13 August 2015

Practice Group(s):

Energy

Environmental, Land and Natural Resources

Global Government Solutions

EPA's Clean Power Plan: Structure, Implications for the Grid, and Next Steps

By R. Timothy Weston, Alyssa A. Moir, Daniel C. Kelly-Stallings, Michael L. O'Neill, Molly Suda

The United States Environmental Protection Agency (EPA) issued the Clean Power Plan (Plan) in its final form on August 3, 2015. The rule reshapes energy policy nationwide by setting state-by-state greenhouse gas emissions standards that all states must meet by 2030. States can comply with these standards through a combination of producing energy more efficiently, reducing energy demand, shifting away from coal-fired generation toward natural gas, nuclear power, and renewable energy, and encouraging state and regional policies such as renewable portfolio standards and cap-and-trade programs.[1]

This alert provides an overview of the Plan, a briefing on its implications for grid reliability, and a discussion of the legal and political events that will determine whether, how and when the Plan will be implemented in the months and years ahead.

1. Clean Power Plan Approach and Structure

Eight years ago, the United States Supreme Court, in its *Massachusetts v. EPA* decision,[2] ruled that EPA possesses the power to regulate greenhouse gas emissions. Subsequent developments have brought EPA's regulatory authority into focus, including EPA's endangerment finding and related legal challenges.[3] With the Supreme Court's decision in *Utility Air Regulatory Group v. EPA*[4] in 2014, it is now clear that EPA may regulate the emissions of stationary power plants, the country's largest emitters of greenhouse gases.

The Clean Power Plan capitalizes on a little-utilized section of the Clean Air Act—Section 111(d)—to create a vast new regulatory scheme that is sweeping and ambitious in its scope and scale. Section 111(d) directs the development of emissions standards for certain identified pollutants emitted by existing stationary sources. Under this authority, the Clean Power Plan aims to reduce by 2030 average nationwide power sector greenhouse gas emissions by 32% from 2005 levels by establishing interim and final carbon dioxide emissions goals within a unique state-by-state framework.

In the Plan, EPA sets emissions reduction targets for each state based on that state's power-producing characteristics and emissions profile and based on three building blocks.[5] These targets reflect a novel and expansive agency view of the "best system of emission reduction" (BSER) for existing power plants. Rather than limiting analysis to process or technological changes, i.e., "inside the fence controls" implemented at existing sources, EPA has considered actions that can be taken through state plans applied across the entire electric

[1] To view the full text of the final rule, visit http://www.epa.gov/airquality/cpp/cpp-final-rule.pdf.

[2] *Massachusetts v. EPA*, 549 U.S. 497 (2007).

[3] *See, e.g.*, *Am. Elec. Power Co. v. Connecticut*, 582 F.3d 309 (2d Cir. 2011).

[4] 134 S. Ct. 2427 (2014).

[5] For a detailed description of these building blocks as proposed in the draft rule, see Environmental, Land and Natural Resources Alert EPA Proposes Major Reductions in Greenhouse Gas Emissions from Existing Power Plants Affecting Everyone Who Produces and Uses Energy by Cliff Rothenstein, William C. Cleveland, and John F. Spinello (June 24, 2014).

generation and distribution system, such as changes in regional energy dispatch policies, investments in renewable energy, and reductions in energy demand. Specifically, these actions include: (1) improving the heat rate for existing coal-fired power plants, (2) expanding deployment of natural gas power plants, and (3) increasing renewable electricity generation from sources such as wind and solar.

Each state has its own emissions reduction target that equates to the performance standard corresponding with that state's BSER. EPA has based these targets on electricity production rather than electricity consumption, placing a comparatively larger burden on states that export power compared to states that import power.

It is up to each state to figure out how to meet its unique emissions target. The Plan provides broad flexibility to states to craft their individual emissions reduction plans. For example, a state may develop its own cap-and-trade program, or it may participate in a regional program. In the final version of the Plan, EPA set uniform national standards for coal/steam units and gas/combustion units based on averaging of rates in three regional transmission interconnections (Eastern, Western, and Texas). This approach brought state targets closer together than they had been under the proposed version of the Plan. It also facilitates emissions trading programs. EPA is further encouraging the use of multi-state trading programs by proposing a model trading rule and a federal implementation trading plan for those states that do not submit their own individual plans.

The Plan strongly incentivizes renewable energy as another way to meet state targets. New or incremental generation from wind, utility-scale solar, geothermal, and hydropower (installed post-2012) count for compliance, as do new or incremental off-shore wind, distributed solar, fuel cells, biomass co-firing, waste heat, and trash-to-energy, subject to meeting eligibility criteria.[6]

The Clean Power Plan gives states 13 months to submit their plans, with a possible two-year extension. States that fail to submit approved plans will be subject to a federal implementation plan.[7] Concurrently with issuance of the final Clean Power Plan calling for state implementation plans, EPA also published a proposed federal implementation plan. The proposed federal plan proposes a "cap and trade" program under which EPA would establish emissions limits on either a rate-based basis (under which the limit would be expressed in pounds of carbon emissions per megawatt hour of power generated by existing power plants) or a mass-based basis (under which the limit would be expressed in total tons of carbon emissions produced by existing power plants in the state). As an enforcement mechanism, EPA would impose fines or other penalties just as in the case of any other federal program under the Clean Air Act.

How each state crafts its plan will depend heavily on its unique target, emissions profile, energy mix, and options for renewable energy generation. States vary widely in terms of resources, power baseloads, and regional efforts already in place to reduce carbon emissions. For more information about how the Plan will impact different regions around the United States, see "EPA's Clean Power Plan: A Regional Analysis."

[6] *See* Clean Power Plan VIII.K.

[7] To view the proposed federal plan, visit http://www.epa.gov/airquality/cpp/cpp-final-rule.pdf. Several states, including Alabama, Arkansas, Georgia, Kentucky, Louisiana, North and South Carolina, Texas and West Virginia, have indicated that they will "just say no" to the Plan, making them potentially subject to the federal plan.

The final version of the Plan differs from the original proposed version in several key respects. Among other changes, EPA modified the allocation of allowable emissions from each state, with some states receiving significant relief and others (such as Texas) facing even higher emission reduction requirements. Second, in setting the emissions targets for each state, EPA assumed emission rates from coal and natural gas-fired plants that were significantly lower than the New Source Performance Standards (NSPS) adopted for new such plants. For example, the NSPS for gas-fired combined-cycle plants is 1000 lbs CO_2/MWh, but the Clean Power Plan assumes gas-fired plants will be operated to attain 771 lbs CO_2/MWh. It is difficult to conceive how the best system of emission reductions for existing plants of a particular type can equate to a substantially lower amount of emissions than the emission limits established for the newest, most state-of-the-art units, but that is what the Plan envisions. Finally, in reordering the building blocks, EPA is proposing that environmental dispatch be utilized to displace new natural gas-fired combined-cycle plants with renewable energy, where available. The implications of this move may be to disincentivize investment in new gas-fired plants. Such plants would no longer fulfill a baseload role, but instead would be subject to interruption and attendant less reliable revenue streams to offset the required plant investments (which often total $1 billion per plant or more).

2. Implications for Grid Reliability

The need to ensure reliability of the electric grid was a flashpoint in the debate over the original draft of the Plan. The North American Electric Reliability Corporation (NERC), among other electric industry participants, criticized the draft Clean Power Plan for proposing emissions reduction standards that would force retirements of coal-fired baseload generation before replacement generation resources could be developed. There was also criticism that the draft Plan provided insufficient time for development and construction of transmission enhancements that would be required to maintain grid reliability as the generation resource mix shifted.[8]

In the final version of the Clean Power Plan, EPA has sought to address these grid reliability concerns by: (1) providing states the option to extend the submission date for their final implementation plans to 2018; (2) delaying the start of the compliance period for emissions reductions from 2020, as proposed, to 2022; (3) requiring states to demonstrate that their final implementation plans have considered reliability issues and that the states have consulted with the appropriate reliability or planning authority; (4) permitting states to revise their implementation plans should reliability issues arise; and (5) creating a reliability safety value under which states may be allowed a 90-day period to exceed emissions limits set out in their plans because of unforeseeable emergencies that threaten grid reliability. The Federal Energy Regulatory Commission (FERC), Department of Energy, and EPA have also committed to meet no less than quarterly to discuss potential reliability concerns that arise through the development of state plans and coordinate with one another and the states to resolve any reliability concerns.

Commentators are split over whether implementation of the final Clean Power Plan, even with the adjustments described above, will threaten grid reliability. Some have argued that

[8] *See* North American Electric Reliability Corporation, Potential Reliability Impacts of EPA's Proposed Clean Power Plan, Initial Reliability Review, November 2014, http://www.nerc.com/pa/RAPA/ra/Reliability%20Assessments%20DL/Potential_Reliability_Impacts_of_EPA_Proposed_CPP_Final.pdf.

the emissions reductions targets in the Plan are consistent with current trends in generation retirement and development and, thus, will not spur a shift in the generation resource mix faster than market trends otherwise would. Similarly, defenders of the Plan argue that the extended time to plan and prepare for implementation of state implementation plans will provide sufficient time to address any reliability concerns.

Critics of the Plan warn that the complexity of potential grid reliability issues has been underestimated, and it will be difficult and costly to resolve reliability issues that arise during the development and implementation of the Plan. FERC Commissioner Tony Clark has been outspoken on the difficulties that lay ahead, stating that "EPA's new regulation is undeniably an enormous task for the people who actually plan, finance, construct, operate and regulate this complex US power system."[9] Commissioner Clark has expressed concerns that even the 2022 deadline for compliance may be challenging in light of the long planning timelines typically needed to develop and construct major infrastructure projects. Fellow FERC Commissioner Philip Moeller has warned that relying on state air regulators and other state officials without a background in electricity infrastructure to develop state implementation plans could "disrupt existing competitive wholesale markets, causing inefficiencies that would actually increase emissions" and "substitut[e] environmental dispatch for economic dispatch."[10] Resolving these and other grid reliability concerns will require close coordination and collaboration among states, regulatory agencies, industry organizations, and market participants in the coming months and years.

3. What are the Next Steps for the Clean Power Plan?

With the issuance of the final Clean Power Plan, we now expect a surge of activity.

On the litigation front, a series of states and industry groups has questioned whether the Plan exceeds the scope of what EPA is authorized to regulate under Section 111(d). The Plan is subject to legal challenge because its greenhouse gas emission reduction targets arguably look beyond the emissions of specific existing sources and instead require changing the mix of electric generation and the way state and regional electric grids are dispatched and operated.

Another legal challenge centers on the two different versions of Section 111(d) that were signed into law, or the "glitch" issue. In 1990, both the House and the Senate passed their own sets of Clean Air Act amendments, including revisions to Section 111(d). There were subtle but important differences between the two versions of Section 111(d) that were not harmonized when they were signed into law: The Senate's version says EPA can adopt rules for any non-toxic pollutant. Since greenhouse gases aren't toxic the Senate's language allows for the Plan. The House version says EPA can adopt rules only for categories of sources (such as power plants) whose toxic emissions EPA doesn't already regulate. Because EPA already regulates mercury emissions from existing power plants under Section 112, the House language does not allow for the Plan. Litigation will focus on Congressional intent and whether the conflicting amendments are ambiguous, thus requiring deference to EPA's interpretation. These arguments, raised in *Murray Energy Corp. v. EPA* and *West Virginia v. EPA* but deemed premature prior to the finalization of the Plan,[11] will certainly be raised again and thoroughly litigated.

[9] Statement of Tony Clark, Commissioner, Federal Energy Regulatory Commission (Aug. 3, 2014).
[10] Statement of Philip Moeller, Commissioner, Federal Energy Regulatory Commission (Aug. 4, 2015).
[11] No. 14-1112 (D.C. Cir. June 9, 2015).

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In terms of political action, even before the ink was dry on the final Plan, the Environment and Public Works Committee's Clean Air and Nuclear Safety Subcommittee announced that it will consider a bill to roll back EPA's carbon rules by extending compliance deadlines pending judicial review and allowing governors not to comply if compliance would hurt the economy or electric reliability.[12] In addition, the American Coalition for Clean Coal Electricity filed a request with EPA the day before the final Plan was released to stay the Plan while the courts weigh in, and it plans to ask the courts for a judicial stay in the event its request is denied.

States have taken widely varying positions on the Clean Power Plan. Executive and legislative leaders in some states have expressed antipathy to the Clean Power Plan, suggesting that their states would not move forward to develop implementation plans, which would ultimately leave to EPA the task of developing and enforcing federal implementation plans. Other states, with administrations that are more supportive of the Plan, will begin developing their implementation plans. In both instances, industry will work concurrently with government to influence the shape of the implementation plans and prepare for a transformative period that will fundamentally change the way electric power is produced.

We will continue to monitor and analyze developments for interested stakeholders. Readers who are interested in signing up to receive our alerts on the Plan can do so here. Additional information will be posted on our Global Energy Law and Policy Blog, which you can find at http://www.globalpowerlawandpolicy.com/.

Authors:

R. Timothy Weston
tim.weston@klgates.com
+1.717.231.4504

Alyssa A. Moir
alyssa.moir@klgates.com
+1.206.370.7965

Daniel C. Kelly-Stallings
daniel.kelly-stallings@klgates.com
+1.206.370.8012

Michael L. O'Neill
mike.oneill@klgates.com
+1.202.778.9037

Molly Suda
molly.suda@klgates.com
+1.202.778.9452

[12] S. 1324 (introduced May 13, 2015).