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EPA Proposes Strict Greenhouse Gas Emissions Standards On New Electric Utilities

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Introduction

The United States Environmental Protection Agency (EPA) has proposed New Source Performance Standards (NSPS) that would set carbon dioxide (CO₂) emission limits for certain new fossil-fueled electric utility generating units (EGUs).¹ This would be the first national CO₂ emission standard for EGUs, although a handful of states, including California, Washington, and Oregon have set CO₂ emission limits on EGUs.² EPA is expected to take final action on this proposal in 2014. It is the first of two CO₂ standards President Obama called for in his Climate Change Action Plan on June 25, 2013. While this proposal is important in its own right, it may be viewed as a “dress rehearsal” for the second action expected in June 2014 when EPA will issue a proposal setting CO₂ emission limits for *existing* EGUs, which may be even more far-reaching.

As further described below, the proposal would set stringent performance standards, generally requiring new natural gas fired EGUs to limit CO₂ emissions to 1,000 pounds per megawatt hour (lbs. CO₂/MWh), and EGUs firing coal, oil, or pet coke to limit CO₂ emissions to 1,100 lbs. CO₂/MWh. According to EPA, new natural gas-fired EGUs could be designed and operated to meet the standard without installing add-on controls, but those EGUs firing coal, oil, and pet coke would require the installation of carbon capture and storage (CCS) technology to meet the standard. Questions about the cost and availability of CCS technology have caused some stakeholders to view the proposal as a ban on the development of new coal, oil, and pet coke-fired generation, at least for a period of time. The emerging nature of CCS technology has also prompted some stakeholders to question EPA’s conclusion that CCS has been “adequately demonstrated,” and that the emission standards are “achievable” — findings EPA is legally required to make under Section 111 of the Clean Air Act (CAA) to justify the adoption of the NSPS.

In addition, once adopted, the NSPS would set a new floor for “best available control technology” (BACT) determinations made in connection with New Source Review/Prevention of Significant Deterioration (NSR/PSD) preconstruction permits. The rule may also reshape how standards are set in the future for other pollutants and source categories by establishing that “achievable” emission standards may be based on emerging technologies that have not yet been widely deployed on a commercial scale.

Thus, the proposed NSPS may be the most significant action taken by EPA to date to control greenhouse gas (GHG) emissions from stationary sources. Legal challenges to the rule are expected, especially over whether CCS technology is adequately demonstrated, as well as close Congressional scrutiny and legislative efforts to overturn the rule under the Congressional Review Act. Riders on appropriations bills and other essential congressional action are also expected.

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Comments on the Proposed Rule must be filed within 60 days of the Proposed Rule's publication in the Federal Register.

Background

Following the U.S. Supreme Court's 2007 decision in *Massachusetts v. EPA*,³ and the EPA's 2009 Endangerment Finding,⁴ EPA entered into settlement agreements in 2010 with several states and advocacy groups committing to set GHG emission standards for new, modified, and existing EGUs and refineries under Section 111 of the CAA.⁵

Section 111 of the CAA authorizes EPA to establish standards of performance for categories or subcategories of any new and modified *stationary source* that EPA determines "causes, or contributes significantly to, air pollution which may reasonably be anticipated to endanger public health or welfare."⁶ Performance standards must reflect "the degree of emission limitation achievable through the application of the best system of emission reduction which (taking into account the cost [and other factors]) the Administrator determines has been adequately demonstrated."⁷ Section 111 also authorizes EPA to establish emission guidelines for categories or subcategories of *existing* stationary sources, which states are to use in the development of standards for incorporation in State Implementation Plans.⁸ The President directed EPA to propose emission guidelines for CO₂ emissions from existing EGUs by September 2014.

EPA's Proposed NSPS for New EGUs

Concurrently with its publication of the proposed NSPS on September 20, 2013, EPA withdrew the NSPS it previously proposed on April 13, 2012, its first attempt at setting standards for CO₂ emissions from new EGUs.⁹ The earlier proposal drew 2.5 million comments and was severely criticized by many stakeholders and members of Congress. The 2012 NSPS set a single CO₂ standard for all new EGUs, which many perceived as a legally vulnerable departure from how EPA historically established NSPS source categories under the CAA. In contrast, the new proposal sets different CO₂ standards for different types of EGUs.

Under the Proposed Rule, *new* natural gas combined cycle (NGCC) units would be required to meet an emissions limit of 1,000 lbs. CO₂/MWh gross for larger units (>850 mmBtu/hr) and 1,100 lbs. CO₂/MWh gross for smaller units (<850 mmBtu/hr). According to EPA, this emission standard can be achieved by NGCC technology without the installation of add-on controls. For *new* steam boilers and integrated gasification combined cycle units firing coal, oil, or pet coke,¹⁰ the proposal would establish the output-based performance standard of 1,100 lbs. CO₂/MWh over a 12-operating month rolling average period, or alternatively 1,000 – 1,050 lbs. CO₂/MWh over an 84-operating month rolling average period. According to EPA, new coal, oil, and pet coke-fired units can meet this standard by employing supercritical combustion processes and CCS technology. This is certain to be the most politically controversial and legally contested aspect of the proposal. Section 111 of the CAA requires the emission standard set in the NSPS to be "achievable" using technology that has been "adequately demonstrated" and is available at a reasonable cost. However, many stakeholders question whether CCS is, in fact, adequately demonstrated and available at a reasonable cost.

In the preamble to its proposal, EPA outlines its conclusion that CCS satisfies these statutory requirements, even while acknowledging that the technology may be expensive and has not been operated commercially. Specifically, EPA argues that the CAA gives it wide discretion to determine when costs become unreasonable in relation to the nature of the air quality problem the standard seeks to address, and when technology has been adequately demonstrated. In support of its position, EPA

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points to several decisions of the U.S. Court of Appeals for the D.C. Circuit interpreting its authority under Section 111. For example, EPA cites the court's opinion in *Portland Cement Ass'n v. Ruckelshaus*, 486 F.2d 375, 391 (D.C. Cir. 1973), in which the court concluded that "Section 111 looks toward what may fairly be projected for the regulated future, rather than the state of the art at present, since it is addressed to standards for new plants It is the 'achievability' of the proposed standard that is in issue." Relying on this interpretation, EPA suggests CCS will be available at that point in the "regulatory future" when it is needed to support new coal, oil, or pet coke-fired generation, which EPA projects will not occur for many years.

At the same time, although not highlighted by EPA in the preamble to the proposal, the D.C. Circuit has also interpreted Section 111 to require a chosen technology to have demonstrated a degree of reliability in practice, holding, "(a)n adequately demonstrated system is one which has been shown to be reasonably reliable, reasonably efficient, and which can reasonably be expected to serve the interests of pollution control without becoming exorbitantly costly in an economic or environmental way. An achievable standard is one which is within the realm of the adequately demonstrated system's efficiency and which, while not at a level that is purely theoretical or experimental, need not necessarily be routinely achieved within the industry prior to its adoption." *Essex Chemical v. Ruckelshaus*, 486 F.2d 427, 433-4 (D.C. Cir. 1973). EPA discusses this decision, which ultimately upheld the NSPS at issue in that case, but not the court's emphasis on the degree of emission control actually achieved in practice by the technology at issue.

In the preamble to the proposal, EPA also relies on the deference reviewing courts ordinarily extend (and that it anticipates will be extended here), to judgments EPA is required to make in assessing the performance of control technology, balancing costs, and other considerations inherent in the statutory standard. However, much of EPA's analysis refers to decisions that pre-date the two-step inquiry established in *Chevron*¹¹ in 1984, does not specifically identify ambiguity in Section 111, and ignores an emerging line of cases that suggest courts are becoming more reticent about deferring to agency judgments and interpretations.¹²

With respect to the performance of CCS, EPA's proposal assumes CCS technology will become commercially available at a reasonable cost, in part, because the proposed NSPS will create an economic incentive for the further development and commercial deployment of this technology.

The proposal provides flexibility in the form of a seven-year compliance period in exchange for a more stringent emission standard. Under the proposal, new coal, oil, and pet coke-fired EGUs would have the option to meet a higher emissions standard over a longer period of time. Rather than meeting the 1,100 lbs. CO₂/MWh standard over a 12-month rolling period, coal, oil, and pet coke-fired sources may instead meet a standard between 1,000 – 1,050 lbs. CO₂/MWh over an 84-month rolling average period. EPA also recognizes that there are alternatives to geologic sequestration, such as reuse, and notes that it wants to encourage the development of alternatives that could help offset the cost of CO₂ capture.

Finally, EPA takes the position in this rulemaking that it is not required to make separate "cause and contribute" and "endangerment" findings for EGUs and their effect on public health and welfare, and instead may rely upon its 2009 endangerment finding for CO₂ emissions from mobile sources under Section 202 of the CAA, noting that EGUs emit about 40% of all CO₂ emissions in the United States.¹³ Alternatively, EPA argues that it has already made the requisite finding when it initially established performance standards for criteria pollutants emitted by EGUs, and no further finding for CO₂ emissions is required. Under either alternative, EPA suggests it would not need to make any further "cause or contribute" and "endangerment" findings to authorize CO₂ limits for *any* additional source category under Section 111 of the CAA.

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Implications of the Proposed NSPS for New EGUs

According to EPA, the proposed NSPS for new EGUs will have no economic or environmental impact because the market forecasts the development of only new NGCC units over the next decade, in light of their inherent energy efficiency and the availability of inexpensive natural gas, and because no new coal-fired generators are expected to be built in the foreseeable future. Based on this assumption, EPA concludes that the proposal will not directly result in any reduction in CO₂, impose any costs, or have any impact on the price of electricity, employment or labor markets. Instead, EPA argues that the market — not the proposed performance standard — would actually be responsible for any economic impacts that result from a complete transition from coal to natural gas over the next decade.¹⁴

Notwithstanding EPA's assessment of the electric generation markets, many critics of the rule suggest it will have profound effects on the coal industry by depressing domestic demand and discouraging new investment in coal production.¹⁵ The proposal, if adopted, is also likely to increase demand for natural gas and, as EPA predicts, put pressure on natural gas prices and the natural gas transportation system.¹⁶ The dislocation of coal as a central fuel for electric generation will, in turn, impact rail transportation and other industries that support coal production, distribution, and use. The coal industry has already begun to pursue greater export opportunities to maintain its economic viability. However, the EPA has also sought to slow the development of export facilities by requiring expansive environmental assessments of secondary and cumulative impacts based on novel applications of the National Environmental Policy Act (NEPA).¹⁷

Moreover, if EPA adopts and successfully defends the proposed NSPS, it will set a new floor for BACT determinations made in connection with NSR/PSD preconstruction permits.¹⁸

In addition, the rule may reshape how standards are set in the future for other pollutants and source categories by establishing that “achievable” emission standards may be based on emerging technologies that have not yet been widely deployed on a commercial scale.

On the political front, this proposal has already received swift reactions and will receive scrutiny from Congress. Reaction from Capitol Hill has been largely along party lines. Republicans were highly critical of the proposal and argue that it will lead to higher energy prices and lost jobs. Most Democrats support the effort, believing it will improve public health and reduce carbon pollution. However, some Democratic members from energy producing states voiced concern with the scope and impact of the EPA rules.

Senate Republican Leader Mitch McConnell (R-Kentucky) announced that he plans to file a resolution of disapproval under the Congressional Review Act.¹⁹ That Act provides for expedited Senate consideration with a simple majority vote to block a regulation. The Republican-controlled House would likely pass it. However, a successful override of an expected Presidential veto is highly unlikely. Lawmakers could also add amendments to legislation funding the EPA in an effort to curtail or stop the regulation. In the near-term, the House will hold hearings in key committees to explore the impact of the new rules in greater detail. Key stakeholders groups will be invited to testify.

Lastly, the rules on new power plants will soon face a 60-day public comment period, likely to be followed by intense industry and environmental lobbying and possible court challenges.

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Conclusion

This proposal is only the first act in fulfilling the objectives of the President's Climate Change Action Plan. Nonetheless, it has the potential to fundamentally change the way electric power is produced and how the CAA is implemented. EPA's action on this proposal, and the related proposal that will apply to existing sources, should be carefully scrutinized by interested stakeholders to ensure compliance with the CAA and to assess the Proposed Rule's economic consequences.

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¹ Standards of Performance for Greenhouse Gas Emissions from New Stationary Sources: Electric Utility Generating Units, EPA-HQ-OAR-2013-0495 (pre-publication version dated Sept. 20, 2013), available at <http://www2.epa.gov/sites/production/files/2013-09/documents/20130920proposal.pdf> (hereinafter referred to as the "Proposed Rule"). The Proposed Rule applies to EGUs that are greater than 25 megawatt electric (MWe) and supply for sale more than one-third of their potential annual electric output to a utility power distribution system.

² See, e.g., CAL. PUB. UTIL. CODE §§ 8340-8341 (2013); WASH. REV. CODE §§ 80.80.005-.120 (2013); OR. REV. STAT.

§§ 757.522-.538 (2012).

³ 549 U.S. § 497 (2007) (holding that the EPA has the authority to regulate GHG emissions and perhaps the obligation to do so once it makes an endangerment finding).

⁴ Endangerment and Cause or Contribute Findings for Greenhouse Gases under Section 202(a) of the Clean Air Act, 74 Fed. Reg. 66,496 (Dec. 15, 2009) (concluding that GHG emissions from mobile sources "cause, or contribute to, air pollution which may reasonably be anticipated to endanger public health or welfare").

⁵ EPA's practice of resolving pending and threatened lawsuits by entering into commitments to take discretionary action has been criticized by some in Congress for circumventing standard procedural safeguards, including transparency and Congressional oversight. See "Sue and Settle — The Growing problem of Closed-Door Rulemaking" (April 5, 2013), available at <http://www.klgates.com/sue-and-settle--the-growing-problem-of-closed-door-rulemaking-04-05-2013/>.

⁶ 42 U.S.C. § 7411(b).

⁷ 42 U.S.C. § 7411(a)(1).

⁸ 42 U.S.C. § 7411(d).

⁹ 72 Fed. Reg. 22,392 (Apr. 13, 2012).

¹⁰ EGUs in this source category must have a capacity of greater than 25 megawatts and supply for sale more than one-third of their potential annual electric output to a utility power distribution system. The new source category includes integrated gasification combined cycle (IGCC) units that operate in intermediate and baseload but would not include new simple cycle combustion turbines. Current performance standards for criteria pollutants emitted by EGUs differentiate between utility steam generating boilers and IGCC units, 40 C.F.R. Part 60 Subpart D, and combined cycle combustion turbine engines, 40 C.F.R. Part 60 Subpart KKKK.

¹¹ *Chevron U.S.A., Inc. v. Natural Res. Def. Council, Inc.*, 467 U.S. 837 (1984).

¹² See, e.g., *Arlington, Tex. v. FCC*, 133 S. Ct. 1863, 1868 (2013) ("No matter how it is framed, the question a court faces when confronted with an agency's interpretation of a statute it administers is always, simply *whether the agency has stayed within the bounds of its statutory authority.*") (emphasis in original); *Decker v. NW Env'tl. Def. Ctr.*, 133 S. Ct. 1326, 1338 (2013) (Scalia, J., dissenting) ("For decades, and for no good reason, we have been giving agencies the authority to say what their rules mean, under the harmless-sounding banner of 'defer[ring] to an agency's interpretation of its own regulations.'").

¹³ Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2011, U.S. Environmental Protection Agency, EPA 430-R-13-001 (April 2013), available at <http://www.epa.gov/climatechange/Downloads/ghgemissions/US-GHG-Inventory-2013-Main-Text.pdf>.

¹⁴ Proposed Rule at 16 and 343.

¹⁵ Docket ID Nos. EPA-HQ-OAR-2011-0660 and EPA-HQ-OAR-2011-0090, available at <http://www.regulations.gov>.

¹⁶ See, e.g., Responses of ISO New England in Federal Energy Regulatory Commission Docket No. AD12-12 (July 5, 2013) ("One of the biggest challenges facing ISO-NE is the region's increasing reliance on natural gas-fired generation.")

¹⁷ 42 U.S.C. § 4321, *et seq.*

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¹⁸ 42 U.S.C. § 7479(3). As EPA affirmed in its *PSD and Title V Permitting Guidance for Greenhouse Gases*, EPA-457/B-11-001, at 20 (March 2011), “[t]he CAA specifies that BACT cannot be less stringent than any applicable standard of performance under the [NSPS].”

¹⁹ 5 U.S.C. § 801, *et seq.*