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WHITE PAPER

September 2018

EPA Offers ACE Rule to Trump Clean Power Plan

Outlined in an Environmental Protection Agency (“EPA”) proposal published on August 31, 2018, the Affordable Clean Energy (“ACE”) rule would replace the Obama Administration’s Clean Power Plan (“CPP”). A 60-day public comment period on the proposal ends on October 30. This Jones Day *White Paper* examines the differences between the two rules and concludes with an analysis of the costs and benefits of CPP vs. ACE.

TABLE OF CONTENTS

Heat-Rate Improvements vs. Building Blocks	1
Emission Guidelines vs. State Limits	1
Gas vs. Coal vs. Biomass vs. Renewables	1
Section 111(d) vs. Section 112	2
Trading vs. Source Limits	2
Traditional NSR vs. Preliminary Applicability Test	2
Implementing Regulations at Subpart B vs. New Subpart Ba	3
Costs and Benefits of CPP vs. ACE	4
Lawyer Contacts	4

The EPA issued a proposal on August 31, 2018, to replace the CPP with the ACE rule (83 Fed. Reg. 44,746). Both rules adopt emission guidelines for greenhouse gas emissions from existing electric generating units using authority provided by Section 111(d) of the Clean Air Act. That is just about the only similarity between the two rules.

This *White Paper* highlights the differences between the two rules with a focus on topics that may draw significant comment during the 60-day comment period that ends on October 30.

HEAT-RATE IMPROVEMENTS VS. BUILDING BLOCKS

The CPP issued by the Obama Administration adopted greenhouse gas limits that were projected to be achievable by states through the use of three building blocks—(i) construction and use of more renewable sources, (ii) shifting generation from coal to gas, and (iii) heat-rate improvements. The Supreme Court stayed the CPP in early 2016. The Court did not explain the basis for the stay, but it presumably reflected a determination that the parties challenging the CPP were likely to succeed on the merits.

After the Trump Administration took control, EPA initially proposed to repeal the CPP based on a revised legal interpretation of its authority under Section 111(d). The revised interpretation stated that Section 111(d) emission guidelines had to be based on emission controls that could be installed or operated at a particular source rather than measures taken outside of the source. Using this interpretation, EPA now believes that the first two building blocks in the CPP were not available under the Clean Air Act. This position is reflected in ACE, which relies solely on heat-rate improvements to set the Section 111(d) emission guidelines.

EMISSION GUIDELINES VS. STATE LIMITS

The CPP established a greenhouse gas emissions rate limit for all of the existing generating units in a state collectively based on the projected application of the building blocks. Each state had authority to set emission limits for its units, but those individual limits could not result in a state-wide emission rate that

exceeded the limit set by EPA. EPA proposed a model emissions trading program that states could use as the basis for their electric generating units to demonstrate compliance with the CPP. Some specific types of sources suggested that subcategories should be established that would favor their operations.

ACE takes a wholly different approach. It identifies a menu of heat-rate improvement techniques that have been demonstrated to be effective for coal-fired units and instructs the states to determine the techniques that are applicable to each unit and set an emission rate for each unit based on that determination. It is unclear how states will view this mandate. Many states advocated for a similar procedure in response to the CPP approach that did not provide a clear way to consider remaining useful life or other unit-specific factors that could affect the achievable emission limits. At the same time, the specific determinations required by ACE for each unit could place a significant burden on state agency time and resources, but they also would minimize the need for subcategorization if an emission limit is established for each unit based on a determination of cost effective heat-rate improvement measures in light of the specific circumstances at the unit.

GAS VS. COAL VS. BIOMASS VS. RENEWABLES

The CPP required electric generation to shift from coal-fired units to gas-fired units and renewable sources. As indicated by EPA's revised legal interpretation of its authority under Section 111(d), ACE does not mandate the use of any particular type of generating unit. Nonetheless, ACE recognized the economic conditions that have made renewable generation and gas-fired generation comparatively less expensive while coal-fired generation has become comparatively more expensive. The result is that electricity generation is shifting from coal-fired units to renewable sources and gas-fired units even without an EPA mandate.

The CPP included carbon dioxide emissions from increased utilization of gas-fired units in determining the appropriate state emission limits. By contrast, ACE does not propose any specific emission guidelines for gas-fired units because increased utilization was one of the building blocks that EPA decided it lacked legal authority to use and because EPA did

not identify any applicable, demonstrated efficiency improvement techniques for gas-fired units. EPA did expressly ask for comments on whether any efficiency improvement techniques for gas-fired units are, in fact, available and demonstrated.

The treatment of emissions from the combustion of biomass such as wood chips created some controversy in the CPP as EPA considered whether to count those emissions in the state limits. EPA released a policy earlier this year that requires it not to count the emissions from combustion of biomass where appropriate measures are taken to prevent deforestation.

SECTION 111(D) VS. SECTION 112

One issue that ACE does not address is the relationship between the Mercury and Air Toxics Standards (“MATS”) issued for coal-fired electric generating units under Section 112 of the Clean Air Act and EPA’s authority under Section 111(d), which is limited to issuing guidelines for units where standards for hazardous air pollutants have not been issued under Section 112. States and industry petitioners challenging the CPP asserted that MATS deprived EPA of authority to issue any guidelines for existing electric generating units under Section 111(d).

The same authority argument would apply to ACE. It is not clear if the petitioners who made the authority argument in response to the CPP will forgo making it in the context of ACE and effectively concede that the EPA has authority to issue some sort of greenhouse gas emission guidelines for existing electric generating units under Section 111(d).

TRADING VS. SOURCE LIMITS

EPA structured the CPP to provide flexibility to sources through interstate trading of emission allowances for states that elected to participate in the trading program. ACE proposes a series of hurdles that will make trading very difficult and, perhaps, ineffective to satisfy the relevant emission limits. ACE proposes rate-based emission limits (e.g., lbs/MWh) rather than the mass-based emission limits (e.g., ton/yr), which are easier to use in a trading program. Beyond that, EPA suggests that its revised legal interpretation for the scope of permissible emission guidelines under Section 111(d) is not legally compatible with trading.

EPA recognizes in ACE that sources desire flexibility. To accomplish this, EPA suggests all of the units in a particular source could be averaged or bubbled as is already allowed in some Clean Air Act programs. EPA also mentioned the importance of selecting appropriate averaging times for units given that some heat-rate improvements have variable impacts over time and different operating characteristics.

ACE proposes important changes to existing regulations—in addition to marked deviations from the CPP—including the New Source Review (“NSR”) program and implementing regulations for Section 111(d), which are likely to draw significant comment during the 60-day comment period.

TRADITIONAL NSR VS. PRELIMINARY APPLICABILITY TEST

EPA’s proposal includes considerable revisions to NSR for electric generating units (“EGUs”) to improve implementation of the ACE rule. The NSR preconstruction program currently is triggered when an existing source undergoes a physical or operational change, known as a major modification, that results in a “significant emissions increase” at the units that are part of the project and a “significant net emissions increase” from the larger source. When comparing emissions for NSR, EPA looks to the maximum annual rate that the modified unit is projected to emit, known as projected actual emissions, and the average annual rate of actual emissions prior to the modification, known as baseline actual emissions. This NSR analysis, and the subsequent permitting requirements if a significant emission increase and a significant net emissions increase are found, is time consuming and costly and presents a major hurdle to implementing improvements at existing sources. Because the crux of the ACE rule is energy efficiency upgrades that can result in greater overall emissions from an EGU while decreasing the rate of emissions per kilowatt-hour, EGUs implementing the required upgrades would trigger the onerous NSR process.

To circumvent the full NSR analysis and permitting requirements, EPA proposes a preliminary applicability test for determining when a physical or operational change to an EGU qualifies as a “major modification” triggering NSR. Under this

hourly emissions increase test, only projects that increase a plant's hourly rate of pollutant emissions would require a full NSR analysis. The baseline for applying the hourly emissions increase test would be either maximum achieved hourly emissions or maximum achievable hourly emissions, not annual emissions. EPA explains that this preliminary applicability test would ensure that coal-fired plants would be able to make the efficiency improvements contemplated without triggering onerous and costly NSR permitting requirements. EPA anticipates that this change will allow states to consider heat-rate improvements that would not otherwise be cost effective due to NSR burdens.

Because the revised NSR provisions would apply to all EGUs for all pollutants, the full impact of these revisions could be far reaching. EGUs would be the recipient of a distinct off-ramp from the NSR process that could allow for EGUs to avoid NSR for a myriad of projects other than implementing efficiency and operational upgrades to comply with the ACE rule. The complexities of the NSR process have long been a target for environmental groups, and it seems likely that such a broad withdrawal of EGUs from the NSR could attract legal challenges.

IMPLEMENTING REGULATIONS AT SUBPART B VS. NEW SUBPART Ba

Concurrent with the revised emission guidelines for EGUs, EPA also proposes new implementing regulations for emission guidelines promulgated under Section 111(d) in a new subpart Ba. These new guidelines will apply to any new, or ongoing as of the date of finalization, Section 111(d) emission guidelines and associated state plan submissions. EPA proposes carrying over many of the existing implementing regulations from subpart B to subpart Ba with a few key changes to definitions, timelines, and other provisions. EPA plans to retain the current implementing regulations that were promulgated in 1975 for emission guidelines and state plans that were promulgated previously.

Clarifying the roles of the states and of EPA is a theme in the ACE rule that manifests in the definition change to "emission guidelines." EPA explains that its role is to (i) provide emission guidelines that states can then use to develop and submit state plans that establish and apply existing source standards of performance, and (ii) evaluate whether the state plan

standards are consistent with the established "best system of emission reduction" ("BSER"). Thus, an emission guideline is not a guideline provided by EPA that presumptively reflects the degree of emission limitation achievable by BSER. Instead, EPA revises the definition of emission guideline to reflect that EPA only needs to provide information "on the degree of emission reduction achievable through the application of" BSER. States must then consider the list of candidate technologies, evaluate which technologies are appropriate for each plant, and then establish a standard of performance in the form of allowable emission rates that reflect the degree of CO₂ emission reduction per unit of energy based on the appropriate technology.

The proposed implementing regulations make significant extensions to the time allowed for states to submit state plans and for EPA to review and approve such plans:

- States will have three years, not nine months, to submit state plans;
- EPA will have one year, not four months, for review after determining completeness to approve the plans;
- EPA will promulgate a federal plan two years, not six months, after finding a failure to submit or disapproving of a state plan; and
- Increments of progress will be required if a compliance schedule for a state plan is longer than 24 months, not 12 months, after the plan is due.

These revised timelines generally align with those for submission of state implementation plans and provide additional time for states to undertake the potentially burdensome task of developing plant specific performance standards. These extended timelines are likely to draw the ire of those in support of expedient implementation of air pollution limits.

Another notable change to the implementing regulations includes increased flexibility in the requirements for seeking variances for a standard of performance for a particular source. EPA proposes a new variance provision that does not rely on the distinction between health-based and welfare-based pollutants, which EPA proposes to abolish, and instead focuses on allowing states to consider the remaining useful life and facility specific factors that make application of a less stringent performance standard or a final compliance timeline more reasonable. Increased flexibility may allow units

that would otherwise be shuttered by the cost of compliance with ACE or future emission guidelines under Section 111(d) to remain operating.

COSTS AND BENEFITS OF CPP VS. ACE

The analysis of the impacts of the proposed ACE rule is quite dense and could support its own *White Paper* because it examines emission impacts, economic costs, and health benefits. The Regulatory Impact Analysis for ACE provides a cost benefit analysis of four scenarios. These scenarios include full repeal of the CPP and three policy scenarios modeling heat-rate improvements at coal-fired electric utility generating units. The policy scenarios are compared against a base case that includes the CPP. The Regulatory Impact Analysis thus analyzes the world without the CPP, the world with ACE, and the difference in the effects of ACE and of the CPP. The first policy scenario is 2 percent heat-rate improvement at \$50/kW without NSR reform. The second policy scenario is 4.5 percent heat-rate improvement at \$50/kW with NSR reform. The final policy scenario is 4.5 percent heat-rate improvement at \$100/kW with NSR reform. The EPA evaluated the no CPP scenario and three ACE policy scenarios using the present value of costs, benefits, and net benefits for the years 2023-2037 from the perspective of 2016, using both 3 percent and 7 percent discount rates. In addition, EPA provided cost benefit assessments for the snapshot years of 2025, 2030, and 2035.

Depending on the heat-rate improvement that is actually achieved, ACE is projected to result in CO₂ emission reductions of 13 million tons to 27 million tons in 2030 with corresponding reductions in SO₂ and NO_x emissions. These figures are 47 million tons to 61 million tons higher than they would be with implementation of the CPP.

Compliance with ACE in 2030 is projected to result in costs that range from a savings of \$200 million to an expense of \$900 million. The range of these costs is \$200 million more to \$1 billion less than EPA is projecting the CPP would cost. Not

surprisingly, these ACE compliance costs are accompanied by projected decreases in retail electricity rates and increases in coal production relative to the CPP.

To estimate the benefits of ACE, EPA separated the benefits of CO₂ emission reductions, which it called “targeted pollutant benefits,” from the co-benefits of emission reductions of other pollutants. EPA concluded that it was unable to quantify the economic value of changes in exposure to mercury, carbon monoxide, SO₂, and NO₂. Targeted pollutant benefits were estimated using a social cost of carbon focused on direct impacts of climate change within the nation’s borders. These direct impacts are projected to cost \$300 million - \$400 million more in 2030 than would occur under the CPP (assuming a 3 percent discount rate) while the CPP would be expected to have \$3.6 billion to \$10.6 billion of health co-benefits in 2030 compared to ACE.

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