

## **Proposed Action Memo: EPA Rollbacks of Benefits and Costs in the Clean Air Act Rulemaking Process**

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January 2021

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\*This memorandum was prepared for the [Reversing Environmental Rollbacks](#) project led by the Center for Law, Energy and the Environment (CLEE) at UC Berkeley School of Law in partnership with Governing for Impact. The project seeks to track, analyze, and develop strategies to reverse the environmental policy rollbacks of the previous federal administration, offering a comprehensive database and targeted analyses to complement the efforts of peer institutions. CLEE thanks Holly Doremus (UC Berkeley) for thoughtful review and feedback on this memorandum.

## I. Summary

### Rollbacks

- December 8, 2020, EPA Final Rule titled “[Increasing Consistency and Transparency in Considering Costs and Benefits in the Clean Air Rulemaking Process](#).” (85 FR 35612).
- May 13, 2019 EPA memorandum from Andrew Wheeler directing EPA Assistant Administrators to develop reforms and rulemakings regarding cost benefit analyses, and asking the Office of Policy to “improve and update” EPA’s “Guidelines for Preparing Economic Analyses.”
- Executive Order 13783 disbanding the interagency working group responsible for calculating the Social Cost of Carbon

### Agencies

- Environmental Protection Agency
- OMB
- Council on Environmental Quality

### Impact

- The Rule instructs EPA to “disaggregate” co-benefits in cost-benefit analysis in the Clean Air Act rulemaking process, essentially instructing the agency not to consider societal benefits that occur because of pollution intervention or reduction that was not the primary target of the regulation (i.e. the reduction of numerous additional pollutants due to a proposed regulation targeting only a single pollutant). The Rule also imposes a higher evidentiary bar on the inclusion of benefits in analysis, while maintaining a relatively lower bar for the inclusion of costs of compliance in analysis. **Overall the rule would result in less inclusion of potential benefits of Clean Air Act regulations, thereby skewing the cost benefit analysis towards the cost of compliance.**
- Without the formalized Social Cost of Carbon figure calculated by the working group, the Trump EPA has been able to apply a much higher discount rate to future costs from carbon emissions, and limit the cost of carbon calculation to domestic climate impacts. **The result is a significantly decreased quantification of the societal costs of carbon emissions reflected in EPA’s regulatory analysis.**

### Recommended Reversal

- **Rescind the rule to allow for the continued inclusion of co-benefits in cost–benefits analysis and lower the unreasonably high evidentiary bar for inclusion of direct benefits.**
- **Immediately issue an Executive Order rescinding Executive Order 13783.**
- **Take further steps to strengthen the legal resilience of SCC and take further actions to account better for benefits of reduced emissions in both cost–benefit analysis and SCC.**

Changes to the benefit–cost analysis under the Clean Air Act are a particularly subtle way for the Trump administration to undercut environmental and climate change regulations because a benefit–cost analysis suggests, at a surface level, a scientific and clear cut approach to complex questions of benefits, costs, and trade-offs in developing clean air regulations. Under the Trump administration,

benefit–cost analysis was often heavily swayed based on its inputs, specifically how narrowly a “benefit” is construed and how, or which, “costs” are quantified.

On December 8, 2020, the EPA issued its final rule titled “Increasing Consistency and Transparency in Considering Costs and Benefits in the Clean Air Rulemaking Process.” (85 FR 35612) (Rule). Under the guise of “increasing transparency” and codifying benefit-cost analysis for Clean Air Act regulations, the Final Rule would severely the limit scope of what “benefits” an agency should consider in its analysis. The Rule instructs EPA to “disaggregate” co-benefits in cost-benefit analysis, essentially instructing the agency not to consider societal benefits that occur because of pollution intervention or reduction that was not the primary target of the regulation (i.e. the reduction of numerous additional pollutants due to a proposed regulation targeting only a single pollutant). The Rule also imposes a higher evidentiary bar on the inclusion of benefits in analysis, while maintaining a relatively lower bar for the inclusion of costs of compliance in analysis.

The Rule followed a June 2020 Notice of Proposed Rulemaking (NPRM), a June 2018 Advanced Notice of Proposed Rulemaking (ANPRM) soliciting public input on whether and how to change the way EPA considers benefits and costs in rulemaking, and a May 2019 EPA memorandum from Andrew Wheeler (Wheeler Memo), directing EPA Assistant Administrators to develop reforms and rulemakings regarding cost benefit analyses, and asking the Office of Policy to “improve and update” EPA’s “Guidelines for Preparing Economic Analyses.” The EPA Science Advisory Board released draft revisions to the “Guidelines for Preparing Economic Analyses” in April 2020. (2020 Draft Guideline Revisions).

On a second front, President Trump issued Executive Order 13783 disbanding the interagency working group responsible for calculating the Social Cost of Carbon, a dollar value metric capturing the monetized damages associated with an incremental increase in carbon emissions in a given year. Without the formalized Social Cost of Carbon figure calculated by the working group, the Trump EPA has been able to apply a much higher discount rate to future costs from carbon emissions, and limit the cost of carbon calculation to domestic climate impacts. The result is a significantly decreased quantification of the societal costs of carbon emissions reflected in EPA’s regulatory analysis (i.e. the benefit of not emitting carbon).

This memorandum proposes that the EPA formally repeal the rule and revert back to the previous guidance provided under Office of Management and Budget’s Circular A-4, published in 2003, and the EPA’s long-standing “Guidelines for Preparing Economic Analyses,” published by the EPA in 2010. This would de facto reinstate the EPA’s ability to consider co-benefits alongside direct benefits when engaging in benefit-cost analysis. The EPA should also withdraw the Wheeler Memo directing the NPRM, and any revisions to the “Guidelines for Preparing Economic Analyses” that are finalized before January 20, 2021.

With regard to the Social Cost of Carbon, this memorandum proposes that the Biden administration immediately revoke Executive Order 13783, direct OMB to reconvene and expand the Interagency Working Group on Social Cost of Greenhouse Gases, and reinstate that Working Group’s *Technical Support Documents*. Further, the Biden administration should direct the Working Group to clarify that the 2016 SCC values are consistent with Circular A-4’s guidance, that the “global” estimated of emissions is the preferred method for calculation of climate damages, and that SCC can be used in NEPA analyses. The Biden administration should also direct the Working Group to study and develop updated figures for Social Cost of Carbon, accounting for updated data and research since

the figure was last updated in 2016, clarify that Circular A-4 does not require an exclusively domestic-only focus on costs and benefits, clarify that the range of estimates included in the *Technical Support Documents* does not signal uncertainty about methodology, and clarify that the SCC may be used in environmental assessments under NEPA.

## **II. Background**

### **A. Benefit–Cost Analysis and Co-Benefits**

Benefit–Cost analysis (BCA) has been a government-wide tool for regulatory decision making since it was first formally required under an Executive Order by President Reagan.<sup>2</sup> President Reagan later designated the Office of Information and Regulatory Affairs (OIRA) within the Office of Management and Budget (OMB) as the entity responsible for overseeing the process of regulatory review. President Clinton’s Executive Order 12866 replaced the Reagan-era mandate, requiring that for all significant regulatory actions, the enacting agency provide “an assessment of the potential costs and benefits of the regulatory action, including an explanation of the manner in which the regulatory action is consistent with a statutory mandate [...]”<sup>3</sup> For any regulatory action likely to result in a rule that may have an annual effect on the economy of \$100 million or more, or would “adversely affect in a material way the economy, a sector of the economy, productivity, jobs, the environment, public health or safety, or State, local, or tribal governments or communities,” the agency must also quantify benefits and costs to the extent feasible.

The necessary role of cost considerations in Clean Air Act (CAA) regulations has been affirmed by the Supreme Court as well. In *Michigan v. EPA*, 576 U.S. 743 (2015), a 5-4 majority<sup>4</sup> held that the EPA must consider costs of proposed regulation under the portions of the CAA, including cost of compliance, when determining whether a proposed regulation is “appropriate and necessary” under the CAA.

Under the Obama administration, Clean Air Act BCA drew from two main sources of guidance. The first is the OMB’s Circular A-4,<sup>5</sup> published in 2003, and EPA’s long-standing “Guidelines for Preparing Economic Analyses,” published by EPA in 2010 (the “2010 Guidelines”). The 2010

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<sup>2</sup> Enacted under Executive Order 12291 stating in relevant part: “(a) Administrative decisions shall be based on adequate information concerning the need for and consequences of proposed government action; (b) Regulatory action shall not be undertaken unless the potential benefits to society for the regulation outweigh the potential costs to society; (c) Regulatory objectives shall be chosen to maximize the net benefits to society; (d) Among alternative approaches to any given regulatory objective, the alternative involving the least net cost to society shall be chosen; and Agencies shall set regulatory priorities with the aim of maximizing aggregate net benefits to society, taking into account the condition of the particular industries affected by regulations, the condition of the national economy, and other regulatory actions contemplated for the future.” Executive Order 12291 (February 17, 1981) at Sec. 2, available at <https://www.archives.gov/federal-register/codification/executive-order/12291.html>.

<sup>3</sup> Executive Order 12866 (September 30, 1993), available at: <https://www.archives.gov/files/federal-register/executive-orders/pdf/12866.pdf>.

<sup>4</sup> The dissent agreed that EPA’s action would have been “unreasonable if ‘the Agency gave cost no thought at all’”—the dissent merely believed that EPA had, in fact, given costs adequate attention.

<sup>5</sup> *Circular A-4*, Office of Management and Budget (2003) available at: <https://www.whitehouse.gov/sites/whitehouse.gov/files/omb/circulars/A4/a-4.pdf>.

Guidelines were developed by EPA's Nation Center for Environmental Economics in consultation with economists throughout EPA and EPA's science Advisory Board.<sup>6</sup>

Circular A-4 contemplates the consideration of co-benefits alongside direct benefits in BCA of proposed regulatory actions, directing agencies to “[i]dentify the expected undesirable side-effects and ancillary benefits of the proposed regulatory action and then alternatives. These should be added to the direct benefits and costs as appropriate.”<sup>7</sup> The 2010 Guidelines similarly direct “[a]n economic analysis of regulatory or policy options should present all identifiable costs and benefits [...] These should include directly intended effects and associated costs, as well as ancillary (or co-) benefits and costs.”<sup>8</sup>

## B. Social Cost of Carbon

The Social Cost of Carbon (SCC) is a dollar value metric, separate from co-benefits, capturing the monetized damages associated with an incremental increase in carbon emissions in a given year, designed for use in BCAs of proposed regulatory actions,<sup>9</sup> and also appropriate for use in other agency analyses, such as environmental impact statements.<sup>10</sup> The metric is meant to capture changes in net agricultural productivity, human health, property damages from increased flood risk, and the value of ecosystem services due to climate change, among other damages categories that can currently be quantified.<sup>11</sup> Because this value is accounting for future harms, the dollar value of SCC metric ultimately depends heavily on the discount rate utilized by the reviewing agency.

In *Center for Biological Diversity v. National Highway Traffic Safety Administration*, 508 F.3d 508 (9th Cir. 2007), the court held that the federal government needed to account for economic effects of climate change in regulatory BCAs. In response, the Obama administration OMB convened the Interagency Working Group on the Social Cost of Carbon (later renamed the Interagency Working Group on Social Cost of Greenhouse Gases), which issued a series of *Technical Support Documents* from 2010 – 2016, quantifying the SCC for greenhouse gas pollutants emitted by year through 2050, and applying discount rates of 2.5%, 3%, and 5%.<sup>12</sup>

## III. Current Status

### A. Benefit–Cost Analysis and Co-Benefits

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<sup>6</sup> *Guidelines for Preparing Economic Analyses*, U.S. EPA (2010) available at: <https://www.epa.gov/environmental-economics/guidelines-preparing-economic-analyses>.

<sup>7</sup> *Circular A-4, supra*, (2003) at p. 3.

<sup>8</sup> *Guidelines for Preparing Economic Analyses, supra*, (2010) at 11-2.

<sup>9</sup> *Technical Update of the Social Cost of Carbon for Regulatory Impact Analysis – Under Executive Order 12866*, Interagency Working Group on Social Cost of Greenhouse Gasses, United States Government (August 2013) available at: [https://obamawhitehouse.archives.gov/sites/default/files/omb/inforeg/scc\\_tsd\\_final\\_clean\\_8\\_26\\_16.pdf](https://obamawhitehouse.archives.gov/sites/default/files/omb/inforeg/scc_tsd_final_clean_8_26_16.pdf).

<sup>10</sup> Council on Environmental Quality, Draft Guidance on Greenhouse Gases and Climate Change 16 (2014), [https://obamawhitehouse.archives.gov/sites/default/files/docs/nepa\\_revised\\_draft\\_ghg\\_guidance\\_searchable.pdf](https://obamawhitehouse.archives.gov/sites/default/files/docs/nepa_revised_draft_ghg_guidance_searchable.pdf).

<sup>11</sup> *Technical Update of the Social Cost of Carbon for Regulatory Impact Analysis – Under Executive Order 12866*, Interagency Working Group on Social Cost of Greenhouse Gasses, United States Government (August 2013) available at: [https://obamawhitehouse.archives.gov/sites/default/files/omb/inforeg/scc\\_tsd\\_final\\_clean\\_8\\_26\\_16.pdf](https://obamawhitehouse.archives.gov/sites/default/files/omb/inforeg/scc_tsd_final_clean_8_26_16.pdf).

<sup>12</sup> *See, e.g., Id.* Besides the three discount rates, the Interagency Working Group also calculated a “high-impact” estimate, to capture the potential for catastrophic risks and other variables that could not currently be quantified directly. In addition to the Social Cost of Carbon, in 2016, the Interagency Working Group also issued estimates for the Social Cost of Methane and the Social Cost of Nitrous Oxide.

On **June 7, 2018**, EPA issued an Advanced Notice of Proposed Rulemaking (ANPRM) of the same title soliciting public input on whether and how to change the way EPA considers benefits and costs in rulemaking. On **May 13, 2019**, EPA issued the Wheeler Memo, directing EPA Assistant Administrators to develop reforms and rulemakings regarding cost benefit analyses, and asking the Office of Policy to “improve and update” EPA’s “Guidelines for Preparing Economic Analyses.”

On **April 3, 2020**, the EPA Science Advisory Board released the 2020 Draft Guideline Revisions.<sup>13</sup> The 2020 Guideline Revisions do not go as far as the NPRM, but they do include proposed changes to the BCA process. The 2020 Guideline Revisions purposefully avoid using the terms “co-benefits” or “ancillary benefits”, and call for EPA to “clearly distinguish between benefits that arise from the statutory objective of the regulation and other welfare effects of the regulation, when it is possible to do so.”<sup>14</sup> The 2020 Draft Guideline Revisions also include language that may suggest that an analysis of a proposed rule with large co-benefits should consider alternative ways of “obtaining these unrelated benefits,” presumably suggesting that EPA should consider whether co-benefits should instead be obtained through separate rulemakings that can achieve co-benefits more directly.<sup>15</sup>

On **June 11, 2020**, EPA issued its NPRM titled “Increasing Consistency and Transparency in Considering Costs and Benefits in the Clean Air Rulemaking Process.” (85 FR 35612). On **December 8, 2020**, EPA finalized the Rule consisting of three distinct elements: (1) it directs EPA to prepare BCA for all significant proposed and final regulations under the CAA, (2) it directs EPA to prepare BCA using the best available scientific information and in accordance with best practices from the economic, engineering, physical, and biological sciences; and (3) it provides “additional procedural requirements to increase transparency in the presentation of the BCA results.” Included in the “additional procedural requirements” is a “disaggregation” of co-benefits from direct benefits in BCA analysis, meaning that for a proposed regulation EPA must present at least one BCA analysis in which co-benefits are *not* considered in the quantification of benefits, and the benefits calculation is instead limited to the direct benefits of the proposed regulation of a particular pollutant or emission. However, the Rule does not outright ban the consideration of co-benefits in the EPA’s consideration of co-benefits in the rulemaking process. The Rule also fails to treat benefits and costs equally: the Rule sets a high bar of “endpoints for which the scientific evidence indicates there is [a] clear causal or likely causal relationship between pollutant exposure and effect” for a potential benefit to be counted, while only requiring a “relatively precise” and “reasonable” estimate of a proposed regulation’s compliance costs.<sup>16</sup>

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<sup>13</sup> “Guidelines for Preparing Economic Analyses: Review Copy Prepared for EPA’s Science Advisory Board’s Economic Guidelines Review Panel.” EPA (April 3, 2020) available at: [https://yosemite.epa.gov/sab/sabproduct.nsf/0/30D5E59E8DC91C2285258403006EEE00/\\$File/GuidelinesReviewDraft.pdf](https://yosemite.epa.gov/sab/sabproduct.nsf/0/30D5E59E8DC91C2285258403006EEE00/$File/GuidelinesReviewDraft.pdf).

<sup>14</sup> “Initial Comments to the Science Advisory Board Economic Guidelines Review Panel,” New York University School of Law Institute for Policy Integrity (April 15, 2020) at p. 4 available at: [https://policyintegrity.org/documents/SAB\\_Econ\\_Guidelines\\_Review\\_Panel\\_Initial\\_Comment\\_2020.04.15-signed.pdf](https://policyintegrity.org/documents/SAB_Econ_Guidelines_Review_Panel_Initial_Comment_2020.04.15-signed.pdf).

<sup>15</sup> *Id.* at p. 5.

<sup>16</sup> “Comments on Notice of Proposed Rulemaking for ‘Increasing Consistency and Transparency Considering Benefits and Costs in the Clean Air Act Rulemaking Process,’” New York University School of Law Institute for Policy Integrity, et al. (August 3, 2020) available at: [https://policyintegrity.org/documents/EPA\\_CBA\\_under\\_CAA\\_Joint\\_Comments\\_2020.08.03.pdf](https://policyintegrity.org/documents/EPA_CBA_under_CAA_Joint_Comments_2020.08.03.pdf).

## B. Social Cost of Carbon

On **March 28, 2017**, President Trump issued Executive Order 13783, which in relevant part disbanded the Interagency Working Group on Social Cost of Greenhouse Gases and withdrew all published *Technical Support Documents*.<sup>17</sup> The Executive Order also left agencies with the mistaken impression that Circular A-4 required a “domestic-only” estimate of the social cost of carbon and required application of a high 7% discount rate to intergenerational climate effects. Consequently, EPA and other agencies during the Trump administration typically applied so-called “interim” estimates of the social cost of carbon, which decimated the valuation of climate change. Lastly, the Trump administration universally refused to use SCC in NEPA assessments.

In **April 2020**, the EPA Science Advisory Board released the 2020 Guideline Revisions. The 2020 Guideline Revisions do not formally make any changes to the SCC; however, the 2020 Guideline Revisions advocate for a domestic-only estimate of social cost of greenhouse gasses.<sup>18</sup>

## **IV. Proposed Action**

### A. Benefit-Cost Analysis and Co-Benefits

#### 1. *Issue Policy Statement / Guidance*

The EPA should issue a policy statement or guidance noting the importance of equally accounting for all benefits and costs, including co-benefits, in BCA analysis. This statement should also cite the inclusion of co-benefits by OMB’s Circular A-4 and the 2010 Guidelines, as well as the centrality of co-benefits quantification in the promulgation of previous regulations. In addition, the EPA should withdraw the Wheeler Memo in the statement. If the 2020 Draft Guideline Revisions have been adopted, those should be withdrawn as well.

#### 2. *Begin Notice-and-Comment Process to Rescind BCA Rule*

If the rule is “effective” by January 20, 2021, the Biden EPA would need to begin the process of formally rescinding the rule and revert back to the previous policy governed by OMB’s Circular A-4 and the 2010 Guidelines. Formal rescission would require notice-and-comment procedure under the Administrative Procedure Act, beginning with a Notice of Intention to Review and Rescind or Revise the Rule. In the notice, the Biden EPA should underscore that Executive Order 12866 directs agencies to quantify benefits of proposed regulation, and existing guidance under OMB’s Circular A-4 and the 2010 Guidelines clearly state that co-benefits are to be included in any quantification of benefits.<sup>19</sup> EPA can also state that the rule has no basis for its disparate treatment

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<sup>17</sup> See “Presidential Executive Order on Promoting Energy Independence and Economic Growth” at Sec. 5(b), available at: <https://www.whitehouse.gov/presidential-actions/presidential-executive-order-promoting-energy-independence-economic-growth/>.

<sup>18</sup> “Initial Comments to the Science Advisory Board Economic Guidelines Review Panel,” New York University School of Law Institute for Policy Integrity (April 15, 2020) at p. 3 available at: [https://policyintegrity.org/documents/SAB\\_Econ\\_Guidelines\\_Review\\_Panel\\_Initial\\_Comment\\_2020.04.15-signed.pdf](https://policyintegrity.org/documents/SAB_Econ_Guidelines_Review_Panel_Initial_Comment_2020.04.15-signed.pdf).

<sup>19</sup> This would help satisfy the legal consideration in reversing course on the previous administration’s Rule. The Biden EPA must “provide reasoned explanation for its action,” which “would ordinarily demand that it display awareness that

of the standard of evidence for benefits vs costs, and that the Rule did not demonstrate any need for the rule.<sup>20</sup> The Agency should seek comments on (1) the inclusion of co-benefits in the quantifications of benefits in BCA, and (2) the Rule's consistency with existing guidance under OMB's Circular A-4 and the 2010 Guidelines.

If the rescission cannot be completed before a draft cost-benefit analysis of a different rulemaking needs to be published, there are a few options. If at least a proposed notice of rescission has been published, analysts can cite to the notice of rescission and say there is reason not to follow practices codified in the rule. The proposed 40 CFR 83.3(b) allows EPA to "depart" from the so-called "best practices" being codified upon providing a "reasoned explanation," including "a discussion of the likely effect of the departures on the results." Analysts could say that the notice of repeal provides a sufficient reason, and the "departures" will not meaningfully affect the substance of the cost-benefit results. Alternatively, there may be ways to more or less "comply" with the terms of the rule without actually compromising the integrity of the cost-benefit analysis, though that will have to be worked out case-by-case.

The Rule is also likely to be challenged by environmental groups. To the extent legal challenges occur, they can be referenced in the Biden EPA's Notice of Intent to review and rescind the Rule.

## B. Social Cost of Carbon

President-elect Biden should revoke President Trump's Executive Order 13783 in a Day One Executive Order on Climate. President Biden should also direct OMB to reconvene the Interagency Working Group on Social Cost of Greenhouse Gases (formerly the Interagency Working Group on the Social Cost of Carbon), and order that the Working Group's *Technical Support Documents* are reinstated and representative of governmental policy, thereby restoring the calculated value of SCC reflected in the Working Group's 2016 document. Furthermore, President Biden can direct OMB to invite the Federal Energy Regulatory Commission and the Army Corps of Engineers to join the Interagency Working group, as both agencies have expertise relevant to the calculation of the social cost of greenhouse gasses.<sup>21</sup>

After reconvening the Working Group, the Biden administration can direct the Group to undertake an updated analysis based on current data and methodologies to develop an updated SCC for use in BCAs and other agency analyses, perhaps following the recommendations outlined in the National Academy of Sciences 2017 publication *Valuing Climate Damages: Updating Estimation of the Social Cost of*

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it is changing position." However the reasoned explanation need not be "justified by reasons more substantial than those required to adopt a policy in first instance," and the Biden EPA need not identify any new facts prompting its change in policy, it can instead base its decision on "a reevaluation of which policy would be better in light of the facts." *Nat'l Ass'n of Home Builders v. E.P.A.*, 682 F.3d 1032, 1037-1038 (D.C. Cir. 2012).

<sup>20</sup> See "Initial Comments to the Science Advisory Board Economic Guidelines Review Panel," New York University School of Law Institute for Policy Integrity (April 15, 2020) available at: [https://policyintegrity.org/documents/SAB\\_Econ\\_Guidelines\\_Review\\_Panel\\_Initial\\_Comment\\_2020.04.15-signed.pdf](https://policyintegrity.org/documents/SAB_Econ_Guidelines_Review_Panel_Initial_Comment_2020.04.15-signed.pdf).

<sup>21</sup> See "Enhancing the Social Benefits of Regulatory Review" New York University School of Law Institute for Policy Integrity (October 2020) at p. 22 available at: [https://policyintegrity.org/files/publications/Enhancing\\_the\\_Social\\_Benefits\\_of\\_Regulatory\\_Review.pdf](https://policyintegrity.org/files/publications/Enhancing_the_Social_Benefits_of_Regulatory_Review.pdf).



*Carbon Dioxide.*<sup>22</sup> The Biden administration can also direct the Group to study further the appropriate application of discount rates in the context of the SCC to best capture the weight of potential climate catastrophes, and in turn provide more guidance to agencies on the appropriate discount rate to use in applying the SCC. Until the new SCC is developed, agencies may rely on the 2016 SCC values.

While waiting for the value to be updated, there are certain clarifications the Working Group can make to repudiate the more problematic positions taken by the Trump Administration and ensure that the SCC is more resilient to legal challenges. The Working Group should clarify that Circular A-4 does not require an exclusively domestic-only focus on costs and benefits, especially when international costs and benefits will affect U.S. interests.<sup>23</sup> The Working Group should also clarify that the range of estimates included in the *Technical Support Documents* does not signal uncertainty about methodology, and clarify that the SCC may be used in environmental assessments under NEPA.<sup>24</sup>

If the 2020 Draft Guideline Revisions have been adopted, those should be withdrawn as well.

## **V.**                    **Justification**

### **A. Benefit–Cost Analysis and Co-Benefits**

Failure to rescind the rule will severely underweight the potential benefits of proposed Clean Air Act regulations, especially those governing climate change-related pollutants.

Co-benefits cover a wide swath of public health benefits associated with reducing conventional air pollution and climate change-related emissions, including reductions in particulate matter, nitrogen oxides, and sulfur dioxide. For instance, the 1990 CAA amendments established the first cap and trade program for sulfur dioxide, a regulation developed primarily to reduce acid rain and the associated acidification of forests and waterbodies. However, most of the monetized benefits from the regulation have resulted from reducing human exposure to particulate matter, of which sulfur dioxide is a precursor.<sup>25</sup> More recently, the 2015 Clean Power Plan was promulgated to reduce carbon dioxide emissions in an effort to mitigate climate change, but the BCA also included billions of dollars of monetized benefits due to anticipated reductions in sulfur dioxide, nitrogen oxides, and resulting reduction in particulate matter and ozone resulting from measures to reduce carbon dioxide.<sup>26</sup> The potential consequences of the EPA’s Rule are apparent from the EPA’s April decision to begin rolling back the Obama Mercury and Air Toxics Standards (MATS).<sup>27</sup> The Obama EPA

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<sup>22</sup> National Academies of Sciences, Engineering, and Medicine, *Valuing Climate Damages: Updating Estimation of the Social Cost of Carbon Dioxide*, The National Academies Press (2017), available at: <https://doi.org/10.17226/24651>.

<sup>23</sup> See “Enhancing the Social Benefits of Regulatory Review” New York University School of Law Institute for Policy Integrity (October 2020) at p. 19 available at: [https://policyintegrity.org/files/publications/Enhancing\\_the\\_Social\\_Benefits\\_of\\_Regulatory\\_Review.pdf](https://policyintegrity.org/files/publications/Enhancing_the_Social_Benefits_of_Regulatory_Review.pdf).

<sup>24</sup> *Id.* at p. 21-24.

<sup>25</sup> Joseph Aldy, Matthew Kotchen, Mary Evans, Meredith Fowlie, Arik Levinson, and Karen Palmer, *Co-Benefits and Regulatory Impact Analysis: Theory and Evidence from Federal Air Quality Regulations*, Resources for the Future, Working Paper 20-12 (August 2020), available at: [https://media.rff.org/documents/RFF\\_WP\\_20-12\\_Aldy\\_et\\_al19599.pdf](https://media.rff.org/documents/RFF_WP_20-12_Aldy_et_al19599.pdf).

<sup>26</sup> *Id.*

<sup>27</sup> “Regulatory Actions - Final Mercury and Air Toxics Standards (MATS) for Power Plants”, U.S. EPA, July 2020, available at: <https://www.epa.gov/mats/regulatory-actions-final-mercury-and-air-toxics-standards-mats-power-plants>

had promulgated MATS standards designed to reduce mercury emissions, relying heavily on the value of the co-benefits of particulate matter pollution reduction, estimated to range from \$33 Billion to \$90 Billion a year, to outweigh the MATS program's estimated costs of \$9 Billion a year.<sup>28</sup>

In fact, a 2020 review of 239 peer reviewed studies found that co-benefits, particular those that arise from climate related policy and regulation proposals, often equal or exceed the costs of the proposals.<sup>29</sup> Without considerations of co-benefits, improperly narrow CAA analysis could result in the rejection of necessary climate regulations that, in reality, produce a wide array benefits beyond just climate mitigation that far outweigh any costs of implementation.

Furthermore, the communities most likely to be affected by a minimization of public health co-benefits are those communities that already face a disproportionate burden of air pollutants, degraded air quality, and particulate matter: largely low income communities of color and other marginalized communities.<sup>30</sup>

Lastly, a formal rule governing BCA is not necessary, and will harm the goal of dynamic climate regulation in the long run. Having agency-specific, statute-specific rules interferes with one purpose of the whole OIRA process, which is to make overall government regulatory policy more consistent. The EPA already has robust guidance and peer-reviewed guidelines governing the scientific standards for BCAs: Circular A-4 and the 2010 Guidelines, which explicitly allow for the consideration of co-benefits. The use of guidelines, as opposed to formal rules, allow for future flexibility and adaptation to changing data and methods of quantification without the constraints of APA requirements.<sup>31</sup> Furthermore, assessment of other parameters, such as discount rates, are evolving, making it unwise to entrench them in formal regulations.

Wide-ranging environmental benefits, such as protecting human life and health, or protecting ecosystems and species, are already notoriously hard to quantify.<sup>32</sup> Excluding the robust accounting of co-benefits exacerbates this further.

## B. Social Cost of Carbon

Agencies cannot properly fulfill the mandate of Executive Order 12866 if they are utilizing purposefully skewed inputs.

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<sup>28</sup> See, e.g., Joseph Aldy, Matthew Kotchen, Mary Evans, Meredith Fowlie, Arik Levinson, and Karen Palmer, *Deep flaws in a mercury regulatory analysis*, Science 368, 247-248 (April 17 2020), available at:

<https://science.sciencemag.org/content/368/6488/247.full>; see also Jean Chemnick, "How a revised calculation could hurt future climate rules," E&E News (May 14, 2020) available at: <https://www.eenews.net/stories/1063128561>.

<sup>29</sup> Mikael Karlsson, Eva Alfredsson, and Nils Westling, *Climate policy co-benefits: a review*, Climate Policy, 20:3, 292-316, DOI (2020), available at: <https://www.tandfonline.com/doi/full/10.1080/14693062.2020.1724070>.

<sup>30</sup> See, e.g., Christopher W. Tessum, et al., *Inequity in consumption of goods and services adds to racial-ethnic disparities in air pollution exposure*, PNAS 116 (13) (March 26, 2019), available at: <https://www.pnas.org/content/116/13/6001>.

<sup>31</sup> See Alan Krupnick, Richard Morgenstern, Arthur Fraas, and Nathan Richardson, *Comments on "Increasing Consistency and Transparency in Considering Costs and Benefits in the Clean Air Rulemaking Process*, Resources for the Future (July 28, 2020), available at: <https://www.rff.org/publications/testimony-and-public-comments/comments-to-the-epa-on-increasing-consistency-and-transparency-in-considering-benefits-and-costs-in-the-clean-air-act-rulemaking-process/>.

<sup>32</sup> See, e.g., Lisa Heinzerling, *Cost-Nothing Analysis: Environmental Economics in the Age of Trump*, Colorado Natural Resources, Energy and Env. Law Review, 30:2, 287 (November 2018), available at: [https://www.colorado.edu/law/sites/default/files/attached-files/heinzerling\\_web\\_edition\\_pdf.pdf](https://www.colorado.edu/law/sites/default/files/attached-files/heinzerling_web_edition_pdf.pdf).

The Trump administration's disbanding of the Interagency Working Group on Social Cost of Greenhouse Gases and revocation of its calculated SCC values have allowed the Trump EPA to utilize woefully low valuation of SCC in decision making by limiting the calculation to include only domestic emissions, and applying a far higher discount rate.<sup>33</sup> At times, the Trump EPA has used a value as low as \$1 per ton of carbon emitted.<sup>34</sup> Such a blatant undercounting of the societal and environmental costs of continued or increased carbon emissions clearly skews BCA to disfavor regulations that meaningfully decrease carbon emissions, or worse, favor a status-quo of no regulation.

However, merely reestablishing SCC at the previously calculated value may not be enough to remedy this issue adequately. Some critics argue that research demonstrates that the 2020 SCC should be doubled or quadrupled from the Obama administration numbers<sup>35</sup>, while others estimate the correct SCC be around \$100 to \$200, and increase to nearly \$600 by 2100.<sup>36</sup> In order to ensure that the true cost of carbon emissions are accounted for in BCA and other agency analyses, the Interagency Working Group on Social Cost of Greenhouse Gases should undertake an updated analysis and quantification of SCC, both in terms of the value of future harms and the appropriate discount rate with which to weigh the cost of those harms.

To make the SCC more resilient to legal challenges, the Working Group should clarify the 2016 SCC and any updated SCC's compatibility with Circular A-4 and permissibility of use in NEPA analysis.

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<sup>33</sup> Dana Nuccitelli, *The Trump EPA is vastly underestimating the cost of carbon dioxide pollution to society, new research finds*, Yale Climate Connections (July 30, 2020), available at: <https://yaleclimateconnections.org/2020/07/trump-epa-vastly-underestimating-the-cost-of-carbon-dioxide-pollution-to-society-new-research-finds/>.

<sup>34</sup> Cass R. Sunstein, *Watch for Biden Decision on Unsung Climate Metric*, Bloomberg Opinion (November 10, 2020), available at: <https://www.bloomberg.com/opinion/articles/2020-11-10/biden-climate-change-policy-turns-on-carbon-cost-calculation#footnote-1>.

<sup>35</sup> *Id.*

<sup>36</sup> Dana Nuccitelli, *The Trump EPA is vastly underestimating the cost of carbon dioxide pollution to society, new research finds*, Yale Climate Connections (July 30, 2020), available at: <https://yaleclimateconnections.org/2020/07/trump-epa-vastly-underestimating-the-cost-of-carbon-dioxide-pollution-to-society-new-research-finds/>.