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Hidden Costs: President Trump's Campaign to Erase the Social Cost of Carbon

By Alison Cassady April 19, 2017

On March 28, 2017, President Donald Trump signed an executive order that attempts to upend critical components of President Barack Obama's Climate Action Plan.[1] The sweeping executive order directs his Cabinet officials to review and potentially rescind several climate-related rules, including the Clean Power Plan, or CPP—which set the first-ever carbon pollution standards for power plants—and two rules establishing methane pollution limits for oil and gas drilling facilities. The order also ends a moratorium on coal leasing on public lands, among other policy changes.[2]

Media coverage focused primarily on these significant rule reversals. But the executive order also rescinds what the chief economist of President Obama's Council of Economic Advisors called the "the most important figure you've never heard of"—the social cost of carbon, or SCC.[3] The SCC reflects the marginal economic cost of adding one ton of carbon pollution to the atmosphere or, conversely, the economic benefit of removing one ton. President Obama established an interagency working group to develop the SCC so that federal agencies had a sound basis from which to quantify the benefits of policies to cut carbon pollution and justify those policies relative to their costs. The SCC is currently set at $39 per metric ton in 2007 dollars.

Because the SCC plays a key role in validating federal climate policies, fossil fuel interests and their allies in conservative think tanks—many of whom served on the Trump administration's transition team—have been pushing to eliminate or lower the SCC value.[4]

The executive order rescinds the current SCC and provides agencies with direction that could result in a SCC value that approaches zero. A cost-benefit analysis that uses a low SCC would underestimate the quantifiable benefits of cutting carbon pollution and other greenhouse gas emissions. This would have a real-world consequence: It would make it harder for the U.S. Environmental Protection Agency, or EPA, to justify strong carbon pollution limits or, in turn, make it easier for the agency to defend weaker limits. As such, rescinding the SCC is a wonkier means to achieve the same goal as the rest of the March 28 executive order: Undercut action on climate change.

This issue brief describes the genesis of the SCC; its importance for future administrative action to cut pollution; and how the Trump administration could minimize the SCC value to achieve the political goal of hindering U.S. action on climate change.

Calculating the cost of carbon pollution

In 1981, President Ronald Reagan issued an executive order establishing a process for analyzing the costs and benefits of federal regulatory actions.[5] President Bill Clinton updated this executive order in 1993 and directed federal agencies to "assess both the costs and the benefits of the intended regulation" and "propose or adopt a regulation only upon a reasoned determination that the benefits of the intended regulation justify its costs."[6]

For the purpose of cost-benefit analyses, the EPA's scientists and economists have developed methods to monetize the benefits of cutting emissions of traditional pollutants that affect air quality, such as ozone and fine particles. These benefits include reducing the number of asthma attacks and premature deaths, emergency room visits, and lost work and school days, all of which have a dollar value.[7] Emissions of carbon and other greenhouse gases also impose a cost—with the concomitant benefit when emissions fall. The consensus scientific opinion is that carbon dioxide and other greenhouse gases are warming the climate, which over time will cause increasingly severe, irreversible, and costly consequences—including more frequent and severe weather events, deadly heat waves, droughts, species loss, and sea-level rise.[8] Given the wide range of impacts that could be felt across generations and continents, the per-ton economic cost of carbon pollution is challenging to monetize.[9]

A 2007 legal challenge elevated the issue of quantifying the costs and benefits of a ton of carbon pollution. In 2006, the George W. Bush administration's National Highway Transportation Safety Administration, or NHTSA, issued new vehicle fuel economy standards. Several states and other stakeholders challenged these standards in court, arguing that NHTSA did not attempt to quantify one of the most significant environmental benefits of more efficient cars: reducing carbon emissions from tailpipes.[10] In 2007, the U.S. Court of Appeals for the 9th Circuit agreed with the litigants in *Center for Biological Diversity v. National Highway Traffic Safety Administration*. In the decision, the court acknowledged the challenge in quantifying the benefit of cutting carbon pollution but admonished that the value is "certainly not zero."[11]

The court remanded the rule to NHTSA to promulgate a new rule that addressed this and other legal shortcomings in the standards. The Bush administration began the process of developing a new rule but did not finalize it before President Obama took office. In 2010, the Obama administration established fuel economy and greenhouse gas emissions standards for light vehicles with model years 2012 through 2016 and included a full accounting of the monetized climate benefit of making cars and light trucks more fuel-efficient.[12] This accounting was based on the SCC, which is described below.

The best estimate: The social cost of carbon

Following the NHTSA court ruling, the Bush administration experimented with varying methods to quantify the value of a ton of carbon pollution for several rulemakings. The differing methodologies produced a wide range of numbers, from $0 per ton to $159 per ton.[13]

In 2009, the Obama administration created an interagency working group in an effort to standardize the valuation of the SCC—an estimate of the "monetized damages associated with an incremental increase in carbon emissions in a given year."[14] The SCC reflects "changes in net agricultural productivity, human health, property damages from increased flood risk, and the value of ecosystem services due to climate change," as well as other factors.[15] The Interagency Working Group on Social Cost of Carbon, which later became the Interagency Working Group on Social Cost of Greenhouse Gases, had a single charge: Develop an SCC estimate that would allow federal agencies to incorporate the monetized benefit of carbon pollution reductions in their cost-benefit analyses for rulemakings.[16]

From the beginning, the working group included scientists and economists from the Office of Management and Budget, or OMB; the Council on Environmental Quality; the National Economic Council; the EPA; and U.S. departments of Agriculture, Commerce, Energy, Transportation, and Treasury.[17] To develop the SCC, the working group primarily relied on existing academic literature and three commonly-used models to estimate how the economy and socioeconomic factors will evolve over the next century; how the climate will respond to rising carbon concentrations; and how climate change will impose quantifiable costs on society.[18] In 2009, the working group announced interim SCC values, which were first used in a proposed Department of Energy, or DOE, rulemaking related to the efficiency of beverage vending machines. Stakeholders had the opportunity to comment on the SCC as part of that rulemaking process and several others that followed.[19]

The working group issued revised estimates in February 2010.[20] At that time, the working group set a goal of revising the SCC values every two years or when necessary to reflect updates to the models themselves.[21] The working group updated the SCC in 2013,[22] 2015,[23] and again in 2016, although the core methodology never changed.[24]

The working group provided four values for the SCC. Three are based on the averages generated from the models at discount rates of 2.5 percent, 3 percent, and 5 percent. The discount rate is an economic concept—discussed in more detail later in this issue brief—that describes how much it is worth to today's generations to prevent the climate-related damage that future generations will experience. The fourth value for the SCC reflects the potential for lower-probability but higher-impact outcomes from climate change—in this case, the 95th percentile of SCC modeling estimates. The work-

ing group chose the SCC value at the 3 percent discount rate as the central value.[25] For 2017, the SCC is $39 per metric ton in 2007 dollars at a 3 percent discount rate—or more than $45 in today's dollars.[26] (see Table 1) The SCC increases each year to reflect the rising economic cost of unmitigated climate change.

TABLE 1

Annual social cost of carbon values

2007 dollars per metric ton of carbon dioxide

Year	5 percent average discount rate	3 percent average discount rate	2.5 percent average discount rate	High impact—95th percentile at 3 percent
2015	$11	**$36**	$56	$105
2020	$12	**$42**	$62	$123
2025	$14	**$46**	$68	$138
2030	$16	**$50**	$73	$152
2035	$18	**$55**	$78	$168
2040	$21	**$60**	$84	$183
2045	$23	**$64**	$89	$197
2050	$26	**$69**	$95	$212

Source: Interagency Working Group on Social Cost of Greenhouse Gases, *Technical Support Document: Technical Update of the Social Cost of Carbon for Regulatory Impact Analysis Under Executive Order 12866* (U.S. Government, 2016), p. 25, appendix A, available at https://www.epa.gov/sites/production/files/2016-12/documents/sc_co2_tsd_august_2016.pdf.

The SCC is not precise due to uncertainty about the scope and timing of climate impacts on the natural and human environment and the inherent challenge of estimating and projecting the cost of these impacts across many generations in the future.[27] Many experts, however, argue that the SCC may underestimate the actual cost of carbon emissions because it does not factor in ocean acidification and other climate impacts that existing models cannot quantify. In a 2015 paper, Stanford University analysts found that the true SCC could be as high as $220 per metric ton.[28] In 2012, two economists concluded that the SCC should be many factors higher—as much as $900 per ton—because the current methodology does not give weight to the worst case climate scenarios and "downplays the impact of current emissions on future generations."[29]

Despite these uncertainties, the SCC remains the best-available estimate of the cost of a ton of carbon pollution. The interagency working group, however, recognized these challenges and asked the National Academy of Sciences, or NAS, to review the SCC methodology and offer suggestions for how to improve it.[30] The NAS published its final report days before President Trump took office.[31]

The SCC is central to action on climate change

The SCC is critical to the cost-benefit justification for federal action on climate change. Two experts involved from the beginning in the working group—Michael Greenstone, a professor of economics at the University of Chicago and former chief economist for the Council of Economic Advisers, and Cass R. Sunstein, a professor at Harvard Law School and former administrator of the Office of Information and Regulatory Affairs at the OMB—summarized the importance of the SCC as follows:

> *This figure plays a central role in the cost-benefit analyses that agencies use in deciding whether to issue regulations to limit greenhouse gas emissions, and how stringent such regulations should be. … Without it, such regulations would have no quantifiable benefits. For this reason, the social cost of carbon can be seen as the linchpin of national climate policy.*[32]

The 2007 NHTSA case illustrates the importance of monetizing the benefits of carbon pollution reductions. To determine the new fuel economy standard finalized in 2006, NHTSA tightened the stringency of the standard until the marginal cost of additional fuel savings equaled the benefit. Under this methodology, the benefits side of the equation was critical in that it placed a de facto cap on the compliance costs and, therefore, the suite of fuel efficiency technologies that automakers should be expected to adopt.[33] In their successful 2007 challenge to the rules, the petitioners argued that NHTSA did not set fuel economy standards at the "maximum feasible" level required by law, in part because of this inadequate cost-benefit analysis.[34] If NHTSA had monetized the climate benefits, then the agency would have been able to set more stringent fuel economy standards and still meet the cost-benefit test.

As another example, the EPA used the SCC to show that the CPP would achieve carbon pollution emissions reductions valued at $20 billion in 2030.[35] The CPP also would reduce sulfur dioxide, nitrogen oxides, and particulates, which can trigger health impacts such as asthma attacks and premature death. The EPA projected that these health benefits would be worth between $14 billion and $34 billion.[36] After accounting for $8 billion in estimated compliance costs, the EPA concluded that the CPP would provide net benefits of $26 billion to $45 billion.[37] The health co-benefits alone justify the CPP, but the climate benefits help to demonstrate the value of the rule to the public interest.

Federal agencies referenced the SCC or the social cost of other greenhouse gases in 67 final regulatory actions between 2008 and the end of 2016.[38] According to William Nordhaus, a Yale University economist, federal agencies have used the SCC in the economic analyses of regulations that provide more than $1 trillion in climate and nonclimate benefits.[39] Going forward, if federal agencies are not able to properly monetize the benefit of cutting a ton of carbon pollution, they may have to opt for regulatory options that confer lower costs on polluters but provide fewer benefits for the climate and public health.

Big polluters and their allies have fought the SCC

Because the SCC plays a central role in quantifying the benefits of climate rules, oil companies, coal companies, electric utilities, and their political allies have had a bull's-eye on it for years.

Trade associations representing the largest industries in the United States have long opposed federal agencies' use of the SCC. In 2014, the American Petroleum Institute, American Chemistry Council, American Fuel & Petrochemical Manufacturers, National Association of Manufacturers, National Mining Association, and others provided the OMB with 30 pages of comments about the SCC and asked the federal government to cease using it to justify rulemakings.[40] Think tanks and advocacy groups funded by the Koch brothers and other fossil fuel companies—including the Competitive Enterprise Institute, American Energy Alliance, The Heritage Foundation, Heartland Institute, and FreedomWorks—also have opposed the SCC and advocated for its undoing. They claim the SCC is politically motivated "mischief" and "an attempt to generate numbers that justify their administrative actions in pursuit of their political [g]lobal [w]arming agenda."[41]

Opponents of the SCC have had the ear of President Trump and his administration. David Kreutzer, a Heritage Foundation economist who has questioned the methodology used to calculate the SCC,[42] and David Schnare, an attorney who denies basic climate science and calls the SCC a "highly discretionary government means to the end of centralized control,"[43] served on the EPA transition and beachhead teams and only recently departed the agency.[44] Daniel Simmons, vice president for policy at the Koch-funded Institute for Energy Research, or IER, and now a political appointee at the DOE, told reporters that he "cannot fathom how anyone could think it has any basis in reality."[45] Travis Fisher, a former economist from the IER, also has joined the DOE.[46] As an institution, the IER goes beyond questioning the methodology behind the SCC to say "the very concept itself is far too dubious to be used in federal policymaking."[47]

Two more architects of the coalition against the SCC—Myron Ebell of the Competitive Enterprise Institute[48] and Thomas Pyle of the American Energy Alliance, the advocacy arm of the IER[49]—also were early members of the Trump transition team. Shortly after the election, Pyle outlined in a fundraising email what to expect from the Trump administration on energy and climate. He predicted that Trump would "[end] the use of the social cost of carbon in federal rulemakings."[50] The Trump transition team also requested the names of DOE employees who worked on the SCC, a move that many saw as an opening attack on scientific integrity.[51]

Congress may act in tandem with the Trump administration to permanently block the SCC. The House of Representatives Science Committee held a hearing on February 28, 2017, at which Chairman Lamar Smith (R-TX) called the SCC a "flawed value" that "desperately attempts to justify the agency's alarmist reasoning for support of the Clean

Power Plan and other climate regulations." He recommended eliminating the use of the SCC "until a credible value can be calculated."[52] At the end of the 114th Congress, Sen. James Lankford (R-OK) introduced legislation to do just that: permanently block agencies from using the SCC unless Congress expressly authorizes it.[53] Rep. Evan Jenkins (R-WV) introduced a similar bill in the House of Representatives.[54] They have yet to reintroduce their bills in the 115th Congress.

President Trump's executive order

On March 28, 2017, President Trump signed a wide-ranging executive order to undo several of the Obama administration's climate-related rules, guidance documents, and orders. Section 5 of the executive order disbands the SCC interagency working group and withdraws the technical support documents that justified and outlined the economic and scientific basis for the SCC calculations, stating that they are "no longer representative of governmental policy."[55]

The executive order does not outline a new process for revising the SCC; instead, it directs agencies to follow guidance from the OMB. Specifically, it states:

> *Effective immediately, when monetizing the value of changes in greenhouse gas emissions resulting from regulations, including with respect to the consideration of domestic versus international impacts and the consideration of appropriate discount rates, agencies shall ensure, to the extent permitted by law, that any such estimates are consistent with the guidance contained in OMB Circular A-4 of September 17, 2003 (Regulatory Analysis), which was issued after peer review and public comment and has been widely accepted for more than a decade as embodying the best practices for conducting regulatory cost-benefit analysis.*[56]

As a result of this order, federal agencies will likely revert to the pre-Obama administration method of estimating the value of cutting or increasing emissions—that is, agency-by-agency determinations without any common understanding of the proper number. The executive order's references to "discount rates" and "consideration of domestic versus international impacts," however, mirror common industry criticisms of the SCC and therefore provide some guidance on the result that President Trump hopes to achieve.[57] As described below, the executive order could have the effect of significantly lowering the SCC value and making it harder for agencies to quantify any benefit from cutting greenhouse gas emissions.

Raising the discount rate

The executive order could change the discount rate that agencies use to calculate the value of a ton of greenhouse gas pollution.

As a general matter, economists assume that people would rather have $1 today than $1 in the future or, put another way, that they may only be willing to spend 75 cents today to get $1 worth of benefits in the future. As the saying goes, "A bird in the hand is worth two in the bush." The discount rate reflects how economists weigh this trade-off: costs to society today versus potential future benefits.

The discount rate and climate change

Climate change poses a unique problem—those who pay now to reduce greenhouse gas emissions may not be alive to reap the benefits in the form of averted climate impacts decades in the future. Within this context, the discount rate describes how much people today value preventing climate-related damage in the future—or how much they discount it relative to the value of having money in their pockets today. A higher discount rate suggests that "those alive today are worth more than future generations."[58] A higher rate translates into a lower SCC and, therefore, lower quantified benefits of cutting carbon pollution from power plants, vehicles, or other sources. If the discount rate is low, on the other hand, then it gives more weight to the well-being of future generations. A lower discount rate translates into a higher SCC value and more economic benefits of cutting pollution.

Table 1 shows how the discount rate can change the SCC. In 2015, the central value of the SCC at the 3 percent discount rate was $36 per metric ton. At a higher discount rate of 5 percent, that value drops to $11 per metric ton. At a slightly lower rate of 2.5 percent, the SCC value jumps to $56 per metric ton. Because the discount rate has a significant effect on the SCC value, and therefore the monetized benefits of cutting pollution, it has been the subject of substantial debate.

OMB guidance on discount rates

The OMB Circular A-4, which the executive order directly references, says federal agencies should "provide estimates of net benefits using both 3 percent and 7 percent" discount rates while noting that some cases might merit a discount rate "outside the range of 3 to 7 percent."[59] It also states that, in some cases, "a lower discount rate is appropriate" when a policy, such as a price on carbon pollution, could influence the cost of goods and services.[60] The OMB guidance suggests that low rates of 1 percent to 3 percent may be most appropriate when discounting across generations. Specifically:

> *Special ethical considerations arise when comparing benefits and costs across generations. Although most people demonstrate time preference in their own consumption behavior, it may not be appropriate for society to demonstrate a similar preference when deciding between the well-being of current and future generations. Future citizens who are affected by such choices cannot take part in making them, and today's society must act with some consideration of their interest.*[61]

After reviewing the OMB guidance and applying it to the unique challenges posed by climate change, the SCC interagency working group recommended that agencies calculate the central SCC value using a 3 percent discount rate and 2.5 percent and 5 percent as the outer range. In response to comments on the SCC methodology, the working group defended this choice by stating that the "3 percent rate is an estimate of the real rate at which consumers discount future consumption flows to their present value"—that is, how consumers evaluate the tradeoffs of consuming of goods now versus in the future. The 3 percent discount rate, in the working group's view, is therefore in accordance with OMB guidance.[62]

The ethical case for a lower discount rate

Some economists argue that the 3 percent discount rate is too high for intergenerational cost-benefit analysis.[63] Greenstone, who helped craft the original SCC methodology, has noted that this is "not just wonky cost-benefit. It's what our grandchildren would want us to do."[64] Certainly, the choice of the discount rate is about ethics as much as it is about economics.

In a 2012 paper, economists Laurie Johnson and Chris Hope argued that the 3 percent discount rate is much too high and overstates "how well people may fare in the future, and the risks they are willing to assume."[65] In their view, discounting over generations "runs into both a logical and ethical complication: a person today enjoying the instant gratification of consuming goods whose production generates climate pollution is not the same person harmed by the associated carbon emissions."[66] Given these ethical concerns, the authors conclude that the only defensible approach is to use a discount rate that approaches zero.[67]

Industry's case for a higher discount rate

At the other end of the debate, several stakeholders have criticized the SCC working group for not following the letter of the OMB Circular A-4 and not using the 7 percent discount rate as the baseline for the SCC calculation.[68]

The American Chemistry Council, American Petroleum Institute, National Association of Manufacturers, National Mining Association, U.S. Chamber of Commerce, and other powerful trade associations submitted comments to the working group making this very point.[69] Several other industry associations commented separately and criticized the exclusion of the 7 percent rate. The Edison Electric Institute, for example, recommended that the OMB require the working group to use the "full range of prescribed discount

rates," including the higher rate of 7 percent, when estimating the SCC.[70] The American Coalition for Clean Coal Electricity estimated that the SCC calculated at a 7 percent discount rate would be roughly half the lowest values calculated by the working group.[71]

Kreutzer, the Trump EPA transition team member and former Heritage Foundation economist, also submitted comments arguing that the working group improperly ignored the OMB's guidance to use the 7 percent discount rate in regulatory cost-benefit analyses and erred in including the lower rates of 2.5 and 3 percent.[72] In his estimation, a discount rate of 7 percent is more appropriate, as it better reflects "the best rate of return that could reasonably be expected in capital markets."[73] When he applied a 7 percent discount rate to the models used to calculate the SCC, the SCC value fell by 80 percent in one run and dropped below $0 in another.[74] Daniel Simmons, now sitting at the DOE, submitted comments to the working group on behalf of the IER. The IER found that at a 7 percent rate, "the estimated SCC for early years would be close to $0/ton, if not negative."[75] A negative SCC would imply that carbon emissions provide a benefit, not a cost, which is contrary to the scientific consensus about the impact of greenhouse gas emissions on the climate and the consequences of climactic change.

In light of industry comments on the SCC; the Trump administration's close ties with the fossil fuel industry; and the role of SCC opponents in the Trump transition, the wording of the executive order—directing federal agencies to afford "consideration of appropriate discount rates"—could be read to suggest that agencies use a 7 percent discount rate when doing cost-benefit analysis related to greenhouse gas emissions.[76] The result would lower the SCC value, perhaps even to $0, and significantly underestimate the monetized benefit of cutting emissions.

Assuming U.S. pollution causes no harm abroad

The executive order could change the geographic scope of the cost-benefit analysis for a ton of carbon pollution.

The OMB Circular A-4 says "analysis of economically significant proposed and final regulations from the domestic perspective is required, while analysis from the international perspective is optional."[77] When estimating the SCC value, the interagency working group chose to base it on the global economic damage caused by a ton of carbon pollution, not just damage suffered within U.S. borders. The interagency working group opted for this methodology for three primary reasons. First, the working group concluded that climate change, from a regulatory perspective, is "highly unusual" because "emissions of most greenhouse gases contribute to damages around the world even when they are emitted in the United States."[78] This is not true of most other air pollutants, which generally cause local or regional harm within U.S. borders. Thus, the working group determined that the SCC "must incorporate the full (global) damages" caused by greenhouse gas emissions in order to "address the global nature of the problem."[79]

Second, because climate change is a global problem in need of a global solution, the working group decided that using a "global estimate of damages in U.S. regulatory analyses sends a strong signal to other nations that they too should base their emissions reductions strategies on a global perspective."[80] Finally, according to the working group's justification, climate change impacts in other countries "can have spillover effects on the United States, particularly in the areas of national security, international trade, public health, and humanitarian concerns."[81] For these reasons, the working group concluded "a purely domestic measure is likely to understate actual impacts to the United States."[82]

Notably, the courts have affirmed the working group's methodological choice. In August 2016, the U.S. Court of Appeals for the 7th Circuit examined claims that the SCC is "irredeemably flawed" as a cost-benefit analysis tool in *Zero Zone, Inc., et al. v. United States Department of Energy*.[83] The petitioners argued that the SCC inappropriately weighed national-level costs of new energy efficiency standards against global benefits to the climate. The court examined the DOE's justifications, which mirrored those of the interagency working group, and concluded that the agency "acted reasonably when it compared global benefits to national costs."[84]

Opponents of the SCC often criticize the working group's choice to include global costs in the SCC calculation and point to the language in the OMB Circular A-4 as a justification.

The IER, for example, told the working group that it "neglected clear OMB guidance to report costs and benefits from a domestic perspective."[85] The IER noted that the 2010 SCC value of $33 per ton would have been between $2 per ton and $8 per ton if it only reflected domestic costs rather than global costs.[86] The IER also has argued that basing the SCC on global economic impacts allows "regulations to appear to pass cost/benefit tests when they actually do not confer net benefits on Americans."[87] A coalition of conservative think tanks wrote that using a global SCC estimate "inflates the hypothetical benefit to the American people."[88] Industry groups weighed in as well.[89] The Edison Electric Institute, for example, said using a global SCC value "overstated the domestic benefits of reducing [carbon] emissions and is inappropriate in domestic rulemakings."[90]

As with the discount rate, these comments from industry and conservative think tanks provide some insight into how federal agencies may interpret President Trump's directive to consider "domestic versus international impacts" when applying the OMB guidance to cost-benefit analyses. They could calculate a value that only reflects the cost of a ton of carbon pollution within U.S. borders, causing the value to fall dramatically from current SCC levels. If agencies apply this in combination with a higher discount rate, the cost associated with emitting a ton of carbon pollution would certainly approach zero.[91] This means federal agencies would be unable to quantify the benefit of policies to cut carbon pollution and therefore would be limited in the policy options they can pursue.

Conclusion

The Trump administration's March 28 executive order directs the EPA to reopen—and likely weaken—several rulemakings that the Obama administration promulgated to cut greenhouse gas emissions. The directive to disregard the SCC calculated by the interagency working group complements this effort. If the result is a deflated value for a ton of carbon pollution, then the EPA may not be able to demonstrate significant benefits from cutting that pollution. As the agency moves to reconsider these rulemakings, the EPA could use this lack of quantifiable benefits to justify imposing weaker pollution limits or eliminating them entirely. The cost-benefit analysis—including the methodology used to calculate the value of a ton of carbon pollution—is likely to be an important component of the inevitable legal challenge to each rulemaking.

Uncertainties remain about the most precise way to value the cost of a ton of carbon pollution or how to incorporate the well-being of future generations into everyday economic decisions. But this does not mean that policymakers should assume the costs are negligible. Any effort to undervalue the cost of carbon pollution increases the likelihood that the United States will not act urgently and boldly enough to cut pollution and avert the worst impacts of climate change.

If the Trump administration were to review the SCC methodology in a rigorous and thoughtful manner, the National Academy of Sciences, or NAS, has offered one potential path forward. In July 2015, the interagency working group asked the NAS to examine the methodology for calculating the SCC and recommend how to update it to reflect the most recent science.[92] In early 2017, the NAS released a report with recommendations for how to improve the SCC methodology to make it more transparent and responsive to changes in the scientific understanding of climate change.[93] The Trump administration would be well-advised to start with the NAS report—written by a distinguished panel of economists, scientists, and academics from across the country—as the baseline for any evaluation of how to calculate the value of a ton of carbon pollution.

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