The Trump Effect on Power Plant Carbon Dioxide Emissions

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I. INTRODUCTION

The election of Donald J. Trump came as a shock to many environmental activists. Trump led an anti-Washington campaign that made it clear he had little use for environmental regulation. He promised to audiences of Appalachian miners and Rust Belt power plant employees that he would get rid of "regulations that shut down hundreds of coal-fired power plants and block the construction of new ones."[1] Environmental groups were concerned that President Trump would reverse the progress made during the previous eight years toward achieving the environmental goals of the nation and of the world. In particular, they worried that the Trump Administration would divert the country away from its commitments under the Copenhagen Accord to cut GHG emissions by 17 percent from 2005 levels by 2020 and under a separate agreement with China to cut GHG emissions to 26-28 percent below 2005 levels by 2025. Additionally at stake was the Paris Agreement, which specified the global temperature increase resulting from human activities to well below two degrees Celsius above pre-industrial levels.[2] Protective regulations at risk of replacement

1. John Schwartz, *Trump's Climate Views: Combative, Conflicting and Confusing*, N.Y. TIMES (Mar. 10, 2017), https://www.nytimes.com/2017/03/10/climate/donald-trump-global-warming-views.html?_r=0 [http://perma.cc/59JA-KMAY].

2. *See The Paris Agreement*, U.N. CLIMATE CHANGE (2014), http://unfccc.int/paris_agreement/items/9485.php [https://perma.cc/HLZ4-KZQ2]; David Nakamura & Steven Mufson, *The U.S. and China Reach a Landmark Climate Deal*, WASH. POST (Nov. 12, 2014), https://www.washingtonpost.com/opinions/the-us-and-china-reach-a-landmark-climate-

included the Obama Administration's Clean Power Plan (CPP), its new source performance standards (NSPS) for greenhouse gas (GHG) emissions from new and modified power plants, and the "endangerment finding" that was a condition precedent to those regulations and additional requirements for new and modified power plants. Overall, environmental groups feared that a Trump Administration EPA would repeal these commitments and protective regulations, and replace them with tepid rules that would reverse the electric power industry's impressive progress in reducing carbon dioxide (CO_2) emissions during the previous five years.

Many close observers of the political realm predict that President Trump and his political appointees will not be able to reverse the decline in emissions in the electric power industry because the owners of the heaviest emitting coal-fired power plants have retired many "big dirties" and are committed to retiring many more in the next few years. Also, building new coal-fired plants has ceased and only a few natural gas-fired plants are on the horizon because of low demand for electricity, local demand response programs, and distributed generation. In addition, the proportion of electricity demand supplied by renewable resources is rising due to consumer demand for "clean" power, and heavy utility company investments in utility-scale wind farms and solar arrays. Finally, many cities and states are pressing forward with renewable portfolio standards and their own GHG emissions reduction programs irrespective of the Trump administration's regulatory activities.

This Article will probe the legal, technological and economic underpinnings the Trump Administration initiatives and the viewpoint that their initiatives will have little impact on CO_2 emissions from power plants. Part II will highlight the Trump Administration's views on the extent to which human activities are the leading contributing factor. Part III will describe the radical change in direction that that the Trump Administration is taking with respect to regulations designed to reduce GHG emissions from power plants. Part IV will offer predictions about the likely effect of the Trump Administration's rollbacks on the electric power and coal industries, on jobs in those industries, and on the natural gas and renewables industries. Finally, Part V will offer concluding thoughts about the state of power plants and their projected CO_2 emissions.

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deal/2014/11/12/a1f49f4c-6aa5-11e4-a31c-77759fc1eacc_story.html?utm_term=.4a51d348c91.

II. DONALD TRUMP'S VARIABLE VIEWS ON CLIMATE DISRUPTION

Donald Trump's pre-election utterances on climate change evidenced a disbelief in climate change. In 2012, Trump famously tweeted that "global warming was created by and for the Chinese in order to make U.S. manufacturing non-competitive."[3] In 2015, he told a conservative talk show audience that he was "not a believer in man-made global warming."[4] On the campaign trail, Trump promised to reverse Obama Administration environmental policies, including EPA's highly controversial CPP for reducing CO_2 emissions from existing coal-fired power plants, which he called "stupid" and "job killing."[56] At the same time, he promised to "save that coal industry."[7] Soon after the election, however, President-elect Trump told Fox News that he was "still open-minded" about whether human activities caused climate disruption and added that, "nobody really knows."[8]

The clearest indication of where Trump now stands on climate disruption is his decision to withdraw from the Paris Agreement, which committed the U.S. to reducing the nation's GHG emissions by 26 to 28 percent by 2025.[9] Initially, the administration was divided on whether the United States should withdraw from the Paris Agreement, with EPA Administrator Scott Pruitt, Vice President Mike Pence, Attorney General Jeff Sessions and presidential counselor Steve Bannon strongly in favor of withdrawal.[10]

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3. Schwartz, *supra* note 1, at A14.

4. Hugh Hewitt, *Donald Trump Returns*, HUGEHEWITT (Sept. 21, 2015), http://www.hughhewitt.com/donald-trump-returns/ [https://perma.cc/467H-A4HM].

5. Brady Dennis, *Scientists are frantically copying U.S. climate data, fearing it might vanish under Trump*, WASH. POST (Dec. 13, 2016), https://www.washingtonpost.com/news/energy-environment/wp/2016/12/13/scientists-are-frantically-copying-u-s-climate-data-fearing-it-might-vanish-under-trump/?utm_term=.c69d2b0a09a5 [http://perma.cc/EET7-EK54].

6. Lisa Friedman, *Trump Takes First Step Toward Scrapping Obama's Global Warming Policy*, N.Y. TIMES (Oct. 4, 2017), https://www.nytimes.com/2017/10/04/climate/trump-climate-change.html [http://perma.cc/5JK7-3P68].

7. Steven Mufson, *Trump promotes fossil fuels and assails pollution rules in energy plan*, WASH. POST (May 26, 2016), https://www.washingtonpost.com/business/economy/trump-pledges-to-bring-energy-independence-to-america/2016/05/26/eba464b6-234e-11e6-9e7f-57890b612299_story.html?utm_term=.eb0aac02aaf4 [http://perma.cc/N3VQ-6SKG].

8. Robin Bravender, *Trump pledges "open mind" on environment*, E&E DAILY (Dec. 12, 2017), https://www.eenews.net/stories/1060046993.

9. *See* Chris Mooney, *This is where Obama's hugely ambitious climate policies were headed - before Trump came along*, WASH. POST (Nov. 16, 2016), https://www.washingtonpost.com/news/energy-environment/wp/2016/11/16/this-is-where-obamas-hugely-ambitious-climate-policies-were-headed-before-trump/?utm_term=.c9741180bf71.

10. *See* Jean Chemnick & Emily Holden, *Inside the "dirty" fight to leave the Paris deal*, E&E NEWS: CLIMATEWIRE (July 7, 2017), https://www.eenews.net/stories/1060057039 [https://perma.cc/3RKT-3XCH]; *See also* David Schultz, et. al., *Only Constant in Trump's Approach to Climate is Inconsistency*, BNA: ENERGY & CLIMATE REP. (Apr. 28, 2017), http://0-news.bna.com.sally.sandiego.edu/clln/CLLNWB/split_display.adp?fedfid=110380

However, Secretary of State Rex Tillerson, Secretary of Commerce Gary Cohn, presidential advisor Ivanka Trump, and Energy Secretary Rick Perry wanted to renegotiate the Paris Agreement's terms.[11] According to one source, the battles within the administration over the withdrawal issue were "dirty and rough."[12] While Bannon fired up the conservative base, Pruitt persuaded the National Mining Association to come out against the pact, launching a national media campaign that asserted the Paris Agreement was "a bad deal for our country." Pruitt also assisted several Republican senators in drafting a letter to Trump, urging him to withdraw.[13] On the other hand, Ivanka Trump persuaded leaders of corporate America to sponsor a full-page advertisement in the *Wall Street Journal* urging Trump to remain in the agreement.[14] In response, coal baron Robert Murray, who had been a large financial contributor to the Trump campaign, pointed out that "[t]hose in your administration advising you to stay in this fraudulent agreement were not elected; you were."[15] Environmental groups also weighed in by running ads on cable news programs that Trump reportedly watched on a daily basis urging him to remain in the Paris Agreement.[16] In the end, however, the pro-withdrawal faction won out.

President Trump delivered a Rose Garden speech with Bannon, Pruitt and the Competitive Enterprise Institute's Myron Ebel standing in the background,[17] announcing that the United States would "cease all implementation of the nonbinding Paris accord."[18] Trump called the

389&vname=ccrnotallissues&wsn=494619605&searchid=30832626&doctypeid=1&type=date&mode=doc&split=0&scm=CLLNWB&pg=0.

11. Chemnick & Holden, *supra* note 10.

12. *Id.*

13. *See* Ashley Parker, et. al., *Inside Trump's climate decision: After fiery debate, he stayed where he's always been*, WASH. POST (June 1, 2017), https://www.washingtonpost.com/politics/inside-trumps-climate-decision-after-fiery-debate-he-stayed-where-hes-always-been/2017/06/01/e4acb27e-46db-11e7-bcde-624ad94170ab_story.html?utm_term=.a7a4bfcb890c [https://perma.cc/9V5H-KGTS] [hereinafter Parker, et. al., *Inside Trump's climate decision*].

14. Jonathan Easley, et. al., *How Trump Left the Paris Climate Deal*, THE HILL (June 1, 2017), http://thehill.com/policy/energy-environment/336015-how-trump-left-the-paris-climate-deal [https://perma.cc/RLC5-3B8W].

15. *See id.*

16. *See* Chemnick & Holden, *supra* note 10.

17. Callum Borchers & Amber Phillips, *Transcript: President Trump's remarks on leaving the Paris climate deal, annotated*, WASH. POST (June 1, 2017), https://www.washingtonpost.com/news/the-fix/wp/2017/06/01/transcript-president-trumps-remarks-on-leaving-the-paris-climate-deal-annotated/?utm_term=.3d0a95324b91 [http://perma.cc/XLK6-B4DC].

18. *Id.*

Paris Agreement "simply the latest example of Washington entering into an agreement that disadvantages the United States, to the exclusive benefit of other countries, leaving American workers . . . and taxpayers to absorb the cost in terms of lost jobs, lower wages, shuttered factories and vastly diminished economic production."[19] He also claimed that the Paris Agreement "effectively block[ed] the development of clean coal in America, and that he was elected to represent the citizens of Pittsburgh, not Paris."[20]

Although it will take four years to accomplish the withdrawal as a formal matter,[21] it played very well with Trump's electoral base.[22] The president of the Tea Party Patriots opined that the Paris Agreement was "a drag on our economy and a bad deal for American workers."[23] Trump's withdrawal made it clear that on issues of great importance to the base, Trump's economic advisors and even his daughter had little influence.[24] In the time since Trump's withdrawal, environmental groups, electricity-consuming companies, and many other officials have criticized his decision.[25] For instance, Bill McKibben, a climate activist, declared that the withdrawal amounted to "a thorough repudiation of two of the civilizing forces on our planet: diplomacy and science."[26] The mayor of Pittsburgh, the city Trump alluded to in his speech, assured residents that the city would continue to "follow the guidelines of the Paris Agreement for our people, our economy

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19. *Id.*

20. *See* Dean Scott, *Trump Exit Won't Bar Successor from Rejoining Climate Pact*, BNA: ENVIRONMENT & ENERGY REPORT (June 2, 2017), https://www.bna.com/trump-exit-wont-n73014451796/ [https://perma.cc/9BCV-3MZH].

21. *See* Peter Baker, *In Rejecting Popular Paris Accord, Trump Bets on His Base*, N.Y. TIMES (June 1, 2017), https://www.nytimes.com/2017/06/01/climate/paris-accord-trump-conservative-base.html (quoting Glen Bolger, Republican pollster); *see also* John Wagner, *With withdrawal from Paris accord, Trump keeps focus squarely on his most devoted supporters*, WASH. POST (June 2, 2017), https://www.washingtonpost.com/politics/with-withdrawal-from-paris-accord-trump-keeps-focus-squarely-on-his-most-devoted-supporters/2017/06/02/7b446a1c-4793-11e7-a196-a1bb629f64cb_story.html?utm_term=.7e32da8f98ee (quoting Doug Heye, Republican consultant).

22. Brian Dabbs, *Pruitt Publicity May Be at High Point Post-Paris, Some Analysts Say*, BNA: ENV'T & ENERGY REP. (June 2, 2017), https://www.bna.com/pruitt-publicity-may-n73014451870/ [https://perma.cc/D3FQ-EHW6].

23. *See* Jonathan Easley & Amie Parnes, *Trump's Paris rejection a defeat for deal's White House backers*, THE HILL (June 2, 2017), http://thehill.com/homenews/administration/336164-trump-paris-pullout-a-defeat-for-deals-white-house-backers [https://perma.cc/LK5S-QQRG].

24. *See* Bill McKibben, *Trump's Stupid and Reckless Climate Decision*, N.Y. TIMES (June 1, 2017), https://www.nytimes.com/2017/06/01/opinion/trump-paris-climate-accord.html [http://perma.cc/DA9S-BC3Y]. *See also* Scott, *supra* note 20.

25. McKibben, *supra* note 24.

26. Michael D. Shear, *Trump Abandoning Global Climate Accord*, N.Y. TIMES (June 2, 2017), https://www.nytimes.com/2017/06/01/climate/trump-paris-climate-agreement.html.

& future."[27] And the, chancellor of the University of Pittsburgh, chastised Trump for failing to see that the city was no longer dependent on coal and had moved on to become "home to one of the most vibrant technology and health care markets in the country."[28]

The American public also disfavored Trump's decision to withdraw from the Paris Agreement. A Washington Post-ABC poll found that 59 percent of respondents opposed the withdrawal while only 28 percent supported it. However, 67 percent of Republicans supported it compared to 82 percent of Democrats who opposed it.[29] Despite the public's wide disagreement, the action has no immediate domestic impacts. In the future, it could indirectly help the coal industry and coal dependent power companies, but it could also adversely affect the coal industry if other signatories to the Paris Agreement erect tariffs against imports of coal in response to the U.S. action.[30]

III. A RADICAL CHANGE IN DIRECTION

A. Political Appointments

Scott Pruitt, President Trump's EPA Administrator, was a fierce critic of the EPA. As Oklahoma's attorney general, he had filed legal challenges to the Obama EPA's regulations. Pruitt shared President Trump's view that the EPA's "out-of-control energy agenda [had] destroyed millions of jobs."[31] Pruitt had also been the chairman of the Rule of Law Defense Fund, an offshoot of the Republican Attorneys General Association that was funded by Freedom Partners, which was in turn funded by oil

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27. Patrick Gallagher, *Pittsburgh Myth, Paris Reality*, SCIENCE (June 8, 2017), http://science.sciencemag.org/content/early/2017/06/07/science.aao0172 [https://perma.cc/WB3Z-DFXW].

28. Scott Clement & Brady Dennis, *Post-ABC poll: Nearly 6 in 10 oppose Trump scrapping Paris agreement*, WASH. POST (June 5, 2017), https://www.washingtonpost.com/news/energy-environment/wp/2017/06/05/post-abc-poll-nearly-6-in-10-oppose-trump-scrapping-paris-agreement/?utm_term=.830b851e10b8.

29. *See* Christopher Flavelle, *What Did Trump Just Do? Paris Climate Withdrawal Explained*, BLOOMBERG (June 1, 2017, 1:21 PM PDT), https://www.bloomberg.com/news/articles/2017-06-01/what-did-trump-just-do-the-paris-climate-withdrawal-explained [http://perma.cc/3BN6-YRY5].

30. Ari Natter, *Trump's EPA Pick Steps Down From Group That Battled the Agency*, BLOOMBERG POLITICS (Jan. 6, 2017, 2:26 PM PST), https://www.bloomberg.com/news/articles/2017-01-06/trump-s-epa-pick-steps-down-from-group-that-battled-the-agency [http://perma.cc/UZ5F-5L9K].

31. *See id.*

billionaires Charles and David Koch and their circle of wealthy conservative benefactors.[32] He also raised money from the oil and gas and coal industries for a super PAC called "Liberty 2.0."[33] After being elected attorney general in 2011, Pruitt disbanded the department's environmental enforcement division.[34] In its place, he established a new "federalism" unit that eventually brought 14 lawsuits against EPA, focusing particularly on regulations that affected the energy industry.[35] The press later reported that he signed several letters to federal officials on his Attorney General letterhead that were drafted by attorneys for Devon Energy, a large Oklahoma natural gas company.[36]

Representing Oklahoma consumers before the Oklahoma Corporation Commission, Pruitt supported Oklahoma Gas and Electric's (OG&E) application to recover the cost of installing scrubbers at its coal-fired plants to comply with EPA's regional haze regulations over the objections of environmental groups who wanted the company to retire the plants. But he opposed the application of Public Service of Oklahoma (PSO) to recover the cost of implementing a settlement with EPA under which it retired one coal-fired plant, rather than install pollution controls, and purchased renewable power to replace the lost capacity.[37] The difference was that OG&E stuck with the Attorney General in his challenge to EPA's regional haze plan while PSO abandoned the challenge upon entering into the settlement agreement with EPA.[38] Pruitt's critics claimed that he had become so committed to his lawsuit against EPA that he was willing to allow OG&E to saddle consumers with the cost of expensive scrubbers to keep a 37-year-old coal-fired unit running.[39]

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32. Mike Soraghan, *Pruitt Acknowledges Raising Money for Super PAC*, E&E NEWS (Jan. 27, 2017), https://www.eenews.net/stories/1060049089 [https://perma.cc/L4ES-7G7H].

33. *See* Mike Soraghan, *Environmental Enforcement got short shrift in Oklahoma under Pruitt*, E&E NEWS (Jan. 18, 2017), https://www.eenews.net/stories/1060048539 [https://perma.cc/L23Z-ZJBQ].

34. Emily Holden, *How Scott Pruitt rode a wave of federalism to power*, E&E NEWS (Jan. 18, 2017), https://www.eenews.net/stories/1060048547 [https://perma.cc/9WM7-S29Q].

35. *See* 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/?utm_term=.290dfeb753a9. *See also* Eric Lipton, *Energy and Regulators on One Team*, N.Y. TIMES (Dec. 7, 2016), http://www.pulitzer.org/files/2015/investigative-reporting/lipton/02lipton2015.pdf [https://perma.cc/G798-2PZ7].

36. *See* Benjamin Storrow, *Inside Pruitt's Conflicting Approaches to Okla. Energy Cases*, E&E NEWS (Jan. 17, 2017), https://www.eenews.net/stories/1060048459 [https://perma.cc/TU8T-CTHH].

37. *See id.*

38. *See id.*

39. *See* Kevin Bogardus, *Environmental Groups Ramp Up Campaign Against Pruitt*, E&E NEWS (Jan. 17, 2017), https://www.eenews.net/greenwire/stories/1060048505?t=https%3A%2F%2Fwww.eenews.net%2Fstories%2F1060048505. *See also* Kevin Bogardus

Environmental groups strongly opposed the appointment.[40] With the financial assistance of hedge fund billionaire Tom Steyer, they ran television advertisements 1642 times in seven states pointing out that Pruitt had received campaign contributions totaling more than $300,000 from oil and coal companies and the Koch brothers.[41] The National Association of Manufacturers responded with an ad campaign supporting Pruitt's nomination.[42]

At his confirmation hearings, Pruitt said that he did not "believe climate change is a hoax."[43] It was instead a topic "subject to continuing debate and dialogue."[44] In a March 2017 television interview, however, Pruitt said that he did not think that anthropogenic GHG emissions were "a primary contributor to the global warming that we see."[45] He concluded that "we need to continue the debate and continue the review and analysis."[46] In a carefully written response to the Senate Environment and Public Works Committee, Pruitt stated that "[t]he climate is changing and human activity impacts our changing climate in some manner," but "[t]he ability to measure with precision the degree and extent of that impact, and what to do about it, are subject to continuing debate and dialogue."[47] Soon after he was confirmed,

& Geof Koss, *Groups intensify ideological battle over Pruitt*, E&E NEWS (Jan. 12, 2017), https://www.eenews.net/stories/1060048303/ [https://perma.cc/6CNS-GNAW].

40. *See* Anne C. Mulkern, *Steyer ads target EPA Nominee's oil ties in ads*, E&E NEWS (Jan. 16, 2017), https://www.eenews.net/greenwire/stories/1060048409?t=https%3A%2F%2Fwww.eenews.net%2Fspecial_reports%2Fpowershift%2Fstories%2F1060048409. *See also* Kevin Bogardus, *Ad War waged Over Pruitt's Nomination*, E&E NEWS (Feb. 16, 2017), https://www.eenews.net/stories/1060050196 [https://perma.cc/243T-KX8T].

41. *See* Kevin Bogardus, *Enviros, industry ready for battle over Pruitt*, E&E NEWS (Jan. 17, 2017), https://www.eenews.net/eedaily/stories/1060048467?t=https%3A%2F%2Fwww.eenews.net%2Fstories%2F1060048467.

42. Kevin Bogardus, *Human Impact on Climate Change Up for Debate—Pruitt*, E&E NEWS (Jan. 18, 2017), https://www.eenews.net/special_reports/powershift/stories/1060048581 [https://perma.cc/PS8G-389D].

43. *Id.*

44. Chris Mooney & Brady Dennis, *On Climate Change, Scott Pruitt Causes an Uproar – and Contradicts EPA's Own Website*, WASH. POST (Mar. 9, 2017), https://www.washingtonpost.com/news/energy-environment/wp/2017/03/09/on-climate-change-scott-pruitt-contradicts-the-epas-own-website/?utm_term=.fe52f29c0413 [http://perma.cc/RCN3-DH9M].

45. *Id.*

46. Emily Holden & Nina Heikkinen, *Pruitt questions warming, leaves wiggle room on CO2 finding*, E&E NEWS: CLIMATEWIRE (Jan. 26, 2017), https://www.eenews.net/climatewire/stories/1060049016?t=https%3A%2F%2Fwww.eenews.net%2Fstories%2F1060049016.

47. Emily Holden, *Pruitt gets hero's welcome at conservative confab*, E&E NEWS (Feb. 27, 2017), https://www.eenews.net/eedaily/2017/02/27/stories/1060050572.

Pruitt announced at the Conservative Political Action Conference that the Clean Power Plan was among the regulations "that in the near term need to be rolled back in a very aggressive way."[48] Fearing violent retaliation from environmental activists, Pruitt demanded 24/7 protection from bodyguards pulled from the agency's enforcement office.[49]

President Trump belatedly nominated Andrew Wheeler to be the agency's Deputy Administrator.[50] A former chief counsel to the Senate Committee on Environment and Public Works under Chairman James Inhofe (R-Oklahoma), Wheeler had spent the past eight years as a lobbyist for the electric power industry and Murray Energy company, one of the most aggressive critics of EPA regulation of fossil fuel-fired power plants.[51] The Competitive Enterprise Institute strongly supported Wheeler's appointment, but some environmental groups found the nomination to be "absolutely horrifying."[52] To head the Office of Air and Radiation, Trump appointed Bill Wehrum, an attorney who represented the American Petroleum Institute.[53] After being nominated, Wehrum told the press that he did not believe that Congress had given EPA authority to regulate GHG emissions.[54]

President Trump appointed former Texas governor Rick Perry to be his Secretary of Energy.[55] Perry's acceptance of the position was ironic because he had advocated abolishing the department when he ran for president in 2012.[56] A graduate of Texas A&M University with an undergraduate degree in animal science, Perry had most recently been a contestant on "Dancing With the Stars."[57] As a candidate in the 2016 presidential primaries, he had referred to Donald Trump as "a barking carnival act," but he later campaigned

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48. *See* Robin Bravender, *Pruitt wants 24/7 bodyguards*, E&E NEWS (Feb. 20, 2017), https://www.eenews.net/stories/1060050315 [http://perma.cc/84RD-2W84].

49. *See* Kevin Bogardus, *Right Thrilled as Trump Taps Former Coal Lobbyist for Top Post*, E&E NEWS (Oct. 6, 2017), https://www.eenews.net/eedaily/2017/10/06/stories/1060062849 [https://perma.cc/X9ML-GVG9].

50. *See id.*

51. *Id.*

52. *See* Juan Carlos Rodriguez, *Trump Nominates Hunton & Williams Atty for EPA Air Job*, LAW 360 (Sept. 7, 2017), https://www.law360.com/articles/961877/trump-nominates-hunton-williams-atty-for-epa-air-job [http://perma.cc/73F9-5429].

53. *See* Niina Heikkinen, *Air nominee doesn't think agency should regulate GHGs*, E&E NEWS: CLIMATEWIRE (Sept. 8, 2017), https://www.eenews.net/climatewire/stories/1060060091?t=https%3A%2F%2Fwww.eenews.net%2Fstories%2F1060060091.

54. *See* Coral Davenport, *Rick Perry, Ex-Governor of Texas, is Trump's Pick as Energy Secretary*, N.Y. TIMES (Dec. 13, 2016), https://www.nytimes.com/2016/12/13/us/politics/rick-perry-energy-secretary-trump.html [hereinafter Davenport, *Rick Perry*].

55. *See id.*

56. *See id.*

57. *Id.*

for Trump in the general election.[58] As governor, Perry strongly opposed EPA's efforts to regulate GHG emissions, and in 2005 he issued an executive order to speed up permitting of 18 new coal-fired power plants, 15 of which were ultimately cancelled after environmental groups challenged them.[59] But he also supported a massive publicly funded build-out of transmission lines to West Texas called the "Competitive Renewable Energy Zone" to enable wind power to reach major metropolitan areas in the state.[60] In his 2010 book, Perry referred to the scientific consensus that human activities caused global warming as a "contrived phony mess."[61] By the time of his confirmation, however, he testified that "it's not settled science," and he did not "mind being skeptical about things."[62]

A representative of the coal and electric power industry praised the nomination as "a good pick."[63] Pointing out that Perry had been a beneficiary of large campaign contributions from energy companies and their executives, environmental groups opposed the nomination, calling Perry "completely unfit to run an agency he sought to eliminate."[64]

B. Concerns for Scientific Integrity During the Transition

Fearing that the incoming administration would remove valuable information on climate change from the agency websites, scientists and database experts

58. *See* Joe Ryan & Brian Eckhouse, *Climate Skeptic Perry Seen as Unlikely Ally of Clean Energy*, BLOOMBERG: NEW ENERGY FINANCE (Dec. 15, 2016), https://about.bnef.com/blog/climate-skeptic-perry-seen-as-unlikely-ally-to-clean-energy/ [http://perma.cc/R6N8-J5SQ]. *See also* Mike Lee & Edward Klump, *Perry's rebirth from 'oops' to Energy shows his political skills*, E&E NEWS (Dec. 14, 2016), https://www.eenews.net/stories/1060047159 [http://perma.cc/959U-Y5LB].

59. Daniel Cusick, *Perry Oversaw a Texas Wind Miracle – But Did He Lead It?*, E&E NEWS: CLIMATEWIRE (Dec. 14, 2016), https://www.eenews.net/climatewire/stories/1060047166?t=https%3A%2F%2Fwww.eenews.net%2Fstories%2F1060047166. Juliet Eilperin & Steven Mufson, *Trump taps former Texas Gov. Rick Perry to head Energy Department he once vowed to abolish*, WASH. POST (Dec. 13, 2016), https://www.washingtonpost.com/news/energy-environment/wp/2016/12/13/trump-taps-former-texas-gov-rick-perry-to-head-energy-department-he-once-vowed-to-abolish/.

60. Davenport, *Rick Perry*, *supra* note 54.

61. Umair Irfan, *Perry Says "I don't mind being skeptical" on warming*, E&E NEWS: CLIMATEWIRE (June 22, 2017), https://www.eenews.net/climatewire/stories/1060056421/.

62. Hannah Northey, *Rick Perry to Lead agency he promised to kill—source*, E&E NEWS: GREENWIRE (Dec. 13, 2016), https://www.eenews.net/greenwire/stories/1060047131?t=https%3A%2F%2Fwww.eenews.net%2Fstories%2F1060047131.

63. Eilperin & Mufson, *supra* note 59. Northey, *supra* note 62.

64. *See* Dennis, *supra* note 5.

spent the two months between the election and the inauguration preserving that information on separate websites to make it available to the public in the future.[65] They were outraged that the Trump transition team at the Department of Energy had requested the names of agency employees who had participated in international climate discussions and worked on the science underlying EPA climate disruption regulations.[66] Although the request was later withdrawn,[67] climate scientists were concerned that the incoming administration would attempt to deter government scientists from their research and undermine the consensus in the scientific community that human activities contributed to climate disruption.[68]

C. Scrubbing Agency Websites

The fears were well-founded. Within hours of the inauguration, all mention of climate change and government attempts to deal with it was removed from the White House website.[69] At the same time, incoming officials made verbal requests to EPA web managers to take down pages on the agency's website devoted to climate change, but they backed off when the career employees demanded that they put their requests in writing.[70] Within weeks, however, EPA's website experienced subtle changes, such as the disappearance of references to President Obama's Climate Action

65. *See id. See also* Todd Shields & Jennifer A. Dlouhy, *Energy Department rejects Trump's request for names of those who worked on climate agenda*, BLOOMBERG (Dec. 13, 2016), https://www.pressherald.com/2016/12/13/energy-department-rejects-trumps-request-for-names-of-those-who-worked-on-climate-agenda/ [http://perma.cc/3M6S-ZLQG]. *See also* Coral Davenport, *Climate Change Conversations are Targeted in Questionnaire to Energy Department*, N.Y. TIMES (Dec. 9, 2016), https://www.nytimes.com/2016/12/09/us/politics/climate-change-energy-department-donald-trump-transition.html.

66. *See* Chris Mooney & Juliet Eilperin, *Trump transition says request for names of climate scientists was "not authorized,"* WASH. POST (Dec. 14, 2016), https://www.washingtonpost.com/news/energy-environment/wp/2016/12/14/trump-transition-says-request-for-names-of-climate-scientists-was-not-authorized/?utm_term=.367c15e88190 [http://perma.cc/87H9-SPCH].

67. *See* Eric Holthaus, *Why I'm trying to preserve federal climate data before Trump takes office*, WASH. POST (Dec. 13, 2016), https://www.washingtonpost.com/posteverything/wp/2016/12/13/why-im-trying-to-preserve-federal-climate-data-before-trump-takes-office/ [http://perma.cc/UN2R-ZYNV].

68. *See* Jeffrey Kluger & Justin Worland, *How a War on Science Could Hurt the U.S. – and Its Citizens*, TIME (Feb. 13. 2017), http://time.com/4657656/how-a-war-on-science-could-hurt-the-u-s-and-its-citizens/.

69. *See* Brady Dennis & Juliet Eilperin, *Trump administration backs off plan to scrub climate pages from EPA website*, WASH. POST (Jan. 25, 2017), https://www.washingtonpost.com/news/energy-environment/wp/2017/01/25/trump-administration-backs-off-plan-to-scrub-climate-pages-from-epa-website/.

70. *See* Brian Kahn, *The EPA Has Started to Remove Obama-Era Information*, CLIMATE CENTRAL (Feb. 2, 2017), http://www.climatecentral.org/news/epa-climate-web-pages-change-21133 [http://perma.cc/52KH-FZYA].

Plan.[71] In late April 2017, EPA removed several pages containing descriptions of climate disruption and climate-related scientific data.[72] Former Administrator, Gina McCarthy called it a "wholesale wiping out of the historical record of what this agency has been doing with public dollars for decades, not just the past eight years."[73] In May, the agency removed the climate change link from the "Effects of Air Pollution" section on EPA's list of "Environmental Topics."[74] In September 2017, EPA amended the website for an industry-government program to enhance truck efficiency to replace words like "climate change" and "greenhouse gas emissions" with words like "sustainability" and "pollution."[75] In October, the agency removed pages detailing approaches for mitigating and adapting to climate change from its webpage offering resources for state and local government.[76] Similarly, the National Institutes for Environmental Health Sciences removed several pages on the relationship between climate change and adverse public health effects from its website.[77] Pie charts on the Department of Energy's website showing the link between coal and GHG emissions were quietly removed.[78] The Department also removed the words "clean energy" from many of its pages and deleted the

71. *See* Chris Mooney & Juliet Eilperin, *EPA website removes climate science site from public view after two decades*, WASH. POST: ENERGY & ENV'T (Apr. 29, 2017), https://www.washingtonpost.com/news/energy-environment/wp/2017/04/28/epa-website-removes-climate-science-site-from-public-view-after-two-decades/?utm_term=.f74e21efd3f2 [http://perma.cc/VD78-TPN7].

72. Hannah Hess, *McCarthy slams Trump's "unprecedented" webpage overhaul*, E&E NEWS (May 2, 2017), https://www.eenews.net/stories/1060053924/.

73. Niina Heikkinen, *EPA Just Scrubbed Even More Mentions of Climate from Its Web Site*, E&E NEWS: CLIMATEWIRE (May 8, 2017), https://www.eenews.net/climatewire/stories/1060054162 [http://perma.cc/MQ4J-CE46].

74. Camille von Kaenel, *Agency Nixes "Climate" from Website for Trucking*, E&E NEWS: CLIMATEWIRE (Sept. 22, 2017), https://www.eenews.net/stories/1060061409.

75. *See* Lisa Friedman, *E.P.A. Scrubs a Climate Website of 'Climate Change,'* N.Y. TIMES: CLIMATE (Oct. 20, 2017), https://www.nytimes.com/2017/10/20/climate/epa-climate-change.html.

76. *See* Scott Waldman, *Agency defends website changes on climate*, E&E NEWS: CLIMATEWIRE (Aug. 23, 2017), https://www.eenews.net/climatewire/stories/1060059079.

77. *See* Amy Harmon, *The Rush to Uncover, and Save "Dark Data,"* NY TIMES: CLIMATE (Mar. 7, 2017), https://www.nytimes.com/2017/03/06/science/donald-trump-data-rescue-science.html.

78. Christa Marshall, *DOE: Agency axes "clean energy" from tech websites*, E&E NEWS: GREENWIRE (May 30, 2017), https://www.eenews.net/stories/1060055293 [http://perma.cc/D7KT-K4SQ].

word "Clean" from its Clean Energy Investment Center.[79] And in June 2017, it revamped its website to emphasize fossil fuels over renewables.[80]

D. Executive Order on Promoting Energy Independence and Economic Growth. E.O. 13783

On March 28, 2017, President Trump signed an executive order on "Promoting Energy Independence and Economic Growth" that makes the new administration's priorities crystal clear. The order requires all departments and agencies to review existing regulations, orders, guidance documents, and other policy instruments "that potentially burden the development and use of domestically produced energy resources, with particular attention to oil, natural gas, coal, and nuclear energy resources."[81] As soon as practicable, the agencies and departments have to "suspend, revise, or rescind" those actions that unnecessarily burden the development and use of domestically produced energy resources. The president ordered EPA Administrator Pruitt to "immediately take all steps necessary to review and as soon as practicable suspend, revise or rescind" the CPP for CO_2 emissions from existing fossil fuel-fired power plants, the model trading rules for states to use in implementing the CPP, and the NSPS for power plants that specified emissions limitations for new and modified fossil fuel-fired power plants.[82] Finally, the order suggests that the Attorney General provide notice of the executive order and any EPA action taken pursuant to it to the D.C. Circuit, which was reviewing those rules, and request stays pending the completion of EPA's reviews.[83]

In issuing the Executive Order, President Trump was apparently playing to his Republican base. A February 2017 poll revealed that only 25 percent of Trump voters believed that anthropogenic GHG emissions were causing global warming.[84] But the climate-change-denying base was only a small minority of American public. In the same poll, 65 percent of all voters believed that GHG emissions caused global warming.[85] A March 2017 Gallup poll found that 68 percent of respondents believed that climate change was driven by human activities (the highest percentage of any Gallup poll),

79. *See* Christa Marshall, *Overhauled Website Boosts Fossil Fuels Over Climate*, E&E NEWS: GREENWIRE (June 5, 2007), https://www.eenews.net/stories/1060055547.
80. Exec. Order No. 13783 § 2(a), 82 FR 16093 (Mar. 28, 2017).
81. *Id.* § 2(g).
82. *Id.* § 4(a).
83. *See id.* § 4(d).
84. *See* Kavya Balaraman, *Most Trump voters see climate as an 'alternative fact,'* E&E NEWS: CLIMATEWIRE (Feb. 6, 2017), https://www.eenews.net/climatewire/2017/02/06/stories/1060049581.
85. *See id.*

and only 29 percent attributed it to natural causes.[86] An April 2017 Quinnipiac poll of more than 1000 voters found that 65 percent believed that climate change was caused by human activities.[87] And a large poll of more than 1200 adults conducted by the Yale Program on Climate Change Communication and the George Mason University Center for Climate Change Communication in April 2017 found that 70 percent of respondents thought climate change was happening and that 58 percent thought that it was mostly caused by humans.[88]

As we learned in the 2016 election, however, public opinion polls do not necessarily predict how voters perform at the polls. Issues other than climate disruption may motivate people to vote for a climate change denying candidate. Thus, while the Trump Administration's attempts to turn back the clock on climate disruption probably delighted his base, it may not cost him many votes among Republicans who believe in human-caused climate change or among independent voters who tend to vote Republican for other reasons.

E. Pulling Back the Clean Power Plan

EPA got right to work on implementing the executive order. Had it gone into effect in a timely fashion, the CPP might have been the most significant environmental regulation promulgated under the Clean Air Act. The highly complex final rule flowed from a series of steps that the agency took during the Obama administration in response to the Supreme Court's landmark holding in *Massachusetts v. EPA.* In that case, the Court held that GHGs, including carbon dioxide (CO_2), were "pollutants" under

86. *See* Chelsea Harvey, *Earth's Temperatures are Continuing to Rise – and So Are Americans' Worries About It*, WASH. POST: ENERGY AND ENV'T (Mar. 15, 2017), https://www.washingtonpost.com/news/energy-environment/wp/2017/03/15/earths-temperatures-are-continuing-to-rise-and-so-are-americans-worries-about-it/?utm_term=.8a88c0b546b5 [http://perma.cc/4F3Z-5MYX].

87. *See* Scott Waldman, *Most Americans Oppose Climate Science Cuts*, E&E NEWS: CLIMATEWIRE (Apr. 6, 2017), https://www.scientificamerican.com/article/most-americans-oppose-climate-science-cuts/ [http://perma.cc/XQD8-AKG8].

88. *See* ANTHONY LEISEROWITZ, ET. AL., CLIMATE CHANGE IN THE AMERICAN MIND 3 (Yale Univ. & George Mason Univ.) (Climate Change in the American Mind (May 2017) (New Haven, CT: Yale Program on Climate Change Communication & George Mason University Center for Climate Change Communication), https://www.climatechange communication.org/wp-content/uploads/2017/07/Climate-Change-American-Mind-May-2017.pdf [http://perma.cc/X3TG-FK8Q].

the Clean Air Act.[89] In December 2009, EPA published a formal finding that greenhouse gas emissions "endangered" human health and the environment,[90] and the D.C. Circuit upheld that finding in June 2012.[91] With the publication of the finding, EPA Administrator Lisa Jackson announced that the agency was "now authorized and obligated to make reasonable efforts to reduce greenhouse gas pollutants under the Clean Air Act."[92] Among other things, the finding triggered the obligation of EPA and state agencies administering EPA's prevention of significant deterioration (PSD) program to consider GHG emissions in issuing permits for new and modified major stationary sources.[93] After the Supreme Court rejected EPA's ill-conceived "tailoring rule,"[94] EPA and state permitting agencies were left with the obligation to factor GHG emissions into their "best available control technology" (BACT) determinations for all new and modified power plants that emitted more than 100 tons per year of sulfur dioxide (SO2), oxides of nitrogen (NOx) or particulate matter (PM) or more than 75,000 tons per year of CO_2.[95]

The next step for EPA was to promulgate an NSPS for new and modified power plants that addressed GHG emissions. In August 2015, EPA promulgated standards for all new and modified fossil fuel-fired electricity generating units ("EGUs").[96] As a practical matter, the standards established a floor for BACT determinations for new and modified plants in the PSD program.[97] Having established a NSPS for new sources, the agency had an obligation

89. Massachusetts v. EPA, 127 U.S. 1438, 1477 (2007).

90. Environmental Protection Agency, Endangerment and Cause or Contribute Findings for Greenhouse Gases Under Section 202(a) of the Clean Air Act, 74 Fed. Reg. 66,496, 66,496 (Dec. 15, 2009) (to be codified at 40 C.F.R. ch. I).

91. Coalition for Responsible Regulation, Inc. v. EPA, 684 F.3d 102, 115 (D.C. Cir. 2012).

92. David A. Patten, *Climate Change Ruling Threatens to Chill U.S. Economy*, NEWSFRONT (Dec. 7, 2009), http://www.newsmax.com/Newsfront/climate-obama-economy-us/2009/12/07/id/337658/ [https://perma.cc/W6UU-8KKU].

93. Reconsideration of Interpretation of Regulations That Determine Pollutants Covered by Clean Air Act Permitting Programs, 75 Fed. Reg. 17,004, 17,006 (Apr. 2, 2010) (to be codified at 40 C.F.R. pt. 50, 51, 70, and 71).

94. Utility Air Regulatory Group v. EPA, 134 U.S. 2427, 2436 (2014).

95. Memorandum from Janet G. McCabe and Cynthia Giles to Regional Administrators (Jul. 24, 2014).

96. Standards of Performance for Greenhouse Gas Emissions from New, Modified, and Reconstructed Stationary Sources: Electric Utility Generating Units, 80 Fed. Reg. 64,510, 64,510 (Oct. 23, 2015) (to be codified at 40 C.F.R. pts. 60, 70, 71, and 98). The standard of performance for newly constructed coal-fired EGUs was 1,400 pounds of CO_2 per megawatt hour (lb/MWh) based on an "efficient new supercritical pulverized coal utility boiler implementing partial carbon capture and storage." *Id.* at 64, 512. The standard for new gas-fired plants was based on natural gas combined cycle technology. *Id.* at 64, 612.

97. 42 U.S.C. § 7479(3)(1990).

under section 111(d) of the statute to promulgate guidance for state plans addressing GHG emissions from existing fossil fuel-fired power plants.[98] At the same time that it finalized the NSPS, the agency finalized guidelines for existing sources.[99]

The so-called Clean Power Plan for existing sources covered both coal- and gas-fired electricity generating units (EGUs) and states containing such units in the continental United States other than Vermont and D.C., which lacked such units.[100] The regulations had three main elements. First, they set out CO_2 emission performance rates for coal-fired steam generating units and gas-fired combustion turbines reflecting the agency's determination of the "best system of emissions reduction" (BSER) that had been "adequately demonstrated" for those two subcategories. The regulations phased in the performance rates over the years 2022 through 2030. Second, the regulations specified CO_2 emissions goals for each state expressed as both emission rates and as total mass based on each state's mix of affected EGUs and the two performance rates. Finally, they provided guidelines for the affected states to use in developing and submitting for EPA approval state plans implementing the emission performance rates "either through emission standards for affected EGUs, or through measures that achieve the equivalent, in aggregate, of those rates as defined and expressed in the form of the state goals."[101] In other words, a state could meet its rate-based goal by imposing technology-based emissions limitations on individual electricity generating units or meet its mass-based goal by establishing an acceptable cap-and-trade program.

The affected states have until September 2018 to submit their plans, after which EPA has a year to review them. The plans can require generating units to begin making reductions by as late as 2022 so long as they met the final goals by 2030.[102] The plan also created a Clean Energy Incentive Program (CEIP) that allowed states to award allowances (for cap-and-trade regimes) and "emission rate credits" (for rate-based requirements) to "qualified providers" that made early investments in renewable energy or implemented demand-side energy efficiency programs in low-income

98. 42 U.S.C. § 7411(d)(1) (2017).
99. Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units, 80 Fed. Reg. 64,662, 64,663 (Oct. 23, 2015) (to be codified at 40 C.F.R. pt. 60).
100. *Id.* at 64,664.
101. *Id.* at 64,666.
102. *Id.* at 64,669.

communities.[103] The allowances and credits, however, were capped at 300 million tons of CO_2 emissions nationwide.[104] The preamble to the regulations put off for another day the agency's explanation of how the CEIP would operate in the real world.[105] EPA predicted that the regulations would reduce CO_2 emissions from the electric power sector by 22 to 23 percent below 2005 levels in 2020, 28 to 29 percent below 2005 levels in 2025, and 32 percent below 2005 levels in 2030.[106]

1. Requesting a Stay from the D.C. Circuit

On the same day that President Trump signed Executive Order 13783, the Department of Justice asked the D.C. Circuit to stay its consideration of the CPP, even though the court had already heard oral arguments in an *en banc* proceeding.[107] The government lawyers told the court that EPA needed time to conduct the regulatory reviews mandated by the executive order.[108] The agency's brief noted that holding the proceedings in abeyance would, "promote judicial economy by avoiding unnecessary adjudication and will support the integrity of the administrative process."[109] Industry groups and states challenged the CPP supported the motion.[110] Environmental groups objected to the motion and urged the court to decide the case forthwith.[111] On April 28, 2017, the D.C. Circuit granted EPA's motion to stay the litigation, thereby giving the agency a chance to rescind the regulation before the court ruled on its legality.[112] The court gave the parties 60 days to file briefs on whether the court should continue the stay or remand the

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103. *Id.* at 64,670.
104. *Id.*
105. *Id.*
106. *Id.* at 64,679.
107. *EPA Cites Trump Order in Bid to Halt D.C. Circuit Utility Rule Suits*, INSIDE EPA (Mar. 29, 2017), https://insideepa.com/daily-news/epa-cites-trump-order-bid-halt-dc-circuit-utility-ghg-rule-suits [hereinafter *EPA Cites*]; Andrew Harris & Jennifer A. Dlouhy, *Trump Administration, Asks Court to Halt Clean Power Plan Review*, BNA: ENERGY AND CLIMATE REP. (Mar. 29, 2017), https://www.bloomberg.com/news/articles/2017-03-29/trump-administration-asks-court-to-halt-clean-power-plan-review.
108. *EPA Cites*, *supra* note 107; Harris & Dlouhy, *supra* note 107.
109. *EPA Cites*, *supra* note 107.
110. Juan Carlos Rodriguez, States, Industry Groups Ask DC Circ. To Put Off CPP Ruling, LAW360 (Apr. 6, 2017), https://www.law360.com/articles/911013/states-industry-groups-ask-dc-circ-to-put-off-cpp-ruling [https://perma.cc/C6GR-9MD5].
111. Juan Carlos Rodriguez, *Enviros Urge DC Circ. To Decide Clean Power Plan Case*, LAW 360 (Aug. 4, 2017), https://www.law360.com/articles/951535/enviros-urge-dc-circ-to-decide-clean-power-plan-case [https://perma.cc/TNC8-J2E3].
112. Keith Goldberg, *DC Circ. Pauses Clean Power Plan Litigation*, LAW 360 (Apr. 28, 2017), https://www.law360.com/articles/918478/dc-circ-pauses-clean-power-plan-litigation.

case to EPA.[113] The court issued another order in August 2017 holding the lawsuit in abeyance for another 60 days.[114]

2. Reversing Endangerment Finding

Recognizing that the BACT requirement for new and modified power plants could stymie new power plant construction, conservative think tanks and long-time climate disruption deniers urged Administrator Pruitt to reverse the endangerment finding that triggered all GHG regulation under the CAA.[115] The Competitive Enterprise Institute filed a formal petition in February 2017 asking EPA to rescind the endangerment finding.[116] Although the White House initially considered a favorable response, EPA has so far declined to go that far, despite several nudges from the petitioners and criticism from conservative groups.[117] At his confirmation hearings, Pruitt testified that the endangerment finding was the law of the land and therefore, "must be respected."[118] To the chagrin of conservative groups, Pruitt reportedly removed a directive to revisit the endangerment finding

113. Ellen M. Gilmer, *Litigation's Fate Still Uncertain as Enviros Chart Options*, E&E NEWS: CLIMATEWIRE (May 1, 2017), https://www.eenews.net/stories/1060053811 [ ].

114. Environmental Protection Agency, Repeal of Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units; Proposed Rule, 82 Fed. Reg. 198 (2017), at 48035; Judges Suggest High Court Path for CPP Supporters to Win Rule's Release, INSIDE EPA (Aug. 11, 2017), https://insideepa.com/daily-news/judges-suggest-high-court-path-cpp-supporters-win-rules-release.

115. *Emboldened by Pruitt Pick, Conservatives Renew Calls to Scrap GHG Finding*, INSIDE EPA (Dec. 9, 2016), https://insideepa.com/daily-news/emboldened-pruitt-pick-conservatives-renew-calls-scrap-ghg-finding [hereinafter *Emboldened*].

116. Petition of the Competitive Enterprise Institute and the Science and Environmental Policy Project for Rulemaking on the Subject of Greenhouse Gases and Their Impact on Public Health and Welfare in Connection with EPA's 2009 Endangerment Finding, Feb. 17, 2017.

117. Arianna Skibell, *Foes of Endangerment Finding "Nudge" Pruitt*, E&E NEWS: GREENWIRE (Aug. 15, 2017), https://www.eenews.net/greenwire/stories/1060058798?t=https%3A%2F%2Fwww.eenews.net%2Fstories%2F1060058798; Coral Davenport, *Scott Pruitt Faces Anger from Right Over E.P.A. Finding He Won't Fight,* N.Y. TIMES: CLIMATE (Apr. 12, 2017), https://www.nytimes.com/2017/04/12/climate/scott-pruitt-epa-endangerment-finding.html [https://perma.cc/59WD-RH86] [hereinafter Davenport, *Scott Pruitt*].

118. *Hearing on Nomination of the Attorney General Scott Pruitt to be Administrator of the U.S. Environmental Protection Agency*: S. HRG 115-1, (2017).

from a draft of Executive Order 13783.[119] And the *New York Times* reported that "a chorus of more pragmatic voices inside the administration and industry" insisted that reversing the endangerment finding "would be a legal morass with an uncertain outcome."[120]

It would in fact be exceedingly difficult to reverse the endangerment finding in a credible way, given the overwhelming consensus among climate scientists that anthropogenic emissions are in fact contributing to serious climate disruption, the even stronger evidence that has become available since the original 2009 endangerment finding, and the demise of the "hiatus" theory that for several years propped up the climate change deniers' claims.[121] In a concurring opinion to the D.C. Circuit's decision to hold the challenge to the CPP in abeyance, Judges Tatel and Millett reminded EPA that the D.C. Circuit had already upheld Administrator Jackson's endangerment finding in the litigation involving its triggering and tailoring rules.[122] Any contrary finding would likewise have to survive judicial review on a record that demonstrated that GHG emissions no longer endangered public health or the environment.

Some industry groups that supported relaxation of environmental requirements worried that an attempt to undo the endangerment finding would bog down the agency in an unwinnable war and would allow environmental groups to paint Republicans as extremists in the climate change debates.[123] It would also create even more uncertainty about the obligations of electric power companies that would make it difficult to engage in the long-range planning required of large capital expenditures.[124] Even the editorial page of the *Wall Street Journal* warned that "creating a legally bulletproof non-

119. Davenport, *Scott Pruitt*, *supra* note 117; Robin Bravender, *Conservative Civil War Brews Over Climate Policies*, E&E NEWS (Mar. 28, 2017), https://www.eenews.net/stories/1060052200.

120. Lisa Friedman, *Trump Wants to Repeal Obama's Climate Plan. The Next Fight: Its Replacement*, N.Y. TIMES: CLIMATE (Sept. 28, 2017), https://www.nytimes.com/2017/09/28/climate/clean-power-plan.html [https://perma.cc/DLH6-LEHS].

121. Scott Waldman, *Trashing EPA's Endangerment Finding Would Be Tough*, E&E NEWS (July 18, 2017), https://www.eenews.net/stories/1060057523; *Emboldened, supra* note 115 (quoting Michael Gerrard, Columbia University School of Law).

122. Keith Goldberg, *Trump's Clean Power Plan Repeal Will Face Legal Gantlet*, LAW 360 (Oct. 10, 2017), https://www.law360.com/articles/972687/trump-s-clean-power-plan-repeal-will-face-legal-gantlet [hereinafter Goldberg, *Trumps Clean Power Plan*]; *see* Coal. for Responsible Regulation, Inc. v. EPA, 684 F.3d 102 (D.C. Cir. 2012).

123. Zack Colman, *It's Finally Getting the Ax. But Climate Skeptics Want More*, E&E NEWS (Oct. 10, 2017), https://www.eenews.net/stories/1060063101 [hereinafter Colman, *It's Finally Getting the Ax.*].

124. Abby Smith, *Clean Power Plan Only First Target for Foes of Climate Rules*, BNA DAILY ENV. & ENERGY REP. (Oct. 11, 2017), https://bnanews.bna.com/environment-and-energy/clean-power-plan-only-first-target-for-foes-of-climate-rules [https://perma.cc/
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endangerment rule would consume a tremendous amount of EPA resources."[125]

Administrator Pruitt's current effort to assemble a "red team/blue team" debate over the scientific underpinnings of the endangerment finding may reflect a backdoor strategy for bypassing the scientific consensus and putting the endangerment finding back on the table.[126] In a widely read op-ed in the *Wall Street Journal*, prominent climate change skeptic, Steve Koonin, suggested that EPA might assign a red team of scientists who are skeptical of climate change claims to review and critique documents like the federal government's National Climate Assessment or the most recent report of the Intergovernmental Panel on Climate Change and assign a blue team of mainstream scientists to rebut the red team's assessment. An appointed commission would "coordinate and moderate the process and then hold public hearings to highlight points of agreement and disagreement, as well as steps that might resolve the latter."[127] Koonin argued that the red team/ blue team approach would be more rigorous than traditional peer review and would "allow the public and decision makers a better understanding of certainties and uncertainties."[128]

After meeting with Koonin in April 2017,[129] Administrator Pruitt announced in a June 2017 interview with Breitbart Radio that the American people deserved "a true, legitimate, peer-reviewed, objective, transparent discussion about" climate change and that the red team/blue team approach was a good vehicle for achieving that goal.[130] Energy Secretary Rick Perry quickly

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125. *Highway from the Endangerment Zone: Scott Pruitt is Right to Avoid a Fight Over an Anti-CO_2 EPA Finding*, WALL ST. J. (Apr. 19, 2017), https://www.wsj.com/articles/highway-from-the-endangerment-zone-1492555808.

126. Scott Waldman, *"Red Teams" Gain Prominence to Question Climate Science*, E&E NEWS: CLIMATEWIRE (June 29, 2017), https://www.eenews.net/climatewire/stories/1060056782 [hereinafter Waldman, *'Red Teams' Gain Prominence to Question*].

127. Steven Koonin, *A "Red Team" Exercise Would Strengthen Climate Science*, WALL ST. J. (Apr. 20, 2017), https://www.wsj.com/articles/a-red-team-exercise-would-strengthen-climate-science-1492728579.

128. *Id.*

129. Brad Plumer & Coral Davenport, *E.P.A. to Give Dissenters a Voice on Climate, No Matter the Consensus*, N.Y. TIMES: CLIMATE (June 30, 2017), https://www.nytimes.com/2017/06/30/climate/scott-pruitt-climate-change-red-team.html [https://perma.cc/4D6U-M3M2].

130. *Will Pruitt Review GHG Endangerment Finding?* INSIDE EPA, (June 6, 2017), https://insideepa.com/daily-feed/will-pruitt-review-ghg-endangerment-finding; Jason Samenow, *EPA's Scott Pruitt Wants to Set Up Opposing Teams to Debate Climate Change Science*, WASH. POST (Jun. 7, 2017), https://www.washingtonpost.com/news/capital-weather-gang/wp/2017/06/07/epas-scott-pruitt-wants-to-set-up-opposing-teams-to-debate-climate-change-science/?utm_term=.ac7fc0882f47 [https://perma.cc/7235-X7V3].

endorsed the idea, as did prominent climate skeptics.[131] Public interest groups opposed the idea as "an act of false equivalence" designed give climate skeptics more credibility with the public than they had in the scientific community.[132] They worried that the debate would become a public spectacle in the genre of "the Scopes trial meets 'the Survivor.'"[133] A professor of atmospheric sciences at the University of Georgia called the idea a "gimmick" and pointed out that climate skeptics were free to express their criticisms in peer reviewed journals and in comments on drafts of the consensus reports.[134] Other climate scientists bemoaned the implicit message underlying the proposal that scientists were members of tribes and that one of the tribes had not had a sufficient say in the development of climate science.[135] Despite the criticism, Pruitt told coal industry executives in late June 2017 that he was going forward with the project.[136] In September, he asked the Heartland Institute, a prominent critic of EPA's climate initiatives, to identify prospective members of the red team.[137] He later told a conservative talk radio host that he was assembling the red and blue teams to challenge what he called "the so-called settled science" on climate change.[138]

3. Early Actions and State Responses

Two days after the president signed Executive Order 13783, Administrator Pruitt wrote a letter to all state governors stating the agency's new policy that "States have no obligation to spend resources to comply with a Rule

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131. Robin Bravender, *Contenders for Pruitt's 'Red Team' Say It Would Be 'A Hoot,'* E&E NEWS: CLIMATEWIRE, (July 25, 2017), https://www.eenews.net/climatewire/stories/1060057852; Umair Irfan, *Perry, Franken Spar Over Warming,* E&E NEWS: CLIMATEWIRE (June 23, 2017), https://www.eenews.net/climatewire/2017/06/23/stories/ 1060056501.

132. Waldman, *'Red Teams' Gain Prominence to Question*, *supra* note 126; Samenow, *supra* note 130 (quoting Peter Frumhoff, Union of Concerned Scientists); *see also* Emily Holden, *Scientists See Proposed Climate Debates as a Trap*, E&E NEWS (July 13, 2017) [hereinafter Holden, *Scientists*].

133. Holden, *Scientists*, *supra* note 132 (quoting Tom Reynolds).

134. Samenow, *supra* note 130 (quoting Marshall Shepherd, University of Georgia).

135. Benjamin Santer, et. al., *Attention Scott Pruitt: Red Teams and Blue Teams Are No Way to Conduct Climate Science*, WASH. POST (June 21, 2017), https://www.washingtonpost.com/news/capital-weather-gang/wp/2017/06/21/attention-scott-pruitt-red-teams-and-blue-teams-are-no-way-to-conduct-climate-science/?utm_term=.ab075c53d529 [https://perma.cc/696Q-JSTZ].

136. Plumer & Davenport, *supra* note 129.

137. Scott Waldman, *EPA Asked Heartland for Experts Who Question Climate Science*, E&E NEWS (Sept. 21, 2017), https://www.eenews.net/stories/1060061307.

138. Timothy Cama, *EPA Head Casts Doubt on "Supposed" Threat from Climate Change,* THE HILL (Aug. 9, 2017), http://thehill.com/policy/energy-environment/345937-epa-head-casts-doubt-on-supposed-threat-from-climate-change [http://perma.cc/Z7TG-M8RJ].

that has been stayed by the Supreme Court of the United States."[139] The letter was a signal to those states that were still drafting plans that they should stand down.[140] In early April, EPA published a notice in the *Federal Register* withdrawing previously published proposals for model trading rules and for the CEIP.[141] Traveling to the mining town of Sycamore, Pennsylvania, Administrator Pruitt told the assembled miners that the "regulatory assault" on coal was over and that the Trump Administration was going to "grow jobs and show the rest of the world how it's done."[142]

Environmental agencies in most of the 27 states that challenged the CPP stopped working on their clean power plans after the election.[143] But many of those states had had already slowed or stopped working on plans when the Supreme Court stayed the rule in February 2016.[144] Other states continued to prepare plans, and some, like California, went beyond what was called for in the CPP.[145] A coalition of 20 states and localities responded with a letter to EPA's General Counsel stating that Pruitt's letter was unlawful because the CPP remained the law of the land until overturned by a court.[146] It further alleged that all of these actions violated Pruitt's obligation to recuse himself from matters upon which he had been on opposite sides of the agency during his term as Oklahoma Attorney General.[147]

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139. Letter from E. Scott Pruitt to Matt Bevin, Mar. 30, 2017, https://www.epa.gov/sites/production/files/2017-03/documents/ky_bevin.pdf [http://perma.cc/HC4P-A4EM]; Emily Holden, *Pruitt Reiterates States Don't Have to Make Plans*, E&E NEWS: CLIMATEWIRE (Mar. 31, 2017), https://www.eenews.net/climatewire/2017/03/31/stories/1060052407 [hereinafter Holden, *Pruitt*].

140. Holden, *Pruitt Reiterates States*, *supra* note 139.

141. Christine Powell, *EPA Yanks CPP-Related Proposals After Trump's Exec. Order*, LAW360 (Mar. 31, 2017), https://www.law360.com/articles/908602/epa-yanks-cpp-related-proposals-after-trump-s-exec-order.

142. Joe Mandak, *EPA Head Tells Coal Miners "Regulatory Assault is Over,"* U.S. NEWS (Apr. 13, 2017), https://www.usnews.com/news/business/articles/2017-04-13/epa-head-tells-coal-miners-regulatory-assault-is-over.

143. Emily Holden, *Even Before Formal Death Knell, Clean Power Plan is History*, E&E NEWS (Jan. 24, 2017), https://www.eenews.net/stories/1060048857/.

144. *Id.*

145. *Id.*

146. Arianna Skibell, *State AGs Urge Pruitt to Retract "Legally Incorrect" Guidance*, E&E NEWS (Aug. 31, 2017), https://www.eenews.net/greenwire/2017/08/31/stories/1060059513.

147. *Id.*

4. The CPP Withdrawal NPRM

On October 9, 2017, EPA Administrator Pruitt flew to Hazard, Kentucky to announce that "[t]he war against coal is over."[148] The EPA would be repealing the CPP.[149] The next morning, he signed a notice of proposed rulemaking (NPRM) to that effect.[150] The agency based the reversal on its conclusion that the CPP rested on an erroneous legal premise that the "best system of emission reduction" could encompass "measures that would generally require power generators to change their energy portfolios through generation-shifting (rather than better equipment or operating their existing plants), including through the creation or subsidization of significant amounts of generation from power sources entirely outside the regulated source categories, such as solar and wind energy."[151] This interpretation raised the possibility that the CPP would "necessitate changes to a State's energy policy, such as a grid-wide shift from coal-fired to natural gas-fired generation, and from fossil fuel-fired generation to renewable generation."[152] Instead, the agency, under new leadership, proposed to interpret the phrase "in a way that is consistent with the Agency's historical practice of determining BSER by considering only measures that can be applied to or at the source."[153] Such measures "must be based on a physical or operational change to a building, structure, facility, or installation at that source, rather than measures that the source's owner or operator *can implement on behalf of* the source at another location."[154]

The notice elaborated on five legal arguments supporting its changed position, most of which mimicked the arguments of the states and companies in their legal challenges to the rule in the D.C. Circuit.[155] First, the agency's narrower interpretation of BSER "accord[ed] with the meaning and application of relevant terms and phrases in CAA section 111 as they are used in other,

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148. Juliet Eilperin & Brady Dennis, *EPA Chief Scott Pruitt Tells Coal Miners He Will Repeal Power Plant Rule Tuesday*, WASH. POST (Oct. 9, 2017), https://www.washingtonpost.com/news/energy-environment/wp/2017/10/09/pruitt-tells-coal-miners-he-will-repeal-power-plan-rule-tuesday-the-war-on-coal-is-over/?utm_term=.adf93587f025 [https://perma.cc/K7J9-EY5K].

149. *Id.*

150. Repeal of Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units, 82 Fed. Reg. 48035 (2017).

151. *Id.* at 48037.

152. *Id.*

153. *Id.*

154. *Id.* at 48039.

155. Lisa Friedman & Brad Plumer, *E.P.A. Announces Bid to Roll Back Emissions Policy*, N.Y. TIMES (Oct. 10, 2017), https://www.nytimes.com/2017/10/09/climate/clean-power-plan.html [https://perma.cc/ND47-WEXB] [hereinafter Friedman & Plumer, *E.P.A. Announces Bid*]; Goldberg, *Trump's Clean Power Plan, supra* note 122.

related sections of the CAA."[156] Second, it better squared with the agency's new view of congressional intent as reflected in the statute's legislative history. Third, it aligned with the agency's new conception of the "prior understanding of CAA section 111 as reflected in the Agency's prior regulatory actions."[157] Fourth, it avoided what the agency now regarded as "illogical results when considered with other provisions of the statute."[158] Finally, it avoided what the agency now regarded as "a policy shift of great significance for the relationship between the federal government and the states" and the relationship between EPA and other federal agencies, like the Federal Energy Regulatory Commission (FERC).[159]

To support the withdrawal, the agency completely revamped its assessment of the benefits of the CPP. The Obama version of the regulatory impact assessment for the regulation estimated the global benefits of the predicted CO_2 emissions reductions, but the Trump version focused exclusively on domestic benefits.[160] And the Trump version limited the Obama version's estimate of the "co-benefits" attributable to corresponding reductions of particulate matter (PM) to the benefits that resulted from reducing the levels of PM in the ambient air up to the national ambient air quality standards for that pollutant and no further.[161] At the same time, the Trump version also increased its cost estimate for the rule from $8.4 billion to more than $33 billion.[162]

The agency did not promise to promulgate a replacement rule that focused exclusively on source-specific measures, but it cautioned that "any potential future rule that regulates GHG emissions from existing EGUs under CAA section 111(d) must begin with a fundamental reevaluation of appropriate

156. Repeal of Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units, 82 Fed. Reg. at 48039.
157. *Id.*
158. *Id.*
159. *Id.*
160. Ellen M. Gilmer, *Legal War Looms as EPA Targets Climate Rule*, E&E NEWS (Oct. 10, 2017), https://www.eenews.net/energywire/2017/10/10/stories/1060063109 [hereinafter Gilmer, *Legal War Looms*].
161. Jennifer Lu, *Axing Power Plan Health Benefits May Signal EPA's Tack*, BNA DAILY ENV. & ENERGY REP. (Oct. 11, 2017), https://bnanews.bna.com/environment-and-energy/axing-power-plan-health-benefits-may-signal-epas-new-tack [https://perma.cc/ZE3F-XNUB].
162. Jennifer A. Dlouhy, *Trump Plays Down Health Hazard in Justifying Climate Rule Repeal*, BNA DAILY ENV. & ENERGY REP. (Oct. 11, 2017), https://www.bloomberg.com/news/articles/2017-10-10/trump-plays-down-health-hazard-in-justifying-climate-rule-repeal [https://perma.cc/TA98-3SBE].

and authorized control measures and recalculation of performance standards."[163] EPA intended to issue an advance notice of proposed rulemaking "in the near future" to entertain comments on systems of emission reduction that would be consistent with its new interpretation of BSER.[164] In announcing the proposed repeal, Administrator Pruitt did not mince words. The Trump Administration was "committed to righting the wrongs of the Obama administration by cleaning the regulatory slate."[165]

5. Reactions to the CPP Withdrawal

Environmental groups were highly critical of the proposed pullback. The Sierra Club predicted that "Donald Trump and Scott Pruitt will go down in infamy for launching one of the most egregious attacks ever on public health, our climate, and the safety of every community in the United States."[166] Former EPA Administrator Gina McCarthy suggested that repealing the CPP without offering a timeline for its replacement represented "a wholesale retreat from EPA's legal, scientific and moral obligation to address the threats of climate change."[167] A business group called Environmental Entrepreneurs estimated that the pullback would destroy the opportunity to add 560,000 jobs to the workforce and $52 billion to the Gross Domestic Product.[168] And religious leaders from the Catholic, Protestant, Evangelical, Jewish and Quaker faiths condemned the move as inconsistent with the obligation of human beings to the Earth and to each other.[169]

Coal companies and coal-dependent power companies praised the reversal. The National Rural Electric Cooperative Association, whose rural co-op generators relied on coal for 60 percent of their power, were pleased to be able to keep their older plants running.[170] Murray Energy CEO Robert Murray applauded the repeal and urged Pruitt to withdraw the endangerment

163. Repeal of Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units, 82 Fed. Reg. at 48038.

164. *Id.*

165. Juliet Eilperin, *EPA's Pruitt Signs Proposed Rule to Unravel Clean Power Plan*, WASH. POST (Oct. 10, 2017), https://www.washingtonpost.com/politics/epas-pruitt-signs-proposed-rule-to-unravel-clean-power-plan/2017/10/10/96c83d2c-add2-11e7-a908-a3470754bbb9_story.html?utm_term=.e2bf7dc20e29 [https://perma.cc/3JC3-HTXB] [hereinafter Eilperin, *EPA's Pruitt Signs Proposed Rule*].

166. Eilperin & Dennis, *EPA Chief Scott Pruitt Tells Coal Miners*, *supra* note 148.

167. *Id.*

168. E2, OPPORTUNITY LOST: HOW ROLLING BACK THE CLEAN POWER PLAN HURTS AMERICA'S ECONOMY (2017).

169. Arianna Skibell, *Religious Leaders Condemn Trump Repeal*, E&E NEWS (Oct. 11, 2017), https://www.eenews.net/greenwire/stories/1060063331.

170. Eilperin & Dennis, *EPA Chief Scott Pruitt Tells Coal Miners*, *supra* note 148.

170. *Id.*

finding to ensure that a future administration did not replace it.[171] The Texas Public Policy Foundation praised EPA for proposing to kill the CPP, but it urged the agency to use the comment period to reconsider the endangerment finding as well.[172] However, power companies like Pacific Gas & Electric that did not rely heavily on coal were disappointed by the action.[173]

Attorneys for a coalition of 13 electric utility companies who supported the plan warned Pruitt that the withdrawal might encounter legal problems if the agency did not come up with an alternative plan to replace the CPP.[174] They predicted that environmental groups would sue the agency, arguing that it had a nondiscretionary duty to promulgate regulations under section 111(d) so long as the endangerment finding and the NSPS remained in effect.[175] And they obligingly provided a draft of an alternative plan that provided greater flexibility, focused on individual electricity generating units "inside the fence line" and came well within EPA's authority.[176]

Yet the fact remains that any replacement that focuses exclusively on changes "to or at" individual sources will have to focus on efficiency enhancing changes (sometimes called "heat rate improvement"), like automating processes and fixing leaking seals, that could at best reduce CO_2 emissions by 6 percent, far less than the 32 percent reduction that EPA predicted would

171. Marianne Lavelle, *Coal Boss Takes Climate Change Denial to the Extreme*, INSIDE CLIMATE NEWS (Oct. 11, 2017), https://insideclimatenews.org/news/11102017/climate-denial-coal-industry-global-warming-robert-murray-energy [https://perma.cc/NK3S-GDV9].

172. Niina Heikkinen, *Think Tank Wants "Endangerment" Review During Repeal*, E&E NEWS: CLIMATEWIRE (Oct. 6, 2017), https://www.eenews.net/climatewire/stories/1060062895.

173. Jennifer A. Dlouhy, *Trump Seen Replacing Obama Power Plant Overhaul With a Tuneup*, BNA (Oct. 6, 2017), https://www.bloomberg.com/news/articles/2017-10-06/trump-seen-replacing-obama-power-plant-overhaul-with-a-tune-up [https://perma.cc/CF7K-WXZH] (quoting Kathryn Zyla, Pacific Gas & Electric).

174. *See* Abby Smith, *Utilities Coalesce Around Plan for New Carbon Dioxide Standards*, BNA DAILY ENV. & ENERGY REP. (Oct. 3, 2017), https://bnanews.bna.com/environment-and-energy/utilities-coalesce-around-plan-for-new-carbon-dioxide-standards; *see generally* Dawn Reeves, *Industry Attorneys See Legal Risks to EPA's CPP "Repeal First" Strategy*, INSIDE EPA (June 8, 2017), https://insideepa.com/daily-news/industry-attorneys-see-legal-risks-epas-cpp-repeal-first-strategy; Abby Smith, *Utility Group Suggests CPP Replacement Pan as EPA Advances Rollback*, INSIDE EPA (June 12, 2017), https://insideepa.com/daily-news/utility-group-suggests-cpp-replacement-plan-epa-advances-rollback.

175. *See* Amanda Reilly & Ellen M. Gilmer, *Industry Seeks Legal Cover with Replacement Rule*, E&E NEWS: CLIMATEWIRE (Oct. 12, 2017), https://www.eenews.net/climatewire/stories/1060063383; Reeves, *supra* note 174.

176. Smith, *supra* note 174; *see* Reeves, *supra* note 174.

result from the CPP.[177] The Obama EPA rejected that approach as a grossly inefficient way to bring about CO_2 reductions from existing power plants.[178] Environmental groups suggested that enhancing the efficiency of old heavily polluting coal-fired plants could even have the perverse effect of extending their lifetimes by allowing them to compete with natural gas and renewables.[179] If EPA was determined to adopt a source-specific approach, they argued, it would have to consider more fundamental changes like switching to natural gas or installing carbon capture and storage technology.[180]

6. Prospects for Judicial Review of the CPP

If the D.C. Circuit decides to rule on the pending challenges to the Obama EPA's CPP, it should apply *Chevron* deference to the ambiguous phrase "best system of emission reduction" and uphold the plan.[181] That holding would create a steep uphill climb for Pruitt to repeal the Obama CPP, because it would undercut the legal analysis that forms the exclusive basis for the repeal.[182] EPA would need to withdraw the endangerment finding or find some technical basis for repealing the CPP, and either option must be capable of withstanding judicial review under the Administrative Procedure Act's "arbitrary and capricious" test.[183] On the other hand, the court could simply sit on the case until EPA finalizes the repeal and then dismiss the challenge to the Obama CPP as moot.[184]

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177. Dlouhy, *supra* note 173.
178. *Id.*
179. Dlouhy, *supra* note 173.
180. *Id.*
181. Chevron U.S.A. Inc. v. Natural Resources Defense Council, Inc., 467 U.S. 837 (1984). In an oft-quoted passage, the Court explained: "When a court reviews an agency's construction of the statute which it administers, it is confronted with two questions. First, always, is the question whether Congress has directly spoken to the precise question at issue. If the intent of Congress is clear, that is the end of the matter; for the court, as well as the agency, must give effect to the unambiguously expressed intent of Congress. If, however, the court determines Congress has not directly addressed the precise question at issue, the court does not simply impose its own construction on the statute, as would be necessary in the absence of an administrative interpretation. Rather, if the statute is silent or ambiguous with respect to the specific issue, the question for the court is whether the agency's answer is based on a permissible construction of the statute." *Id.* at 843–44.
182. Krysti Shellenberger, *Pruitt's Move to Repeal CPP Sets Up Prolonged Battle Over Carbon Regulations*, UTILITY DIVE (Oct. 11, 2017), https://www.utilitydive.com/news/clean-power-plan-repeal-pruitt/506985/ [https://perma.cc/2J9H-27W9]; Robin Bravender, *The Next Big Battlegrounds*, E&E NEWS: CLIMATEWIRE (Oct. 10, 2017), https://www.eenews.net/climatewire/stories/1060063097 [hereinafter Bravender, *The Next Big Battlegrounds*].
183. 5 U.S.C.S. § 706 (LexisNexis, Lexis Advance through PL 115-82, approved 11/2/17).
184. Bravender, *The Next Big Battlegrounds*, *supra* note 182 (quoting Professor Pat Parenteau, Vermont Law School).

If the D.C. Circuit decides to remand the Obama EPA's plan and wait until environmental groups and state attorneys general challenge the Trump EPA's repeal of that plan, the court would presumably give *Chevron* deference to the Trump EPA's new legal interpretations and uphold the withdrawal.[185] The Trump EPA focused on the weakest pillar of the Obama EPA's legal rational—the agency's conclusion that it had the authority to suggest to the states that they regulate "beyond-the-fenceline." However, the Trump EPA's legal edifice also has some cracks. Most importantly, it ignores the fact that the CPP left open the option for states to achieve their GHG reduction goals through source-specific, rate-based measures if they so desired. The key question in the litigation would be whether EPA properly relied on the possibility that states could adopt beyond-the-fenceline measures in setting their CO_2 reduction goals. Jeff Holmstead, an attorney for the electric power industry, is confident that a court applying *Chevron* deference would uphold the repeal because, in his view, it merely represents an "interpretation of the statute that existed for 45 years" prior to the Obama Administration.[186] Apparently, EPA's original interpretation of the meaning of BSER and the agency's subsequent interpretation, which assigned to the same phrase the opposite meaning, are both entitled to *Chevron* deference. Nonetheless, the subsequent interpretation may not, as a practical matter, receive the same degree of deference if the court has already upheld the former interpretation. Thus, in the scheme of things, timing may be everything.

In any event, the litigation over EPA's repeal of the CPP and any replacement that it comes up with could last until after the 2020 elections, and the outcome is far from certain.[187] So, when President Trump boasted to a delighted crowd at an Alabama rally in September 2017 that the CPP was "boom, gone," he was making a prediction, not stating a fact.[188]

185. *See* Ellen M. Gilmer, *Legal War Looms*, *supra* note 160(quoting Professor Dan Farber, University of California Boalt School of Law); Goldberg, *Trump's Clean Power Plan*, *supra* note 122.

186. Goldberg, *Trump's Clean Power Plan, supra* note 122.

187. Bravender, *The Next Big Battlegrounds*, *supra* note 182.

188. Zack Colman, Colman, *It's Finally Getting the Ax.*, *supra* note 123 ("Just as Trump is playing to his base in tweets and speeches, so are lieutenants such as Pruitt in their actions."), https://www.eenews.net/stories/1060063101.

7. *Conclusions*

EPA Administrator Pruitt addressed the Republican base when he announced the CPP pullback in a Kentucky speech with that state's senior senator, Mitch McConnell on the stage.[189] In addition to highlighting the Trump Administration's efforts to save the coal industry, Pruitt praised McConnell for blocking President Obama's nomination of Merrick Garland to the Supreme Court to a huge round of applause.[190] Administrator Pruitt's announcement was about politics. It was not about policy or science, and the pullback ran counter to overall public opinion. According to a poll conducted by the Associated Press and the NORC Center for Public Affairs Research, 61 percent of the respondents (but only 43 percent of Republicans) thought that government action was needed to address climate change and only 20 percent thought that EPA should rescind the CPP.[191] But it almost certainly played well with Trump supporters who were expecting the administration to reduce the burden of environmental regulations on American businesses.

Although the NPRM said that EPA would at some future time consider promulgating a rule to replace the CPP, few observers are holding their breath.[192] According to Tim Profeta, the Director of Duke University's Nicholas Institute for Environmental Policy Solutions, "[i]t seems clear that there's no desire to regulate greenhouse gases from power plants any time in the near future."[193] Pointing out that the Trump Administration had almost a year to come up with an alternative rule since the 2016 election, Professor Vicki Arroyo suggested that the Administration was "basically running out the clock."[194] In the meantime, existing power plants continue to pour millions of tons of CO_2 into Earth's warming atmosphere.

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189. Dino Grandoni, *Pruitt Plays to GOP Base by Repealing the Clean Power Plan*, WASH. POST (Oct. 10, 2017), https://www.washingtonpost.com/news/powerpost/paloma/the-energy-202/2017/10/10/the-energy-202-trump-plays-to-gop-base-by-repealing-the-clean-power-plan/59db9d5530fb0468cea81e16/?utm_term=.9c3ba4c57809.

190. *Id.*

191. Adam Aton, *Most Americans Want Climate Policies – That Don't Cost Much*, E&E NEWS: CLIMATE (Oct. 3, 2017), https://www.scientificamerican.com/article/most-americans-want-climate-change-policies/ [https://perma.cc/SG46-GLZ8].

192. Lisa Friedman, *A New Federal Carbon Rule? Not So Fast*, N.Y. TIMES (Oct. 11, 2017), https://www.nytimes.com/2017/10/10/climate/epa-pruitt-climate-rule.html [https://perma.cc/6UFR-AKDU] [hereinafter Friedman, *A New Federal Carbon Rule?*].

193. John H. Cushman, *Inside the Coal War Games*, INSIDE CLIMATE NEWS (Oct. 11, 2017), https://insideclimatenews.org/news/10102017/trump-coal-clean-power-plan-epa-renewable-energy-wind-solar-pruitt-perry [https://perma.cc/H965-YE4C] [hereinafter Cushman, *Inside the Coal War Games*].

194. Friedman, *A New Federal Carbon Rule?*, *supra* note 192.

F. Pulling Back the Power Plant New Source Performance Standards

A prerequisite to regulating existing power plants under section 111 was EPA's rule—promulgated simultaneously with the CPP—establishing NSPS for CO_2 emissions from new and modified power plants. The NSPS were less important than the guidelines for existing sources because they served mainly as a backstop for "best available technology" determinations for new and modified major emitting facilities under the Clean Act's Prevention of Significant Deterioration program. Nevertheless, they were of great concern to the electric power and coal industries because the standards that EPA promulgated for coal- and oil-fired plants were based on the performance of an "efficient new supercritical pulverized coal utility boiler implementing partial carbon capture and storage."[195] Because nearly all coal-dependent power companies maintained that carbon capture and storage (CCS) was not yet an available technology for removing CO_2 from power plant emissions, they believed that the NSPS was effectively a ban on building new coal fired plants until CCS did become available.[196] The standard did, however, allow a new plant to meet its requirements by co-firing with natural gas, an option that allowed companies to build new coal-fired plants without CCS.[197]

Like CPP, the NSPS for power plants was under challenge in the D.C. Circuit at the change in administrations, but the litigation was not as far along as the CPP lawsuit. Industry groups argued that because the record compiled by EPA did not support its conclusion that CCS was "adequately demonstrated," the standard was invalid.[198] Therefore, the industry groups and several state attorneys general urged Administrator Pruitt to pull back the NSPS to

195. ENVTL. PROTECTION AGENCY, Standards of Performance for Greenhouse Gas Emissions from New, Modified, and Reconstructed Stationary Sources: Electric Utility Generating Units, 80 Fed. Reg. 64,510 (Oct. 23, 2015), at 64,512-513 (Table 1), https://www.gpo.gov/fdsys/pkg/FR-2015-10-23/pdf/2015-22837.pdf [https://perma.cc/YEW7-B9H3].

196. *Clean power plan results in industry vitriol, tepid praise*, O'DWYER'S at 32 (Sept. 2015), http://www.odwyerpr.com/magazine/odwyers-magazine-september-2015.pdf [http://perma.cc/R7QM-GDCW].

197. Dawn Reeves, *Court Precedent Favors EPA Discretion on CCS but Rulings Decades Old*, InsideEPA.com/climate (Oct. 22, 2015). Dawn Reeves, NSPS Critics See Gas Co-Firing Alternative to CCS As New Grounds For Suit, InsideEPA.com/climate (Sept. 10, 2015).

198. Lee Logan, *As Trump Order Looms, Groups Hint at "Change" in EPA Stance in NSPS Suit*, INSIDEEPA.COM (Mar. 22, 2017).

reevaluate the previous administration's conclusion.[199] In August 2017, the court granted the Justice Department's request to hold the litigation in abeyance until the Trump Administration decided whether to repeal the regulation.[200] As of this writing, EPA has taken no further action on NSPS regulations.

Unlike the CPP, no court had stayed the effectiveness of the regulation at the time that the D.C. Circuit granted the Justice Department's request to hold the litigation in abeyance. Accordingly, the NSPS is applicable to any company that desires to build a new fossil fuel-fired power plant.[201] Industry attorney Jeff Holmstead suggested that neither the industry nor the agency was in a hurry to promulgate a revised NSPS because "people aren't building coal-fired plants in the current market."[202] In addition, some electric power companies strongly support CCS as the best way to achieve the goal of "clean coal," and they may not be anxious to join in an attack on a standard that requires that technology.[203] In any event, the pullback is not likely to have any impact on either emissions or construction of new power plants for the foreseeable future.

G. Coal Industry's Emergency Petition to DOE

Sometime before late July 2017, several coal companies petitioned DOE to issue an emergency order under section 202(c) of the Federal Power Act, which authorizes the Secretary of Energy to order a power plant to operate when an emergency exists because of a sudden increase in demand for electricity or a sudden reduction in supply resulting from the loss of power producing facilities or fuel or water for such facilities.[204] The petitioners wanted DOE to declare a two-year moratorium on closures of coal-fired power plants to prevent their owners from declaring bankruptcy, which, they maintained, would pose a threat to the reliability of the nationwide electricity grid.[205] Although it was unclear whether such an order would waive

199. Abby Smith, *Morrisey Hopes Trump Seeks Broad Rollback of EPA Power Plant GHG Rules*, INSIDEEPA.COM (Feb. 23, 2017).

200. Kat Sieniuc, *D.C. Cir. Pauses Litigation on EPA New Plant Carbon Rule*, LAW360 (Aug. 10, 2017), https://www.law360.com/articles/953186/dc-circ-pauses-litigation-on-epa-new-plant-carbon-rule [https://perma.cc/7YS3-QAMB].

201. *Id.*

202. Goldberg, *Trump's Clean Power Plan*, *supra* note 122.

203. *Id.*

204. Jeff Horwitz, Michael Biesecker & Matthew Daly, *A Coal Country Dispute Over an Alleged Trump Promise Unmet*, DENVER POST (Aug. 23, 2017) [hereinafter Horwitz et al.]; 16 U.S.C.S. § 824a(c). *See* Michael Gergen et al., *Walking the Line Between the Clean Air Act and the Federal Power Act: Balancing Emission Reductions and Bulk Power Reliability*, 25.1 ELEC. J. 16, 17 (Jan./Feb. 2012).

205. Horwitz et al., *supra* note 204.

the plant's liability for any resulting violations of the Clean Air Act,[206] the companies demanded relief from environmental requirements and current market stresses.[207] According to Robert Murray of Murray Energy Corporation, President Trump, referring to the DOE order, told Energy Secretary Rick Perry, "I want this done" on several occasions in which Murray was present.[208] Nevertheless, DOE denied the request on the ground that there was no emergency warranting a section 202(c) order, which is ordinarily limited to individual plants, not entire industries.[209] Declining to say whether Trump ordered Perry to issue the order, a DOE spokesperson later explained that the White House and DOE were "in agreement that the evidence does not warrant the use of this emergency authority."[210]

The petition denial is the only instance thus far in which the Trump Administration has varied from the agenda of the coal industry and coal-dependent electric power companies.[211] The denial should come as no surprise to anyone, because the poor economic health of the coal industry is hardly an emergency warranting a nationwide moratorium on closures of coal-fired power plants. There is very little evidence that the nationwide grid is at risk of a breakdown as coal-fired power plants are taken offline.[212] In fact, the grid has become more resilient with the recent addition of "high-efficiency natural gas plants, dozens of wind farms, and thousands of solar installations."[213] Because little or no evidence supports the fossil fuel industry's reliability claims, a DOE grant of a section 202(c) order in the future would undoubtedly be challenged by environmental groups and probably by the natural gas industry. The reviewing courts would need to decide whether DOE was arbitrary and capricious in determining that emergency conditions warranted such an extreme intervention into the marketplace and whether the Federal Power Act supersedes the Clean Air Act in emergency situations. In any event, no temporary emergency order will be sufficient to protect the coal industry from the long-term market

206. Gergen et al., *supra* note 204, at 20–21, 23–25.
207. Horwitz et al., *supra* note 204.
208. *Id.*
209. *Id.*
210. Rebecca Kern & Stephen Lee, *White House Denies Murray Emergency Request, Despite Trump Backing*, BNA DAILY ENV. REP. (Aug. 23, 2017), https://www.bna.com/white-house-denies-n73014463453/ [hereinafter Kern] (quoting Professor James Van Nostrand, West Virginia University School of Law).
211. Horwitz *et al.*, *supra* note 204.
212. Kern & Lee, *supra* note 210.
213. *Id.*

forces that are persistently pushing the electric power industry away from coal.[214]

H. DOE's Grid Resiliency Directive

On September 28, 2017, Secretary of Energy Rick Perry wrote a letter to the sitting commissioners on the Federal Energy Regulatory Commission (FERC) directing them "to issue rules to protect the American people from the threat of energy outages that could result from the loss of traditional baseload capacity."[215] Perry believed that it was important that the diverse mix of resources necessary to retain grid resiliency and reliability include "traditional baseload generation with on-site fuel storage" capable of "withstand[ing] major fuel supply disruptions caused by natural and man-made disasters."[216] In a dramatic reversal of past industry practice, it had become so costly to run baseload coal and nuclear power plants that power generating companies were relying upon available natural gas and renewable resources until those supplies were exhausted, at which point they called on their coal and nuclear plants.[217] The problem with that approach was that the price of electricity was so low that it was not economical to fire up coal and nuclear plants once they were taken offline.[218] This posed a reliability risk to the grid and decreased its resiliency.[219] Both Perry and EPA

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214. Hannah Northey & Dylan Brown, *Trump Touts Cleaning of Coal as Murray Battle Heats Up*, E&E NEWS (Aug. 23, 2017) (quoting Ari Peskoe, Harvard Law School), https://www.eenews.net/greenwire/2017/08/23/stories/1060059110; Peter Behr & Saqib Rahm, *Presidential Limits: Trump Can't Come Through for Coal*, E&E NEWS (Aug. 23, 2017) (quoting Melissa Powers, Lewis & Clark School of Law), https://www.eenews.net/energywire/stories/1060059081/search?keyword=presidential+limits+trump+can%27t+come+through+for+coal.

215. Letter from Rick Perry, Sec'y of Energy, to Neil Chatterjee, Chairman, Cheryl A. LaFleur, Comm'r, & Robert Powelson, Comm'r, Fed. Energy Regulatory Comm'n (Sept. 28, 2017) [hereinafter Letter from Rick Perry] (on file with Comm'n).

216. *Id.*

217. Catherine Traywick, *Perry Moves to Aid Coal, Nuclear Generators with Pricing Rule*, BNA ENERGY & CLIMATE REP. (Sept. 29, 2017), https://bnanews.bna.com/ environment-and-energy/perry-moves-to-aid-coal-nuclear-generators-with-pricing-rule-1?context=article-related [hereinafter Traywick, *Perry Moves to Aid Coal*].

218. *Id.*

219. *See* Traywick, *Perry Moves to Aid Coal*, *supra* note 217 (explaining how reliability of the grid has to do with maintaining excess capacity to deal with peak loads and unexpected outages); NAT'L RESEARCH COUNCIL, *National Academies of Sciences: Enhancing the Resilience of the Nation's Electricity Systems* (2017) ("Resiliency is about managing and coping with outage events as they occur to lessen their impacts, regrouping quickly and efficiently once an event ends, and learning to better deal with other events in the future.").

Administrator Pruitt regarded this as a major threat to both the economy and national security.[220]

Invoking his power under section 403 of the Department of Energy Organization Act of 1977 for only the second time since its enactment,[221] Perry ordered FERC to use its authority under sections 205 and 206 of the Federal Power Act[222] to publish a proposed rule allowing unregulated "merchant" electric power generators selling electricity in wholesale markets to fully recover the costs of providing "fuel-secure" generation from units that retained a 90-day fuel supply on site "in the event of supply disruptions caused by emergencies, extreme weather, or natural or man-made disasters."[223] As a practical matter, the eligible units had to be coal burning or nuclear, because natural gas burning power plants cannot store significant amounts of fuel on site and wind and solar generators do not burn fuel.

The authority that Secretary Perry invoked to support his order authorized both the Secretary of Energy and FERC "to propose rules, regulations, and statements of policy of general applicability with respect to any function" within FERC's jurisdiction.[224] It then assigned exclusive jurisdiction over such proposals to FERC and ordered FERC to "consider and take final action on any proposal made by the Secretary . . . in an expeditious manner in accordance with such reasonable time limits as may be set by the Secretary for the completion of action by the Commission on any such proposal."[225]

The DOE's proposed rule ordered the independent system operators (ISOs) and regional transmission operators (RTOs) that managed wholesale electricity markets to establish "just and reasonable" tariffs for the "purchase of electric energy" from eligible reliability and resiliency resources and for "recovery of costs and a return on equity for such resource dispatched during grid operations."[226] The just and reasonable rate had to include pricing

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220. Gavin Bade, *How DOE's Baseload Power Rule "Would Blow the Market Up,"* UTILITY DIVE (Oct. 2, 2017), https://www.utilitydive.com/news/how-does-baseload-power-rule-would-blow-the-market-up/506269/ [https://perma.cc/4DBE-SJMW] [hereinafter Bade, *How DOE's Baseload Power Rule*].

221. 42 U.S.C. § 7173. Department of Energy Organization Act, Pub. L. 95-91, title IV, § 403 (1977). Timothy Puko, *U.S. Urges Price Shift for Energy*, WALL ST. J. (Sept. 29, 2017), https://www.wsj.com/articles/energy-department-urges-pricing-shift-that-could-bolster-coal-nuclear-1506698449.

222. 16 U.S.C. §§ 824(d); *id.* at 824(e).

223. Letter from Rick Perry, *supra* note 215.

224. 42 U.S.C. § 7173(a).

225. 42 U.S.C. § 7173(b).

226. Dep't of Energy Grid Resiliency Pricing Rule, 18 C.F.R. § 35.28 (2017).

to ensure that each eligible resource was "fully compensated for the benefits and services it provid[ed] to grid operations, including reliability, resiliency, and on-site fuel assurance, and that each eligible resource recover[ed] its fully allocated costs and a fair rate of return." In effect, system operators would need to pay operators of idle coal-fired and nuclear plants to keep their plants ready to run, so long as they hoarded 90 days-worth of fuel.[227] One industry analyst dubbed the proposal the "squirrel plan."[228]

Perry's letter specified that eligible units would have to comply with all environmental regulations and could not be subject to cost-of-service regulation by any state or local authority.[229] Finally, Perry "direct[ed]" the commission to complete the rulemaking process within 60 days from the date of publication of the notice of proposed rulemaking and to have the final rule take effect within 30 days of publication of the final rule.[230] The ISOs and RTOs would then have 15 days to submit the required tariffs.[231]

Perry believed that these rather drastic steps were "especially urgent to prevent premature retirements" of fuel-secure generation resources.[232] In support of that contention, Perry's letter cited a recently completed DOE staff report on the reliability of electricity markets, which concluded that 80 percent of the 59,000 megawatts of generation capacity that companies had retired between 2002 and 2016 consisted of coal-fired power plants and that an additional 12,700 megawatts of coal-fired capacity was scheduled for retirement by 2020.[233] The letter noted that the electric generating industry's timely response to the 2014 "polar vortex," where coal-fired units operating at reduced loads were called into full-time service and nuclear units ran at 95 percent capacity to meet the extraordinary demand during that event, demonstrated the need for fuel-secure resources.[234] Perry also cited "a growing recognition" that the markets that ISOs and RTOs managed did "not necessarily pay generators for all the attributes that they provide to the grid, including resiliency."[235] One of the DOE staff report's primary recommendations was to protect grid resiliency by "correct[ing] distortions

227. Cushman, *Inside the Coal War Games*, *supra* note 193.
228. Benjamin Storrow, *Explaining Perry's Grid Directive, for Dummies*, E&E NEWS (Oct. 11, 2017), https://www.eenews.net/stories/1060063299 (quoting Liam Denning, Bloomberg Gadfly columnist).
229. Letter from Rick Perry, *supra* note 215.
230. Letter from Rick Perry, *supra* note 215.
231. Letter from Rick Perry, *supra* note 215.
232. Letter from Rick Perry, *supra* note 215.
233. Letter from Rick Perry, *supra* note 215.
234. Letter from Rick Perry, *supra* note 215.
235. Letter from Rick Perry, *supra* note 215.

in price formation in the organized markets."[236] FERC therefore had an obligation to promulgate rules requiring the ISOs and RTOs "to reduce the chronic distortion of those markets threating the resilience of the nation's electricity system."[237] Nowhere in the letter did Perry mention the value to the public of reduced CO_2 emissions and other environmental benefits of reduced reliance on coal-fired power plants.[238]

The coal industry, the nuclear power industry, and electric power companies that depended heavily on coal and nuclear power strongly supported the directive, as did trade associations and think tanks that they supported.[239] Murray Energy CEO Robert Murray called the proposal "the single greatest action that has been taken in decades to support low-cost reliable electric power in the United States."[240] The CEO of FirstEnergy Corporation commended Perry for attempting to correct "faulty market conditions" by keeping "essential baseload plants operating."[241] Exelon Corporation was "pleased that DOE is proposing action to ensure that attributes of nuclear generation are fully and appropriately valued."[242] The head of the American Coalition for Clean Coal Electricity was pleased that the proposal would

236. Letter from Rick Perry, *supra* note 215.

237. Letter from Rick Perry, *supra* note 215.

238. Peter Behr, *Perry Accused of 'Crying Wolf' on Grid Threats*, E&E NEWS (Oct. 2, 2017) https://www.eenews.net/energywire/2017/10/03/stories/1060062389 [Behr, *Perry Accused of 'Crying Wolf'*].

239. Rebecca Kern, *Federal Regulators Criticize Energy Rule for Distorting Markets*, BNA ENV'T & ENERGY REP. (Oct. 5, 2017), https://bnanews.bna.com/environment-and-energy/federal-regulators-criticize-energy-rule-for-distorting-markets (quoting William Nelson, Bloomberg New Energy Finance); Rod Kuckro, *Perry Calls on FERC to Dismantle U.S. Energy Markets*, E&E NEWS (Oct. 2, 2017), https://www.eenews.net/energywire/2017/10/02/stories/1060062263 [hereinafter Kuckro, *Perry Calls on FERC to Dismantle*]; Keith Goldberg, *Perry's FERC Pricing Plan Would Roil Energy Markets*, LAW360 (Sept. 29, 2017), https://www.law360.com/articles/969563/perry-s-ferc-grid-pricing-plan-would-roil-energy-markets [hereinafter *Perry's Pricing Plan Would Roil Energy Markets*]; Chris Mooney & Steven Mufson, *Rick Perry Just Proposed Sweeping New Steps to Help Struggling Coal and Nuclear Plants*, WASH. POST (Sept. 29, 2017), https://www.washingtonpost.com/news/energy-environment/wp/2017/09/29/rick-perry-proposes-sweeping-new-moves-to-support-coal-and-nuclear-plants/?utm_term=.021dac369d6d [hereinafter Mooney & Mufson, *Rick Perry Just Proposed Sweeping New Steps*] (quoting Richard Powell, ClearPath Foundation and Paul Bailey, American Council for Clean Coal Electricity).

240. Hannah Northey, *Bob Murray Says Trump's at Work on Industry "Action Plan*," E&E NEWS (Oct. 10, 2017), https://www.eenews.net/stories/1060063221 (quoting Robert Murray, Murray Energy Corp.).

241. Kuckro, *Perry Calls on FERC to Dismantle*, *supra* note 239.

242. Kuckro, *Perry Calls on FERC to Dismantle*, *supra* note 239.

"finally value the on-site fuel security provided by the coal fleet."[243] The Texas Public Policy Foundation, a strong supporter of the coal industry, praised Perry's proposal for attempting to "eliminate renewable energy subsidies and the regulations" that made coal less competitive.[244] Supporters argued that coal-fired power plants had encountered a number of challenges, including "massive environmental compliance expenditures, low natural gas prices, renewable portfolio standards, tax incentives for renewables, and wholesale market rules that did not value the reliability and resilience attributes of the coal fleet."[245] They warned that without FERC intervention, another wave of coal and nuclear plant retirements would put the "long-term price stability benefits" of coal and nuclear power at risk.[246]

The directive, however, encountered a firestorm of opposition from a wide variety of stakeholders, including the natural gas industry,[247] renewable energy companies,[248] independent power producers,[249] vertically integrated utility companies,[250] commercial and industrial electricity consumers,[251] system operators,[252] and environmental groups.[253] The head of the nation's largest grid system operator, PJM Interconnection, testified to a House subcommittee that "[f]or policymakers to simply try to 'outguess' the market or supplant it with their particular policy choice is simply a recipe for building an unsustainable market outcome that no investor would seriously consider

243. Kuckro, *Perry Calls on FERC to Dismantle*, *supra* note 239.

244. Edward Klump, *Disappointment and Hope in Perry's Texas*, E&E NEWS (Oct. 4, 2017), https://www.eenews.net/energywire/2017/10/04/stories/1060062543 [hereinafter Klump, *Disappointment and Hope*] (quoting Bill Peacock, Texas Public Policy Foundation).

245. *Part II: Powering America: Defining Reliability in a Transforming Electricity Industry*, *Hearing Before the Subcomm. on Energy of the H. Comm. on Energy & Com.*, 115th Cong., 1st Sess. 6 (2017) (testimony of Paul Bailey, President and Chief Executive Officer, American Coalition for Clean Coal Electricity) [http://perma.cc/H6ND-AKBX].

246. John Siciliano, *Coal Industry tells FERC the last 7 years was a catastrophe it must now fix*, WASH. EXAMINER (Oct. 23, 2017), https://www.washingtonexaminer.com/coal-industry-tells-ferc-the-last-7-years-was-a-catastrophe-it-must-now-fix [http://perma.cc/5ZFQ-KHZV].

247. Kuckro, *Perry Calls on FERC to Dismantle*, *supra* note 239.

248. Rod Kuckro, Ellen M. Gilmer & Jenny Mandel, *"Strange Bedfellows Tangle with Pery's Grid Plan,"* E&E News (Oct. 25, 2017), https://www.eenews.net/energywire/stories/1060064585?t=https%3A%2F%2Fwww.eenews.net%2Fstories%2F1060064585.

249. *Id.*

250. *Id.*

251. Hannah Northey, *Industrialists want Lawmakers to Block Perry Proposal*, E&E NEWS (Oct. 11, 2017) https://www.eenews.net/eedaily/2017/10/11/stories/1060063263; Kuckro, *Perry Calls on FERC to Dismantle*, *supra* note 239.

252. Klump, *Disappointment and Hope*, *supra* note 244.

253. Robert Walton, *Sierra Club: DOE Cost Recovery Rule Could Cost Consumers Billions in Higher Bills*, UTILITY DIVE (Oct. 18, 2017) [hereinafter Walton, *Sierra Club*] (quoting Mary Anne Hitt, Sierra Club) https://www.utilitydive.com/news/sierra-club-doe-cost-recovery-rule-could-cost-consumers-billions-in-higher/507422/ [https://perma.cc/H8XS-GGPZ]; Mooney & Mufson, *Rick Perry Just Proposed Sweeping New Steps*, *supra* note 239.

and for which no consumer would ultimately benefit."[254] Five former FERC chairpersons wrote that the proposal would "fundamentally distort" wholesale electricity markets, undermine investor confidence, and make the grid less reliable.[255] One former Republican member of the commission bluntly referred to the proposal as "cash for cronies."[256] Even some coal-dependent power companies were dubious about the proposal.[257] The CEO of Dynegy, a large merchant generator that relied heavily on coal called the proposal "nothing more than just a new subsidy" that was "designed to counter the efficiency of the marketplace and to save assets that should be exiting the market."[258]

Critics of the proposal first denied its underlying premise that the reliability and resilience of the grid were at risk.[259] They cited a recent report by the North American Electric Reliability Corporation, the entity charged with ensuring the resiliency and reliability of the national grid, concluding that "the state of reliability in North America remains strong, and the trend line shows continuing improvement year over year."[260] The author of the recent DOE staff report that Secretary Perry cited in his letter told the press that "[t]he mainland grid is clearly reliable today, and fairly resilient . . . and it is clearly not in an emergency yet."[261] The report itself concluded that the grid was performing reliably with new gas-fired power plants, renewable energy, and demand-side management making up the capacity losses attributable to retiring coal and nuclear plants.[262] A report prepared for the Natural Resources Defense Council ("NRDC") by the Brattle Group found that there was "no special need for continuous power supply to come from a single [baseload] unit . . . rather than a mix of resources" that could include demand-

254. Powering America: A Review of the Operation and Effectiveness of the Nation's Wholesale Electricity Markets: Testimony Before the Subcomm. on Energy Comm. on Energy and Commerce, H.R. (July 26, 2017) at 13 (testimony of Craig Glazer, VP of Fed. Gov't Policy, PJM Interconnection).

255. Gavin Bade, *Former FERC heads: DOE NOPR would 'fundamentally distort' power markets*, UTILITY DIVE (Oct. 18, 2017), https://www.utilitydive.com/news/former-ferc-heads-doe-nopr-would-fundamentally-distort-power-markets/507627/ [http://perma.cc/MDN6-X9ZF].

256. Benjamin Storrow, *'Cash for Cronies.' Past GOP regulators oppose Perry plan*, E&E NEWS (Dec. 18, 2017, https://www.eenews.net/climatewire/2017/12/18/stories/1060069251.

257. Klump, *Disappointment and Hope*, *supra* note 244.

258. Klump, *Disappointment and Hope*, *supra* note 244.

259. Kuckro, *Perry Calls on FERC to Dismantle*, *supra* note 239 (quoting Nora Mead Brownell, National Grid PLC and Spectra Energy Partners).

260. Kuckro, *Perry Calls on FERC to Dismantle*, *supra* note 239.

261. Kuckro, *Perry Calls on FERC to Dismantle*, *supra* note 239 (quoting Alison Silverstein).

262. Kuckro, *Perry Calls on FERC to Dismantle*, *supra* note 239.

side management, natural gas, renewable resources and storage.[263] Problems with resiliency, critics argued, had more to do with downed power lines and other failings of local grids than with the sources of power to those grids.[264] Critics accused Perry of "crying wolf" in order to fulfill candidate Trump's promises to the coal and nuclear industries.[265] Energy consultant ICF International argued that instead of providing a windfall for nuclear and coal plant operators, the Trump Administration should urge FERC to issue more "reliability must-run" orders, which provide for cost recovery in situations in which the retirement of a plant would pose a threat to the reliability of a local grid.[266]

Second, critics characterized the proposal as a call for a return to regulated wholesale markets that would sacrifice all of the benefits to consumers of the deregulation that FERC had accomplished since the second term of the Clinton Administration.[267] A member of the Montana Public Service Commission predicted that the proposal would "literally lead to a round of government price fixing in the electric industry that would put us back the better part of a century from where we are today."[268] According to Professor Joel Eisen, the proposal would bring about "the most sweeping change to the wholesale electricity markets since their inception."[269] Former FERC chairman John Wellinghoff, an Obama appointee, predicted that the proposal "would blow the market up."[270] The head of a coalition of industrial and commercial consumers complained that the proposal would "impose higher energy costs on consumers for no tangible benefit by forcing electricity

263. Judy W. Chang, et al., *Advancing Past "Baseload" to a Flexible Grid —How Grid Planners and Power Markets Are Better Defining System Needs to Achieve a Cost-Effective and Reliable Supply Mix*, THE BRATTLE GROUP, (June 26, 2017), https://www.eenews.net/assets/2017/06/26/document_gw_02.pdf [https://perma.cc/9HGH-FF4T] [hereinafter Chang, et al., *Advancing Past "Baseload"*].

264. Jeremy Dillon, *Power Play on the Grid*, CONG. QUARTERLY, Nov. 6, 2017, at 14, 16.

265. Behr, *Perry Accused of 'Crying Wolf*, *supra* note 238.

266. Peter Behr, *Perry's Grid Proposal Poses Resilience Issues*, E&E NEWS (Oct. 5, 2017), https://www.eenews.net/energywire/stories/1060062723/search?keyword=Peter+Behr%2C+Perry%E2%80%99s+Grid+Proposal+Poses+Resilience+Issues.

267. Goldberg, *Perry's Pricing Plan Would Roil Energy Markets*, *supra* note 239.

268. Rebecca Kern, *Pricing Rule to Help Coal, Nuclear Faces Uncertain Future*, BNA DAILY ENV'T REP. (Oct. 2, 2017) (quoting Travis Kavulla, Montana Pub. Service Comm'n), https://www.bna.com/search/detail?q=Pricing+Rule+to+Help+Coal%2c+Nuclear+Faces+Uncertain+Future&f_Blogs=Blogs&page=1.

269. Kuckro, *Perry Calls on FERC to Dismantle*, *supra* note 239 (quoting Professor Joel Eisen).

270. Bade, *How DOE's Baseload Power Rule*, *supra* note 220. *See also* Robbie Orvis & Mike O'Boyle, *DOE rulemaking threatens to destroy wholesale markets with no tangible benefit*, UTILITY DIVE (Oct. 2, 2017) (proposal "threatens to completely destabilize" wholesale markets), https://www.utilitydive.com/news/doe-rulemaking-threatens-to-destroy-wholesale-markets-with-no-tangible-bene/506289/ [https://perma.cc/373K-6KRN].

customers to pay and keep uneconomic power plants in operation."[271] The Sierra Club agreed that the subsidy could add billions to consumers' electric bills.[272] Myron Ebell of the Competitive Enterprise Institute supported burning more coal, but he did not believe that "the right way to solve the problem . . . is to add on market-distorting subsidies."[273] Even the American Coalition for Clean Coal Electricity, a trade association for coal companies and coal-dependent electric power companies, did not fully endorse the proposal, fearing it could lead to cost-of-service rate-making in previously deregulated wholesale markets.[274]

Third, the proposal represented a dramatic departure from FERC's "fuel neutral" approach to regulating electricity because it clearly favored coal and nuclear power over natural gas and renewables. One critic noted that the proposal would protect "old, inefficient, fully-depreciated assets . . . that . . . made lots and lots and lots of money before the advent of shale gas," and he cautioned that it was "the antithesis of what capitalism is about."[275] Environmental groups saw the proposal as an attempt "to prop up uneconomic resources that pollute," which to them was "very discouraging."[276]

Fourth, subsidizing coal and nuclear plants would not necessarily provide additional resiliency during severely cold weather and floods, because those conditions could compromise coal and nuclear plants as well as natural gas pipelines and plants.[277] Having 90 days' worth of fuel on-site could

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271. Kuckro, *Perry Calls on FERC to Dismantle*, *supra* note 239 (quoting Graham Richard, CEO, Advanced Energy Economy); *see also* Mooney & Mufson, *Rick Perry Just Proposed Sweeping New Steps*, *supra* note 239 (quoting Mark Kresowik, Sierra Club).

272. Walton, *Sierra Club*, *supra* note 253.

273. Benjamin Storrow, *Perry, An Oil Guy, Angers Allies by Rushing to Coal's Aid*, E&E NEWS (Oct. 12, 2017) https://www.eenews.net/climatewire/ stories/1060063421/search?keyword=Benjamin+Storrow%2C+Perry%2C+An+Oil+Guy%2C+Angers+Allies+by+Rushing+to+Coal%E2%80%99s+A*Id.*

274. Gavin Bade, *Updated: DOE cost recovery rule divides power sector in house hearing*, UTILITY DIVE (Oct. 4, 2017), https://www.utilitydive.com/news/updated-doe-cost-recovery-rule-divides-power-sector-in-house-hearing/506452/ [https://perma.cc/SPD5-65ZX].

275. Kuckro, *Perry Calls on FERC to Dismantle*, *supra* note 239 (quoting Nora Mead Brownell, National Grid PLC and Spectra Energy Partners).

276. Edward Klump, *Regulator, enviro, generator: 3 views on Perry's resilience push*, E&E NEWS (Oct. 10, 2017) (quoting Lenae Shirley, *Envtl. Defense Fund*), https://www.eenews.net/energywire/stories/1060063139/search?keyword=Edward+Klump%2C+Regulator%2C+Enviro%2C+Generator%3A+3+Views+on+Perry%E2%80%99s+Resilience+Push.

277. Kuckro, *Perry Calls on FERC to Dismantle*, *supra* note 239 (quoting Alison Silverstein); Sam Mintz & Hannah Northey, *Perry Proposes Regulatory Overhaul to Boost*

help mitigate supply disruptions, but only 0.0007 percent of outages during 2012-2016 were attributable to fuel supply shortages.[278] On-site supplies would do little to secure the grid against other sources of outages.[279] For example, Perry's letter failed to mention that during the Polar Vortex, around 25 percent of the coal-fired capacity in the heavily affected PJM Interchange was forced offline by low temperatures, while wind power and demand response programs helped fill the void.[280] More recently, floodwaters from Hurricane Harvey forced NRG to take two coal-fired units at its W.A. Parish Generating Station offline because the coal piles were too wet to burn.[281]

Fifth, critics questioned Perry's authority to determine the substance of the regulation, noting that FERC had the final say on the content of the final rule.[282] They further argued that DOE had not provided a sufficient factual basis for concluding that existing practices were unjust, unreasonable, unduly discriminatory or preferential under the Federal Power Act.[283] The FERC commissioners assured the critics that the commission would independently consider the proposal and reach its own conclusions about whether intervention into wholesale markets was appropriate.[284]

Secretary Perry gamely defended the DOE's proposal. Testifying before a subcommittee of the House Committee on Energy and Commerce in mid-October 2017, he agreed that the added cost to consumers that would result from the rule was an important consideration.[285] However, to him the issue

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Coal, Nuclear, E&E NEWS (Sept. 29, 2017) (quoting former FERC Chairman Jon Wellinghoff), https://www.eenews.net/greenwire/stories/1060062181/search?keyword=Sam+Mintz+%26+Hannah+Northey%2C+Perry+Proposes+Regulatory+Overhaul+to+Boost+Coal%2C+Nuclear.

278. Walton, *Sierra Club*, *supra* note 253. Benjamin Storrow, *Trump's cash-for coal plan rewards political base*, E&E NEWS (Oct. 4, 2017), https://www.eenews.net/climatewire/stories/1060062547/search?keyword=Benjamin+Storrow%2C+Trump%E2%80%99s+Cash-for+Coal+Plan+Rewards+Political+Base.

279. Bade, *How DOE's Baseload Power Rule*, *supra* note 220.

280. Orvis & O'Boyle, *supra* note 270.

281. Benjamin Storrow, *Flooded Texas coal piles dampen reliability arguments*, E&E NEWS (Sept. 29, 2017), https://www.eenews.net/climatewire/stories/1060062093/search?keyword=Benjamin+Storrow%2C+Flooded+Texas+Coal+Piles+Dampen+Reliability+Arguments.

282. Kuckro, *Perry Calls on FERC to Dismantle*, *supra* note 239 (quoting Professor Joel Eisen, University of Richmond School of Law).)

283. Rebecca Kern, *Energy Bid to Support Coal, Nuke Plants Called Illegal*, BNA DAILY Report for Executives (Oct. 25, 2017), https://bnanews.bna.com/environment-and-energy/energy-bid-to-support-coal-nuke-plants-called-illegal [https://perma.cc/PN23-FBEV].

284. Kuckro, *Perry Calls on FERC to Dismantle*, *supra* note 239 (quoting Comm'r Neil Chatterjee).

285. Keith Goldberg, Perry Gets Rough Reception on Hill Over FERC Grid Proposal, Law 360 (Oct. 12, 2017), https://www.law360.com/articles/973250/perry-gets-rough-reception-on-hill-over-ferc-grid-proposal [https://perma.cc/X27F-2J7B].

was: "What's the cost of freedom?"[286] He did not want to rely "on the free market" to protect American freedom.[287]

FERC quickly responded to Perry's directive by publishing a notice stating that it would take public comment on DOE's proposal for three weeks and allow replies to the comments for an additional two weeks.[288] As it became clear that the coal and nuclear industries were at odds with oil and gas interests, Republican strategists worried that the initiative would become another fault line along which supporters of their party fractured.[289] On October 10, 2017, DOE sent to the *Federal Register* a modification of the NOPR that limited the proposal to merchant power plants (plants not subject to state public utility commission regulation) in ISO and RTO systems with energy and capacity markets.[290]

On January 8, 2018, FERC unanimously rejected Secretary Perry's proposed resiliency rule, finding that DOE had not demonstrated that existing rules governing wholesale electricity pricing were unjust and unreasonable.[291] The grid operators had on many occasions amended their rules to ensure that generators had secure fuel supplies, and they were adapting to their greater reliance on natural gas and renewables.[292] Nothing in the record suggested that this was an unjust or unreasonable approach.[293] Furthermore, DOE had not demonstrated that its proposed remedy was not unduly discriminatory or preferential.[294] The commission did, however, create a new docket to "examine holistically the resilience of the bulk power system" and to

286. *Id.*
287. *Id.*
288. Jenny Mandel, *Industry Warily Eyes DOE Directive on Coal, Nuclear*, E&E NEWS (Oct. 3, 2017), https://www.eenews.net/energywire/ stories/1060062353/search?keyword =Jenny+Mandel%2C+Industry+Warily+Eyes+DOE+Directive+on+Coal%2C+Nuclear.
289. Storrow, *Perry, An oil guy, angers allies*, *supra* note 273.
290. Gavin Bade, *DOE limits NOPR to RTOs with capacity markets as FERC denies extension request*, UTILITY DIVE (Oct. 11, 2017), https://www.utilitydive.com/news/doe-limits-nopr-to-rtos-with-capacity-markets-as-ferc-denies-extension-requ/507090/ [https://perma.cc/E2LC-42LL].
291. Rod Kuckro & Sam Mintz, *FERC rejects Perry's bid for coal-based grid resilience*, E&E NEWS (Jan. 9, 2018), https://www.eenews.net/energywire/stories/1060070449 [hereinafter Kuckro & Mintz, F*ERC rejects Perry's bid*].
292. Timothy Puko, *Trump Power Plan is Rejected*, WALL ST. J., Jan. 9, 2018, at A1.
293. Keith Goldberg, *FERC Nixes Perry's Plan to Pay Coal, Nuke Plants*, LAW 360 (Jan. 8, 2018), https://www.law360.com/articles/999944/ferc-nixes-perry-s-plan-to-pay-coal-nuke-plants [https://perma.cc/Z6TZ-C85J].
294. Gavin Bade, *'FERC Did Its Job:' Former Regulators, Lawyers Laud DOE NOPR rejection*, UTILITY DIVE (Jan. 9, 2018), https://www.utilitydive.com/news/ferc-did-its-job-former-regulators-lawyers-laud-doe-nopr-rejection/514394/ [https://perma.cc/23CW-8MNW].

come to some agreement about "what resilience of the bulk power system means and requires."[295] It asked the six regional grid operators to provide information on those questions within 60 days and invited public, after which it might issue another order.[296] Secretary Perry said that he was pleased that his proposal had "initiated a national discussion on the resiliency of our electric system," and he promised to work with FERC to address "market distortions that are putting the long-term resiliency of our electric grid at risk."[297]

The resiliency proposal was an attempt to bring about a renewal of the coal and nuclear industries to create, or at least maintain, jobs for coal miners and other workers in spite of the signals from the market that coal and nuclear were uneconomic.[298] It seems unlikely that FERC will approve any plan to subsidize the coal industry and owners of coal-fired power plants by re-regulating wholesale electricity markets after hearing from the system operators and other stakeholders.[299] In a separate concurrence, Commissioner Richard Glick observed that "[t]he Proposed Rule had little, if anything, to do with resilience, and was instead aimed at subsidizing certain uncompetitive electric generation technologies."[300] If FERC had agreed to re-regulate wholesale markets to ensure that coal and nuclear plants receive greater compensation for their electricity than natural gas and renewables, it might have delayed or even halted the ongoing transformation of the electric power industry.[301] Commissioner Cheryl LaFleur noted that even if DOE had demonstrated a resiliency problem, she had "serious concerns about the nature of the proposed remedy, which would address the issue not through market rules but through out-of-market payments to certain designated [generation] resources."[302] Companies might have put off retiring some of their older, less-efficient coal-fired units.[303] But even that may have proven uneconomical, because most coal-fired plants would have had to purchase more coal to increase their stockpiles—from the current 75-day average

295. Kuckro & Mintz, *FERC rejects Perry's bid*, *supra* note 291.
296. Kuckro & Mintz, *FERC rejects Perry's bid*, *supra* note 291.
297. Kuckro & Mintz, *FERC rejects Perry's bid*, *supra* note 291.
298. Joe Ryan, *Trump Has a Plan to Save Coal and Hobble Clean Energy*, BLOOMBERG LAW: BNA ENERGY & CLIMATE REP. (Oct. 2, 2017), https://bnanews.bna.com/environment-and-energy/trump-may-have-paths-to-save-coal-hobble-clean-energy [https://perma.cc/4QC2-GC8D] [hereinafter Ryan, *Trump Has a Plan to Save Coal*].
299. Steven Mufson, *Trump-appointed regulators reject plan to rescue coal and nuclear plants*, WASH. POST (Jan. 8, 2018), https://www.washingtonpost.com/ [http://perma.cc/E2FC-2Q5L].
300. Kuckro & Mintz, *FERC rejects Perry's bid*, *supra* note 291.
301. Storrow, *Perry, An Oil Guy, Angers Allies*, *supra* note 273.
302. Kuckro & Mintz, *FERC rejects Perry's bid*, *supra* note 291.
303. Mooney & Mufson, *Rick Perry Just Proposed Sweeping New Steps*, *supra* note 239.

to the proposal's 90-day requirement—and they would have had to spend more money on personnel and equipment to maintain the larger piles.[304]

I. A Subsidy for Appalachian Coal

Sharing the platform with President Trump in early August 2017, West Virginia Governor Jim Justice announced his switch from the Democratic to the Republican party.[305] At the same time, Governor Justice announced that he had presented President Trump with a proposal for a congressionally funded program to pay Eastern power plants $15 per ton for coal that they purchase from the Central or Northwest Appalachian regions, a subsidy that would cost the federal government about $4.5 billion annually.[306] The governor explained that the coal mines in those regions were vital to national security and that the subsidies were warranted to keep those mines from closing down.[307] Governor Justice also presented the idea to Energy Secretary Rick Perry, Vice President Mike Pence, and Senior Presidential Advisor Jared Kushner.[308]

Not surprisingly, coal companies from states not covered by the proposed subsidy were adamantly opposed to the idea, arguing that "the federal government should not be in the business of picking winners and losers in the market through subsidies that pit one coal producing region against

304. Tim Loh, *Perry's Coal Proposal Seen Unlikely to Reverse Historic Decline*, BLOOMBERG LAW: ENERGY & CLIMATE REP. (Oct. 4, 2017), https://www.bloomberg.com/news/articles/2017-10-03/perry-s-coal-proposal-seen-unlikely-to-reverse-historic-decline [https://perma.cc/M8VP-RNFZ].

305. Zack Colman, *Trump champions coal exports in W. Va. rally*, E&E NEWS (Aug. 4, 2017), https://www.eenews.net/stories/1060058399/.

306. Dan Molinski, *West Virginia Gov. Justice Asks Trump for $4.5 Billion to Save Eastern Coal*, WALL ST. J. (Aug. 10, 2017), https://www.wsj.com/articles/west-virginia-gov-justice-asks-trump-for-4-5-billion-to-save-eastern-coal-1502312048 (published in print as *Governor Seeks Subsidy to Save Coal* on Aug. 10, 2017).

307. *Id.*

308. Tim Loh, *Trump is Said to Be "Really Interested" in Payments for Coal Use*, BLOOMBERG LAW: ENERGY & CLIMATE REP. (Aug. 11, 2017), https://www.bloomberglaw.com/product/blaw/document/X8A44E04000000?bc=W1siU2VhcmNoIFJlc3VsdHMiLCIvcHJvZHVjdC9ibGF3L3NlYXJjaC9yZXN1bHRzLzg1ODlmN2E2NDFlYmU0YTdlMmUzNmMwMWZhZGIxZmQ0Il1dc5b098fd84179f1ff89809b2358dd420c5cbddf7&search32=ccNvFuRULaOxL76LVM8X1g%3D%3DOnro17jIfl7kFNkMBHrH29RLeXdot7R1gUMuSUbilcQnsAXfPjfueJ5Bc-t1ptYsQWD3e0kF_JmV8lgoCMhVzegg7Az07JE8jeiHaLprIWXM8Ti-VoQ1hurDGoUfCXCBftd_YePKb6WQSIJkIxBq64GiHcts0EMWW1CKi_XM_71IGZszYhdlgdw5ulYzIzgd-qTarc2QQR5HCXNDiiUTniyCyEAS3zrDAZZO5siGTE%3D.

another."[309] The conservative Heritage Foundation, a consistent Trump ally in policy debates, also expressed concern that Congress would "expand the subsidy pool even further."[310] Nevertheless, the governor reported that the president was "really interested" in the idea.[311]

Governor Justice's proposal for subsidizing Appalachian coal by paying power plants to burn coal from that region has not gained any traction in Congress thus far. Yet, the apparent quid pro quo between President Trump and Governor Justice left open the possibility that the Administration would support the plan if Congress took it up.[312] However, the fact that the Chairman of the Senate Environment and Public Works Committee, John Barraso (R-Wyo.), thought that the idea "doesn't make sense" and that environmental groups also opposed the proposal suggests that it is not likely to go far in the future.[313]

J. Tariff on Solar Panels

In April 2017, Suniva, Inc., the nation's largest manufacturer of solar panels declared bankruptcy.[314] Soon thereafter, Suniva shocked the solar installation and service industry by filing a petition with the United States International Trade Commission (ITC), asking the Trump Administration to impose a stiff tariff on imported solar panels.[315] Suniva complained that it could not compete with cheap solar panels from China and elsewhere because they were subsidized by their governments.[316] Suniva was an odd entity to bring the request, because its major shareholder was a Chinese corporation and because it imported many of the components and constituents

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309. Zack Colman, *With Trump as dealmaker, could coal be subsidized?*, E&E NEWS (Aug. 18, 2017), https://www.eenews.net/stories/1060058930 [https://perma.cc/GK4Z-Q89G]; Stephen Lee, *West Virginia Governor's Coal-Subsidy Pitch Troubles Westerners*, BNA ENERGY & CLIMATE REP. (Aug. 11, 2017), https://www.bna.com/west-virginia-governors-n73014463079/ Lee, *West Virginia* [https://perma.cc/3KU3-3NW3] (quote) [hereinafter Lee, *West Virginia Governor's Coal-Subsidy*].

310. Lee, *West Virginia Governor's Coal-Subsidy*, *supra* note 309.

311. Lee, *West Virginia Governor's Coal-Subsidy*, *supra* note 309.

312. Hannah Northey & Dylan Brown, *W. Va. governor pitched Trump on subsidy before party switch*, E&E NEWS (Aug. 8, 2017), https://www.eenews.net/greenwire/stories/1060058531.

313. Lee, *West Virginia Governor's Coal-Subsidy*, *supra* note 309.

314. David Ferris, *Solar firm prods Trump to start a trade war*, E&E NEWS (Apr. 27, 2017), https://www.eenews.net/stories/1060053680/ [https://perma.cc/MZ8H-AAR4] [hereinafter Ferris, *Solar firm prods Trump*].

315. *Id.*

316. David Ferris, *The "Buy America" company that sourced from abroad*, E&E NEWS (May 16, 2017), https://www.eenews.net/stories/1060054585/ [https://perma.cc/99RH-PZ59] [hereinafter Ferris, *"Buy America"*].

of its solar panels from South Korea, Germany, Canada, and China.[317] The petition was strongly opposed by the Solar Energy Industries Association (SEIA), which represented solar installation companies that had greatly profited from low priced imported panels, and a number of free-market conservative groups like the Heritage Foundation and the Cato Institute.[318] SEIA tweeted out an advertisement featuring Fox News commentator (and Trump supporter) Sean Hannity opposing the tariff.[319] Even the *Wall Street Journal's* editorial page came out against the proposed tariff.[320]

Opponents argued that a decision imposing a high tariff on those products could throw the market for solar energy into disarray.[321] A tariff would make all solar panels more expensive just at a time when solar energy was becoming competitive with fossil fuel-fired power.[322] Higher priced panels would make solar projects more expensive, and that would result in a decline in demand that could end the solar energy boom of the previous several years.[323] As fossil fuel-fired plants provided cheaper power, GHG emissions would increase dramatically.[324] They pointed out that far more American workers were employed in turning imported solar cells in to solar panels than were employed in manufacturing solar cells.[325] Opponents worried that President Trump would see the petition as an opportunity to show his supporters that he was "putting America first" while at the same time giving a massive boost to his efforts to aid the coal industry.[326]

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317. Ferris, *"Buy America"*, *supra* note 316.

318. Zack Colman, *Industry speaks Trump's language to sway trade decision*, E&E NEWS (Dec. 6, 2017), https://www.eenews.net/climatewire/stories/1060068199?t=https%3A%2F%2Fwww.eenews.net%2Fstories%2F1060068199; Ferris, *Solar firm prods Trump*, *supra* note 314.

319. *Sean Hannity is bashing solar tariffs*, E&E NEWS (Oct. 20, 2017), https://www.eenews.net/climatewire/2017/10/20/stories/1060064143.

320. Editorial, *How to Kill American Solar*, WALL ST. J., Oct. 30, 2017, at A16, https://www.wsj.com/articles/how-to-kill-american-solar-1509312015.

321. *Id.* Diane Cardwell, *Solar Trade Case, With Trump as Arbiter, Could Upend Market*, N.Y. TIMES (June 30, 2017), https://www.nytimes.com/2017/06/30/business/energy-environment/solar-energy-trade-china-trump.html (published in print as *Battle over Solar Trade* on July 1, 2017) [https://perma.cc/W3RN-XJKT] [hereinafter Cardwell].

322. Ferris, *supra* note 314.

323. *Id.*

324. *Id.*

325. David Ferris, *Suniva trade case throws industry into doubt*, E&E NEWS (May 8, 2017), https://www.eenews.net/stories/1060054176/ [http://perma.cc/L2BB-4EP5].

326. *Id.*

In September 2017, the ITC found that imports of solar cells and modules were causing "serious injury to the domestic [solar manufacturing] industry."[327] Then in late October 2017, the commissioners recommended three remedies, ranging from a limit on the total power of solar cells that could be imported in any given year to tariffs ranging from 10 percent to 35 percent that would decrease as domestic solar manufacturers recovered.[328] Accepting the ITC finding in January 2018, President Trump imposed a tariff on solar cells and solar panels from anywhere in the world.[329] He set the tariff at 30 percent for the first year, and it would decrease 5 percent per year for the next three years, at which point it would end.[330] The president, however, exempted the first 2.5 gigawatts of imported solar cells to ensure that domestic solar panel assemblers and installers were not harmed too drastically by the action.[331] Although the tariffs were not nearly as steep as the local manufacturers had requested, SEIA predicted that up to one-third of the 260,000 workers in the solar sector could lose their jobs.[332] Bloomberg New Energy Finance estimated that the tariffs could add 10 percent to the cost of building utility-scale solar plants and 3 percent to the cost of installing rooftop solar panels.[333]

K. Eliminating Renewable Tax Credits

In October 2017, Administrator Pruitt announced that he favored eliminating the federal tax credits for wind and solar power.[334] Currently,

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327. Ana Swanson, *Trade Body Urges Restrictions on Solar Imports*, N.Y. TIMES, Oct. 31, 2017, at A12; Chris Mooney, *Federal trade panel calls for restrictions on imported solar cells – which Trump could soon implement*, WASH. POST (Oct. 31, 2017), https://www.washingtonpost.com/news/energy-environment/wp/2017/10/31/federal-trade-panel-calls-for-protections-against-imported-solar-panels-which-trump-could-soon-implement/?noredirect=on&utm_term=.2105b1f1bc94 [http://perma.cc/PL9T-2ZFP].

328. Swanson, *supra* note 327.

329. David J. Lynch, *Trump imposes tariffs on solar panels and washing machines in first major trade action of 2018*, WASH. POST (Jan. 22, 2018, https://www.washingtonpost.com/news/wonk/wp/2018/01/22/trump-imposes-tariffs-on-solar-panels-and-washing-machines-in-first-major-trade-action/?utm_term=.e48122200456 [http://perma.cc/5KR9-J9CY] [hereinafter, Lynch, *Trump imposes tariffs*].

330. Lynch, *Trump imposes tariffs*, *supra* note 329.

331. Alex Lawson, *Trump Oks New Tariffs on Solar Cells, Washing Machines*, LAW 360 (Jan. 22, 2018), https://www.law360.com/articles/1004529 [https://perma.cc/L72D-2D4S].

332. Lynch, *Trump imposes tariffs*, *supra* note 329.

333. Reed Landberg & Brian Eckhouse, *Trump's Solar Tariffs Skewer $161 Billion Industry Led By China*, BNA Env't & Energy Rep. (Jan. 23, 2018), https://www.bloomberg.com/news/articles/2018-01-23/trump-s-solar-tariffs-skewer-161-billion-industry-led-by-china [https://perma.cc/PV32-LS3L].

334. Timothy Cama, *EPA Chief: I'd 'do away with' wind, solar tax credits*, THE HILL (Oct. 9, 2017), http://thehill.com/policy/energy-environment/354594-epa-chief-id-do-away-with-wind-solar-tax-credits [https://perma.cc/EQM5-QXHC].

wind generators can receive a tax credit of 2.3 cents per kilowatt hour, and companies that install solar arrays can receive credits equal to 30 percent of their capital investments.[335] Pruitt's suggestion would, of course, require an act of Congress or a decision by Congress to allow the existing credits to lapse in 2020 and 2022, respectively, by failing to reauthorize them.[336] Pruitt's claim that he merely wants to put renewables and fossil fuels on an equal footing, however, ignores the considerable subsidies that the federal government has provided to the latter sources of electricity over the years.[337] Thus far, there has been no observable move in Congress to abolish the credits, but it is quite possible that Congress could drop the credits in the future.

Reducing the tax advantages for renewables could put coal and natural gas in a better position to continue to dominate the electric power market. This would slow down or reverse the trend toward reduction in CO_2 emissions from power plants. It would, however, do nothing to the current cost disparity between coal and natural gas. Taking away the tax advantages of investing in solar and wind power would reduce the speed with which those technologies penetrated electricity markets, but it would probably not result in a substantial increase in the use of coal, so long as companies like Google, Bank of America, and General Motors remain committed to 100 percent use of renewables and states continue to enforce renewable portfolio standards.[338]

IV. THE TRUMP EFFECT

A. Effect on Power Plant Emissions

1. Introduction

The eight years of the Obama Administration saw coal's fortunes fall, rise, and fall again as the electric power industry was buffeted by winds of change. These changes were largely driven by declining natural gas prices,

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335. *Id.*
336. *Id.*
337. American Energy Security and Innovation: Grid Reliability Challenges in a Shifting Energy Resource Landscape: Hearing Before the Subcomm. on Energy and Power of the H. Comm. on Energy and Commerce, 113th Cong. 49 (2013) (statement of Daniel Weiss, Senior Fellow and Director of Climate Strategy, Center for American Progress) (describing a study detailing large subsidies to fossil fuel-fired power plants).
338. Ryan, *Trump Has a Plan to Save Coal*, *supra* note 298.

greater efforts to reduce demand through end-use efficiency and demand-response programs, EPA regulations, and an extraordinary campaign by the Sierra Club and other environmental groups to prevent companies from building new power plants and forcing them to retire existing power plants. As companies were forced to internalize the externalities of burning coal, the economics of coal-fired power plants looked less and less attractive.[339] American Electric Power, one of the largest coal-users in the country, announced in June 2013 that coal would account for less than 50 percent of its capacity in 2020.[340] A financier with Deutsche Bank called coal "a dead man walking" because banks would not finance them, insurance companies would not insure them, EPA was "coming after them," and "the economics to make it clean don't work."[341] Even some state public utility commissions turned against coal. The head of the Arizona Corporation Commission promised that Arizona would "never again" permit another coal-fired power plant to be built within the state.[342] Robert Murray declared in November 2014 that anyone who believed that the domestic coal market would experience a revival either did not understand the business or was "smoking dope."[343]

2. A Transformed Electric Power Industry

By the time that Donald Trump took over the oval office, most major electric power companies had already initiated the transformation from coal to natural gas and renewables.[344] Demand for electrical power was not increasing—despite population increases and an economic recovery—in large part due to end-use energy conservation measures and state renewable portfolio standards.[345] Low natural gas prices played a major role in the

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339. Patrick Charles McGinley, *Climate Change and the War on Coal: Exploring the Dark Side*, 13 VT. J. ENVTL. L. 255, 329 (2011), http://www.ourenergypolicy.org/wp-content/uploads/2012/11/VJEL10178.pdf [https://perma.cc/4QUF-E6JR] [hereinafter McGinley].

340. Bob Matyi, *Coal to fall below 50% of AEP's generation*, S&P GLOBAL PLATTS (June 17, 2013).

341. McGinley, *supra* note 339 (quoting Head of Asset Management, Deutsche Bank).

342. Lynn Doan, *Arizona Utility Regulator Says State will 'Never Again' Build a Coal-fired Power Plant*, SNL ELEC. UTILITY REP. (Oct. 25, 2010).

343. Darren Epps, *Murray Energy founder Robert Murray: The coal market is not coming back*, SNL DAILY COAL REP. (Sept. 23, 2014).

344. Coral Davenport, *Clean Energy 'Moving Forward' Despite Trump's E.P.A. Pick, Experts Say*, N.Y. TIMES (Dec. 8, 2016), https://www.nytimes.com/2016/12/08/us/politics/trump-climate-epa-coal-jobs.html [https://perma.cc/42A8-XGU3] [hereinafter Davenport, *Clean Energy 'Moving Forward'*].

345. Mark Chediak, *U.S. Power Demand Flatlined Years Ago and It's Hurting Utilities*, BNA ENERGY & CLIMATE REP. (Apr. 25, 2017), https://www.bloomberg.com/news/articles/2017-04-25/u-s-power-demand-flatlined-years-ago-and-it-s-hurting-utilities [https://perma.cc/YLG9-77UA].

transformation.[346] Declining prices for renewable energy also caused the industry to migrate away from coal.[347] Demand from environmentally conscious customers, including some major corporate entities, ensured that electric power companies continued to expand their renewable offerings.[348] The average capacity factor for coal-fired plants (i.e., the percentage of time that they actually run) fell from 61 percent in 2014 to 52 percent in 2016.[349] It simply did not pay to maintain an aging coal or nuclear plant that only ran half the time.[350] When it came to building new facilities, the industry faced 20-30 year time horizons and could not afford to be swayed by the deregulatory activities of a single presidential administration.[351] All of these trends appear to be continuing into the foreseeable future, with or without EPA's Clean Power Plan.[352] Even President Trump's top economic advisor has concluded that "[c]oal doesn't even make that much sense anymore as a feedstock."[353]

Many of the nation's largest power generators say that they will continue to invest in natural gas and renewables and include CO_2 reductions as part of their overall corporate strategies, whether or not EPA repeals the CPP.[354] In June 2018, the proposed Wind Catcher Energy Connection project was approved at a cost of $4.5 billion to purchase a massive 2,000 megawatt

346. Naureen S. Malik & Tim Loh, *America's Other Coal Job, Ignored by Politicians, Is Dying Fast*, BNA DAILY ENV'T REP. (Aug. 11, 2017), https://www.bloomberg.com/news/articles/2017-08-10/america-s-other-coal-job-ignored-by-politicians-is-dying-fast [https://perma.cc/DFR5-U63V].

347. Mark Chediak, *Killing Obama's Power Plan Hasn't Stopped the Renewable Boom Yet*, BNA ENERGY & CLIMATE REP. (Oct. 10, 2017), https://www.bloomberg.com/news/articles/2017-10-10/killing-obama-s-power-plan-hasn-t-stopped-the-renewable-boom-yet [https://perma.cc/6F9S-8RAQ]; Jeffrey C. Peters, *Trump may dismantle the EPA Clean Power Plan but its targets look resilient*, THE CONSERVATION (Nov. 15, 2016), http://theconversation.com/trump-may-dismantle-the-epa-clean-power-plan-but-its-targets-look-resilient-68460 [https://perma.cc/55T3-5KEG].

348. Andrew Childers & Rebecca Kern, *Utilities Counting on Carbon Regulation to Return*, 48 BNA ENERGY & CLIMATE REP. 591 (Mar. 31, 2017).

349. Storrow, *Explaining Perry's Grid Directive*, *supra* note 228.

350. *Id.*

351. Davenport, *Clean Energy 'Moving Forward'*, *supra* note 344.

352. Peters, *supra* note 347.

353. Mark Landler, Brad Plumer & Linda Qiu, *Trump, Prioritizing Economy Over Climate, Cites Disputed Premises*, N.Y. TIMES (Jun. 2, 2017), https://www.nytimes.com/2017/06/01/us/politics/fact-check-climate-change-trump.html [https://perma.cc/6QKU-AX8K].

354. Timothy Puko, *Power Companies to Stick with Plans Despite EPA's Emissions Repeal*, WALL ST. J. (Oct. 11, 2017), https://www.wsj.com/articles/epa-moves-proposal-to-withdraw-obama-power-plant-rules-1507657014 [https://perma.cc/G5BG-M3N4] [hereinafter Puko, *Power Companies*].

wind farm in Oklahoma, distribute its power over four states, and recover the cost of the purchase from its ratepayers.[355] It is a model that is becoming increasingly attractive to large power companies. Instead of purchasing power from renewable generators, they purchase the generating capacity and profit from the low-cost energy.[356] NextEra Energy and Xcel Energy employed the same model to acquire renewable resources.[357] Another major player, Duke Energy, still plans to reduce CO_2 emissions by 40 percent by 2030, and it has no plans to increase its reliance on coal.[358] The Southern Company, which dominates the electricity markets in the Southeast, announced in October 2017 that the CPP repeal will have only a marginal effect on its future plans.[359]

DTE Energy, a major supplier of electricity to the Detroit area, remains on track to comply with the CPP, and its plans are not going to change, "whether the Clean Power Plan survives or dies on the vine."[360] Merchant generator, Entergy Corporation, is adhering to its plans to reduce its CO□emissions by 20 percent from 2000 levels by 2020.[361] PNM Resources of New Mexico plans to replace two coal-fired units totaling 783 megawatts of power, with solar and nuclear energy.[362] After agreeing in a 2014 settlement with EPA to install NOx controls at its massive Navajo plant in Northern Arizona, the Salt River Project decided in the fall of 2017 to retire the

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355. *Louisiana Public Service Commission Approves Wind Catcher Project*, SOUTHWESTERN POWER ELECTRONIC CO. (June 20, 2018), https://swepco.com/info/news/viewRelease.aspx?releaseID=2641 [https://perma.cc/B2EP-89PE].

356. Christopher Martin, Jim Polson & Mark Chediak, *Growth-Starved Utilities Have Found a New Way of Making Money*, BNA DAILY ENV'T REP. (Jul. 26, 2017), https://www.bloomberg.com/news/articles/2017-07-26/aep-to-spend-4-5-billion-on-the-largest-wind-farm-in-the-u-s [https://perma.cc/VM4A-BTS3].

357. *Id.*

358. Danielle Paquette, *Solar's rise lifted these blue-collar workers. Now they're worried about Trump*, WASH. POST (Jun. 5, 2017), https://www.washingtonpost.com/news/wonk/wp/2017/06/05/solars-rise-in-north-carolina-lifted-blue-collar-workers-now-theyre-worried-about-trump/?utm_term=.63f4f7786c09 [https://perma.cc/5Y6L-WFE7].

359. Puko, *Power Companies*, *supra* note 354.

360. Lee Logan & Doug Obey, *Despite Litigation Stance, Many State Critics Find Eased ESPS Compliance*, INSIDE EPA (Oct. 26, 2016), https://insideepa.com/daily-news/despite-litigation-stance-many-state-critics-find-eased-esps-compliance?destination=node/195733 [hereinafter Logan & Obey, *Despite Litigation Stance*].

361. Kristi E. Swartz & Edward Klump, *EPA repeal plan strips policy from carbon-free nuclear*, E&E NEWS (Oct. 11, 2017), https://www.eenews.net/energywire/stories/1060063255?t=https%3A%2F%2Fwww.eenews.net%2Fstories%2F1060063255 [hereinafter Swartz & Klump, *EPA repeal plan strips policy*].

362. Maxine Joselow, *Trump's bet on coal isn't changing utility long-term planning*, E&E NEWS (Mar. 31, 2017), https://www.eenews.net/energywire/stories/1060052386?t=https%3A%2F%2Fwww.eenews.net%2Fstories%2F1060052386.

plant and cease production at the mine that supplied its coal.[363] Having made its peace with EPA, the Project's decision was prompted by the economic impossibility of competing with cheap natural gas and renewables.[364]

Even in coal-friendly Texas, inexpensive natural gas and wind generation is driving companies to retire coal-fired plants ahead of schedule.[365] The same week that EPA published its proposed CPP repeal, Vistra Energy's Luminant subsidiary said that it would be retiring its coal-fired Monticello, Big Brown and Sandow plants, with a capacity totaling 4 gigawatts, by early 2018.[366] One of the Sandow units was built in 2009 and was nowhere near the end of its useful life.[367] Rice University engineering professor Daniel Cohan observed that "Trump can repeal environmental rules, but he can't repeal economics."[368] A March 2017 survey of utility industry executives found that large majorities expected that their companies' power mixes would include more renewable resources and distributed generation in the next 10 years.[369] Rural cooperatives are also relying heavily on gas and wind power, having added more than 900 megawatts of wind power in 2016 at the same time that it retired or converted to gas 700 megawatts of coal-fired power.[370]

At least one company has experienced pushback from its shareholders for failing to take advantage of the Trump Administration's radically different approach to coal. A January 2017 announcement by merchant generator

363. Ian Frisch, *The End of Coal Will Haunt Navajo Power Station*, BNA ENV'T & ENERGY (Oct. 13, 2017, 5:04 AM), https://bnanews.bna.com/environment-and-energy/the-end-of-coal-will-haunt-navajo-power-station [https://perma.cc/8ZHZ-5KJ5].

364. *Id*.

365. Jim Polson & Emma Ockerman, *Coal Plants Are Dying in America's Most Energy-Friendly State*, BNA ENV'T & ENERGY (Oct. 13, 2017, 11:31 AM), https://bnanews.bna.com/environment-and-energy/coal-plants-are-dying-in-americas-most-energy-friendly-state [https://perma.cc/88EQ-C7VH].

366. Edward Klump, *Coal plant closures are coming to Texas. Now what?*, E&E NEWS (Oct. 16, 2017), https://www.eenews.net/stories/1060063689 [https://perma.cc/52SE-ZNVQ]. Swartz & Klump, *EPA repeal plan strips policy*, *supra* note 361.

367. Klump, *Disappointment and Hope*, *supra* note 244. Swartz & Klump, *EPA repeal plan strips policy*, *supra* note 361.

368. Klump, *Disappointment and Hope*, *supra* note 244. Swartz & Klump, *EPA repeal plan strips policy*, *supra* note 361.

369. Gavin Bade, *Why utilities don't think Trump will stop the clean energy transition*, UTILITY DIVE (Mar. 28, 2017), https://www.utilitydive.com/news/why-utilities-dont-think-trump-will-stop-the-clean-energy-transition/439138/ [https://perma.cc/GZ73-VC98].

370. Herman K. Trabish, *How rural co-ops are shifting to a cleaner power mix*, UTILITY DIVE (Aug. 21, 2017), https://www.utilitydive.com/news/how-rural-co-ops-are-shifting-to-a-cleaner-power-mix/503024/ [https://perma.cc/GHF7-CYES].

NRG Corporation that it would be adhering to its plan to reduce CO_2 emissions by 50 percent by 2030 and 90 percent by 2050[371] precipitated a revolt by activist hedge fund investors, who installed two members on NRG's board with the goal of selling off many of its renewable projects.[372] One of those directors, Barry T. Smitherman, is a former chairman of the Texas Public Utility Commission and a climate change skeptic.[373] New York City's comptroller on behalf the city pension funds challenged Smitherman's appointment, arguing that his views on global warming disqualified him.[374] Nonetheless, the company's shareholders voted overwhelmingly in favor of leaving him on the board.[375] Although NRG's Vice President for Sustainability insists that the company remains committed to its GHG reduction goals,[376] the company supported the CPP repeal because it wanted EPA to improve its "methodology and timeline."[377]

In supporting the Trump initiatives, NRG joined several other companies. Some electrical co-operatives welcomed the Trump Administration action, believing that they would have more time to recoup costs already expended on expensive coal-fired plants.[378] Merchant generator Dynegy supported the Trump Administration's repeal of the CPP, but hoped that the Administration would replace it with "a regulatory solution that delivers environmental benefits, while maintaining the integrity of the competitive wholesale power market and preserving the ability of the power sector to deliver affordable and reliable energy."[379]

Nevertheless, most close observers of the industry have concluded that any changes implemented by the Trump Administration will have little effect on CO_2 emissions trends.[380] According to the Energy Information

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371. Edward Klump, *How Will Coal's Future Play Out in Texas*, E&E NEWS (Jan. 4, 2017), https://www.eenews.net/stories/1060047781 [https://perma.cc/Q6FE-NQ5B].

372. Diane Cardwell & Alexandra Stevenson, *NRG, A Power Company Leaning Green, Faces Activist Challenge* (Apr. 7, 2017), https://www.nytimes.com/2017/04/07/business/dealbook/nrg-elliott-management-climate.html [https://perma.cc/X8UA-8V6Y].

373. *Id*.

374. Edward Klump, *Bid to derail NRG director won't be easy for NYC*, E&E NEWS (Apr. 12, 2017), https://www.eenews.net/energywire/2017/04/12/stories/1060052968.

375. Edward Klump, *NRG investors back director criticized for climate stance*, E&E NEWS (May 1, 2017), https://www.eenews.net/energywire/stories/1060053813?t=https%3A%2F%2Fwww.eenews.net%2Fstories%2F1060053813.

376. Edward Klump, *NRG, despite doubters, aims at sustainability push*, E&E NEWS (Aug. 3, 2017), https://www.eenews.net/energywire/stories/1060058313?t=https%3A%2F%2Fwww.eenews.net%2Fstories%2F1060058313.

377. Swartz & Klump, *EPA repeal plan strips policy*, *supra* note 361.

378. Childers & Kern, *supra* note 348.

379. Swartz & Klump, *EPA repeal plan strips policy*, *supra* note 361.

380. Cushman, *Inside the Coal War Games*, *supra* note 193 (quoting Union of Concerned Scientists report). Benjamin Storrow, Debra Kahn & Scott Waldman, *Governors, faced with Paris withdrawal, pledge climate action*, E&E NEWS (June 1, 2017), https://www.eenews.net/

Administration, CO_2 emissions in 2016 were 24 percent lower than in 2005 without the direct stimulus of CPP, well on the way to CPP's 32 percent reduction goal.[381] The head of the Rhodium Group, a prominent energy industry analyst, concluded that EPA's proposed CPP repeal did not "change any other market factors that are pushing coal out of the system."[382] In early 2017, his group published a report estimating that CO_2 emissions from power plants would be 27 to 35 percent below 2005 levels by 2025, with or without the CPP.[383] He acknowledged, however, that the repeal could affect progress in the 12 to 21 states that were not on track to meet their CPP targets.[384]

3. Customers Conserve and Purchase Renewable Energy

Many major American companies have pledged to reduce their carbon footprints by improving energy conservation and purchasing more power from renewable resources.[385] Some companies have invested in renewable energy as a hedge against uncertain prices for fossil fuel-fired power.[386] Others have done so to improve their image with environmentally conscious consumers.[387] For example, Walmart's "Project Gigaton" has the goal of removing a billion metric tons of GHG from it supply chains by 2030.[388] Home Depot agreed to purchase sufficient electricity from the Los Mirasoles wind farm near McAllen, Texas, to power 100 of its stores for one year.[389]

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stories/1060055391 [https://perma.cc/VB4S-T5LB] [hereinafter Storrow et al., *Governors, faced with Paris withdrawal*]. David Schultz, *Will Decline in Greenhouse Gas Emissions Survive Trump Presidency?*, BNA ENV'T & ENERGY REP. (Feb. 17, 2017, 3:01 AM), https://www.bna.com/decline-greenhouse-gas-n57982084069/ [https://perma.cc/6LXB-PHBF].

381. Benjamin Storrow, *Repeal comes in period of falling emissions*, E&E NEWS (Oct. 10, 2017), https://www.eenews.net/climatewire/stories/1060063113 [hereinafter Storrow, *Repeal comes*].

382. Cushman, *Inside the Coal War Games*, *supra* note 193.

383. Eilperin, *EPA's Pruitt Signs Proposed Rule*, *supra* note 165.

384. *Id.*

385. Hiroko Tabuchi, *U.S. Companies to Trump: Don't Abandon Global Climate Deal*, N.Y. TIMES (Nov. 16, 2016), https://www.nytimes.com/2016/11/17/business/energy-environment/us-companies-to-trump-dont-abandon-global-climate-deal.html.

386. Chang, et al., *Advancing Past "Baseload"*, *supra* note 263.

387. *Id.* at 11.

388. Nathan Hale, *Mayors Say Cities Must Take Lead on Fighting Climate Change*, Law 360 (June 23, 2017), https://www.law360.com/energy/articles/938090/mayors-say-cities-must-take-lead-on-fighting-climate-change [https://perma.cc/8EMG-4W2E].

389. Daniel Cusick, *Mega-retailer makes mega wind investment*, E&E News (Feb. 6, 2017), https://www.eenews.net/climatewire/stories/1060049582/climate_digest.

Other big-box stores, like Target, Ikea and Kohls have made similar commitments.[390] Major technology companies like Google, Apple, Amazon, and Microsoft have committed themselves to relying more heavily on renewable energy.[391] More than two-thirds of Fortune 100 companies and more than half of Fortune 500 companies have implemented renewable energy or sustainability polices with specific targets.[392] In an ironic sign of the times, the Kentucky Coal Museum is in the process of switching to solar power.[393]

The leaders of many American corporations strongly supported the CPP and were deeply disappointed with President Trump's withdrawal from the Paris Accord.[394] Around 100 companies and 80 university presidents announced that they would continue to implement existing GHG reduction programs, and come up with new programs to offset predictable emissions in homes and less environmentally conscious businesses.[395] Yet more than 25 of those companies also contributed a total of more than $3 million to the Republican Attorneys General Association, which was vigorously challenging the CPP in the D.C. Circuit.[396] It remains to be seen whether those companies will adhere to their commitments if the economy spins into another recession.

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390. *Id.*

391. Chang, et al., *Advancing Past "Baseload"*, *supra* note 263, at 11.

392. Emily Holden, *Utilities see demise of climate rule, still cut CO2*, E&E NEWS (Feb. 15, 2017), https://www.eenews.net/climatewire/2017/02/15/stories/1060050087.

393. Karen Heller, *Coal No Longer Fuels America. But the Legacy—and the Myth—Remain*, WASH. POST (July 9, 2017), https://www.washingtonpost.com/lifestyle/style/coal-no-longer-fuels-america-but-the-legacy—and-the-myth—remain/2017/07/07/d8a8bcb4-582b-11e7-b38e-35fd8e0c288f_story.html?utm_term=.331a86f30036 [https://perma.cc/ 3J8D-8SVC].

394. Alana Semuels, *The Myth That 'Business' Hated Obama's Clean Power Plan*, THE ATLANTIC (Oct. 10, 2017), https://www.theatlantic.com/business/archive/2017/10/business-clean-power-plan/542529/ [https://perma.cc/Y9GZ-AVSN]; Parker, et. al., *Inside Trump's climate decision*, *supra* note 13.

395. Kathleen Parker, *Trump's Paris decision was an accidental call to action*, WASH. POST (June 2, 2017), https://www.washingtonpost.com/opinions/trumps-paris-decision-was-an-accidental-call-to-action/2017/06/02/a9d3630e-47cc-11e7-98cd-af64b4fe2dfc_story.html?utm_term=.d186ae5d2d80 [https://perma.cc/N3E9-74U5] [hereinafter Parker, *Trump's Paris decision*]; Phillip Rucker & Jenna Johnson, *Trump announces U.S. will exit Paris climate deal, sparking criticism at home and abroad*, WASH. POST (June 1, 2017), https://www.washingtonpost.com/politics/trump-to-announce-us-will-exit-paris-climate-deal/2017/06/01/fbcb0196-46da-11e7-bcde-624ad94170ab_story.html?utm_term=.f66ccf9635f5 [https://perma.cc/D7LW-FTYX].

396. Rachel Leven & Jamie Smith Hopkins, *These companies support climate action, so why are they funding opposition to it?*, THE CENTER FOR PUBLIC INTEGRITY (Sept. 19, 2017), https://www.publicintegrity.org/2017/09/19/21168/these-companies-support-climate-action-so-why-are-they-funding-opposition-it [https://perma.cc/U88B-KW47].

4. Environmental Group Resistance

Environmental groups are determined to do whatever they can to prevent the Trump Administration from undoing the progress made during the Obama years. Days after the election, the Executive Director of NRDC announced that environmental groups would "build a wall of opposition" to stop Trump.[397] Greenpeace said it would be "fighting harder than ever for environmental, racial, and social justice."[398] The Sierra Club's generously funded Beyond Coal campaign is still pursuing its goal of retiring half of the coal-fired fleet by the end of 2017.[399] The head of the campaign is convinced that "[t]he coal industry is on the decline, and Donald Trump can't save it."[400]

Environmental groups are fiercely resisting the Trump Administration's efforts to repeal and replace the Obama Administration climate change initiatives and its efforts to steer the electric power industry toward greater reliance on coal. In addition to speaking out against the repeal of the CPP, they have promised to challenge it in court after it is finalized, and they have predicted that the challenges will result in years of litigation.[401] On the other hand, the groups did not oppose the indefinite stay of the litigation over the NSPS for power plants, because the standard remained in effect during the litigation.[402] They will no doubt challenge any replacement that is less stringent than the Obama standards.

Environmental groups strongly opposed the DOE resiliency proposal.[403] John Moore of NRDC argued that it was "absurd to pay the resources that are a root cause of climate change and more intense and severe weather"

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397. Emily Holden, *A 'sea change' for power-sector climate action?*, E&E NEWS (Nov. 9, 2016), https://www.eenews.net/climatewire/stories/1060045490?t=https%3A%2F%2Fwww.eenews.net%2Fstories%2F1060045490.

398. *Id.*

399. Michael Grunwald, *Environmentalists get a dose of good news*, POLITICO (Nov. 18, 2016), https://www.politico.com/agenda/story/2016/11/environmentalists-get-a-dose-of-good-news-000233 [https://perma.cc/CV6A-597U] [hereinafter Grunwald, *Environmentalists*].

400. *Id.* (quoting Bruce Niles, Sierra Club).

401. Timothy Puko, *EPA to Withdraw Power-Plant Rules*, WALL ST. J. (Oct. 9, 2017), https://www.wsj.com/articles/epa-to-withdraw-power-plant-rules-1507580639 [https://perma.cc/GES4-LV4N].

402. Cushman, *Inside the Coal War Games*, *supra* note 193 (quoting David Doniger, NRDC); Krysti Shallengerger, *Challenge to Carbon Rules for New Power Plants Delayed Indefinitely*, UTILITY DIVE (Aug. 11, 2017), https://www.utilitydive.com/news/challenge-to-carbon-rules-for-new-power-plants-delayed-indefinitely/449163/.

403. *See* Chang, et al., *Advancing Past "Baseload"*, *supra* note 263.

in order to keep emitting greenhouse gases.[404] They will no doubt join consumer groups and the natural gas industry in challenging any future FERC regulation that intervenes in wholesale markets to steer consumer dollars toward coal-fired power plants.

Finally, we can expect environmental groups to object strongly to the many efforts to build a new coal-fired power plant and to monitor existing coal-fired plants carefully for changes that might result in emissions increases above the regulatory thresholds for "modifications" that would trigger new source review. For plants that undertake such modifications, the environmental groups will probably continue their longstanding practice of insisting that plant owners implement the "best available" technology for addressing CO_2 emissions. In many cases that may consist of greater efficiency measures or converting to natural gas. But as CCS technologies become more effective and less expensive, these environmental groups may insist on at least partial capture and sequestration of CO_2 emissions.

5. State and Local Regulation

The Trump Administration's pullbacks will bump up against the commitment of many states and cities, which are not greatly influenced by the federal government, to reduce GHG emissions.[405] After President Trump withdrew from the Paris Accords, the governors of several states and the mayors of many cities committed their governments to meet that agreement's GHG percentage reduction goals.[406] The "We Are Still In" coalition, composed of representatives of nine states, 125 cities and more than 1000 private sector corporations vowed to stay on the schedule set out in that agreement.[407] The Sierra Club estimated that the United States could achieve 60 percent of its Paris Accord commitments through the actions of states, cities and businesses.[408]

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404. Rod Kuckro, *FERC's Chatterjee Moderates Views on Baseload Coal*, E&E NEWS (Sept. 15, 2017), https://www.eenews.net/energywire/2017/09/15/stories/1060060761.

405. *See* Chang, et al., *Advancing Past "Baseload"*, *supra* note 263, at 10.

406. Lizette Alvarez, *Mayors, Sidestepping Trump, Vow to Fill Void on Climate Change*, N.Y. TIMES (June 27, 2017), https://www.nytimes.com/2017/06/26/us/mayors-trump-climate-change.html [hereinafter Alvarez, *Mayors, Sidestepping Trump*]; Parker, *Trump's Paris decision*, *supra* note 395.

407. Emily Holden & Anne Mulkern, *Trump ignites climate pledges with Paris order*, E&E News (June 6, 2017), https://www.eenews.net/climatewire/stories/1060055590 [hereinafter Holden & Mulkern, *Trump ignites climate pledges*]; Dean Scott, *Trump Exit Spurs State, Corporate Vows to Back Climate Pact*, BNA DAILY ENV'T REP. (June 6, 2017), http://0-news.bna.com.sally.sandiego.edu/deln/DELNWB/split_display.adp?fedfid=113487710&vname=dennotallissues&wsn=507560000&searchid=30828482&doctypeid=1&type=date&mode=doc&split=0&scm=DELNWB&pg=0.

408. Georgina Gustin, *Over 1,400 U.S. Cities, States and Businesses Vow to Meet Paris Climate Commitments*, INSIDE CLIMATE NEWS (June 6, 2017), https://insideclimatenews.

The attorneys general of several states promised to challenge EPA's repeal of the Clean Power Plan in court.[409] States that had already made strong commitments to reducing GHG emissions continued on course in the absence of a federal program ensuring that every state would assume its fair share of the pollution reduction burden. When President Trump announced his decision to withdraw the country from the Paris Accord, governors from 12 states formed the U.S. Climate Alliance and pledged to make extra efforts to meet the U.S. commitment without the support of the federal government.[410] In September 2017, the Rhodium Group concluded that the alliance, which by then had grown to 14 states, had already created programs that would reduce CO_2 emissions by 24 to 29 percent below 2005 levels by 2025, quite similar to the United States commitment of a 26 to 28 percent reduction under the Paris Accord.[411] Rhodium predicted that CO_2 emission reductions across all states would decline by 27 to 35 percent from 2005 emissions by 2020 without the CPP, and would have declined even further if the plan had gone into effect.[412]

Despite the EPA's proposed repeal of the CPP, California adopted a plan that met its requirements.[413] And in 2016, it increased the goal of its renewable portfolio standard to a reliance on renewable resources for 50 percent of its electricity by 2030.[414] Not to be outdone, Hawaii upped its renewable portfolio standard to 100 percent by 2045.[415] Colorado's Democratic governor, John Hickenlooper, boasted that his state was planning to exceed

org/news/05062017/paris-climate-agreement-trump-bloomberg-cities-states-businesses [https://perma.cc/Y5XF-ZB8B].

409. Storrow, *Repeal comes*, *supra* note 381; Eilperin & Dennis, *EPA Chief Scott Pruitt Tells Coal Miners*, *supra* note 148.

410. Holden & Mulkern, *Trump ignites climate pledges*, *supra* note 407; Storrow et al., *Governors, faced with Paris withdrawal*, *supra* note 380.

411. Brad Plumer, *How Can U.S. Fight Climate Change if Trump Quits the Paris Accord?*, N.Y. TIMES (Sept. 20, 2017, https://www.nytimes.com/2017/09/20/climate/paris-climate-accord-trump.html [hereinafter Plumer, *How Can U.S. Fight Climate Change*].

412. Brad Plumer, *How Will the Clean Power Plan Repeal Change Carbon Emissions for Your State?*, N.Y. TIMES (Oct. 10, 2017), https://www.nytimes.com/interactive/2017/10/10/climate/clean-power-plan-emissions-your-state.html?mtrref=www.google.com&gwh=20FF5C1A3241B63AF161FF3158D66767&gwt=pay [https://perma.cc/RVG4-DG74].

413. Debra Kahn, *In a blast from the past, state approves Clean Power Plan*, E&E NEWS (July 28, 2017), https://www.eenews.net/climatewire/2017/07/28/stories/1060058067.

414. Phil McKenna, *50% Rise in Renewable Energy Needed to Meet Ambitious State Standards*, INSIDE CLIMATE NEWS (July 27, 2017), https://insideclimatenews.org/news/26072017/rewnewable-energy-portfolio-standard-wind-solar-states-increase [https://perma.cc/F3RD-USVE].

415. *Id.*

the CPP's goal for the state because companies were retiring power plants early and the state was encouraging the wind and solar industries.[416] In June 2017, New York Governor Andrew Cuomo announced a $1.5 billion Clean Climate Careers initiative with a goal of creating 40,000 clean energy jobs by 2020.[417] He signed an executive order requiring the state to get half of its electricity from renewable resources by 2030 and 80 percent by 2050.[418] And the state legislature enacted a $5 billion program to provide incentives for building solar, wind and other clean energy generators.[419]

The nine Northeastern states in the Regional Greenhouse Gas Initiative (RGGI) had reduced CO_2 emissions by 37 percent from 2008 levels by 2016.[420] Initiated in 2009, that multi-state program established a successful cap-and-trade regime for CO_2 emissions from power plants, but the price for allowances dropped dramatically with the election of Donald Trump.[421] In August 2017, the group agreed to bring about a reduction in GHG emissions from power plants by an additional 30 percent by 2030.[422] Virginia governor, Terry McAuliffe, signed an executive order requiring state regulatory agencies to come up with a plan to cap CO_2 emissions from power plants with the goal of joining the RGGI.[423] Other attempts at assembling regional GHG reduction initiatives, however, have foundered.[424]

The efforts were not limited to blue states. The Republican governor of Iowa floated a plan for increasing utility-scale wind and solar projects.[425]

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416. Friedman & Plumer, *E.P.A. Announces Bid*, *supra* note 155.

417. Robert Walton, *New York will sink $1.5B into Renewable energy projects to spur clean energy jobs*, UTILITY DIVE (June 5, 2017), https://www.utilitydive.com/news/new-york-will-sink-15b-into-renewable-energy-projects-to-spur-clean-energ/444240/ [https://perma.cc/F7LW-BUNT].

418. Gerald B. Silverman, *States Bet on Green Economy as Trump Dumps Climate Programs*, BNA ENERGY & CLIMATE REP. (June 19, 2017), https://www.bna.com/states-bet-green-n73014453584/ [https://perma.cc/3PJ2-9Q46].

419. Storrow et al., *Governors, faced with Paris withdrawal*, *supra* note 380.

420. *Id.*

421. Gerald B. Silverman, *Carbon Prices Sink in Northeast Allowance Auction*, BNA ENERGY AND CLIMATE REP. (Mar. 10, 2017), https://www.bna.com/rggi-carbon-price-n57982073647/.

422. Benjamin Storrow, *Northeast Strengthens Carbon goals as Federal Rules Fade*, E&E NEWS (Aug. 24, 2017), https://www.eenews.net/climatewire/stories/1060059139?t=https%3A%2F%2Fwww.eenews.net%2Fstories%2F1060059139.

423. Emily Holden & Rod Kuckro, *McAuliffe puts Va. on a path to its Own Clean Power Plan*, E&E NEWS (May 17, 2017), https://www.eenews.net/climatewire/2017/05/17/stories/1060054648; Dean Scott, *Effort to Rely on States for Climate Action Scores Win in Virginia,* BNA ENERGY & CLIMATE REP. (May 16, 2017), https://www.bna.com/effort-rely-states-n73014451691/ [https://perma.cc/5ZD6-8YJ8].

424. Storrow et al., *Governors, faced with Paris withdrawal*, *supra* note 380.

425. Ari Natter, *As Trump Bows Out, States Seek to Fill Void on Climate Change*, BNA ENERGY & CLIMATE REP. (Mar. 28, 2017), https://www.bloomberg.com/news/articles/

Anticipating that a future administration will revive the CPP, the state of Arkansas, which challenged the CPP in court, urged electric utility companies to switch from coal to natural gas and renewables.[426] At the behest of local landowners, the Wyoming Environmental Quality Council, a board appointed by the Governor to oversee the Department of Environmental Quality in siting decisions, overruled the Department's decision to grant a permit to dig the state's first new coal mine in three decades.[427]

At the local level, the United States Conference of Mayors approved a resolution in June 2017 committing their cities to run on 100 percent renewable energy by 2035.[428] Former New York City mayor, Michael Bloomberg, announced that his philanthropy would spend $200 million over the next three years to support innovative approaches in cities to meet urban challenges, including climate disruption.[429] As of May 2017, 27 cities had agreed to transition to 100 percent renewable energy by 2035.[430] Pittsburgh, the city that President Trump mentioned in his withdrawal from the Paris Accords, was one of those cities.[431] The mayor was "appalled that the president used my city to justify his unacceptable decision."[432]

Several cities are already powering government buildings with renewable energy, and others have pledged to do so in the future.[433] Some cities are attempting to convert their transportation fleets to electric vehicles.[434] New York City came up with a plan to reduce GHG emissions that relied on more

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2017-03-28/as-trump-bows-out-states-seek-to-fill-void-on-climate-change [https://perma.cc/3PWN-SS9F].

426. Friedman & Plumer, *E.P.A. Announces Bid*, *supra* note 155 (quoting Ted J. Thomas, Chairman, Arkansas Public Service Commission).

427. Alexander C. Kaufman, *Wyoming Just Took the Unusual Step of Turning Down a New Coal Mine*, HUFFINGTON POST (Aug. 2, 2017), https://www.huffingtonpost.com/entry/wyoming-coal-mine_us_598229dce4b0fa1575fbc4f6 [http://perma.cc/6ZER-JA29].

428. Alvarez, *Mayors, Sidestepping Trump*, *supra* note 406, at A9; Hannah Hess, *U.S. mayors promise climate action, rebuke Trump*, E&E NEWS (June 26. 2017), https://www.eenews.net/greenwire/2017/06/26/stories/1060056569.

429. Alvarez, *Mayors, Sidestepping Trump*, *supra* note 406; Hess, *supra* note 428.

430. Robert Walton, *Atlanta pledges 100% renewables by 2035*, UTILITY DIVE (May 3, 2017), https://www.utilitydive.com/news/atlanta-pledges-100-renewables-by-2035/441850/ [https://perma.cc/ED2Z-5XGQ].

431. Brian Eckhouse & Joe Ryan, *Pittsburgh, the City Trump Prefers to Paris, Plans to Go Green*, BNA DAILY ENV'T REP. (June 5, 2017), https://www.bloomberg.com/news/articles/2017-06-02/pittsburgh-the-city-trump-prefers-to-paris-plans-to-go-green.

432. *Id.*

433. Alvarez, *Mayors, Sidestepping Trump*, *supra* note 406; Holden & Mulkern, *Trump ignites climate pledges*, *supra* note 407.

434. Holden & Mulkern, *Trump ignites climate pledges*, *supra* note 407.

stringent energy codes for buildings, rapid charging stations for electric vehicles, and insistence on renewable power in city procurement contracts.[435]

Many Appalachian, Rust Belt, Western and Southeastern states, however, remain heavily dependent on coal, and environmental agencies in those states are not likely to push the electric power industry toward lower coal use.[436] A few coal-dependent states are moving in the opposite direction by considering legislation to repeal renewable portfolio standards and end-use energy efficiency programs.[437] After the Trump EPA proposed to repeal the CPP, the Rhodium group predicted that 12 states would miss their CPP targets, and some, like West Virginia, would miss their targets by large amounts.[438] Those 12 states were responsible for 40 percent of the nation's CO_2 emissions from power plants.[439]

Even with Michael Bloomberg's help, meeting the ambitious GHG reduction goals that many cities have established will be exceedingly difficult. Most cities do not currently have an accurate inventory of their GHG emissions or their current energy efficiency efforts to serve as a baseline against which to measure progress.[440] Bloomberg hoped to solve this problem by funding an initiative by the Rocky Mountain Institute and the World Resources Institute to measure the effectiveness of state, city and industry GHG reduction plans.[441] Many of the pledges presumed an active federal EPA and continued financial support from the federal government that is not likely to be forthcoming during the Trump Administration.[442] Except for cities that own their municipal utilities, cities do not have any

435. CITY OF NEW YORK, *N.Y.C. Delivers First-Ever City Plan to Meet the Goals of the Paris Climate Agreement* (Oct. 3, 2017), http://www1.nyc.gov/office-of-the-mayor/news/634-17/nyc-delivers-first-ever-city-plan-meet-goals-the-paris-climate-agreement [https://perma.cc/NNR2-PVK6].

436. Gerald B. Silverman, *States See Same Climate Paths After Trump Election*, BNA ENV. REP. (Nov. 10, 2016), https://www.bna.com/states-climate-paths-n57982082643/ [https://perma.cc/6S9R-HMU2]; Grunwald, *Environmentalists*, *supra* note 399.

437. Christopher Martin & Ryan Collins, *In America's Coal Country, States Feel Emboldened to Ditch Efficiency*, BNA ENERGY & CLIMATE REP. (Mar. 22, 2017), https://www.bloomberg.com/news/articles/2017-03-22/in-coal-country-states-feel-emboldened-to-cut-energy-efficiency.

438. Brad Plumer, *How State Carbon Emissions May Change*, N.Y. TIMES, Oct. 11, 2017, at A11.

439. *Id.*

440. Benjamin Storrow, *Mayors Promise to act on climate. How much can they do?*, E&E NEWS (July 6, 2017), https://www.eenews.net/stories/1060056980 [https://perma.cc/Y6JL-K2N3].

441. Benjamin Storrow & David Ferris, *Can mayors fix rising temps? Bloomberg wants to find out*, E&E NEWS (July 13, 2017), https://www.eenews.net/stories/1060057313.

442. Sam Ross-Brown, *Can Cities and States Step Up to Fight Climate Change?*, AM. PROSPECT (July 24, 2017), http://prospect.org/article/can-cities-and-states-step-fight-climate-change [https://perma.cc/8NN4-W2K9] [hereinafter Ross-Brown, *Can Cities and States Step Up*].

power over the grids from which they draw electricity.[443] At best, they can negotiate with generators to supply renewable power to municipal operations, but they lack authority to regulate what kind of power their citizens' purchase.[444]

Cities generally have the power to reduce emissions from their own operations and to provide tax incentives to install efficient appliances and solar panels.[445] The most effective regulatory tools available to cities are energy codes that specify energy efficiency measures for new residential and commercial buildings.[446] Most large cities have enacted such codes, but they vary in their stringency, and most codes are under-enforced.[447] The American Recovery and Reinvestment Act of 2009 required states accepting economic stimulus money to come up with plans to ensure 90 percent energy code compliance by 2017, but many cities do not have the resources to achieve that degree of compliance.[448]

Many of the cities that have pledged to adhere to the Paris Accord are in states with Republican governors and Republican-controlled legislatures. State legislatures have begun to limit the power of cities to promulgate regulatory requirements that are more stringent than those of state environmental agencies.[449] For example, in Texas, city ordinances regulating stationary sources of GHG emissions are subject to preemption by the Republican-controlled Texas Commission on Environmental Quality (TCEQ).[450] It is therefore unclear how cities in those states will achieve the promised reductions if their plans depend on exercising their regulatory powers.

443. Storrow et al., *supra* note 419.
444. *Id.*
445. Keith Goldberg, *Red-State Cities Face Uphill Battle to Keep Paris Pledge*, LAW 360 (June 6, 2017), https://www.law360.com/articles/931565/red-state-cities-face-uphill-battle-to-keep-paris-pledge [https://perma.cc/W4BF-F5Z9] [hereinafter Goldberg, *Red-State Cities*].
446. Courtney Humphries, *Cities Cracking Down on Climate Law-Breakers*, INSIDE CLIMATE NEWS (Sept. 22, 2017), https://insideclimatenews.org/news/21092017/energy-efficiency-city-buildings-code-enforcement-new-york-seattle-washington-climate-change [https://perma.cc/6VKE-JZQM].
447. *Id.*
448. *Id.*
449. Goldberg, *Red-State Cities*, *supra* note 445.
450. Goldberg, *Red-State Cities*, *supra* note 445.

6. Revitalizing Nuisance Suits

Either a reversal of the endangerment finding or a failure to promulgate a replacement plan for existing power plants could give added impetus to nuisance lawsuits against owners of power plants. The Supreme Court has held that lawsuits brought by states under the federal common law of interstate pollution are preempted by the Clean Air Act's grant of authority to EPA to regulate GHG emissions.[451] If, however, EPA concludes that GHG emissions do not endanger public health or welfare or it simply abandons its efforts to regulate GHGs, the Court might be persuaded to allow such lawsuits to go forward.[452] The defendants in that litigation could, however, cite language in the Court's opinion to the effect that the mere grant of power to EPA to decide whether to regulate GHG emissions was enough to preempt federal common law litigation.[453]

The Court left open the question whether the Clean Air Act preempted nuisance claims brought under state common law.[454] Seizing on that ambiguity, three California cities and two counties have filed lawsuits against many large GHG emitters under that states common law.[455] The lawsuits are quite compatible with the Clean Air Act's "floor preemption" provision, which allows states to regulate stationary sources more stringently than that statute requires.[456] If EPA abandons the field, state courts may feel a greater responsibility for entertaining such lawsuits, despite the difficulties they would encounter in managing them and in coming up with appropriate relief. State judges will no doubt be reluctant to take on these extensive cases, but they do have a duty to decide the common law claims of citizens who have been wronged by others.[457] Fearing such lawsuits and the uncertainties they entail, many electric power companies are urging EPA to replace the

451. Am. Elec. Power Co., Inc. v. Conn., 564 U.S. 410 (2011).

452. Ellen M. Gilmer, *Legal War Looms*, *supra* note 160 (quoting Michael Gerrard, Sabin Center for Climate Change Law, Columbia Law School).

453. Krysti Shallenberger, *Pruitt's Move to Repeal CPP Sets Up Prolonged Battle Over Carbon Regulations*, UTILITY DIVE (Oct. 11, 2017), https://www.utilitydive.com/news/clean-power-plan-repeal-pruitt/506985/ [https://perma.cc/D3K8-KUXU], (quoting Michael Gerrard, Sabin Center for Climate Change Law, Columbia Law School) [hereinafter Shallenberger, *Pruitt's Move to Repeal*].

454. *Id.*

455. Georgina Gustin, *Coastal Communities Sue 37 Oil, Gas and Coal Companies Over Climate Change*, INSIDE CLIMATE NEWS (July 18, 2017), https://insideclimatenews.org/news/18072017/oil-gas-coal-companies-exxon-shell-sued-coastal-california-city-counties-sea-level-rise [https://perma.cc/79AZ-GCJA]; Shallenberger, *Pruitt's Move to Repeal*, *supra* note 453.

456. 42 U.S.C. § 7416.

457. Shallenberger, *Pruitt's Move to Repeal*, *supra* note 453.

CPP with a program capable of satisfying the courts that EPA intends to address climate disruption.[458]

B. Effect on the Coal Industry

1. Introduction

The coal industry was on a rather steep decline at the outset of the Trump Administration. The proportion of the nation's electricity supplied by coal fell from 51 percent in 2008 to 31 percent in 2016.[459] During that time, electric power companies retired 59 gigawatts (17 percent) of the country's coal-fired capacity and switched 13 gigawatts (4 percent) to natural gas.[460] Electric power companies had by early 2017 announced that they would be retiring or converting another 51 gigawatts (18 percent of currently operating coal-fired capacity),[461] and more than 1000 coal mines had closed since the beginning of the Obama Administration.[462] When President Trump was elected, three of the nation's largest coal companies were emerging from bankruptcy.[463] The coal industry and the Trump Administration said that its initiatives would bring about a reversal in the coal industry's fortunes.[464] That assessment, however, does not appear to comport with the facts on the ground.

2. No Rush to Coal with New Coal-Fired Power Plants

There is not likely to be another "rush to coal" to build new coal-fired power plants as there was during the first few years of the George W. Bush

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458. *See* text accompanying *supra* note 174.
459. Union of Concerned Scientists, *A Dwindling Role for Coal*, (last visited Nov. 15, (2017), https://www.ucsusa.org/clean-energy/coal-and-other-fossil-fuels/coal-transition#.W0-DidVKipo [https://perma.cc/7WA6-5XUS].
460. *Id.*
461. *Id.* at 1.
462. Jennifer A. Dlouhy & Mark Chediak, *Natural Gas Moves to the Naughty List*, 48 BNA ENV. REP. 760 (Apr. 20, 2017), https://www.bloomberg.com/news/articles/2017-04-20/natural-gas-moves-to-the-naughty-list [hereinafter Dlouhy & Chediak, *Natural Gas Moves*].
463. Darryl Fears, *Trump promised to Bring back coal jobs. That Promise 'Will Not Be Kept,' experts say*, WASH. POST (Mar. 29, 2017), https://www.washingtonpost.com/news/energy-environment/wp/2017/03/29/trump-promised-to-bring-back-coal-jobs-that-promise-will-not-be-kept-experts-say/?utm_term=.cf0dd01b9a56.
464. Christopher Coats, *Could a change in the White House offer coal the political relief it needs?*, SNL DAILY COAL REP., Dec. 16, 2015.

Administration, when upwards of 200 new coal-fired power plants were on the drawing boards.[465] First, even if EPA repeals the NSPS for GHG emissions from fossil fuel-fired power plants, the BACT and LAER requirements for emissions of new coal-fired power plants will require expensive technologies for both conventional pollutants and CO_2 that make building a new gas-fired plant expensive compared to a solar array or wind farm. Electric power companies are well aware of the risk of future environmental regulation, and they will factor that risk into any plans to build a power plant with a 30-to-50 year lifetime.[466] The regulatory uncertainty over CO_2 emissions will take new coal-fired power plants off the table until Congress or EPA achieves a lasting regulatory resolution of the issue.[467] Second, in many areas of the country, gas is cheaper than coal.[468] Unless Congress or FERC provides an exceedingly high subsidy to coal-fired plants, the price disparity is likely to remain. Third, renewables are rapidly becoming cheaper than coal, at least as long as the tax advantages remain in place.[469]

Cost overruns and delays plagued all of the last few coal-burning "mega-projects," like Duke Energy's Edwardsport Power Station in Indiana, Prairie State Energy's Prairie State Station in Southern Illinois, and Southern Company's notorious Plant Ratcliffe in Kemper County, Mississippi, which ultimately abandoned coal for natural gas.[470] Power4Georgians' planned 850 megawatt Plant Washington is currently on hold because of uncertainties surrounding federal requirements for CO_2 emissions, and it is unclear whether state regulators will grant its permit extension request.[471] The only mega-projects in the works these days are large combined-cycle natural gas-fired turbines, wind farms, and utility-scale solar arrays.[472] In 2016, two-thirds of all new generating capacity in the country consisted of renewables, and natural gas made up nearly all of the remaining third.[473]

465. Jeff Goodell &, Scott Pruitt, *Can't Stop the Death of Big Coal*, ROLLING STONE (Oct. 10, 2017) ("It's highly unlikely anybody is going to build a new coal plant in America ever again."), https://www.rollingstone.com/politics/politics-features/scott-pruitt-cant-stop-the-death-of-big-coal-198953/ [https://perma.cc/2J46-KPT8]; Benjamin Storrow, *Will the U.S. Ever Build Another Big Coal Plant?*, E&E NEWS (Aug. 21, 2017), https://www.scientificamerican.com/article/will-the-u-s-ever-build-another-big-coal-plant/ [https://perma.cc/HD3W-MSX3].

466. Storrow, *supra* note 465 (quoting Travis Miller, Morningstar, Inc.).

467. Storrow, *supra* note 465 (quoting Jason Begger, Whoming Infrastructure Authority).

468. Storrow, *supra* note 465.

469. Storrow, *supra* note 465.

470. Storrow, *supra* note 465; Jeffrey Tomich, *Is the era of the utility megaproject over?* E&E NEWS (Aug. 3, 2017), https://www.eenews.net/stories/1060058301 [https://perma.cc/F2AJ-FVLA].

471. Storrow, *supra* note 465.

472. Tomich, *supra* note 470.

473. Grunwald, *Environmentalists*, *supra* note 399.

No power company was interested in investing in a new coal-fired plant.[474] The only coal-fired power plant under construction in the fall of 2017 was a tiny combined heat and power facility at the University of Alaska in Fairbanks.[475]

3. No Zombie Coal-Fired Plants

Electric power companies are not likely to fire up mothballed or retired coal-fired plants, even in the unlikely event that coal becomes less expensive than natural gas and renewables.[476] In most cases, the plants would have to obtain new permits, and that could trigger NSR and its BACT requirement. And environmental groups would almost certainly contest those permits in state agencies and courts. Moreover, efforts to recover the cost of bringing retired plants back to life would probably encounter stiff resistance from consumer and environmental groups in state PUCs.

4. Temporary Life Extensions for Currently Operating Coal-Fired Plants

The best that coal advocates can hope for is that the owners of the coal-fired plants that are currently operating, many of which were built in the 1980s and contain second-generation pollution controls, will do what it takes to keep the plants running for as many years as possible. The Department of Energy's Energy Information Institute in early 2017 calculated that repealing the Clean Power Plan could at best stabilize demand for coal through 2030 instead of a steady decline to near zero consumption if the CPP remained in effect.[477] However, companies will have to be very careful to craft life extension projects to come within the "routine maintenance, repair and replacement" exception to NSR. Otherwise, they will have to install the best available technology for limiting CO_2 emissions, and that could be quite expensive as CCS technologies become commercially available.

474. Emily Holden, *Was the climate rule really bad for the economy?*, E&E NEWS (Mar. 28, 2017), https://www.eenews.net/stories/1060052178.

475. Storrow, *supra* note 465.

476. *Id.* Storrow, *Repeal comes*, *supra* note 381 (quoting Andy Blumenfeld, Doyle Trading Consultants); Coral Davenport, *Energy Trends Outpace Plans for the E.P.A.*, N.Y. TIMES, (Dec. 8, 2016), at A1 (quoting Kevin Book, ClearView Energy Partners).

477. Jennifer A. Dlouhy, *Trump to Drop Climate Change from Environmental Reviews, Source Says*, BLOOMBERG NEWS (Mar. 14, 2017), https://www.bloomberg.com/news/articles/2017-03-14/trump-said-to-drop-climate-change-from-environmental-reviews.

5. *Subsidies to Power Companies*

In rejecting DOE's grid resiliency proposal, FERC undid one of the Trump Administration's most important attempts to bring about a revival of the coal industry.[478] Had FERC approved the proposal, it is not clear that a large subsidy to power companies would have worked its way through to the coal industry.[479] As previously noted, plant owners seeking to take advantage of the subsidy would have had to go to the expense of maintaining larger stockpiles of coal. Since the subsidies for stockpiling coal would not have made a plant's electrical output any more competitive in the wholesale marketplace, power companies might well have pocketed the subsidies and run their plants at the same levels without burning more coal.[480]

6. *Conclusions*

Coal experienced a slight rebound during the first quarter of 2017, but quickly lost ground during the unseasonably warm fall.[481] When President Trump in early June 2017 boasted of "a big opening of a brand-new mine," he was alluding to the Acosta Deep Mine.[482] Corsa Coal decided to dig that mine in September 2016 to extract metallurgical coal for use in making steel, a use that would be unaffected by the Trump regulatory rollbacks.[483] Corsa's head engineer said the decision to open the mine had nothing to do with the election.[484]

When Columbia University's Center on Global Policy modeled the impact of the pullbacks mandated by President Trump's Executive Order, it concluded that "for the next few years, natural gas prices and, to a lesser extent, renewable energy costs will play a far greater role in determining U.S.

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478. Benjamin Storrow, *FERC rejection exposes Trump's limits in helping coal*, E&E NEWS (Jan. 8, 2018), https://www.eenews.net/climatewire/stories/1060070463.

479. Dylan Brown, All-of-the-above hurts coal—analysis, E&E News (Oct. 17, 2017), https://www.eenews.net/greenwire/2017/10/17/stories/1060063867 [hereinafter Brown, *All-of-the-above*].

480. Brown, *All-of-the-above*, *supra* note 479.

481. Tim Loh, *Coal's Comeback is Running Out of Steam After a Year of Growth*, BNA DAILY ENV'T REP., (Oct. 13, 2017, 2:12 PM), https://www.bloomberg.com/news/articles/2017-10-12/coal-s-comeback-is-running-out-of-steam-after-a-year-of-growth [https://perma.cc/T8JD-TBET]; Benjamin Storrow, *supra* note 381.

482. Ana Swanson, *'Coal country is a great place to be from.' But does the future match Trump's optimism*, WASH. POST (June 6, 2017), https://www.washingtonpost.com/national/coal-country-is-a-great-place-to-be-from-but-does-the-future-match-trumps-optimism/2017/06/06/406f55b2-4af1-11e7-bc1b-fddbd8359dee_story.html?utm_term=.be2f4d54d1c2 [https://perma.cc/R9BP-XKM8] [hereinafter Swanson, *'Coal country'*].

483. Swanson, *'Coal country'*, *supra* note 482.

484. Swanson, *'Coal country'*, *supra* note 482.

coal consumption than President Trump's deregulatory agenda."[485] The impact could be "material" by 2025 "but could still be overwhelmed by the impact of cheaper natural gas."[486] In the best-case scenario for coal, in which natural gas prices more than doubled between 2017 and 2025, demand for coal would "plateau at 19 percent below 2007 levels."[487]

Only one of the electric power company executives that testified before the Energy Subcommittee of the House Committee on Energy and Commerce in July 2017 believed that regulation had much to do with retirements of coal-fired power plants.[488] The rest cited low-cost natural gas and renewable energy.[489] Former FERC chairman Joseph Kelliher testified that coal-fired power plant retirements were "primarily driven by economics and not by environmental regulation."[490] Since repealing the CPP will have little effect on the economics of the electric power industry, it will not likely bring about an increase in coal use in the nation's power plants. In a March 2017 survey of utility company executives, a plurality said their outlook for coal was better after Executive Order 13783, but the vast majority of respondents allowed that their companies would not be drawing more power from coal plants.[491] Even super coal enthusiast Robert Murray opined that he did not know "how far the coal industry can be brought back."[492] At most, he expected that repealing the CPP would "change the trajectory at which [CO_2 emissions] would decline."[493]

485. TREVOR HOUSER, JASON BORDOFF & PETER MARSTERS, CAN COAL MAKE A COMEBACK?, (Columbia Univ. Ctr. ON GLOBAL POL'Y, Apr. 2017) at 39, http://energypolicy.columbia.edu/sites/default/files/Center%20on%20Global%20Energy%20Policy%20Can%20Coal%20Make%20a%20Comeback%20April%202017.pdf [https://perma.cc/9UYN-5JXN] [hereinafter Houser et al.].

486. Houser et al., *supra* note 485, at 39.

487. Houser et al., *supra* note 485, at 39.

488. Sam Mintz, *Industry execs split on baseload reliability*, E&E NEWS (July 19, 2017). https://www.eenews.net/stories/1060057578/ [hereinafter Mintz, *Industry execs split*].

489. Mintz, *Industry execs split*, *supra* note 488.

490. Mintz, *Industry execs split*, *supra* note 488.

491. Bade, *Why utilities don't think Trump will stop*, *supra* note 369.

492. Coral Davenport, *Planned Rollback of Climate Rules Unlikely to Achieve All Trump's Goals*, N.Y. TIMES (Mar. 27, 2017), https://www.nytimes.com/2017/03/27/climate/planned-rollback-of-climate-rules-unlikely-to-achieve-all-trumps-goals.html., at A17 [hereinafter Davenport, *Planned Rollback*].

493. Rod Kuckro, *Energy discussions live on as EPA rule faces death*, E&E NEWS, (Feb. 21, 2017), https://www.eenews.net/interactive/clean_power_plan/column_posts/1060050326 [https://perma.cc/9CYJ-THVC].

C. Effect on Jobs

The president's cruelest promise in ordering EPA to rescind Obama Era protections was his guarantee that coal miners were going back to work. During the 2016 campaign, he told miners that when he was elected "you are going to be working your asses off."[494] When he signed Executive Order 13783, he told the coal miners that the White House had brought in for props: "Do you know what this says? You're going back to work."[495] At a March 2017 rally in Kentucky, Trump promised that Executive Order 13783 would "save our wonderful coal miners from continuing to be put out of work."[496] Many coal miners believed him.[497] For years, they had been told by their employers, local politicians, talk radio hosts, and Fox News that EPA regulations were the primary causes for the coal industry's decline and the resulting "economic plague" that had swept through Appalachia.[498] It therefore made sense that repealing the Obama era regulations on the electric power industry would bring about a revival of the industry. Robert Murray praised Trump's actions as "vital to the American coal industry, to our survival, and to getting some of our coal families back to work."[499]

In reality, there is very little likelihood that the Trump Administration's initiatives will deliver on those promises.[500] Even if all of the proposals are finalized and survive judicial review, the decline in coal mining jobs may be slowed,[501] but there will be no dramatic increase in employment in the coal mining industry.[502] First, as discussed above, there likely will not be a rush to build new coal-fired power plants during the Trump Administration. The administration is also rolling back regulations that affect the price and availability of natural gas, like the EPA's rule

494. Meghan Keneally, Jessica Hopper & Evan Simon, *Wyoming hopes in coal country with Trump's climinate change policy,* ABC NEWS (May 18, 2017), available at http://abcnews.go.com/Politics/wyoming-coal-miners-high-hopes-trump-amid-national/story?id=47465051 [https://perma.cc/T5HX-B9Q9] [hereinafter Keneally et al., *Wyoming hopes*].

495. Timothy Cana, *Trump order to roll back Obama's climate moves*, THE HILL (Mar. 28, 2017), http://thehill.com/policy/energy-environment/326124-trump-signs-order-to-roll-back-obamas-climate-moves [https://perma.cc/9EDP-VGZH] [hereinafter Cana, *Trump order*].

496. Davenport, *Planned Rollback*, *supra* note 492.

497. Keneally et al., *Wyoming hopes*, *supra* note 494.

498. Campbell Robertson, *Coal Miners Hope* Home *Trump's Order Will Help. Few are Counting on It*, N.Y. TIMES (Mar. 29, 2017), https://www.nytimes.com/2017/03/28/us/coal-miners-hope-trumps-order-will-help-but-few-are-counting-on-it.html.

499. Davenport, *Planned Rollback*, *supra* note 492.

500. Cana, *Trump order*, *supra* note 495.

501. Benjamin Storrow, *Have markets rendered KXL, Clean Power Plan irrelevant?* E&E News, Mar. 28, 2017 (quoting Michael Webber, Univ. of Texas Energy Institute), https://www.eenews.net/climatewire/2017/03/28/stories/1060052174.

502. Editorial Board, *Mr. Trump Nails Shut the Coffin on Climate Relief,* N.Y. TIMES, Oct. 11, 2017, at A22.

regulating methane emissions from natural gas operations and the Department of Interior's efforts to pull back a regulation limiting flaring of natural gas in remote locations. To the extent that these rollbacks result in cheaper natural gas, the demand for coal will continue to suffer.[503]

Second, the coal mining industry has changed in ways that require fewer workers to produce the same amount of coal. Underground mining has become increasingly mechanized.[504] Additionally, enormous surface mines in the Powder River Basin and mountaintop mining in Appalachia require huge machines but fewer people.[505] Even if the coal industry thrives, employment is not likely to increase significantly, because the move toward letting machines do more of the work is consistent with the coal industry's long-term business model of "producing more coal with fewer workers."[506]

Third, coal mining jobs are regionally important, but nationally insignificant. Coal companies employed around 66,000 miners in 2015, down from around 88,000 in 2008.[507] By contrast, about 370,000 people work for solar companies, most of whom are involved in installation.[508] In fact, fewer people work as coal miners than work for the fast food chain, Arby's.[509] This is not to suggest that we should allow the marketplace to sort out what happens to the miners and workers in supporting industries in Appalachia and the Powder River Basin. Rather, we should come up with training programs and do what we can to bring a different sort of economic development to these areas.

Unfortunately, the Trump Administration is moving in exactly the opposite direction. The president's proposed budget for fiscal year 2018 eliminated funding for the Appalachian Regional Commission, a $146 million state-federal partnership designed to create economic opportunities for the residents of the 13 Appalachian states.[510] Between October 2015 and January 2017, the program sponsored 662 projects that created or maintained more than 23,000 jobs and trained more than 49,000 residents. The proposed budget also eliminated several other programs that were part of President Obama's

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503. Keneally et al., *Wyoming hopes*, *supra* note 494.
504. Davenport, *Planned Rollback*, *supra* note 492.
505. Keneally et al., *Wyoming hopes*, *supra* note 494.
506. Darryl Fears, *supra* note 463 (quoting Institute for Energy Economics and Financial Analysis report).
507. Davenport, *Planned Rollback*, *supra* note 492.
508. Paquette, *Solar's Rise Lifted*, *supra* note 358.
509. Swanson, *'Coal country'*, *supra* note 482.
510. Stephen Lee, *Appalachian Aid Agency Bumped from Trump's Proposed Budget*, BNA ENERGY & CLIMATE REP., (Mar. 15, 2017) [hereinafter Lee, *Appalachian Aid*].

Partnerships for Opportunity and Workforce and Economic Revitalization (POWER) initiative, which was designed to help communities dependent on coal or coal-fired power plants to diversify their economies and lower unemployment.[511] Rebuffing protests by senators and representatives in areas the programs were designed to help,[512] the administration explained that it was offering sufficient aid to highly impacted communities by cutting regulations and streamlining permit approvals.[513][514] Some Trump supporters in the region are willing to suffer the cuts because they believe that the president will bring back the coal jobs as he promised on multiple occasions.[515]

So long as Senator Mitch McConnell (R-Kentucky) remains the Senate majority leader and Harold Rogers (R-Kentucky) remains a member of the House Appropriations Committee, however, the commission will probably be funded, yet at a reduced level.[516] An amendment to the commission's reauthorization bill to eliminate its funding in April 2017 failed by a vote of 25-71.[517] However, the House Appropriations Committee approved an appropriation for the Appalachian Regional Commission that reduced its budget by 14.5 percent.[518]

Most observers of the coal industry do not believe that Trump initiatives will put many miners back to work. The Energy Information Administration concluded in March 2017 that, at best, rescinding the CPP might save some jobs in the Western United States.[519] In its 2017 U.S. Coal Outlook, the Institute for Energy Economics and Financial Analysis bluntly concluded that "[p]romises to create more coal jobs will not be kept" and "the industry will continue to cut payrolls."[520] Indeed, an analysis of the cost of rescinding

511. Luke Bassett & Jason Walsh, *The Trump Budget Cuts Hit Coal Communities and Workers Where It Hurts*, CENTER FOR AMERICAN PROGRESS, Apr. 24, 2017, https://www.americanprogress.org/issues/green/reports/2017/04/24/430842/trump-budget-cuts-hit-coal-communities-workers-hurts/ [https://perma.cc/TL83-GZ9P].

512. Geof Koss, *Top Republicans chagrined over proposed cuts that hit home*, E&E NEWS (May 25, 2017), https://www.eenews.net/stories/1060055122 [https://perma.cc/X8CP-5UWK].

513. Dylan Brown, *Trump doubles down on coal-field cuts, touts killing regs*, E&E NEWS (May 24, 2017), https://www.eenews.net/eedaily/2017/05/24/stories/1060055034.

514. Lee, *Appalachian Aid*, *supra* note 510.

515. Jose A. DelReal, *Trump's budget targets rural development programs that provide a quiet lifeline*, WASH. POST (Mar. 21, 2017), https://www.washingtonpost.com/ [hereinafter DelReal, *Trump's budget targets*].

516. DelReal, *Trump's budget targets*, *supra* note 515.

517. Lee, *Appalachian Aid*, *supra* note 510.

518. Mark Hand, *House spending package contains big cuts to clean energy, Appalachian development programs*, THINKPROGRESS (July 25, 2017), https://thinkprogress.org/minibus-package-cut-clean-energy-spending-318888a35a34/ [https://perma.cc/LF7S-NGNF].

519. Holden, *Was the Climate Rule Really Bad*, *supra* note 474.

520. Fears, *supra* note 463.

the CPP prepared by Environmental Entrepreneurs (E2) concluded that it would reduce the gross domestic product by $52 billion by 2030 and result in the loss of 560,000 new jobs.[521] Finding that it is highly unlikely that the Trump Administration's deregulatory initiatives will bring about a revival of the coal industry with lots of high paying jobs, the Columbia University Center on Global Policy urged policymakers "to be honest about these facts—about the causes of coal's decline and unlikeliness of its resurgence —rather than offer false hope that the glory days can be revived."[522]

D. Effect on the Natural Gas Industry

The Trump Administration initiatives have thus far had little impact on the natural gas industry. The industry was not pleased with President Trump's efforts to aid its competitors in the coal industry, and it was pleased to see FERC reject DOE's proposed subsidy for power plants that stockpile coal.[523] Since every FERC member who has spoken out on the proposal has favored a fuel-neutral approach to regulation of wholesale markets, it seems unlikely that that agency will promulgate a rule that gives the coal industry a significant advantage over the natural gas industry in the future. Regarding the CPP, DOE's Energy Information Administration predicted in September 2017 that natural gas consumption will increase at an average of 1.4 percent per year through 2040, with or without the CPP.[524]

Of perhaps greater concern to natural gas producers is the renewed determination of local and national environmental groups to vigorously oppose new natural gas pipelines and other infrastructure, which could slow down or halt projects needed to get gas from wells to power plants.[525] The goal of Sierra Club's "Beyond Natural Gas" campaign is to "go after gas-fired plants with the same vengeance they've used to force the retirements

521. Hannah Hess, *Backers defend rule in report to OMB*, E&E NEWS (June 21, 2017), https://www.eenews.net/greenwire/stories/1060056374.

522. Houser et al., *supra* note 485, at 45.

523. *Natural Gas Industry Lobbies Trump*, E&E News (July 20, 2017), https://www.eenews.net/energywire/stories/1060057619/feed.

524. Jenny Mandel, *Natural gas, oil loom large in fuel mix for decades–EIA*, E&E NEWS (Sept. 15, 2017), https://www.eenews.net/energywire/stories/1060060763?t=https%3A%2F%2Fwww.eenews.net%2Fstories%2F1060060763.

525. Dlouhy & Chediak, *Natural Gas Moves*, *supra* note 462; Emily Hodges, *Despite a friendly White House, natural gas in for "rocky times,"* E&E NEWS (Nov. 23, 2016), https://www.eenews.net/stories/1060046192 [https://perma.cc/E9G2-2A8W].

of hundreds of coal facilities."[526] If that campaign is nearly as successful as the "Beyond Coal" campaign, it will become much more difficult to build new gas-fired plants, which are currently subject to the Obama Administration's NSPS and to the additional BACT requirement in PSD areas.

E. Effect on Renewables

Developers of renewable energy are very concerned about the impact of the Trump Administration initiatives on their industry. A spokesperson for Ideal Energy of Fairfield Iowa predicted that the CPP repeal would "have extreme impact on everything that we've built up."[527] Other knowledgeable observers of the industry, however, do not share in that negative assessment. In an April 2017 nationwide survey of electric utility company professionals, 80 percent expected renewable energy to increase moderately or significantly in their service areas over the next decade.[528] While EPA regulations may have had a modest influence on the trend of power companies toward renewable energy, most observers have concluded that the growth of renewable power is far more dependent on continued tax incentives and state renewable portfolio standards than on the survival of the Clean Power Plan.[529] In June 2016, the Energy Information Administration predicted that renewable power would increase from less than 300 to more than 400 gigawatts by 2040 with or without the Clean Power Plan.[530] An NRDC report reached a similar conclusion.[531] In May 2016, the North American Electric Reliability Council concluded that due to state requirements and general demand, renewable capacity would increase by 110 gigawatts by 2030, with or without the Clean Power Plan.[532]

In Texas, a fierce opponent of the CPP, it was clear by the end of 2016 that the state would meet the CPP's goal of 32 percent reduction in CO_2

526. Dlouhy & Chediak, *Natural Gas Moves*, *supra* note 462.

527. Jennifer A. Dlouhy, & Jim Polson, *Coal Gets Nod Over Renewables in Repeal of Clean Power Plan,* BNA DAILY ENV. REP. (Oct. 11, 2017), https://www.bloombergquint.com/politics/2018/07/20/no-confidence-motion-live-debate-set-to-start-shortly#gs.RmPuGaA [https://perma.cc/AW38-GBVK].

528. Herman K. Trabish, *Why utilities are more confident than ever about renewable energy growth*, UTILITY DIVE (Apr. 25, 2017), http://www.nebraskansforsolar.org/2017/04/25/why-utilities-are-more-confident-than-ever-about-renewable-energy-growth/ [https://perma.cc/J86Y-DFVZ].

529. Michael Copley, EIA: *Renewables growth does not hang on Clean Power Plan,* SNL ELECTRIC UTIL. REP., June 13, 2016 [hereinafter Copley, EIA: *Renewables growth*]; Joe Ryan, *Trump's Order on Emissions to Have Little Impact on Clean Energy*, BNA ENERGY & CLIMATE REP., Mar. 28, 2017.

530. Copley, EIA: *Renewables growth*, *supra* note 529.

531. Copley, EIA: *Renewables growth*, *supra* note 529.

532. Ethan Howland, *Gas-fired generation to fall without CPP: NERC,* PLATTS MEGAWATT DAILY, May 23, 2016, at 2.

emissions by 2030, even if the CPP were rescinded, because of an enormous influx of wind-based electricity from the high plains of that state.[533] This is in a state that would be the world's sixth largest CO_2 emitter if it were a separate country.[534] The same was true in many states that were vigorously challenging the CPP in the D.C. Circuit.[535] Even in Scott Pruitt's own state of Oklahoma, the prominent utility company, Public Service Company of Oklahoma, was on course to supply 30 percent of its electrical power output with renewable resources by 2018.[536] Interestingly, most renewable power facilities were being built in Republican congressional districts.[537]

The 30 percent tariff that President Trump imposed on imported solar cells will cause an increase in the price of solar cells, 95 percent of which are imported.[538] Electric power companies will have a reduced incentive to invest in renewables, and banks may be less inclined to support renewable investments.[539] While this might not have a huge impact on the domestic renewables industry or the overall move away from coal,[540] it could have a devastating effect on some small solar installation companies.[541] And to the extent that Trump's tariff puts renewable energy companies out of business, they will have a negative impact on jobs in an industry that has been one of the largest sources of jobs in the current American economy.[542]

V. CONCLUSIONS

Most presidential elections feature promises of change from one side or the other. The change in environmental policy that followed the 2016 election was more radical than any election in this author's experience. A cautiously progressive administration, committed to forcing the electric power industry

533. Logan & Obey, *Despite Litigation Stance*, *supra* note 360.
534. Logan & Obey, *Despite Litigation Stance*, *supra* note 360.
535. Logan & Obey, *Despite Litigation Stance*, *supra* note 360.
536. Logan & Obey, *Despite Litigation Stance*, *supra* note 360.
537. Emily Holden, *Utilities see demise of climate rule*, *supra* note 392.
538. Ana Swanson & Brad Plumer, *Trump's Solar Tariffs Are Clouding the Industry's Future*, N.Y. TIMES, Jan. 24, 2018, at A1 [hereinafter Swanson & Plumer, *Trump's Solar Tariffs*].
539. Shallenberger, *Pruitt's Move to Repeal*, *supra* note 453.
540. Krysti Shallenberger, *Will utilities keep investing in solar after Trump's tariffs?*, UTILITY DIVE (Jan. 25, 2018), https://www.utilitydive.com/news/will-utilities-keep-investing-in-solar-after-trumps-tariffs/515556/ [https://perma.cc/D42H-G62H] [hereinafter Shallenberger, *Will utilities keep*].
541. Paquette, *Solar's Rise Lifted*, *supra* note 358.
542. Paquette, *Solar's Rise Lifted*, *supra* note 358; Lynch, *Trump imposes tariffs*, *supra* note 329.

to confront the looming catastrophe of climate disruption in the face of congressional gridlock, was replaced by an administration that doubted whether human activities contributed to global warming, and was committed to undoing every reform of its predecessor. The Trump Administration may well succeed in repealing the Clean Power Plan and the power plant NSPS, either directly in its repeal initiative or indirectly through simple failure to enforce their requirements. It is not at all clear, however, that those actions will have a significant impact on the electric power industry, the coal industry, or jobs in those industries. Although it is still very early in the implementation process, the Trump Administration initiative has had no perceptible effect on the coal and electric power industries or on their workers and the communities in which they live.[543]

There are good reasons for optimism on the part of those who believe the science underlying climate disruption and worry about the threat to the planet posed by CO_2 emissions from fossil fuel-fired power plants. Former New York Mayor Michael Bloomberg believes that "forces beyond Washington" have reached such a "critical mass" that "we should be more optimistic than ever about our ability to lead—and win—the fight against climate change."[544] President Trump's decision to withdraw from the Paris Accords did not precipitate a rash of withdrawals by other nations as had been predicted.[545] It merely resulted in the United States joining Syria and Nicaragua as "global renegades."[546] The United States will remain a party to the Paris Accords until November 2020.[547] If President Trump is not re-elected, his successor could rejoin the agreement in 30 days and undertake an ambitious program for controlling CO_2 emissions from power plants in an attempt to meet the Paris Agreement's 2025 goal.[548] The United States may meet its commitment under the Paris Accords to reduce GHG emissions to 17 percent below 2005 levels by 2020, but it will probably not meet its commitment

543. Evan Halper, *Coal country is finding little relief in Trump's climate actions*, L.A. TIMES (Oct. 15, 2017), http://www.latimes.com/politics/la-na-pol-trump-coal-climate-201710-htmlstory.html [https://perma.cc/WQ2Z-W64F].

544. Michael Bloomberg, *Climate Progress, With or Without Trump*, N.Y. TIMES (Mar. 31, 2017), https://www.nytimes.com/2017/03/31/opinion/climate-progress-with-or-without-trump.html [https://perma.cc/WV6L-BJNM].

545. Parker, *Trump's Paris decision*, *supra* note 395.

546. Michael Grunwald, *Why Trump Actually Pulled Out of Paris*, POLITICO (June 1, 2017), https://www.politico.com/magazine/story/2017/06/01/why-trump-actually-pulled-out-of-paris-215218 [https://perma.cc/H4B8-4H3K].

547. Chelsea Harvey, *Withdrawing from the Paris deal takes four years. Our next president could join again in 30 days*, WASH. POST (June 5, 2017), https://www.washingtonpost.com/news/energy-environment/wp/2017/06/05/withdrawing-from-the-paris-deal-takes-four-years-our-next-president-could-join-again-in-30-days/?utm_term=.fa19928ed3fd [https://perma.cc/5K94-N3LR]; Parker, *Trump's Paris decision*, *supra* note 395.

548. Harvey, *supra* note 547; Parker, *Trump's Paris decision*, *supra* note 395.

to reduce GHG emissions to 26-28 percent below 2005 levels by 2025.[549] In the meantime, the countries that remain in the agreement are presumably working diligently toward their voluntary goals.

It is unlikely that Congress will amend the Clean Air Act to overturn the Supreme Court's holding that GHGs are pollutants.[550] It remains to be seen whether Administrator Pruitt will attempt to rescind Administrator Jackson's finding that GHG emissions endanger public health and the environment. Even if the EPA follows through with Administrator Pruitt's red team-blue team exercise, the agency will have a steep hill to climb to overcome the accumulated scientific evidence that GHG emissions cause climate disruption. The statute requires the EPA to regulate a pollutant if it "may reasonably be anticipated to endanger" public health. Even if uncertainties remain about the nature of the relationship between anthropogenic emissions and global warming, the agency is obliged under this precautionary language to take action to protect people and the environment.[551]

Another encouraging sign is that renewable energy companies are located in areas like Wyoming and West Virginia, and they are offering training to coal miners on how to install wind turbines and rooftop solar panels.[552] Even in coal-dependent states, public utility commissions driven by cost considerations may put pressure on companies to repower or retire old coal-fired plants.[553] President Trump's solar tariff may slow investments in solar power for a year or two, but renewable energy should be on the rise over the long term. In a state that emits more CO_2 than any other by a considerable distance, wind energy occasionally provides half of the electricity consumed in Texas.[554] Allowing the tax credits for renewable installations to lapse will undoubtedly hurt the renewables industry, but it will not stop the remarkable technological innovation that is making wind and solar power cheaper than coal, even without the subsidy.

549. Joshua Busby, *Trump says goodbye to the Paris climate agreement. Here's what that means*, WASH. POST (June 1, 2017), https://www.washingtonpost.com/news/monkey-cage/wp/2017/06/01/trump-says-goodbye-to-the-paris-climate-agreement-heres-what-that-means/?utm_term=.b641f25215fa [https://perma.cc/T2UV-ZU73].

550. Cushman, *Inside the Coal War Games*, *supra* note 193.

551. Ethyl Corp. v. EPA, 541 F.2d 1 (D.C. Cir. 1976), *cert. denied* 426 U.S. 941 (1976).

552. Diane Cardwell, *What's Up in Coal Country: Alternative-Energy Jobs*, N.Y. TIMES (Sept. 30, 2017), https://www.nytimes.com/2017/09/30/business/energy-environment/coal-alternative-energy-jobs.html [https://perma.cc/E2PQ-FGDR].

553. Grunwald, *Environmentalists*, *supra* note 399.

554. Ari Natter, *As Trump Bows Out*, *supra* note 425.

There are also good reasons to be pessimistic about climate disruption in the future. While the electric power industry's transformation will continue if the EPA repeals the CPP, the Obama regulation was a critical backstop against regression toward coal in states that were disinclined to regulate CO_2 emissions. Some analysts believe that the EPA's repeal of the CPP will, if finalized, slow the rate of CO_2 emissions reductions nationwide, especially in states like Georgia and Texas that refused to implement the CPP.[555] An April 2017 report by Climate Advisors, a consulting company, concluded that CO_2 emissions in the U.S. would reverse their downward trend and flatten out or increase by 2020 if the CPP does not go into effect.[556]

The *Wall Street Journal*'s editorial page announced in mid-August 2017 that coal was making a comeback as exports were on the rise and natural gas prices had increased 63 percent between March 2016 and August 2017.[557] The editors further noted that the coal companies emerging from the recent bankruptcies were "leaner and more competitive" than in the past.[558] While that assessment may be overly optimistic from the coal industry perspective, the Trump Administration initiatives may well cause an increase in reliance on currently underutilized coal-fired power plants and a corresponding increase in CO_2 emissions from the electricity generation sector.

Efforts by states to fill the void left by inaction at the federal level may founder on preemption grounds. The Supreme Court has held that lawsuits brought by states under the federal common law of nuisance against large CO_2 emitters are preempted by the Clean Air Act. The defendants in the recent nuisance actions brought by cities and counties under California's common law will no doubt argue that state common law is likewise preempted by the EPA's regulation of CO_2 emissions or its decision not to regulate those emissions. A federal district court held that the City of Albuquerque's changes to its building code to require more efficient hot water heaters and heating, ventilation, and air conditioning equipment were preempted by DOE's standards. This does not bode well for local regulation of those energy-consuming products.[559] Although preemption does not pose a serious problem

555. Storrow, *Repeal comes*, *supra* note 381.

556. Marianne Lavelle, *Trump's Climate Cuts Could Result in Half-Billion Extra Tons of CO_2 in the Air*, INSIDE CLIMATE NEWS (Apr. 25, 2017), https://insideclimatenews.org/news/25042017/donald-trump-climate-change-clean-power-plan-paris-agreement [https://perma.cc/99PW-DBPT].

557. The Editorial Board, *Coal Makes a Comeback,* WALL ST. J. (Aug. 16, 2017), https://www.wsj.com/articles/coal-makes-a-comeback-1502926053 [https://perma.cc/53T7-WGSV].

558. *Id.*

559. Cary Coglianese & Shana Starobin, *The Legal Risks of Regulating Climate Change at the Subnational Level*, REG. REV. (Sept. 18, 2017), https://www.theregreview.org/2017/

for state and local regulation of power plants in their state implementation plans,[560] it does threaten other local actions aimed at increasing energy efficiency of products that are sold in national markets.[561]

At the end of the day, the efforts by states and cities, while commendable, will probably not achieve the short-term goals for the United States established in the Paris Accords. Only 14 states are currently members of the Climate Alliance.[562] Cities participating in the "We Are Still In" initiative account for 51 percent of the United States population but only 36 percent of the nation's CO_2 emissions.[563] It is unlikely that the efforts by these states and cities alone can make up for the states and cities that are not committed to the Paris Agreement's goals or are downright hostile to them.[564] Only if voluntary efforts by corporate and residential consumers reduce demand to much lower levels in the next seven years are we likely to meet the Paris Agreement's near term goals. That would by no means guarantee that the United States will contribute its share of the GHG reductions needed to meet the long-term goal of preventing global temperatures from rising 1.5 degrees centigrade above historical levels.[565]

If we are going to meet the Paris Agreement goals, GHG emissions nationwide must decrease by around 5 percent per year. This requires a halt to all new fossil fuel-fired power plants, and the shutdown of many existing fossil fuel-fired power plants before the end of their planned lifetimes.[566] To make up the shortfall, the electric power industry will have to make massive investments in renewable power that match or exceed the large investments of the past few years. At the very least, the Trump Administration's actions have created uncertainty, and uncertainty hampers such large-scale investment.[567] That, by itself, could be enough to slow the movement away

09/18/coglianese-starobin-legal-risks-climate-change-subnational/ https://perma.cc/97Q-YBFD] [hereinafter Coglianese & Starobin, *The Legal Risks*].

560. 42 U.S.C.S. § 7416 (LexisNexis, Lexis Advance through P.L. 115-114, approved 1/10/18, with gaps of P.L. 115-91, Subtitles C and D of Title I and Title II of P.L. 115-97). The Clean Air Act's "floor preemption" provision allows states to impose more stringent controls on stationary sources that required by federal standards. 42 U.S.C. § 7416.

561. Coglianese & Starobin, *The Legal Risks*, *supra* note 559.

562. Plumer, *How Can U.S. Fight Climate Change*, *supra* note 411.

563. Ross-Brown, *Can Cities and States Step Up*, *supra* note 442.

564. Swanson & Plumer, *Trump's Solar Tariffs*, *supra* note 538.

565. Lee Logan & Dawn Reeves, *Nations Back Historic Paris Climate Pact, Framework for Stricter GHG Limits*, INSIDE EPA (Dec. 12, 2015), https://insideepa.com/daily-news/nations-back-historic-paris-climate-pact-framework-stricter-ghg-limits.

566. Davenport, *Clean Energy 'Moving Forward'*, *supra* note 344.

567. Shallenberg, *Will utilities keep*, *supra* note 540.

from coal and the corresponding reductions in GHG emissions. The negative effect on emissions reductions will be much greater if prices for natural gas increase in a market that is notoriously volatile.

In the meantime, CO_2 levels in the atmosphere continued to rise 3 ppm in both 2015 and 2016, the largest increases since the Mauna Loa Baseline Atmospheric Observatory began measuring those levels in the 1950s.[568] A draft of the EPA's quadrennial National Climate Assessment approved by a peer review group assembled by the National Academies of Sciences concluded that even if all anthropogenic GHG emissions ceased immediately, global temperatures would rise another 0.5 degrees Fahrenheit by the end of the century.[569]

It seems clear that we will not meet the Paris Agreement's long-term goal without active intervention from the federal government.[570] Without the threat of the EPA taking over their permit programs, coal-dependent states are not likely to put pressure on owners of coal-fired plants within their borders to retire them or convert them to gas.[571] Yet it is not at all clear that restrictions on GHG emissions in progressive states that want to protect their citizens from climate disruption will be sufficient to meet the near term Paris Agreement goal of a 26 to 28 percent reduction in GHG emissions by 2025. If we do not meet that modest goal, it will be very difficult, if not impossible, to prevent global temperatures from rising to catastrophic levels.

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568. Chelsea Harvey, *Carbon dioxide in the atmosphere is rising at the fastest rate ever recorded*, WASH. POST (Mar. 13, 2017), https://www.washingtonpost.com/news/energy-environment/wp/2017/03/13/carbon-dioxide-in-the-atmosphere-is-rising-at-the-fastest-rate-ever-recorded/?utm_term=.cd6936d7195a [https://perma.cc/3LB8-6L3M].

569. Lisa Friedman, *Scientists Fear Trump Will Dismiss Blunt Climate Report*, N.Y. TIMES (Aug. 7, 2017), https://www.nytimes.com/2017/08/07/climate/climate-change-drastic-warning-trump.html [https://perma.cc/UWJ7-HWDP].

570. Swanson & Plumer, *Trump's Solar Tariffs*, *supra* note 538; Davenport, *Planned Rollback*, *supra* note 492.

571. Shallenberger, *Will utilities keep*, *supra* note 540.