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# THE GEORGE WASHINGTON UNIVERSITY

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WASHINGTON, DC

Public Interest Comment<sup>1</sup> on  
The Environmental Protection Agency's Proposed Rule

Emission Guidelines for Greenhouse Gas Emissions  
From Existing Electric Utility Generating Units;  
Revisions to Emission Guideline Implementing Regulations;  
Revisions to New Source Review Program

Docket ID No. EPA-HQ-OAR-2017-0355  
RIN: 2060-AT67

October 30, 2018

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The George Washington University Regulatory Studies Center

The George Washington University Regulatory Studies Center improves regulatory policy through research, education, and outreach. As part of its mission, the Center conducts careful and independent analyses to assess rulemaking proposals from the perspective of the public interest. This comment on the Environmental Protection Agency's proposed rule setting greenhouse gas (GHG) emissions guidelines for electric power plants does not represent the views of any particular affected party or special interest, but is designed to evaluate the effect of EPA's proposal on overall consumer welfare.

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<sup>1</sup> This comment reflects the views of the author, and does not represent an official position of the GW Regulatory Studies Center or the George Washington University. The Center's policy on research integrity is available at <http://regulatorystudies.columbian.gwu.edu/policy-research-integrity>.

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## Introduction

In 2015 the Environmental Protection Agency (EPA) promulgated its Clean Power Plan (CPP)<sup>3</sup> requiring most states—although notably not Alaska and Hawaii<sup>4</sup>—to impose restrictions on CO<sub>2</sub> emissions from electricity generating units (EGU). A majority of the states sued, and the Supreme Court issued a rare stay<sup>5</sup> of the administrative rule pending resolution of the legal challenges. In October 2017 the agency proposed to repeal<sup>6</sup> the CPP, in December 2017 it issued an Advanced Notice of Proposed Rulemaking<sup>7</sup> for a replacement rule, and in August 2018 it issued this Notice of Proposed Rulemaking,<sup>8</sup> which offers an alternative Affordable Clean Energy (ACE) framework. The planned final rule will both repeal the stayed CPP and replace it with the ACE rule.

The ACE proposal includes several components. It determines that improved heat-rate efficiency is the Best System of Emissions Reduction (BSER) for GHG emissions from coal-fired power plants, and lists several “candidate technologies” that states can use when developing their state implementation plans. It provides new implementation procedures for emissions guidelines under Clean Air Act section 111(d)—not just for the purposes of the ACE rule, but also for future uses of section 111(d). States will now have three years, rather than nine months, to submit implementation plans. The rule also alters the “major modification” trigger for New Source Review (NSR), in order to allow EGU operators to make needed improvements to power plants without having to undertake a prohibitively expensive comprehensive retrofit.

Compared to the CPP, the ACE rule generally gives greater flexibility to states in developing their implementation plans, and it lowers the cost of compliance for EGUs. Approximately 600 coal-fired EGUs at 300 facilities would be covered by the rule. The proposed definition of BSER conforms to EPA’s practice prior to the stayed CPP, in that it describes technologies that can be implemented within the fence line of existing facilities. In contrast, the CPP’s definition of BSER would have required states to shut down some coal fired power plants and to find replacement sources of electricity with much lower CO<sub>2</sub> emissions.

EPA’s preliminary Regulatory Impact Analysis (PRIA) calculates that, compared to the *status quo ante* (i.e., no CPP in effect), the ACE rule will reduce CO<sub>2</sub> emissions in 2025 by between 13 and 30 million short tons, resulting in \$1.6 billion in monetized domestic climate benefits. Unlike the CPP, the ACE does not depend on overseas climate benefits to justify the rule. This does not mean that the overseas benefits do not exist—just that they are not counted towards the

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<sup>3</sup> “CPP,” 80 FR 64662 (October 23, 2015).

<sup>4</sup> Brian Mannix, “Alaska is Exempt!” 9/8/2015. <https://fedsoc.org/commentary/blog-posts/alaska-is-exempt>

<sup>5</sup> “Stay of the CPP,” *West Virginia v. EPA*, No. 15A773 (S.Ct. Feb. 9, 2016).

<sup>6</sup> “Repeal NPRM,” 82 FR 48035 (October 16, 2017).

<sup>7</sup> “Replace ANPRM,” 82 FR 61507 (December 28, 2017).

<sup>8</sup> “ACE,” 83 FR 44746 (August 31, 2018).

total net benefits in making the case for the rule. The ACE may also reduce SO<sub>2</sub> and NO<sub>x</sub> emissions by up to 2 percent.

Compared to a scenario where the CPP does go into effect,<sup>9</sup> the PRIA found that the ACE rule has slightly higher CO<sub>2</sub> emissions, and therefore slightly lower domestic and foreign climate benefits. It also has slightly higher SO<sub>2</sub> and NO<sub>x</sub> emissions, and therefore slightly lower “co-benefits.” The ACE rule is projected to reduce compliance costs by up to \$6.4 billion, and to result in retail electricity prices that are 0.2 to 0.5 percent lower than would prevail under the CPP. EPA estimates the net benefits of replacing CPP with ACE are approximately \$3.4 billion, representing the amount by which the present value of cost savings exceed the estimated reduction in domestic benefits.

## Statutory Authority

EPA’s statutory authority to regulate GHGs arises from the Supreme Court’s interpretation of the Clean Air Act,<sup>10</sup> and from EPA’s subsequent finding<sup>11</sup> that anthropogenic GHG emissions endanger human health and the environment. The specific use of section 111(d) to promulgate the CPP rule is the subject of extraordinarily complex legal controversy, and the ACE rule has been designed to avoid the most contested aspects of its predecessor—especially the CPP’s finding that the BSER, a “performance standard,” was for some EGUs to simply disappear and be replaced by completely different sources of electricity.

Some continued legal controversy will be unavoidable, because the perceived stakes (both the costs and the benefits) in this rulemaking are large, and the agency is necessarily making decisions without much relevant statutory guidance. When the applicable sections of the Clean Air Act were enacted, Congress was thinking about more conventional pollutants—not about trying to regulate the earth’s climate. Given the endangerment finding, the ACE proposal does a much better job of conforming to the specific requirements of the Clean Air Act, but will be criticized by some as not being a sufficient response to the challenge of anthropogenic climate change. This criticism would be better directed at Congress, but inevitably the courts will be asked to mandate the more ambitious CPP.

Standards for existing sources under section 111(d) obligate the states to develop implementation plans and submit them to EPA for approval. Different state governments have widely varying views on climate change policies, as well as particular concerns about how the rule might affect

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<sup>9</sup> Note that the comparison of the CPP and ACE rules is complicated by the fact that EPA’s 2015 projections of industry and economic conditions are already at substantial variance with reality – an important reminder of the need to approach the art and science of Regulatory Impact Analysis with humility.

<sup>10</sup> *Massachusetts v. EPA*, 549 U.S. 497, 2007.

<sup>11</sup> “Endangerment Finding”, 74 Fed. Reg. 66496 (Dec. 15, 2009).

the state's economic competitiveness. While a majority of the states sued EPA to overturn the CPP, several others will surely challenge its successor and likely will have standing to do so.

Although the ACE rule is less vulnerable on statutory grounds than the CPP, much of the controversy is likely to focus on the very different analyses of benefits and costs that accompany the two rules. As discussed below, courts have increasingly been willing to examine EPA's consideration of costs as well as benefits under the Clean Air Act. The legal challenges to EPA's final decision on the ACE rule are likely to argue that it should be regarded as arbitrary and capricious in light of the (multiple) rulemaking records and the agency's supporting analyses.

In the PRIA supporting the ACE proposal, EPA takes care to follow the requirements of EO 12866<sup>12</sup> and related OMB guidance. The agency clearly explains the nature of the market failure that it is trying to remedy, and documents its analysis of the benefits and costs of a range of alternatives. It clearly explains the underlying assumptions and how they depart from the assumptions made in the prior CPP analysis.

## Relationship to Prior Comments

This is the fourth public interest comment filed by the author on EPA's proposals for regulating GHGs from EGUs.

The first comment,<sup>13</sup> filed on the NPRM for the original CPP, was directed partly at EPA but also at the states, who were tasked by the CPP with developing implementation plans. It stressed the advantages of constraining CO<sub>2</sub> intensiveness, rather than setting a mass-based standard. It went into detail on the economic theory underlying this recommendation. While the CPP offered states a choice of which method to use in their implementation plans, the agency encouraged states to choose a mass-based standard.<sup>14</sup> By determining that BSER consists of improvements to the heat-rate efficiency of EGUs, the ACE rule effectively adopts an intensiveness standard, consistent with the recommendations made in that first comment.

The second comment,<sup>15</sup> filed in response to the agency's 2017 ANPRM, offered several suggestions for what features EPA might include in a rule to replace the CPP.

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<sup>12</sup> Exec. Order No. 12866, Regulatory Planning and Review.

<sup>13</sup> Brian Mannix, *Public Comment: EPA's Proposed Rule: Federal Plan Requirements for Greenhouse Gas Emissions From Electric Utility Generating Units*, November 19, 2015.

<https://regulatorystudies.columbian.gwu.edu/public-comment-epas-proposed-rule-federal-plan-requirements-greenhouse-gas-emissions-electric>

<sup>14</sup> In comparing the ACE rule with the CPP, the PRIA assumes a mass-based implementation of the CPP.

<sup>15</sup> Brian Mannix, *Public Comment on EPA's ANPRM: State Guidelines for Greenhouse Gas Emissions from Existing Electric Utility Generating Units*, February 27, 2018.

<https://regulatorystudies.columbian.gwu.edu/public-comment-epas-proposed-rule-state-guidelines-greenhouse-gas-emissions-existing-electric>

The author's third comment,<sup>16</sup> filed in response to the CPP Repeal NPRM, recapitulated the recommendation for an intensiveness standard and made further recommendations, many of which remain relevant to the ACE rule—especially the discussion of why the agency should use a domestic Social Cost of Carbon (SCC), rather than a global one, to measure climate benefits. In response to EPA's request<sup>17</sup> in the ACE NPRM, the author's comment on the Repeal NPRM is attached to the present comment for the agency's continued consideration.

This remainder of this comment will focus on three of the major questions raised in this rulemaking that are likely to be litigated: the proper metric for climate benefits, the treatment of co-benefits, and the proposed reforms to the NSR criteria.

### ***Are Global or Domestic Benefits the Relevant Metric?***

EPA's decision in the 2015 Clean Power Plan rulemaking to use an SCC that included all global benefits violated OMB guidance—and long-established practice—to the contrary. This has been a source of much commentary.

Some economists have argued that Americans generally care about people overseas, and therefore the welfare of the latter enters into the welfare function of the former. This is the type of careless reasoning that often leads to double-counting in a benefit-cost analysis (BCA). But it is also illogical in that it proves too much. If Americans care so much about the welfare of everyone in the world, then there are no externalities and there is no market failure. There is no need for EPA to regulate at all, because Americans will do what is right without the need for any stifling and coercive regulations.

But that is clearly not an accurate assessment. Climate change, to the extent that it is a problem, is indeed a classical externality, and a global one at that. The frustrating reality is that unilateral national actions, like the CPP, are not an ideal solution. It is also true that working through the states, as section 111(d) requires, may not be an ideal solution. One can wish that international negotiations had not been derailed, or that Congress had enacted more appropriate legislation—possibly a carbon tax. Meanwhile, EPA must use the authority that it has, and that authority is to improve national welfare, not to diminish it.

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<sup>16</sup> Brian Mannix, *Public Comment on the EPA's Proposed Rule Repeal of Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units*, April 27, 2018, <https://regulatorystudies.columbian.gwu.edu/public-comment-epas-proposed-rule-repeal-carbon-pollution-emission-guidelines-existing-stationary>

<sup>17</sup> “If commenters believe that any of their previously submitted comments are still applicable, they should resubmit those comments to this rulemaking to ensure they are considered.” 83 Fed. Reg. 44748 (August 31, 2018).

Of course, anthropogenic climate change is a global phenomenon—regardless of how serious or benign one thinks it is. Therefore the relevant scientific models and risk assessments are conducted on a global scale. Economists, too, approach the problem as a global one, and as a classical example of environmental externalities which, in the case of GHGs, happen to occur on a global scale. Accordingly, economists offer remedies that are necessarily global in their reach. Multiple rounds of international negotiations have properly focused on finding a global solution.

Absent such a solution, however, how are we to evaluate a regulation that is adopted unilaterally? In any particular rulemaking, the agency must evaluate its options with a realistic assessment of what they will actually accomplish, and it must act within its legal authority. The use of a global metric of climate benefits is unsuited for this purpose for two reasons elaborated below. First, an estimate of global benefits gives an inaccurate picture of what a domestic rule is likely to do. Second, absent explicit authority from Congress, a domestic regulatory agency does not have the authority to venture beyond domestic interests in pursuit of global interests.

### ***Some Background on the Social Cost of Carbon, Domestic and Global***

During the last 3½ years of the Bush administration, the author served as Associate Administrator of EPA for Policy, Economics, and Innovation. In that capacity, in the wake of the 2007 *Massachusetts v. EPA* decision, he supported the use of an SCC to guide the agency’s policy on GHGs. In 2008 he proposed that, rather have EPA estimate the SCC in isolation, the president’s Council of Economic Advisors, Office of Management and Budget, and Council on Environmental Quality should convene an interagency working group to develop an SCC that all agencies could use to establish a consistent set of climate policies. In 2009, President Obama followed exactly that plan, and the working group developed a Technical Support Document (TSD) estimating the SCC for use across the government.

In a comment on an Energy Department rulemaking that relied on the TSD, several authors called for both peer review and public participation.<sup>18</sup> In 2013, when the Office of Management and Budget requested comment on a revision to the Technical Support Document, the author and a co-author filed a comment that supported the development of a uniform SCC, but pointed out several flaws in the approach that the working group had used. They reviewed these points in a subsequent article:

The SCC summarizes in a single number (more properly, a range of numbers) a vast array of information derived from scientific and economic research and modeling. All of this information is subject to disagreement, and the relationships embedded in the calculation of the SCC are extraordinarily complex, presenting a

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<sup>18</sup> See *The Social Cost of Foregoing Public Participation in the SCC* by Susan Dudley, Sofie Miller, & Brian Mannix, September 10, 2013.

<https://regulatorystudies.columbian.gwu.edu/social-cost-foregoing-public-participation-scc>

daunting challenge to anyone trying to arrive at a consensus figure. Nonetheless, it is worthwhile to try. The SCC may appear to be a gross oversimplification of a complex underlying reality; but, in fact, it is the right simplification to undertake. This is because any damage that greenhouse gas emissions may inflict on global climate systems is independent of the source of the emissions. To the climate, all CO<sub>2</sub> molecules look the same.

This simple fact does not tell us whether it makes sense to regulate energy efficiency or subsidize certain technologies, but it does tell us that any cost-effective portfolio of climate policies will have a single implicit marginal cost of carbon. For this reason, we commend the efforts of the interagency working group to reach agreement on the value of the SCC. A common SCC should be used to evaluate climate-related regulatory mandates, grant programs, and tax policies.<sup>19</sup>

While we did, and still do, support the use of a consistent SCC to guide policy, we listed several concerns about the working group process. First was the need for greater transparency, including more scientific peer review and opportunity for public comment. In particular, we argued that any agency relying on the SCC in a rulemaking must re-open the analysis for comment and for any subsequent review by a court. The suitability of the SCC and supporting analyses can only be judged in the context of a particular rulemaking and its statutory authority. We also pointed out systematic biases in the working group's analysis, including the use of unusually low discount rates, and a tendency to look only at one tail (the "hot" tail) in the distribution of climate change scenarios. Finally, we criticized the working group's recommendation to apply a *global* SCC to unilateral *domestic* actions. We endorsed the use of a global SCC in international negotiations, but observed that:

It is simply not plausible to claim that any unilateral U.S. action could achieve, in practice, the global benefits that are implied by the SCC as it is calculated in the TSD. International competition will cause the domestic costs of unilateral action to be amplified, even while the global benefits evaporate. The place to use the global SCC is not—at least for now—in the RIAs of U.S. regulatory agencies, but in the international fora where climate policies are being negotiated.<sup>20</sup>

Note that from this point of view the domestic SCC is not altogether realistic, either. To the extent that unilateral action puts the U.S. at a competitive disadvantage in CO<sub>2</sub> intensive industries, "leakage" will cause reduced emissions in the U.S. to pop in some other country that

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<sup>19</sup> Susan E. Dudley, and Brian F. Mannix. 2014. "The Social Cost of Carbon." *Engage: Journal of the Federalist Society Practice Groups* 15:14–18. <https://fedsoc.org/commentary/publications/the-social-cost-of-carbon>. Note that Ms. Dudley was the Administrator of OMB's Office of Information and Regulatory Affairs from 2007 – 2009. Ms. Dudley and Mr. Mannix have been married since 1987.

<sup>20</sup> *Ibid.*

does not similarly constrain its emissions. The result will be that forecast climate benefits will not materialize—either globally or domestically. Predicting these effects is very challenging; avoiding them, by acting within an enforceable framework for international action, would be desirable but is even more challenging. Meanwhile, EPA should recognize that the domestic SCC likely represents an upper bound on the benefits of domestic action, and should acknowledge that there is another compelling reason to prefer the domestic SCC to the global SCC: the limits of the agency’s legal authority.

### ***The Agency is not Authorized to Act Contrary to the National Interest***

Consider a regulatory option (such as the CPP) that has positive net benefits when assessed with a global SCC, but negative net benefits when assessed with a domestic SCC. What this means is that the regulatory agency is imposing an affirmative net harm on the U.S. in order to advance the interests of foreign nations.<sup>21</sup> Does EPA have the authority to do this?

An examination of the Clean Air Act certainly suggests that it is primarily intended to remedy the damage that air pollution inflicts on the U.S. It has particular provisions<sup>22</sup> for cases where pollution has international effects, and authorizes EPA to act (“give formal notification to the Governor of the State in which such emissions originate”), but it contains a strict reciprocity provision: “This section shall apply only to a foreign country which the Administrator determines has given the U.S. essentially the same rights with respect to the prevention or control of air pollution occurring in that country as is given that country by this section.”

Thus the text of the Act does not seem to provide blanket authority for EPA to regulate the U.S. on behalf of foreign interests. On the other hand, it has been argued that phrases like “human health” and “the environment” should be construed broadly, and that the boundaries of EPA’s authority should be given a commensurately broad construction. Economists refer to the question of whose benefits should be counted as the “standing” problem in BCA. But the resolution of this question needs to be examined from a legal perspective, as well as an economic one:

Courts, too, have found reason, when reviewing administrative decisions, to look for some form of balancing of benefits and costs. To borrow familiar phrases from *A.L.A. Schechter Poultry Corp. v. United States* (295 U.S. 495 [1935]), *Panama Refining Co. v. Ryan* (293 U.S. 388 [1935]), and earlier cases, BCA supplies a

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<sup>21</sup> The late Thomas Schelling, a Nobel laureate in economics, pointed out that the overseas benefits of actions to reduce domestic GHG emissions were analogous to giving foreign aid to countries in the future—countries who will be far richer than we are, who have a much better understanding of climate change than we do, and who have much more advanced technologies. That observation doesn’t mean that action today is not warranted, since (as is often asserted) opportunities to act may exist today that will be foreclosed tomorrow. But it is helpful to keep in mind the nature of the attempted transfer.

<sup>22</sup> 42 U.S. Code § 7415 – International air pollution.

convenient “intelligible principle” where Congress has failed to supply a different one, and it handily erects “two banks” to prevent administrative discretion from overflowing too far in one direction or another. More recent rulings have found that the failure to consider costs as well as benefits might render a decision arbitrary and capricious under the Administrative Procedure Act (see Sunstein, 2017<sup>23</sup>).<sup>24</sup>

As hinted at in the language above, the legal principle of benefit-cost balancing has roots not only in the Administrative Procedure Act, but also in the nondelegation doctrine. By applying the constitutional avoidance canon, a reviewing court might find that a fatally broad or vague delegation of power to an administrative agency might nonetheless be constitutional, as long as the statute is interpreted to require the agency to strike a balance between benefits and costs.

To be useful, judicial review of the use of benefit-cost analysis in rulemaking cannot be merely superficial and deferential, treating the analysis as hyper-technical and opaque:

This paper argues that BCA is properly viewed, not simply as a technocratic planning tool, but as a solution to a principal-agent problem. Specifically, it is intended to test whether an agency can demonstrate that it is acting in the public interest ... Agency officials are not principals; they wield whatever power they have as agents of the people. They ought to be able to demonstrate that their discretionary official actions serve the public interest, promote the general welfare, or otherwise advance the common good.<sup>25</sup>

Viewed through this lens, the question of standing in BCA is easier to resolve. On whose behalf should we presume an administrative agency has discretionary authority to act? Can it justify an action that harms the U.S. in order to deliver benefits to other countries? Congress certainly has the power to render foreign aid, and to direct agencies to deliver it. But it does so in explicit terms. The Constitution does not give the Executive an independent authority to act contrary to the national interest in order to enhance the welfare of foreign nations, however much those foreign nations might desire that outcome. Indeed, it seems hostile to the very idea (see the Emoluments Clause).

This is not to say that the U.S. would be unable or unwilling to do its share, and considerably more than its share, to address climate change as a global problem. But that requires Congress to act. The authority of an administrative agency to subordinate the national interest in pursuit of a

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<sup>23</sup> Cass Sunstein, 2017. “Cost-Benefit Analysis and Arbitrariness Review.” *Harvard Environmental Law Review* 41:1–41.

<sup>24</sup> Brian F. Mannix, 2017. “Benefit-Cost Analysis as a Check on Administrative Discretion,” *Supreme Court Economic Review*, University of Chicago Press, vol. 24(1), pages 155-168.

<sup>25</sup> *Ibid.*

global objective must be explicitly granted; it is not something that can be discovered in the interstices of statutes:

[I]t is not hard to imagine the U.S. being willing to do its part despite not being a net beneficiary of a global regime.

In the absence of such reciprocal action by other nations, however, the global benefits in the SCC cannot be regarded as a legitimate entry in the benefit-cost ledger. Basing unilateral domestic action on the global SCC would put U.S. government agencies in the impossible position of acting contrary to the interests of U.S. citizens, using the excuse that they are acting as representative agents of foreign countries. Moreover, since the actual representative agents of those foreign countries have declined to take comparable action to constrain carbon emissions, U.S. agencies would be making the implausible argument that they are better representatives of foreign interests than are the governments of those countries. Domestic regulatory agencies have only those powers which the Congress has delegated to them, and the legitimacy of individual regulatory actions will have to be measured against the applicable authorizing statutes. In creating the Corporate Average Fuel Economy program at DOT, or the Appliance Efficiency Standards at DOE, for example, did Congress intend those agencies to set standards that, on behalf of silent foreign interests, affirmatively harm U.S. consumers and the U.S. economy? If not, then the global SCC cannot be used to justify such standards.<sup>26</sup>

The emissions reductions projected for the ACE proposal will produce global climate benefits, but EPA is right to use only the domestic benefits to justify the costs of the rule. The agency must interpret its statutes to give it authority to advance the general welfare of the U.S., unless Congress clearly instructs it to do otherwise.

## **Should Co-Benefits be Included in the Analysis?**

BCA aspires to be comprehensive, including all of the foreseeable consequences of a decision. In practice however, the analyst must inevitably draw boundaries that capture the major effects while keeping the analysis tractable. This boundary-drawing exercise should be done in a balanced way, but that can be a difficult discipline to adhere to when an agency feels pressure to find benefits that will justify a costly regulation.<sup>27</sup>

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<sup>26</sup> Ibid.

<sup>27</sup> See Susan Dudley, et al, "Consumer's Guide to Regulatory Impact Analysis: Ten Tips for Being an Informed Policymaker." *Journal of Benefit-Cost Analysis*, Volume 8 Issue 2, 2017.  
<https://www.cambridge.org/core/journals/journal-of-benefit-cost-analysis/article/consumers-guide-to-regulatory-impact-analysis-ten-tips-for-being-an-informed-policymaker/FAF984595B822A70495621AEA7EF7DEB/core-reader>

Even the name “co-benefits” indicates a bias in the way the analysis is being done. Any major regulation will generate a whole sea of what once were called “unintended side effects,” and typically they were expected to be negative. By fishing in this sea for beneficial side effects, an agency can deem them “intended,” and take credit for them, while continuing to ignore the bad side effects that it did not intend. The difficulty is that intent is irrelevant in BCA.

In the case of the CPP, EPA claimed substantial co-benefits because of the reduction of non-CO<sub>2</sub> emissions that would occur when coal plants were shut down. But EPA had the authority to regulate those other emissions directly, and we know that direct regulation allows the affected source to find the most cost-effective method of compliance—resulting in compliance costs per ton of emissions that are lower than can be achieved by some indirect route. Thus we expect that the co-benefits of the CPP rule would be accompanied by co-costs that are larger than the obvious alternative of direct regulation. It is possible that there are wrinkles in the analysis, such as the existence of joint costs, that would have made a stronger case. But in defending the CPP rule, EPA chose the disingenuous path of simply counting the benefits and leaving out the corresponding costs. As pointed out in the attached comment:

Any benefit-cost analysis has to draw boundaries in order to be manageable, but the process should be a neutral one. It is not acceptable to selectively include co-benefits without making a commensurate effort to also include co-costs, or negative co-benefits, that might paint a different picture. In the 2015 CPP RIA it appears that EPA went to great efforts to identify co-benefits while ignoring negative benefits...<sup>28</sup>

See the attached comment on the Repeal NPRM for a fuller discussion of co-benefits.

## **A Note on the Revised Trigger for New Source Review**

The NPRM proposes revisions to the agency’s NSR permitting program. As currently configured, NSR could present a substantial barrier to the effective implementation of the ACE rule. If an EGU is made cleaner and more efficient, it is likely to be used more intensively. In particular, it is likely to be dispatched to provide electricity to the grid more often than EGUs that are less efficient and more polluting, and will be less often taken offline for maintenance. But if the improved EGU increases its output, emissions generated onsite could increase, causing the NSR program to classify it effectively as a “new source.” The anticipated costs of getting permitted as a new source are likely to discourage anyone from making the investment to improve the EGU in the first place.

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<sup>28</sup> Brian Mannix, “Public Comment on the EPA’s Proposed Rule Repeal of Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units,” April 27, 2018, p. 7.  
<https://regulatorystudies.columbian.gwu.edu/public-comment-epas-proposed-rule-repeal-carbon-pollution-emission-guidelines-existing-stationary>

This is not a new phenomenon, and NSR reform is long overdue. Note that the author served on the National Academy of Science’s Committee on Changes in New Source Review Programs for Stationary Sources of Air Pollutants<sup>29</sup> and contributed to its interim report.<sup>30</sup> It was clear even then that the NSR program was very good at generating enforcement actions and keeping lawyers—both in and out of government—fully employed. But it did not appear to be accomplishing much in the way of environmental improvements, and in some respects seemed to be counterproductive.

EPA proposed NSR reforms in 2005, and issued a supplemental NPRM in 2007,<sup>31</sup> but did not take final action. The ACE rule revives some of those same alternatives and would give states the option of applying a more reasonable NSR test. The new test asks whether changes in an EGU will produce an increase in *hourly* emissions; if not, then it need not be classified as a new source.

The absence of any NSR reform was a serious defect in the original CPP. In effect, the CPP would have required major improvements at existing EGUs, and at the same time effectively prohibited those same improvements. The agency seemed to be telling coal-fired EGUs that there was nothing they could do—or would be permitted to do—to comply; they should simply go away. The NSR reforms in the ACE proposal are essential to the proposal’s effectiveness; and, indeed, can stand on their own merits even if no GHG rule were ever finalized, because NSR has been an obstacle to cleaning up other types of emissions as well.

## Conclusion

The proposed ACE rule rests on a stronger legal foundation and a sounder economic analysis than the stayed CPP. In particular, the choice of a BSER based on heat-rate efficiency, a measure of CO<sub>2</sub> intensity, is much more consistent with the Clean Air Act than was the CPP’s statewide budget approach. It is likely to remain relevant over time, whereas the CPP, particularly if many states used a mass-based implementation plan, was unlikely to be durable. The decision to use domestic benefits to justify the ACE is correct; the CPP’s alternative of using global benefits to justify domestic harm raises many issues, including questions about EPA’s interpretation of the Clean Air Act and consistency with constitutional nondelegation principles.

The proposed reforms to section 111(d) procedures and to the NSR criteria are both important and stand on their own right. They should be regarded as severable from the GHG standards. NSR reform, in particular, is welcome and long overdue.

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<sup>29</sup> The author resigned from the Committee in 2005 when he was appointed Associate Administrator of EPA.

<sup>30</sup> National Research Council, 2005. *Interim Report of the Committee on Changes in New Source Review Programs for Stationary Sources of Air Pollutants*. Washington, DC: The National Academies Press.

<https://doi.org/10.17226/11208>.

<sup>31</sup> <https://www.regulations.gov/document?D=EPA-HQ-OAR-2005-0163-0196>.

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## The George Washington University Regulatory Studies Center

The George Washington University Regulatory Studies Center improves regulatory policy through research, education, and outreach. As part of its mission, the Center conducts careful and independent analyses to assess rulemaking proposals from the perspective of the public interest. This comment on the Environmental Protection Agency's Notice of Proposed Rulemaking (NPRM) to repeal the Agency's Clean Power Plan does not represent the views of any particular affected party or special interest, but is intended to assist EPA in developing economically efficient options for its regulatory decisions and sound economic analyses to support them.

## Introduction

The EPA has proposed to repeal the greenhouse gas (GHG) emissions guidelines for electric generating units issued on October 23, 2015—better known as the Clean Power Plan (CPP). The Agency has also sought comment separately on what, if anything, ought to replace it. I have filed a comment in that separate ANPRM docket with a number of suggestions for what a replacement

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<sup>1</sup> This comment reflects the views of the author, and does not represent an official position of the GW Regulatory Studies Center or the George Washington University. The Center's policy on research integrity is available at <http://regulatorystudies.columbian.gwu.edu/policy-research-integrity>.

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rule might look like. I also filed an earlier comment in December 2014, offering advice to states on the best method of complying with the then-proposed CPP.

This comment will focus on the Regulatory Impact Analysis (RIA) that supported EPA's 2015 CPP final rule. Quite apart from the Agency's interpretation of its authority under the Clean Air Act, the deficiencies in the 2015 RIA are severe, and by themselves form a compelling basis for repeal of the CPP. EPA has proposed revisions to the RIA that would make a substantial improvement in its accuracy, and that also would undermine the Agency's earlier claim that the benefits of the CPP outweighed the costs. Moreover, in many areas the proposed revisions do not go far enough in correcting the distortions of the original RIA. The comment below, often drawing on earlier comments and commentary, outlines those areas where the agency made major errors in the 2015 RIA, and where it could go further to improve the analysis.

## What is the Purpose of an RIA?

In the case of the CPP, as in other rulemakings, highly consequential regulatory decisions can turn on the results of economic and related analyses published in the form of a Regulatory Impact Analysis—especially on the RIA's assessment of benefits and costs. The Clean Air Act requires that the Agency consider costs as well as benefits when setting standards under §111(d). Benefit-cost balancing is required also by Executive Order 12866, signed by President Clinton and still in effect. And in recent decisions the Supreme Court has indicated that, unless a statute explicitly instructs an agency to ignore costs, taking regulatory action without considering costs could be found arbitrary under the Administrative Procedure Act.

I outline these developments in a forthcoming article,<sup>3</sup> and explain that a benefit-cost analysis (BCA) should not be viewed simply as a technical planning document for the agency's use, but as a necessary demonstration that an agency is acting in the public interest. Courts increasingly are, and ought to be, reviewing the substance of agency benefit-cost analyses to determine if regulatory actions comply with requirements of the authorizing statute and of the Administrative Procedure Act.

[O]ur government is one of checks and balances, not of independent decision-makers... Agency officials are not principals; they wield whatever power they have as agents of the people. They ought to be able to demonstrate that their discretionary official actions serve the public interest, promote the general welfare, or otherwise advance the common good... BCA can help distinguish those actions that appear to be justified from those that clearly are not...

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<sup>3</sup> Brian F. Mannix, "Benefit-Cost Analysis as a Check on Administrative Discretion" forthcoming, *Supreme Court Economic Review*.

[B]enefit-cost analysis, as applied to regulation, should be viewed less as a tool to inform the regulators and more as a test to see whether the regulators are acting as faithful agents of the public's interest.

It is helpful to keep that purpose in mind when reviewing agency RIAs, and to apply a healthy skepticism (rather than deference) towards the more extravagant economic claims that an agency might make in an attempt to justify its actions.

## **Domestic vs. Global Benefits**

In its 2015 RIA, EPA chose to base its regulatory decisions on a calculation of global benefits. While this did not conform to the requirements of E.O. 12866, it was supported by an interagency committee led by the Office of Management and Budget, which earlier had calculated a global Social Cost of Carbon (SCC) for all agencies to use. I have supported the effort during the administration of President Obama to calculate both a global and domestic value for the SCC, but it is important to recognize that they serve two very different purposes.

This reasoning [a global SCC] makes sense if, and only if, the intent is to use the SCC to support the development of a global system of constraining carbon emissions. It does not make sense to use that same global SCC to characterize the benefits of unilateral domestic actions that are unlikely to achieve the stated global benefits...

It is simply not plausible to claim that any unilateral U.S. action could achieve, in practice, the global benefits that are implied by the SCC as it is calculated in the TSD [Technical Support Document]. International competition will cause the domestic costs of unilateral action to be amplified, even while the global benefits evaporate. The place to use the global SCC is not—at least for now—in the RIAs of U.S. regulatory agencies, but in the international fora where climate policies are being negotiated...

The absence of an international consensus is problematic for another reason. We know that the vast majority—perhaps all—of the benefits incorporated into the SCC will not accrue to the United States. It might be possible to justify using the SCC as a guide for domestic regulations if they are being undertaken within an international framework that promises reciprocal action by other countries. Even in that context, it seems likely that the U.S. would be a net loser – bearing more of the costs of effective global action, and less of the benefits. Nonetheless, with proper Congressional authorization, such actions might be justified. If carbon emissions are, as argued in the TSD, a global externality, then it makes sense that there will be winners and losers in a corrective global regulatory regime, and it is

not hard to imagine the U.S. being willing to do its part despite not being a net beneficiary.

In the absence of reciprocal action by other nations, however, the global benefits in the SCC cannot be regarded as a legitimate entry in the benefit-cost ledger. Basing domestic action on the global SCC would put U.S. government agencies in the impossible position of acting contrary to the interests of U.S. citizens, using the excuse that they are acting as representative agents of foreign countries.<sup>4</sup>

Another caution is in order with regard to the domestic SCC that EPA now proposes to use. The existing estimates were calculated, not by looking at the harm to the United States caused by greenhouse gas emissions, but by calculating the U.S.'s "fair share" of the global SCC, based on our relative contribution to global GHG emissions. In other words, it is analogous to the "damages" that might be assessed against the U.S. in some kind of global tort action, rather than to any actual injury experienced by the U.S. from GHGs.

It is reasonable for EPA to calculate the global SCC, and it is reasonable to calculate the U.S. share of the global SCC—as long as each is properly labeled. Both of these numbers could be useful in negotiating an international treaty, or informing Congress as it drafted legislation. Neither of these is appropriate to use in a rulemaking under the Clean Air Act, however. Instead, EPA needs to calculate a domestic SCC based on the estimated injury to the U.S. caused by climate change. This is a difficult calculation, and the resulting uncertainty will cover a wide range of values. Nonetheless, it is the right calculation to use.

Congress does, of course, have the power to authorize foreign aid or—even in the absence of a treaty or any sort of reciprocal action—to order agencies to assist foreign nations in a variety of ways. It must do so explicitly, however. Absent legislative authorization, an agency cannot presume that it has the power to take actions that affirmatively harm the U.S. in order to help foreign interests—which is what it means when an action fails a domestic benefit-cost analysis but passes when global benefits are tossed in. The fact that Congress has a power does not mean that domestic regulatory agencies, absent legislative authorization, may choose to wield it. This is arrogation running riot.

Nor can an agency, by consulting with foreign governments, acquire regulatory authority that has not been granted to it by Congress. This is true even if the consultation produces a treaty that is then ratified by the Senate. A treaty may obligate the U.S. to take specific actions, including

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<sup>4</sup> Brian Mannix and Susan Dudley, "The Social Cost of Carbon," *The Federalist Society Engage* Vol 15, Issue 1, July 2014. <https://fedsoc.org/commentary/publications/the-social-cost-of-carbon>. See also: Public Interest Comment on *The Interagency Technical Support Document: Technical Update of the Social Cost of Carbon for Regulatory Impact Analysis under Executive Order No. 12866*, February 26, 2014. Available at: [https://regulatorystudies.columbian.gwu.edu/sites/g/files/zaxdzs1866/f/downloads/OMB\\_2013-0007\\_SCC.pdf](https://regulatorystudies.columbian.gwu.edu/sites/g/files/zaxdzs1866/f/downloads/OMB_2013-0007_SCC.pdf).

legislation. But it cannot eliminate the Constitutional requirement for bicameral enactment of legislation, nor can it nullify the Constitutional guarantees of due process for U.S. citizens. Until it is instructed by Congress to do otherwise, EPA needs to justify its actions under CAA §311(d) by using domestic costs and domestic benefits.

## **Public vs. Private Discount Rate**

EPA proposes to go back to using the standard 3 percent and 7 percent discount rates for evaluating future benefits and costs, which is a useful step. However, it should also consider the possibility that these discount rates are inappropriate for evaluating rules that impose capital costs on the private sector. Many households do not have unencumbered access to capital markets, and they have effective discount rates that are several times higher than 7 percent. By using an artificially low discount rate EPA is severely undercounting the costs that households—especially poorer households—will bear as a result of the CPP.<sup>5</sup>

## **Public vs. Private Benefits**

One result of the use of artificially low discount rates is the phenomenon of so-called “private benefits.” These are benefits that accrue to individuals when a regulation forces them to do something that they would prefer not to do. In other words, private benefits are inconsistent with the axiomatic foundations of benefit-cost analysis. It is not legitimate to “correct” the preferences of consumers and attribute regulatory benefits to them that they do not actually experience as such.

Any truthful analysis of benefits and costs will tell us what consumers think, not what the regulator thinks consumers should think. We do not allow the government to change the results of elections because of some theory of irrational and biased voters; neither should we allow it to distort consumers’ revealed preferences in an economic analysis.<sup>6</sup>

Generally, if an economic model generates private benefits by compelling consumers and businesses to act contrary to their own perceived best interest, it should be taken as an indication that the model is wrong—not that the regulated public is wrong. Using a more accurate, empirically based, discount rate would go a long way to correcting the errors in the CPP RIA.

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<sup>5</sup> Sofie E. Miller, “One Discount Rate Fits All? The Regressive Effects of DOE’s Energy Efficiency Rule,” *Policy Perspectives*, Vol. 22. <http://journal.policy-perspectives.org/article/view/15110>.

<sup>6</sup> Brian F. Mannix and Susan E. Dudley, “The Limits of Irrationality as a Rationale for Regulation.” *Journal of Policy Analysis and Management* 34:705–12, 2015.

## Co-Benefits

The CPP RIA also makes claims about the “co-benefits” that will be realized from the CPP rule. These are implausible for a variety of reasons, but the point I want to emphasize here is that they arise from a biased, and therefore illegitimate, analytical practice. Even the term, co-benefits, is a clue that the analysis sought to identify good side-effects from regulation, and ignored any bad side-effects. The RIA makes no mention of any co-costs, or negative co-benefits.

Yet we do not have to look far to find some negative co-benefits that could—and in two cases did—make the CPP appear undesirable. President Obama took a trip to Alaska to promote the CPP, and was greeted enthusiastically. But the enthusiasm for the rule in Alaska was not because of the benefits it produced, but rather it was the fact that the President exempted Alaska from having to comply. He also exempted Hawaii. Why?

The main concern of the Alaskans I spoke with, however, was not the glaciers; rather, it was the fate of the Susitna River. Recently the Alaskan Energy Authority has revived a proposal originally made by the U.S. Department of the Interior: the Susitna Hydroelectric Project. If built, it will be the most expensive hydroelectric dam ever built in North America, and it will supply power to Alaska’s central railbelt, where most of the state’s population lives.

There are serious environmental concerns about the project. Like many Alaska rivers, “The Su” flows two ways: the water flows downstream to the ocean; but vast quantities of nutrients from the ocean flow upstream, in the form of salmon, into the interior. The salmon spawn there, and die, and feed the eagles and the bears and ultimately the entire ecosystem—which otherwise, having been scraped clean by glaciers, might be rather barren. Many Alaskan environmentalists view the salmon as the very roots of the trees of the forests, and adamantly oppose damming the Su.

The energy options in Hawaii look a little different. That state’s high cliffs (pali) are ideally situated to catch the ocean breezes, and could, at great expense, supply most of Hawaii’s electricity demand. But many residents recoil at the sight of the high ridges bristling with wind turbines, and at the death toll the turbines take on the native birds, including Hawaii’s state bird, the beloved nene. If the president had capped fossil-fueled power there, many more Hawaiian ridges would likely become covered with wind turbines.

Of course, there are also difficult trade-offs to be made in the contiguous 48 states. In addition to higher utility bills and lower reliability, the Clean Power Plan may force states to choose energy options that are more environmentally damaging than the existing fossil-fueled infrastructure. But with numerous power

producers, interconnected grids, a maze of state plans, and linked carbon markets, the chain of cause and effect will be more variegated and difficult to trace. In a benefit-cost analysis, as in politics, this complex terrain makes it easier to engage in a game of smoke and mirrors. Regulatory agencies can make grand claims about the benefits that will flow from their good intentions, while finding other parties or other factors to blame for any “unintended” adverse consequences. When bad things happen, the president will have plausible deniability.

In contrast, Alaska and Hawaii both have “island” power systems, where the consequences of capping carbon will be all too easy for everyone to see. The president did not want to be greeted in Alaska with “Don’t Dam the Su” demonstrators; neither, should he decide to retire in Hawaii, would he want the carcasses of dead nene laid at his door.<sup>7</sup>

Any benefit-cost analysis has to draw boundaries in order to be manageable, but the process should be a neutral one. It is not acceptable to selectively include co-benefits without making a commensurate effort to also include co-costs, or negative co-benefits, that might paint a different picture.<sup>8</sup> In the 2015 CPP RIA it appears that EPA went to great efforts to identify co-benefits while ignoring negative benefits—even though it was forced to avoid them in two states favored by the president.

## Conclusion

EPA’s 2015 RIA is so flawed that the CPP should be repealed as unsupported by a reasoned analysis of benefits and costs. EPA should continue to do analysis of climate change, including the SCC. But if it acts to limit GHG emissions under the Clean Air Act, it should do so in the interests of the United States, until legislative action gives it another mandate.

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<sup>7</sup> Brian Mannix, “Alaska is Exempt!” <https://fedsoc.org/commentary/blog-posts/alaska-is-exempt>.

<sup>8</sup> Dudley, S., Belzer, R., Blomquist, G., Brennan, T., Carrigan, C., Cordes, J... Zerbe, R. (2017). Consumer’s Guide to Regulatory Impact Analysis: Ten Tips for Being an Informed Policymaker. *Journal of Benefit-Cost Analysis*, 8(2), 187-204. doi:10.1017/bca.2017.11. available at: <https://www.cambridge.org/core/journals/journal-of-benefit-cost-analysis/article/consumers-guide-to-regulatory-impact-analysis-ten-tips-for-being-an-informed-policymaker/FAF984595B822A70495621AEA7EF7DEB>