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ERCC Answers Ten Important Questions You Should Have About EPA's Final Rule on Carbon Emissions from Power Plants

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U.S. Environmental Protection Agency (EPA) Administrator Gina McCarthy signed the final rule to address carbon emissions from power plants on August 3, 2015. As the rule is read and interpreted, the Electric Reliability Coordinating Council (ERCC) offers the following questions as a way to place the final rule in perspective.

ERCC is a group of energy companies that provide reliable and affordable power to millions of consumers across the US. ERCC members have long supported commonsense interpretation of the Clean Air Act and responsible efforts to enhance efficiency and renewable power.

Question One: So the rule is final. What does that mean and what happens next?

Answer: The rule was “signed,” making it final, on Monday, August 3. EPA will now publish the rule in the *Federal Register* – perhaps in relatively short order. Typically, litigation proceeds after publication, but it arguably can proceed after the rule is signed. Several groups are likely to sue EPA over the rule, with some states, the regulated community and others asking for the rule to be “stayed” – i.e. put on hold. If the stay motions succeed, implementation will be delayed until the legality under the Clean Air Act can be clearly determined.

A stay would avoid the situation created by EPA’s Mercury and Air Toxics Standards (MATS) Rule. That rule remained in effect while it was being challenged in court, and most power plants were required to come into compliance before the Supreme Court decision on MATS, which found the underpinning of the rule to be illegal. Now, power companies and their customers have paid tens of billions of dollars to install controls, shut down dozens of power plants, and laid off thousands of workers – all because of a rule that the Supreme Court has found to be unlawful.

Although the regulated community appreciates the extra time resulting from EPA pushing back the interim compliance deadlines, the slight delay by EPA does not alter the prospects of states aggressively moving for a stay of the rule. States have to take action – albeit on a draft basis – as soon as 12 months after the rule is final. The requirement that this preliminary effort be underway immediately creates harm in changing investment and resource decisions, representing a near-term chokepoint in the rule.

The lack of case law on Section 111 (d) further weakens EPA's position by demonstrating the complete lack of precedent for EPA's action. In fact, all of the previous regulations under Section 111(d) don't collectively add up to the financial or regulatory significance of the final Clean Power Plan.

The bottom-line is that unless there is a stay of EPA's carbon rule, the rule will proceed through implementation even as its legality continues to be challenged. EPA will expect a draft implementation plan from the states in a year, a final plan in three years, and compliance will begin at the beginning of 2022.

Question Two: EPA says they have listened carefully to comments and made changes. What has changed and has it fixed the proposed rule?

Answer: There is no doubt that EPA took to heart a great deal of the stinging criticism the rule received from so many quarters. A broad swath of industries and consumers coupled with dozens of states argued for major changes to the rule. The final rule is long and will be subject to further intensive review.

Like others in the regulated community, ERCC is in the process of completing an exhaustive analysis of the roughly 1,500 page rule. In short, EPA reduced the number of options to address carbon emissions under its recommended building blocks while increasing the overall stringency of the rule. It will be interesting to see how they can pull off that act of regulatory sleight of hand.

Here are some items to look at in the final rule:

The structure of the rule has changed, both with regard to setting the Best System of Emissions Reduction (BSER), as well as compliance options. As has been widely noted, the rule achieves **higher total reductions than the proposal**. It now calls for a 32% reduction over 2005 levels by 2030. The calculation of displacement potential (e.g., how many emissions reductions any BSER component can achieve) is now more regionally, rather than state-based.

EPA will allow **more time for states to file implementation plans**, although EPA will still require a preliminary plan within one year of publication of the rule. **This remains a major chokepoint and is unreasonable on its face**. Compliance with the rule will begin in 2022, with the interim compliance periods: 2022-2025, 2025-2027 and 2027-2029, as well as the going-forward 2030 target, which will be subject to a two-year average. The interim compliance periods will have explicit milestones, but states can seek to adjust those. State compliance plans are due in 2016, but EPA is likely to be lenient with granting extensions until 2018. The federal implementation plan (FIP) process will begin when the 2016 deadline is missed (e.g., under this Administration, EPA has 12 months to approve or disapprove which goes through 2017).

Many of these are welcome changes. Over the last year, EPA clearly has come to realize that the timelines in their original proposal just weren't feasible. Even states and companies that were generally supportive of the proposal were telling EPA that states needed more time to develop their plans, and that very few states could actually meet their interim targets by 2020. As a

result, EPA has now pushed back the dates by one or two years. However, **EPA's deadlines are still unrealistic.** As just one example of why, after 49 states submit their plans in 2018, EPA must analyze those plans in writing and then issue a proposal for each state plan to explain why EPA believes the plan should be approved, in whole or in part, or disapproved. After taking public comment, EPA must then issue a final rule that responds to all the public comments it received and explains why it is either approving or disapproving 49 state plants. Under EPA's schedule, this is supposed to occur within just one year. But years of experience with other, much simpler types of state plans suggests that this process will take several years at least.

In any event, EPA has still not made the case of **any intrusive form of interim obligation.** Other Clean Air rules do not have this feature, and EPA has not justified this additional chokepoint in the final rule.

EPA dropped out energy efficiency provisions of the rule. While efficiency has been removed, it may still be used for compliance at a state's discretion.

That said, the essential premise of the proposal was that the broad range of compliance mechanisms was essential for "flexibility" under the rule. Now, the Administration claims no reduction in stringency based on a more aggressive use of fewer building blocks. **So much for flexibility.**

Nuclear has also seen some changes. The EPA has not included nuclear generation from either existing or under construction units in the determination of the BSER. It will, however, give states credit for updates that happen post-2012 and plants which are counted as "new." EPA states: "Generation from new nuclear units and capacity uprates at existing nuclear units will be eligible for use in adjusting a CO2 emission rate, just like new and uprated capacity RE. Preserving generation from existing nuclear capacity is not eligible for use in adjusting a CO2 emission rate. Only the incremental capacity from the uprate is eligible for use to adjust a CO2 emission rate." Any capacity increases at existing plants will count in meeting state requirements. For the five units currently under construction in Tennessee, Georgia and South Carolina, output won't be counted until the plants actually begin to operate. EPA is counting on the mass-based incentives to attract states to mass programs, thereby implicitly valuing nuclear and other excluded zero-carbon generation.

Other compliance mechanisms have also changed. For example, states still have the choice between rate or mass-based systems, although both have been revised.

For rate, states will be offered a default national coal and gas rate they may impose directly on units in their state. The rates will be based on displacement, i.e., lower than either could meet alone – all units would have to buy credits to achieve it. In states that choose this option, units may trade with or buy credits from any state that similarly chooses the option. Renewables and efficiency could generate credits for sale in these states ("Emission Reduction Credits" or ERCs). States could also choose a blended state rate more like the proposal, but would have to blend their rates with other states in order to trade with them.

For mass, EPA will offer two explicit numbers for each state – one higher with new gas units and one lower without them. The budget with new units is “generous” to entice states to choose it. For states that elect mass, but not to include new units, they will be obligated to “address” leakage in some other way. All mass-based states will be able to trade with other mass-based states without an explicit regional plan.

Other changes include “modest” adjustments to the **heat rate** improvements required in building block one of the proposal. This change is a tacit admission that EPA has misinterpreted the data on heat rate improvements found in the study they cited in the proposed rule.

There are also changes in the ways in which natural gas can be used in building block two of the original proposal. The rule now assumes a regionalized degree of natural gas ramp up regardless of capacity. EPA has had to re-visit the 70 percent capacity utilization for certain existing gas-fired plants in light of technical realities they ignored the first time around. They may also be turning to states **without gas capacity** and insisting that they install up to a floor of gas generation, even though that generation is not part of the states’ current inventory of generation assets.

Another change is the inclusion of a “reliability safety valve,” which mandates that states consider reliability in their state plan development. When a safety valve is needed, a unit can operate for up to 90 days outside of the plan, i.e., not accounting for their emissions. Who permits this is a little vague, but likely EPA in coordination with the RTO or similar body. Units are limited to two 90-day periods in the unit’s lifetime (in other words, can emit outside the plan’s compliance requirements for 180 days).

The final plan also includes **Early Action Credits** as an incentive for timely compliance. Renewable energy can earn credits for generation in 2020 and 2021 if they started construction after state plan submittal. Energy efficient can also earn credits in this time period with a 2 times multiplier for projects in low-income communities. These early action credits officially are deducted from the state’s total 2022 or later rate or mass, but can be replenished through a separate, national pool of credits EPA will reserve. They would be refunded to states proportionately to their reduction requirements. If a state chooses not to tap the pool, their share can be redistributed to the states that do sign up on time and issue the credits.

In light of the adjustments in other parts of the rule, it seems that the final rule will be relying on a **more full-throated use of renewable energy**. Renewable energy is an important part of the energy picture. Great strides have been made in renewable development, as all ERCC members know well. However, **there are still significant problems associated with using ever higher renewable rates for base load power production**.

But it is difficult to visualize a program in which stringency remains the same based solely on more renewables and perhaps some additional requirement for natural gas.

Question Three: Why do so many states seem so angry about the EPA rule?

Answer: There is little doubt that **many states will be poised to challenge the final rule as soon as possible**. Many states are likely to join stay petitions, and even more will challenge the rule over the 60 days that follow its finalization. Still others will intervene in litigation. Aside from **clear threats to reliability and the economy of the states**, state leaders are also angry that EPA has finalized **an unprecedented interference into state authority** over energy regulation and markets, clearly inconsistent with statutory and Constitutional principles.

As Professor Laurence Tribe, a noted Constitutional scholar at Harvard Law School, testified before Congress, the EPA rule would constitute “a total overhaul of each State’s way of life.” He observed that an attempt by EPA to substitute its will over the states would constitute “the takeover of their energy sectors by an inflexible federal plan of uncertain scope that would inflict significant economic damage.” Professor Tribe concluded by noting, “EPA is attempting **an unconstitutional trifecta**: usurping the prerogatives of the States, Congress and the Federal Courts – all at once.”

For his full statement, see <http://docs.house.gov/meetings/IF/IF03/20150317/103073/HHRG-114-IF03-Wstate-TribeL-20150317-U1.pdf>

Question Four: How much will the rule cost American families and businesses?

Answer: If anything, the final rule may be even more problematic than the proposed rule when it comes to costs imposed on families and businesses. EPA previously conceded that electric rates would rise as a result of the rule, but argued that bills would nevertheless decline as a result of energy efficiency programs. But now EPA has deleted the efficiency provisions of the rule (Building Block Four) while maintaining overall stringency.

Several recent studies have focused on significant impacts the rule will likely have on households and businesses. Management Information Services, in a June 2015 report prepared for the National Black Chamber of Commerce, found as follows:

“These regulations would have serious economic, employment, and energy impacts at the national level and for all states, and the impacts on low-income groups, Blacks, and Hispanics would be especially severe. The EPA rules would: 1) Significantly **reduce U.S. GDP every year over the next two decades -- over \$2.3 trillion**; 2) **Destroy millions of jobs**; 3) More than double the cost of power and natural gas to over \$1 trillion; 4) **Require the average family to pay over \$1,225 more for power and gas in 2030 than in 2012**.

The EPA regulations will increase Hispanic poverty by more than 26% and Black poverty by more than 23%. The energy burdens for Blacks and Hispanics will increase and large numbers of both groups will be forced into energy poverty, and Black and Hispanic household incomes will decline by increasing amounts each year. There would be increasing job losses: By 2035, cumulative job losses for Blacks will total about seven million and for Hispanics will total 12 million. Most job losses would occur in the states in which Blacks and Hispanics are most heavily concentrated.”

The full study is available here: <http://nbccnow.org/wp-content/uploads/2015/06/Minority-Impacts-Report-June-2015-Final.pdf>

Specifically, “**electricity prices for consumers will be 15% higher, on average, each year under the Clean Power Plan** than they would be without it. Peak year electric price increases during this period average 22% for the 31 states.” These estimates are likely conservative because they do not take into account any additional natural gas infrastructure or electric transmission investments needed to comply with EPA regulations. Given that the final rule now relies even more heavily on renewable energy, these transmission investments may be considerable.

More information is available here:

<http://democrats.energycommerce.house.gov/sites/default/files/documents/Testimony-Trisko-EP-Ratepayer-Protection-2015-04-14.pdf>

Question Five: EPA and some environmental groups say the carbon rule will actually save money and create jobs. Can this be true?

Answer: You can't regulate your way to prosperity. EPA and its allies argue that the final rule will create jobs by pointing to people that would be hired to install insulation and build more renewable power plants. But they ignore the many jobs that will be destroyed by closing down existing power plants and mines. And more importantly, they ignore the jobs that would be lost due to higher energy costs for industrial users.

EPA and environmental groups acknowledge that electricity rates will increase, but they claim that people and businesses will be able to get by with much less electricity. There is no doubt that our economy is becoming more energy efficient, but EPA's claims about future improvements are simply wishful thinking – particularly now that the final rule does not seem to address energy efficiency. We are not aware of any serious analysis showing, as EPA claims, that it will save you money by increasing your electricity rates.

David Montgomery, a private sector economist who taught environmental economics at the California Institute of Technology and economic theory at Caltech and Stanford University, testified before the Senate and cited extensive data from Europe:

"Claims that regulations that raise the cost of doing business will create new jobs are, at best, a sideshow. Such claims only distract attention from the difficult tradeoffs that must be made between costs and benefits. 'Green jobs' is not a subject that leading economists have usually taken seriously enough to criticize in professional journals....**The experience of the past decade has proven that environmental standards or clean energy mandates will not create industries in the United States that will export clean technology to the rest of the world. To the contrary, the cost of such mandates is borne where they are imposed, but the equipment may well be produced by workers in other countries.**"

For more, see <http://www.epw.senate.gov/> and go to the March 17, 2011 Green Jobs hearing.

Question Six: Will the final carbon rule actually reduce the threat of global warming?

Answer: No. Based on EPA's approach for analyzing the temperature and sea level effects of reducing CO2 emissions, **a complete shutdown of U.S. coal-fired power plants is projected to reduce the average global temperature by about 1/20th of a degree Fahrenheit; and to reduce sea level by about 1/25th of an inch.** This assumes that any power generation built to replace these plants would be carbon free – an assumption that is obviously unrealistic.

But, even this almost undetectable reduction in global warming is unlikely to occur given that other nations are unlikely to follow our lead in reducing carbon emissions.

US carbon emissions have been stable or declined over the last decade. By contrast, **Chinese emissions have increased over 170 percent while Indian emissions have increased over 90 percent during the same period.** There is little evidence that our trade competitors will follow our lead on carbon regulation when the competitive advantage of their industries hang in the balance. Indeed, as manufacturing moves overseas in search of more optimal regulatory conditions, **even more carbon will be released** as less efficient factories churn out goods that must then be transported thousands of miles back to US customers. Our trading partners with measurably worse environmental records may be the real winners when the US goes it alone with unilateral carbon regulations.

Question Seven: I thought this rule was about climate change, and it doesn't do much about that. And yet, EPA and the President are doing all sorts of media events regarding the impact of the rule on conventional air pollution. Do Greenhouse gasses cause asthma?

Answer: No, they certainly do not. Because the rule will do essentially nothing to impact climate change, the Administration appears to be confusing the rule with one designed to address conventional air pollution. The fact is that EPA admits that conventional air pollution has been on decline for years and the agency has adopted a number of recent rules to address the very sort of emissions it now claims to be reducing with the carbon rule. Put another way, EPA continues to pile on new costs but claims the same old benefits it has used before to justify other costly rules. This is called **double accounting**, and frankly it got some folks in serious trouble a few years ago at Enron and in the home mortgage industry.

The last time EPA tried to pull this public health bait and switch was with respect to one of its last expensive power plant rules (MATS). They were called on it then too. Susan Dudley, a professor of regulatory studies at George Washington University, and a former senior OMB official, put it this way:

"To a large extent the EPA gets its huge benefits by assigning high dollar values to reductions in emissions of fine particles that it models will occur as a side-effect of the required controls.

These fine particles are already regulated through other EPA mandates, including standards the EPA updates regularly based solely on public health considerations. **Yet, through what is essentially an accounting trick, the EPA calculates almost all of its monetary benefits for this rule from particle reductions well below the levels it has established as safe...** Contrary to the EPA's claim that the rule will provide particular benefits to children, the premature deaths the EPA says will be averted are modeled to accrue to people with an average age of 80 years, who would live weeks or months longer, if at all, as a result of the regulations. This modeling is also suspect, because the EPA assumes causality where none can be explained, and makes other assumptions that overstate effects."

See <http://thehill.com/blogs/congress-blog/energy-a-environment/200539-epas-risks-outweigh-rewards-for-new-mercury-rule>

In fact, by increasing energy costs, **the final rule could make public health worse.** This is true in two ways: by increasing the cost of medical care and treatment; and, by imposing real threats on human health by suppressing economic growth and the improved health it brings.

With respect to treatment costs, U.S. hospitals spend \$8.5 billion annually on energy, often equaling between one and three percent of a hospital's operating budget. Furthermore, EPA estimates, in the U.S., the health sector is the second most energy-intensive commercial sector overall. Hospital administrators will have no choice but to pay attention to the cost of energy as surging energy costs will squeeze hospital budgets like never before. Without an adequate supply of affordable power, the healthcare sector and the American public can expect increasing costs that consumers can ill-afford.

Undermining economic recovery and job creation is detrimental to public health. A report to Congress' Joint Economic Committee by Dr. Harvey Brenner showed the impacts of unemployment on public health. Brenner found that a one percent increase in the unemployment rate was associated with a two percent increase in premature deaths. In 2004, Brenner used his **econometric models to estimate the public health results from reducing coal-generated electricity. For example, with a substantial reduction in coal-fired power, Brenner found the result would be between 170,000 and 300,000 premature deaths.**

For more, see <http://www.electricreliability.org/ercc-comments-submitted-epa-new-source-performance-standards-power-plant-carbon-emissions>

Question Eight: Could the proposed carbon rule pose a threat to reliable electric power in the United States?

Answer: Yes. Many of the facts on the ground have not changed regarding reliability since the rule was first proposed. While delaying interim compliance is helpful – in some states in particular – the underlying rule (including changes to the building blocks) has not been subject to sufficient interagency and expert coordination and consultation to avoid **significant threats to reliability.**

On February 18, 2015 ERCC released a report that established a consensus viewpoint of experts on the “**clear threat to electric reliability**” posed by the rule.

See http://www.electricreliability.org/sites/default/files/media_files/Reliability_White_Paper.pdf

ERCC cited the North American Electric Reliability Corporation’s (NERC) findings regarding “strains” to “essential reliability services,” regional transmission organizations that found significant potential for “**erosion**” of “**reserve margin**” which increases the likelihood of reliability shortfalls. Other Regional Transmission Organizations (RTOs) found that the EPA plan would “**impede reliable operation of the electric transmission grid**,” a finding all the more problematic in light of the final rule’s greater reliance on intermittent sources of power. ERCC also cited significant concerns among state regulators and cited EPA’s failure to consult adequately with federal experts at the Federal Energy Regulatory Commission (FERC).

As we noted previously, reliability is not optional. Putting electric reliability at risk entails serious legal and public policy consequences. Electrical outages endanger economic growth, and have a demonstrable negative effect on public health. As ISO New England has stated:

“**A reliable supply of electricity is a foundation of our prosperity and quality of life.** Without it, our world literally grinds to a halt—businesses cannot plan and operate productively, hospitals and schools cannot provide their essential services, and residents cannot depend on the electricity they need simply to live their daily lives. Without reliable electricity, the financial and societal costs would be enormous.” Id. at 12.

We will be curious to see how any EPA “**safety valve**” will operate in practice. While a safety valve designed to address reliability crises is necessary, no safety valve can fix a poorly crafted rule that harms reliability as it is implemented. That’s like relying on an emergency brake after an accident is already under way. You need to prevent the accident in the first instance. And as the D.C. Circuit has ruled, if emergency authority alone fixed rules then “no rule, no matter how irrational, could be struck down, provided only that a waiver provision was attached. A rule with no rational basis...cannot be saved in this fashion.” 828 F2d 551 (D.C. Cir 1988).

Question Nine: Some say the EPA rule may be illegal, but didn't the Supreme Court say EPA can regulate carbon under the Clean Air Act?

Answer: The Supreme Court said that EPA could regulate greenhouse gas emissions if it made appropriate findings to justify such regulation. The EPA effort to stretch from this decision to a rule requiring 49 states to restructure their whole electricity systems under a seldom-used provision of the Clean Air Act is unprecedented and was not authorized by the Supreme Court.

Even if the EPA may address carbon emissions from power plants in some reasonable fashion, the way it does it can still be illegal. The EPA is finalizing a carbon reduction number not based on what an improved power plant might do, but rather on a whole range of changes in the way energy is generated beyond the limits of the plant targeted for regulation. All of this is based on a section of the Clean Air Act (section 111(d)) that is a few hundred words and doesn't

mention demand-side reductions or carbon or even power plants. And in 40 years, this provision has never been interpreted in a way that would allow the EPA rule.

Since the time the EPA first proposed the rule, the Supreme Court has spoken several times in ways that **cast great doubt on EPA's ability to defend its legal interpretation:**

- *King v. Burwell*, the Supreme Court Obamacare case. The Court stated that matters of “deep economic and political significance” must be “expressly” assigned to an Agency by Congress in order to justify deference to that Agency;
- *Michigan v. EPA*, the Supreme Court MATS case. The Court admonished EPA for “stray[ing] well beyond the bounds of reasonable interpretation in concluding that cost is not a factor relevant to the appropriateness of regulating power plants.”
- *UARG v. EPA*, the greenhouse gas permits case. The Court warned EPA against any Clean Air Act “interpretation [that] would also bring about an enormous and transformative expansion in EPA’s regulatory authority without clear congressional authorization.”
- *EPA v. EME Homer City*. While the Supreme Court upheld the Cross State Air Pollution Rule (CSAPR), they sent it back to the D.C. Circuit for attention to the specific budgets set for particular states. On July 28, 2015, the D.C. Circuit found significant errors in EPA’s calculation of many state budgets. Of course, issues of state-specific rates and inventories will also be at issue regarding the final carbon rule.

Question Ten: But the EPA made changes to the rule. Doesn't that mean it is better able to survive legal challenges?

Answer: The biggest problems with the final rule are missed opportunities to cure the legal problems obvious in the proposed rule. In fact, the final rule may even be more vulnerable to legal challenges, but further careful analysis will be required. EPA’s included new provisions and new methodologies that were not fully part of the record when public comments were filed. Given these changes, the rule could have additional problems under administrative law.

The weakest part of the EPA proposal is that the agency is attempting to use the Clean Air Act to regulate far afield from the actual facilities that are the target of the rule. In the parlance of the rule, that's called going beyond the fence line. By dropping consumer energy efficiency as a basis for establishing the rule, the EPA has removed one part of the rule that lies beyond the fence line. But, changing the dispatch of natural gas and insisting on renewables investments really lie just as far outside the fence line. These two other building blocks remain critical to the rule, but are completely unprecedented and outside the scope of Section 111 of the Clean Air Act.

Another issue of note is the rule for new power plants -- the 111(b) rule – which will still utilize carbon capture and sequestration as a basis for regulation, but at a reduced capture rate. Since there is no evidence of established commercial viability for this technology, the 111(b) provisions of the rule are still on weak legal grounds. And it is an established feature of the

Clean Air Act that if the approach to 111(b) fails to pass legal muster, EPA cannot proceed to regulate existing sources under Section 111(d) of the rule.

Finally, as for the question of whether Section 112 regulations preempts the use of Section 11, that matter is still quite active. The states and some members of the regulated community asked for the panel to reconsider its views in the Murray litigation just before EPA made clear its intention to finalize the rule. So that matter is serious and is not changed in any way by the final rule or by the Supreme Court's dim view of the failure to consider cost in the context of the MATS rule.

Beyond that, EPA still has created an untested foundation for the rule. It has tread upon established constitutional principles and undermined the sense of federalism that is essential to the Clean Air Act.

Bottom line: it does not appear that EPA has addressed the fundamental legal flaws in its proposal. Given a host of legal infirmities, it appears that between 20 and 30 states, along with a number of industry groups, will challenge the rule in court shortly after it is final.

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