

**U.S. HOUSE OF REPRESENTATIVES  
COMMITTEE ON SCIENCE, SPACE, AND TECHNOLOGY  
FULL COMMITTEE**

**HEARING CHARTER**

*EPA's Carbon Plan: Failure by Design*

Wednesday, July 30, 2014  
10:00 a.m. – 12:00 p.m.  
2318 Rayburn House Office Building

**PURPOSE**

The Committee on Science, Space, and Technology will hold a hearing entitled *EPA's Carbon Plan: Failure by Design* on Wednesday, July 30<sup>th</sup>, in Room 2318 of the Rayburn House Office Building. The hearing will examine the Environmental Protection Agency's (EPA) approach to implementing technology-based standards under section 111 of the Clean Air Act (CAA). In so doing, the hearing will examine the scientific methods employed by EPA to calculate each state's specific carbon-reduction goal; the technologies available to meet EPA's standards for fossil-fuel power plants; and technical challenges to implement EPA's carbon plan.

**WITNESS LIST**

- **The Honorable Jeffrey Holmstead**, Partner, Bracewell & Giuliani LLP
- **The Honorable Charles McConnell**, Executive Director, Energy & Environment Initiative, Rice University
- **Dr. David Cash**, Commissioner, Massachusetts Department of Environmental Protection
- **Mr. Gregory Sopkin**, Partner, Wilkinson, Barker, Knauer LLP

**BACKGROUND**

Following the Supreme Court's 5-4 decision in *Massachusetts v. EPA*,<sup>1</sup> the Agency promulgated numerous standards and proposed rules aimed at reducing greenhouse gas (GHG) emissions. These include EPA's:

- 2009 *Endangerment Finding*, where "EPA determined that greenhouse gases endanger the health and welfare of Americans,"<sup>2</sup>

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<sup>1</sup> *Massachusetts v. U.S. Environmental Protection Agency*, 549 U.S. 497 (2007) available at <http://www.supremecourt.gov/opinions/06pdf/05-1120.pdf>.

<sup>2</sup> U.S. ENVIRONMENTAL PROTECTION AGENCY. "Endangerment and Cause or Contribute Findings for Greenhouse Gases Under Section 202(a) of the Clean Air Act; Final Rule." Dec. 2009. Available at <http://www.gpo.gov/fdsys/pkg/FR-2009-12-15/pdf/E9-29537.pdf>.

- *Light Duty Vehicle Rule*, in which “EPA coordinated with the National Highway Traffic Safety Administration to develop harmonized regulations to reduce greenhouse gas emissions and improve the fuel economy of light-duty vehicles;”<sup>3</sup> and
- *Tailoring Rule*, where “EPA set greenhouse gas emission thresholds to define when permits under the New Source Review Prevention Significant Deterioration (PSD) and title V Operating Permit programs are required for new and existing industrial facilities.”<sup>4</sup>

Climate science—and regulatory actions informed by such science—are among the most complex and controversial issues facing policymakers. President Obama has increasingly signaled his intention to propose significant, new executive actions and regulatory measures aimed at addressing climate concerns.<sup>5</sup>

According to EPA, power plants are the Nation’s largest source of carbon pollution and “account for roughly one-third of all domestic greenhouse gas emissions in the United States.”<sup>6</sup>

(See Figure 1) On June 25, 2013 President Obama directed the Environmental Protection Agency (EPA) to regulate greenhouse gas emissions from new and existing power plants.<sup>7</sup>

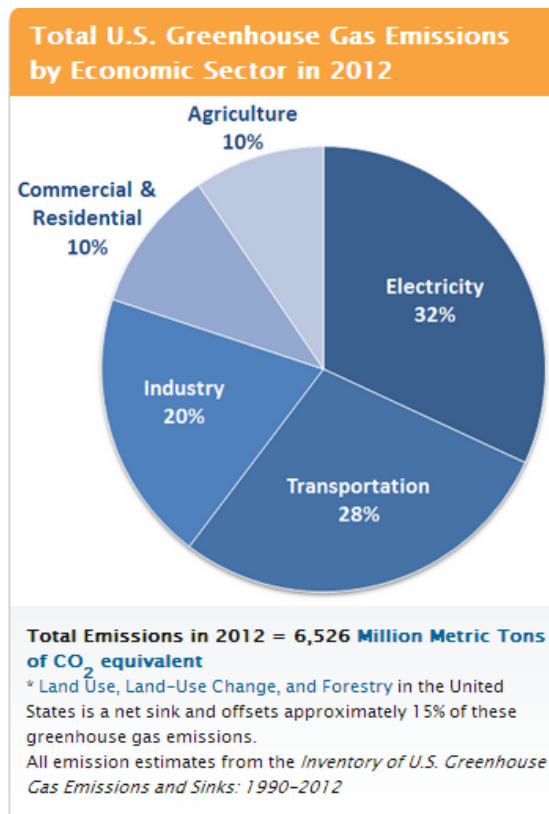


Figure 1. Source: U.S. EPA Available at <http://www.epa.gov/climatechange/ghgemissions/sources.html>

## **REGULATORY CONTEXT**

Section 111 of the Clean Air Act (CAA) establishes a unique technology-based mechanism for controlling emissions from “stationary sources” (i.e., power plants). Section 111 provides authority for EPA to promulgate standards which apply to new and modified sources. Specifically, EPA is directed to set standards based on “the degree of emission limitation achievable through the application of the best system of emission reduction which (taking into

<sup>3</sup> U.S. ENVIRONMENTAL PROTECTION AGENCY. “Light-Duty Vehicle Greenhouse Gas Emissions Standards and Corporate Average Fuel Economy Standards; Final Rule.” May 2010. Available at <http://www.gpo.gov/fdsys/pkg/FR-2010-05-07/pdf/2010-8159.pdf>.

<sup>4</sup> See e.g. U.S. Environmental Protection Agency. “Prevention of Significant Deterioration and Title V Greenhouse Gas Tailoring Rule Step 3 and GHG Plant wide Applicability Limits; Final Rule” July 2012. Available at <http://www.gpo.gov/fdsys/pkg/FR-2012-07-12/pdf/2012-16704.pdf>.

<sup>5</sup> See: <http://www.whitehouse.gov/the-press-office/2013/06/25/remarks-president-climate-change> and <http://www.whitehouse.gov/climate-change> for examples.

<sup>6</sup> <http://yosemite.epa.gov/opa/advpress.nsf/bd4379a92ceceac8525735900400c27/5bb6d20668b9a18485257ceb00490c98!OpenDocument>

<sup>7</sup> THE WHITE HOUSE, “The President’s Climate Action Plan,” June 2013. Available at <http://www.whitehouse.gov/sites/default/files/image/president27sclimateactionplan.pdf>

account the cost. . .) the Administrator determines has been adequately demonstrated.”<sup>8</sup> In setting the standard, EPA is given some flexibility in that “emission limits may be established either for equipment within a facility or for an entire facility.”<sup>9</sup>

Section 111 lays out different approaches for new and existing sources. Under Section 111(b), the EPA has the authority to develop a “federal program to address new, modified and reconstructed sources by establishing standards of performance.”<sup>10</sup> In contrast, EPA explains that “section 111(d) of the Act requires states to develop plans for *existing* sources of noncriteria pollutants (i.e., a pollutant for which there is no national ambient air quality standard) whenever EPA promulgates a standard for a new source.”<sup>11</sup>

### ***New Power Plants***

EPA first proposed a New Source Performance Standards (NSPS) for emissions for carbon dioxide (CO<sub>2</sub>) from power plants in April 2012. However, after more than 2.5 million comments on the original proposal, EPA decided that a new approach was warranted and rescinded the original proposal.<sup>12</sup> Consequently, on September 20, 2013 Administrator Gina McCarthy announced EPA’s re-proposed CO<sub>2</sub> NSPS for new fossil fuel-based electric generating units (EGUs).

Under EPA’s NSPS proposal, the Agency concluded that Carbon Capture and Storage (CCS) has been adequately demonstrated as a technology for controlling CO<sub>2</sub> emissions in full-scale commercial applications at coal-fired EGUs, while reaching the opposite conclusion—that CCS is not adequately demonstrated—in the case of gas-fired EGUs. Based on this determination, EPA proposed an emissions limit for coal-fired sources of 1,100 lb CO<sub>2</sub>/MWH and proposed standards for natural gas combined cycle sources from 1,000 to 1,100 lb CO<sub>2</sub>/MWH depending on the size and type of unit. EPA did not include modified and reconstructed plants in the proposed rule. EGUs that primarily fire biomass are exempted from the proposed rule.<sup>13</sup> Find more information on CCS and EPA’s carbon rules in hearing held last March: <http://science.house.gov/hearing/subcommittee-energy-and-subcommittee-environment-joint-hearing-science-capture-and-storage>.

### ***Existing Power Plants***

On June 2, 2014, EPA issued its “Clean Power Plan” under section 111(d), which addressed carbon emissions from existing fossil-fueled power plants. EPA explains the key difference between section 111(d), for existing power plants, and 111(b) for new and modified plants: “Section 111(d)'s mechanism for regulating existing sources differs from the one that

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<sup>8</sup> Clean Air Act § 111(a)(1), 42 USCA § 7411(a)(1) (2006).

<sup>9</sup> <http://www2.epa.gov/sites/production/files/2013-09/documents/111background.pdf>

<sup>10</sup> <http://www2.epa.gov/sites/production/files/2013-09/documents/20130920technicalfactsheet.pdf>

<sup>11</sup> <http://www.epa.gov/Region7/air/rules/111d.htm>.

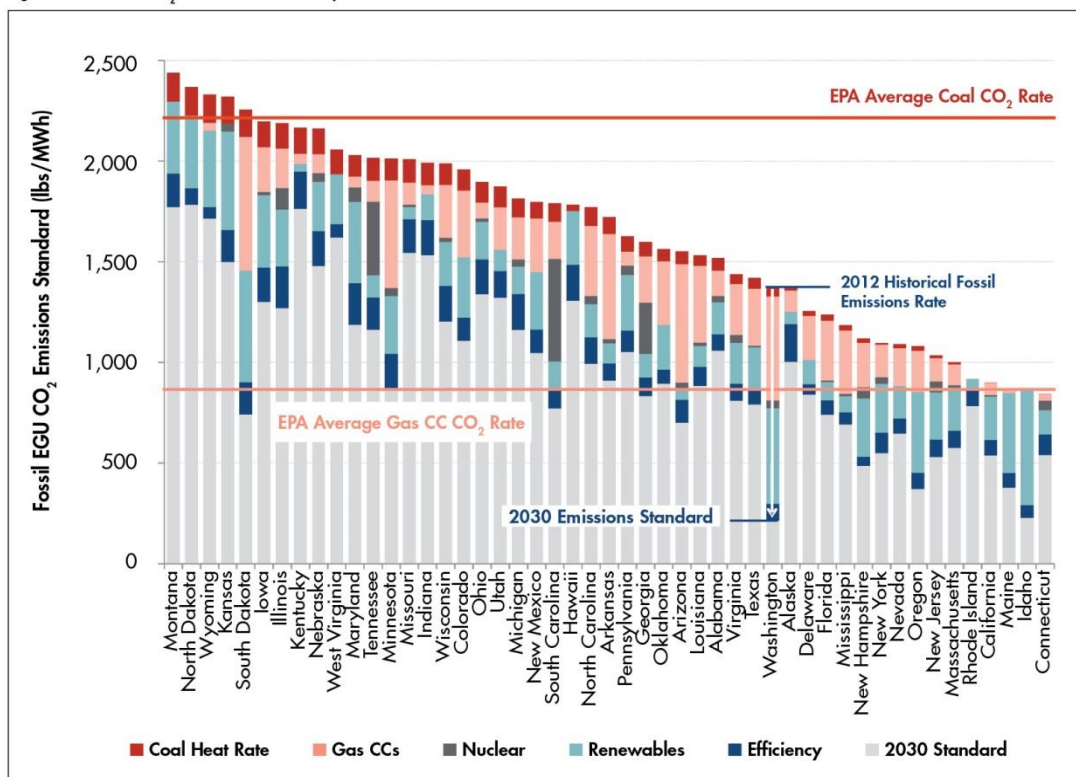
<sup>12</sup> Standards of Performance for Greenhouse Gas Emissions from New Stationary Sources: Electric Utility Generating Units, Proposed Rule, Preamble p. 14-5, Sep. 20, 2013. Found at: <https://www.federalregister.gov/articles/2014/01/08/2013-28668/standards-of-performance-for-greenhouse-gas-emissions-from-new-stationary-sources-electric-utility#h-18> (Is this the right link for this citation?)

<sup>13</sup> *Id.* at 30, fn. 8.

CAA section 111(b) provides for new sources because CAA section 111(d) contemplates states submitting plans that establish ‘standards of performance’ for the affected sources and that contain other measures to implement and enforce those standards.’<sup>14</sup>

The Agency believes the proposed Clean Power Plan will “lower the carbon intensity of power generation in the United States by approximately 30% in 2030 from carbon dioxide emissions levels in 2005. The agency predicts that under the Clean Power Plan, electricity bills will decline by “roughly 8 percent”<sup>15</sup> and that the amount of U.S. electricity generated by coal-fired EGUs will decline by at least 25%. To achieve this goal, EPA is giving each state a numerical carbon reduction target, based on the state’s existing power generation portfolio.”<sup>16</sup> (See Figure 2.)

Figure 2: Fossil EGU CO<sub>2</sub> emissions standards by state



Source: The Brattle Group

Specifically, EPA set each state’s required level of carbon reduction assuming that each state could recognize a set level of carbon reductions through the use of four “building blocks.” Broadly speaking, the four blocks encompass:<sup>17</sup>

<sup>14</sup> U.S. ENVIRONMENTAL PROTECTION AGENCY, *Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units*, Proposed Rule, 79 FR 34832, June 2, 2014.

<sup>15</sup> <http://yosemite.epa.gov/opa/admpress.nsf/bd4379a92ceceac8525735900400c27/5bb6d20668b9a18485257ceb00490c98!OpenDocument>

<sup>16</sup> CONGRESSIONAL RESEARCH SERVICE, *EPA’s Proposed Greenhouse Gas Regulations: Implications for the Electric Power Sector*. June 23, 2014. Available at: <http://www.crs.gov/pdfloader/R43621>.

<sup>17</sup> U.S. ENVIRONMENTAL PROTECTION AGENCY, *Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units*, Proposed Rule, 79 FR 34832, June 2, 2014.

1. Installing technologies to increase efficiency at power plants.
2. Giving Natural Gas Combined-Cycle plants priority over steam-boilers.
3. Building new renewable power generation.
4. End-user efficiency technologies and programs that reduce power demand.

EPA proposes that these building blocks represent the “best system of emissions reduction” that has been adequately demonstrated for fossil-fuel power plants regulated under the EPA rule.

According to EPA, the proposed rule will be “implemented through a state-federal partnership under which states identify a path forward using either current or new electricity production and pollution control policies to meet the goals of the proposed program. The proposal provides guidelines for states to develop plans to meet state-specific goals to reduce carbon pollution and gives them the flexibility to design a program that makes the most sense for their unique situation.”<sup>18</sup>

### ***Modified Power Plants***

On the same day as the 111(d) “Clean Power Plan,” EPA also unveiled a separate 111(b) “Modified Source Proposal,” in which EPA explained:

*For more than four decades, the EPA has used its authority under CAA section 111 to set cost-effective emission standards that ensure newly constructed, reconstructed and modified stationary sources use the best performing technologies to limit emissions of harmful air pollutants. In this proposal, the EPA is following the same well-established interpretation and application of the law under CAA section 111 to address GHG emissions from modified and reconstructed fossil fuel-fired electric steam generating units and natural gas-fires stationary combustion turbines.*<sup>19</sup>

The proposed rule for Modified Sources only applies to fossil-fueled power plants that undergo major modifications or reconstruction. In contrast with the broad approach EPA utilized for existing power plants, this proposal identifies a “combination of best operating practices and equipment upgrades” as the “best system of emission reduction” and arrives at a unit specific standard requiring 2% efficiency gains.

### **ADDITIONAL READING**

CONGRESSIONAL RESEARCH SERVICE. *Climate Change and Existing Law: A Survey of Legal Issues Past, Present, and Future*. March 10, 2014. Available at <http://www.crs.gov/pdfloader/R42613>.

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<sup>18</sup><http://yosemite.epa.gov/opa/admpress.nsf/bd4379a92ceceac8525735900400c27/5bb6d20668b9a18485257ceb00490c98!OpenDocument> .

<sup>19</sup> U.S. ENVIRONMENTAL PROTECTION AGENCY. “Carbon Pollution Standards for Modified and Reconstructed Stationary Sources: Electric Utility Generating Units; Proposed Rule.” June 2014. Available at <http://www.gpo.gov/fdsys/pkg/FR-2014-06-18/pdf/2014-13725.pdf>.

- CONGRESSIONAL RESEARCH SERVICE. *EPA's Proposed Greenhouse Gas Regulations: Implications for the Electric Power Sector*. June 23, 2014. Available at <http://www.crs.gov/pdfloader/R43621>.
- CONGRESSIONAL RESEARCH SERVICE. *EPA's Proposed Greenhouse Gas Regulations for Existing Power Plants: Frequently Asked Questions*. July 3, 2014. Available at <http://www.crs.gov/pdfloader/R43572>.
- U.S. ENVIRONMENTAL PROTECTION AGENCY. *Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units*, Proposed Rule. 79 FR 34832. June 2014. Available at <http://www2.epa.gov/carbon-pollution-standards/clean-power-plan-proposed-rule>.
- U.S. ENVIRONMENTAL PROTECTION AGENCY. *Carbon Pollution Standards for Modified and Reconstructed Stationary Sources: Electric Utility Generating Units*, Proposed Rule. 79 FR 34960. June 2014. Available at <http://www.gpo.gov/fdsys/pkg/FR-2014-06-18/pdf/2014-13725.pdf>.
- U.S. ENVIRONMENTAL PROTECTION AGENCY. *Standards of Performance for Greenhouse Gas Emissions from New Stationary Sources: Electric Utility Generating Units*, Proposed Rule. 40 CFR Part 60. Sep. 20, 2013. Available at <http://www2.epa.gov/carbon-pollution-standards/2013-proposed-carbon-pollution-standard-new-power-plants>.