Compliance with EPA’s Clean Power Plan: 
A Utility’s Perspective

The U.S. Environmental Protection Agency’s (EPA) final Clean Power Plan (CPP) represents the most significant regulatory action ever taken under the U.S. Clean Air Act and its implications will fundamentally change the electricity generation mix in the United States. The rule is pushing utilities, which are already driving innovation, to add cleaner resources and respond to rapidly evolving customer needs, to move even faster, spend more money, and take additional risks to comply. While many of us at local utilities support the overarching goals of the CPP, we must always consider the impact of the pace and scale of compliance on our electric systems and, most importantly, our customers.
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The Clean Power Plan
In technical terms, the plan calls for a projected nationwide reduction in carbon dioxide emissions from fossil fuel-fired electric generation of 32 percent by 2030, as compared to 2005 levels. The CPP seeks to restructure the U.S. power system to reduce electricity generation from coal from 36 percent to 27 percent (total generation capacity) over the next 15 years, while deploying significant amounts of new renewable energy. Given the unique challenges and opportunities of each individual state, this considerable shift in resources likely will lead to a market-based emissions trading program among states.

The CPP will result in varying compliance obligations among states and, ultimately, electricity generators. Some companies will have to make significant reductions in carbon dioxide emissions, while others will be able to maintain a business-as-usual approach. Some companies with operations in several states will be faced with balancing a myriad of compliance obligations. EPAs own modeling indicates that by 2030, under a mass-based compliance approach, 108 GW of coal-generating units will retire, as compared to the estimated 70 GW that is expected without the effects of the CPP. Cost impacts to utilities and their customers will vary from state to state, but there is no doubt that overall U.S. retail electricity prices and electricity investments will increase.

PNM’s Perspective
PNM Resources is the largest electricity provider in New Mexico and the operator and partial owner of the San Juan Generating Station, a 1,800-MW coal-fired power plant serving more than 2 million customers in the Southwest United States. As CEO (and a New Mexican), I am concerned about the impact the CPP will have on our state and our customers. PNM has long supported national carbon legislation and has demonstrated our commitment to reducing emissions through strong company actions and our efforts and alliances with various industry coalitions and trade associations. And like many electric utility companies, PNM has for several years incorporated carbon dioxide reduction costs in modeling for generation decision-making.

While supporting a commitment to reduce carbon dioxide emissions, I also want to make certain that compliance with the CPP does not cripple the state economically or discourage businesses from expanding or relocating to New Mexico. Our residential and business customers not only want reliable, low-cost electricity, but...
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they also want to live in a prosperous state and they care about the environment. When all is said and done, PNMs ultimate mission, along with our electric utility brethren, is to provide affordable, reliable, and sustainable electricity.

Under the CPP, New Mexico must achieve a 36-percent reduction in carbon dioxide emissions (rate-based) or a 28-percent reduction (mass-based) from 10 affected facilities state-wide by 2030, as compared to 2012 levels (see Figure 1). These electric generating plants emit roughly 17 million tons per year of carbon dioxide, are located throughout the state and include both steam generation fueled by coal, oil, or natural gas, and natural gas combined cycle (NGCC) units. New Mexico must develop a state plan (or be subject to a federal plan) that demonstrates how the state will achieve compliance from these affected units.

PNM’s Regional Haze Plan for San Juan
I am proud to say that PNM’s Regional Haze Plan for the San Juan Generating Station will play a significant role in helping the state of New Mexico comply with the CPP. The plan was developed in collaboration with EPA and the New Mexico Environment Department and received approval from the New Mexico Public Regulation Commission in December 2015. PNM, along with the other joint owners of San Juan, will install nitrogen-oxide-reducing technology on two of the four units and shutdown the remaining two units, resulting in the retirement of almost 900 MW of coal-fired power generation by December 31, 2017.

PNM’s resource planning has been anticipating carbon regulation for several years, and retiring the two units at San Juan and replacing the retired capacity with a diversified energy mix is a cost-effective solution for PNM’s customers. It is crucial for our customers that the actions we are taking at San Juan are recognized by EPA and credited toward compliance throughout the CPP compliance period.

Shutting down two units at the San Juan Generating Station is expected to cut carbon dioxide emissions from the plant by half (approximately 5 to 6 million tons annually), long before the 2022 compliance date for the CPP. Under PNM’s plan, New Mexico’s carbon dioxide emissions will be lowered by about 25 percent by 2030, as compared to 2012 levels. PNM will reduce the burning

![New Mexico CO₂ Emissions](image-url)
of coal from 41 percent to 27 percent. In addition, our proposed replacement power includes the use of cleaner fuels, including zero-carbon-emitting nuclear and solar resources, plus natural gas peaking capacity. It is also important to note that economic modeling shows that retiring the two units at San Juan and replacing the retired capacity with a diversified energy mix is the lowest cost option for PNM’s customers.

**State Plans**

The most important question for PNM and for other electric utilities across the United States to ask of their state regulators is whether a state will develop a plan to comply with the CPP or choose to be covered by the Federal Plan that EPA has drafted. New Mexico has indicated that it plans to write its own plan and feels confident that it will result in better outcome than a federal plan. PNM wholeheartedly supports New Mexico’s desired approach. The state has indicated that it will submit an initial draft plan by the September 6, 2016, deadline and will inform EPA of options the state thinks will work best for New Mexico. The state also plans to request additional time to submit a final plan as allowed under the final rule.

States can choose from many options when designing plans, depending on their unique energy, environmental, and economic resources and goals. Two or more states may also choose to combine their goals and create a bilateral or multi-state plan to meet their combined goals jointly, something EPA is encouraging. New Mexico must decide which one of the six pathways to compliance it will adopt—three mass-based options and three rate-based options have been proposed by EPA, how to demonstrate that enforceable limits on power plants will achieve either the rate-based or mass-based limits, and whether it wants to create a trading-ready plan and enter into multi-state trading agreements. For New Mexico, PNM believes a mass-based approach is simpler and cheaper due to the carbon reductions that will be achieved by PNM’s own regional haze compliance plan.

Another key question under a rate- or mass-based program is how the state will award emission reduction credits or allocate allowances to affected units, including those that retire during the compliance period or before the compliance period begins (like the two units at San Juan). The CPP does not provide clear direction on methods that would be ultimately approved by EPA, even though this is a critical element for states and utilities to determine how a state will successfully achieve compliance. According to EPA, New Mexico and all other states have broad discretion in credit/allowance allocation. PNM is recommending to New Mexico that under a mass-based approach, the state could choose to allocate allowances to retired units in perpetuity. One thing is clear: ultimately, each affected facility must fend for itself, and the cost of compliance will depend on the allocation scheme.

One particular area of concern in the final rule is the requirement for states to address emissions “leakage” in a mass-based compliance program. Leakage occurs as a result of shifting generation from sources covered by the rule to sources, such as new NGCC, that are not covered. EPA has provided some guidance in the draft Federal Plan that allows states to cover new units under the CPP by accepting a mass cap that includes new sources, setting aside renewable energy credits to ensure they are not traded, or proving to the agency that no leakage is occurring. There is no guarantee that EPA will approve any particular effort regarding
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leakage. It remains unclear for PNM, the utility industry, and regulators in general just how best to address this in state plans.

**Transitioning to Clean Energy**

In the final rule, EPA proposed the Clean Energy Incentive Program to drive early investment in renewable energy and low-income energy efficiency projects. States can set aside allowances or generate emission reduction credits for eligible projects and the megawatts they generate or the end-use energy savings they achieve in 2020 and 2021 and EPA will match them. While the proposed incentives could and should spur further development of renewable energy and energy efficiency, the electric power industry has already been focused on transitioning to a cleaner fleet. Through investments in renewable energy, shifting from coal to natural gas, and implementing energy efficiency programs, the U.S. electric power industry has already reduced carbon dioxide emissions 15 percent below 2005 levels. Unfortunately, none of these early actions will be credited toward compliance with the CPP.

PNM has invested more than $270 million in 15 large-scale solar facilities throughout the state. By the end of 2015, PNM produced enough solar energy to power approximately 40,000 average homes and we have increased our wind generation by 50 percent this year. Our customer-owned solar program began in 2006 and now supports more than 5,000 customers. PNM estimates that its energy efficiency and load management programs have saved approximately 75 GWh of electricity in 2014.

Over the next 20 years, PNM projects these programs will provide the equivalent of 13,000 GWh of electricity, which will avoid at least 6.5 million metric tons of carbon emissions based upon projected emissions from PNM’s system-wide resources. Under the final Clean Energy Incentive Program, PNM and other utilities would like to see EPA allow early action credit for clean energy projects that are placed into service after promulgation of the final CPP (October 2014), in addition to what has been proposed.

The U.S. electric utility industry has already made huge strides in reducing carbon dioxide emissions and utilities will continue to advance clean energy technology by working with states to find the solutions that achieve compliance with the CPP. The good news is that the final plan appears to provide broad flexibility to states to develop their own path to compliance and each state has discretion in choosing the basis for implementation. It does, however, present significant uncertainty with respect to interpretation, analysis of compliance strategies, and state decision-making. Utilities like PNM must align with the state, environmental regulators, and public utility regulators to assist states in developing the very best plan for each state and its citizens. All must work together to ensure that whatever path or approach taken to accomplish the goals of the CPP, the end result maintains reliable electric service and cost control for customers.

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