



June 10, 2020

**Attn:** Appliance and Equipment Standards Program, U.S. Department of Energy

**Re:** Energy Conservation Program: Energy Conservation Standards for Water-Source Heat Pumps

**Docket No.:** EERE-2019-BT-STD-0031

The Institute for Policy Integrity (“Policy Integrity”) at New York University School of Law<sup>1</sup> respectfully submits comments on the Department of Energy (“DOE”)’s recent request for information on the energy conservation standards for water source heat pumps.<sup>2</sup> Policy Integrity is a non-partisan think tank dedicated to improving the quality of government decisionmaking through advocacy and scholarship in the fields of administrative law, economics, and public policy.

In the request for information, DOE asked for input on conducting its national impact analysis, including on market failures, and its emissions analysis. DOE should, as it has in the past, continue to monetize the full climate benefits of greenhouse gas emissions reductions, using the best estimates, which were derived by the Interagency Working Group (“IWG”), and should factor these benefits into its choice of the maximum efficiency level that is economically justified, consistent with its statutory requirement to assess the national need to conserve energy.

### ***DOE Should Monetize the Full Benefits of Emission Reductions***

DOE asks for input on the kinds of analysis it undertakes to select which efficiency level is the maximum level that is economically justified,<sup>3</sup> including the national impact analysis, emissions analysis, and monetization of emissions reduction benefits.<sup>4</sup> The U.S. Court of Appeals for the Seventh Circuit has ruled that DOE’s statutory mandate to assess “the need for national energy...conservation” requires the agency to consider environmental effects. In particular, the Seventh Circuit ruled that in order for DOE “[t]o determine whether an energy conservation measure is appropriate under a cost-benefit analysis, the expected reduction in *environmental costs needs to be taken into account.*”<sup>5</sup> In other words, correcting

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<sup>1</sup> This document does not purport to present New York University School of Law’s view, if any.

<sup>2</sup> Dep’t of Energy, Energy Conservation Program: Energy Conservation Program: Energy Conservation Standards for Water-Source Heat Pumps, 85 Fed. Reg. 27,929 (May 12, 2020).

<sup>3</sup> 85 Fed. Reg. 27,929. (“This request for information (RFI) solicits information from the public to help DOE determine whether amended standards for WSHPs, a category of covered commercial equipment, would result in significant additional energy savings and whether such standards would be technologically feasible and economically justified.”).

<sup>4</sup> *Id.* at 27,932 (Tbl I-1).

<sup>5</sup> *Zero Zone v. Dep’t of Energy*, 832 F.3d 654, 677 (7th Cir. 2016) (emphasis added).

the market failure of environmental externalities must be part of DOE's consideration in analyzing the national impact and selecting the maximum economically justified efficiency level.

To that end, the Department must fully account for the benefits from greenhouse gas emissions reductions that come from the use of more energy efficient appliances. DOE seems to agree, having listed "monetization of emissions reduction benefits" as a key analysis that must be conducted during development of a proposed energy conservation standard.<sup>6</sup> To fulfill this requirement, the Department should monetize greenhouse gas emissions reduction benefits using the IWG's social costs of greenhouse gases estimates, as it has in past energy conservation program actions.<sup>7</sup>

***DOE should continue to use the global estimate of the social cost of greenhouse gases***

Specifically, DOE should use global estimates of the social costs of greenhouse gases for the proposal's national impact analysis and as a primary consideration in selecting the standards. In August 2016, the U.S. Court of Appeals for the Seventh Circuit determined that a global perspective on climate damages was the reasonable approach for DOE to take in setting energy conservation standards.<sup>8</sup>

Opponents of climate regulation have long challenged the global number in court and other forums, and often attempted to use the Office of Management and Budget's *Circular A-4* guidance on regulatory impact analysis as support.<sup>9</sup> Specifically, opponents have seized on *Circular A-4's* instructions to "focus" on effects to "citizens and residents of the United States," while any significant effects occurring "beyond the borders of the United States . . . should be reported separately."<sup>10</sup> Importantly, despite this language and such challenges, the U.S. Court of Appeals for the Seventh Circuit had no trouble concluding that a global focus for the social cost of greenhouse gases was reasonable.<sup>11</sup>

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<sup>6</sup> 85 Fed. Reg. at 27,932 Tbl I-1 (detailing EPCA requirements and corresponding DOE analysis).

<sup>7</sup> *E.g.*, Energy Conservation Program: Energy Conservation Standards for Air Compressors, 85 Fed. Reg. 1504, 1508 (Jan. 10, 2020). *See also, e.g.*, Energy Conservation Program: Energy Conservation Standards for Walk-In Cooler and Freezer Refrigeration Systems, 82 Fed. Reg. 31,808 (July 10, 2017); Energy Conservation Program: Energy Conservation Standards for Ceiling Fans, 82 Fed. Reg. 6826 (Jan. 19, 2017); Energy Conservation Program: Energy Conservation Standards for Residential Central Air Conditioners and Heat Pumps, 82 Fed. Reg. 1786 (Jan. 6, 2017); Energy Conservation Program: Energy Conservation Standards for Commercial Packaged Boilers, 85 Fed. Reg. 1592, 1649 (Jan. 10, 2020); Energy Conservation Program: Energy Conservation Standards for Portable Air Conditioners, 85 Fed. Reg. 1378, 1381 (Jan. 10, 2020); Energy Conservation Program: Energy Conservation Standards for Uninterruptible Power Supplies, 85 Fed. Reg. 1447, 1477 (Jan. 10, 2020).

<sup>8</sup> *Zero Zone*, 832 F.3d at 674.

<sup>9</sup> Ted Gayer & W. Kip Viscusi, *Determining the Proper Scope of Climate Change Policy Benefits in U.S. Regulatory Analyses: Domestic versus Global Approaches*, 10 REV. ENVTL. ECON. & POL'Y 245 (2016) (citing Circular A-4 to argue against a global perspective on the social cost of carbon); *see also, e.g.*, Petitioners Brief on Procedural and Record-Based Issues at 70, in *West Virginia v. EPA*, case 15-1363, D.C. Cir. (filed Feb. 19, 2016) (challenging EPA's use of the global social cost of carbon).

<sup>10</sup> Circular A-4 at 15. Note that Circular A-4 slightly conflates "accrue to citizens" with "borders of the United States": U.S. citizens have financial and other interests tied to effects beyond the borders of the United States, as discussed further below.

<sup>11</sup> *Zero Zone*, 832 F.3d at 679 ("AHRI and Zero Zone [the industry petitioners] next contend that DOE [the Department of Energy] arbitrarily considered the global benefits to the environment but considered only the national costs. They

*Circular A-4's* reference to effects “beyond the borders” confirms that it is appropriate for agencies to consider the global effects of U.S. greenhouse gas emissions. While *Circular A-4* may suggest that most typical decisions should focus on U.S. effects, the *Circular* cautions agencies that special cases call for different emphases, noting that “[d]ifferent regulations may call for different emphases in the analysis, depending on the nature and complexity of the regulatory issues.”<sup>12</sup> In fact, *Circular A-4* elsewhere assumes that agencies’ analyses will not always be conducted from purely the perspective of the United States, as one of its instructions applies only “as long as the analysis is conducted from the United States perspective,”<sup>13</sup> suggesting that in some circumstances it is appropriate for the analysis to be global. Because climate change represents a global tragedy of the commons, regulations that affect greenhouse gas emissions are precisely the kind of regulation that, according to the principles of *Circular A-4*, requires a “different emphasis”—namely, a global perspective on climate damages.<sup>14</sup>

DOE should not attempt to calculate and base its proposal’s justification on a domestic-only value of the social cost of carbon. Not only is it inconsistent with *Circular A-4* and best economic practices to fail to estimate the global damages of U.S. greenhouse gas emissions in regulatory analyses, but existing methods for estimating a “domestic-only” value are unreliable, incomplete, and therefore inconsistent with *Circular A-4*. Indeed, in 2015, the Office of Management and Budget concluded, along with several other agencies, that “good methodologies for estimating domestic damages do not currently exist.”<sup>15</sup> Moreover, a domestic-only estimate misapplies models that were not built for the purpose of calculating regional damages, ignores recent literature on significant U.S. climate damages, and fails to reflect international spillovers to the United States, U.S. benefits from foreign reciprocal actions, and the extraterritorial interests of U.S. citizens including financial interests and altruism.

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emphasize that the [statute] concerns only ‘national energy and water conservation.’ In the New Standards Rule, DOE did not let this submission go unanswered. It explained that climate change ‘involves a global externality,’ meaning that carbon released in the United States affects the climate of the entire world. According to DOE, national energy conservation has global effects, and, therefore, those global effects are an appropriate consideration when looking at a national policy. Further, AHRI and Zero Zone point to no global costs that should have been considered alongside these benefits. Therefore, DOE acted reasonably when it compared global benefits to national costs.”).

<sup>12</sup> *Circular A-4* at 3. (“[Y]ou cannot conduct a good regulatory analysis according to a formula. Conducting high-quality analysis requires competent professional judgment. Different regulations may call for different emphases in the analysis, depending on the nature and complexity of the regulatory issues and the sensitivity of the benefit and cost estimates to the key assumptions.”).

<sup>13</sup> *Id.* at 38 (counting international transfers as costs and benefits “as long as the analysis is conducted from the United States perspective”).

<sup>14</sup> For more details on the justifications for a global perspective on climate damages in regulatory analysis, see, e.g., Peter Howard & Jason Schwartz, *Think Global: International Reciprocity as Justification for a Global Social Cost of Carbon*, 42 COLUMBIA J. ENVTL. L. 203 (2017).

<sup>15</sup> In November 2013, OMB requested public comments on the social cost of carbon. In 2015, OMB along with the rest of the Interagency Working Group issued a formal response to those comments. Interagency Working Group on the Social Cost of Carbon, *Response to Comments: Social Cost of Carbon for Regulatory Impact Analysis under Executive Order 12,866* at 36 (July 2015) [hereinafter OMB 2015 Response to Comments].

***DOE has used the IWG's range of global social cost of greenhouse gases values in the very recent past***

In energy conservation program rules for air compressors,<sup>16</sup> commercial packaged boilers,<sup>17</sup> portable air conditioners,<sup>18</sup> and uninterruptible power supplies,<sup>19</sup> all released on January 10, 2020, DOE used the IWG social cost of carbon estimates.<sup>20</sup> DOE used the range of social cost of carbon estimates of global damages, including the estimated calculated at the 2.5-percent, 3-percent, and 5-percent discount rates, as well as the 95<sup>th</sup> percentile estimate.<sup>21</sup> In fact, in announcing the final standards, DOE explained: “The CO<sub>2</sub> reduction is a benefit that accrues globally. DOE maintains that consideration of global benefits is appropriate because of the global nature of the climate change problem.”<sup>22</sup> The Department further stated that “preference is given to consideration of the global benefits of reducing CO<sub>2</sub> emissions,”<sup>23</sup> over domestic-only benefits of emissions reductions. Previously, in a rulemaking for walk-in cooler and freezer systems released in July 2017, DOE similarly made use of the IWG ranges of social cost of carbon estimates,<sup>24</sup> and used the same justification for considering global climate damages.<sup>25</sup>

In the January 2020 final rules, DOE places a clear emphasis on global climate damages,<sup>26</sup> and justifies doing so by saying:

First, [climate change] involves a global externality: Emissions of most greenhouse gases contribute to damages around the world even when they are emitted in the United States. Consequently, to address the global nature of the problem, the SC-CO<sub>2</sub> must incorporate the full (global) damages caused by GHG emissions. Second, climate change presents a problem that the United States alone cannot solve. Even if the United States were to reduce its greenhouse gas emissions to zero, that step would be far from enough to avoid substantial climate change. Other countries would also need to take action to reduce emissions if significant changes in the global climate are to be avoided. Emphasizing the need for a global solution to a global problem, the United States has been actively involved in seeking international agreements to reduce emissions and in encouraging other nations, including emerging major economies, to take significant steps to reduce emissions. When

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<sup>16</sup> 85 Fed. Reg. 1504.

<sup>17</sup> 85 Fed. Reg. at 1592.

<sup>18</sup> 85 Fed. Reg. 1378.

<sup>19</sup> 85 Fed. Reg. 1447.

<sup>20</sup> 85 Fed. Reg. at 1506; *see also* 85 Fed. Reg. at 1649, 85 Fed. Reg. at 1381, 85 Fed. Reg. at 1477.

<sup>21</sup> *See, e.g.*, 85 Fed. Reg. at 1507, tbl I.3 – Summary of Economic Benefits and Costs of Adopted Energy Conservation Standards for Air Compressors.

<sup>22</sup> *Id.* at 1508.

<sup>23</sup> *Id.* at 1564.

<sup>24</sup> 82 Fed. Reg. at 31,808.

<sup>25</sup> *Id.* at 31,881.

<sup>26</sup> 85 Fed. Reg. at 1504 (Though DOE included a “speculative” domestic-only estimate in attached Technical Support Document, the same analysis says that “preference is given to consideration of the global benefits of reducing CO<sub>2</sub> emissions” (Technical Support Document at 14-3), the agency’s clear focus throughout the rule’s preamble was on a global estimate); *see also* 85 Fed. Reg. at 1652, 85 Fed. Reg. at 1425, 85 Fed. Reg. at 1480.

these considerations are taken as a whole, the interagency group concluded that a global measure of the benefits from reducing U.S. emissions is preferable. DOE's approach is not in contradiction of the requirement to weigh the need for national energy conservation, as one of the main reasons for national energy conservation is to contribute to efforts to mitigate the effects of global climate change.<sup>27</sup>

In this proceeding, DOE should continue to rely on this logic that is based in a clear understanding of the relationship between greenhouse gas emissions and global climate change.

In the January 2020 air compressors final rule, DOE also included an explanation of why the Department used the range of social costs of greenhouse gases discount rates. On the question of appropriate discount rates, DOE stated, "The central value, 3 percent, is consistent with estimates provided in the economics literature and OMB's Circular A-4 guidance for the consumption rate of interest,"<sup>28</sup> and that "for purposes of capturing the uncertainties involved in regulatory impact analysis, the IWG emphasizes the importance of including all four sets of SC-CO<sub>2</sub> values,"<sup>29</sup> which are reflected in DOE's analysis for this 2020 rule.<sup>30</sup> Using the range of discount rates and focusing on global damages is consistent with best practices and is consistent with Circular A-4, and the agency should continue to do so in this rulemaking as well.

### ***DOE should rely only on the best available science and economics***

As agencies follow *Circular A-4's* standards for using the best available data and methodologies, they will necessarily choose similar data, methodologies, and estimates as the IWG, since the IWG's work continues to represent the best available estimates.<sup>31</sup> The social costs of greenhouse gases metric, developed by the IWG, is the best available tool for measuring the economic damages from greenhouse gas emissions because it is based on the best available science and economics and is therefore consistent with *Circular A-4*. It has been used in analysis for over 100 federal regulations that affect greenhouse gas emissions, as well as by a number of states in electricity and climate policy.<sup>32</sup> This metric takes into account the interconnected, global nature of our climate-vulnerable economy, as well as the devastating effects that climate change will have on younger and future generations.

The Department should not rely on any "interim" estimates that do not include a range of discount rates or global climate impacts. Two agencies have developed new "interim"

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<sup>27</sup> 85 Fed. Reg. at 1566; *see also* 85 Fed. Reg. at 1480, 85 Fed. Reg. at 1425.

<sup>28</sup> 85 Fed. Reg. at 1566.

<sup>29</sup> *Id.* at 1564; *see also* 85 Fed. Reg. at 1423, 85 Fed. Reg. at 1650

<sup>30</sup> 85 Fed. Reg. at 1564.

<sup>31</sup> Richard L. Revesz et al., *Best Cost Estimate of Greenhouse Gases*, 357 Science 6352 (2017) (explaining that, even after Trump's Executive Order, the social cost of greenhouse gas estimate of around \$50 per ton of carbon dioxide is still the best estimate).

<sup>32</sup> Institute for Policy Integrity, *Social Cost of Greenhouse Gases* (2017), *available at*: [https://policyintegrity.org/files/publications/Social\\_Cost\\_of\\_Greenhouse\\_Gases\\_Factsheet.pdf](https://policyintegrity.org/files/publications/Social_Cost_of_Greenhouse_Gases_Factsheet.pdf).

values of the social costs of greenhouse gases following Executive Order 13,783.<sup>33</sup> Relying on faulty economic theory, these “interim” estimates drop the social cost of carbon from \$50 per ton in year 2020 down to as little as \$1 per ton, and drop the social cost of methane from \$1420 per ton in year 2020 down to \$58. These “interim” estimates are inconsistent with accepted science and economics. The IWG’s methodology and estimates have been repeatedly endorsed by reviewers as transparent, consensus-based, and firmly grounded in the academic literature. By contrast, the “interim” estimates ignore the interconnected, global nature of our climate-vulnerable economy, and obscures the devastating effects that climate change will have on younger and future generations. DOE should not use the “interim” social cost of greenhouse gas estimates because of their methodological flaws.<sup>34</sup>

Respectfully submitted,

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<sup>33</sup> Oil and Natural Gas Sector: Emission Standards for New, Reconstructed, and Modified Sources: Stay of Certain Requirements, 82 Fed. Reg. 51,788 (Nov. 8, 2017); Waste Prevention, Production Subject to Royalties, and Resource Conservation; Delay and Suspension of Certain Requirements, 82 Fed. Reg. 46,458 (Oct. 5, 2017).

<sup>34</sup> For more details, *see* Environmental Defense Fund, Institute for Policy Integrity at New York University School of Law, Natural Resources Defense Council, Sierra Club, and Union of Concerned Scientists, Comments to Bureau of Land Management on Proposed Rule, Regulatory Impact Analysis, and Environmental Assessment on the Delay and Suspension of Certain Requirements for Waste Prevention and Resource Conservation, (Nov. 6, 2017), *available at* <https://policyintegrity.org/projects/update/comments-on-delay-of-blm-waste-prevention-rule>.