

[Union of Concerned Scientists

April 26, 2018

To: Administrator Scott Pruitt

Docket ID No. EPA-HQ-OAR-2017-0355

Repeal of Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units; Vol. 82, Federal Register, No. 198, Monday, October 16, 2017. Proposed Rule. Environmental Protection Agency: 40 CFR Part 60.

U.S. Environmental Protection Agency, EPA Docket Center, Mail Code: 28221T, 1200 Pennsylvania Ave, NW, Washington, DC 20460.

Submitted directly to *Regulations.gov*

Administrator Pruitt:

The Union of Concerned Scientists (UCS) stands in strong disagreement with the Environmental Protection Agency's (EPA) proposed repeal of the Clean Power Plan (CPP), which lacks a coherent motivating framework and fails to advance a defensible strategy for replacement. The CPP, which was established to regulate carbon emissions from existing fossil fuel-fired power plants under section 111(d) of the Clean Air Act, was promulgated through a robust rulemaking process and is underpinned by rigorous research and analysis. The same cannot be said for the CPP's proposed repeal, which reveals a complete abdication of the agency's mandated roles and responsibilities, and engages in deceptive accounting practices to obfuscate the overwhelming net benefits of the original rule. Our organization condemns this effort.

UCS puts rigorous, independent science to work to solve our planet's most pressing problems. We work on behalf of our more than 500,000 supporters and network of over 20,000 scientists to advance public awareness of both the science of climate change and the many cost-effective solutions available to help lower heat-trapping emissions and limit harmful climate impacts. This has resulted in our long record of engagement on defining and advancing federal and state roles and responsibilities related to climate change, including deep involvement with the formation and evolution of the CPP, particularly through modeling analysis¹ and technical comments^{2,3,4} highlighting the appropriateness and cost-effectiveness of an increased role for renewable energy under the rule. We have also engaged in the process through a number of collaborative channels, including the Midcontinent Power Sector Collaborative^{5,6} and joint comments regarding the agency's use of the social cost of carbon⁷.

¹ Cleetus, R., S. Clemmer, J. Deyette, S. Mullendore, and J. Richardson. 2014. *Strengthening the EPA's Clean Power Plan*. Cambridge, MA: Union of Concerned Scientists. Online at www.ucsusa.org/sites/default/files/attach/2014/10/Strengthening-the-EPA-Clean-Power-Plan.pdf, accessed on January 9, 2018.

² Union of Concerned Scientists. 2014. *Technical comments on the Environmental Protection Agency (EPA) Proposed Rule: Carbon Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units*. Cambridge, MA. Online at www.regulations.gov/#/documentDetail;D=EPA-HQ-OAR-2013-0602-33893, accessed on January 9, 2018.

³ Union of Concerned Scientists. 2015. *Technical comments on the Clean Energy Incentive Program (CEIP) Design and Implementation*. Cambridge, MA. Online at www.regulations.gov/#/documentDetail;D=EPA-HQ-OAR-2015-0734-0097, accessed on January 9, 2018.

⁴ Union of Concerned Scientists. 2016. *Technical comments on the Federal Plan Requirements for Greenhouse Gas Emissions from Electric Utility Generating Units Constructed on or Before January 8, 2014; Model Trading Rules; Amendments to Framework Regulations*. Cambridge, MA. Online at <https://www.regulations.gov/document?D=EPA-HQ-OAR-2015-0199-0436>, accessed on January 9, 2018.

⁵ Midwest Power Sector Collaborative. 2014. *Midwestern Power Sector Collaborative's Final Comments to the U.S. EPA on Draft 111(d) Guidelines*. Minneapolis, MN. Online at <https://www.regulations.gov/document?D=EPA-HQ-OAR-2013-0602-23564>, accessed on January 10, 2018.

⁶ Midcontinent Power Sector Collaborative. 2016. *Midcontinent Power Sector Collaborative's Comments to the U.S. EPA on the Draft Federal Plan and Modal Rules*. Minneapolis, MN. Online at <https://www.regulations.gov/document?D=EPA-HQ-OAR-2015-0199-0893>, accessed on January 10, 2018.

⁷ Environmental Defense Fund, Institute for Policy Integrity at New York University School of Law, Natural Resources Defense Council, and Union of Concerned Scientists. 2014. *Comments on the U.S. Social Cost of Carbon*. Online at <https://academiccommons.columbia.edu/catalog/ac:182531>, accessed on March 22, 2018.

Curtailling carbon emissions from the US power sector, one of the largest sources of US emissions, is a critical and necessary contribution to global efforts to limit climate impacts. As the 2017 Climate Science Special Report—an authoritative assessment of the latest climate science by the U.S. Global Change Research Program—clearly articulates, Americans are already experiencing the harmful effects of climate changes and these risks are projected to worsen as heat-trapping emissions continue to rise.⁸ Further, transitioning to a cleaner power system will bring significant near-term public health and economic benefits to communities around the country.

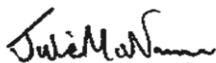
Given the critical and urgent need to sharply curtail global warming emissions, and the wide availability of cost-effective means to do so in the power sector, our organization is deeply troubled by the agency’s proposed repeal of the CPP. This action demonstrates a concerted effort to ignore science, ignore regulatory responsibilities, and ignore the agency’s own long record of research and analysis—all at great cost to the American public. Indeed, the EPA appears to be motivated not by a drive to improve upon the CPP, but instead to answer the pleas of a select few fossil fuel corporate interests to delay or stop climate action to further their profits. This blinkered approach is why our organization signed on to a request for Administrator Pruitt to recuse himself from all CPP proceedings⁹, and underpins our forceful denouncement of the agency’s recent Advance Notice of Proposed Rulemaking (ANPR)^{10,11}.

We urge the EPA to reorient its efforts to once again align the agency with its mission: to protect public health and the environment. The EPA should be actively advancing standards to lower emissions across the power sector, not diluting requirements to protect polluters at devastating public cost.

On behalf of the Union of Concerned Scientists:



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⁸ USGCRP, 2017: *Climate Science Special Report: Fourth National Climate Assessment, Volume I* [Wuebbles, D.J., D.W. Fahey, K.A. Hibbard, D.J. Dokken, B.C. Stewart, and T.K. Maycock (eds.)]. U.S. Global Change Research Program, Washington, DC, USA, 470 pp, doi: 10.7930/J0J964J6. Online at science2017.globalchange.gov/downloads/CSSR2017_FullReport.pdf.

⁹ Appalachian Mountain Club, Center for Biological Diversity, Clean Air Council, Clean Air Task Force, Clean Wisconsin, Conservation Law Foundation, Earthjustice, Environmental Defense Fund, Environmental Law and Policy Center, National Parks Conservation Association, Sierra Club, and Union of Concerned Scientists. 2018. *Comments on EPA Administrator Scott Pruitt’s Improper Prejudgment of Outcome of Proposed Repeal of Clean Power Plan*. Online at <https://www.regulations.gov/document?D=EPA-HQ-OAR-2017-0355-17195>, accessed on March 22, 2018.

¹⁰ Union of Concerned Scientists. 2018. *Technical comments on the State Guidelines for Greenhouse Gas Emissions from Existing Electric Utility Generating Units; Advance Notice of Proposed Rulemaking*. Cambridge, MA. Online at <https://www.regulations.gov/document?D=EPA-HQ-OAR-2017-0545-0284>, accessed on March 22, 2018.

¹¹ Appalachian Mountain Club, Center for Biological Diversity, Clean Air Council, Clean Air Task Force, Clean Wisconsin, Conservation Law Foundation, Earthjustice, Environmental Defense Fund, Environmental Law and Policy Center, National Parks Conservation Association, Sierra Club, and Union of Concerned Scientists. 2018. *Joint comments of environmental and public health organizations on Advance Notice of Proposed Rulemaking Regarding Emission Guidelines for Existing Electric Utility Generating Units*. Online at <https://www.regulations.gov/document?D=EPA-HQ-OAR-2017-0545-0298>, accessed on March 22, 2018.

1. EPA Moves to Ignore Overwhelming Evidence That Climate Change is an Urgent Threat¹²

The EPA is demonstrating a clear dereliction of its duty to the American public by not taking immediate action to limit carbon emissions from power plants. The statement that: “The EPA has not determined the scope of any potential rule under CAA section 111(d) to regulate greenhouse gas (GHG) emissions from existing EGUs, and, if it will issue such a rule, when it will do so and what form that rule will take,” is completely at odds with the urgency inherent in the latest climate science evidence.

The Climate Science Special Report (CSSR), Volume 1 of the National Climate Assessment, is one such recent authoritative, rigorous, peer-reviewed synthesis of the latest science.¹³ Drafted by the United States Global Change Research Program (USGCRP), it is the work of 13 US federal government agencies, including the EPA, and was approved and released by the White House on November 3, 2017—during the current administration. The report reaffirms the findings of multiple scientific assessments that human-caused emissions of carbon dioxide and other heat-trapping gases are the dominant cause of observed warming since the mid-20th century; that increasing extreme heat, precipitation, and coastal flooding from rising seas are already affecting the United States; and that swift and deep reductions in emissions could limit the scale and severity of further climate change this century and beyond.

Climate science is of central relevance to the agency’s 2009 Endangerment Finding, which established that emissions of carbon dioxide and other heat-trapping gases endanger public health and welfare. This Finding, together with the 2009 *Mass v. EPA* Supreme Court ruling, clearly establishes EPA’s authority and obligation to limit these emissions under the Clean Air Act. The Endangerment Finding is solidly grounded in a thorough assessment of policy-relevant climate science and has been upheld by the U.S. Supreme Court. Were it to be updated today, **the record would clearly show that the scientific basis for climate change, its human-caused drivers, and its impacts on human health and welfare have only become stronger in the intervening years since the finding was issued in 2009.**

Observed trends and advances in scientific projections include the following facts:

- **Temperatures.** Global mean surface temperatures have continued to rise. The years from 2014 to 2017 were the four warmest ever recorded. Seventeen of the warmest years on record have occurred in the past 18 years. Data from NOAA also show that the continental US had its third warmest year on record in 2017 and, for the third consecutive year, every state across the contiguous US and Alaska was warmer than average—including five states with their warmest year on record.¹⁴
- **Sea Level Rise.** Regular high tide flooding, exacerbated by sea level rise, is already a reality for many communities along the East and Gulf coasts of the US.¹⁵ Global average sea levels are projected to increase by at least several inches in the next 15 years and, conservatively, by 1 to 4 feet by 2100. A rise of as much as 8 feet by 2100 cannot be ruled out.
- **Heat Waves.** The frequency of multi-day heat waves has increased since the mid-1960s, and their frequency and intensity are projected to increase further throughout this century.
- **Rainfall Intensity.** The frequency and intensity of heavy rainfall events are also on the rise over the past century, with the Northeast and the Midwest experiencing some of the greatest increases.
- **Eroding Snowpack.** Earlier snowmelt and reduced snowpack are already affecting water availability in the western US and projections show that the risks of prolonged and chronic drought are increasing.

¹² See additionally: Environmental and public health organizations. 2018. *Joint Comments of Environmental and Public Health Organizations Regarding the Proposed Repeal of Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units; Comments Specific to Climate Change*. Submitted to www.regulations.gov, Docket ID No. EPA-HQ-OAR-2017-0355.

¹³ USGCRP, 2017: *Climate Science Special Report: Fourth National Climate Assessment, Volume I* [Wuebbles, D.J., D.W. Fahey, K.A. Hibbard, D.J. Dokken, B.C. Stewart, and T.K. Maycock (eds.)]. U.S. Global Change Research Program, Washington, DC, USA, 470 pp, doi: 10.7930/J0J964J6. Online at science2017.globalchange.gov/downloads/CSSR2017_FullReport.pdf.

¹⁴ National Centers for Environmental Information. 2018. *Assessing the U.S. climate in 2017: 2017 was the third warmest year on record for the United States*. National Oceanic and Atmospheric Administration. 5 January. Online at <https://www.ncei.noaa.gov/news/national-climate-201712>, accessed April 17, 2018.

¹⁵ Spanger-Siegfried, E., K. Dahl, A. Caldas, S. Udvardy, R. Cleetus and P. Worth. 2017. *When Rising Seas Hit Home: Hard Choices Ahead for Hundreds of US Coastal Communities*. Cambridge, MA: Union of Concerned Scientists. Online at <https://www.ucsusa.org/sites/default/files/attach/2017/07/when-rising-seas-hit-home-full-report.pdf>.

- **Climate Attribution.** The science of climate attribution has advanced steadily, allowing scientists in some cases to identify the extent to which climate change has contributed to specific extreme events in the United States and globally. Recent studies have characterized how heat waves, wildfires, extreme precipitation, and hurricanes have been affected by climate-related factors such as rising air and ocean temperatures, atmospheric moisture, and sea level. For example, two studies show that the heavy precipitation that accompanied Hurricane Harvey was significantly worsened by climate change.^{16,17}
- **Billion-dollar Disasters.** NOAA’s National Center for Environmental Information yearly report on U.S. “billion-dollar weather and climate disasters”¹⁸ found that in 2017, such events cumulatively reached a staggering \$306.2 billion in costs, setting a new US record. These events also resulted in 362 fatalities. (This number only reflects official tallies to date—as news reports indicate, the true death toll from Hurricane Maria in Puerto Rico could be as high as 1,052, over 16 times¹⁹ the current official figure.) Hurricanes Harvey, Maria, and Irma propelled 2017 to become the costliest hurricane season on record at \$265 billion, and California’s terrible wildfires led to it also being the costliest wildfire year at \$18 billion.

Lest there be any doubt, the CSSR states: “Many lines of evidence demonstrate that it is *extremely likely* that human influence has been the dominant cause of the observed warming since the mid-20th century. Over the last century, there are *no convincing alternative explanations* [emphasis added] supported by the extent of the observational evidence.” Equally important, the report states that the magnitude of projected climate impacts beyond the next few decades depends principally on the amount of global emissions of heat-trapping gases humans emit. Therefore, it is crucial that the US join the global community in doing its utmost to cut these emissions, including through measures like power plant carbon standards.

The EPA is responsible for protecting public health and the environment and is required to do so based on the best available science. It is long past time for robust actions to protect current and future generations of Americans from the harmful and costly impacts of climate change.

2. EPA Abandons Science and Statute to Develop an Unreasonably Narrow Interpretation of the Best System of Emission Reduction²⁰

- UCS objects to the EPA’s unfounded rationale for its repeal of the CPP, including the agency’s complete disregard for the rule’s existing and robust record of support.
- UCS finds that the EPA’s rationale for issuing a proposed repeal is woefully insufficient to reject the CPP, and signals an unduly limited approach to the best system of emission reduction (BSER).

In its proposed repeal of the CPP, the EPA fully abandons the robust administrative record established in the development and issuance of the final CPP. Such action reflects a wholesale abdication of the agency’s statutory obligations. It also results in a proposed repeal that is lacking in substantive and defensible positions for *why* the rule must be repealed, and *what form* a replacement might take. **The proposed repeal is shamefully transparent in attempting to advance a singular mission—repeal of the CPP—regardless of the facts or statutes standing in the way.**

¹⁶ Risser, M.D. 2017. *Attributable human-induced changes in the likelihood and magnitude of the observed extreme precipitation during Hurricane Harvey*. Geophysical Research Letters, Vol. 44, Issue 24. Online at <https://agupubs.onlinelibrary.wiley.com/doi/full/10.1002/2017GL075888>, accessed April 17, 2018.

¹⁷ Oldenborough, G.J., K. Wiel, A. Sebastian, R. Singh, J. Arrighi, F. Otto, K. Hausteine, S. Li, G. Vecchi, and H. Cullen. 2017. *Attribution of extreme rainfall from Hurricane Harvey, August 2017*. Environmental Research Letters, Vol. 12, Issue 12. Online at <http://iopscience.iop.org/article/10.1088/1748-9326/aa9ef2>, accessed April 17, 2018.

¹⁸ National Centers for Environmental Information. 2018. *Billion-dollar weather and climate disasters*. National Oceanic and Atmospheric Administration. Online at <https://www.ncdc.noaa.gov/billions/>, accessed April 17, 2018.

¹⁹ Robles, F., K. Davis, S. Fink, and S. Almkhatar. 2017. “Official toll in Puerto Rico: 64. Actual deaths may be 1,052.” 9 December: *The New York Times*. Online at <https://www.nytimes.com/interactive/2017/12/08/us/puerto-rico-hurricane-maria-death-toll.html>, accessed April 17, 2018.

²⁰ See additionally: Environmental and public health organizations. 2018. *Joint Comments of Health, Environmental, and Conservation Groups on EPA’s Proposed Rule: Repeal of Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units*. Submitted to www.regulations.gov, Docket ID No. EPA-HQ-OAR-2017-0355.

2.1. UCS objects to the proposed repeal's complete disregard for the robust record underpinning the development of the CPP.

The development and issuance of the CPP resulted in the establishment of a robust and lengthy record. The EPA painstakingly anchored its interpretation of BSER in the context of its Clean Air Act section 111(d) requirements, coupled with a careful consideration of how such factors interface with the specificities of the electric power sector. The agency also performed rigorous cost-benefit analyses and issued a wealth of supporting technical documents.

In the agency's proposed repeal, no such diligence is employed. Alarming, nor is attention paid to the record as it already exists. As a result, although the proposed repeal searches for clear and convincing justifications, the end result is little more than tenuous claims and irrelevant objections. This may hold as a political position statement, but it is certainly not a defensible regulatory action. As our joint coalition comments detail, this negligent action by the EPA is not just poor protocol—it is flagrantly unlawful.²¹ And it is an utter waste of taxpayer dollars.

The EPA's proposed repeal of the CPP is entirely centered around achieving a specific outcome—repeal—with no concern for detailing the ways in which the agency got there. Indeed, the EPA's actions are so untethered from reality and statutory requirement that they can only be read as a desperate attempt to float *something* to justify the outcome the agency now wants and hope that one of the frantic proposals sticks.

2.2. UCS finds that the EPA's rationale for issuing a proposed repeal is woefully insufficient to reject the CPP, and signals an unduly limited approach to the BSER.

The EPA is proposing to repeal the CPP because it believes the BSER exceeds the agency's statutory authority under the Clean Air Act. The EPA declares this to be the case because it believes that the CPP incorporates compliance measures beyond those that are applied "at or to a source." But while making this assertion, the agency entirely circumvents the existing careful and lengthy record on the matter, failing to meaningfully counter—or even engage with—the original CPP approach.

That original approach is in fact fully in line with the EPA's interpretation of "at or to a source." Specifically, the CPP's BSER worked within the confines of section 111(d) while also recognizing the unique attributes of the interconnected electricity system. As a result, compliance measures can and should recognize this interconnected nature, and the ways in which such energy flows have long been employed throughout the system. Indeed, the CPP's BSER takes advantage of multiple cost-effective approaches already in use and available across the country to help shift our electricity system toward cleaner, less polluting options. And as we discuss further in Section 3.4 below, this ongoing transition points toward a CPP that is not only eminently achievable, but also readily positioned to go even further in the future, in turn delivering ever more public health and economic benefits.

By contrast, UCS strongly opposes the EPA's new and unnecessarily restrictive turn toward limiting compliance measures to, effectively, heat-rate improvements at individual power plants. This would severely undercut the ability of the regulation to meaningfully regulate carbon emissions—the entire motivation for the CPP—while increasing the cost of compliance. The legal statute of the Clean Air Act allows for a systems approach to implementing the BSER—and indeed taking such an approach is completely in keeping with the interconnected nature of the power grid.

3. EPA Engages in Deceptive and Inappropriate Accounting in its Regulatory Impact Analysis²²

- UCS objects to the EPA's deceptive shift in energy efficiency accounting, undertaken to improve the optics of its proposed repeal, not to reflect an improvement in understanding.
- UCS condemns the EPA's unsubstantiated effort to separate and limit the valuation of health co-benefits from the rule, which not only ignores reality, but also goes against established practice.

²¹*Ibid.*

²² See additionally: Environmental and public health organizations. 2018. *Joint Comments of Environmental and Public Health Organizations Regarding the "Proposed Repeal of Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units," 82 Fed. Reg. 48,035 (Oct. 16, 2017), Comments Specific to the "Regulatory Impact Analysis for the Review of the Clean Power Plan: Proposal."* Submitted to www.regulations.gov, Docket ID No. EPA-HQ-OAR-2017-0355.

- UCS opposes the EPA’s short shrift of climate accounting in its analysis of the rule, with the agency’s proposal running counter to evidence and science advisement.
- UCS objects to the EPA’s unsupported and misplaced conclusions resulting from recent changes in the nation’s power mix, seeing reasons to repeal when the CPP should, if anything, instead be strengthened as a result.

In its proposed repeal of the CPP, the EPA has gone to great lengths to improve the optics of its intended action—not by uncovering new findings or analysis, but by deploying deceptive accounting gimmicks that artificially and inappropriately inflate the costs and deflate the benefits of the original rule. Such cynical actions do nothing to advance solutions against the reality of climate change, nor do they increase the “transparency” of the proposed repeal, as was the agency’s purported intention. As detailed below, UCS strongly believes that the EPA has erred in such actions.

3.1. UCS objects to the EPA’s deceptive shift in energy efficiency accounting, undertaken to improve the optics of its proposed repeal, not to reflect an improvement in understanding.

In its proposed repeal of the CPP, the EPA dedicates a significant portion of the supporting Regulatory Impact Analysis (RIA) to recalculating the costs and benefits of the rule to “increase transparency.” One major component of this effort is to redefine how energy efficiency is factored into the rule’s accounting. As the agency itself states, “In terms of calculating a net benefit estimate, it does not matter if these energy cost savings are treated on the cost side – or the benefit side – of the ledger.”²³ Why, then, does the agency go to such great lengths to attempt to back-out and re-classify costs and benefits, all to achieve no net change?

It certainly does not appear to be as a way to increase transparency. Indeed, this shift actually makes it *more* difficult to compare various analyses—and thus decreases transparency—because in addition to the EPA’s previous work, other government and non-governmental organization assessments of the CPP employed the original energy efficiency accounting approach as well. This is a point the EPA is repeatedly forced to concede in footnotes throughout the proposed repeal’s RIA.

The EPA also suggests that such energy efficiency accounting changes were undertaken to be consistent with Office of Management and Budget (OMB) guidance²⁴; however, the cited guidance also states, “In most cases where there is ambiguity in the categorization of impacts, agencies should conform to the accounting conventions they have followed in past analyses.” Maintaining consistency on this front would help to ensure that the long record of research that has been conducted to inform the CPP rulemaking process is still able to be used to inform the agency today.

One thing that the EPA’s accounting shift does very clearly achieve, however, is the *appearance* of an increase in the cost of the rule. This is particularly apparent when the agency calculates the present value of the avoided cost of the rule over time. Indeed, through its accounting theatrics, the agency was able to inflate costs by *billions* of dollars—a boon for the agency’s tally under Executive Order 13771: Reducing Regulation and Controlling Regulatory Costs²⁵ (i.e., two-for-one), but not much else.

What’s more, despite the agency’s sustained focus on energy efficiency accounting in the proposed repeal’s RIA, the EPA does not make an effort to update conservative assumptions regarding the cost of energy efficiency programs. Energy efficiency is a proven, highly cost-effective mechanism for lowering emissions and saving ratepayers money. The agency itself acknowledges that compared to much of the literature, the employed levelized cost of saved energy (LCSE) is a conservative estimate. In light of these findings, however, the EPA elected to focus on additional uncertainties and possibilities for higher costs, *not* lowering its assumptions. The agency also worked to discount the benefits of the resulting energy efficiency analyses by additionally employing a higher discount rate than that which had been previously used.

²³ U.S. Environmental Protection Agency. 2017. *Regulatory Impact Analysis for the Review of the Clean Power Plan: Proposal*. Online at https://www.epa.gov/sites/production/files/2017-10/documents/ria_proposed-cpp-repeal_2017-10_0.pdf, accessed January 10, 2018. P. 38.

²⁴ U.S. Office of Management and Budget. 2017. *Guidance Implementing Executive Order 13771, Titled “Reducing Regulation and Controlling Regulatory Costs.”* Online at <https://www.whitehouse.gov/sites/whitehouse.gov/files/omb/memoranda/2017/M-17-21-OMB.pdf>, accessed January 10, 2018.

²⁵ Executive Office of the President. 2017. *Executive Order 13771: Reducing Regulation and Controlling Regulatory Costs*. 80 FR 9339. Online at www.federalregister.gov/documents/2017/02/03/2017-02451/reducing-regulation-and-controlling-regulatory-costs, accessed April 4, 2018.

As a result, it is hard not to view such manipulations in service of “transparency” cynically: **the sole result is to make the costs of the rule look higher while hindering the ability to perform a true comparison across analyses.**

3.2. UCS opposes the EPA’s unsubstantiated effort to separate and limit the valuation of co-benefits from the rule, which goes against established practice and reality.

In its proposed repeal of the CPP, the EPA repeatedly attempts to muddy the waters surrounding the repercussions of what the rule’s repeal would actually mean for the people of the United States. One such example is the agency’s manipulation of foregone health benefits, in the form of separating out and limiting their valuation. These efforts are harmful not just because they threaten to undervalue the importance of the CPP, but also because they perniciously—and unfoundedly—result in generating confusion over well-established practice.

Under the guise of providing these “alternative approaches” for examining foregone benefits, the agency in one effort separated out health “co-benefits” from “direct” health benefits. As in, separated health benefits arising from regulating the target pollutant, i.e., carbon dioxide, from those resulting from a hand-in-hand reduction in other air quality pollutants. The agency argues that there is value in making this distinction because other rules could have more effectively achieved these non-target pollutant reductions. This is a preposterous justification for purposefully excising the significant co-benefits accruing from these reductions in some of the agency’s calculations, leading to misleading and potentially ill-informed comparisons.

The EPA also adjusted calculations of the proposed repeal’s foregone benefits by employing different assumptions about the risk of PM_{2.5} exposure given various concentration cut points. The agency concedes that using log-linear concentration-response functions (quantifying risk along a range of exposures) is consistent with the approach used in many recent RIAs. In fact, **scientific research has long supported the conclusion that there are no “safe thresholds” for carcinogenic pollutants like PM_{2.5}**—and EPA’s practice until this administration had been to reflect this science and increase the public health benefits of emissions reductions through rulemakings.^{26,27} However, in the current RIA the agency also presented two additional approaches, both of which resulted in downward estimates of foregone health co-benefits. Once again, these actions were justified by the agency by aiming to “increase transparency.” However, in the absence of presenting any motivating analyses or data to counter well-supported conclusions to the contrary,²⁸ such actions seem more directly targeted at generating confusion over foregone benefits above all else. What’s more, as a forthcoming article by Castle and Revesz states: “Indeed, it is only by completely disregarding the Clean Power Plan’s principal co-benefits, particulate reductions under the level of the NAAQS, that the Trump Administration is able to conclude that the cost savings from repealing the rule exceed the foregone benefits that would result from the repeal.”²⁹

The agency concludes its dissection, manipulation, and repackaging of foregone costs and benefits by stating that its reanalysis “underscores the profound uncertainties associated with possible outcomes of the CPP implementation analysis.”³⁰ It is true that when one purposefully manipulates the findings to extract different and skewed results and compares them against the original, a variety of take-aways can emerge. However, the predominant variable here is not the presence of uncertainty—it’s the presence of willful obfuscation.

What is particularly striking is that **the agency is well aware that the repeal of the CPP could have specific negative consequences for the health of children.** As the proposed repeal states under Section IV, part H (Executive Order 13045: Protection of Children From Environmental Risks and Health Risks): “This action is subject to Executive Order 13045 because it is an economically significant regulatory action as defined by Executive Order 12866. The CPP was anticipated to lower ambient concentrations of PM_{2.5} and ozone, and some of the benefits of reducing these pollutants

²⁶ National Research Council. 2009. *Science and Decisions: Advancing Risk Assessment*. Washington, DC: The National Academies Press. Online at <https://doi.org/10.17226/12209>, accessed April 25, 2018.

²⁷ U.S. EPA. 2010. *Summary of Expert Opinions on the Existence of a Threshold in the Concentration-Response Function for PM_{2.5}-related Mortality*. Technical Support Document. Online at <https://www3.epa.gov/ttnecas1/regdata/Benefits/thresholdstd.pdf>, accessed April 25, 2018.

²⁸ See, e.g., World Health Organization. 2016. *Ambient air pollution: A global assessment of exposure and burden of disease*. Online at <http://www.who.int/phe/publications/air-pollution-global-assessment/en/>, accessed April 18, 2018.

²⁹ Castle, K.M., and R.L. Revesz. (Forthcoming). *Environmental Standards, Thresholds, and the Next Battleground of Climate Change Regulations*. 103 *Minnesota Law Review*. Online at https://its.law.nyu.edu/faculty/profiles/representativeFiles/Environmental_Thresholds_4.11.18_Posting_Draft_21438D0D-1B21-6206-60325456E60DF236.pdf, accessed April 17, 2018.

³⁰ U.S. EPA (2017), p. 26.

would have accrued to children.” Recent research further elucidates these specific health consequences (e.g., Yang and Chou³¹; Horne et al.³²).

Moreover, the CPP was also expected to bring benefits to fenceline communities that have historically suffered a disproportionate burden of pollution from power plants and other industrial facilities (see, e.g., Mikati et al.³³). In Section IV, Part K, of the CPP proposed repeal, the EPA acknowledges this: “The CPP anticipated reductions in CO₂ emissions, as well as lower concentrations of PM_{2.5} and ozone due to changes in EGU emissions. The EPA conducted a proximity analysis for the CPP and identified that low-income and minority communities located in proximity to EGUs may have experienced an improvement in air quality as a result of the emissions reductions.”

Yet in repealing the CPP, the EPA resorts to dishonest dissembling of the facts to avoid acknowledging the harmful effects of this action. Simply put: **even by its own account, the agency is willfully choosing to ignore the public health impacts of pollution on vulnerable populations that it is charged with protecting.**

3.3. UCS opposes the EPA’s short shrift of climate accounting in its valuation of the rule, with the agency’s proposed revision to the social cost of carbon running counter to evidence and science advisement.

At a time when the impacts and costs of climate change are clearer than ever, the Trump administration’s decision to significantly revise downward the social cost of carbon, also reflected in the RIA that accompanies the EPA’s proposed repeal of the CPP, is a gross mistake. The agency’s movement toward a discount rate widely considered to be inappropriate, as well as its farcical limiting of climate impacts to those registering domestically as opposed to globally, reveal an agency scrambling to obfuscate the truth.

We urge the EPA to revert to the social cost of carbon developed by the Interagency Working Group and most recently updated in 2016.³⁴ In fact, the Interagency Working Group’s central estimate of \$67 per ton (for year 2035 emissions)³⁵ is widely considered by economic and legal experts to significantly underestimate the true costs of global warming emissions and should appropriately be treated as a lower-bound estimate.³⁶ Please also refer to joint comments on the social cost of carbon filed by the Institute for Policy Integrity on behalf of a broad coalition of economic, public health, and environmental organizations for additional discussion.³⁷

3.4. UCS finds that the EPA arrives at an unsupported conclusion about the value of the CPP after noting the falling costs of compliance mechanisms and a rapidly evolving resource mix.

The EPA rightly acknowledges in its proposed repeal that the nation’s electricity system has been undergoing a significant transition away from fossil fuels, including in the time since the CPP was published in 2015. As the agency notes,

³¹ Yang, M., and S.-Y. Chou. 2017. “The impact of environmental regulation on fetal health: Evidence from the shutdown of a coal-fired power plant located upwind of New Jersey.” *Journal of Environmental Economics and Management*. Online at <https://doi.org/10.1016/j.jeem.2017.11.005>, accessed April 18, 2018.

³² Horne, B.D., E.A. Joy, M.G. Hofmann, P.H. Gesteland, J.B. Cannon, J.S. Lefler, D.P. Blagev, E.K. Korgenski, N. Torosyan, G.I. Hansen, D. Kartchner, and C.A. Pope III. 2018. “Short-term elevation of fine particulate matter air pollution and acute lower respiratory infection.” *American Journal of Respiratory and Critical Care Medicine*. Online at <https://doi.org/10.1164/rccm.201709-1883OC>, accessed April 18, 2018.

³³ Mikati, I., A.F. Benson, T.J. Luben, J.D. Sacks, and J. Richmond-Bryant. 2018. “Disparities in distribution of particulate matter emission sources by race and poverty status.” *American Journal of Public Health* 108, no. 4: pp. 480-485. Online at <https://ajph.aphapublications.org/doi/abs/10.2105/AJPH.2017.304297>, accessed April 18, 2018.

³⁴ Interagency Working Group on Social cost of Greenhouse Gases, United States Government. 2016. *Technical Support Document: Technical update of the Social Cost of Carbon for Regulatory Impact Analysis – Under Executive Order 12866*. Online at https://obamawhitehouse.archives.gov/sites/default/files/omb/infores/scc_tsd_final_clean_8_26_16.pdf, accessed April 18, 2018.

³⁵ *Id.*

³⁶ See, e.g., R.S. Pindyck 2016. *The Social Cost of Carbon Revisited*. National Bureau of Economic Research., Working Paper w22807. Online at <http://www.nber.org/papers/w22807>. R.S. Pindyck. 2017. *Coase Lecture—Taxes, Targets, and the Social Cost of Carbon*. 84 *Economica* 335. Online at <https://doi.org/10.1111/ecca.12243>. Revesz, R.L., P.H. Howard, K. Arrow, L.H. Goulder, R.E. Kopp, M.A. Livermore, M. Oppenheimer, and T. Sterner. 2014. *Global warming: Improve economic models of climate change*. 508 *Nature* 7495. Online at <https://www.nature.com/news/global-warming-improve-economic-models-of-climate-change-1.14991>.

³⁷ Environmental Defense Fund, Institute for Policy Integrity at New York University School of Law, Montana Environmental Information Center, Natural Resources Defense Council, Sierra Club, Union of Concerned Scientists, Western Environmental Law Center, and WildEarth Guardians. 2018. *Comments on Flawed Estimates of the Social Cost of Carbon in the Proposed Repeal of Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units*. Submitted to www.regulations.gov, Docket ID No. EPA-HQ-OAR-2017-0355.

contributing factors include the continuing steep decline in costs of renewable energy technologies like wind and solar,³⁸ the extension of federal tax credits, the present low price of natural gas, the widescale retirement of coal-fired generators,³⁹ and flattening demand for electricity.

The upshot of these changes is a national electricity system further along in carbon emissions reductions than that which was profiled in the design of the CPP.⁴⁰ In turn, there is an expectation of lower cost of compliance with the rule, and an overall lessening of incremental impacts on carbon emission reductions given the rule's alignment with ongoing national power sector decarbonization trends.

In its proposed repeal, the EPA processes these findings to arrive at the conclusion that they generate “profound uncertainties” in understanding costs and benefits of the action. The agency further states that it intends to carry such uncertainties forward in upcoming analyses, to demonstrate just how much “uncertainty” exists. But the EPA is willfully misleading on this front. These are not uncertainties, but rather updates to match new analyses with present conditions. What's more, this discussion severely downplays two critical points about the CPP:

1. The CPP has an essential role to play in establishing a coherent vision of fossil fuel-fired emissions trajectories. This is important across all states, but particularly so for those lagging behind in the transition, as ill-considered investments and analyses could lead to a significant accumulation of stranded assets over the long-term, which are commonly borne on the backs of ratepayers. This role of pulling laggards along is reflected in the still-significant modeled gains from a CPP deployed in the present environment—the rule could bring change to those who need it most, helping to ensure residents and businesses within these states do not continue to fall further behind.
2. The benefits arising from the rule, even if less than originally projected given recent energy system changes, remain undeniable. For example, in the EPA's comparison of scenarios from the Energy Information Administration's (EIA) Annual Energy Outlook (AEO) 2017, the agency found that a repeal of the CPP would result in carbon dioxide emissions 384 million short tons higher, sulfur dioxide emissions 423,000 short tons higher, and nitrogen oxides emissions 255,000 short tons higher. Even with the agency's new accounting manipulations, such benefits are real, and significant.

Indeed, instead of the transition underway leading the agency to conclude that its repeal intentions are even more justified, the EPA should instead be interpreting them as pointing in the exact opposite direction. Namely, given the urgent threat of climate change and the EPA's mission to protect human health and the environment, the agency should be greeting the rapidly evolving electricity sector as a welcome call to *strengthen* the CPP, not repeal it.

4. Conclusion

In conclusion, Administrator Pruitt's statements and actions and the direction established at the EPA under his leadership indicate that the agency has predetermined the outcome in terms of the repeal of the CPP, and has done so in a manner that displays clear conflicts of interest with the public welfare. Nevertheless, we feel it is our duty to speak up through these comments in pointing out the deeply flawed, unjust, and unscientific effort currently underway to dismantle the CPP. We join with a majority of the American public in calling for this charade to end, and for the EPA to go back to doing its job to protect our health and the environment. Implementing a robust power plant carbon standard is a vital first step.

³⁸ Lazard. 2017. *Lazard's Levelized Cost of Energy Analysis – Version 11.0*. Online at <https://www.lazard.com/media/450337/lazard-levelized-cost-of-energy-version-110.pdf>, accessed April 18, 2018.

³⁹ Richardson, J., S. Gomberg, J.C. Kibbey, and J. McNamara. 2017. *A dwindling role for coal: Tracking the electricity sector transition and what it means for the nation*. Cambridge, MA: Union of Concerned Scientists. Online at <https://www.ucsusa.org/clean-energy/coal-and-other-fossil-fuels/coal-transition>, accessed April 18, 2018.

⁴⁰ U.S. Environmental Protection Agency. 2017. *Basis for Denial of Petitions to Reconsider and Petitions to Stay the CAA section 111(d) Emission Guidelines for Greenhouse Gas Emissions and Compliance Times for Electric Utility Generating Units, Appendix 2 – Power Sector Trends*. Online at <https://www.regulations.gov/contentStreamer?documentId=EPA-HQ-OAR-2013-0602-37338&attachmentNumber=2&contentType=pdf>, accessed April 18, 2018.