

The intersection of the Clean Air Act and energy policy: EPA's proposed greenhouse gas standards for existing power plants

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On June 18, 2014, the U.S. Environmental Protection Agency (EPA) published its proposed greenhouse gas emission reductions rule for existing fossil fuel-fired power plants. 79 Fed. Reg. 34,830. Once final, this rule will broadly affect energy generation, transmission, distribution, and use throughout the country, giving EPA the potential to exercise significant control over the economy. This article outlines the central features of the proposal, with the caveat that EPA requests comment on alternative approaches for many of the provisions. The 120-day comment period is set to close on October 16, 2014.

Using 2005 emissions as a baseline, EPA seeks to achieve a 30 percent reduction in nationwide emissions of carbon dioxide (CO₂) from existing fossil fuel-fired power plants by 2030. EPA proposes mandatory CO₂ emission targets for each state, expressed in pounds of CO₂ emitted per net megawatt/hour (MWh) of electricity generated. Each state must implement an EPA-approved plan establishing how the state will achieve its specific target. Unlike traditional "end-of-pipe" pollution control rules, EPA's proposal envisages control measures "beyond-the-fence-line" of fossil fuel-fired power plants that have far-reaching implications for both conventional and alternative energy producers, distributors, and consumers.

The origin of the performance goals: The building blocks and BSER

EPA developed the state-specific performance goals by first creating a "best system of emission reduction" (BSER) template based on four "building blocks."

- - Building block 1 assumes that existing coal-fired power plants can improve their heat rate (i.e., - efficiency) by 6 percent through operational improvements and equipment upgrades. -
- - Building block 2 projects that electricity dispatch procedures can be used to displace electricity generated by coal-fired power plants with electricity from lower CO₂-emitting sources (primarily natural-gas-fired combined cycle plants (NGCC)), increasing the utilization rate of NGCC units from a national average of 46 percent of capacity up to 65 to 75 percent.

- - Building block 3 is based on displacing electricity generated by fossil fuel-fired power plants with electricity generated by very low/zero-emitting sources, including renewable energy (e.g., wind and solar) and nuclear power plants. EPA arrived at renewable energy targets for each state by evaluating the best practices of the renewable portfolio standards on a regional basis and then applying a growth factor. EPA concluded that nuclear energy plants currently under construction would be completed and that certain units currently slated for retirement would continue to operate, avoiding the loss of 6 percent of nuclear capacity. While EPA is giving “credit” for the continued operation of nuclear plants currently scheduled for retirement, it does not give states “credit” for currently operating nuclear plants that are not scheduled for retirement.
- - Building block 4 projects a 1.5 percent annual reduction of electricity consumption through improvements in “demand-side management” (i.e., increased efficiency by energy users). -

EPA applied the “4-block BSER” to each state’s factual circumstances to arrive at the specific CO₂ emission targets for each state. The agency took into account factors such as the amount of electricity generated by coal, natural gas, nuclear, and renewable energy in the state; the utilization rates of power plants; and various energy efficiency initiatives. Though EPA advances a national goal to reduce nationwide emissions of CO₂ from fossil fuel-fired power plants 30 percent by 2030 based on a 2005 baseline, the proposed state targets are based on 2012 CO₂ emissions data (i.e., states do not get “credit” for reductions achieved between 2005 and 2012). For example, to achieve EPA’s proposed goals, Florida would have to reduce the net CO₂/MWh emissions from fossil fuel-fired power plants by approximately 38 percent from its 2012 baseline, Pennsylvania by approximately 32 percent, New York by approximately 44 percent, and Texas by approximately 39 percent. See, “Goal Computation Technical Support Document,” U.S. Environmental Protection Agency, Office of Air and Radiation (June 2014), Appendix 5, U.S. EPA Docket ID No. EPA-HQ-OAR-2013-0602. The proposed rule would allow states to translate these emission rate targets into mass-based targets, which may be more amenable to cap-and-trade programs.

State plans

The rule would establish guidelines and approval criteria for state plans: EPA does not propose specific requirements to control CO₂ emissions from fossil fuel-fired power plants, which is the ultimate objective of the rule. Those source-specific requirements will only be imposed through state plans. Therefore, much of the “action” related to this rule will occur in the states where the details directly applicable to regulated entities will be established, not just through advocacy at the federal level.

After EPA has set the state CO₂ targets, each state must submit to EPA a plan describing how it will meet the target; alternatively, groups of states may exercise the option to submit joint plans. Though EPA has based the state targets on the “4-block BSER,” EPA says that states may meet their targets any way they choose. States would not be bound by the BSER: state plans may include all, none, or any combination of the four blocks and may employ strategies not identified by EPA as BSER (e.g., cap and trade, carbon capture and storage, or biomass-based initiatives). If a state claims that any particular “building block” assumption made by EPA is not attainable, EPA expects that the state will be able to make up the difference either by more aggressively implementing one of the other three “building blocks” or by devising some other strategy.

Each state plan must, among other things, identify the “affected entities” that will be subject to the plan, which may extend well beyond fossil fuel-fired power plants, and the specific standards the state will impose on the affected entities. These standards must be quantifiable, nonduplicative, permanent, verifiable, and enforceable. Highlighting the importance of state-level advocacy, each state’s plan must go through a public hearing process. If a state does not submit, or EPA does not approve, a plan, then EPA will develop and implement an enforceable plan for that state.

EPA’s aggressive schedule assumes the final rule will be published in June 2015, with state plans due by June 30, 2016 (though states may seek extensions into 2017). Multi-state plans could be submitted as late as June 30, 2018. EPA gives itself 12 months to review and approve state plans, which it will accomplish through notice-and-comment rulemaking.

Some implications of EPA’s proposed rule

This is a complex and ambitious proposal with many moving parts. The preamble alone covers 120 pages of the *Federal Register*. It advances a number of legal and technical issues that will be the subject of legislative, regulatory, and courtroom advocacy in the coming years, raising the possibility of outcomes that are quite different from those in the proposed rule. Indeed, the first legal challenge was filed on the same day the proposal was published in the *Federal Register*, a case that has already attracted nine states as amici. *Murray Energy Co. v. EPA*, No. 14-1112 (D.C. Cir. June 18, 2014). Twelve states (including those that filed as amici in the *Murray Energy* case) have since filed their own challenge to the proposed rule. *West Virginia et al. v. EPA*, No. 14-1146 (D.C. Cir. Aug. 1, 2014).

Some legal issues arise in part because section 111(d) of the Clean Air Act (CAA), the statutory basis for the proposal, has rarely been used and never for a rule of this scope and complexity. One issue that has been getting significant attention is whether sources already regulated under section 112 of the CAA, such as fossil fuel-fired power plants, may be regulated under section 111(d). Statutory language originating from a Senate amendment suggests that EPA may regulate sources under both section 112 and section 111(d), while language originating from a House amendment suggests that EPA’s proposed approach would be barred. *See, e.g.*, the petitions filed in the *Murray Energy* and *West Virginia* cases. The proposal’s focus on state rather than source-specific requirements has also raised questions, such as, whether EPA has the authority to impose state-level targets under section 111(d), which directs EPA to establish regulations for the creation of state plans, and whether EPA may establish a “standard of performance” at the state level rather than for individual sources. Further, it is not clear if section 111(d) authorizes the imposition of “beyond-the-fence-line” measures as a method of reducing CO₂ emissions from fossil fuel-fired power plants.

Another complexity is that EPA itself has interpreted section 111(d) not to be available to regulate *existing* sources for a category of sources unless EPA has established companion new source performance standards (NSPS) for *new* sources within that category under section 111(b). 79 Fed. Reg. at 34,852, col. 2. Thus, the fate of this rule may be tied to that of EPA’s proposed NSPS for CO₂ emissions from fossil-fueled power plants, which will surely also face legal challenges. 79 Fed. Reg. 1430 (Jan. 8, 2014). EPA has projected that it will finalize NSPS rule in early 2015.

Not surprisingly, EPA addresses each of these questions in a manner that supports its proposal, asserting that it should be granted deference under *Chevron v. NRDC*, 467 U.S. 837 (1984). The degree to which EPA's interpretations will be granted such deference will be evaluated in light of the U.S. Supreme Court's recent decision in *UARG v. EPA*, 134 S. Ct. 2427 (June 23, 2014), in which the Court held that certain EPA interpretations of the CAA as applied to greenhouse gas emissions were not reasonable and not due *Chevron* deference.

The proposal also implicates other CAA requirements. For example, achieving the 6 percent heat rate improvement projected by EPA in "building block 1" might require the installation of new equipment at coal-fired power plants that could be considered "modifications" triggering the New Source Review (NSR) requirements of the CAA. This could be a disincentive to increase heat rates. Among the solutions EPA offered to avoid triggering NSR in this manner is that state plans could increase the emphasis on the options contained in the other three "building blocks" so as to decrease reliance on the first building block.

Apart from the various CAA issues, EPA's plan to displace electricity generated by coal-fired power plants with electricity from lower- and zero-emitting sources raises numerous issues at the state regulatory level. They include cost recovery for the generation, transmission, and distribution investment required to comply with the new rules; the existence of various regulatory models at the state level (e.g., vertically-integrated utilities, deregulated generation facilities); and the transaction costs associated with industrywide contested case proceedings to readjust rates and the siting, construction, and permitting of the new infrastructure (e.g., electricity transmission lines, natural gas pipelines) necessary to effectuate the large-scale energy source substitution.

EPA's proposal raises numerous other issues, including the factual basis for each state's proposed CO₂ emissions target, whether the differences between the state targets are fair, the potential impacts of the rule on the cost and reliability of electricity service, how to estimate the "social cost of carbon," and how to quantify the non-CO₂ pollutant reduction benefits that EPA asserts will be derived from this rule and the decreased operation of coal-fired power plants.

In sum, EPA's proposal to regulate CO₂ emissions from existing fossil fuel-fired power plants extends beyond traditional end-of-pipe, source-specific controls and contemplates a system for controlling the generation, transmission, distribution, and use of energy that will have a significant effect on the economy as well as the environment. We expect that it will be the subject of vigorous advocacy at both the federal and state levels, as well as in the public square.