EPA’s Clean Power Plan: A Regional Analysis

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EPA’s recently issued Clean Power Plan ("CPP" or "Plan") affects every state differently. The Plan has a decidedly nationwide impact—reducing the United States’ power plant greenhouse gas emissions 32 percent by the year 2030. But the Plan functions entirely on a state-by-state level, treating each state in a different way based on its unique emissions profile. In this way, the Plan seeks to harness the power of federalism to achieve its ambitious goals.

While the target-based approach is in some ways similar to the structure of EPA’s National Ambient Air Quality Standards (NAAQS), the CPP has revised and reordered certain elements, and has modified the targets for carbon dioxide (CO2) reductions required by individual states. Although NAAQS are set on a nationwide basis, under the CPP every state has a different carbon target based on a calculus that includes the state’s emissions profile and energy mix. Thus, some states (like Montana and West Virginia) are subject to greater emission reductions than other states (like Idaho and Maine). And while states have some flexibility to determine how to meet their targets, the devil will be in the details, as evidenced by EPA’s compliance pathway chart.

The varying state plans will be key to how the CPP will impact industry. The differences are important for state regulators and industry leaders to understand as they will drive the pace and rate of policy change, the on-the-ground implications for energy markets, and potential regional cooperation. Given the interconnectedness of our electrical grid, impacts in some states will be felt in others. In many cases, a burden imposed on one state represents an opportunity for another. It is also possible that states will participate in regional plans that will affect energy producers by, for example, allowing them to trade emissions credits across state lines, and energy consumers, by potentially normalizing rate increase burdens across larger geographical sectors.

These state plans are being crafted in the shadow of what is expected to be lengthy litigation. The first move involved 15 states seeking an emergency stay of the Plan. You can read the petition here. The D.C. Circuit denied the request on September 9th, but interested parties should expect additional lawsuits as states begin working on their plans.

Read below for an analysis of how each of the country’s different regions will be affected by the Plan.2

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1 The states that signed onto this petition are from all around the nation: West Virginia, Alabama, Arkansas, Florida, Indiana, Kansas, Kentucky, Louisiana, Michigan, Nebraska, Ohio, Oklahoma, South Dakota, Wisconsin, and Wyoming.

2 One notable feature of the Plan is that many of its targets and measurements are based on electricity generation, not electricity consumption. This means that the Plan affects states that are net energy importers differently from states that are net energy exporters.
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1. The Northeast Region

Some governors and environmental agency heads in the Northeast—all of which at one point in time were members of the Regional Greenhouse Gas Initiative (“RGGI”)—publicly support the CPP and have, for the most part, expressed confidence in their states’ abilities to meet the Plan’s stated goals. This is despite the fact that all but one of the states in the region are burdened with some of the more stringent goals for CO2 emissions under the Plan. Using a rate-based goal approach, state goals nationwide fall in a range between 771 lbs/MWh on the low end (for states with only natural gas plants) to 1,305 lbs/MWh on the high end (for states with only coal and oil plants). The average 2030 goal for the seven states in the Northeast region that come within the CPP’s reach is 821 lbs/MWh—a goal that is on the low end of this range.

Leaders in the Northeast appear optimistic about meeting CPP targets because state efforts across the region for reducing CO2 emissions are already under way. For example, before the final rule was announced, New York already had a plan in place to cut greenhouse gases 80 percent by the year 2050. Similarly, the majority of Rhode Island’s electric generators burn gas, which emits about half the CO2 of coal, and the state has begun looking increasingly toward renewable generation with the construction of the nation’s first offshore wind farm near Block Island. Government support for the CPP from the northernmost states is nearly unanimous, with Vermont being exempted from the Plan entirely because of its already-low carbon emissions and the absence of any coal-fired plants in the state. Maine recently announced that it is well on its way to meeting the Plan’s goals, in part because of energy policies implemented eight years ago. Likewise, New Hampshire has expressed confidence that its membership in the RGGI will translate into compliance with the

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4 Connecticut, Rhode Island, New Hampshire, Maine, Massachusetts, and New Jersey have some of the “more stringent” state goals, while New York is the only state in the region to have one of the “moderate” state goals. See, e.g., EPA, Clean Power Plan: State at a Glance, http://www.epa.gov/airquality/cpptoolbox.com.


8 See supra note 4; see also Sam Heller, Obama’s Clean Power Plan Garners Praise from Vermont Leaders, VTDIGGER.ORG (Aug. 4, 2015), http://vtdigger.org/2015/08/04/obamas-clean-power-plan-gamers-praise-from-vermont-leaders/.

CPP. Supporters in New Hampshire concede, however, that the CPP is likely to raise electricity rates in New Hampshire during the short term, “partly by prodding the closure of some polluting power plants that are cheap to operate.”

However, the Plan still has its critics in the Northeast. States with a comparatively larger number of coal-fired plants in the region, such as New Jersey, have already challenged the EPA’s adoption of the rule. New Jersey recently requested that EPA stay the implementation of the CPP. One analyst has predicted that at least one New Jersey-based company could suffer major profit losses because the “majority of its electricity comes from coal plants that are in EPA’s cross hairs.” Densely populated states such as New Jersey, however, will be allowed to “increase the amount of pollution they produce in 2030, compared with 2012, as their populations increase.” Whether this serves to alleviate some of the burdens imposed by the CPP remains to be seen.

Experts have also generally cautioned that companies selling electricity into the deregulated markets of this region, specifically in New York and New England and certain mid-Atlantic states, will face the biggest challenges “in part because they cannot recoup costs through regulatory rulings.” In deregulated markets, generators must typically recover their costs through the organized electricity markets or through bilateral agreements. Therefore, generators will have some exposure and will only be able to recover their CPP-related costs if market prices allow it. Increased costs could create opportunities for other types of generation and technology to compete in the markets. In sections of the country where generation is still regulated and costs are recovered through a state-regulated rate, generators may be able to seek to include costs to comply with the CPP in their regulated rates. However, generators’ ability to include CPP-related costs in their regulated rates would likely depend on the particular state’s position on the CPP and its inclination to allow the generators to do so. Because of the support coming from the state governments in this region, industry participants with offices in the Northeast—especially in the northernmost states in the region—should not expect challenges to the CPP at the state level. Instead, industry participants conducting operations in this region may decide to challenge the EPA’s rule independently.

2. Mid-Continent Coal-Dependent States

The Plan will have deep and long-lasting impacts on a group of states in the middle of the continent that includes Kentucky, Pennsylvania, Ohio, Indiana, and West Virginia. Of these five states, four (all except Pennsylvania) joined 11 other states in filing the emergency stay petition in federal court. This opposition to the Plan is largely traceable to the fact that these

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11 Id.
12 Although New Jersey relies less heavily on coal-fired plants than some of its neighboring states, there are still five coal-fired plants within the state, and it is “unclear whether . . . any of [these plants] will be forced to shutter.” Karen Yi, Obama’s Clean Power Plan Sets Lofty Goal for NJ, ASBURY PARK PRESS (Aug. 4, 2015), http://www.app.com/story/news/politics/new-jersey/2015/08/04/obamas-clean-power-plan-sets-lofty-goal-new-jersey/31118891/.
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states are deeply involved in the coal industry through both mining and coal-fired electricity generation. In some of these states, entire communities depend on coal for their livelihood.

In Kentucky, the final rule was met with significant opposition from state political leaders after Kentucky’s targets increased dramatically from the proposed rule to the final rule. 18 Kentucky must reduce its emissions rate by more than 40 percent or lower its total carbon dioxide emissions from 91.3 million to 63.1 million tons by 2030. 19 Kentucky is already struggling with a steep decline in coal-related jobs in recent years and is now expected to face even more job loss.

The response in Pennsylvania has been more measured. Pennsylvania has 78 coal-fired power plants and faces a 33.3% reduction target, so there is no doubt that the Plan will affect the state’s economy. Pennsylvania’s Democratic Governor is “committed to making the Clean Power Plan work” and has not joined in the emergency stay petition opposing the Plan, 20 although any implementation plan to be adopted in Pennsylvania under the Clean Power Plan is subject to legislation adopted in 2014 that will require review by the GOP-controlled legislature.

Ohio, Indiana, and West Virginia are united in their opposition to the Plan. In Ohio, some critics have argued that the state’s goals are unattainable. 21 And although this claim is the subject of intense debate, it underscores the potential difficulty that coal-dependent states will have in complying with the Plan. Many of them will have to reshape their energy markets in order to unwind their dependence on coal. Indiana has “one of the least stringent” emissions targets in the nation, but Governor Mike Pence may refuse to comply with the Plan, 22 arguing that it will increase electricity rates in Indiana. Likewise, West Virginia officials emerged as leading voices for states to ignore EPA’s requirements even before the Obama Administration released the final version of the Plan. 23 West Virginia Sen. Shelley Moore Capito has proposed legislation in the U.S. Senate that would allow state governors to opt out of the program and permit the EPA to mandate only technology-based emissions controls with at least one year of demonstrated effectiveness. 24 West Virginia faces a 37 percent emissions reduction target—up 10 percent from the proposed rule, and appears fully committed to fighting the rule. At the same time, West Virginia regulators are now considering whether to put all their chips in a litigation strategy or hedge their bets by simultaneously creating a state plan in order to avoid being subject to the federal plan. 25

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24 S. 1324 (introduced May 13, 2015).
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3. The Southeast Region
Many southeastern states face some of the more stringent emissions rates and emissions mass reduction goals under the CPP of all the 47 states the Plan covers. For example, Maryland must reduce its carbon dioxide emissions rate by approximately 37 percent by 2030. Other states, like Florida and Virginia, do not face especially onerous emissions goals but will nevertheless have to take action to meet their targets. For example, while some experts believe that Florida may be well-positioned to accept the challenges presented by the CPP, others note that there is “lots of work . . . ahead” for coal-fired plants in the state. The atmosphere is similar in Virginia. While some state leaders believe that Virginia may have little difficulty meeting its goals as a result of an almost-decade long effort to reduce pollution that is already in place, others view the CPP as a “threat to Virginia’s ‘struggling economy,’” and have urged the governor to delay implementation until judicial challenges to the CPP have run their course.

Given the administrative headaches and significant expense associated with reaching these goals, it is not surprising that several southeastern states have announced their intention to challenge the legality of the CPP. Several southeastern states joined the request to stay the rulemaking pending the outcome of judicial challenges.

The region’s reliance on legacy coal generating assets, coupled with skepticism toward federal regulation of environmental issues, suggests that the Southeast will remain at the forefront of any challenge to the CPP.

4. The West Coast and Intermountain West Regions
The Clean Power Plan will have a broad range of impacts across the West Coast and the Intermountain West regions, and the expected effects vary widely by region and by state.

The West Coast states are optimistic about their ability to comply with the Plan. California has virtually eliminated coal from its energy mix and has been a national leader in cutting greenhouse gas emissions. California hopes that the rule will boost its economy through increased interest in energy efficiency and renewable energy. The Plan was welcomed by Governor Jerry Brown as a “bold and absolutely necessary” step.

Oregon’s emissions target was reduced from 48 percent in the proposed rule to 20 percent in the final rule, placing the final target below the state’s previously adopted statewide emissions reductions goals. The chairman of Oregon’s Global Warming Commission lauded the final rule, stating that “[t]he targets and the incentives that EPA is putting in are exactly

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29 Id.
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the kind of things that Oregon utilities, that our institutions are really good at taking advantage of.”

The situation is similar in Washington, where state regulators are hopeful that the state can meet its emissions targets largely by complying with existing law. In large part, this is due to the fact that Washington’s only remaining coal-fired power plant is scheduled to be shut down entirely by 2025, and Washington’s existing laws on carbon emissions are reasonably aggressive.

The same is true in some, but not all, of the Intermountain West states. Nevada, for example, is believed to be on its way to meeting its targets and has visions of riding the wave of anticipated demand for renewables to become a net energy exporter. Some reports have Colorado being as much as 75 percent of the way toward meeting its target, but the state will still need to take some action due to the fact that roughly half of its energy came from coal in 2014. Colorado also has untapped renewable potential that the state is already moving to utilize.

The situation is more complicated in other Mountain West states. For example, Montana and Wyoming have been identified as two of the “biggest losers” under the final version of the Plan, with their emissions targets more than doubling from the draft rule. In Montana, this places significant pressure on large coal plants and increases the likelihood that they may need to be shut down. In Wyoming, major changes will need to be made because 90 percent of the state’s energy came from coal in 2013. On the other hand, states like Montana, Utah, and Wyoming are believed to have huge untapped potential for renewable energy, especially wind power. These states are therefore also well-positioned to benefit as the energy grid undergoes a nationwide transition from fossil fuel-fired electricity generation to renewables.

Meanwhile, Arizona and Utah are leading the charge to oppose the Plan. Arizona’s Attorney General signed onto a letter sent by 16 states requesting that EPA stay the rule. Arizona faces a 52 percent emissions reduction target due to its widespread coal- and gas-fired electricity generation. Utah is a signatory to the letter as well. Idaho has one of the lowest emissions targets nationwide at 10 percent, but has limited options for making reductions.

Tribal interests are also affected. The Navajo Nation faces closure of coal-fired plants and coal mines in Arizona and Utah, foreclosing a major revenue source for the tribe.

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There does not currently appear to be any regional plan in the works for the West Coast and Intermountain West regions. However, according to some sources, there is a movement to create individual state plans with common measurement and tracking systems. This would facilitate trading between states even in the absence of a regional plan, and it could help energy-interconnected western states avoid reliability problems and rate increases. This may be attractive to multistate utilities that own power-generating facilities across multiple western states.

5. Texas and Mid-Central South

Texas has been vocal in its opposition to the Plan. The same day the Plan was released, Texas Governor Greg Abbott staked out his opposition with a sharply worded press release criticizing the Obama Administration’s “unilateral executive overreach,” which he said is “threatening the free-market principles this country was founded on.”

Texas’ opposition is in some respects understandable. Texas has relatively stringent emissions reduction requirements, so some stakeholders are challenging some of EPA’s assumptions in calculating its target. In addition, Texas anticipates facing capacity and reliability problems, as predicted by the North American Electric Reliability Corporation’s approved reliability entity, responsible for 90 percent of the users in the state of Texas (the Energy Reliability Council of Texas or “ERCOT”) based on the Plan as proposed. Many people have questioned whether Texas can achieve its targets at all. Texas has a robust natural gas industry that would have benefitted under the draft Plan. However, the State now anticipates that the Plan will result in changes to power dispatch protocols that will constrain these benefits. Texas’ prospects of achieving compliance will be the subject of heated debate in the coming months and years.

Reactions are similar in Oklahoma and Louisiana, both of which had joined earlier legal challenges to the rule and are considering further legal action. Though both states, like Texas, are top natural gas producers, changes in the final Plan meant to slow a rush to natural gas now make it more difficult for either state to meet their targets.

Arkansas, dependent on coal for over half of its electricity in 2013 and facing a nearly 38 percent reduction, is walking the line. Republican Governor Asa Hutchinson vowed to continue fighting the final rule while also promising to work with industries and consumers to determine a lowest cost option to compliance.

6. Midwest

Midwestern states have some of the highest percentages in terms of required reductions under the Plan, as well as some of the greatest variables when it comes to the resources used to generate electricity.

In the upper Midwest, which is rich in wind and sun and with already-established renewable portfolios, states are generally on track to meet the Plan’s targets. For example, Minnesota’s aggressive renewable energy standard had already closed more than a dozen coal-fired electric plants. Minnesota still gets about 55 percent of its electricity from coal, but utilities

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will be able to keep cutting emissions by adding more wind power, and the state expects to generate 28.5 percent of its power from renewable sources by 2030. In Iowa, where wind energy already makes up more than 28 percent of the state’s electricity production, EPA projected that even without the Plan, the state would surpass its 2027 emissions target by 2020.

Michigan is more conflicted. With its existing 10 percent renewable energy standard and energy efficiency mandate, together with a proposed plan for low-carbon power investment and energy waste reduction, initial state assessment of the final Plan indicated that Michigan could meet its 39.4 percent reduction target. However, citing concerns regarding increased electricity costs and job loss from one of the oldest coal-fired power fleets in the country, the state joined the petition seeking an emergency stay of the CPP until the legality of the rule is determined.

Coal-heavy Kansas faces a 43 percent reduction in its carbon emissions rate, a 19 percent increase from the proposed rule. While the state has made major recent gains in wind production, it does not have natural gas combined-cycle units subject to the Plan to see it through a ramp-up to renewables. The state’s Department of Health has stated that it believes the Plan is unattainable, and Governor Brownback is now reconsidering whether to “just say no” in light of the significant change for the state.

Similarly, North Dakota saw its emission reduction goals increase dramatically in the final rule, which is one of the steepest cuts in the nation at 44.9 percent. Achieving this cut will likely lead to closing coal plants, but with only 15 percent of its generation from wind power, the state will need to sharply increase that supply to reach its target. Even with an increase, the state and its neighbor to the south are disadvantaged because the Plan awards renewable energy credits based on where the power is used rather than on the location of its generation, and both North and South Dakota ship wind and hydro power out of state.

In midwestern states that are either heavily coal-dependent or without effective renewable portfolios, such as Wisconsin and Nebraska, state officials have petitioned for an emergency stay of the CPP, and are considering renewed legal action questioning EPA’s authority to adopt the regulations and/or joining the “just say no” campaign in its refusal to implement state plans.

Despite the varying impacts and reactions, some midwestern states had already begun planning for a regional trading platform to reduce the cost of compliance, even before the final rule made this easier with its national standard and explicit encouragement for these platforms. Other commentators have noted that energy efficiency may be the most cost-

42 Final Rule Update—Minnesota, E&E Publishing, http://www.eenews.net/interactive/clean_power_plan/states/minnesota. For Minnesota, relying on renewable energy as a building block, rather than natural gas, makes more sense because current natural gas plants often run mainly during peak times to back up renewables.
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effective way for Midwest states to meet targets, with estimates at an average of $14 per megawatt hour.\textsuperscript{48}

Conclusion

For some states, compliance with the Plan is simply a matter of following existing state laws, targets, and emissions reduction plans. For other states, the measures required will involve tough decisions with real economic impact, and political opposition will be a substantial roadblock to achieving the Plan’s goals. And for many of the remaining states, the road ahead will be defined by balancing antipathy with support, challenges with opportunities, and costs weighed against benefits as the energy mix across the country continues to transform.

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