



Environmental Protection Network

Resetting the Course of EPA

Strengthening Economic Analysis at EPA



This paper is part of the [Resetting the Course of EPA](#) project by the [Environmental Protection Network \(EPN\)](#), a bipartisan network of more than 500 former EPA career employees and political appointees across the country who served under multiple Democratic and Republican administrations.

Resetting the Course of EPA outlines specific and actionable steps that EPA leadership can take to reset the course of the agency to address the most significant and pervasive threats to public health and our environment. As there is no single roadmap, EPN looks forward to collaborating with others to advance the dialogue around the future of EPA and set ideas into motion that will better protect the health and wellbeing of everyone.

Additional Resetting the Course of EPA documents are available here:

<https://www.environmentalprotectionnetwork.org/reset>

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Summary

EPA has a strong history of conducting first-rate economic analyses and needs to reestablish its prominence. Economic analysis has historically played a crucial role in EPA’s evaluation of regulatory options. Recently, EPA’s use of economic analyses has been compromised to the detriment of agency rulemaking, public health, our environment, and the nation’s economic well-being. Reentry into the economic mainstream is essential.

Recommendations

1. **Launch a substantial new effort to improve methods of economic analysis, including both benefit and cost estimation.** This effort should address the challenges of assessing benefits that are difficult to quantify and monetize. It should also improve EPA’s assessment of distributional impacts, including addressing the inequitable environmental conditions of communities of color, lower-wealth communities, and tribal and indigenous communities, who continue to experience disproportionately high levels of exposure and vulnerability to toxic pollution and environmental risks. [\[Read More\]](#)
2. **Review and revise agency economic analysis guidelines to incorporate the full measure of benefits.** This entails a reissuance of Regulatory Impact Assessment (RIA) guidelines to explicitly reaffirm, strengthen, and expand on the inclusion of all significant costs and benefits, including co-benefits from regulatory actions. [\[Read More\]](#)
3. **Establish a new version of the Environmental Economic Advisory Committee (EEAC) of the EPA Science Advisory Board (SAB),** incorporating leading experts in a broad array of economic subspecialties. Set an agenda of key issues for the economics committee to address. [\[Read More\]](#)
4. **Convene an Interagency Work Group (IWG) on the “social cost of carbon” (SCC)** and instruct it to conduct an updated analysis and issue a report. This could be preceded by retaining (an) outside organization(s) to produce a short-term review/reassessment of SCC. Key issues to address include: the appropriate use of discounting (including discount rates for intergenerational impacts), the geographic scope of benefits and costs, and risk aversion. [\[Read More\]](#)
5. **Pilot retrospective analyses of priority/selected EPA rules to better understand the actual costs/benefits of agency actions.** [\[Read More\]](#)

Recommendation #1: Launch a substantial new effort to improve methods of economic analysis, including both benefit and cost estimation.

Cost-benefit analytics have advanced substantially since EPA was formed. The agency has served as both a catalyst and forum for this advancement. [RIAs](#) of major rules are more encompassing and firmly grounded. However, the full complement of outcomes must be fully and fairly presented and considered. There remains potential for substantial improvements in:

- ❖ the characterization, measurement, and valuation of expected effects.
- ❖ assessing distributional impacts, including the critical importance of addressing the inequitable environmental conditions of communities of color, lower wealth communities, and tribal and indigenous communities, who continue to experience disproportionately high levels of exposure and vulnerability to toxic pollution and environmental risks.
- ❖ the characterization and valuation of benefits that are distant in time with costs that are near-term (climate change is a case in point).
- ❖ the characterization of benefits that are evident in science but not amenable to quantification or monetization (ecosystem function is an example).

EARLY ACTIONS, INCLUDING THE FIRST 100 DAYS

- ❖ Announce an effort to better analyze and understand the full benefits and costs of EPA rules, including distributional impacts on communities who continue to experience disproportionately high levels of exposure and vulnerability to toxic pollution and environmental risks.

FIRST YEAR AND SUSTAINED ACTIONS

- ❖ Undertake a review/evaluation of the state of theory and practice related to the discipline of benefit and cost assessment in EPA rulemaking processes, particularly with regard to benefits that are known to exist but are difficult to quantify or monetize.
 - ◆ This would encompass examining behavioral economics and other sub-disciplines. A key aspect would deal with the benefits and costs of stabilizing climate.
 - ◆ Put emphasis on benefits research on ecosystem impacts that will greatly inform water and climate analyses.
 - ◆ This should be done in close collaboration with a subcommittee of the reconstituted SAB economic advisory committee.
 - ◆ Launch an effort to better portray cost-benefit analysis (CBA) results: best practices would likely include charts/tables, video, etc., describing and, when possible, quantifying benefits (numbers of premature deaths and illnesses avoided, improvements in visibility, etc.) that cannot readily be monetized. It’s important to find ways to keep non-monetized benefits from being ignored in characterizations of CBA results.
- ❖ A cost-effective way to improve CBA would be for the Office of Policy in the Administrator’s Office to identify a set of key CBA issues and encourage research in those areas, periodically updating the list. Even without associated EPA funding, it is likely to result in papers, dissertations, and third-party funded research.

Recommendation #2: Review and revise agency economic analysis guidelines to incorporate the full measure of benefits.

Comprehensive, state-of-the-art economic analysis is integral to informed, transparent regulatory policy. Such analyses require full inclusion of all significant benefits and costs resulting from regulatory actions. Relative shares of direct vs. indirect benefits and costs are relevant, but neither should be discounted or excluded based on their share of the total. Well-established economic theory and practice are firm and clear on this.

EPA must clearly signal in its “[Guidelines for Preparing Economic Analyses](#)” and other policy statements that all significant indirect/ancillary impacts (including co-benefits) of agency actions must be fully assessed. They should be considered to the extent allowed by governing statutes, while watching out for possible double-counting of the same impact/benefit by multiple, simultaneous RIAs.

IMMEDIATE ACTIONS

- ❖ Announce that EPA will use the most efficient and legally defensible process to expeditiously reverse EPA’s 2020 “appropriate and necessary” finding for regulation of power plants under the [Mercury and Air Toxics Standards \(MATS\)](#) for oil- and coal-fired power plants. Proposing a new rule to reverse this will take time, but this is a public first step. Economists from the SAB can provide input.
- ❖ Publicly announce a return to the prior policy of full inclusion of significant co-benefits in all regulatory economic analysis and consideration of all co-benefits to the extent allowed by the governing legislation. If EPA has revised its “Guidelines for Preparing Economic Analyses” before January 2021 to change terminology and/or to ignore or disallow use of co-benefits/ancillary benefits in decision-making, reverse such changes. Restore consideration of co-benefits as in the prior EPA guidelines, consistent with [OMB Circular A-4](#).

FIRST YEAR AND SUSTAINED ACTIONS

- ❖ Update EPA’s “Guidelines for Preparing Economic Analyses” to clearly affirm that significant indirect benefits and costs are to be fully considered in CBAs and explain the reasons for doing so. Issue a public statement, possibly as a *Federal Register* notice, stating the agency’s position in order to ensure that the MATS rule is not the last formal statement on the issue of CBAs.

Recommendation #3: Establish a new version of the Environmental Economic Advisory Committee (EEAC) of the EPA Science Advisory Board (SAB).

EPA benefits from a diverse array of scientific advisory groups that review agency proposals and offer guidance on the latest research and findings in their fields. One of these groups was the EEAC. Without explanation, the EEAC was disbanded in 2018 just prior to the issuance of a [Notice of Proposed Rulemaking considering how costs and benefits](#) of proposed regulations should be analyzed. The disbanded EEAC members met on their own, reconstituted as the “[External Environmental Economics Advisory Committee \(E-EEAC\)](#)”, and analyzed the MATS rule, issuing a helpful [fact sheet](#) and a [report](#).

IMMEDIATE ACTIONS

- ❖ Announce the reestablishment of an SAB Economic Advisory Committee, inviting the most recent members of the EEAC to return. The committee should include additional sub-specialty expertise such as labor, macro, regional, and engineering economists.
- ❖ Welcome researchers, including those who have received EPA grants in the past, onto the committee. Take legitimate conflicts of interest seriously in selecting membership.

EARLY ACTIONS, INCLUDING THE FIRST 100 DAYS

- ❖ Invite current/past members of the EEAC and EPA program offices to recommend new participants to this committee, including prospective members with expertise in a wide range of economic sub disciplines, including the evaluation of impacts on low-income communities, communities of color, and indigenous communities.

FIRST YEAR AND SUSTAINED ACTIONS

- ❖ Working with EPA’s Policy Office, develop and issue an initial agenda for the reconstituted committee, including key economic issues for its attention.
 - ◆ In that agenda, ask the committee to assess the feasibility and merits of macro-scale climate simulations. This could be an expansion/refinement of Resources for the Future’s work on a 20-year look at climate for the state of Florida. The goal is to estimate production, income, and employment impacts initially for states, followed by regions, and then nationally.
 - ◆ In that agenda, include improved approaches to analyzing and valuing health disparities and environmental benefits to environmental justice communities that bear outsized burdens of exposures and health damages.
- ❖ Set up meetings for the committee to review, and advise on issues such as criteria the agency should use for selecting past rules for retrospective CBAs, the treatment of co-benefits in agency CBAs, and appropriate discount rates for the social cost of carbon.
- ❖ Hold committee panel meetings, including public forums, on these key environmental economic issues and gain consensus on recommendations.
- ❖ Apply the panel’s recommendations to cost-benefit analysis done at EPA.

Recommendation #4: Convene an Interagency Work Group (IWG) on the “social cost of carbon” (SCC).

Convene a reconstituted IWG on the [SCC](#) and instruct it to conduct an updated analysis and issue a report. This initiative could be preceded by an outside organization that is a recognized voice in the field producing a near-term review/reassessment of SCC.

The updated IWG analysis and report on the SCC should:

- ❖ review and potentially revise guidelines with respect to the appropriate use of discounting, including the merits of declining discount rates¹ for intergenerational issues, i.e., where costs are near-term and benefits stretch decades and decades into the future.
- ❖ address global dimensions to climate change. Policy makers must have the analysis to be able to consider benefits and costs not only within U.S. borders as a basis for action, but also to consider international costs and benefits.
- ❖ advise on how risk aversion should be incorporated in the SCC. Climate change poses a range of uncertain outcomes and potentially catastrophic damages, especially at upper levels of projected average warming.

IMMEDIATE ACTIONS

- ❖ Working with the White House, announce the creation of a reconstituted IWG on the SCC.

EARLY ACTIONS, INCLUDING THE FIRST 100 DAYS

- ❖ Establish an EPA contract with an established organization to assess the full global SCC. This will provide near-term guidance to inform the work of the IWG. Have the participating agencies (Council on Economic Advisors, Council on Environmental Quality, Department of Commerce, Department of Defense, Department of Energy, Department of Interior, Department of Treasury, EPA, National Economic Council, Office of Management and Budget, Office of Science and Technology Policy, U.S. Department of Agriculture) appoint representatives to serve on the IWG.

FIRST YEAR AND SUSTAINED ACTIONS

- ❖ Convene meetings of the IWG to determine needed updates to the prior recommendations, especially with respect to the discount rate(s) used for benefits and costs. Also address the rationale for considering global versus only domestic impacts.
- ❖ Apply the revised recommendations to government-wide work.

¹ Use of lower discount rates result in greater valuation for long-term effects (such as climate related benefits). Conversely, use of higher discount rates result in a higher relative value to near-term effects (e.g., costs) versus those in the long-term. Currently, OMB recommends a range of 3% to 7% discount rate in cost-benefit analyses. In the landmark “Stern Review on the Economics of Climate Change” (2006), the average value used is 1.5%. (For a short review of the Stern Report and the debate over discount rates, see the [wiki discussion Section 5.](#)) For a discussion directed at non-economists, see “[The Social Cost of Carbon and Competing Decision Frameworks for Climate Policy](#)” by K. Hausker (2011).

Recommendation #5: Pilot retrospective analyses of priority/selected EPA rules to better understand the actual costs/benefits of agency actions.

EPA does extensive analysis before issuing rules that attempt to forecast their benefits and costs. However, it rarely looks at actual experience under those rules after they are implemented. Retrospective analysis helps the agency better understand and portray actual firm and community compliance responses and costs.

Assessing such results could inform future regulatory design. Such analyses will better demonstrate actual outcomes of agency rules and help EPA make improved forecasts for future rules. For example, industry costs have often been overestimated during rulemaking, as they tend to underestimate innovation that has led to lower cost solutions in practice.² While retrospective analysis can be costly, it also yields very valuable information. Qualitative as well as quantitative analyses provide insights for improved regulations. Undertaking and disseminating such analysis would enhance EPA’s reputation for economic rigor and transparency.

EARLY ACTIONS, INCLUDING THE FIRST 100 DAYS

- ❖ Announce that EPA will pilot an ongoing process for retrospective cost-benefit analysis—assessing the benefits, costs, and other impacts of a selected set of priority rules following their implementation.
- ❖ Direct leadership in the National Center for Environmental Economics (within the Office of Policy in the Administrator’s Office) to develop a research plan for this work. (The SAB economic advisory committee is a resource for establishing selection criteria and other aspects of the plan.) Work with leadership in Program Offices to identify candidate rules for pilot analyses.

FIRST YEAR AND SUSTAINED ACTIONS

- ❖ Scope and initiate two to three retrospective analyses of EPA rules.
 - ◆ Identify two to three rules currently in effect for ex-post analysis of actual costs and benefits.
 - ◆ Include assessments of distributional impacts.
- ❖ Examine/assess feasibility of incorporating such analyses (with potential inclusion of improved data collection) into new rules.
 - ◆ Identify two to three rules under development to pilot an approach that builds an evaluation plan into the rulemaking. Such a plan may make analysis less burdensome by identifying metrics, obtaining an Information Collection Request for future information gathering, and creating a process for data gathering. Add a timetable for gathering data— specifying roles and responsibilities and a target date for reviewing results.
 - ◆ Commit to examining the feasibility of this approach and to funding such evaluations.

² An example is the MATS rule. EPA assumed many plants would need to retrofit with dry scrubbers, but instead used dry sorbent injection to meet standards at a fraction of the cost. EPA had also assumed plants would not be able to sell their ash for concrete, thus incurring high disposal costs. Instead, suppliers developed a method compatible with use for concrete. One industry analyst estimated the actual costs incurred by industry at about a quarter of EPA’s estimate in its regulatory impact analysis.

- ❖ Assuming feasibility, complete both sets of evaluations listed above. Results will better inform agency regulatory options, allowing mid-course corrections (if needed), and improving cost effectiveness and EPA’s capacity to better assess regulatory costs of future rules. Following completion of these pilot analyses, review what has been learned and establish policy with regard to future retrospective analyses.

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Strengthening Economic Analysis at EPA

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