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EPA Releases Suite of Environmental Regulations for Utility Sector: What does it mean for you?

Alert

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By Brittany Barrientos, Aimee Guzman Davenport, Quint Doan, Kristen Ellis Johnson, Dennis Lane, Betsy Smith and Sarah Lintecum Struby

On April 25, 2024, the Environmental Protection Agency (EPA) signed four final rules representing multi-media regulation (air, water, waste, climate) for the utility sector. Individually, each rule would have been notable for its impact; collectively, the rules reflect the Biden Administration's expectation of an aggressive and comprehensive approach to utility regulation. EPA said as much with its issuance: "By announcing these final rules at the same time, EPA is following through on the commitment ... to provide regulatory certainty as the power sector makes long-term investments in the transition to a clean energy economy."

A summary of each final rule is included below, which we have broken down chronologically based on the type of operations that may be impacted by each rule:

- **Past Operations:** EPA addresses contamination from historical reliance on coal-fired plants through the Legacy CCR Rule.
- **Present Operations:** EPA strengthened requirements to reduce discharges of toxic metals and other pollutants from coal-fired power plants through its Steam Electric Power Generating Effluent Guidelines, and requires immediate implementation of a new National Emission Standards for Hazardous Air Pollutants (NESHAP).
- **Future Operations:** The future transition away from coal and toward a requirement of capture and storage of 90% of carbon dioxide emissions beginning in 2032; less than 10 years away.

Comprehensively, the message to regulated entities is clear: get rolling on consolidated and comprehensive planning to transition from coal generation.

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PAST OPERATIONS: LEGACY CCR RULE

EPA announced its long-awaited final rule amending the coal combustion residuals (CCR) regulations[1] to address inactive surface impoundments (aka coal-ash ponds) at inactive coal-fired power plants, referred to as "legacy CCR surface impoundments" (the Legacy CCR Rule). The Legacy CCR Rule also imposes requirements on "CCR management units" at active CCR facilities and at inactive CCR facilities with a legacy CCR surface impoundment. It will take effect six months after publication in the *Federal Register*, and facilities are not required to meet any of the new requirements outlined below before that six-month date. Significant provisions include:

- Regulations for "Legacy Surface Impoundments": Going forward, legacy CCR surface impoundments will be subject to the same regulations that apply to inactive CCR impoundments at active power plants, except for the location restrictions (found at 40 C.F.R. § 257.60-257.64) and the liner design criteria (found at § 257.71). The final rule adopts the proposed definition of "legacy CCR surface impoundment" without revision. A legacy CCR surface impoundment must meet three criteria: (1) the unit meets the definition of a CCR surface impoundment[2]; (2) the unit contains both CCR and liquids on or after October 19, 2015; and (3) the unit is located at an inactive electric utility or independent power producer.

Although EPA's finalization of the Legacy CCR Rule responds to the U.S. Court of Appeals for the District of Columbia Circuit's direction in *Utility Solid Waste Activities Group, et al v. EPA* to initiate a rulemaking process, EPA notes that the record independently demonstrates that legacy CCR surface impoundments, which were created and filled decades before the CCR regulations were promulgated in April 2015, are the most likely to be unlined, unmonitored, and potentially impacting soil and groundwater.

- Regulations for "CCR Management Units": The Legacy CCR Rule establishes groundwater monitoring, corrective action, closure and post-closure care requirements for "CCR management units" (CCRMUs) located at active facilities and inactive facilities with a legacy CCR surface impoundment. This part of the final rule is intended to address risks posed by disposal of coal ash directly on land in areas outside of regulated units. CCRMUs consist of CCR surface impoundments and landfills that were closed prior to October 19, 2015, and inactive CCR landfills, which include inactive CCR piles.
- Facility Evaluation Reports: Owners and operators of both legacy CCR surface impoundments and CCRMUs units are required to prepare facility evaluation reports (FERs) that identify the units, include figures of the facilities and where the units are located, and the sizes of the units. Regulated utilities must post these reports on their CCR websites for public access. As proposed, the FER was required within three months of the effective date. Many commenters cited the impossibility of meeting this deadline. Those comments were acted on and, in the final rule, EPA changed the framework for FER into a two-part exercise required to be completed and posted within 15 months (FER part one) and 27 months (FER part two) of the effective date.

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Along with this pre-publication of the final Legacy CCR Rule, EPA posted lists of presumed legacy CCR surface impoundments, CCRMUs, and CCRMUs at other active facilities. Significantly, these lists differ from those included with the proposed rule and are *not* exhaustive. Potentially affected entities should examine the record as well as the applicability criteria at 40 C.F.R. § 257.50 to determine whether the data in the record is valid and if they are subject to these new provisions.

PRESENT OPERATIONS: AIR EMISSIONS, GHG REPORTING AND EFFLUENT GUIDELINES

Mercury & Air Toxics Rule

On April 24, 2024, EPA issued a pre-publication notice of the NESHAP: Coal- and Oil-Fired Electric Utility Steam Generating Units Review of the Residual Risk and Technology Review, commonly referred to as the Mercury and Air Toxics Standards (MATS) Rule for power plants, based on revisions to the coal- and oil-fired electric generating units (EGU) NESHAP as proposed in EPA's April 2023 review of 2020 residual risk and technology review. This is the latest update to the MATS rulemakings, which began in 2012.

The NESHAP applies to mercury (Hg) and several non-mercury hazardous air pollutants (HAP), including lead, arsenic, chromium, nickel, cadmium and hydrogen chloride. Exposure to all of these, depending on level and duration, are linked to various adverse health effects. Coal- and oil-fired EGUs remain among the largest emitters of both Hg and the non-Hg HAPs. EPA's 2023 review focused on developments in the costs of control technologies and the effectiveness of those controls in meeting a more stringent emission standard.

Currently, almost all EGUs use a non-Hg HAP metals surrogate, known as the fPM emission standard, to demonstrate compliance with the existing 0.030 lb/MMBtu emission standard. EPA's new final rule will set the new non-Hg HAP fPM emission standard for all existing coal-fired EGUs at 0.010 lb/MMBtu. Currently, EGUs can demonstrate compliance by either conducting quarterly stack testing or by using a particulate matter continuous monitoring system (PM CEMS). The new rule requires all coal- and oil-fired EGUs to use PM CEMS to demonstrate compliance. For EGUs that prefer to use emission limits for each of the non-Hg HAP metals, the new rule revises the emission limit for each such metal proportionately to the new 0.010 lb/MMBtu fPM standard. In addition, these EGUs must request and receive approval to use a HAP metal continuous monitoring system as the test method.

For coal-fired EGUs, the final rule proposes to have a uniform emission standard for all units, regardless of the coal type used, of 1.2 lb/TBtu or, alternatively, an output-based standard of 0.013 lb/GWh. This eliminates the less stringent standard currently available for lignite-fired EGUs.

The final rule does not modify the existing HCl emission standard or the alternative SO_2 emission standard that serves as a surrogate for all acid gas HAP for existing coal-fired EGUs. The final rule also does not require PM CEMS for integrated gasification combined cycle EGUs due to technical calibrating issues.

EPA expects substantial emission reductions from the new rule, but forecasts negative net monetized benefits because many of the benefits cannot be monetized. In its press release, EPA noted that the final rule projects $300 million in health benefits and $130 million in climate benefits over the 10-year period from 2028-2037.

Steam Electric Power Generating Effluent Guidelines

On April 25, 2024, EPA used its Clean Water Act authority and issued a final rule implementing stricter wastewater discharge standards, known as Effluent Limitation Guidelines (ELGs), for coal-fired power plants. Through this rule, EPA is targeting water used by coal-fired power plants that is then returned to bodies of water, which EPA notes can carry mercury, arsenic, selenium, nickel, bromide, chloride, iodide and nutrient pollution. EPA expects this rule to prevent more than 660 million pounds of pollution per year from being discharged into waters.

EPA established a zero-pollutant discharge limitation for:

- Flue gas desulfurization wastewater.
- Bottom ash transport water.
- Combustion residual leachate.

EPA is requiring these new limitations to be achieved by no later than December 31, 2029, with instructions to permitting authorities to choose a compliance date "as soon as possible" on or after 60 days from the rule's publication in the *Federal Register*.

EPA also established numeric discharge limitations for:

- Mercury and arsenic for combustion residual leachate that is discharged through groundwater.
- Legacy wastewater, which is wastewater discharged from surface impoundments (e.g., coal ash ponds), if those surface impoundments have not started closure under CCR regulations. The ELGs for legacy wastewater are effective 60 days after publication of the rule in the *Federal Register*.

The rule includes implementation flexibilities for a new category of EGUs that permanently cease coal combustion by 2034.[3] These EGUs are required to meet the 2020 rule requirements rather than the 2024 requirements. The rule also does away with the 2020 regulation's bottom ash transport water requirements for high-flow facilities and low-utilization EGUs, except these requirements still apply to EGUs that

permanently cease coal combustion by 2034.

The economic impact of the ELG rule on existing coal-fired power plants is still hotly contested. Clients should work closely with their state and regulators to incorporate all regulatory flexibilities when implementing the requirements of the rule.

Greenhouse Gas Reporting Rule

Also today, EPA amended the greenhouse gas (GHG) reporting rule. The Greenhouse Gas Reporting Program (GHGRP) requires large emission sources to annually report certain data and relevant information, and applies to approximately 8,000 facilities nationwide. It includes 41 source categories for which EPA has published 13 years of data under the GHGRP. In today's final rule, EPA made three key changes:

- Amends the greenhouse gas reporting rule provisions on global warming potentials.
- Expands the reporting rule to five new source categories: geologic sequestration of CO_2 with enhanced oil recovery; coke calciners; calcium carbide production; caprolactam, glyoxal and glyoxylic acid production; and ceramics production.
- Modifies requirements for certain sectors that EPA indicates are intended to close gaps, provide clarification and improve data validation.

The rules go into effect January 1, 2025, and will impact the 2025 greenhouse gas reporting year.

FUTURE OPERATIONS: CLIMATE

Greenhouse Gas Final Rule for Electric Generating Utilities

After more than a decade of attempts at regulating GHG emissions from power plants and ongoing litigation, on April 25, 2024, EPA issued a prepublication notice to formally repeal the Affordable Clean Energy Rule and at the same time finalized several actions under the Clean Air Act to address GHG emissions from fossil-fuel fired EGUs. The final rule, commonly referred to as the Greenhouse Gas Standards and Guidelines for Power Plants, will become effective 60 days after publication in the *Federal Register*. The rule sets forth New Source Performance Standards (NSPS) for New, Modified, and Reconstructed stationary combustion turbine EGUs and Emissions Guidelines for existing coal- and oil/gas-fired steam generating EGUs.

At a high level, the final rule requires reduction of GHG emissions through efficiency requirements for new and modified gas-fired combustion turbines, the phase-out of coal-fired plants, and capture and storage of 90% of carbon dioxide emissions from base load EGUs. EPA will require EGUs to implement the "best

system of emission reduction" standards (BSER) based on the type of facility and load at which it operates.

EPA believes it has authority to promulgate the final rule pursuant to the Clean Air Act section 111, which requires EPA to regulate emissions of air pollutants from existing stationary sources and to set NSPS for industrial categories which emit dangerous air pollutants. EPA's Section 111 authority has been repeatedly questioned (and narrowed) in prior GHG cases.[4] The final rule is substantially different from the proposed rule that was published in May 2023 in response to a slew of comments EPA received and considered in the final rulemaking, likely anticipating legal challenges.

NSPS for New, Modified, and Reconstructed Gas-Fired Combustion Turbine EGUs

While the proposed rule would have applied NSPS to both new and existing gas-fired combustion turbines, EPA opened a separate non-rulemaking docket to address emissions from existing EGUs in March 2024 and has removed regulation of existing EGUs from the final rule. Thus, the final rule applies NSPS only to new and modified or reconstructed gas-fired combustion turbine EGUs. BSER for combustion turbines has two components in two phases. New and reconstructed base load EGUs must (1) immediately utilize high efficiency technology, and (2) achieve 90% carbon capture and storage (CCS) by January 1, 2032. The final rule abandons the proposal to provide an alternative compliance route through co-firing with hydrogen or other low GHG-emitting fuels.

Coal-Fired EGUs

EPA's final rule recognizes the imminent retirement of existing coal-fired plants. BSER for existing units that will retire before 2040 is dependent on the remaining operating horizon of the specific EGU. Coal-fired plants that will cease operation by 2032 are exempt from the final rule. EGUs that will retire before January 1, 2039, must begin co-firing with 40% natural gas and meet a presumptive standard of 16% emissions reduction before January 1, 2030. Existing coal-fired EGUs that intend to operate beyond 2040 must implement CCS at 90% beginning January 1, 2032.

State Plans

When proposed GHG regulations are finalized, pursuant to EPA regulations, states must submit plans containing specific emissions restrictions they intend to adopt and enforce the emission guidelines for the sources within their state boundaries for EPA's approval within 18 months. If a state fails to submit a plan or if EPA disapproves the state's submission, EPA can impose a federal implementation plan on sources within the state within 12 months of the failure or disapproval.

EPA Response to Comments and Benefits of the GHG Rule

Responding to industry comments regarding threats to electricity grid reliability, EPA has allowed some implementation flexibility regarding compliance dates within state plans to allow up to one-year extension on compliance deadlines. Further, the final rule cites grid reliability concerns as its justification for EPA's adjustments from the proposed rule, including allowing longer CCS compliance time frames, and limiting the subcategories of affected sources.

EPA's regulatory impact analysis has calculated that the final rule will significantly reduce GHG emissions, expecting carbon emissions reductions of 1.38 billion metric tons by 2047 (which is equivalent to preventing the annual emissions of 328 million gasoline cars, or to nearly an entire year of emissions from the entire U.S. electric power sector), in addition to tens of thousands of tons of other harmful air pollutants such as particulate matter, sulfur dioxide, and nitrogen oxide. The final rule is expected to benefit the climate and protect public health, including reductions in fine particles and ozone in all areas of the country.

CONCLUSION

A suite of rules this significant has not been rolled out in parallel in recent history. While the Biden Administration is clearly showing its commitment to progress away from coal-fired generation in a comprehensive manner, it also indicates the priority of EPA to issue rules before the upcoming Congressional Review Act lookback period begins in the coming weeks. The scope and timing will inevitably result in litigation, which will create more uncertainty, complicating the planning process.

Stinson attorneys have significant experience with these rules, having been involved with many since they (or their predecessors) were first proposed 10 years ago. For more information on the evolving regulatory landscape, please contact Brittany Barrientos, Aimee Davenport, Andrew Davis, Quint Doan, Kristin Ellis Johnson, Kyle Foote, Dennis Lane, Betsy Smith, Sarah Struby, Claire Williams, Zachary Wright or the Stinson LLP contact with whom you regularly work.

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[1] 40 C.F.R. part 257, subpart D. The first CCR regulations were promulgated on April 17, 2015. Those regulations established minimum criteria for existing and new CCR landfills, existing and new CCR surface impoundments and inactive surface impoundments at active power plants, but did not impose any requirements on inactive surface impoundments at inactive power plants. On August 21, 2018, the U.S. Court of Appeals for the District of Columbia Circuit vacated the exemption for inactive surface impoundments at inactive facilities, holding EPA acted arbitrarily and capriciously in exempting them. *Util. Solid Waste Activities Grp. V. Env't Prot. Agency*, 901 F.3d 414 (D.C. Cir. 2018), *judgment entered*, No. 15-219, 2018 WL 4158384 (D.C. Cir. Aug. 21, 2018) ("*USWAG*"). The Court, among other things, remanded the

provision back to EPA for further rulemaking. This Legacy CCR Rule responds to that decision.

[2]A CCR surface impoundment or impoundment means a natural topographic depression, man-made excavation, or diked area, which is designed to hold an accumulation of CCR and liquids, and the unit treats, stores, or disposes of CCR. 40 C.F.R § 257.53.

[3] The mercury and arsenic ELGs for these EGUs must be met "as soon as possible" beginning 120 days after permanent cessation of coal combustion.

[4] West Virginia v. EPA, 597 U.S. 697 (2022) ("Congress did not grant EPA in Section 111(d) of the Clean Air Act the authority to devise emissions caps based on the generation shifting approach the Agency took in the Clean Power Plan.").

CONTACTS

Brittany Barrientos

Aimee Guzman Davenport

Quint C. Doan

Kristen Ellis Johnson

Betsy C. Moedritzer

Sarah Lintecum Struby

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