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## How Clean Is Clean?: An Analysis on the Difference between the Affordable Clean Energy Rule and the Clean Power Plan and Why States Should Adhere to Stricter Emissions Standards

Katherine McCormick  
*Georgetown Climate Center*

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## ARTICLE

# How Clean Is Clean?: An Analysis on the Difference between the Affordable Clean Energy Rule and the Clean Power Plan and Why States Should Adhere to Stricter Emissions Standards

KATHERINE MCCORMICK\*

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\* Institute Associate at Georgetown Climate Center, Georgetown University Law Center. The author would like to give a special thanks to Professor Vicki Arroyo and Joseph Kruger for their incredible assistance in providing insightful comments and suggestions regarding the content and direction of the article.

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## I. INTRODUCTION

The Clean Power Plan (“CPP”) was an Obama-era policy enacted by the Environmental Protection Agency (“EPA”) in August of 2015.<sup>1</sup> An attempt at curbing carbon emissions from power plants, the EPA estimated “that the rule would have reduced greenhouse-gas [“GHG”] emissions from the power sector 32 percent [32%] below 2005 levels by 2030.”<sup>2</sup> “Promulgated under authority of the Clean Air Act (“CAA”), the Clean Power Plan require[d] states to establish standards cutting carbon pollution from existing power plants, the largest source of GHG emissions in the United States” at the time.<sup>3</sup>

Much of the CPP, its emissions targets, and its overall goals, were built on successful state programs that had been achieving emissions reductions for years.<sup>4</sup> When the CPP was finalized, some states continued adhering to their own programs (so long as the program was compatible with CPP mandates), while others began to implement policies that would bring their GHG discharges to CPP mandated thresholds.<sup>5</sup> Unfortunately, CPP emissions requirements have never taken legal effect. Even as states were beginning to implement CPP programs, shortly after its inception, over two dozen other states, several fossil fuel companies, and interest groups involved in the coal industry filed suit against the

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1. David Biello, How Far Does Obama’s Clean Power Plan Go in Slowing Climate Change?, SCI. AM. (Aug. 6, 2015), <https://www.scientificamerican.com/article/how-far-does-obama-s-clean-power-plan-go-in-slowing-climate-change/> [https://perma.cc/5956-9NQR].

2. *What is the Clean Power Plan, and How Can Trump Repeal it*, N.Y. TIMES (Oct. 10, 2017), <https://www.nytimes.com/2017/10/10/climate/epa-clean-power-plan.html> [https://perma.cc/D7WN-JKJB] [hereinafter *What is the Clean Power Plan*].

3. Gabriel Pacyniak, *Making the Most of Cooperative Federalism: What the Clean Power Plan Has Already Achieved*, 29 GEO. ENVTL. L. REV. 301, 302 (2017).

4. See Mary D. Nichols, et. al., Comment Letter on Emissions Guidelines for Greenhouse Gas Emissions from Existing Electric Utility Generating Units; Revisions to Emission Guidelines Implementing Regulations; Revisions to New Source Review Program, 22 (Oct. 31, 2018), [https://www.georgetownclimate.org/files/2018-10-31\\_State\\_Environment\\_Leaders\\_Comment\\_Letter\\_CPP\\_Replacement.pdf](https://www.georgetownclimate.org/files/2018-10-31_State_Environment_Leaders_Comment_Letter_CPP_Replacement.pdf) [https://perma.cc/74YB-LPSS] [hereinafter Comment Letter].

5. Naveena Sadasivam, *States Begin to Comply with Clean Power Plan, Even While Planning to Sue*, INSIDE CLIMATE NEWS (Oct. 22, 2015), <https://insideclimatenews.org/news/22102015/states-challenge-clean-power-plan-also-comply-obama-administration-coal> [https://perma.cc/T4EA-TZUB].

EPA.<sup>6</sup> In September 2019, the case was dismissed for mootness, due to the release of the Trump's Administration's proposed rule.<sup>7</sup>

President Trump and his EPA released this proposed replacement, the Affordable Clean Energy Rule ("ACE"), in August 2018.<sup>8</sup> It was finalized in June 2019.<sup>9</sup> "The ACE rule. . . establish[es] emission guidelines for states to develop plans to address. . . (GHG) emissions from existing coal-fired power plants, without setting individual state GHG emissions limits."<sup>10</sup> Under the ACE, states have wide latitude to institute their own performance goals, and the expected emissions reductions will be extremely low—in fact, an increase in emissions may even occur in some states.<sup>11</sup>

The question then becomes whether leadership states interested in furthering the ultimate goals of the CPP—for example, stricter emissions standards and an overall decrease in GHG discharges—can continue to adhere to stricter emissions targets, often in line with the Obama-era regulations, under the Trump Administration's ACE Program. This question is vitally important for several reasons. First, under the assumption that a future EPA and Presidential Administration will support more aggressive use of CAA authorities, stricter emissions reductions targets like those mandated by the CPP will be required. In fact, due to the dire impacts of climate change, many current 2020 candidates have advocated for even more stringent GHG

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6. See Pacyniak, *supra* note 3, at 304 (noting that states and industry have lined up to support and challenge the EPA's action).

7. Ellen M. Gilmer, *D.C. Circuit Scraps Clean Power Plan Litigation*, BLOOMBERG ENV'T. (Sept. 17, 2019), <https://news.bloombergenvironment.com/environment-and-energy/d-c-circuit-scraps-clean-power-plan-litigation> [<https://perma.cc/G3RY-MFP6>].

8. News Release, EPA Proposes Affordable Clean Energy (ACE) Rule, EPA (Aug. 21, 2018), <https://www.epa.gov/newsreleases/epa-proposes-affordable-clean-energy-ace-rule> [<https://perma.cc/BMM6-YBN8>].

9. *Issue Brief: Final ACE Rule Raises State Concerns*, GEO. CLIMATE CTR. (July 2, 2019), <https://www.georgetownclimate.org/files/article/GCC%20Summary%20of%20ACE%20Rule%20July%202%202019.pdf> [<https://perma.cc/39US-CPDD>] [hereinafter *Issue Brief*].

10. Kristen Hildreth, *EPA Unveils Affordable Clean Energy Rule to Replace Clean Power Plan*, NAT'L CONF. OF ST. LEGISLATURES (Aug. 22, 2018), <http://www.ncsl.org/blog/2018/08/22/epa-unveils-affordable-clean-energy-rule-to-replace-clean-power-plan.aspx> [<https://perma.cc/L8Z7-YQFA>].

11. *Issue Brief*, *supra* note 9, at 1.

requirements.<sup>12</sup> Climate change and its devastating effects will continue to impact the United States.<sup>13</sup> It is appropriate to assume that future administrations will attempt to mitigate these effects by reducing carbon emissions. In allowing states to continue following more stringent emissions targets, like those set forth by the CPP, these leadership states will have an advantage in meeting the stricter goals likely to be set in the future.

Relatedly, before the CPP was released, the energy and electricity markets, both at home and abroad, had begun to move away from coal and other polluting energy sources and towards cleaner, more environmentally friendly energy.<sup>14</sup> Globally, in 2018 alone, renewable energy investments were expected to reach upwards of \$228.3 billion as popularity in the solar and wind renewable industry increase and costs decline significantly.<sup>15</sup> That same year, in the United States, a fifth of the power generation could be credited to renewable energy resources.<sup>16</sup> In comparison, partly due to this increase in renewables and natural gas fired generation, the coal industry, which significantly contributes to emission rates, has declined substantially since 2008 from 1,172 million tons of total production a year to 755 million tons of

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12. Renee Cho, *How the Top Ten Democratic Candidates Plan to Deal with Climate Change*, ST. OF THE PLANET (Aug. 29, 2019), <https://blogs.ei.columbia.edu/2019/08/29/2020-candidates-climate-change/> [https://perma.cc/99B2-QGD].

13. *See generally* U.S. GLOBAL CHANGE RESEARCH PROGRAM, CLIMATE SCIENCE SPECIAL REPORT, EXECUTIVE SUMMARY (2017), <http://www.ncsl.org/blog/2018/08/22/epa-unveils-affordable-clean-energy-rule-to-replace-clean-power-plan.aspx> [https://perma.cc/UG54-VYWP] (discussing the impacts of climate change on the United States and the globe).

14. *See generally* Adam Vaughan, *Renewable Energy Will be World's Main Power Source by 2040, Says BP*, GUARDIAN (Feb. 14, 2019), <https://www.theguardian.com/business/2019/feb/14/renewable-energy-world-power-source-bp> [https://perma.cc/AU4K-E5ZC].

15. Mike Scott, *Clean Energy Market Continues Strong Growth as Costs Continue to Fall*, FORBES (Oct. 5, 2018), <https://www.forbes.com/sites/mikescott/2018/10/05/clean-energy-market-continues-strong-growth-as-costs-continue-to-fall/#71a728b53fc7> [https://perma.cc/H7CT-WVF9].

16. Joshua S. Hill, *US Renewables Nearly Tied with Nuclear at 20%, Coal Falls to 27%*, CLEAN TECHNICA (June 28, 2018), <https://cleantechnica.com/2018/06/28/us-renewables-over-20-as-coal-falls-to-27-eia/> [https://perma.cc/SRN9-QYLC].

production in 2018.<sup>17</sup> For the first time since 1978, in 2020, coal consumption by the power sector is projected to be below 500 million short tons.<sup>18</sup> Since 2016 alone, consumption has dropped 27%.<sup>19</sup> Essentially, the energy market is moving away from coal and towards more renewable, environmentally friendly resources, and, the electric grid is adapting to accommodate them. Whether or not states can continue to adhere to stricter emissions targets like those mandated by the CPP, rather than the lax standards of the ACE, is an essential question because it will allow for states to remain economically competitive in the energy industry. As these trends continue, it will be important for states to have stricter emissions targets. These goals will encourage increased investment and production of renewable energy into electric grids nationwide.

Lastly, there is also a fair chance that the finalized ACE rule may not withstand a legal challenge. States have already sued the Trump Administration over the rule.<sup>20</sup> According to *Massachusetts v. EPA*,<sup>21</sup> under the CAA, the EPA must regulate air pollution that endangers the public health.<sup>22</sup> In that case, the Bush Administration declined to regulate carbon emissions from vehicles.<sup>23</sup> The Supreme Court rejected the reasoning behind this

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17. Johnathan Hettinger, *Spring Creek Mine Re-Opens, Challenges Remain*, INDIANZ (Oct. 28, 2019), <https://www.indianz.com/News/2019/10/28/spring-creek-mine-reopens-challenges-rem.asp>.

18. Matt Egan, *Trump's Push to Save Coal is Failing. Coal Demand to Plunge to 42-Year Low*, CNN BUS. (Oct. 10, 2019), <https://www.cnn.com/2019/10/10/business/coal-power-trump/index.html> [<https://perma.cc/ZR32-H9SR>].

19. *Id.*

20. Lisa Friedman, *States Sue Trump Administration Over Rollback of Obama-Era Climate Rule*, N.Y. TIMES (Aug. 13, 2019), <https://www.nytimes.com/2019/08/13/climate/states-lawsuit-clean-power-ace.html> [<https://perma.cc/4ALP-DBS3>].

21. 549 U.S. 497, 534–35 (2007).

22. WORLD RESOURCES INST., THE BOTTOM LINE ON REGULATING GREENHOUSE GASES UNDER THE CLEAN AIR ACT (2009), [https://wriorg.s3.amazonaws.com/s3fs-public/pdf/bottom\\_line\\_ghg\\_clean\\_air.pdf?\\_ga=2.65502892.389680249.1548438725-333995315.1548438725](https://wriorg.s3.amazonaws.com/s3fs-public/pdf/bottom_line_ghg_clean_air.pdf?_ga=2.65502892.389680249.1548438725-333995315.1548438725) [<https://perma.cc/KGG8-QFU7>].

23. Nathan Richardson, *EPA's ACE Rule May Not Hold Up in Court*, RESOURCES FOR THE FUTURE (Jan. 22, 2019), <https://www.resourcesmag.org/common-resources/epas-ace-rule-may-not-hold-up-in-court/> [<https://perma.cc/5EKV-KRJG>].

refusal, consequentially making regulatory inaction “legally vulnerable.”<sup>24</sup> As has been previously stated, under the ACE, it is possible that carbon emissions will increase, even compared to business as usual projections.<sup>25</sup> It logically follows that if regulatory inaction is legally vulnerable, so too is regulatory action that worsens the very problem the rule claims to address.<sup>26</sup> Thus, if the ACE is declared invalid under the CAA, states would benefit from setting stricter standards, like those required by the CPP, rather than adhere to the ACE’s loose mandates.

There are several other reasons why it is essential that states should be allowed to adhere to their own stricter emissions targets over the ACE requirements. This Article will discuss not only these reasons, but it will also address the question of whether states can actually implement more stringent guidelines than those mandated by the rule now that the ACE is finalized. Part I of this Article will discuss the impacts of climate change and how GHGs play a part in our warming climate. Part II of this Article will analyze the inner-workings of the CPP—what it is, how it was developed, and its intended outcomes in relation to emissions reduction and climate change. Part III will discuss the Trump Administration’s ACE Rule. It will analyze not only the history behind how the rule was developed, but also how it intends to work. Part IV explains the differences between the two rules, while Part V will discuss the relevance of this topic by analyzing the importance of continued adherence to stricter targets and examining the reasons why states should want to adhere to these targets. Lastly, Part VI will analyze the legal issues that may arise from states attempting to implement stricter regulations and mandates more in line with CPP guidelines. Largely, it will look to the ACE as a whole and determine whether there are limiting factors that would allow for the federal rule to supersede any regulation passed by states that mandate more rigorous emissions obligations. Thus, the overall objective of this Article is to compare the Obama and Trump-era rules, highlight the importance of

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24. *Id.*

25. Umair Irfan, *Trump’s EPA Just Replaced Obama’s Signature Climate Policy with a Much Weaker Rule*, VOX (June 19, 2019), <https://www.vox.com/2019/6/19/18684054/climate-change-clean-power-plan-repeal-affordable-emissions> [<https://perma.cc/JUM3-MKH4>].

26. Richardson, *supra* note 23.

continuing to follow strict emissions guidelines, and analyze whether more stringent targets in line with the CPP can still be implemented and achieved.

## II. THE IMPACTS OF CLIMATE CHANGE

A majority of scientists now believe that GHGs lead to extensive changes in climate, thereby largely affecting humanity's health and welfare.<sup>27</sup> A substantial contribution of these harmful GHGs come from power plants driven by fossil fuels—as of 2015 (when the CPP was finalized), a study found that 31% of the United States' total emissions were released from power plants.<sup>28</sup> GHGs released into the atmosphere then absorb outgoing heat reflected back from the Earth's surface, increasing the overall temperature of Earth's climate.<sup>29</sup> Because of this changing, warming climate, three identifiable categories affecting life on earth are influenced negatively: the natural environment, the health of the population, and both domestic and international economics.<sup>30</sup>

In terms of ecology, because of climate change, sea levels are rising, oceans are acidifying, and extreme weather events are becoming more and more common.<sup>31</sup> Bodies of water, both freshwater and saltwater, will be affected severely. Saltwater temperatures are expected to rise, which will melt arctic sea ice on a more rapid scale.<sup>32</sup> As a result, sea level is expected to rise, which

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27. John Cook et al., *Consensus on Consensus: A Synthesis of Consensus Estimates on Human-Caused Global Warming*, 11 ENVTL. RES. LETTERS 1, 1 (2016), <https://iopscience.iop.org/article/10.1088/1748-9326/11/4/048002/pdf> [https://perma.cc/8L66-K7CG].

28. EPA, CLEAN POWER PLAN: OVERVIEW OF THE CLEAN POWER PLAN CUTTING CARBON POLLUTION FROM POWER PLANTS 2 (2015), <https://archive.epa.gov/epa/sites/production/files/2015-08/documents/fs-cpp-overview.pdf> [https://perma.cc/245V-ZBV3] [hereinafter OVERVIEW].

29. *Global Climate Change: The Causes of Climate Change*, NASA, <https://climate.nasa.gov/causes/> [https://perma.cc/8AZZ-A5DE] (last updated Oct. 30, 2019).

30. See generally *Climate Impacts on Society*, EPA, [https://19january2017snapshot.epa.gov/climate-impacts/climate-impacts-society\\_.html](https://19january2017snapshot.epa.gov/climate-impacts/climate-impacts-society_.html) [https://perma.cc/QQ2V-RATD].

31. COMM. ON ECOLOGICAL IMPACTS OF CLIMATE CHANGE, ECOLOGICAL IMPACTS OF CLIMATE CHANGE 6–8 (2008).

32. *Fourth National Climate Assessment Volume II: Impacts, Risks, and Adaptation in the United States—Summary Findings*, U.S. GLOBAL CHANGE RES. PROGRAM, <https://nca2018.globalchange.gov/> [https://perma.cc/NJ5V-63WS] [hereinafter *Summary Findings*].

will cause coastal erosion, higher storm surges, and ultimately more severe weather and precipitation events both along the coastline and at sea.<sup>33</sup> And, “[e]ven if significant emissions reductions occur, many of the effects from sea level rise over this century—and particularly through mid-century—are already locked in due to historical emissions, and many communities are already dealing with the consequences.”<sup>34</sup>

Freshwater temperatures are expected to rise as well, which will also have a large effect on precipitation patterns.<sup>35</sup> These changes will result in “intensifying droughts, increasing heavy downpours, reducing snowpack, and causing declines in surface water quality, with varying impacts across regions.”<sup>36</sup> For example, due to drought on the West Coast, wildfires have continued to ravage California and other states in the West.<sup>37</sup> On the other side of the country, hurricanes are occurring more often and are more destructive.<sup>38</sup> As the world is generally becoming warmer, forests are facing not only the projected impacts of climate change, but also “impacts from land development, suppression of natural periodic forest fires, and air pollution.”<sup>39</sup> Entire species are forced to leave historic habitats as temperatures climb, retreating farther and farther north, while invasive species spread through regions previously not inhabitable to their genus.<sup>40</sup> Some organisms, including those that cannot move fast enough or those whose territorial ranges are actually shrinking, are left with no place to go and become endangered or even extinct.<sup>41</sup>

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33. *Id.*

34. *Id.*

35. *Id.*

36. *Id.*

37. Alejandra Borunda, *See How a Warmer World Primed California for Large Fires*, NAT’L GEOGRAPHIC (Nov. 15, 2018), <https://www.nationalgeographic.com/environment/2018/11/climate-change-california-wildfire/#close> [<https://perma.cc/GP9C-5294>].

38. See Henry Fountain, *The Hurricanes, and Climate-Change Questions, Keep Coming. Yes, They’re Linked*, N.Y. TIMES (Oct. 10, 2018), <https://www.nytimes.com/2018/10/10/climate/hurricane-michael-climate-change.html> [<https://perma.cc/VP2D-J79V>]; see also *Summary Findings*, *supra* note 32.

39. *Climate Impacts on Forests*, EPA, [https://19january2017snapshot.epa.gov/climate-impacts/climate-impacts-forests\\_.html](https://19january2017snapshot.epa.gov/climate-impacts/climate-impacts-forests_.html) [<https://perma.cc/Z7GU-4ZV7>] (last updated Dec. 22, 2016).

40. *Summary Findings*, *supra* note 32.

41. See generally *id.*

Climate change is not just affecting ecosystems and organisms, but humans as well. Simply put, “[t]he future is expected to hold more deadly heat waves, the fast spread of certain infectious diseases and catastrophic food shortages.”<sup>42</sup> As temperatures and precipitation patterns change, air quality risks from natural disasters like wildfires are increasing, as is ground-level ozone pollution.<sup>43</sup> According to a new report from the United Nations’ Intergovernmental Panel on Climate Change (“IPCC”), as the world gets warmer, the number of mosquitoes and ticks will increase, raising the potential for vector-borne diseases.<sup>44</sup> Exposure to water- and food-borne diseases is growing as well.<sup>45</sup> As oceans rise and floods become more common, so too does the likelihood for contaminated water sources, which can lead to deadly bacterial infections.<sup>46</sup> These alarming findings do not even touch on the direct effects of air pollution—one of the most visible consequences of burning fossil fuels—which often have the most devastating impacts. “Poor air quality leads to reduced lung function, increased risk of asthma complications, heart attacks, heart failure, and death.”<sup>47</sup> Already, “8 million people die early due to air pollution every year.”<sup>48</sup> As the amount of pollution in the atmosphere increases, so too will the number of deaths.

Lastly, due in part to effects on the environment and impacts on human health, climate change will negatively affect both domestic and international economies as well. One study projected that if emissions continue to increase unabated, the annual economic impact of more severe hurricanes, residential property damages due to sea-level rise, and growing water and energy costs could reach \$271 billion (in 2006 dollars) in 2025 and \$1.87 trillion

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42. Jacqueline Howard, *Scientists Highlight Deadly Health Risks of Climate Change*, CNN (Feb. 16, 2017), <https://www.cnn.com/2017/02/16/health/climate-change-deaths-health-al-gore-bn/> [https://perma.cc/DQT4-5ECC].

43. *Summary Findings*, *supra* note 32.

44. Arman Azad, *How Climate Change Will Affect Your Health*, CNN (Oct. 12, 2018), <https://www.cnn.com/2018/10/12/health/climate-change-health-effects/index.html> [https://perma.cc/CS9C-9FXE].

45. *Summary Findings*, *supra* note 32.

46. *Id.*

47. *Climate Changes Health: Respiratory Health*, AM. PUB. HEALTH ASS’N, <https://www.apha.org/topics-and-issues/climate-change/air-quality> [https://perma.cc/XD4U-2WHP].

48. Azad, *supra* note 44.

(in 2006 dollars) in 2100, or approximately 1.4 and 1.8% of United States' gross domestic product ("GDP"), respectively.<sup>49</sup> Economies and industries that depend on temperature stability and specific natural resources, like agriculture, tourism, and fisheries, will become more vulnerable as the climate destabilizes and natural resources disappear.<sup>50</sup> Regarding agriculture, "more extreme weather events, from high temperatures to flooding, can prevent crops from growing and reduce yields," meaning less income for farmers and less product to import and export.<sup>51</sup> The risks to public health<sup>52</sup> will also result in climbing insurance rates.<sup>53</sup> "With continued growth in emissions at historic rates, annual losses in some economic sectors are projected to reach hundreds of billions of dollars by the end of the century—more than the current gross domestic product [GDP] of many U.S. states."<sup>54</sup>

According to a recent study published by the IPCC, in every aspect, the risks associated with climate change worsen if the temperature of the Earth increases by 1.5 degrees Celsius.<sup>55</sup> Impacts on climate have the potential to become even worse depending on the amount the Earth's temperature rises. On the other hand, impacts can be reduced if climate change is limited to 1.5 degrees or less. For example, the number of people exposed to extreme flooding could be reduced by as much as 34 million should

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49. FRANK ACKERMAN & ELIZABETH A. STANTON, NAT. RES. DEF. COUNCIL, *THE COST OF CLIMATE CHANGE: WHAT WE'LL PAY IF GLOBAL WARMING CONTINUES UNCHECKED* 2, tbl. 1 (2008), <https://www.nrdc.org/sites/default/files/cost.pdf> [<https://perma.cc/SR8M-K7NV>].

50. *Summary Findings*, *supra* note 32.

51. Howard, *supra* note 42.

52. *See Summary Findings*, *supra* note 32.

53. *See Azad*, *supra* note 44; *see also* NAT'L. ASS'N. OF INS. COMMISSIONERS, *THE POTENTIAL IMPACT OF CLIMATE CHANGE ON INSURANCE REGULATION* 10 (2008), [https://www.naic.org/documents/cipr\\_potential\\_impact\\_climate\\_change.pdf](https://www.naic.org/documents/cipr_potential_impact_climate_change.pdf) [<https://perma.cc/5P7R-SGAM>].

54. *Summary Findings*, *supra* note 32.

55. Ove Hoegh-Guldberg et al., *Impacts of 1.5C of Global Warming on Natural and Human Systems*, in *GLOBAL WARMING OF 1.5C. AN IPCC SPECIAL REPORT ON THE IMPACTS OF GLOBAL WARMING OF 1.5C ABOVE PRE-INDUSTRIAL LEVELS AND RELATED GLOBAL GREENHOUSE GAS EMISSION PATHWAYS, IN THE CONTEXT OF STRENGTHENING THE GLOBAL RESPONSE TO THE THREAT OF CLIMATE CHANGE, SUSTAINABLE DEVELOPMENT, AND EFFORTS TO ERADICATE POVERTY* 175, 214 (Jose Antonio Marengo, et al. 2018), [https://www.ipcc.ch/site/assets/uploads/sites/2/2019/05/SR15\\_Chapter3\\_Low\\_Res.pdf](https://www.ipcc.ch/site/assets/uploads/sites/2/2019/05/SR15_Chapter3_Low_Res.pdf) [<https://perma.cc/V48W-BSZP>].

temperatures increase by 1.5 degrees instead of 2 degrees.<sup>56</sup> At a 2 degrees increase, 13% of biomes will change, but at a 1.5 degrees increase, the rate of change will be 4%.<sup>57</sup> Ice-free summers in the Arctic could be as commonplace as once a decade should the temperature rise 2 degrees Celsius, whereas an increase of 1.5 degrees will result in the same phenomenon only once a century.<sup>58</sup> In Earth's oceans, approximately 10% of coral reefs will remain with a 1.5 degree increase—at 2 degrees, they will entirely disappear.<sup>59</sup>

Because of the devastating consequences of climate change, it is imperative that Presidential Administrations implement programs that limit the release of GHGs. The following sections will analyze two of the most recent attempts to do so: the Obama-era Clean Power Plan, and its successor, the Trump Administration's Affordable Clean Energy Program.

### III. THE CLEAN POWER PLAN

#### A. History and Purpose

The Obama Administration released the CPP in August 2015 after an extensive notice and comment period as an attempt at fulfilling the duties prescribed to the EPA by the CAA.<sup>60</sup> In 2007, after the Bush Administration refused to regulate GHG emissions coming from motor vehicles, the Supreme Court found in *Massachusetts v. EPA* that the agency's inaction was "arbitrary, capricious. . . or otherwise not in accordance with the law[.]" primarily because it had "offered no reasoned explanation for its refusal to decide whether greenhouse gases [GHGs] cause or contribute to climate change."<sup>61</sup> Under the CAA, the Court held that regulatory inaction requires a scientific finding that GHGs do not contribute to changes in climate, or, failing that, a reasonable explanation as to why the agency will not exercise its discretion to

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56. *Id.* at 178.

57. *Id.* at 216.

58. *Id.* at 178.

59. *Id.* at 179.

60. Herman K. Trabish, *Comments are in on the EPA's Clean Power Plan*, UTILITY DIVE (Dec. 2, 2014), <https://www.utilitydive.com/news/comments-are-in-on-the-epas-clean-power-plan/338783/> [<https://perma.cc/7QP5-FDRH>].

61. *Massachusetts v. EPA*, 549 U.S. 497, 534 (2007).

regulate—both of which Bush’s EPA did not provide.<sup>62</sup> Should this scientific study conclude that the emissions of a particular pollutant endanger the public health or welfare, also known as an endangerment finding, the EPA would be required to regulate the pollutant in question.<sup>63</sup>

Following the Court’s holding, the Agency commenced a rigorous and thorough investigation into the effects of GHGs on the climate, as well as on the population. In 2009, the EPA concluded that carbon dioxide was indeed a contaminant that caused harm to the public health and welfare.<sup>64</sup> The agency then issued an endangerment finding, which categorized carbon dioxide and GHGs as pollutants under the CAA.<sup>65</sup> As a result, this “finding required the EPA to take action under the Clean Air Act to curb emissions of carbon dioxide, methane, and other heat-trapping air pollutants from vehicles. . .”<sup>66</sup> Another obligation triggered by the finding was the “setting of performance standards for categories of stationary sources that emit harmful air pollution—including power plants and different types of industrial facilities—under Section 111 of the Clean Air Act.”<sup>67</sup>

The purpose of the CPP was to fulfill this responsibility to set performance standards, with the overall goal to reduce “carbon pollution from power plants. . . while maintaining energy reliability and affordability.”<sup>68</sup> The task to create a plan that would regulate carbon dioxide from fossil-fueled power plants was not undertaken lightly. Beginning in July of 2013,<sup>69</sup> the EPA

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62. *Id.* at 533.

63. 42 U.S.C. § 7521(a)(1) (2019).

64. Eli Kintisch, *EPA: Carbon Dioxide is a Danger to Human Health*, SCI. (Apr. 17, 2009), <https://www.sciencemag.org/news/2009/04/epa-carbon-dioxide-danger-human-health> [<https://perma.cc/PN7S-SBH3>].

65. Mark Hand, *Environmental Law Experts Find Major Legal Flaws in Trump’s Replacement for Clean Power Plan*, THINKPROGRESS (Aug. 23, 2018), <https://thinkprogress.org/environmental-law-experts-find-major-legal-flaws-in-trumps-replacement-for-clean-power-plan-85a881557852/> [<https://perma.cc/6XYR-JYB2>].

66. *Id.*

67. Pacyniak, *supra* note 3, at 308.

68. OVERVIEW, *supra* note 28, at 1.

69. A Presidential Memorandum was published by the Obama Administration mandating that the EPA issue standards for carbon dioxide emissions from new and existing power plants. Tomás Carbonell, *EPA’s Proposed Clean Power Plan: Protecting Climate and Public Health by Reducing Carbon Pollution from the U.S. Power Sector*, 33 YALE L. & POL’Y REV. 403, 407 (2015).

participated in over 300 meetings with stakeholders before the Agency ultimately published its proposal, and 300 additional meetings thereafter prior to publication of the final rule in August 2015.<sup>70</sup> A total of four public hearings were held throughout the process, netting more than 2,700 attendees and 1,300 oral comments.<sup>71</sup> Additionally, it is important to note that several states had already implemented successful emissions reduction regulations and programs.<sup>72</sup> Policymakers from these states and programs offered commentary and suggestions, further influencing the development and creation of the rule.<sup>73</sup> All told, the “EPA received more than 4.2 million comments on the proposed carbon pollution emission guidelines from a range of stakeholders that included. . . state environmental and energy officials, local government officials, tribal officials, public utility commissioners, system operators, utilities, public interest advocates, and members of the public.”<sup>74</sup>

### B. How the Clean Power Plan Intended to Work

This comprehensive and historic public process resulted in the final CPP. It was the first-ever federal limitation on carbon and GHG pollution from power plants, which at the time, made up “the nation’s largest source of the pollution driving dangerous climate change.”<sup>75</sup> The finalized rule aimed to reduce emissions from the electricity sector by 32% below 2005 levels by 2030.<sup>76</sup>

The CPP attempted to combat GHG emissions on multiple fronts. From a national perspective, the CPP established federal emissions rates for all existing fossil fuel and gas-fired generating

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70. Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units, 80 Fed. Reg. 64,662, 64,704 (Oct. 23, 2015) (to be codified at 40 C.F.R. pt. 60) [hereinafter CPP].

71. *Id.*

72. *Id.*

73. *Id.*

74. *Id.* at 64,707.

75. David Doniger, *Understanding the EPA’s Clean Power Plan*, NAT. RESOURCE DEF. COUNCIL (Aug. 11, 2015), <https://www.nrdc.org/experts/david-doniger/understanding-epas-clean-power-plan> [<https://perma.cc/XPL8-JG64>].

76. CPP, *supra* note 70, at 64,924.

units.<sup>77</sup> These national performance rates were set by the EPA using the “best system of emission reduction” (“BSER”), which took into account cost, the efficiency of power generation concerning the amount of emissions released, and other factors.<sup>78</sup> From there, states would “then develop and implement plans that ensure[d] that the power plants in their state. . . achieve[d] the interim CO<sub>2</sub> emissions performance rates [established by the EPA] over the period of 2022 to 2029 and the final CO<sub>2</sub> emission performance rates, rate-based goals or mass-based goals by 2030.”<sup>79</sup> Fundamentally, the states could either adopt the federal BSER plan set by the EPA, or implement a state measures plan. These state measures plans contained a mixture of programs, and were required to “include a backstop of federally enforceable standards on affected power plants that fully meet the emission guidelines and that would be triggered if the state measures fail to result in the affected plants achieving the required emissions reductions schedule.”<sup>80</sup>

Many of the options available to states were built from the successful emissions reduction programs and regulations that some states had implemented before the development of the CPP.<sup>81</sup> Among these already proven successful measures were programs involving emission trading, enhanced renewable portfolio standards, and mandates on entities other than fossil-fuel power plants.<sup>82</sup> The EPA would then review these plans and determine whether the reductions predicted were adequate to hit the targets required by the CPP. If not, the Agency would enforce the federal plan within each power plant in each non-compliant state.<sup>83</sup>

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77. Starla Yeh, *Understanding the EPA’s Clean Power Plan*, NAT. RESOURCE DEF. COUNCIL 2 (Aug. 15, 2015), [https://www.nrdc.org/sites/default/files/cpp-national-compliance-IB\\_0.pdf](https://www.nrdc.org/sites/default/files/cpp-national-compliance-IB_0.pdf) [<https://perma.cc/J3X6-SQPQ>].

78. *Id.*

79. OVERVIEW, *supra* note 28, at 4.

80. *Id.* at 6.

81. Comment Letter, *supra* note 4, at 5.

82. Mary Nichols, et al., Comment Letter on Proposed Rule to Repeal of Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units 8 (Apr. 17, 2018), <https://www.georgetownclimate.org/files/report/State-Environmental-and-Energy-Regulators-CPP-Repeal-Comment-Letter-and-Appendix-041718.pdf> [<https://perma.cc/QFA8-SZ3N>] [hereinafter Repeal Comment Letter].

83. *Id.* at 4.

Essentially, to simplify the intricate workings of the CPP, the proposed rule had three core elements:

First, the rule presents EPA's proposed determination as to the BSER for reducing CO<sub>2</sub> emissions from existing power plants, taking into account the statutory factors of costs and energy requirements. Second, the Clean Power Plan provides each state with unique, state-wide emission goals for its fossil fuel-fired power plants, reflecting the application of the BSER in each state through 2030. Third, the Clean Power Plan sets forth procedural requirements for state plans, including filing deadlines, minimum elements of a satisfactory plan, compliance flexibilities, and provisions to help ensure states adhere to their plans.<sup>84</sup>

### C. How States Are Continuing to Adhere to Stricter Emissions Standards

Despite the courts issuing a stay on the rule, states across the country either continued to comply with the programs or regulations that were in place before the CPP was finalized, or implemented various statutes in adherence with the stricter requirements of the CPP in anticipation of it taking effect. Since then, although the Trump Administration's rule rolls back many of the CPP requirements, dozens of states are continuing to work towards lowering their emissions.<sup>85</sup> In fact, twenty-two states, as well as the District of Columbia, have set various GHG reductions targets and implemented policies that facilitate the achievement of these targets.<sup>86</sup> Various regional programs aimed at cutting emissions across a variety of sectors have remained successful throughout the country, and are even growing. For example, nine states currently participate in the Regional Greenhouse Gas Initiative ("RGGI"), which implements a cap-and-trade program in the power sector;<sup>87</sup> the Transportation Climate Initiative recently announced that a coalition of twelve states, and the District of

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84. Carbonell, *supra* note 69, at 409–10.

85. See *FACT SHEET: Overview of the Clean Power Plan*, EPA, <https://archive.epa.gov/epa/cleanpowerplan/fact-sheet-overview-clean-power-plan.html> [<https://perma.cc/NKA8-7YT3>] (discussing an overview of the CPP).

86. *State Climate Policy Maps*, CTR. FOR CLIMATE & ENERGY SOLUTIONS, <https://www.c2es.org/content/state-climate-policy/> [<https://perma.cc/59ED-AGMA>].

87. *Id.*

Columbia, are in the process of designing a policy to cap and reduce carbon emissions from the transportation sector;<sup>88</sup> and, the Pacific Coast Collaborative, comprised of three states and a Canadian Province, as well as various cities, has committed to 80% emissions reduction across all sectors by 2050.<sup>89</sup>

In all, “[a]s of 2016, at least 13 states had power sector carbon emissions that were at or below the final mass-based goals set out in the Clean Power Plan . . . .”<sup>90</sup> Further still, “all but 8 states [are] making progress toward their Clean Power Plan goals, with total power sector emissions down relative to 2012 levels.”<sup>91</sup> Essentially, although several states sued to block the CPP from taking effect, many of these same states, as well as other energy leaders, are still on track to meet stricter targets that align with CPP goals.<sup>92</sup>

#### IV. THE AFFORDABLE CLEAN ENERGY RULE

##### A. History and Purpose

Before President Trump had even taken office, as has been previously stated, several states and corporations within the coal industry sued the EPA shortly after the agency published the final CPP rule in 2015. The plaintiffs argued that the Plan should be held unconstitutional primarily because the federal government does not have the authority to regulate a state’s carbon emissions

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88. *TCI’s Regional Policy Design Process 2019*, TRANSP. & CLIMATE INITIATIVE OF THE NORTHEAST AND MID-ATLANTIC STATES, <https://www.transportationandclimate.org/main-menu/tcis-regional-policy-design-process-2019> [https://perma.cc/4C87-CUCK].

89. *About*, PACIFIC COAST COLLABORATIVE, <http://pacificcoastcollaborative.org/about/> [https://perma.cc/YR6H-YTM2].

90. *Tracking Power Sector Changes in the Years Since the Clean Power Plan*, BIPARTISAN POLY CTR. (Aug. 6, 2018), <https://bipartisanpolicy.org/report/tracking-power-sector-changes-in-the-years-since-the-clean-power-plan/> [https://perma.cc/QHV5-TLSA].

91. *Id.*

92. Ben Adler, *States are Already Complying with the Clean Power Plan Rule they are Challenging in Courts*, GRIST (Sept. 19, 2016), <https://grist.org/briefly/states-are-already-complying-with-the-clean-power-plan-rules-they-are-challenging-in-court/> [https://perma.cc/JE4Y-24W9]. These states knew that “[they could not] count on winning the lawsuit,” so many implemented legislation that would have met CPP targets. Sadasivam, *supra* note 5.

under the CAA.<sup>93</sup> As of September 2019, *West Virginia v. EPA*, filed in 2015, was dismissed as moot, due to the finalization of the ACE.<sup>94</sup>

Outside of the judicial issues raised by the *West Virginia* case, the CPP also faced political problems. Throughout the election cycle of 2016, Donald Trump as a presidential candidate lambasted the CPP often, promising that he would replace it upon taking office.<sup>95</sup> During political rallies, especially those held in places like West Virginia, he promised audiences that he would “end the war on coal,” referring to the CPP and, as he categorized, “these ridiculous rules and regulations that make it impossible for you to compete.”<sup>96</sup> He promised supporters that in repealing the CPP, he would bring the coal industry back, despite the fact that even without CPP regulations, over the past thirty-five years the number of coal mining jobs had declined from 250,000 to 50,000.<sup>97</sup> Once elected, President Trump unfortunately followed through on his promises. On March 28, 2017, he released the Executive Order, “Promoting Independence and Economic Growth,”<sup>98</sup> which required that the EPA review the CPP, request public comments concerning the CPP, propose a new rule, and finally, take additional comments in relation to the new rule.<sup>99</sup> The Executive Order “also reverse[d] a Presidential Memorandum on Climate

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93. *West Virginia v. EPA*, 136 S. Ct. 1000, 1000 (2016); see also Bobby Magill, *Lawsuit Aims to Overturn Obama’s Clean Power Plan*, SCI. AM. (Apr. 12, 2016), <https://grist.org/briefly/states-are-already-complying-with-the-clean-power-plan-rules-they-are-challenging-in-court/> [https://perma.cc/JM6L-AFGE].

94. Gilmer, *supra* note 7.

95. Emily Holden, *What Could Replace the Clean Power Plan*, SCI. AM. (Jan. 23, 2017), <https://www.scientificamerican.com/article/what-could-replace-the-clean-power-plan/> [https://perma.cc/2TJU-ZHNS].

96. Michelle Nijhuis, *Why Trump Can’t Make Coal Great Again*, NAT’L GEOGRAPHIC (Mar. 28, 2017), <https://www.nationalgeographic.com/news/2016/11/why-trump-can-t-make-coal-great-again/> [https://perma.cc/D4TA-CNUZ].

97. *Id.*

98. Rachel Cleetus, *President Trump’s All-Out Attack on Climate Policy*, UNION OF CONCERNED SCIENTISTS (Mar. 28, 2017, 11:28 AM), [https://blog.ucsusa.org/rachel-cleetus/president-trumps-all-out-attack-on-climate-policy?\\_ga=1.228425309.1774087224.1488856299/](https://blog.ucsusa.org/rachel-cleetus/president-trumps-all-out-attack-on-climate-policy?_ga=1.228425309.1774087224.1488856299/) [https://perma.cc/9E7S-P2GM].

99. Tom DiChristopher, *Trump is Killing Obama’s Clean Power Plan. The Hard Part Comes Next*, CNBC (Mar. 28, 2017), <https://www.cnbc.com/2017/03/28/trump-is-killing-obamas-clean-power-plan-the-hard-part-comes-next.html> [https://perma.cc/LX5R-8WUP].

Change and National Security, and call[ed] for the Secretary of the Interior to review rules on oil and gas operations and take steps to amend or withdraw an order to modernize the Federal coal leasing program.”<sup>100</sup>

The EPA began complying with this Executive Order through several regulatory rollbacks. As of December 2018, the Trump Administration has rolled back seventy-eight environmental rules, many dealing with climate change.<sup>101</sup> In June of 2017, the EPA announced a one year delay on the deadline set for states to comply with the National Ambient Air Quality Standards for the ozone—also known as the “Smog Rule.”<sup>102</sup> Under Trump’s presidency, thousands of acres of federal land have been reopened for mining—land that had previously been protected under Obama’s moratorium on new coal mining leases—which was withdrawn in March 2017.<sup>103</sup> In April 2018, the EPA’s then-Administrator Scott Pruitt declared the Agency’s intention to eliminate GHG emission reduction goals for motor vehicles.<sup>104</sup> By the end of the Summer of 2019, the Administration proposed new rollbacks, which not only relax fuel economy standards for most motor vehicles, but also revoke California’s waiver under the CAA that allows it to set stricter emissions standards than those imposed by the federal government.<sup>105</sup> Twenty-three states have already sued the Administration over the attempted revocation.<sup>106</sup>

To rollback the CPP itself, in adherence to his promises on the campaign trail, President Trump’s EPA released a proposed rule

100. Cleetus, *supra* note 98.

101. Nadja Popovich et al., *78 Environmental Rules on the Way Out Under Trump*, N.Y. TIMES (Dec. 28, 2018), <https://www.nytimes.com/interactive/2017/10/05/climate/trump-environment-rules-reversed.html?mtrref=www.google.com> [https://perma.cc/RQC9-4UYK].

102. *Regulatory Rollbacks*, ENVTL. INTEGRITY PROJECT, <http://www.environmentalintegrity.org/trump-watch-epa/regulatory-rollbacks/> [https://perma.cc/4ZPM-SB4T].

103. *Id.*

104. *Id.*

105. Maxine Joselow, *Rollback of California Car Rules Will Cause Emissions to Spike*, SCI. AM. (Oct. 21, 2019), <https://www.scientificamerican.com/article/rollback-of-california-car-rules-will-cause-emissions-to-spike/> [https://perma.cc/W4K5-CB3].

106. Colin Dwyer, *23 States Sue Trump Administration in Escalating Battle Over Emissions Standards*, NPR (Sept. 20, 2019), <https://www.npr.org/2019/09/20/762763138/23-states-sue-trump-administration-in-escalating-battle-over-emissions-standards> [https://perma.cc/T9ZN-GUXB].

in August 2018 that would replace the CPP: The Affordable Clean Energy Rule.<sup>107</sup> Initially heading the development of the rule at the EPA was first, former-Administrator Scott Pruitt, a known climate change skeptic,<sup>108</sup> who served as Oklahoma's Attorney General wherein he worked closely with the fossil fuel industry to combat federal environmental mandates.<sup>109</sup> Pruitt was succeeded by Andrew Wheeler, who came to the Agency as a former coal lobbyist, fighting against emissions reduction regulations for coal companies like Murray Energy and Energy Fuel Resources.<sup>110</sup>

The ACE rule was finalized in June 2019.<sup>111</sup> Outside of the regulations mandated – which will be discussed in the following section – it is important to note the difference in public outreach that facilitated the construction of the ACE. In terms of public participation, during the creation of the ACE, only “one public hearing” was promised,<sup>112</sup> and only one was held.<sup>113</sup> Additionally, the comment period for the ACE was limited to only 90 days total in comparison to the CPP's 165.<sup>114</sup>

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107. Emission Guidelines for Greenhouse Gas Emissions from Existing Electric Utility Generating Units; Revisions to Emission Guideline Implementing Regulations; Revisions to New Source Review Program, 83 Fed. Reg. 44,746 (proposed Aug. 31, 2018) (as codified at 40 C.F.R. pts. 51, 52, 60) [hereinafter ACE Proposal].

108. Jared Keller, *Oil and Gas Ties Run Deep in the Trump Administration*, PACIFIC STANDARD (Jan. 5, 2018), <https://psmag.com/environment/oil-and-gas-ties-run-deep-in-trump-administration> [<https://perma.cc/6GET-7UX4>].

109. Brady Dennis & Steven Mufson, *Thousands of Emails Detail EPA Head's Close Ties to Fossil Fuel Industry*, WASH. POST (Feb. 22, 2017), <https://www.washingtonpost.com/news/energy-environment/wp/2017/02/22/oklahoma-attorney-generals-office-releases-7500-pages-of-emails-between-scott-pruitt-and-fossil-fuel-industry/> [<https://perma.cc/D9W5-PK43>].

110. See Brian Schwartz, *Scott Pruitt's Replacement at the EPA has a Long, Lucrative History of Working for Coal and Chemical Companies*, CNBC (July 6, 2018), <https://www.cnbc.com/2018/07/06/scott-pruitts-epa-successor-has-long-history-with-coal-companies.html> [<https://perma.cc/J7DB-QFP7>].

111. Irfan, *supra* note 25.

112. Comment Letter, *supra* note 4, at 22.

113. Repeal of the Clean Power Plan; Emission Guidelines for Greenhouse Gas Emissions From Existing Electric Utility Generating Units; Revisions to Emission Guidelines Implementing Regulations, 84 Fed. Reg. 32,520, 32,533 (July 8, 2019) (as codified at 40 C.F.R. pt. 60) [hereinafter ACE Final].

114. Compare ACE Final, *supra* note 113, at 32,533, with CPP, *supra* note 70, at 64,672.

## B. How the Affordable Clean Energy Rule Intends to Work

The ACE attempts to control emissions through three distinct programs. First, the “ACE defines the ‘best system of emission reduction’ for existing power plants as onsite, heat-rate efficiency improvements.”<sup>115</sup> Essentially, instead of creating emissions targets that consider the shutting down of coal-fired power plants and the increased use of renewable technology into account, the ACE establishes GHG emissions reductions targets for power plants that reflect only those reductions “that can be achieved through making the existing plants more efficient.”<sup>116</sup>

Second, in terms of establishing the standards of performance themselves under the BSER, the ACE provides states with a list of candidate technologies that can be used and incorporated into each individualized state plan.<sup>117</sup> The final rule indicates that best candidate technology is intended to be a unit-by-unit determination that “consider[s] remaining useful life and other factors.”<sup>118</sup> This could potentially allow states to set standards that may lead to an *increase* in emissions for specific units.<sup>119</sup> Studying emissions rates unit-by-unit may also create a significant resource burden for states as well.<sup>120</sup> These lower targets and candidate technology qualifications under the ACE, in addition to considerations regarding remaining plant-life, give states relatively broad discretion to both establishing and applying emissions standards.<sup>121</sup>

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115. Waste360 Staff, *EPA Proposes Affordable Clean Energy Rule*, WASTE360 (Aug. 22, 2018), <https://www.waste360.com/legislation-regulation/epa-proposes-affordable-clean-energy-rule> [<https://perma.cc/G23Z-J3TV>] [hereinafter Waste360].

116. Jessica Wentz, Sabin Center for Climate Change Law, *6 Important Points About the ‘Affordable Clean Energy Rule’*, EARTH INST. AT COLUM. UNIV.: ST. OF THE PLANET (Aug. 22, 2018), <https://blogs.ei.columbia.edu/2018/08/22/affordable-clean-energy-rule/> [<https://perma.cc/5RBX-4NZ8>].

117. Waste360, *supra* note 115.

118. *Issue Brief*, *supra* note 9, at 3.

119. *Id.*

120. *See id.* at 3; *Summary of the Proposed Affordable Clean Energy Rule (Clean Power Plan Replacement)*, MJ BRADLEY & ASSOC. 7 (Sept. 7, 2018), [https://www.mjbradley.com/sites/default/files/MJBA\\_Summary\\_ACE\\_Proposal\\_\(CPP\\_Repeal\).pdf](https://www.mjbradley.com/sites/default/files/MJBA_Summary_ACE_Proposal_(CPP_Repeal).pdf) [<https://perma.cc/G296-T3BY>] [hereinafter SUMMARY].

121. 8 ALAN C. WEINSTEIN, *FEDERAL LAND USE LAW & LIT.*, § 8:37 (2018 ed.).

Lastly, the EPA claims that the ACE adheres to the CAA Section 111(d), which requires that the federal government give states adequate time and flexibility in crafting and implementing state plans.<sup>122</sup> Under the ACE, states will have three years to develop emissions plans after its finalization; the EPA will then have one and a half years from the submission to decide on “completeness” and whether or not the state plan is adequate under the rule—and, if the EPA decides otherwise, it has two more years to issue a federal plan for that specific state.<sup>123</sup> In all, it could take as long as six and a half years after the finalization of the ACE rule for a state to have any emissions reduction regulation in place for its power plants.<sup>124</sup>

It is important to note that the proposal for ACE also purported to update the New Source Review (“NSR”) permitting program “to further encourage efficiency improvements at existing power plants.”<sup>125</sup> Under the proposal’s regulations, a “back door” would have been created to escape NSR requirements under the guise of an “efficiency improvement.”<sup>126</sup> Essentially, if a modification to a plant did not result in an hourly increase in emissions, NSR would not be triggered.<sup>127</sup> The fact that fewer NSRs would have been triggered could have led to increases in air pollution from individual plants without the facilities triggering significant permitting and emissions monitoring requirements. While the final rule did not include these proposed changes to the NSR program, the EPA has since indicated that it still intends to take action on these proposed reforms in a separate rulemaking.<sup>128</sup>

### C. The Potential Fallout from Adherence to the

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122. Waste360, *supra* note 115.

123. OFFICE OF AIR & RADIATION, AFFORDABLE CLEAN ENERGY RULE (ACE), 19 (July 18, 2019), [https://www.epa.gov/sites/production/files/2019-07/documents/ace\\_overview\\_presentation\\_july2019.pdf](https://www.epa.gov/sites/production/files/2019-07/documents/ace_overview_presentation_july2019.pdf) [<https://perma.cc/4ME3-5S4>] [hereinafter ACE GUIDELINES].

124. This period would be without any further delay or appeal by the state in relation to a submitted plan, which can occur as well.

125. Waste360, *supra* note 115.

126. See Wentz, *supra* note 116.

127. SUMMARY, *supra* note 120, at 2.

128. *Issue Brief*, *supra* note 9, at 4.

### Affordable Clean Energy Rule

The finalized ACE rule will do little to decrease the United States' contribution to worldwide emissions. Even more importantly, if the ACE rule survives litigation challenges, the interpretations and approach taken in the ACE could constrain a future EPA's ability to apply CAA authorities to address GHG emissions and impacts from global climate change.

According to the regulatory impact analysis ("RIA") for the proposed rule, if states were to have adhered to the proposal, GHG emissions were actually expected to increase by 3% by 2035, relative to 2005 levels, increases which the Agency admits in their RIA for the proposed rule.<sup>129</sup> Additionally, "[e]missions of other pollutants [were] also projected to be higher than they would have been under the Clean Power Plan—emissions of sulfur dioxide and nitrogen oxides increase under every scenario modeled."<sup>130</sup> Under the ACE, compliance costs [were] expected to rise as well, perhaps even to levels above what were expected under the CPP.<sup>131</sup> Lastly and perhaps most importantly, "EPA's own analysis conclude[d] that the Proposed Rule would [have] result[ed] in an increased number of premature deaths relative to the CPP—up to 1,400 annually beginning in 2030."<sup>132</sup> Additionally, there would have been "up to 15,000 new cases of upper respiratory problems, a rise in bronchitis, and tens of thousands of missed school days."<sup>133</sup> In comparison, in conducting a similar analysis of the Obama-era regulations, the EPA concluded that the CPP would avoid up to

129. Katherine L. Vaccaro & Megan Elliott, *Climate Change Scorecard: Affordable Clean Energy Rule Versus Clean Power Plan*, LEGAL INTELLIGENCER (Sept. 13, 2018), <https://www.law.com/thelegalintelligencer/2018/09/13/climate-change-scorecard-affordable-clean-energy-rule-versus-clean-power-plan/> [https://perma.cc/8XQU-XFA3]; see also Comment Letter, *supra* note 4, at 9 (noting EPA's proposed rule will not achieve meaningful emission reductions).

130. Ben Havumaki et al., *ACE: What's in the Cards for Emissions Reductions*, SYNAPSE ENERGY ECON., INC. (Sept. 4, 2018), <https://www.synapse-energy.com/about-us/blog/ace-whats-cards-emissions-reductions-0> [https://perma.cc/L5Z9-XS3P].

131. Comment Letter, *supra* note 4, at 10.

132. *Id.* at 11.

133. Lisa Friedman, *Cost of New E.P.A. Coal Rules: Up to 1,400 More Deaths a Year*, N.Y. TIMES (Aug. 21, 2018), <https://www.nytimes.com/2018/08/21/climate/epa-coal-pollution-deaths.html> [https://perma.cc/M52U-STWN].

3,600 premature deaths per year by 2030, and avoid as many as 180,000 missed school days annually.<sup>134</sup>

Facing pushback as a result of these findings, the EPA in its final rule RIA modified its methodology to produce less negative results.<sup>135</sup> In its analysis, the EPA changed the baseline it used to estimate the impacts of the rule.<sup>136</sup> In drafting the proposal, the EPA compared implementing ACE to a baseline scenario in which the CPP would have been implemented “[a] reasonable assumption, given that this rule was intended to replace the CPP. For the final rule, EPA now relies on a baseline in which there are no federal standards for CO<sub>2</sub> emissions from power plants under Section 111 of the Clean Air Act.”<sup>137</sup> In using this baseline, EPA now concludes that by 2030, 50 to 122 premature deaths will be avoided, 14,000 cases of asthma prevented, 4,600 less days of work missed, and 8,200 fewer days of school lost due to illness.<sup>138</sup> Essentially, the baseline is now set for business as usual rather than the decreased emissions that would have resulted from the Clean Power Plan. Regardless, in one scenario under the finalized ACE, GHG emissions are still expected to increase in 21 states, relative to 2005 levels.<sup>139</sup>

## V. DIFFERENCES BETWEEN THE CLEAN POWER PLAN AND THE AFFORDABLE CLEAN ENERGY RULE

The differences between the CPP and the ACE rule proposal are stark in almost all areas: their background, purpose, implementation, and results. Most important is the difference in

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134. *Id.*

135. See generally EPA, Regulatory Impact Analysis for the Repeal of the Clean Power Plan, and the Emission Guidelines for Greenhouse Gas Emissions from Existing Electric Utility Generating Units (June 2019), [https://www.epa.gov/sites/production/files/2019-06/documents/utilities\\_ria\\_final\\_cpp\\_repeal\\_and\\_ace\\_2019-06.pdf](https://www.epa.gov/sites/production/files/2019-06/documents/utilities_ria_final_cpp_repeal_and_ace_2019-06.pdf) [https://perma.cc/RV2P-BUKD].

136. Jessica Wentz et. al, *Four Important Points About EPA’s Affordable Clean Energy Rule*, CLIMATE L. BLOG (June 20, 2019), <http://blogs.law.columbia.edu/climatechange/2019/06/20/four-important-points-about-epas-affordable-clean-energy-rule/> [https://perma.cc/42L5-FT8C].

137. *Id.*

138. *Id.*

139. *Issue Brief*, supra note 9, at 3.

emissions reductions. Due to regulations imposed by the CPP, emissions were expected to be reduced in the power sector by 32% by 2030.<sup>140</sup> In actuality, projections showed that CPP implementation may have achieved 36% reductions by 2030, had the program remained in place.<sup>141</sup> Under the ACE, however, as has been previously discussed, in many of the scenarios examined by the EPA where the ACE mandates are in place, GHGs are actually expected to increase when compared to having no federal program at all.<sup>142</sup>

In addition, even the development and evolution of both rules were vastly different. Unlike the amount of public input that influenced and helped to create the CPP, the EPA had very little public engagement with interested stakeholders throughout the ACE's development. For example, the EPA held several hearings and participated in meetings throughout the process of finalizing the CPP, reaching upwards of 600 such conferences, in contrast, during the ACE creation, only "one [public] hearing" was held.<sup>143</sup> Additionally, the comment period for the ACE was limited to only 90 days, in comparison to the CPP's 165 days.<sup>144</sup> By the time the CPP was finalized, the EPA had based its rulemaking on more than 4.2 million comments from interested stakeholders.<sup>145</sup> ACE received less than 500,000 comments.<sup>146</sup> This difference is likely due to the fact that the comment period was so limited and thus resulted in a rule that had far less public engagement than its predecessor.

Essentially, the ACE simply was not developed with the same amount of public input as the CPP. The CPP contains in its proposal an entire section dedicated to public outreach undertaken in the creation of the rule.<sup>147</sup> The EPA heard from the general

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140. Andy Barnes, *What is the Affordable Clean Energy Rule and How Does it Compare to the Clean Power Plan?*, LEADERS IN ENERGY (Aug. 29, 2018), <https://leadersinenergy.org/what-is-the-affordable-clean-energy-rule-and-how-does-it-compare-to-the-clean-power-plan/> [<https://perma.cc/69DX-U67F>].

141. *Id.*

142. *Issue Brief*, *supra* note 9, at 1.

143. ACE Final, *supra* note 113, at 32,533.

144. *E.g.*, ACE Final, *supra* note 113, at 32,533; CPP, *supra* note 70, at 64,672.

145. CPP, *supra* note 70, at 64,707.

146. ACE Final, *supra* note 113, at 32,533.

147. CPP, *supra* note 70, at 64,672–73.

public, as well as state officials, tribal officials, United States Territories, Industry representatives, Electric Utility Representatives, Electric Grid Operators, Representatives from Community and Non-Governmental Organizations, Environmental Justice Organizations, Labor, and other federal and independent agencies.<sup>148</sup> An entire portion of the June 2014 proposal of the CPP analyzes the stakeholder outreach undertaken throughout the rulemaking process, and the conclusions the EPA came to because of it.<sup>149</sup> There is no comparable section in the ACE proposal,<sup>150</sup> despite numerous objections that the CPP be repealed, and that the fact that the EPA has a legal obligation to regulate carbon dioxide from power plants.<sup>151</sup>

It is not surprising that the rules are so different given the lack of stakeholder engagement and the overall direction of the Trump Administration. With EPA Administrators that have strong ties to the fossil fuel industry, working for a President that casts doubt on climate change as a whole, it is foreseeable that the rule published in June 2019 will do little to curb GHG emissions and address the devastating effects of climate change. One of the most significant difference between the rules is the broad scope of state discretion in the creation of emissions targets and standards. Under the CPP, there was a baseline of performance that facilities had to meet.<sup>152</sup> To reach this presumptive standard, the BSER extended “beyond the fence line” of improving the efficiency of plants, in that the program also encouraged the replacement of plants with renewables or natural gas.<sup>153</sup> States could achieve the emissions targets set by the CPP through a wide variety of options, including increasing the efficiency of individualized units, incorporating renewable resources into energy production, or

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148. *Id.* at 64,672.

149. Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units, 79 Fed. Reg. 34,830, 34,845 (June 18, 2014) (codified at 40 C.F.R. pt. 60).

150. *See generally* ACE Final, *supra* note 113.

151. *See* Repeal Comment Letter, *supra* note 82, at 1; Mary Nichols, et al., Comment Letter on Advance Notice of Proposed Rulemaking on State Guidelines for Greenhouse Gas Emissions from Existing Sources 2 (Feb. 26, 2018), [https://www.georgetownclimate.org/files/report/MultiState%20Comments\\_ANPR\\_M\\_Feb262018.pdf](https://www.georgetownclimate.org/files/report/MultiState%20Comments_ANPR_M_Feb262018.pdf) [<https://perma.cc/Q4VK-CPZN>]; Comment Letter, *supra* note 4, at 1.

152. CPP, *supra* note 70, at 64,719.

153. Vaccaro & Elliott, *supra* note 129.

implementing other compatible programs that limited emissions from sources other than power plants.<sup>154</sup> These options allowed for states to meet their environmental standards in a flexible manner, modelling successful emissions programs that had been implemented in other states prior to the CPP's finalization.<sup>155</sup> In the end, there would not only have been a reduction in emissions, but also an increase in renewable energy production, as well as the introduction of other environmentally friendly legislation and regulations designed to contribute to states meeting their targets.<sup>156</sup>

Under the ACE, however, states are allowed “to determine, on a case-by-case basis, the standards that can be achieved through the best system of emissions reductions under CAA Section 111(d).”<sup>157</sup> This BSER does not include “extending beyond the fence line” to incorporate other reduction programs, but rather, provides only that states *can* limit their reduction measures and implementation plans to a set of heat rate improvement (“HRI”) measures.<sup>158</sup> Because meeting the ACE thresholds does not mandate the consideration of the development of other programs, implementing renewable energy mandates or exploring options beyond emissions reductions on the power sector alone are no longer encouraged, as states are only required to limit their reduction initiatives to facilitate efficiency improvement.<sup>159</sup>

The proposed rule identifies a menu of candidate HRI technologies that states can choose from in developing their state implementation plans. The ACE rule would also allow states to consider the cost, suitability and potential improvement’ that each technology would bring to an individual plant. As part of this

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154. See generally LISSA LYNCH, ET AL., GEORGETOWN CLIMATE CENTER, CLEAN POWER PLAN IMPLEMENTATION: OVERVIEW OF POTENTIAL COMPLIANCE PATHWAYS (2015), [https://www.georgetownclimate.org/files/report/GCC\\_CompliancePathwaysOverview\\_January2015.pdf](https://www.georgetownclimate.org/files/report/GCC_CompliancePathwaysOverview_January2015.pdf) [<https://perma.cc/DR8H-VQ78>] (noting the flexibility afforded to states under the CPP).

155. See *id.* at 1.

156. See generally *id.* (discussing compliance approaches under the CPP).

157. Vaccaro & Elliott, *supra* note 129.

158. Joseph Goffman & Caitlin McCoy, *EPA’s House of Cards: the Affordable Clean Energy Rule*, HARV. L. SCH. (Oct. 31, 2019), <http://eelp.law.harvard.edu/wp-content/uploads/ACE-Paper-Final.pdf>

159. Barnes, *supra* note 140.

evaluation, states can weigh a plant's age and remaining useful life.<sup>160</sup> This did not change in the final rule.

Relatedly, in allowing for an "extension beyond the fence line," the CPP sanctioned the possibility of the introduction of a trading program within the state between plants.<sup>161</sup> Under the CPP, power plants could meet their target standards through various means, including trading emissions rate credits for plants that had met their targets, or allowances for those that had not.<sup>162</sup> Under the ACE, however, trading as a compliance mechanism is not allowed.<sup>163</sup> The rationale for prohibiting trading as a compliance mechanism, the EPA argues, is because it does not meet the criteria for compliance measures: that "(1) [t]he compliance measures must be capable of being applied to and at the source, and (2) they must be measurable at the source using data, emissions monitoring equipment or other methods to demonstrate compliance, such that they can be easily monitored, reported, and verified at a unit."<sup>164</sup> Additionally, since the standards mandated by the ACE are so lax, it is not difficult for facilities to meet emissions targets. Thus, trading between plants is unnecessary in the first place.<sup>165</sup> Further still, the Agency argues that trading interferes with the inclusion of the remaining useful life of the plant into BSER considerations, causing the provision to "be viewed as superfluous."<sup>166</sup>

Lastly, there is a difference in timing. Had the CPP taken effect as intended, states and the EPA would have had, at most, thirteen months to implement a statewide emissions reduction plan.<sup>167</sup> The process would have been as follows: upon passage of

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160. *Id.* The same allowances and interpretation of considerations are included in the final rule. ACE Final, *supra* note 113, at 32,561.

161. See Ashley Lawson, *Carbon Trading Under the Clean Power Plan*, CTR. FOR CLIMATE & ENERGY SOLUTIONS (July 2016), <https://www.c2es.org/document/carbon-trading-under-the-clean-power-plan/> [<https://perma.cc/9UR5-LZUN>].

162. Comment Letter, *supra* note 4, at 18.

163. ACE Final, *supra* note 113, at 32,555.

164. *Id.*

165. See Jeff Tollefson, *Trump Administration Relaxes Emissions Limits on Power Plants*, SCI. AM. (June 20, 2019), <https://www.scientificamerican.com/article/trump-administration-relaxes-emissions-limits-on-power-plants/> [<https://perma.cc/NH38-ZTFC>].

166. SUMMARY, *supra* note 120, at 8.

167. CPP, *supra* note 70, at 64,703.

the CPP, states would have had to develop implementation plans within the first nine months.<sup>168</sup> Accordingly, the EPA would have been required to review each state's plan in the four months following, and had the agency decided the targets were inadequate, it would promulgate a federal plan sixth months later.<sup>169</sup> Under the ACE, the process takes upwards of six and a half years with state plans due within three years of passage. The EPA then has six months to review each plan for "completeness."<sup>170</sup> Following this review is another review, where the EPA either approves or disapproves of the plan within the next year.<sup>171</sup> If the promulgation of a federal plan is necessary, the agency has up to two years to implement it.<sup>172</sup>

## VI. IMPORTANCE OF STRICTER EMISSIONS STANDARDS

### A. Combatting the Effects of Climate Change

It is not suggested that the effects of climate change would be avoided with the implementation of emissions targets similar to those mandated by the CPP. Climate change is a global issue, and the United States power sector is only one contributor to the problem. Nevertheless, requiring more stringent emission reduction goals in the United States power sector will be critical to meeting any meaningful global climate targets. In addition, the "beyond the fence line" approach pioneered by the CPP could be used to tighten emissions targets even further in the future and could be used to help spur the development of renewable energy and decarbonize the electric grid.

As previously stated, stricter future power sector standards and significant global emission reductions could contribute to limiting the worst effects from climate change. In fact "[a]n October 2018 IPCC Report found that limiting global warming to 1.5 degrees Celsius can meaningfully reduce the risk associated with increases in heavy precipitation events and the frequency and

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168. Barnes, *supra* note 140.

169. *Id.*

170. ACE GUIDELINES, *supra* note 123, at 19.

171. *Id.*

172. *Id.*

magnitude of floods and droughts, forest fires, extreme weather events, desert expansion, and the spread of invasive species, pests, and diseases, compared to 2 degrees Celsius of warming.”<sup>173</sup> Because the magnitude of GHG emissions affect the rate at which temperatures climb, a large-scale reduction in emissions of these gases is necessary to diminish the scale of temperature increase, and consequentially, any climate impacts such a temperature change would bring with it.<sup>174</sup> Thus, for this reason, electric grid decarbonization approaches such as the approach embodied in the CPP, could be critical.

With regard to the natural environment, significant reductions in GHGs in the atmosphere and resulting limits on temperature increases could limit a range of potential climate impacts. For example, species may not be forced to shift their ranges to areas with more tolerable climate conditions.<sup>175</sup> Hotter, dryer seasons could become fewer and farther between, and with that, the threat of raging and unstoppable forest fires could be been mitigated, or at least somewhat curtailed.<sup>176</sup> Limiting temperature change could also diminish impacts on biodiversity and decrease extreme weather events.

Public health could benefit from the implementation of more stringent guidelines as well through the reduction of conventional air pollution. Scholars predicted that, had the CPP and its emissions goals been implemented, the significant reduction of sulfur dioxide and nitrogen oxides could have resulted in approximately \$34 billion in benefits a year.<sup>177</sup> These benefits would have been based primarily on eliminating a projected 3,600 premature deaths, 1,700 heart attacks, 90,000 asthma attacks, and 300,000 missed work and school days per year.<sup>178</sup> Tellingly, “[b]oth EPA and independent assessments indicate that emission reductions on this scale would have important near-term public

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173. See Comment Letter, *supra* note 4, at 4.

174. See Nicholas Stern, *We Must Reduce Greenhouse Gas Emissions to Net Zero or Face More Floods*, GUARDIAN (Oct. 7, 2018), <https://www.theguardian.com/environment/2018/oct/08/we-must-reduce-greenhouse-gas-emissions-to-net-zero-or-face-more-floods> [https://perma.cc/Y547-4GMW].

175. See generally *Climate Impacts on Forests*, *supra* note 39.

176. *Id.*

177. OVERVIEW, *supra* note 28, at 3.

178. *Id.*

health benefits—translating into thousands of avoided deaths, heart attacks, childhood asthma incidents, and hospital visits each and every year.”<sup>179</sup>

In addition to direct health benefits, other economic benefits from stricter emissions adherence in line with the CPP could have been substantial as well. Should CPP-level emissions goals be implemented domestically, potentially fewer people would fall ill due to climate or pollution-induced diseases, and, thus, insurance rates could decrease.<sup>180</sup> Electricity bills could go down as power sources increased in efficiency and renewable sources replaced closing coal-fired power plants.<sup>181</sup> “When considered together with the monetized benefits of reduced climate risk, the *total net* benefits of the Clean Power Plan [CPP]—after counting compliance costs—[would have been] approximately \$46 to \$84 billion in 2030, or approximately \$6 to \$11 for every dollar spent on compliance.”<sup>182</sup> Any emissions program with similar mandates may result in comparable benefits.

## B. New Leadership and Stricter Emissions Standards

There is also the matter of the change in administrations. While it is impossible to predict the views of an upcoming president concerning the environment and GHG emissions, it is logical to assume that in the future, a new President will at least be open to, if not fully invest in, clean, renewable energy as the market trends that way. Further still, the consequences of climate change will continue to worsen, affecting all aspects of American life.<sup>183</sup> In all likelihood, any future President will have to address climate change. Many of the Democratic nominees have stated that, should

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179. Carbonell, *supra* note 69, at 414.

180. Cody Sullivan, *National Climate Assessment: Reducing Greenhouse Gas Emissions Will Save Thousands of Lives in the U.S.*, NOAA CLIMATE.GOV (July 22, 2019), <https://www.climate.gov/news-features/featured-images/national-climate-assessment-reducing-greenhouse-gas-emissions-will> [<https://perma.cc/84AB-RGEL>].

181. Carbonell, *supra* note 69, at 414–15.

182. *Id.* at 414.

183. Kate Ravillous, *Affordable Clean Energy Rule ‘Worse than Doing Nothing’*, PHYSICSWORLD (July 29, 2019), <https://physicsworld.com/a/affordable-clean-energy-rule-worse-than-doing-nothing/> [<https://perma.cc/8BN2-UU5K>] (describing how the ACE is “actively worse than doing nothing, acting to slow the progress of weaning the US off fossil fuels”).

they become President, they will either reinstate CPP targets, or even strengthen them.<sup>184</sup> In implementing stricter emissions, such as those at least as stringent as the CPP instead of the lax targets required by the ACE, states will be further on their way to implement any future regulation under CAA authority that mandates decreased discharges of GHGs.

### C. Utility and Market Trends

Additionally, the push towards a renewable energy economy encouraged in the CPP, and more stringent emissions programs generally, is consistent with predicted market trends in the coming years. These market trends are showing that renewables are the future, and the CPP regulations recognized and built on that fact.<sup>185</sup> The United States power sector is undergoing significant transition, primarily toward “unprecedented declines in coal-fired generation, rapid growth in deployment of renewable energy and energy efficiency, and increases in the use of natural gas combined cycle.”<sup>186</sup> One of the reasons behind this transition is the fact that growth in the electricity sector as a whole has been decreasing steadily since the 1950s and this trend is expected to continue.<sup>187</sup> Distributed energy, like that which comes from renewable resources such as wind, solar, or geothermal, is becoming competitive in terms of cost. In response, the electric grid is beginning to change from “a system of centralized power plants where power flows in one direction through transmission and distribution lines to consumers, to a more complex system where information and electricity flow back and forth from the grid to consumers, guided by ‘smart’ technologies, powerful ‘big data’ analytical tools, and device-to-device communications.”<sup>188</sup> Essentially, the power grid is evolving to incorporate renewables, and, in turn, utilities across the country are restructuring to allow for the contribution of more distributed energy.<sup>189</sup> In short, power

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184. Cho, *supra* note 12.

185. Options for decreasing emissions included replacing coal-generated energy with renewables. Biello, *supra* note 1.

186. Carbonell, *supra* note 69, at 415.

187. Joseph Kruger, *The Clean Power Plan and the “Future-Ready” Utility* 3 (Resources for the Future, Working Paper No. 16-05, 2016).

188. *Id.* at 4.

189. *See id.*

grids and utilities are moving away from centralized coal power plants and towards more distributed, cleaner energy.

In terms of the states themselves, those that had already begun to implement more stringent emissions targets and introduce renewable into the energy market, either in adherence to CPP reductions mandates or in an effort to meet the requirements of their own programs, have since cut emissions, all while increasing GDP.<sup>190</sup> For example, in Maryland, between 2000 and 2014, emissions were reduced by 28%, while the GDP grew by 32%.<sup>191</sup> Additionally, from a global perspective, each year has seen a marked increase in the number of renewable energy investments.<sup>192</sup> By 2050, scientists predict that a combination of renewables and natural gas can provide 80% of the United States' electricity and that prediction comes from using only currently available technologies.<sup>193</sup> Meanwhile, the production and consumption of coal have decreased during the last decade.<sup>194</sup>

The fact is, renewables are the future, and the ACE cannot singlehandedly save the coal industry, which may eventually be obsolete as cleaner, cheaper, and more efficient energy sources replace it. As a result, it is important that states continue to implement emissions programs, like those required by the CPP, that encourage the introduction of renewables in the power sector, as well as investment into the renewable industry as a whole. In doing so, leadership states can be at the forefront of what is expected to be a rapidly growing industry, and conform with the direction utilities and power providers are trending towards.

#### **D. The Potential Legal Vulnerability of the Affordable Clean Energy Program**

Regardless of the monetary, health, or any other benefits stricter emissions standards may have, states would do well to set more stringent emissions because the ACE program may be legally vulnerable. Generally, discretionary decisions by any agency are

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190. Comment Letter, *supra* note 4, at 5–6.

191. *Id.* at 7.

192. See Scott, *supra* note 15.

193. *Renewable Energy Can Provide 80 Percent of U.S. Electricity by 2050*, UNION OF CONCERNED SCIENTISTS, <https://www.ucsusa.org/energy/renewable-energy#.XAABJHpKjOQ> [<https://perma.cc/Z8VW-ERRX>].

194. Egan, *supra* note 18.

usually difficult to challenge in court.<sup>195</sup> Only in instances where a regulation is found to be “arbitrary and capricious”—which usually involves “egregious errors, like failing to support their decisions with evidence or openly refusing to consider information”—does a judge declare an agency mandate invalid.<sup>196</sup> When it comes to the ACE, as previously stated, the CAA mandates that the EPA regulate GHG emissions that endanger public health and welfare.<sup>197</sup> As it is currently written, in some scenarios, the ACE proposal is actually expected to increase carbon dioxide emissions from power plants by 2035.<sup>198</sup> Here, “where an agency proposes a rule that *actually makes the problem it claims to address worse*, even a non-expert judge might be willing to call that arbitrary.”<sup>199</sup>

Further still, CAA authority requires that emissions standards have to reflect an emissions reduction target that has been determined through the application of the BSER.<sup>200</sup> Studies have concluded that, with ACE implementation, the program is expected not only to potentially increase carbon dioxide emissions from a national perspective, but also increase emissions in twenty-one states in comparison to the implementation of no regulation at all.<sup>201</sup>

As previously stated, states have already sued the Trump Administration over the ACE regarding these issues.<sup>202</sup> In short, states would not benefit from implementing the lax standards of a program that may later be found invalid under the CAA. In setting stricter standards like those mandated by the CPP, leadership states—both from an economic and regulatory standpoint—will be

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195. Richardson, *supra* note 23.

196. *Id.*

197. See Hand, *supra* note 65.

198. Dallas Burtraw & Amelia Keyes, *The ACE Rule May be Vulnerable*, RESOURCES FOR THE FUTURE (Jan. 15, 2019), <https://www.resourcesmag.org/common-resources/the-ace-rule-may-be-vulnerable/> [<https://perma.cc/DF3Y-DDU4>].

199. Richardson, *supra* note 23 (emphasis in original).

200. MEGAN CERONSKY & TOMÁS CARBONELL, ENVIRONMENTAL DEFENSE FUND, SECTION 111(D) OF THE CLEAN AIR ACT 3 (rev. ed. 2014), [https://www.edf.org/sites/default/files/section-111-d-of-the-clean-air-act\\_the-legal-foundation-for-strong-flexible-cost-effective-carbon-pollution-standards-for-existing-power-plants.pdf](https://www.edf.org/sites/default/files/section-111-d-of-the-clean-air-act_the-legal-foundation-for-strong-flexible-cost-effective-carbon-pollution-standards-for-existing-power-plants.pdf) [<https://perma.cc/C565-PCRH>].

201. *Issue Brief*, *supra* note 9, at 3.

202. Friedman, *supra* note 20.

well ahead of any other jurisdiction that only aimed to meet the loose standards of the ACE.

## VII. LEGAL HURDLES AND STATE OPTIONS

The answer to this question—whether states can mandate stricter standards than those imposed by the ACE—is likely yes. The biggest issue leadership states will face concerning implementing CPP standards and emissions targets is whether the ACE has any limiting factors, or put another way, does ACE supersede state regulations that create more stringent emissions goals? Likely not. The ACE’s broad language allowing states to develop, adopt, and implement their own plans likely leaves room for states to set stricter reduction goals. In creating standards of performance and implementation plans, the ACE mandates only that the BSER and the candidate technologies listed be taken into account but, states may consider “other factors” as well.<sup>203</sup> Without any explicit restrictions on what states cannot take into account, it follows logically that the ACE rule would not supersede any state attempt to create more rigorous reductions standards. Essentially, the emissions reduction requirements mandated by the ACE are very lenient, and the rule ultimately allows states to make their own decisions relating to the development, adoption, and implementation of their own programs. So long as states are able to meet the very low emissions reduction threshold set by the ACE, an emissions reduction program that sets strict standards, encourages the production of renewable energy, or adheres to other CPP-like mandates will likely not be superseded by the ACE. Leadership states striving to mitigate the effects of climate change would thus do well to implement stringent standards to achieve emissions reduction.

It is important to note, however, that in the preamble to the final ACE rule, the EPA appears to leave room to disapprove of states’ more stringent guidelines. While the EPA states that it will not prejudge more stringent emissions targets set by states, it does make “clear that a state with a program that will achieve greater emission reductions would still have to set standards of performance for any coal-fired power plants operating in its state based on the set of technologies EPA has identified as fitting within

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203. See ACE Final, *supra* note 113, at 32,561.

its new, unit-specific interpretation of BSER.”<sup>204</sup> Whether or not this approach written in the preamble would pass legal scrutiny remains unclear.

## VIII. CONCLUSION

The requirements of President Trump’s proposed Affordable Clean Energy Rule are a far cry from the lofty goals set by President Obama’s Clean Power Plan. Where the first ignores market trends and climate science, the latter helps to mitigate climate change and prepare the country for the future. With the ACE now finalized, state implementation of stricter GHG emissions standards and targets, like those mandated by the CPP, is likely to be permitted, and should be undertaken for states that wish to lead the country today—and tomorrow.

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204. *Issue Brief*, *supra* note 9, at 3–4.