.gov/omb/information-regulatory-affairs/ (last visited August 20, 2020); *but see* Mark Rebrizio & Melinda Warren, *Regulators' Budget: Overall Spending and Staffing Remain Stable* 24 (Weidenbaum Ctr. at Washington University-St. Louis & George Washington University's Regulatory Studies Center Regulators' Budget Report 42, 2020), https://regulatorystudies.columbian.gwu.edu/sites/g/files/zaxdzs3306/f/downloads/Regulators-Budget/GW%20Reg%20Studies%20-%20FY2021%20Regulators%20Budget%20-%20MFebrizio%20and%20MWarren_Weidenbaum%20Center.pdf (reporting an estimated 52 full-time-equivalent staff in 2020, with a potential increase slated for 2021 of up to 63 full-time-equivalent staff).

[253] *See* Policy Integrity, *Strengthening Regulatory Review* at 14-15 (2016), https://policyintegrity.org/files/publications/RegulatoryReview_Nov2016.pdf (reflecting the opinions of a bipartisan group of former OIRA leaders).

[254] *Id.* at 14 & n.29.

[255] Cass R. Sunstein, C*ommentary: The Office of Information and Regulatory Affairs: Myths and Realities*, 126 Harv. L. Rev. 1838, 1843 (2013) ("When rules are delayed, it is often because technical specialists are working through the technical questions. Much of the time, the problem is not that OIRA, or anyone else, has a fundamental objection to the rule and the agency's approach. It is that the technical questions need good answers.").

[256] *See, e.g.*, Editorial, *Stuck in Purgatory*, N.Y. Times, June 30, 2013; Cassidy B. West, *Timeliness of OIRA Reviews: A Snapshot in Time*, G.W. Regulatory Studies Ctr., Apr. 1, 2014, https://regulatorystudies.columbian.gwu.edu/timeliness-oira-reviews-snapshot-time; *see also* Admin. Conf. of the U.S., Statement #18: Improving the Timeliness of OIRA

Regulatory Review, Dec. 6, 2013, https://www.acus.gov/recommendation/statement-18-improving-timeliness-oira-regulatory-review.

257 *See* Bethany A. Davis Noll & Richard L. Revesz, *Regulation in Transition*, 104 Minn. L. Rev. 1 (2019) (on the need to carefully time regulations to avoid subsequent reversals).

258 *See* Policy Integrity, *Strengthening Regulatory Review*, *supra* note 42, at 16 (recommending the same, based on the opinions of a bipartisan group of former OIRA leaders).

259 *See, e.g., id.* at 8-9 (summarizing the advice of a bipartisan group of former OIRA leaders).

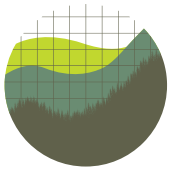
260 For instance, there is the much-lauded example of EPA finally repealing a 40-year-old rule that had required some dairy farmers to treat spilled milk as if it were an oil spill, reportedly saving $800 million in costs over five years. *See* Howard Shelanski, OIRA Admin. Retrospective Review, By the Numbers, https://obamawhitehouse.archives.gov/blog/2016/08/31/retrospective-review-numbers-0 (Aug. 31, 2016).

261 Cass R. Sunstein, *Sludge and Ordeals*, 68 Duke L. J. 1843 (2019); Cass R. Sunstein, *Sludge Audits*, Behavioural Public Policy (2020); *see also* Cass R. Sunstein, *They Ruined the Popcorn: On the Costs and Benefits of Mandatory Labels* (SSRN, draft, June 21, 2018).

262 Policy Integrity has recommended in the past, for example, interagency working groups to harmonize agencies' valuations of mortality risk reductions as well as cancer risk assessments.

263 Exec. Order No. 12,866, 58 Fed. Reg. at 51,735.

264 *Id.*



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