

Ambitious EPA Plan Would Require States to Reduce CO₂ Emissions at Existing Power Plants

Skadden

January 2015

This article is from Skadden's *2015 Insights* and is available at skadden.com/insights.

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In 2015, the U.S. Environmental Protection Agency (EPA) intends to issue in final form three proposed regulations for limiting carbon dioxide (CO₂) emissions pursuant to Section 111 of the Clean Air Act. The proposed regulations would impact new, modified and reconstructed, and existing fossil fuel-fired electric generating units.

While all of these proposed rules have drawn considerable attention,¹ the proposed regulation relating to existing sources, also referred to as the “Clean Power Plan,” is the most controversial.² Because there currently are no cost-effective pollution controls that can be installed at existing power plants to reduce CO₂ emissions, a proposed emission guideline limited to what could be achieved on a source-by-source basis would result in minimal real-world emission reductions. EPA therefore has developed a much more ambitious and complex plan to require states to reduce CO₂ emissions based on what can be achieved by each state’s electric generating sector.

For both new and existing sources subject to regulation under Section 111, EPA is required to issue regulations to achieve a “standard of performance,” which means “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” (BSER). 42 U.S.C. §7411(a)(1). With respect to existing sources, EPA’s challenge is developing guidelines that would actually result in significant reductions. For coal-fired electric generating units, EPA considered and rejected (1) retrofitting such units for carbon capture and sequestration (CCS)³ and (2) substitution of natural gas for some or all of the coal-fired generation (although EPA did solicit comments on whether natural gas cofiring or conversion should be considered part of the BSER). The only part of EPA’s final proposal that directly relates to specific affected sources is the reduction of the carbon intensity of generation through heat-rate improvements at individual affected coal-fired steam generating units. Energy efficiency improvements at existing power plants would result in only modest CO₂ reductions; as EPA has noted, without other incentives to reduce generation and CO₂ emissions from coal-fired power plants, energy efficiency improvements would cause such units to become more competitive compared to other electric generating units, further limiting the benefit of such regulation.

EPA’s final proposal to reduce CO₂ emissions from existing electric generating units is based on the idea that the U.S. electricity system “is a highly interconnected, integrated system” with large numbers of electric generating units operating “diverse fuels and generating technologies ... in a coordinated manner to produce fungible electricity services for customers.” EPA concluded that it could propose a standard of performance for existing electric generating units based on what could be achieved by this broader system, not just at specific units, so long as the term “system” in the definition of “standard of performance” could be interpreted in this manner. EPA’s position is that “system” is not defined in the Clean Air Act and that the dictionary definition of “system” refers to an “interconnected set of things working together.” As a result, EPA asserts that it can include all of the “interconnected” elements as part of the “system,” so long as these elements result in a system that is the “best” at reducing emissions and is adequately demonstrated, taking into

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account costs and other nonair quality impacts. EPA further argues that it is entitled to deference with respect to its interpretation of “standard of performance” pursuant to *Chevron U.S.A., Inc. v. Natural Resources Defense Council, Inc.*, 467 U.S. 837 (1984).⁴

Relying on this broad construction of the term “system,” EPA identified the following “building blocks” as BSER with respect to existing electric generating units:

- Heat rate improvements at affected sources. EPA based its proposal on improving the average heat rate of coal-fired steam electric generating units by 6 percent;
- Displacing coal-fired steam and oil/gas-fired steam generation in each state by increasing generation from existing natural gas-fired combined-cycle combustion turbines toward a 70 percent utilization rate;
- Including the projected amounts of generation achievable by completing all nuclear units under construction, avoiding retirement of about 6 percent of existing nuclear capacity and increasing renewable electric generating capacity over time through the use of state-level renewable generation targets consistent with renewable generation portfolio standards that have been established by states in the same region; and
- Increasing state demand-side energy efficiency efforts to reach 1.5 percent annual efficiency savings in the 2020-29 period.

Based on these elements, EPA proposed state rate-based CO₂ emission performance goals (in terms of lbs. CO₂/net MWh) as an average for each state. EPA proposed “interim” goals for the states to meet beginning in 2020, based on what it believed the states would be able to achieve in that timeframe, and final performance goals by 2030.⁵ The proposed emission performance goals for each state are not identical, as EPA took into account the generation mix in each state, the performance of affected electric generating units and the opportunities for achieving emission reductions in each state using the various building blocks. EPA claims that the Clean Power Plan will result in a 30 percent reduction in CO₂ emissions from the electric power sector compared to 2005 emissions.

States have flexibility to develop plans to achieve compliance with the proposed emission performance goals. In particular, the proposal allows states to develop intra- or interstate market-based trading programs, such as the Regional Greenhouse Gas Initiative that has been in effect since 2009 in nine Northeastern states or the emissions trading program adopted by California pursuant to the Global Warming Solutions Act of 2006. (See “[California Climate Change Initiatives Create Framework for Others.](#)”)

On January 7, 2015, Acting Assistant Administrator Janet McCabe announced that EPA plans to finalize the Clean Power Plan for existing power plants and the performance standards for new, modified and reconstructed power plants by midsummer 2015. States would have until June 30, 2016, to submit their own plans for approval by EPA, unless the delay in issuing the final rule causes EPA to extend the deadline for submission of state implementation plans. The proposed rule allows for more time if states indicate their interest in developing regional approaches to achieve compliance with the guidelines. If states do not submit satisfactory

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plans, EPA would then issue federal implementation plans that would apply directly in any such states. In the January 7, 2015, announcement, McCabe stated that EPA is developing a model rule for existing power plants that could serve as the basis for federal implementation plans if necessary.

Considerable uncertainties associated with EPA's approach to regulating CO₂ emissions from power plants remain. There will be serious legal challenges to these proposed rules, including whether: (1) EPA's proposed standard for new coal-fired electric generating units, which is based on the partial implementation of carbon capture and sequestration technology, has been adequately demonstrated; (2) Section 111(d) of the Clean Air Act bars EPA from regulating electric generating units at all because hazardous air pollutants from such units are regulated under Section 112 of the Clean Air Act; and (3) EPA has authority to require states to achieve CO₂ reductions from their electric generating sectors as a whole, rather than limiting this requirement to what can be achieved by individual electric generating units. There will be legislative efforts to block this rulemaking. Finally, assuming that EPA finalizes these regulations in a form substantially similar to what has been proposed, an extremely complicated process will be initiated on a state, regional and federal level to develop the specifics of regulatory programs that will have profound impacts on how electricity is generated in the United States.

¹ For a more complete discussion of these issues, including background on the judicial and regulatory developments that form the context for the rulemaking discussed herein, the proposals regarding new, modified and reconstructed, and existing fossil fuel-fired electric generating units, and the most significant legal issues that will be raised with respect to EPA's efforts to regulate CO₂ emissions from new and existing power plants, see ["EPA's Proposals to Regulate CO₂ Emissions From Power Plants: Reasonable \(Perhaps\) by Legislation, but Challenging via Clean Air Act."](#)

² The proposed rule with respect to existing electric generating units was published on June 18, 2014. Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electrical Generating Units, 79 Fed. Reg. 34,830 (June 18, 2014) (to be codified at 40 C.F.R. pt. 60).

³ By contrast, EPA's proposed performance standard for new coal-fired electric generating units is based on partial implementation of CCS.

⁴ *Id.* at 34,879-89.

⁵ EPA issued a "Notice of Data Availability" on October 30, 2014, seeking comments on the interim 2020-29 goals. 79 Fed. Reg. 64,543. Stakeholders have expressed concerns that the interim goals would limit state flexibility in developing plans based on all of the building blocks set out by EPA. There have been trade press reports that EPA is considering pushing back the initial interim compliance date to 2025.