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# **EPA's Clean Power Plan for Existing Power Plants: Frequently Asked Questions**

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## Summary

Taking action to address climate change by reducing U.S. emissions of greenhouse gases (GHGs) is among President Obama's major goals. At an international conference in Copenhagen in 2009, he committed the United States to reducing emissions of GHGs 17% by 2020, as compared to 2005 levels. At the time, 85 other nations also committed to reductions. In November 2014, the President set a further goal: a 26% to 28% reduction from 2005 levels to be achieved by 2025—jointly announced with China's Xi Jinping, who set a goal for China's emissions to peak by 2030. Since U.S. GHG emissions peaked in 2007, a variety of factors—some economic, some the effect of government policies at all levels—have brought the United States more than halfway to reaching the 2020 goal. Getting the rest of the way and reducing emissions further by 2025 would likely depend, to some degree, on continued GHG emission reductions from electric power plants, which are the largest source of U.S. emissions.

In June 2013, the President released a Climate Action Plan and directed the Environmental Protection Agency (EPA) to propose standards for “carbon pollution” (i.e., carbon dioxide, the principal GHG) from existing power plants by June 2014 and to finalize the standards a year later. EPA proposed the standards on June 2, 2014, and finalized them on August 3, 2015. The rule, known as the Clean Power Plan, sets individual state targets for average emissions from existing power plants—interim targets for the period 2022-2029 and final targets to be met by 2030. It sets a deadline of September 6, 2016, for states to submit implementation plans to EPA detailing how they will meet these targets.

The rule relies on authority asserted by EPA in Section 111(d) of the Clean Air Act (CAA). This section has been infrequently used and never interpreted by the courts, so a number of questions have arisen regarding the extent of EPA's authority and the mechanisms of implementation. The rule sets emission rate goals for each state based on its unique circumstances. The goal for each state was derived from a formula based on three “building blocks”—broad categories that describe different reduction measures; in general, however, the policies to be adopted to reach these goals would be determined by the states, not EPA. Each state can reach its goal however it chooses, without needing to “comply” with the assumptions in its building blocks.

EPA faced a number of issues in developing the regulations:

- How large a reduction in emissions would it require, and by when?
- How would reduction requirements be allocated among the states?
- How much flexibility would the rule give to the states?
- Would it adopt a “mass-based” limit on total emissions or a rate-based (e.g., pounds of carbon dioxide per megawatt-hour of electricity) approach?
- What role might state emissions cap-and-trade systems play in meeting the goals?
- Will compliance be determined only by the actions of individual power plants (i.e., “inside the fence” actions) or will actions by other actors, including energy consumers (“outside the fence” actions) be part of compliance strategies?
- What role would there be for existing programs at the state and regional levels, such as the Regional Greenhouse Gas Initiative (RGGI), and for broader greenhouse gas reduction programs such as those implemented in California?

This report summarizes the final rule and describes how EPA answered these and other questions. In addition to discussing details of the rule, the report addresses EPA's authority under Section

111 of the CAA, EPA's previous experience using that authority, and other background questions. The report discusses the ongoing litigation in which a number of states and other entities have challenged the rule, while other states and entities have intervened in support of the rule. It also discusses challenges to the rule under the Congressional Review Act and other options that Congress has to influence EPA's action.

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On August 3, 2015, the Environmental Protection Agency (EPA) promulgated standards for greenhouse gas (GHG) emissions from existing fossil-fueled power plants under Section 111(d) of the Clean Air Act (CAA).<sup>1</sup> The rule, known as the Clean Power Plan (CPP), appeared in the *Federal Register* on October 23, 2015.<sup>2</sup> The rule and various supporting materials are posted on EPA's website.<sup>3</sup>

The agency conducted significant outreach to interested parties both before and after the rule's proposal. Before proposal, according to Bloomberg BNA, "Senior Environmental Protection Agency officials consulted with at least 210 separate groups representing a broad range of interests in the Washington, DC, area and held more than 100 meetings and events with additional organizations across regional offices."<sup>4</sup> Despite, or perhaps because of, these outreach efforts, EPA received more than 4.3 million public comments following the rule's proposal, the most ever for an EPA rule.<sup>5</sup> The agency continued outreach activities during the public comment period and before publication of the final rule.

Interest in the rule reflects what is generally conceded to be the importance of its potential effects. The economy and the health, safety, and well-being of the nation depend on a reliable and affordable power supply, which many contend would be adversely affected by controls on GHG emissions from power plants. At the same time, an overwhelming scientific consensus has formed around the need to slow long-term global climate change. To determine how the rule addresses these issues, congressional committees asked EPA officials numerous questions about the rule, and individual Members wrote EPA seeking additional information about the rule's potential impacts.<sup>6</sup> This congressional interest has continued since the final rule was promulgated.

EPA responded to questions and comments by making numerous changes to the rule between proposal and promulgation. In order to provide basic information about the rule as promulgated, this report presents a series of questions and answers.

## Background

### Q: Why did EPA promulgate this rule?

A: EPA promulgated emissions guidelines to limit carbon dioxide (CO<sub>2</sub>) emissions from existing power plants under Section 111(d) of the CAA for a variety of reasons. Some important context includes the following:

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<sup>1</sup> 42 U.S.C. §7411(d).

<sup>2</sup> U.S. EPA, "Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units," Final Rule, 80 *Federal Register* 64661, October 23, 2015.

<sup>3</sup> <http://www.epa.gov/cleanpowerplan/clean-power-plan-existing-power-plants>. EPA also promulgated standards for new, modified, and reconstructed power plants the same day. These New Source Performance Standards and supporting materials can be found at <http://www.epa.gov/cleanpowerplan/carbon-pollution-standards-final-rule-august-2015>.

<sup>4</sup> "EPA Consulted with Hundreds of Groups on Carbon Rule for Existing Power Plants," *Daily Environment Report*, April 8, 2014.

<sup>5</sup> More than 34,000 public submissions on the proposal can be viewed at <http://www.regulations.gov/#!docketDetail;D=EPA-HQ-OAR-2013-0602>. An interactive map allowing users to search for comments by state officials can be found at <http://bipartisanpolicy.org/energy-map/>.

<sup>6</sup> See, for example, the letter from a bipartisan group of 47 Senators to EPA Administrator Gina McCarthy, May 22, 2014, at [http://www.fischer.senate.gov/public/\\_cache/files/79d2321e-175c-4456-b4c7-f9b600e15288/5.22.14-senate-ghg-dear-colleague-letter.pdf](http://www.fischer.senate.gov/public/_cache/files/79d2321e-175c-4456-b4c7-f9b600e15288/5.22.14-senate-ghg-dear-colleague-letter.pdf).

- The Supreme Court in *Massachusetts v. EPA* in 2007 determined that “air pollutant,” as used in the CAA, covers GHGs.<sup>7</sup> EPA thereafter determined that GHGs are air pollutants that were “reasonably anticipated to endanger both public health and welfare.”<sup>8</sup>
- In December 2010, EPA entered into a settlement agreement to issue New Source Performance Standards (NSPSs) for GHG emissions from electric generating units (EGUs) under Section 111(b) of the CAA and emission guidelines under Section 111(d) covering existing EGUs.<sup>9</sup> As discussed further below,<sup>10</sup> EPA finalized NSPSs for GHG emissions from new, modified, and reconstructed fossil-fuel-fired EGUs at the same time as the CPP.<sup>11</sup>
- In the context of U.S. commitments under a 1992 international treaty, the United Nations Framework Convention on Climate Change (UNFCCC), President Obama pledged in 2009 to reduce U.S. GHG emissions by 17% below 2005 levels by 2020 and by 80% by 2050.<sup>12</sup> In November 2014, President Obama announced an additional interim goal to reduce U.S. GHG emissions by 26%-28% below 2005 levels by 2025, in the context of negotiations toward a 2015 agreement applying to all countries to address climate change beyond 2020.<sup>13</sup> In December 2015, delegations from 195 nations adopted an agreement in Paris. Under the Paris Agreement, nations that become parties will be legally bound to submit GHG emission reduction pledges but not to the quantitative targets themselves.<sup>14</sup>

Simultaneously with President Obama's November 2014 announcement, China's President Xi Jinping announced a voluntary target to “peak” China's CO<sub>2</sub> emissions by 2030 and increase its use of non-fossil energy to around 20% by 2030. The European Union is “on track” to reach its target of 20% below 1990 levels by 2020 and has pledged to reduce its GHG emissions to at least 40% below 1990 levels by 2030.

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<sup>7</sup> *Massachusetts v. EPA*, 549 U.S. 497 (2007), actually involved GHG emissions from motor vehicles, not power plants. In 2011, however, the Court explicitly ruled that “air pollutant” includes GHGs when applied to power plants under Section 111. *American Elec. Power Co., Inc. v. Connecticut*, 131 S. Ct. 2527, 2537-38 (2011).

<sup>8</sup> See U.S. EPA, “Endangerment and Cause or Contribute Findings for Greenhouse Gases Under Section 202(a) of the Clean Air Act,” Final Rule, 74 *Federal Register* 66496, December 15, 2009. EPA's “endangerment finding” was upheld by the Supreme Court in *Util. Air Regulatory Group v. EPA*, 134 S. Ct. 2427 (2014).

<sup>9</sup> See Settlement Agreement Between State of New York, et al., and U.S. EPA, December 23, 2010, at <http://www2.epa.gov/sites/production/files/2013-09/documents/boilerghgsettlement.pdf>; CRS Report R41103, *Federal Agency Actions Following the Supreme Court's Climate Change Decision in Massachusetts v. EPA: A Chronology*, by Robert Meltz, p. 7.

<sup>10</sup> See below, “Q: How do the CPP standards for existing power plants relate to EPA's GHG standards for new fossil-fueled power plants?”

<sup>11</sup> U.S. EPA, “Standards of Performance for Greenhouse Gas Emissions from New, Modified, and Reconstructed Stationary Sources: Electric Utility Generating Units,” Final Rule, 80 *Federal Register* 64509, October 23, 2015. As noted in preamble to this rule, EPA first proposed a New Source Performance Standard for GHG emissions from new fossil fuel-fired EGUs in April 2012; it withdrew that proposal and issued a new proposal in January 2014.

<sup>12</sup> See CRS Report R40001, *A U.S.-Centric Chronology of the United Nations Framework Convention on Climate Change*, by Jane A. Leggett; and CRS Report R43120, *President Obama's Climate Action Plan*, coordinated by Jane A. Leggett.

<sup>13</sup> See CRS In Focus IF10239, *President Obama Pledges Greenhouse Gas Reduction Targets as Contribution to 2015 Global Climate Change Deal*, by Jane A. Leggett.

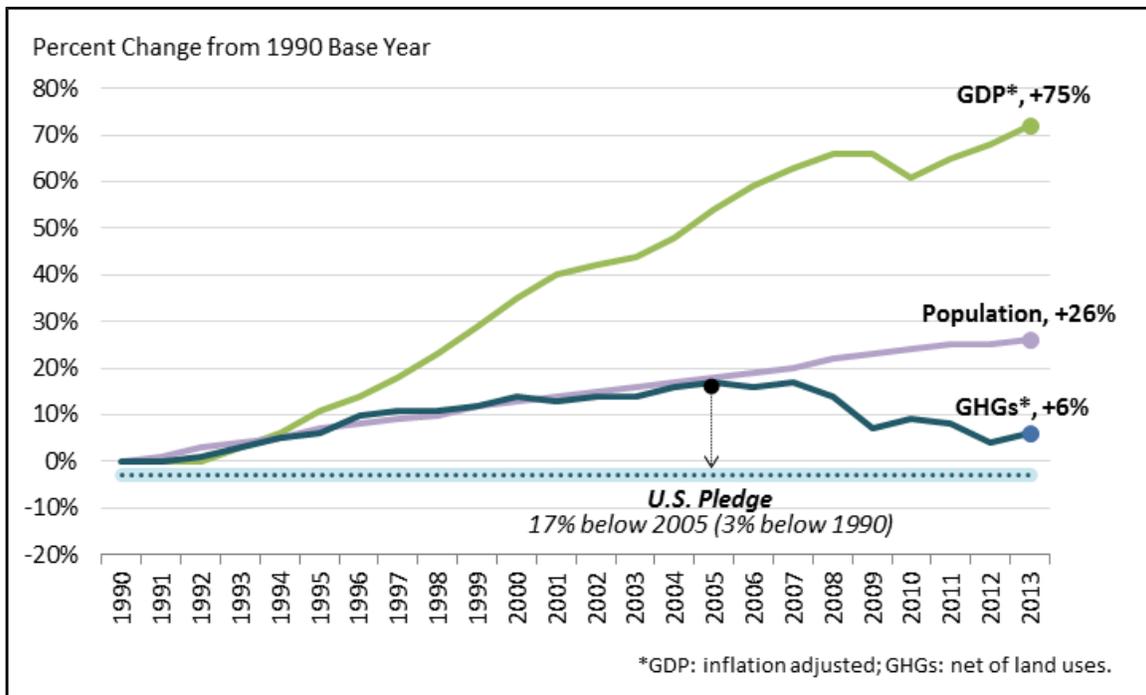
<sup>14</sup> See CRS Insight IN10413, *Climate Change Pact Agreed in Paris*, by Jane A. Leggett.

**Q: How much progress has the United States made in reducing GHG emissions?**

A: Measuring whether progress has been made in reducing U.S. GHG emissions depends on the base year chosen for comparison. In 2013, U.S. GHG emissions were 6,673 million metric tons (mmt) of CO<sub>2</sub>-equivalent (CO<sub>2</sub>e)<sup>15</sup>—about 6% above 1990 emission levels. While higher than 1990 levels, emissions in 2013 were 9% below GHG emission levels in 2005 and more than halfway toward meeting President Obama’s pledge to reduce U.S. GHG emissions to 17% below 2005 levels by 2020. U.S. GHG emissions peaked in 2007 at 7,400 mmt CO<sub>2</sub>e.<sup>16</sup>

As shown in **Figure 1**, during the period from 1990 to 2013, U.S. economic activity, measured as gross domestic product (GDP, adjusted for inflation), rose 75% while population increased 26%.<sup>17</sup>

**Figure 1. Percent Change in U.S. Greenhouse Gas (GHG) Emissions, the Economy, and Population, Since 1990**



**Source:** CRS figure using GHG emissions data from Environmental Protection Agency, *Inventory of Greenhouse Gas Emissions and Sinks: 1990-2013*, EPA 430-15-004, April 15, 2015; and GDP and population data from U.S. Bureau of Economic Analysis, National Economic Accounts, “Table 7.1. Selected Per Capita Product and Income Series in Current and Chained Dollars,” accessed May 27, 2014.

<sup>15</sup> EPA estimates and reports emissions of six GHGs: CO<sub>2</sub>, methane, nitrous oxide, hydrofluorocarbons (HFCs), perfluorocarbons (PFCs) and sulfur hexafluoride. CO<sub>2</sub>-equivalents result from weighting the mass of emissions of a GHG by its effect, relative to the effect of CO<sub>2</sub>, on radiative forcing of the climate system over a specified time period (usually 100 years). Using this method, gases of different atmospheric lifetimes and potencies can be compared or added. Various assumptions affect the relative warming potential of different GHG compounds.

<sup>16</sup> Emissions data are from EPA, *Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990–2013*, April 2015, p. ES-4, <http://www3.epa.gov/climatechange/ghgemissions/usinventoryreport.html>.

<sup>17</sup> *Ibid.*, p. ES-24. For a further discussion, see CRS Report R43795, *U.S. Greenhouse Gas Emissions: Recent Trends and Factors*, by Jonathan L. Ramseur.

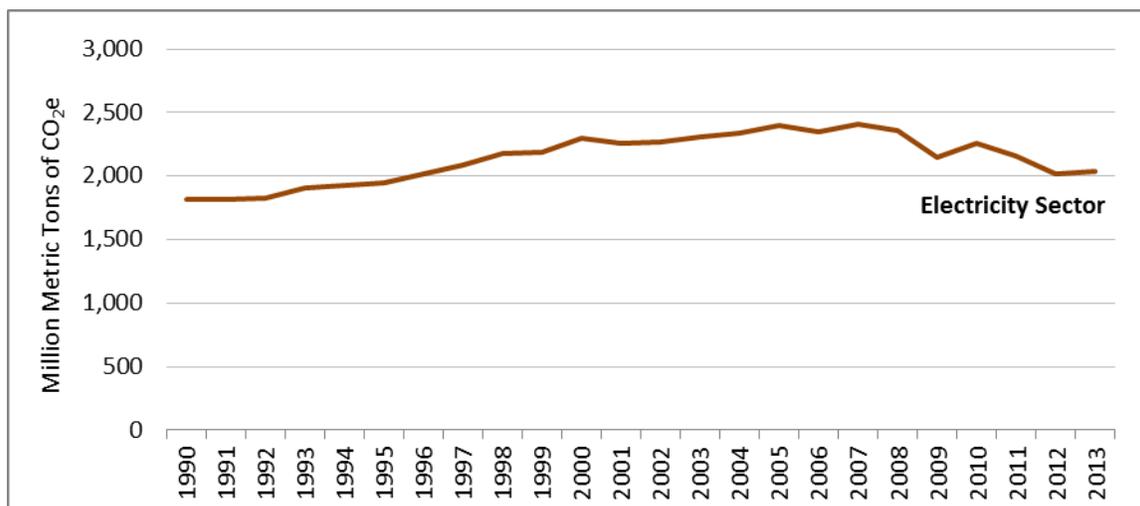
**Notes:** GDP, or “gross domestic product,” is one measure of national economic activity. The six GHGs for which emissions are estimated are carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride.

### Q: How much does the generation of electricity contribute to total U.S. GHG emissions?

A: The U.S. electricity generation sector<sup>18</sup> contributes the largest percentage of U.S. GHG emissions, accounting for about 31% of all U.S. GHG emissions in 2013.<sup>19</sup> As illustrated in **Figure 2**, GHG emissions from electricity generation increased between 1990 and 2007, decreased through 2012, and increased slightly (less than 1%) in 2013.

In its 2015 Annual Energy Outlook reference case scenario, the U.S. Energy Information Administration (EIA) projected CO<sub>2</sub> emissions from electricity generation to increase by 3.5% from 2012 to 2020, assuming no further regulatory actions.<sup>20</sup> Presumably, EPA's regulations for power plants will lower any future EIA projections.

**Figure 2. GHG Emissions from the Electricity Sector**  
1990-2013



**Source:** Prepared by CRS, data from EPA, *Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990–2013*, April 2015.

### Q: What other steps has EPA taken to reduce GHG emissions?

A: Prior to the promulgation of this rule, EPA had already promulgated GHG emission standards for light-duty and medium- and heavy-duty vehicles, using its authority under Section 202 of the CAA.<sup>21</sup> Light-duty vehicles (cars, SUVs, vans, and pickup trucks) and medium- and heavy-duty

<sup>18</sup> Other sectors include transportation, industrial, commercial, and residential.

<sup>19</sup> EPA, “U.S. Greenhouse Gas Inventory Reports:1990–2013,” <http://www3.epa.gov/climatechange/ghgemissions/usinventoryreport.html>.

<sup>20</sup> According to EIA, “the AEO2015 projections are based generally on federal, state, and local laws and regulations in effect as of the end of October 2014.” EIA, *Annual Energy Outlook 2015*, Table 18, April 2015, [http://www.eia.gov/forecasts/aeo/tables\\_ref.cfm](http://www.eia.gov/forecasts/aeo/tables_ref.cfm).

<sup>21</sup> See CRS Report R40506, *Cars, Trucks, and Climate: EPA Regulation of Greenhouse Gases from Mobile Sources*, by (continued...)

vehicles (including buses, heavy trucks of all kinds, and on-road work vehicles) are collectively the largest emitters of GHGs other than power plants. Together, on-road motor vehicles accounted for about 22% of U.S. GHG emissions in 2012.<sup>22</sup>

GHG standards for light-duty vehicles first took effect for Model Year (MY) 2012. Allowable GHG emissions will be gradually reduced each year from MY2012 through MY2025. In MY2025, emissions from new vehicles must average about 50% less per mile than in MY2010. The standards for heavier-duty vehicles began to take effect in MY2014. They will require emission reductions of 6% to 23%, depending on the type of engine and vehicle, when fully implemented in MY2018. A second round of standards, to address MY2019 and later medium- and heavy-duty vehicles, was proposed on June 19, 2015.<sup>23</sup>

The promulgation of standards for motor vehicles also triggered Clean Air Act requirements that new major stationary sources of emissions (power plants, refineries, etc.) obtain permits for their GHG emissions, and install the Best Available Control Technology, as determined by state and EPA permit authorities on a case-by-case basis, prior to construction. The Supreme Court upheld that position in June 2014, provided that the sources were already required to obtain permits for other conventional pollutants.<sup>24</sup>

The GHG permitting requirements for stationary sources have been in place since 2011, but were limited by EPA's "Tailoring Rule" to the very largest emitters—about 200 facilities, as of mid-2014. The Court's June 2014 decision invalidated the Tailoring Rule, but found that EPA could limit GHG permit requirements to "major" facilities, so-classified as a result of their emissions of conventional pollutants. In so doing, the Court limited the pool of potential GHG permittees to a number similar to what the Tailoring Rule would have provided.

## Statutory Authority

### Q: Under what authority did EPA promulgate the CPP rule?

A: EPA cites Section 111(d) of the CAA<sup>25</sup> for its authority to promulgate the CPP.<sup>26</sup> Section 111(d) requires EPA, among other things, to issue regulations providing for states to submit plans to EPA to impose "standards of performance" for existing stationary sources for any air pollutant that meets certain criteria. The first criterion is that the air pollutant must not already be regulated under certain other CAA provisions,<sup>27</sup> which are discussed further below. The second criterion is that CAA Section 111(b) NSPSs apply to the source category for the air pollutant.<sup>28</sup> EPA finalized

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James E. McCarthy and Brent D. Yacobucci; and CRS Report R42721, *Automobile and Truck Fuel Economy (CAFE) and Greenhouse Gas Standards*, by Brent D. Yacobucci, Bill Canis, and Richard K. Lattanzio.

<sup>22</sup> EPA, *Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990–2013*, pp. 3-18 to 3-22.

<sup>23</sup> The proposed rule appeared in the Federal Register on July 13, 2015: U.S. EPA and U.S. Department of Transportation, "Greenhouse Gas Emissions and Fuel Efficiency Standards for Medium- and Heavy-Duty Engines and Vehicles—Phase 2," Proposed Rule, 80 *Federal Register* 40138, July 13, 2015.

<sup>24</sup> *Utility Air Regulatory Group vs. Environmental Protection Agency*, 134 S. Ct. 2427 (2014).

<sup>25</sup> 42 U.S.C. §7411(d).

<sup>26</sup> See EPA, "Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units," Final Rule, 80 *Federal Register* 64661, 64663-69, 64697, 64700-36, 64751-79, 64783-86, 64811-816, 64826, 64835-44, 64853-76, 64881-82, 64926, 64942, October 23, 2015.

<sup>27</sup> 42 U.S.C. §7411(d)(i).

<sup>28</sup> 42 U.S.C. §7411(d)(ii). CAA Section 111(b), 42 U.S.C. §7411(b), requires EPA to issue NSPSs for any stationary (continued...)

Section 111(b) NSPSs for new, modified, or reconstructed power plants for CO<sub>2</sub> when it issued the CPP rule.<sup>29</sup> EPA often refers to Section 111(d) regulations as “emission guidelines.”<sup>30</sup>

**Q: What does Section 111(d), the authority EPA cites for the CPP, bar EPA from regulating?**

A: CAA Section 111(d) bars EPA from regulating an air pollutant pursuant to Section 111(d) if the air pollutant is already regulated as a criteria pollutant under a National Ambient Air Quality Standard (NAAQS) under CAA Section 108 or, per EPA's interpretation, as a hazardous air pollutant (HAP) under CAA Section 112.<sup>31</sup> CO<sub>2</sub> is not regulated as a criteria pollutant or a HAP under either of these provisions.

Because the House and Senate passed different versions of CAA Section 111(d) in the 1990 CAA amendments, controversy exists over EPA's authority per the Section 112 criterion.<sup>32</sup> Under the House's provision, CAA Section 111(d)(1)(A)(i) requires EPA to issue a rule under which each state shall submit to EPA a plan adopting standards of performance for any air pollutant that “is not included on a list published under section 108(a) or emitted from a source category which is regulated under section 112....”<sup>33</sup> Because EPA regulates power plants under Section 112 for HAP,<sup>34</sup> some have argued that EPA is barred from regulating power plants under Section 111(d) for CO<sub>2</sub>, although CO<sub>2</sub> is not regulated as a HAP under Section 112.<sup>35</sup>

In the final CPP rule, EPA addressed this issue, finding the CAA Section 112 exclusion to “not bar the regulation under CAA section 111(d) of non-HAP from a source category, regardless of whether that source category is subject to standards for HAP under CAA section 112.”<sup>36</sup> Describing the House amendment as ambiguous,<sup>37</sup> EPA stated that the “sole reasonable”

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(...continued)

source category on an EPA-maintained list of source categories that “cause ... or contribute ... significantly to, air pollution which may reasonably be anticipated to endanger public health or welfare.”

<sup>29</sup> EPA, “Standards of Performance for Greenhouse Gas Emissions From New, Modified, and Reconstructed Stationary Sources: Electric Utility Generating Units,” Final Rule, 80 *Federal Register* 64509, October 23, 2015.

<sup>30</sup> See, for example, *ibid.* (*passim*); 40 C.F.R. subparts C, Cc, Cd, Ce, UUUU.

<sup>31</sup> The CAA regulates emissions from stationary sources in multiple ways, three of which are relevant here. The first way is by NAAQSs, reserved for harmful but not extremely hazardous pollutants from “numerous or diverse mobile or stationary sources.” CAA §108(a)(1)(B), 42 U.S.C. §7408(a)(1)(B). NAAQSs are implemented by source-specific emission limits imposed by states in “state implementation plans.” CAA §110, 42 U.S.C. §7410. The second way is by federally prescribed national emission standards for hazardous air pollutants, that is, particularly harmful pollutants. CAA §112, 42 U.S.C. §7412. And the third, of interest here, is by federally prescribed standards of performance for new stationary sources. CAA §111, 42 U.S.C. §7411.

<sup>32</sup> See below, “Q: What legal arguments are being made for and against the final CPP rule?” in the Judicial Review section.

<sup>33</sup> P.L. 101-549, §108(g), 104 Stat. 2399, 2467 (1990), codified at 42 U.S.C. §7411(d)(1)(A)(i).

<sup>34</sup> EPA has regulated HAP from power plants under CAA Section 112 as part of its mercury and air toxics standards (MATS). The Supreme Court held that EPA's promulgation of the MATS rule was unlawful for failure to properly consider costs at the threshold stage of determining whether such regulation was “appropriate and necessary.” *Michigan v. EPA*, 135 S. Ct. 2699, 2707-2711 (2015). It remanded the case to the court of appeals, which remanded the MATS rule without vacatur to EPA to make the additional findings required by the Supreme Court. *White Stallion Energy Ctr. LLC v. EPA*, No. 12-1100, order (D.C. Cir. December 15, 2015) (*per curiam*).

<sup>35</sup> See below, “Q: What legal arguments are being made for and against the final CPP rule?”

<sup>36</sup> EPA, “Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units,” Final Rule, 80 *Federal Register* 64711, October 23, 2015.

<sup>37</sup> *Ibid.*, 64712-64714.

interpretation is that “the phrase ‘regulated under section 112’ refers only to the regulation of HAP emissions. In other words, the EPA’s interpretation recognizes that source categories ‘regulated under section 112’ are not regulated by CAA section 112 with respect to all pollutants, but only with respect to HAP.”<sup>38</sup>

In making this argument, EPA also cited the Senate’s 1990 amendment to CAA Section 111(d)(1)(A)(i), which is published in the *U.S. Statutes at Large* but not in the *U.S. Code*.<sup>39</sup> The Senate’s amendment excludes from Section 111(d) regulation any air pollutant “included on a list published under section 108(a) or 112....”<sup>40</sup> As such, the Senate language excludes air pollutants regulated under Section 112, rather than source categories, from Section 111(d) regulation, which is consistent with EPA regulating power plants for CO<sub>2</sub> under Section 111(d).

### **Q: When has EPA previously used its Section 111(d) authority?**

A: An analysis by the American College of Environmental Lawyers observed that since the 1970s, EPA has promulgated emission guidelines under Section 111(d) of the CAA on seven occasions.<sup>41</sup>

EPA’s 2005 Clean Air Mercury Rule (CAMR) delisted coal-fired electric utility steam generating units from Section 112 of the CAA and, instead, established a cap-and-trade system for mercury under Section 111(d);<sup>42</sup> however, the U.S. Court of Appeals for the D.C. Circuit vacated CAMR in 2008.<sup>43</sup> The court found that EPA’s delisting of the source category from Section 112 was unlawful and that EPA was obligated to promulgate standards for mercury and other hazardous air pollutants under Section 112.<sup>44</sup> The court, therefore, did not reach the question of whether the flexible approach taken by EPA for mercury controls (i.e., a cap-and-trade system) met the requirements of Section 111(d).

In 1996, EPA used its Section 111(d) authority to regulate emissions of methane and non-methane organic compounds from large landfills.<sup>45</sup> These regulations set numeric emission limits and required designated landfills to use certain types of control equipment.<sup>46</sup> EPA also used its Section 111(d) authority for another emission guideline rule for large municipal waste combustors, which EPA proposed in 1989 and finalized in 1991 pursuant to a consent decree.<sup>47</sup> However, the 1990 CAA amendments added a new CAA Section 129 specifically to address emissions from solid

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<sup>38</sup> *Ibid.*, 64714; see also below, “Q: What legal arguments are being made for and against the final CPP rule?”

<sup>39</sup> If there is a discrepancy between the *U.S. Statutes at Large* and the *U.S. Code*, the *U.S. Statutes at Large* is the controlling legal evidence of the law, unless Congress has enacted the relevant title of the *U.S. Code* as positive law; in that case, the *U.S. Code* is also legal evidence of the law. See 1 U.S.C. §§112, 204(a).

<sup>40</sup> P.L. 101-549, §302(a), 104 Stat. 2399, 2574 (1990).

<sup>41</sup> American College of Environmental Lawyers, “Memorandum for Environmental Council of the States (ECOS) Concerning Clean Air Act 111(d) Issues,” February 22, 2014, 5, 8-10, [http://acoel.org/file.axd?file=2014%2F9%2FACOEL+Master+Memo+2-22-14+\(1\).pdf](http://acoel.org/file.axd?file=2014%2F9%2FACOEL+Master+Memo+2-22-14+(1).pdf).

<sup>42</sup> 70 *Federal Register* 28606, May 18, 2005 (establishing Subpart HHHH).

<sup>43</sup> *New Jersey vs. EPA*, 517 F.3d 574 (D.C. Cir. 2008). EPA subsequently promulgated the MATS rule pursuant to CAA Section 112(d), which, as noted above, remains in litigation. 77 *Federal Register* 9304, February 16, 2012; see also footnote 34.

<sup>44</sup> *New Jersey vs. EPA*, 517 F.3d at 581-584.

<sup>45</sup> See generally EPA, “Standards of Performance for New Stationary Sources and Guidelines for Control of Existing Sources: Municipal Solid Waste Landfills,” Final Rule, 61 *Federal Register* 9905, March 12, 1996.

<sup>46</sup> *Ibid.*

<sup>47</sup> 56 *Federal Register* 5514, February 11, 1991 (establishing 40 C.F.R. Part 60, Subpart Ca, large municipal waste combustors and discussing background of rulemaking).

waste incinerators, including municipal waste combustors. Section 129 required Section 111 NSPS and emission guidelines for solid waste incinerators to meet certain requirements,<sup>48</sup> so the 1991 rule for large municipal waste combustors was superseded by a later rule intended to comply with Section 129.<sup>49</sup> EPA adopted the remaining Section 111(d) emission guidelines for acid mist from sulfuric acid production units,<sup>50</sup> fluoride emissions from phosphate fertilizer plants,<sup>51</sup> total reduced sulfur emissions from kraft pulp mills,<sup>52</sup> and fluoride emissions from primary aluminum plants.<sup>53</sup> Additionally, EPA has promulgated six rules that implement Section 111(d) in conjunction with the requirements of CAA Section 129.<sup>54</sup>

**Q: How do the CPP standards for *existing* power plants relate to EPA's GHG standards for *new* fossil-fueled power plants?**

A: EPA finalized standards for *new* fossil-fuel power plants under Section 111(b) of the CAA on the same day it finalized the CPP rule.<sup>55</sup> As discussed earlier, when EPA sets NSPSs for a source category for an air pollutant under Section 111(b), EPA triggers Section 111(d)'s applicability for existing sources in the Section 111(b) regulated source category for the air pollutant if the air pollutant is neither regulated as a criteria pollutant under a NAAQS nor, according to EPA's interpretation, regulated as a HAP for the source category.<sup>56</sup> Consequently, EPA's adoption of NSPSs for new fossil fuel power plants for CO<sub>2</sub> triggered Section 111(d)'s applicability for *existing* fossil fuel power plants for CO<sub>2</sub>.

Conversely, EPA has no authority to set Section 111(d) performance standards for existing sources in a source category for an air pollutant if EPA has no NSPSs for new sources in the source category for the air pollutant. Many of the petitioners challenging the CPP rule for existing power plants are also challenging EPA's NSPSs for new, modified, or reconstructed power plants for CO<sub>2</sub>.<sup>57</sup> Because the CPP rule is predicated on the NSPS rule, a court decision striking down the NSPS rule would undermine the CPP rule's legal basis.

**Q: How does Section 111 define the term "standards of performance"?**

A: The term "standards of performance" appears repeatedly in CAA Section 111, including in both the Section 111(b) provisions relating to new sources and the Section 111(d) provisions

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<sup>48</sup> 42 U.S.C. §7429. CAA Section 129 overrides some otherwise applicable aspects of Section 111(d) for solid waste combustion. For example, Section 129 requires that Section 111(d)/129 state plans be submitted to EPA within one year after promulgation of emission guidelines by EPA, whereas Section 111(d) plans have a different schedule.

<sup>49</sup> 60 *Federal Register* 65387, February 19, 1995 (establishing Subpart Cb under CAA Section 129).

<sup>50</sup> 42 *Federal Register* 55796, October 18, 1977, 56 *Federal Register* 5514, February 11, 1991; and 60 *Federal Register* 65387, December 19, 1995 (establishing current Subpart Cd).

<sup>51</sup> EPA, "Phosphate Fertilizer Plants, Final Guideline Document Availability," 42 *Federal Register* 12022, March 1, 1977.

<sup>52</sup> EPA, "Kraft Pulp Mills; Final Guideline Document; Availability," 44 *Federal Register* 29828, May 22, 1979.

<sup>53</sup> EPA, "Primary Aluminum Plants; Availability of Final Guideline Document," 45 *Federal Register* 26294, April 17, 1980.

<sup>54</sup> See footnote 41, 5-8 (citing 40 C.F.R. Parts Cb, Ce, BBBB, DDDD, FFFF, and MMMM).

<sup>55</sup> EPA, "Standards of Performance for Greenhouse Gas Emissions From New, Modified, and Reconstructed Stationary Sources: Electric Utility Generating Units," Final Rule, 80 *Federal Register* 64509, October 23, 2015.

<sup>56</sup> See above, "Q: Under what authority did EPA promulgate the CPP rule?" and "Q: What does Section 111(d), the authority EPA cites for the CPP, bar EPA from regulating?"

<sup>57</sup> See below, "Q: Might other litigation affect the final CPP rule?"

relating to existing sources in a source category. Section 111(a) defines “standard of performance” as:

[A] standard for emissions of air pollutants which reflects the degree of emission limitation achievable through the application of the best system of emission reduction which (taking into account the cost of achieving such reduction and any nonair quality health and environmental impact and energy requirements) the Administrator determines has been adequately demonstrated.<sup>58</sup>

Under this definition, EPA must determine the “best system of emission reduction” (BSER) that is “adequately demonstrated,” considering certain factors. Then, EPA or states, as applicable, must base the standard for emissions on the degree of emission limitation that is “achievable” through the BSER. The CAA does not define these component terms within the definition of “standard of performance.”

As discussed in more detail below,<sup>59</sup> in the CPP rule, EPA determined the BSER for existing power plants based on three “building blocks”: (1) efficiency improvements at affected coal-fired power plants, (2) generation shifts among affected power plants, and (3) renewable generating capacity.<sup>60</sup> It then used the BSER to set CO<sub>2</sub> emission performance rates.<sup>61</sup> EPA used a different approach to determine the BSER for new, modified, and reconstructed power plants.<sup>62</sup>

Courts have expanded on the CAA Section 111 definition of the term “standards of performance” and EPA’s interpretation of its component terms but generally with respect to NSPS under Section 111(b), rather than emission guidelines for existing sources under Section 111(d).<sup>63</sup> As discussed further below,<sup>64</sup> EPA explains that the interpretation of the term “standards of performance” and related terms is guided by *Chevron U.S.A. Inc. v. NRDC*, 467 U.S. 837 (1984), in which the U.S. Supreme Court stated that if a 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.”<sup>65</sup> However, some opponents of the CPP rule argue that this framework, known as “*Chevron* deference,” should not apply, at least to certain aspects of EPA’s interpretation of CAA Section 111.<sup>66</sup>

<sup>58</sup> CAA §111(a)(1), 42 U.S.C. §7411(a)(1).

<sup>59</sup> See “Q: How did EPA establish the national CO<sub>2</sub> emission performance rates?”

<sup>60</sup> See generally EPA, “Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units,” Final Rule, Part V, 80 *Federal Register* 64661, 64717-64811, October 23, 2015.

<sup>61</sup> See *ibid.*, parts VI-VII, 80 *Federal Register* at 64811-64826.

<sup>62</sup> See EPA, “Standards of Performance for Greenhouse Gas Emissions From New, Modified, and Reconstructed Stationary Sources: Electric Utility Generating Units,” Final Rule, 80 *Federal Register* 64509, 64626-28, October 23, 2015; see also EPA, “Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units,” Final Rule, 80 *Federal Register* 64661, 64718-19 fn. 300, October 23, 2015 (characterizing EPA’s interpretation of the requirements for standards of performance and BSER in the 111(b) and 111(d) rules for CO<sub>2</sub> from power plants as “generally consistent except to the extent that they reflect distinctions between new and existing sources”).

<sup>63</sup> See, e.g., *Lignite Energy Council v. EPA*, 198 F.3d 930, 933 (D.C. Cir. 1999); *Sierra Club v. Costle*, 657 F.2d 298 (D.C. Cir. 1981); *ASARCO Inc. v. EPA*, 578 F.2d 319 (D.C. Cir. 1978); *Essex Chemical Corp. v. Ruckelshaus*, 486 F.2d 427 (D.C. Cir. 1973); *Portland Cement Ass’n v. Ruckelshaus*, 486 F.2d 375, 391 (D.C. Cir. 1973).

<sup>64</sup> See “Q: What legal arguments are being made for and against the final CPP rule?”

<sup>65</sup> 467 U.S. at 842-43.

<sup>66</sup> See “Q: What legal arguments are being made for and against the final CPP rule?”

## The Final Rule

### **Q: How does the final rule differ from the proposed rule?**

A: EPA's 2015 final rule is different from EPA's 2014 proposed rule. A key change is the establishment of national CO<sub>2</sub> emission performance rates for the sources affected by the rule: fossil-fuel-fired electric steam generating units and stationary combustion turbines.

EPA used what it called “building blocks” to derive the national emission performance rates and state-specific targets based on the national rates. The final rule's state-specific targets differ from those in the proposed rule, because in the final rule, EPA applied its building block assumptions to regional-level data to create regional CO<sub>2</sub> emission performance rates. These regional rates led to national rates, which were then used to produce state-specific emission rate and emission targets. By contrast, in the proposed rule, EPA applied building blocks to state-level data, yielding different outcomes.

In addition, EPA modified its target creation methodology (e.g., building blocks) in the final rule. Key modifications include adjustments to:

- renewable energy,
- natural gas combined cycle (NGCC) displacement of coal-fired electricity generation,
- heat rate improvements at coal-fired units,
- energy efficiency,
- nuclear power, and
- state-specific 2012 baselines.

These methodology changes impact only the state-specific targets. States can choose to use a variety of mechanisms to meet their targets, including, but not limited to, the emission reduction activities assumed in EPA's methodology.

In addition, state compliance with the final rule begins in 2022 instead of 2020 under the proposed rule. The final rule has additional compliance options available to states, particularly in the form of state plans.

### **Q: By how much would the final rule reduce CO<sub>2</sub> emissions?**

A. EPA's final rule does not set a future level of CO<sub>2</sub> emissions from existing electricity generators. The rule establishes uniform national CO<sub>2</sub> emission<sup>67</sup> performance rates—measured in pounds of CO<sub>2</sub> per megawatt-hour (MWh) of electricity generation—and state-specific CO<sub>2</sub> emission rate and emission targets. States determine which measure they want to use to be in compliance.

Although it has been widely reported that the rule would require a 32% reduction in CO<sub>2</sub> emissions from the electricity sector by 2030, compared to 2005 levels, this reduction is EPA's

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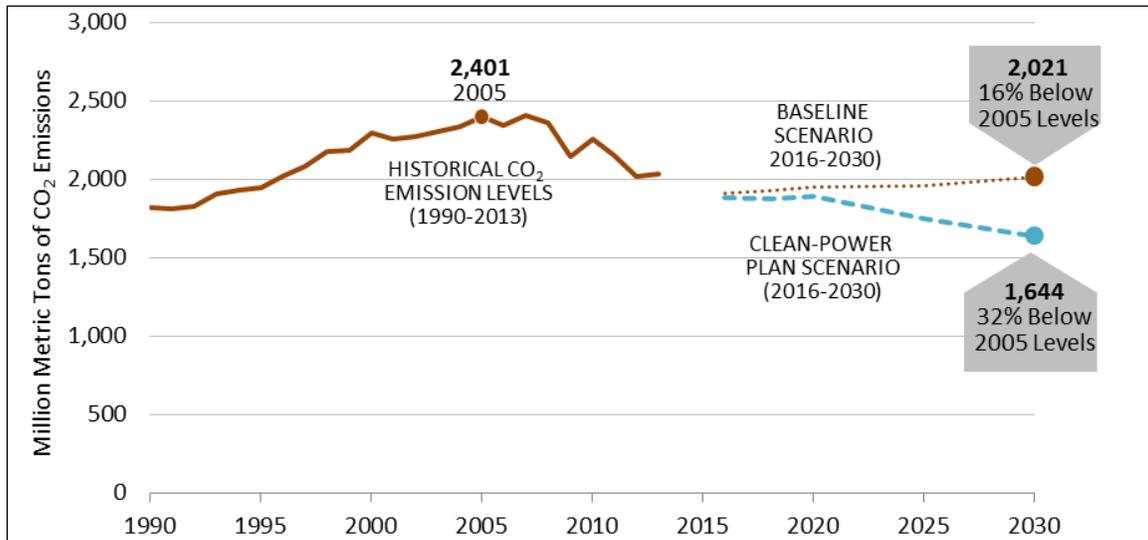
<sup>67</sup> The final rule does not address other GHG emissions. The primary GHGs emitted by humans (and estimated by EPA in its annual inventories) include carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O), sulfur hexafluoride (SF<sub>6</sub>), chlorofluorocarbons (CFCs), HFCs, and PFCs.

estimate of the rule's ultimate effect nationwide. The final rule does not explicitly *require* this level of emission reduction from electric generating facilities or states.

EPA uses computer models to project these CO<sub>2</sub> emission levels. The actual emissions will depend on how states choose to comply with the rule and how much electricity is generated (and at what type of generation units).

**Figure 3** compares EPA's projections of CO<sub>2</sub> emissions in the electricity sector resulting from the final rule with historical CO<sub>2</sub> emissions (1990-2013) from the electricity sector. The figure also illustrates the projected CO<sub>2</sub> emissions from the electricity sector under EPA's baseline scenario (i.e., business-as-usual). The figure indicates that the final rule would reduce CO<sub>2</sub> emissions in the electricity sector by 32% in 2030 compared to 2005 levels. Under the baseline scenario (without the rule), EPA projects a 16% reduction by 2030 compared to 2005 levels.

**Figure 3. U.S. CO<sub>2</sub> Emissions from Electricity Generation**  
Historical Emissions, Baseline Projection, and Clean Power Plan Projection



**Source:** Prepared by CRS; historical emissions from EPA, *Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990–2013*, April 2015; baseline and CPP projections from EPA, Power Sector Modeling, <http://www.epa.gov/airmarkets/programs/ipm/cleanpowerplan.html>.

**Notes:** CRS converted EPA's projected emissions from short tons to metric tons.

**Q: To whom does the final rule directly apply?**

A: The final rule directs governors (or their designees) to submit state-specific plans to EPA that describe how the states will meet their compliance obligations established by the final rule.

**Q: What type of facilities are affected by the final rule?**

A: The final rule addresses CO<sub>2</sub> emissions at “affected” electric generating units (EGUs). In general, an affected EGU is a fossil-fuel-fired unit that was in operation or had commenced construction as of January 8, 2014, has a generating capacity above a certain minimum threshold,

and sells a certain amount of its electricity generation to the grid.<sup>68</sup> The state-specific plans will describe the requirements that affected EGUs will face.

**Q: How many EGUs and facilities are affected by the final rule?**

A: Based on data EPA provided in support of its final rule,<sup>69</sup> the affected EGU definition applies to approximately 3,000 EGUs at approximately 1,100 facilities. The number of EGUs and facilities varies by state.

**Q: Does the final rule apply to all states and territories?**

A: EPA did not establish emission rate goals for Vermont and the District of Columbia, because they do not currently have affected EGUs. Although Alaska and Hawaii had targets in the proposed rule, in its final rule, EPA stated that Alaska, Hawaii, and the two U.S. territories with affected EGUs (Guam and Puerto Rico) will not be required to submit state plans on the schedule required by the final rule, because EPA “does not possess all of the information or analytical tools needed to quantify” the best system of emission reduction for these areas. EPA stated it will “determine how to address the requirements of section 111(d) with respect to these jurisdictions at a later time.”<sup>70</sup>

**Q: What is the deadline for submitting state plans to EPA?**

A: By September 6, 2016, states must submit to EPA either an initial plan or final plan. If a state submits an initial plan, the state can seek an extension from EPA to submit its final plan by September 6, 2018. If EPA grants this extension, the state must submit a progress report by September 6, 2017.

**Q: What are the different options available to states when preparing their state plans?**

A: States have several key decisions to make when crafting their state plans. Perhaps the most important decision is whether they should measure compliance with an emission rate target (pounds of CO<sub>2</sub> per MWh) or a mass-based target (tons of CO<sub>2</sub>). EPA provides both targets in its final rule. If a state decides to set up an emission (or emission rate) trading system, the trading system would be compatible only with systems using the same metric. In other words, a rate-based state cannot trade with a mass-based state.

In addition, the final rule allows for two types of state plans, described by EPA as (1) an “emission standards” approach and (2) a “state measures” approach. With an emission standards approach, a state would implement national CO<sub>2</sub> emission performance rates (discussed below) directly at the affected EGUs in the state. In contrast, a state measures approach would allow a state to achieve the equivalent of the national CO<sub>2</sub> emission performance rates by using some combination of federally enforceable standards and elements that would be enforceable only under state laws (e.g., renewable energy and/or energy efficiency requirements).

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<sup>68</sup> For further details, see EPA, “Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units,” Final Rule, 80 *Federal Register* 64715, October 23, 2015.

<sup>69</sup> See “Data File: Goal Computation Appendix 1-5,” at <http://www2.epa.gov/cleanpowerplan/clean-power-plan-final-rule-technical-documents>.

<sup>70</sup> EPA, “Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units,” Final Rule, 80 *Federal Register* 64743, October 23, 2015.

**Q: Can states join together and submit multi-state plans?**

A: States have the option of submitting multi-state plans. The same deadlines apply to multi-state plans. A multi-state plan would employ either a rate-based or mass-based approach.

**Q: What are the national CO<sub>2</sub> emission performance rates in the final rule?**

A: The final rule establishes uniform national CO<sub>2</sub> emission performance rates—measured in pounds of CO<sub>2</sub> per MWh of electricity generation—for each of the two subcategories of EGUs affected by the rule (**Table 1**). These subcategories include (1) fossil-fuel-fired electric steam generating units, of which coal generation accounts for 94%—oil and natural gas contribute the remainder—and (2) stationary combustion turbines, namely NGCC units.

The national rates are a major change from the proposed rule, which did not include similar performance rates at the EGU level. As discussed below, the national CO<sub>2</sub> emission performance rates are the underpinnings for the calculations that EPA used to develop state-specific emission rates and mass-based targets.

**Table 1. National CO<sub>2</sub> Performance Rates**

Pounds of CO<sub>2</sub> per Megawatt-hour

	2022	2023	2024	2025	2026	2027	2028	2029	2030	Interim (Average of 2022-2030)	Final (2030)
Fossil steam units	1,741	1,681	1,592	1,546	1,500	1,453	1,404	1,355	1,304	1,534	1,305
NGCC units	898	877	855	836	817	798	789	779	770	832	771

**Source:** Prepared by CRS; annual rates from EPA, *CO<sub>2</sub> Emission Performance Rate and Goal Computation Technical Support Document for CPP Final Rule*, August 2015.

**Notes:** To generate the final rates, EPA used the 2030 rates and rounded up to the next integer.

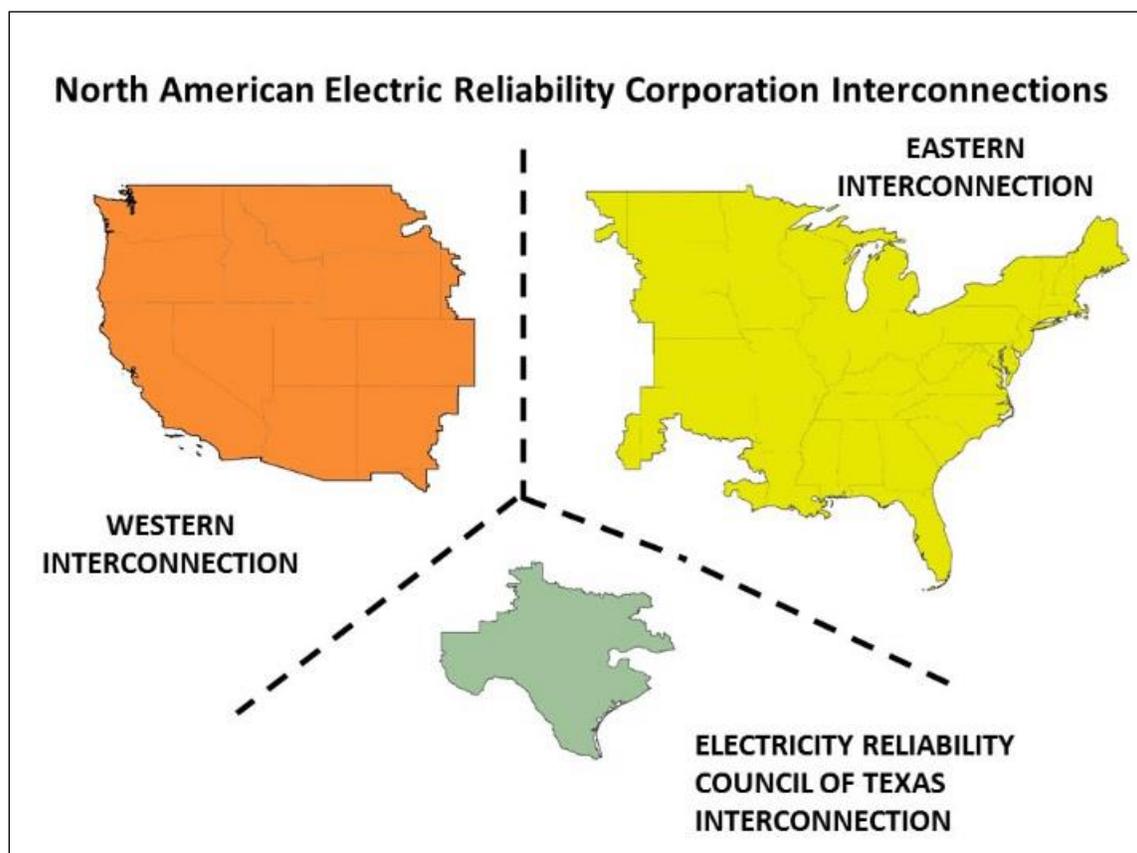
**Q: How did EPA establish the national CO<sub>2</sub> emission performance rates?**

A: EPA compiled 2012 CO<sub>2</sub> emissions and electricity generation data from each affected EGU in each state. Then EPA divided the states into three regions (see **Figure 4**), aggregating the CO<sub>2</sub> emission and electricity generation data. Next, EPA applied three “building blocks” to the aggregated regional data:

- Building block 1: EPA applied heat rate improvements to coal-fired EGUs, improving their overall emission rate. The improvements vary by region from 2.1% to 4.3%.
- Building block 2: EPA assumed NGCC generation would increase to a specific ceiling, displacing an equal amount of generation from steam units (primarily coal). Note that in the final rule, EPA applies building block 3 before building block 2, dampening the impact of building block 2.
- Building block 3: EPA projected annual increases in renewable energy generation, which resulted in corresponding decreases in generation from affected EGUs. EPA based the future increases on renewable energy generation increases between 2010 and 2014

EPA's building block application produced annual CO<sub>2</sub> emission performance rates for steam and NGCC units in each region. EPA compared the rates in each of the three regions and chose the least stringent regional rate as the national standard for that particular year for each EGU category (Table 1).

**Figure 4. Electricity Regions in EPA's Methodology**



**Source:** Reproduced from EPA, *Overview of the Clean Power Plan: Cutting Carbon Pollution from Power Plants*, August 2015, <http://www.epa.gov/airquality/cpp/fs-cpp-overview.pdf>. The figure has a minor error, as the Texas region should be labeled as the Electric Reliability Council of Texas Interconnection.

**Notes:** EPA did not establish emission rate goals for Vermont and the District of Columbia because they do not currently have affected EGUs. Although Alaska and Hawaii have targets in the proposed rule, in its final rule, EPA stated that Alaska, Hawaii, and the two U.S. territories with affected EGUs (Guam and Puerto Rico) will not be required to submit state plans on the schedule required by the final rule, because EPA "does not possess all of the information or analytical tools needed to quantify" the best system of emission reduction for these areas. EPA stated it will "determine how to address the requirements of section 111(d) with respect to these jurisdictions at a later time" (EPA, "Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units," Final Rule, 80 *Federal Register* 64743, October 23, 2015).

### **Q: How did EPA calculate the state-specific emission rate targets?**

A: To generate state-specific emission rate targets, EPA applied the national CO<sub>2</sub> emission performance rates to each state's baseline (2012) of fossil fuel generation (steam generation vs. NGCC generation).

For example, in 2012, Arizona's electricity generation mix included

- 49% steam generation, and

- 51% NGCC generation.

To calculate Arizona's 2030 emission rate target, EPA multiplied the percentage of each generation type by the corresponding 2030 national CO<sub>2</sub> emission performance rate (**Table 1**):  
 $(49\% \times 1,305 \text{ lbs. CO}_2/\text{MWh}) + (51\% \times 771 \text{ lbs. CO}_2/\text{MWh}) = 1,031 \text{ lbs. CO}_2/\text{MWh}$

**Q: What are the state-specific emission rate targets?**

A: **Table 2** lists the 2030 emission rate targets for each state and the 2012 emission rate baselines. In addition, the table lists the implied percentage reductions required to achieve the 2030 emission rate targets compared to the 2012 baselines.

EPA used different formulas to calculate the 2012 baselines in the proposed and final rules. The final rule baseline includes pounds of CO<sub>2</sub> generated from affected EGUs in each state (the numerator) divided by the electricity generated from these units. The proposed rule baseline included pounds of CO<sub>2</sub> generated from affected EGUs in each state (the numerator) divided by the electricity generated from these units and “at-risk” nuclear power and renewable energy generation (the denominator). Including these additional elements in the denominator can yield lower baselines compared to the final rule.

Therefore, it is problematic to compare the percentage rate reductions from the proposed rule with the final rule, because the 2012 baseline calculations changed—sometimes dramatically—in the final rule. For example, Washington's 2012 baseline was 756 lbs. CO<sub>2</sub>/MWh in the proposed rule. In the final rule, Washington's 2012 baseline increased by 107% to 1,556 lbs. CO<sub>2</sub>/MWh.

**Table 2. State-Specific Emission Rate Baselines (2012), Emission Rate Targets (2030), and Percentage Reductions Compared to Baselines**

State	2012 Emission Rate Baseline	2030 Emission Rate Target	Percentage Change Compared to Baseline
Pounds of CO <sub>2</sub> per megawatt-hour of electricity generation			
Alabama	1,518	1,018	33%
Alaska	Not established	Not established	NA
Arizona	1,552	1,031	34%
Arkansas	1,816	1,130	38%
California	954	828	13%
Colorado	1,904	1,174	38%
Connecticut	846	786	7%
Delaware	1,209	916	24%
Florida	1,221	919	25%
Georgia	1,597	1,049	34%
Hawaii	Not established	Not established	NA
Idaho	834	771	8%
Illinois	2,149	1,245	42%
Indiana	2,025	1,242	39%
Iowa	2,195	1,283	42%

Kansas	2,288	1,293	43%
Kentucky	2,122	1,286	39%
Louisiana	1,577	1,121	29%
Maine	873	779	11%
Maryland	2,031	1,287	37%
Massachusetts	1,003	824	18%
Michigan	1,928	1,169	39%
Minnesota	2,082	1,213	42%
Mississippi	1,151	945	18%
Missouri	2,008	1,272	37%
Montana	2,481	1,305	47%
Nebraska	2,161	1,296	40%
Nevada	1,102	855	22%
New Hampshire	1,119	858	23%
New Jersey	1,058	812	23%
New Mexico	1,798	1,146	36%
New York	1,140	918	19%
North Carolina	1,673	1,136	32%
North Dakota	2,368	1,305	45%
Ohio	1,855	1,190	36%
Oklahoma	1,565	1,068	32%
Oregon	1,089	871	20%
Pennsylvania	1,642	1,095	33%
Rhode Island	918	771	16%
South Carolina	1,791	1,156	35%
South Dakota	1,895	1,167	38%
Tennessee	1,985	1,211	39%
Texas	1,553	1,042	33%
Utah	1,790	1,179	34%
Virginia	1,366	934	32%
Washington	1,566	983	37%
West Virginia	2,064	1,305	37%
Wisconsin	1,996	1,176	41%
Wyoming	2,315	1,299	44%

**Source:** Prepared by CRS; final rule target and baseline data from EPA, *CO<sub>2</sub> Emission Performance Rate and Goal Computation Technical Support Document for CPP Final Rule*, August 2015, and accompanying spreadsheets, <http://www2.epa.gov/cleanpowerplan/clean-power-plan-final-rule-technical-documents>. The interim and final targets are codified in 40 C.F.R. Part 60, Subpart UUUU, Table 2.

**Notes:** EPA did not establish emission rate goals for Vermont and the District of Columbia because they do not currently have affected EGUs. Although Alaska and Hawaii had targets in the proposed rule, in its final rule, EPA

stated that Alaska, Hawaii, and the two U.S. territories with affected EGUs (Guam and Puerto Rico) will not be required to submit state plans on the schedule required by the final rule, because EPA “does not possess all of the information or analytical tools needed to quantify” the best system of emission reduction for these areas. EPA stated it will “determine how to address the requirements of section 111(d) with respect to these jurisdictions at a later time” (EPA, “Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units,” Final Rule, 80 *Federal Register* 64743, October 23, 2015).

### **Q: How did EPA calculate the state-specific mass-based targets?**

A: EPA’s conversion from emission rate targets to mass-based targets involves two steps. First, EPA multiplied a state’s emission rate target (lbs. CO<sub>2</sub>/MWh) for a particular year (e.g., 2022) by the state’s 2012 CO<sub>2</sub> generation baseline (MWh). This yields an initial mass-based value for that year.

Second, EPA determined the amount of renewable energy generation (pursuant to building block 3) that would not be needed to achieve the emission rate targets. This “excess” generation is available because EPA chose the least stringent of the three regional CO<sub>2</sub> performance rates as the national CO<sub>2</sub> performance rate.<sup>71</sup> EPA explained:

Due to the nature of the emission performance rate methodology, which selects the highest of the three interconnection-based values for each source category as the CO<sub>2</sub> emission performance rate, there are cost-effective lower-emitting generation opportunities quantified under the building blocks that are not necessary for affected EGUs in the Western and Texas interconnections to demonstrate compliance at historical generation levels.<sup>72</sup>

EPA calculated the CO<sub>2</sub> emissions associated with this “excess” generation and allocated the CO<sub>2</sub> emissions to all of the states based on their 2012 generation, increasing their annual mass-based targets. As a result, some of the states’ 2030 mass-based targets are higher than their 2012 emission baselines.

EPA based the renewable energy allocation on each state’s share of total electricity generation in 2012 from affected EGUs. For example, in 2012, Florida’s affected EGUs accounted for 8% of the generation from all affected EGUs, so Florida received 8% of the excess renewable energy generation in the mass-based calculation.

### **Q: What are the state-specific mass-based targets?**

A: **Table 3** lists the state-specific, mass-based targets from EPA’s final rule. The table compares the 2030 targets with the 2012 baselines as calculated for the final rule and provides a percentage change between the two values. Most of the states have emission reduction requirements, but three states (Connecticut, Idaho, and Maine) have 2030 targets that are higher than their 2012 baselines (as discussed above).

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<sup>71</sup> For further discussion of these calculations, see EPA, *CO<sub>2</sub> Emission Performance Rate and Goal Computation Technical Support Document for the CPP Final Rule*, August 2015, <http://www.epa.gov/sites/production/files/2015-11/documents/tsd-cpp-emission-performance-rate-goal-computation.pdf>.

<sup>72</sup> EPA, “Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units,” Final Rule, 80 *Federal Register* 64822, October 23, 2015.

**Table 3. State-Specific 2012 CO<sub>2</sub> Emission Baselines and 2030 CO<sub>2</sub> Emission Targets**  
Short Tons—Alphabetical by State

State	2012 CO <sub>2</sub> Emission Baseline	2030 CO <sub>2</sub> Emission Targets	Percentage Change
Alabama	75,571,781	56,880,474	-25%
Alaska	Not established	Not established	Not established
Arizona	40,465,035	30,170,750	-25%
Arkansas	43,416,217	30,322,632	-30%
California	49,720,213	48,410,120	-3%
Colorado	43,209,269	29,900,397	-31%
Connecticut	6,659,803	6,941,523	4%
Delaware	5,540,292	4,711,825	-15%
Florida	124,432,195	105,094,704	-16%
Georgia	62,843,049	46,346,846	-26%
Hawaii	Not established	Not established	Not established
Idaho	1,438,919	1,492,856	4%
Illinois	102,208,185	66,477,157	-35%
Indiana	110,559,916	76,113,835	-31%
Iowa	38,135,386	25,018,136	-34%
Kansas	34,655,790	21,990,826	-37%
Kentucky	92,775,829	63,126,121	-32%
Louisiana	44,391,194	35,427,023	-20%
Maine	2,072,157	2,073,942	0.1%
Maryland	20,171,027	14,347,628	-29%
Massachusetts	13,125,248	12,104,747	-8%
Michigan	69,860,454	47,544,064	-32%
Minnesota	34,668,506	22,678,368	-35%
Mississippi	27,443,309	25,304,337	-8%
Missouri	78,039,449	55,462,884	-29%
Montana	19,147,321	11,303,107	-41%
Nebraska	27,142,728	18,272,739	-33%
Nevada	15,536,730	13,523,584	-13%
New Hampshire	4,642,898	3,997,579	-14%
New Jersey	19,269,698	16,599,745	-14%
New Mexico	17,339,683	12,412,602	-28%
New York	34,596,456	31,257,429	-10%
North Carolina	67,277,341	51,266,234	-24%
North Dakota	33,757,751	20,883,232	-38%
Ohio	102,434,817	73,769,806	-28%

State	2012 CO <sub>2</sub> Emission Baseline	2030 CO <sub>2</sub> Emission Targets	Percentage Change
Oklahoma	52,862,077	40,488,199	-23%
Oregon	9,042,668	8,118,654	-10%
Pennsylvania	119,989,743	89,822,308	-25%
Rhode Island	3,735,786	3,522,225	-6%
South Carolina	35,893,265	25,998,968	-28%
South Dakota	5,121,124	3,539,481	-31%
Tennessee	41,387,231	28,348,396	-32%
Texas	251,848,335	189,588,842	-25%
Utah	32,166,243	23,778,193	-26%
Virginia	35,733,502	27,433,111	-23%
Washington	15,237,542	10,739,172	-30%
West Virginia	72,318,917	51,325,342	-29%
Wisconsin	42,317,602	27,986,988	-34%
Wyoming	50,218,073	31,634,412	-37%

**Source:** Prepared by CRS using data from EPA, *CO<sub>2</sub> Emission Performance Rate and Goal Computation Technical Support Document for CPP Final Rule* (August 2015). The interim and final targets are codified in 40 C.F.R. Part 60, Subpart UUUU, Table 3.

**Notes:** EPA did not establish emission targets for Vermont and the District of Columbia because they do not currently have affected EGUs. Although Alaska and Hawaii had targets in the proposed rule, in its final rule, EPA stated that Alaska, Hawaii, and the two U.S. territories with affected EGUs (Guam and Puerto Rico) will not be required to submit state plans on the schedule required by the final rule, because EPA “does not possess all of the information or analytical tools needed to quantify” the best system of emission reduction for these areas. EPA stated it will “determine how to address the requirements of section 111(d) with respect to these jurisdictions at a later time” (EPA, “Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units,” Final Rule, 80 *Federal Register* 64743, October 23, 2015).

### Q: Does the final rule apply to EGUs on Indian lands?

A: The final rule established emission rate and emission targets for three areas of Indian country:

1. the Navajo Nation,
2. the Ute Tribe of the Uintah and Ouray Reservation, and
3. the Fort Mojave tribe.

The targets (**Table 4**) are based on two facilities in the Navajo Nation (the Navajo Generating Station and the Four Corners Power Plant), the South Point Energy Center on the Fort Mojave Reservation, and the Bonanza Power Plant on the Uintah and Ouray Indian Reservation.

**Table 4. Emission Rate and Emission Targets for Areas of Indian Country**

Area of Indian Land	2012 CO <sub>2</sub> Emission Rate Baseline	2030 CO <sub>2</sub> Emission Rate Target	Percentage Change	2012 CO <sub>2</sub> Emission Baseline	2030 CO <sub>2</sub> Emission Targets	Percentage Change
Fort Mojave Tribe	858	771	-10%	583,530	588,519	1%

Area of Indian Land	2012 CO <sub>2</sub> Emission Rate Baseline	2030 CO <sub>2</sub> Emission Rate Target	Percentage Change	2012 CO <sub>2</sub> Emission Baseline	2030 CO <sub>2</sub> Emission Targets	Percentage Change
Navajo Nation	2,121	1,305	-38%	31,416,873	21,700,586	-31%
Ute Tribe	2,145	1,305	-39%	3,314,097	2,263,431	-32%

**Source:** Prepared by CRS. The targets are codified in 40 C.F.R. Part 60, Subpart UUUU, Table 2 (emission rates) and Table 3 (mass-based).

As explained below,<sup>73</sup> on October 23, 2015, in addition to finalizing the CPP and NSPSs for EGUs, EPA *proposed* a rule for a federal plan,<sup>74</sup> which would be implemented by EPA in states that do not submit a satisfactory state implementation plan. In the federal plan rule, EPA proposed “to find that it is necessary or appropriate to regulate affected EGUs in each of the three areas of Indian country that have affected EGUs under the proposed federal plan.” According to EPA, CAA Section 301(d)<sup>75</sup> authorizes the agency to treat Indian tribes in the same manner as states for the purposes of developing and implementing a tribal plan.

If EPA includes this provision in its final rule for federal plans, the tribal governments could seek EPA approval to submit their own plans to meet their emission targets. If a tribal government were not to seek such approval, EPA would develop and implement the federal plan for EGUs in the relevant Indian lands. Such a development would not be unique to this regulatory program. EPA has developed and implemented model rules and plans for states and tribes in other regulatory contexts.

### **Q: Would states and companies that have already reduced GHG emissions receive credit for doing so?**

A: States do not receive “credit” in their emission rate or emission targets for emission reduction measures already taken. Whether individual power companies will receive some type of credit will be decided by states as they develop their implementation plans. The rule requires each state to submit an implementation plan to EPA that identifies what measures/regulations the state will implement to reach its goal.

EPA used 2012 data to prepare the national CO<sub>2</sub> emission performance rates and each state’s emission rate and emission targets. The final rule does not have a process for providing credit for emissions reductions made prior to 2012. EPA contends that states that began action prior to 2012, including a shift to less carbon-intensive energy sources or energy efficiency improvements, will be “better positioned” to meet state-specific emission rate goals.<sup>76</sup> However, some stakeholders would likely argue that the 2012 demarcation is unfair to states that invested in low-carbon generation technology and/or energy efficiency improvements prior to 2012.

<sup>73</sup> See “Q: What happens if a state fails to submit an adequate plan by the appropriate deadline?”, below.

<sup>74</sup> U.S. EPA, “Federal Plan Requirements for Greenhouse Gas Emissions from Electric Utility Generating Units Constructed on or Before January 8, 2014; Model Trading Rules; Amendments to Framework Regulations,” Proposed Rule, 80 *Federal Register* 64966, October 23, 2015.

<sup>75</sup> 42 U.S.C. §7601(d).

<sup>76</sup> U.S. EPA, “Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units,” Final Rule, 80 *Federal Register* 64897, October 23, 2015.

**Q: How does EPA's final rule interact with existing GHG emission reduction programs in the states, namely the Regional Greenhouse Gas Initiative and California's climate policies?**

A number of U.S. states have taken action requiring greenhouse gas (GHG) emission reductions. The most aggressive actions have come from a coalition of states from the Northeast and Mid-Atlantic regions—the Regional Greenhouse Gas Initiative<sup>77</sup>—and California.<sup>78</sup>

The Regional Greenhouse Gas Initiative (RGGI) is a cap-and-trade system involving nine states that took effect in 2009.<sup>79</sup> RGGI applies to CO<sub>2</sub> emissions from electric power plants with capacities to generate 25 megawatts or more.

Pursuant to legislation passed in 2006, California established a cap-and-trade program that took effect in 2013. California's cap covers multiple GHGs and when fully implemented in 2015 will apply to multiple sectors, covering approximately 85% of California's GHG emissions. In addition, California has other policies and regulations that address GHG emissions directly and indirectly.<sup>80</sup>

EPA allows states considerable flexibility in terms of meeting their emission rates or emission targets. For example, states can establish new programs to meet their goals or use existing programs and regulations. Moreover, states can meet their goals individually or collaborate with other states to create (or use existing) multistate plans.

It is uncertain whether the scope and stringency of the RGGI program or the California system would be sufficient to meet the targets in EPA's final rule. In particular, the emission caps in both programs do not go beyond 2020.

**Q: What role is there for "outside-the-fence" emission reductions?**

A: "Outside-the-fence" emission reductions play a central role in the methodology EPA used to establish the national CO<sub>2</sub> emission performance rates, which, in turn, provide the foundation for state-specific targets. In particular, building block 3 (discussed above) includes incremental increases of renewable energy generation, with corresponding decreases in electricity generation at fossil-fuel-fired power plants. Renewable energy appears to play a greater role in the final rule's methodology than in the proposed rule. However, the final rule omits building block 4 from the proposed rule, which included outside-the-fence energy efficiency improvements.

Although outside-the-fence activities are a major component of EPA's target calculations, the degree to which outside-the-fence emission reductions are actually used will depend on the policies and requirements states implement through their state plans.

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<sup>77</sup> See CRS Report R41836, *The Regional Greenhouse Gas Initiative: Lessons Learned and Issues for Congress*, by Jonathan L. Ramseur. See also <http://www.rggi.org/>.

<sup>78</sup> See <http://www.arb.ca.gov/cc/capandtrade/capandtrade.htm>.

<sup>79</sup> Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New York, Rhode Island, and Vermont. New Jersey participated in the program from 2009 through the end of 2011.

<sup>80</sup> More details are available at <http://www.climatechange.ca.gov/>.

**Q: How would new fossil-fuel fired power plants and their resulting electricity generation and emissions factor into a state's emission rate or emission calculations?**

A: In EPA's final rule, new EGUs are treated differently under rate-based and mass-based plans. Under a mass-based approach, states have the option of including new fossil-fuel-fired sources in their emission reduction plans. In its final rule, EPA provides mass-based emission targets that include projections of new sources (described by EPA as a "new source complement").<sup>81</sup> This inclusion would facilitate emissions trading within the state and with other states. These new sources would remain subject to the performance standards under CAA Section 111(b).<sup>82</sup>

In its proposed rule, EPA considered whether states could include new NGCC units in their emission rate calculations. In the final rule, EPA specifically prohibits states from including new NGCC units as a means of directly adjusting the state's emission rate. However, if a new NGCC were to effectively replace existing electricity generation from a coal-fired EGU, the state's emission rate would likely decrease with the removal of the coal-fired unit.<sup>83</sup>

**Q: What role does nuclear power play in EPA's final rule?**

A: EPA modified its treatment of nuclear power in the final rule. In its proposed rule, EPA factored "at risk" nuclear power (estimated at 5.8% of existing capacity) into the state emission rate methodology. As a result, states had an incentive to maintain the at-risk nuclear power generation or their emission rates would increase (all else being equal). The final rule does not include at-risk nuclear generation in its building block calculations.

In addition, in its final rule, EPA decided not to include under-construction nuclear power capacity in the emission rate calculations. Including the estimated generation from these anticipated units in the emission rate equation would have substantially lowered the emission rate targets in Georgia, South Carolina, and Tennessee. If the final rule had retained this feature, and these nuclear units did not enter service, these three states would likely have more difficulty achieving their emission rate goals.

EPA clarified that the final rule would allow the generation from under-construction units, new nuclear units, and capacity upgrades to help sources meet emission rate or emission targets.

**Q: What role does energy efficiency play in EPA's final rule?**

A: In EPA's proposed rule, demand-side energy efficiency (EE) improvements were part of the agency's state-specific emission rate target calculations ("building block 4"). However, in its final rule, EPA did not include demand-side EE improvements as part the agency's national CO<sub>2</sub> emission performance rate calculations, which underlie the state-specific targets.

Although EPA removed demand-side EE assumptions from its target calculations, states may choose to employ EE improvement activities as part of their plans to meet their targets. In

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<sup>81</sup> For further details on how EPA calculated the new source complement emissions, see EPA, *New Source Complements to Mass Goals, Technical Support Document for CPP Final Rule*, August 2015, <http://www2.epa.gov/cleanpowerplan/clean-power-plan-final-rule-technical-documents>.

<sup>82</sup> See U.S. EPA, "Standards of Performance for Greenhouse Gas Emissions for New, Modified, and Reconstructed Stationary Sources; Electric Utility Generating Units," Final Rule, 80 *Federal Register* 64510, October 23, 2015.

<sup>83</sup> For a discussion of this issue, see EPA, "Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units," Final Rule, 80 *Federal Register* 64903, October 23, 2015.

particular, the final rule includes a new voluntary program that provides incentives for early investments (in 2020 and 2021) in EE programs in low-income communities (as discussed below).

In addition, in its *Regulatory Impact Analysis* (RIA) for the final rule, EPA assumes that EE will play an important role in meeting compliance obligations:

[EE] is a highly cost-effective means for reducing CO<sub>2</sub> from the power sector, and it is reasonable to assume that a regulatory requirement to reduce CO<sub>2</sub> emissions will motivate parties to pursue all highly cost-effective means for making emission reductions accordingly, regardless of what particular emission reduction measures were assumed in determining the level of that regulatory requirement.<sup>84</sup>

### **Q: What role does biomass play in EPA's final rule?**

A: In its final rule, EPA would allow states to use “qualified biomass” as a means of meeting state-specific reduction requirements. EPA defines qualified biomass as a “feedstock that is demonstrated as a method to control increases of CO<sub>2</sub> levels in the atmosphere.”<sup>85</sup> This appears to be a narrower approach than was taken in the proposed rule. Also, EPA requires additional accounting and reporting requirements if a state decides to use qualified biomass. The agency gives some indication as to which biomass types may qualify.<sup>86</sup>

### **Q: What is the Clean Energy Incentive Program?**

A: EPA's final rule includes a Clean Energy Incentive Program (CEIP) that encourages states to support energy efficiency measures and renewable energy projects two years before the emission rate or emission compliance obligations begin (i.e., in 2020 and 2021).<sup>87</sup> States would need to include particular design elements in their final plans in order to participate in the CEIP.

The CEIP establishes a system to award credits to energy efficiency projects in low-income communities and renewable energy projects (only wind and solar) in participating states. The credits take the form of emission rate credits (ERCs) or emission allowances, depending on whether a state uses an emission rate or mass-based target, respectively. The credits could be sold to or used by an affected emission source to comply with the state-specific requirements (e.g., emission rate or mass-based targets).

Renewable energy projects would receive one credit (either an allowance or ERC) from the state and one credit from EPA for every two MWh of solar or wind generation. EE projects in low-income communities would receive double credits: For every two MWh of avoided electricity generation, EE projects will receive two credits from the state and two credits from EPA. EPA will match up to the equivalent of 300 million short tons in credits during the CEIP program life.<sup>88</sup> The amount of EPA credits potentially available to each state participating in the CEIP

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<sup>84</sup> EPA, *Regulatory Impact Analysis for the Clean Power Plan Final Rule*, August 2015 (hereinafter RIA), <http://www2.epa.gov/cleanpowerplan/clean-power-plan-final-rule-regulatory-impact-analysis>.

<sup>85</sup> Defined in the final rule regulations (40 C.F.R. §60.5880); EPA, “Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units,” Final Rule, 80 *Federal Register* 64662, October 23, 2015.

<sup>86</sup> For further information, see CRS In Focus IF10280, *The Clean Power Plan (CPP): The Treatment of Biomass*, by Kelsi Bracmort.

<sup>87</sup> EPA, “Fact Sheet: Clean Energy Incentive Program,” August 2015, <http://www.epa.gov/airquality/cpp/fs-cpp-ceip.pdf>.

<sup>88</sup> As a reference point, the electricity sector generated approximately 2,200 short tons of CO<sub>2</sub> emissions in 2013.

depends on the relative amount of emission reduction each state is required to achieve compared to its 2012 baseline. Thus, states with greater reduction requirements would have access to a greater share of the EPA credits.

To generate the credits, states would effectively borrow from their mass-based or rate-based compliance targets for the interim 2022-2029 compliance period. EPA would provide its share of credits from a to-be-established reserve. In its proposed rule for the federal implementation plan EPA is asking for comments on the size of the credit reserve and other CEIP implementation details.<sup>89</sup>

## Next Steps

### **Q: What are the next steps in the rule's implementation?**

A: The rule sets a deadline of September 6, 2016, for each state to submit a State Implementation Plan (SIP) to EPA.<sup>90</sup> In lieu of a completed plan, a state may make an initial submittal by that date and request up to two additional years to complete its submission. For the extension of time to be granted, the initial submittal must address three components sufficiently to demonstrate that the state is able to undertake steps necessary to submit a final plan by September 6, 2018:

1. An identification of the final plan approach or approaches under consideration, including a description of progress made to date;
2. An appropriate explanation for why the state needs additional time to submit a final plan; and
3. A demonstration of how the state has been engaging with the public, including vulnerable communities, and a description of how it intends to meaningfully engage with community stakeholders during the additional time.

Following submission of final plans, EPA will review the submittals to determine whether they are approvable. The agency expects to complete reviews within 12 months of the submittal deadlines. The agency will follow notice-and-comment rulemaking procedures to ensure an opportunity for public comment on the state submissions.

The interim compliance period for the rule begins in 2022. EPA is establishing an eight-year interim period that begins in that year and runs through 2029 and is separated into three steps (2022-2024, 2025-2027, and 2028-2029), each with its own interim goal. Affected EGUs must meet each of the step 1, 2, and 3 CO<sub>2</sub> emission performance rates or follow an EPA-approved emissions reduction trajectory designed by the state itself for the eight-year period from 2022 to 2029.

Compliance with the state's final goal is required by 2030.

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<sup>89</sup> See EPA, "Federal Plan Requirements for Greenhouse Gas Emissions from Electric Utility Generating Units Constructed on or before January 8, 2014; Model Trading Rules; Amendments to Framework Regulations," Final Rule, 80 *Federal Register* 65025, October 23, 2015.

<sup>90</sup> As noted below in "Q: What happens if a state fails to submit an adequate plan by the appropriate deadline?," EPA cannot compel a state to submit a plan, but the statute authorizes EPA to impose a federal plan on the state if a state does not submit a satisfactory plan by EPA's deadline.

## **Q: What incentives are there for early compliance?**

A: In general, the CPP states:

Incremental emission reduction measures, such as RE [renewable energy] and demand-side EE, can be recognized as part of state plans, but only for the emission reductions they provide during a plan performance period. Specifically, this means that measures installed in any year after 2012 are considered eligible measures under this final rule, but only the quantified and verified MWh of electricity generation or electricity savings that they produce in 2022 and future years may be applied toward adjusting a CO<sub>2</sub> emission rate.<sup>91</sup>

As noted earlier, however, EPA is providing incentives for states to adopt measures that will reduce emissions in 2020 and 2021 under the CEIP. Under the CEIP, EPA will provide credits against CPP requirements for wind and solar projects that commence construction after the date that a state submits its final plan to EPA and that generate metered electricity in 2020 and 2021. EPA will provide double credits for EE measures that result in reducing electricity consumption in low-income communities in participating states in the same two years.<sup>92</sup>

## **Q: What happens if a state fails to submit an adequate plan by the appropriate deadline?**

A: EPA cannot compel a state to submit a Section 111(d) plan. Rather, if a state fails to submit a satisfactory plan by EPA's deadline, CAA Section 111(d) authorizes EPA to prescribe a plan for the state. This authority is the same, Section 111(d) says, as EPA's authority to prescribe a federal implementation plan (FIP) when a state fails to submit a state implementation plan to achieve a National Ambient Air Quality Standard (NAAQS).<sup>93</sup> EPA proposed a model FIP on August 3, 2015 (which appeared in the *Federal Register* on October 23, 2015<sup>94</sup>), and is accepting public comments on the proposal until January 21, 2016.

## **Q: What would the proposed FIP require?**

A: Just as EPA cannot compel a state to submit a state plan, it also cannot compel a state to meet its average emission targets. FIPs, therefore, would require compliance by individual EGUs in the affected state. The proposed FIP would set either emission rates or emission limits for affected EGUs. According to EPA, the stringency of the federal plan would be same as the national CO<sub>2</sub> emission performance rates specified in the CPP.<sup>95</sup> In addition, the FIP would establish a trading program that could be used by affected EGUs to meet those limits. If the agency chooses to

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<sup>91</sup> EPA, "Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units," Final Rule, 80 *Federal Register* 64896, October 23, 2015.

<sup>92</sup> For additional information, see "Q: What is the Clean Energy Incentive Program?" above.

<sup>93</sup> CAA §110(c); 42 U.S.C. §7410(c).

<sup>94</sup> See EPA, "Federal Plan Requirements for Greenhouse Gas Emissions from Electric Utility Generating Units Constructed on or Before January 8, 2014; Model Trading Rules; Amendments to Framework Regulations," Proposed Rule, 80 *Federal Register* 64966, October 23, 2015. EPA's website provides technical support documents and other explanatory materials on the proposal at <http://www2.epa.gov/cleanpowerplan/clean-power-plan-existing-power-plants#federal-plan>.

<sup>95</sup> See the proposed FIP, page 64970.

implement a mass-based program, the proposal envisions the allocation of allowances to individual EGUs based on their historical emissions during the years 2010-2012.<sup>96</sup>

Although the proposed rule sets forth both a mass-based and a rate-based option for the proposed trading program, the agency states that it intends to finalize a single approach—i.e., either a rate-based or a mass-based approach—in all FIPs “in order to enhance the consistency of the federal trading program, achieve economies of scale through a single, broad trading program, ensure efficient administration of the program, and simplify compliance planning for affected EGUs.”<sup>97</sup> While accepting comments on both approaches, the agency appears to be leaning toward a mass-based option for use in the FIPs, stating that it

would be more straightforward to implement compared to the rate-based trading approach, both for industry and for the implementing agency. The EPA, industry, and many state agencies have extensive knowledge of and experience with mass-based trading programs. The EPA has more than two decades of experience implementing federally-administered mass-based emissions budget trading programs including the Acid Rain Program (ARP) sulfur dioxide (SO<sub>2</sub>) trading program, the Nitrogen Oxides (NOX) Budget Trading Program, CAIR, and CSAPR. The tracking system infrastructure exists and is proven effective for implementing such programs.<sup>98</sup>

EPA notes that, under its proposed FIP rule, states with FIPs could still participate in the implementation of the program under these conditions:

- After a federal plan is put in place for a particular state, the state would still be able to submit a plan, which, if approved, would allow the state and its EGUs to exit the federal plan.
- States would be allowed to take delegation of administrative aspects of the federal plan in order to become the primary implementers, or they could submit partial state plans in order to take over the implementation of a portion of a federal plan. For example, the states could replace the federal plan's allowance-distribution provisions with their own allowance-distribution provisions.
- States operating under a federal plan would be allowed to adopt complementary measures outside of that plan to facilitate compliance and lower costs to the benefit of power generators and consumers.

## Costs and Benefits of the Rule

### Q: What role did cost play in EPA's choice of emission standards?

A: Under Section 111(a)(1)'s definition of “standards of performance,” EPA must consider cost in developing NSPSs and related emission guidelines for existing sources of pollution. Section 111(d)(1) also states, “Regulations of the Administrator under this paragraph shall permit the State in applying a standard of performance to any particular source under a plan submitted under

<sup>96</sup> For a discussion of the proposed allowance allocation system, see EPA, “Allowance Allocation Proposed Rule Technical Support Document (TSD),” August 2015, <http://www2.epa.gov/sites/production/files/2015-11/documents/tsd-fp-allowance-allocations.pdf>.

<sup>97</sup> EPA, “Federal Plan Requirements for Greenhouse Gas Emissions From Electric Utility Generating Units Constructed on or Before January 8, 2014; Model Trading Rules; Amendments to Framework Regulations,” Proposed Rule, 80 *Federal Register* 64970, October 23, 2015.

<sup>98</sup> *Ibid.*

this paragraph to take into consideration, among other factors, the remaining useful life of the existing source to which such standard applies.”

In addition, EPA is required by Executive Order 12866 to provide a cost-benefit analysis when it proposes or promulgates economically significant rules. The CPP is an economically significant rule and was therefore subject to the executive order. E.O. 12866 states that “in choosing among alternative regulatory approaches, agencies should select those approaches that maximize net benefits (including potential economic, environmental, public health and safety, and other advantages; distributive impacts; and equity), unless a statute requires another regulatory approach.”<sup>99</sup>

The agency’s RIA, which it prepared to comply with the executive order, is available on the agency’s website.<sup>100</sup>

### **Q: What are EPA’s estimates of the costs of this rule?**

A: The cost of the rule will depend on whether states adopt a rate-based or a mass-based approach to compliance. In EPA’s analysis, the cost associated with a mass-based approach is generally less than that of the rate-based: The annual incremental compliance cost for the *mass-based* approach is estimated by EPA to be \$1.4 billion in 2020, \$3.0 billion in 2025, and \$5.1 billion in 2030; the comparable figures for the *rate-based* costs are \$2.5 billion in 2020, \$1.0 billion in 2025, and \$8.4 billion in 2030. Because states will generally determine how to comply with the goals established by the final rule, EPA refers to these cost estimates as “illustrative” and notes that they “do not represent the full suite of compliance flexibilities states may ultimately pursue.”<sup>101</sup> EPA describes the cost estimate as including “the net change in the annualized cost of capital investment in new generating sources and heat rate improvements at coal-fired steam generating units, the change in the ongoing costs of operating pollution controls, shifts between or amongst various fuels, demand-side energy efficiency measures, and other actions associated with compliance.”<sup>102</sup>

### **Q: What other estimates of the CPP’s cost are there?**

A: On November 9, 2015, the American Coalition for Clean Coal Electricity, an industry group, released a study of the CPP’s impacts prepared by NERA Economic Consulting. The study concluded that the annual cost of compliance would range from \$29 billion to \$39 billion in the period 2022-2033, and that 40 states would see average electricity price increases of 10% or more under at least one of the scenarios it modeled.<sup>103</sup> A study released by the National Mining Association projected sharp increases in the cost of both electricity and natural gas as a result of

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<sup>99</sup> Interagency Working Group on Social Cost of Carbon, United States Government. Technical Support Document: - Technical Update of the Social Cost of Carbon for Regulatory Impact Analysis - Under Executive Order 12866. Washington, DC: Office of Management and Budget, November 2013, Section 1. <http://www.whitehouse.gov/sites/default/files/omb/assets/inforeg/technical-update-social-cost-of-carbon-for-regulator-impact-analysis.pdf>.

<sup>100</sup> RIA.

<sup>101</sup> RIA, p. ES-9.

<sup>102</sup> RIA.

<sup>103</sup> NERA Economic Consulting, *Energy and Consumer Impacts of EPA’s Clean Power Plan*, prepared for the American Coalition for Clean Coal Electricity, November 7, 2015, <http://www.americaspower.org/wp-content/uploads/2015/11/NERA-CPP-Final-Nov-7.pdf>.

the rule, with a cumulative increase in wholesale electricity costs of \$214 billion between 2022 and 2030.<sup>104</sup>

Others, including electric power producers and regional transmission organizations, argue that it is too early to arrive at cost estimates.<sup>105</sup> Much depends on decisions to be made by the states as to how they will structure their regulatory programs and on projections of the cost of natural gas, coal, renewable power, and end-use efficiency measures between now and 2030.

### **Q: What are the benefits EPA estimates for the CPP?**

A: In the preamble to the final rule, EPA cites monetized climate benefits of the rule to be \$20 billion in 2030 and the air pollution health co-benefits of the rule to be an additional \$12 billion to \$34 billion (all estimates in 2011 dollars).<sup>106</sup> The agency's estimate of climate benefits is based on an interagency estimate of the "social cost of carbon."<sup>107</sup> It reflects the monetary value of global impacts from CO<sub>2</sub> emission changes, including net changes in agricultural productivity and human health, property damage from increased flood risk, and changes in energy system costs, such as reduced costs for heating and increased costs for air conditioning.

The air pollution health co-benefits reflect reduced exposure to fine particulates (PM<sub>2.5</sub>) and ozone. The health co-benefit estimate is expressed as a range. The range primarily reflects the use of concentration-response functions from different epidemiology studies.<sup>108</sup> Health benefits reflect monetized estimates for the contiguous United States, not the rest of the world. A reduction in premature fatalities each year accounts for over 98 percent of the total monetized health co-benefits.

With estimated compliance costs rising to a maximum of \$8.4 billion in 2030, EPA expects that the CPP would yield *net* benefits of \$24 billion to \$49 billion in 2030.<sup>109</sup>

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<sup>104</sup> Energy Ventures Analysis, *EPA's Clean Power Plan: An Economic Impact Analysis*, prepared for the National Mining Association, November 17, 2015, <http://nma.org/index.php/press-releases-2013/2376-clean-power-plan-will-add-214-billion-to-wholesale-electricity-prices>.

<sup>105</sup> See, for example, ClimateWire, "Experts Say Accurate Clean Power Plan Cost Estimate Won't Arrive for Years," November 30, 2015. The article cites officials at the two largest regional transmission organizations, PJM Interconnection and Midcontinent Independent System Operator, among others.

<sup>106</sup> Each of these estimates uses a 3% discount rate (EPA, "Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units," Final Rule, 80 *Federal Register* 64680-64681, October 23, 2015). Discount rates reflect the preference of most people to have money now rather than in the future. Thus, they discount the value of future benefits derived from the rule. Besides the 3% discount rate, EPA estimated the climate benefits using three other discount rates: 2.5%, 5%, and "the 95<sup>th</sup> percentile at a 3% discount rate." Estimates of the climate benefits ranged from \$6.4 billion to \$61 billion in 2030, depending on which of these discount rates was used (80 *Federal Register* 64934).

<sup>107</sup> Interagency Working Group on Social Cost of Carbon, with participation by Council of Economic Advisers, Council on Environmental Quality, Department of Agriculture, Department of Commerce, Department of Energy, Department of Transportation, Domestic Policy Council, Environmental Protection Agency, National Economic Council, Office of Management and Budget, Office of Science and Technology Policy, and Department of the Treasury, "Technical Support Document: Technical Update of the Social Cost of Carbon for Regulatory Impact Analysis Under Executive Order 12866," May 2013, (revised July 2015), <http://www.whitehouse.gov/sites/default/files/omb/inforeg/scc-td-final-july-2015.pdf>.

<sup>108</sup> To a lesser extent, it reflects the overlapping benefit ranges that EPA estimated for rate-based and mass-based compliance approaches. The mass-based estimate ranges from \$12 billion to \$28 billion in 2030; the rate-based benefit estimate ranges from \$14 billion to \$34 billion.

<sup>109</sup> Using the full range of benefits and costs reported in the RIA, assuming a 3% discount rate.

EPA did not monetize other expected co-benefits of this rule, including reduced morbidity from exposure to nitrogen dioxide, sulfur dioxide, and methylmercury and reduced effects from acid deposition. EPA also did not quantify pollution effects on ecosystems or visibility.<sup>110</sup>

## Potential Impacts on the Electricity Sector

### Q: How might the CPP impact electricity prices and electricity bills?

A: In its RIA, EPA estimates that the *national average retail electricity price*<sup>111</sup> will increase by less than 1% in both 2025 and 2030 compared to EPA's baseline scenario.<sup>112</sup> However, EPA's analysis indicates the electricity price changes will vary by region, ranging from a 5.9% increase (Wisconsin/Michigan region) to a 9% decrease (Long Island region) in 2030 compared to the baseline scenario.<sup>113</sup>

By comparison, EPA estimates that the *average monthly residential electricity bill* will decline by 7.0%-7.7% in 2030 (compared to a baseline scenario) as consumption of electricity declines due to efficiency measures.<sup>114</sup> (EPA's analysis does not provide a regional breakout for electricity bill impacts.) Although the final rule does not include EE activities in the state target calculations (i.e., building block 4),<sup>115</sup> EE activities play a substantial role in EPA's RIA.

### Q: How does the CPP address electricity reliability?

A: EPA's proposed rule generated substantial interest in the potential effects of the rule on the reliability of the electric power supply. EPA asserts that it does not want compliance with the final rule to interfere with industry's ability to maintain the reliability of the nation's electricity supply. EPA's final rule would address electric system reliability in several ways.

In particular, the final rule contains a provision for a reliability "safety valve" for individual power plants. EPA states that there may be a need for an EGU to continue to operate and release "excess emissions" if an emergency situation arises that could compromise electric system reliability. The reliability safety valve allows for a 90-day reprieve from CO<sub>2</sub> emissions limits. EPA stated that the safety valve could be triggered only in an emergency situation. For example, extreme weather events are "of short duration and would not require major—if any—adjustments to emission standards for affected EGUs or to state plans."<sup>116</sup>

EPA has also implemented a formal memorandum of joint understanding on maintaining electric system reliability with the Department of Energy and the Federal Energy Regulatory Commission so as to coordinate efforts while the state compliance plans are developed and implemented. The

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<sup>110</sup> A list of quantified and unquantified benefits of the rule is provided in the RIA, pp. ES12 to ES-14, at <http://www2.epa.gov/sites/production/files/2015-08/documents/cpp-final-rule-ria.pdf>.

<sup>111</sup> In the contiguous United States.

<sup>112</sup> RIA, p. 3-35 and Tables 3-20 and 3-21.

<sup>113</sup> RIA, Table 3-21.

<sup>114</sup> RIA, p. 3-40.

<sup>115</sup> See above "Q: What role does energy efficiency play in EPA's final rule?"

<sup>116</sup> EPA, "Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units," Final Rule, 80 *Federal Register* 64878, October 23, 2015.

memorandum expresses the joint understanding of how the agencies will cooperate, monitor, implement, share information, and resolve difficulties that may be encountered.<sup>117</sup>

**Q: What types of electricity sectors infrastructure changes might result from the CPP?**

A: Although the CPP does not directly require infrastructure changes in the electricity sector, states may need to modify or expand existing infrastructure to meet their emission or emission rate targets. For example, increased use of existing NGCC capacity may require upgraded transmission facilities and potentially new natural gas infrastructure to provide fuel. Projected increases in renewable generation will likely require new transmission lines, and many of today's transmission projects awaiting regulatory approvals are intended to serve renewable electricity projects. In addition, it can take anywhere from three to 10 years to get the federal, state, and local permits in place to build a major electric transmission line.<sup>118</sup> If additional transmission capacity is required, planning would likely need to begin soon to get new lines in place for when they would be needed in the early 2020s.

## Congressional Review

**Q: Can Congress use the Congressional Review Act (CRA) to disapprove the rule?**

A: The CRA provides a mechanism by which Congress may review and disapprove of agency rules through passage of a joint resolution that is eligible for expedited procedures in the Senate.<sup>119</sup> If passed by both houses of Congress, such a joint resolution would be sent to the President for his signature or veto.

The CRA provides expedited procedures for consideration of a joint resolution disapproving a rule in both Senate committee and on the Senate floor. Any time after the expiration of a 20-calendar-day period—which begins after a final rule is received by Congress and published in the *Federal Register*—a Senate committee can be discharged from the further consideration of a CRA joint resolution disapproving the rule.<sup>120</sup> This discharge occurs upon the filing on the Senate floor of a petition signed by at least 30 Senators.<sup>121</sup> Once a CRA joint resolution of disapproval is reported or discharged from Senate committee, any Senator may make a non-debatable motion to proceed to consider the disapproval resolution.<sup>122</sup> This motion to proceed requires a simple majority for adoption. If the motion to proceed is successful, the CRA disapproval resolution

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<sup>117</sup> EPA-DOE-FERC Coordination on Implementation of the Clean Power Plan, August 2015, <http://www.ferc.gov/media/headlines/2015/PPP-EPA-DOE-FERC.pdf>.

<sup>118</sup> For further discussion, see CRS Report R44265, *EPA's Clean Power Plan: Implications for the Electric Power Sector*, by Richard J. Campbell.

<sup>119</sup> 5 U.S.C. §§801-808.

<sup>120</sup> 5 U.S.C. §802(c). It is important to note that the 20-day period is calculated from the receipt and publication of the rule, not from the submission of a disapproval resolution aimed at the rule.

<sup>121</sup> *Ibid.*

<sup>122</sup> 5 U.S.C. §802(d)(1). The motion to proceed to consider contained in the CRA, like the motion to proceed to consider, contained in the Standing Rules of the Senate, can be made by any Senator. In modern practice, however, with rare exceptions, Senators defer to the majority leader or his or her designee to make such scheduling motions.

would be subject to up to 10 hours of debate and then voted upon.<sup>123</sup> A non-debatable motion to limit debate below 10 hours is in order. No amendments are permitted.<sup>124</sup> A CRA disapproval resolution requires a simple majority in order to pass.

The EPA's final CPP rule for existing power plants was received in Congress on September 17, 2015,<sup>125</sup> and published in the *Federal Register* on October 23, 2015. Three CRA resolutions of disapproval were introduced following receipt by Congress: H.J.Res. 67, H.J.Res. 72, and S.J.Res. 24. The Senate resolution became eligible for discharge from committee under the CRA's expedited procedures on November 13. Thirty Senators signed a discharge petition, and the resolution was discharged from the Senate Committee on Environment and Public Works on November 16.<sup>126</sup> The Senate considered the resolution on the floor on November 17 and passed it by a vote of 52-46.<sup>127</sup>

The CRA does not provide any expedited procedures for initial House consideration of a joint resolution disapproving a rule; the House considers these resolutions through its regular order. H.J.Res. 72 was referred to the House Committee on Energy and Commerce on October 26. The Subcommittee on Energy and Power and the full committee marked up the resolution, and it was ordered to be reported on November 18 by a vote of 28-21.<sup>128</sup> On December 1, 2015, the House considered S.J.Res. 24, previously passed by the Senate, under procedures from a special rule reported by the Rules Committee and adopted by the House.<sup>129</sup> The resolution was passed in the House by a vote of 242-180.<sup>130</sup> The President vetoed the resolution on December 18, 2015.<sup>131</sup> As of this publication, Congress has not yet taken action to override the presidential veto.

### **Q: What happens if the President vetoes a CRA joint resolution of disapproval?**

A: When a CRA joint resolution disapproving the rule is passed by both the House and the Senate, it is then presented to the President for his signature or veto. If the President vetoes such a measure, the House and Senate would have the opportunity to override the veto.<sup>132</sup> If two-thirds of both the House and the Senate vote to override the veto, the resolution would become law. There are no expedited procedures for consideration of motions to override a veto.

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<sup>123</sup> 5 U.S.C. §802(d)(2).

<sup>124</sup> *Ibid.*

<sup>125</sup> The rule was received by the Senate on September 11, 2015, and referred to the Committee on Environment and Public Works on September 17, 2015. See *Congressional Record*, vol. 161 (September 17, 2015), p. S6807. The rule was received by the House on September 11, 2015. See *Congressional Record*, vol. 161 (September 17, 2015), p. H5977. For purposes of the act, a rule is considered to have been "received by Congress" on the later date of its receipt in the Office of the Speaker of the House or its referral to Senate committee.

<sup>126</sup> See *Congressional Record*, vol. 161 (November 16, 2015), p. S7965.

<sup>127</sup> U.S. Senate, Roll Call Votes, 114<sup>th</sup> Congress—1<sup>st</sup> Session, Vote Summary on the Joint Resolution (S.J.Res. 24), [http://www.senate.gov/legislative/LIS/roll\\_call\\_lists/roll\\_call\\_vote\\_cfm.cfm?congress=114&session=1&vote=00306](http://www.senate.gov/legislative/LIS/roll_call_lists/roll_call_vote_cfm.cfm?congress=114&session=1&vote=00306).

<sup>128</sup> See H.Rept. 114-349 (2015).

<sup>129</sup> H.Res. 539, 114<sup>th</sup> Cong. (providing for one hour of debate on S.J.Res. 24 and S.J.Res. 23 and waiving all points of order).

<sup>130</sup> Final Vote Results for Roll Call 650, S.J. Res. 24, <http://clerk.house.gov/evs/2015/roll650.xml>.

<sup>131</sup> White House, "Memorandum of Disapproval on S.J. Res. 24," press release, December 18, 2015, <https://www.whitehouse.gov/the-press-office/2015/12/19/memorandum-disapproval-sj-res-24>.

<sup>132</sup> For more information on the procedures for reconsideration of a vetoed measure, see CRS Report RS22654, *Veto Override Procedure in the House and Senate*, by Elizabeth Rybicki.

## Q: What would be the effect of an enacted CRA joint resolution of disapproval?

A: If a CRA joint resolution disapproving a final rule is enacted, the rule would not take effect.<sup>133</sup> If the rule has previously taken effect, it is not to continue in effect and “shall be treated as though such rule had never taken effect.”<sup>134</sup> Additionally, the agency is not permitted to reissue the disapproved rule in “substantially the same form” or issue a “new rule that is substantially the same” as the disapproved rule “unless the reissued or new rule is specifically authorized by a law enacted after the date of the joint resolution disapproving the original rule.”<sup>135</sup> The CRA does not define the meaning or scope of the phrase “substantially the same,” what criteria should be considered, or who should make such a determination.<sup>136</sup> Since the CRA does not define “substantially the same,” sameness could be determined by scope, penalty level, textual similarity, or administrative policy, among other factors. For example, if Congress objected to a specific section of language in a rule that was ultimately disapproved, would a rule that only removed that language be considered “substantially the same” as the original? If the agency reissued a rule in which it changed one standard listed in the original regulation, would that be substantially similar? If it changed the number of categories to which a standard applied, would the rule still be “substantially the same”? These questions, for which no definitive answer is available, highlight the ambiguity in the meaning of “substantially the same.”

The statute is also silent on the question of who would make the determination as to whether an amended rule or new rule is “substantially the same” as a disapproved rule. Congress could take action if it determined that a reissued or new rule was substantially the same as the disapproved rule, since the reissued or new rule would also be subject to the CRA.<sup>137</sup> The CRA precludes judicial review of any “determination, finding, action, or omission” under the act.<sup>138</sup> The prevailing interpretation of this provision is that it prohibits judicial review of any question arising under the CRA and “denies courts the power to void rules on the basis of agency noncompliance with the [CRA].”<sup>139</sup> Based on this interpretation, it may be unlikely that a court

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<sup>133</sup> 5 U.S.C. §801(b)(1).

<sup>134</sup> 5 U.S.C. §801(f).

<sup>135</sup> 5 U.S.C. §801(b)(2). Nevertheless, it does not appear that Congress intended that all disapproved rules would require additional statutory authorization before further agency action on the same subject could take place. For example, where a statute or court order establishes a deadline for promulgating rules, an enacted CRA joint resolution of disapproval will not prohibit the agency from future issuance of rules governed by the deadline. Instead, the CRA extends the deadline for one year from the enactment of the joint resolution of disapproval. 5 U.S.C. §803.

<sup>136</sup> Even the post-enactment legislative history, which is of limited legal value in interpreting a statute, does not shed light on the meaning of “substantially the same.” Nor is there a particular definition of “substantially the same” in the *U.S. Code* that would apply to this section. The code contains over 270 provisions that include the terms “substantially similar” or “substantially the same.” See, e.g., 15 U.S.C. §57a; 26 U.S.C. §§83, 168, 246; 49 U.S.C. §§30141, 30166. At least one other law has prohibited an agency from issuing “substantially similar” regulations, which also remains undefined in the text. Federal Trade Commission Improvements Act of 1980, P.L. 96-252, 94 Stat. 391-92.

<sup>137</sup> Congress could also revoke a rule and/or prevent an agency from promulgating future rules by statute through the regular legislative process.

<sup>138</sup> 5 U.S.C. §805.

<sup>139</sup> *Montanans for Multiple Use v. Barbouletos*, 568 F.3d 225, 229 (D.C. Cir. 2009). See also *Via Christi Reg'l Med. Ctr. v. Leavitt*, 509 F.3d 1259, 1271 n.11 (10<sup>th</sup> Cir. 2007); *United States v. Carlson*, 2013 U.S. Dist. LEXIS 130893 (D. Minn. 2013); *United States v. Ameren Mo.*, 2012 U.S. Dist. LEXIS 95065 (E.D. Mo. 2012); *Forsyth Mem'l Hosp. v. Seblius*, 667 F. Supp. 2d 143, 150 (D.D.C. 2009); *Provena Hosps. v. Sebelius*, 662 F. Supp. 2d 140, 154-55 (D.D.C. 2009); *New York v. Am. Elec. Power Serv. Corp.*, 2006 U.S. Dist. LEXIS 32829 (S.D. Ohio 2006); *United States v. Am. Elec. Power Serv. Corp.*, 218 F. Supp. 2d 931, 949 (S.D. Ohio 2002); *Tex. Savings & Cmty. Bankers Assoc. v. Fed. Hous. Fin. Bd.*, 1998 U.S. Dist. LEXIS 13470, \*27 (W.D. Tex. 1998). One federal district court reached a contrary (continued...)

will determine that it has the authority to decide whether a rule violates the CRA's "substantially the same" prohibition. Therefore, one could argue that evaluating whether this prohibition has been violated may be a matter for Congress alone to decide.

**Q: What other steps might Congress take to overturn or modify the rule?**

A: In addition to joint resolutions of disapproval under the CRA, Congress has considered freestanding legislation or legislation that amends the Clean Air Act in a targeted way.<sup>140</sup> In the 114<sup>th</sup> Congress, the House has passed H.R. 2042, which would delay the date on which state implementation plans must be submitted to EPA and the compliance date of GHG emission standards for EGUs by a period of time equal to the time required for the completion of judicial review. The bill would also allow a state to opt out of compliance if the governor determines that the rule would have an adverse effect on ratepayers or have a significant adverse effect on the reliability of the state's electricity system.

S. 1324, as reported by the Senate Environment and Public Works Committee, contains similar provisions. In addition, it would prohibit EPA from regulating under Section 111(d) any category of existing sources regulated under the hazardous air pollutant authorities of Section 112, which would include EGUs. It would also revoke the NSPSs for EGUs promulgated under Section 111(b) and would set additional requirements for any future EGU standards issued under that authority.

Bills such as H.R. 2042 and S. 1324 face the same obstacle as a CRA joint resolution of disapproval (i.e., being subject to a presidential veto); in addition, they would likely need 60 votes to be considered on the Senate floor.

Another option that Congress could use to delay or rescind the CPP would be to place an amendment, or "rider," on EPA's appropriation bill to prevent funds from being used to implement the rule. In comparison to a CRA joint resolution of disapproval or freestanding legislation, addressing the issue through an amendment to the EPA appropriation may be considered easier. The overall appropriation bill to which it would be attached (possibly an omnibus appropriation covering a large portion of the federal government) would presumably contain other elements that would make it more difficult to veto.

Addressing climate change through the CPP and other Clean Air Act regulations is among the President's highest priorities, however, making it likely that the President would veto any appropriation bill that prohibits implementation of the CPP.

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(...continued)

conclusion, ruling that the CRA's judicial review provision precludes "judicial review of *Congress' own* determinations, findings, actions, or omissions made under the CRA after a rule has been submitted to it for review." *United States v. S. Ind. Gas & Elec. Comp.*, 2002 U.S. Dist. LEXIS 20936, \*13 (S.D. Ind. 2002) (emphasis added). For more information on this provision, see CRS Report R43992, *The Congressional Review Act: Frequently Asked Questions*, by Maeve P. Carey, Alissa M. Dolan, and Christopher M. Davis.

<sup>140</sup> For a broad discussion of congressional options for addressing EPA's GHG regulations, see CRS Report R41212, *EPA Regulation of Greenhouse Gases: Congressional Responses and Options*, by James E. McCarthy.

## Judicial Review

### Q: What parties have joined litigation over the final CPP rule?

A: Parties began filing petitions in the U.S. Court of Appeals for the D.C. Circuit (the “D.C. Circuit”) challenging the final CPP rule for CO<sub>2</sub> from existing power plants starting on the day the rule was published in the *Federal Register*.<sup>141</sup> CAA Section 307(b) requires that such petitions for review must be filed in the D.C. Circuit within 60 days after the rule’s publication in the *Federal Register*;<sup>142</sup> the deadline for petitions for review of the CPP rule was therefore December 22, 2015.

Parties that filed petitions challenging the CPP rule include 27 states. West Virginia and Texas spearheaded a coalition of 24 state petitioners in filing the lead case; Oklahoma, North Dakota, and Mississippi filed their own petitions.<sup>143</sup> Other petitioners challenging the rule include three labor unions, a number of rural electric cooperatives and an association representing them, more than two dozen industry and trade groups, several non-profit public policy organizations, and more than two dozen fossil-fuel-related companies and local electric utilities. Other fossil fuel-related companies have moved to intervene on behalf of the petitioners.<sup>144</sup> In all, more than a hundred parties filed more than three dozen petitions challenging the CPP. All of these petitions have been consolidated into one case, captioned *State of West Virginia, et al v. EPA*.<sup>145</sup>

Parties that have intervened in this case in support of EPA and its Administrator include a coalition of 18 states, the District of Columbia, and five other cities and a county (including some in states that have filed petitions challenging the CPP).<sup>146</sup> Other parties intervening in support of the CPP include regional, state, and municipal utilities and power companies,<sup>147</sup> more than a dozen non-profit organizations (including environmental organizations), and several energy industry associations.<sup>148</sup> Two former EPA Administrators are supporting the CPP as amici curiae (non-party “friends of the court”): William Ruckelshaus, who headed the agency in 1970, when the CAA was enacted, and again in the 1980s; and William Reilly, the EPA Administrator at the

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<sup>141</sup> See docket for *West Virginia, et al v. EPA*, No. 15-1363 (D.C. Cir. docketed October 23, 2015); EPA, “Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units,” Final Rule, 80 *Federal Register* 64661, October 23, 2015.

<sup>142</sup> 42 U.S.C. §7607(b).

<sup>143</sup> See docket for *West Virginia, et al v. EPA*, No. 15-1363 (D.C. Cir. docketed October 23, 2015). The state parties opposing the Clean Power Plan include West Virginia, Texas, Alabama, Arizona (Corporation Commission), Arkansas, Colorado, Florida, Georgia, Indiana, Kansas, Kentucky, Louisiana (Department of Environmental Quality), Michigan (Attorney General Bill Schuette), Mississippi, Missouri, Montana, Nebraska, New Jersey, North Carolina (Department of Environmental Quality), North Dakota, Ohio, Oklahoma, South Carolina, South Dakota, Utah, Wisconsin, and Wyoming.

<sup>144</sup> *Ibid.* In addition, declarations and other exhibits have also been offered in opposition to the rule by various other organizations and individuals not participating as petitioners, intervenors, or amici. See *ibid.*

<sup>145</sup> *Ibid.*

<sup>146</sup> *Ibid.* The state parties supporting EPA include New York, California (and its Air Resources Board), Connecticut, Delaware, Hawaii, Illinois, Iowa, Maine, Maryland, Massachusetts, Minnesota (via the Minnesota Pollution Control Agency), New Hampshire, New Mexico, Oregon, Rhode Island, Vermont, Virginia, and Washington. They are joined by city and local governments, including those of the District of Columbia; Broward County and South Miami, Florida; Boulder, Colorado; Philadelphia, Pennsylvania; Chicago, Illinois; and New York City, New York.

<sup>147</sup> *Ibid.* The cities of Austin, Texas, and Seattle, Washington, are participating through their municipally owned utilities.

<sup>148</sup> *Ibid.*

time Congress passed the Clean Air Act Amendments of 1990.<sup>149</sup> A public policy institute and a local government coalition comprising the National League of Cities, the U.S. Conference of Mayors, and 14 cities are also supporting the CPP as amici curiae.<sup>150</sup>

Five states have not joined the litigation: Alaska (which is exempt from the final rule<sup>151</sup>), Idaho, Nevada, Pennsylvania, and Tennessee.

**Q: What is the status and timeframe of litigation challenging the final CPP rule, and will the rule be stayed?**

A: The D.C. Circuit can stay agency rules pending its decision on the merits. Petitioners filed motions to stay the CPP soon after they filed their petitions for review.<sup>152</sup> A court evaluating a motion for a stay of a rule will generally weigh four traditional factors: (1) the likelihood that the moving party will prevail on the merits, (2) the prospect of irreparable injury to the moving party if relief is withheld, (3) the possibility of harm to other parties if relief is granted, and (4) the public interest.<sup>153</sup> The court will likely decide the motions to stay in early 2016.<sup>154</sup> The parties have also submitted briefs disagreeing over the schedule and procedures for subsequent litigation events, and the court has yet to determine the schedule for briefing on the merits.<sup>155</sup>

Once the D.C. Circuit issues a judgment,<sup>156</sup> a dissatisfied party may move the court to reconsider its decision and may seek Supreme Court review.<sup>157</sup>

**Q: What legal arguments are being made for and against the final CPP rule?**

A: This report does not aim to provide a comprehensive preview of the legal arguments for or against EPA's CPP rule as the litigation proceeds. However, the bullet points below offer a few examples, drawn from litigation filings<sup>158</sup> and EPA documents, to illustrate the range of potential issues.

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<sup>149</sup> Ibid.

<sup>150</sup> Ibid.

<sup>151</sup> See EPA, "Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units," Final Rule, 80 *Federal Register* 64661, 64664, October 23, 2015: "Because the EPA does not possess all of the information or analytical tools needed to quantify the BSER for the two non-contiguous states with otherwise affected EGUs (Alaska and Hawaii) and the two U.S. territories with otherwise affected EGUs (Guam and Puerto Rico), these emission guidelines do not apply to those areas, and those areas will not be required to submit state plans on the schedule required by this final action."

<sup>152</sup> See docket for *West Virginia, et al v. EPA*, No. 15-1363 (D.C. Cir. docketed October 23, 2015).

<sup>153</sup> See *Virginia Petroleum Jobbers v. FPC*, 259 F.2d 921, 925 (D.C. Cir. 1958); D.C. Circuit Rule 18.

<sup>154</sup> See clerk's order, *West Virginia, et al v. EPA*, No. 15-1363 (D.C. Cir. November 30, 2015).

<sup>155</sup> See docket for *West Virginia, et al v. EPA*, No. 15-1363 (D.C. Cir. docketed October 23, 2015).

<sup>156</sup> Supreme Court review of a grant or denial of a stay or other pre-judgment order may be sought, but a "petition for a writ of certiorari to review a case pending in a United States court of appeals, before judgment is entered in that court, will be granted only upon a showing that the case is of such imperative public importance as to justify deviation from normal appellate practice and to require immediate determination in this Court." Rule 11, *Rules of the Supreme Court of the United States*.

<sup>157</sup> See Fed. R. App. P. 35, 40; *Rules of the Supreme Court of the United States*, R. 10-14 (2013).

<sup>158</sup> In particular, pursuant to the court's order dated November 30, 2015, petitioners submitted nonbinding statements of issues to be raised in the proceeding. See generally Statements of Issues filed by various Petitioners, docket for *West Virginia, et al v. EPA*, No. 15-1363 (D.C. Cir. docketed October 23, 2015).

- Petitioners challenging the rule have argued that EPA lacks authority under CAA Section 111(d) to regulate CO<sub>2</sub> from power plants because power plants, as a source category, are already regulated for HAP under CAA Section 112.<sup>159</sup> As noted above, EPA has interpreted Section 111(d) as requiring regulation of CO<sub>2</sub> from existing power plants because CO<sub>2</sub> is not a HAP, and other conditions for regulation under Section 111(d) are met.<sup>160</sup>
- Petitioners have also challenged EPA's design of the CPP as exceeding EPA's scope of authority under Section 111(d).<sup>161</sup> They have argued, for example, that it authorizes EPA to require only measures that can be applied to an individual source's performance by the source's owner or operator ("inside the fence line"), such as adoption of pollution control devices or other design or operational standards.<sup>162</sup> Conversely, they say, it does not authorize what they characterize as a reorganization of the nation's electric grid or states' energy economies.<sup>163</sup> EPA has countered, in part, that "the phrase 'system of emission reduction' ... is capacious enough to include actions taken by the owner/operator of a stationary source designed to reduce emissions from that affected source, including actions that may occur off-site and actions that a third party takes pursuant to a commercial relationship with the owner/operator."<sup>164</sup>
- Various petitioners challenge different technical or programmatic aspects of the rule as arbitrary, capricious, an abuse of agency discretion, or otherwise not in accordance with law, pursuant to the judicial review provisions of Section 307 of the CAA.<sup>165</sup> EPA responded to numerous comments along these lines in its rule preamble, Response to Comments documents, and other technical support documents as well as in its response in opposition to the motions to stay.<sup>166</sup>

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<sup>159</sup> See, e.g., State Petitioners' Motion for Stay and for Expedited Consideration of Petition for Review at 11-15, West Virginia, et al v. EPA, No. 15-1363 (D.C. Cir. filed October 23, 2015) (hereinafter "States' Motion for Stay").

<sup>160</sup> EPA, "Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units," Final Rule, 80 *Federal Register* 64661, 64710-64715, October 23, 2015; Respondent EPA's Opposition to Motions to Stay Final Rule at 37-43, West Virginia, et al v. EPA, No. 15-1363 (D.C. Cir. filed October 23, 2015) (hereinafter "EPA Opposition to Stay"); see also above, "Q: What does Section 111(d), the authority EPA cites for the CPP, bar EPA from regulating?"

<sup>161</sup> See generally Statements of Issues filed by various Petitioners, docket for West Virginia, et al v. EPA, No. 15-1363 (D.C. Cir. docketed October 23, 2015).

<sup>162</sup> See, e.g., States' Motion for Stay, at 6 (see footnote 159).

<sup>163</sup> E.g., Coal Industry Motion for Stay, at 9-11, West Virginia, et al v. EPA, No. 15-1363 (D.C. Cir. filed October 23, 2015); see also, e.g., CRS Legal Sidebar WSLG1360, *EPA's Clean Power Plan: Likely Legal Challenges - Part 2*, by Robert Meltz and Alexandra M. Wyatt.

<sup>164</sup> EPA, "Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units," Final Rule, 80 *Federal Register* 64761, October 23, 2015. See also EPA Opposition to Stay, at 11-37 (see footnote 159).

<sup>165</sup> See generally Statements of Issues filed by various Petitioners, docket for West Virginia, et al v. EPA, No. 15-1363 (D.C. Cir. docketed October 23, 2015) (raising issues such as the degree to which the rule allows states to consider the remaining useful life of existing sources, EPA's consideration of different coal types, availability of particular measures under the mass-based and rate-based approaches, and state-specific issues).

<sup>166</sup> See generally EPA, "Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units," Final Rule, 80 *Federal Register* 64661, October 23, 2015; EPA's Responses to Public Comments on the EPA's Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units (August 2015), <http://www.regulations.gov/#!documentDetail;D=EPA-HQ-OAR-2013-0602-37106> (hereinafter "EPA RTC"); EPA, "Clean Power Plan Final Rule Technical Documents (2015)," <http://www2.epa.gov/cleanpowerplan/clean-power-plan-final-rule-technical-documents>; EPA Opposition to Stay (see footnote 160).

- The parties also debate the standards by which a court should evaluate EPA's interpretation and implementation of CAA Section 111.<sup>167</sup> Under *Chevron v. Natural Resources Defense Council, Inc.*, a court reviewing an agency rule defers to the agency's interpretation of a statute if the agency's interpretation is reasonable.<sup>168</sup> In the 2014 *Utility Air Regulatory Group v. EPA* decision, however, the Supreme Court opined that where a statutory interpretation by EPA "would bring about an enormous ... expansion in EPA's regulatory authority"—which some petitioners say the CPP rule would do—a court should demand "clear congressional authorization."<sup>169</sup>
- Some petitioners have argued for CAA Section 111(d) to be interpreted more narrowly than EPA interprets it so as to avoid certain constitutional issues.<sup>170</sup> For example, states and other petitioners have argued that the CPP impermissibly invades traditional state police powers over the electrical grid and commandeers state legislatures.<sup>171</sup> EPA has previewed its responses to such arguments in its Response to Comments and other documents and in its response in opposition to the motions to stay.<sup>172</sup> EPA calls the rule a "textbook example of cooperative federalism"<sup>173</sup> and argues that states can opt to do nothing, in which case the federal plan option imposes no new regulatory obligations on states.<sup>174</sup>
- Some challengers have disputed the adequacy of certain other procedural aspects of the issuance of the rule, alleging impermissible deviation from the proposed rule<sup>175</sup> or impermissible *ex parte* contacts.<sup>176</sup> Supporters of the rule assert that the final rule is a logical outgrowth of the proposal and comments and that EPA properly followed all other procedural requirements.<sup>177</sup>

These and other arguments are likely to be further developed as the litigation proceeds.

<sup>167</sup> See, e.g., States' Motion for Stay, at 6 (see footnote 159); Coal Industry Motion for Stay, at 9-11 (see footnote 163); EPA Opposition to Stay, at 27 (see footnote 160).

<sup>168</sup> *Chevron vs. Natural Resources Defense Council, Inc.*, 467 U.S. 837, 842-843 (1984).

<sup>169</sup> *Utility Air Regulatory Group v. EPA*, 134 S. Ct. 2427, 2444 (2014). See also, e.g., CRS Legal Sidebar WSLG1315, *What Does King v. Burwell Mean for Chevron?*, by Daniel T. Shedd.

<sup>170</sup> Intervenor Peabody Energy has stated that the Clean Power Plan raises a number of issues under the U.S. Constitution. It has argued, for example, that the rule's relation to states raises federalism issues under the 10<sup>th</sup> Amendment, that it amounts to agency lawmaking and raises separation of powers issues under Articles I and II, and that it raises just compensation issues under the 5<sup>th</sup> Amendment. See Peabody Energy Corp.'s Motion for Stay, *West Virginia, et al v. EPA*, No. 15-1363 (D.C. Cir. November 5, 2015).

<sup>171</sup> States' Motion for Stay, at 9 (see footnote 159); Oklahoma's Motion for Stay at 7-20, *West Virginia, et al v. EPA*, No. 15-1363 (D.C. Cir. October 28, 2015); Statements of Issues filed by various Petitioners, docket for *West Virginia, et al v. EPA*, No. 15-1363 (D.C. Cir. docketed October 23, 2015).

<sup>172</sup> See EPA RTC, at 193-194 (see footnote 166); EPA Opposition to Stay, at 43-50 (see footnote 160).

<sup>173</sup> EPA Opposition to Stay, at 44 (see footnote 160).

<sup>174</sup> *Ibid.* at 46-47; see also, e.g., State Intervenors' Opposition to Petitioners' Motions for a Stay at 2-11, *West Virginia, et al v. EPA*, No. 15-1363 (D.C. Cir. December 8, 2015).

<sup>175</sup> North Dakota's Motion for Stay at 18-19, *West Virginia, et al v. EPA*, No. 15-1363 (D.C. Cir. filed October 29, 2015); generally Statements of Issues filed by various Petitioners, docket for *West Virginia, et al v. EPA*, No. 15-1363 (D.C. Cir. docketed October 23, 2015).

<sup>176</sup> Energy & Environment Legal Institute Petitioners' Response in Support of Motions to Stay, *West Virginia, et al v. EPA*, No. 15-1363 (D.C. Cir. filed November 5, 2015).

<sup>177</sup> See, e.g., EPA, "Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units," Final Rule, 80 *Federal Register* 64840-64850, October 23, 2015; EPA Opposition to Stay, at 62-63 (see footnote 160).

**Q: Might other litigation affect the final CPP rule?**

A: In addition to the direct legal challenge to the CPP rule for CO<sub>2</sub> from existing power plants, 25 states, led by North Dakota and West Virginia, have filed petitions challenging EPA's final NSPS rule for CO<sub>2</sub> from new, modified, or reconstructed power plants.<sup>178</sup> They have been joined by other petitioners including a labor union, a rural electric cooperatives association, several other fossil-fuel-related companies and utilities, and several industry and trade groups. Most of the states and a number of the non-profit organizations that intervened in support of the CPP case also intervened in the NSPS challenge in support of EPA.<sup>179</sup> As noted above, the finalization of NSPS for new air pollutant sources under Section 111(b) of the CAA is a prerequisite for the use of authority under Section 111(d) to regulate existing sources, so this litigation could threaten EPA's basis for the CPP.

**For Further Information**

**Q: Who are the CRS contacts for questions regarding this rule?**

A: CRS analysts, listed below, cover areas related to the proposed rule.

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<sup>178</sup> See generally docket for North Dakota v. EPA, No. 15-1381 (D.C. Cir. filed October 23, 2015). Colorado and New Jersey did not join the coalition of states challenging the NSPS rule.

<sup>179</sup> Ibid.

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