

KIRKLAND & ELLIS

Kirkland Alert

EPA Issues Four Final Rules Targeting Emissions From Power Plants

20 May 2024

Introduction

Last week, the U.S. Environmental Protection Agency (“EPA”) published in the Federal Register a set of four final rules targeting pollution and greenhouse gas (“GHG”) emissions from nuclear and “fossil fuel”-fired power plants (e.g., coal, oil and natural gas). These new rules, which EPA asserts are statutorily authorized under the Clean Air Act, Clean Water Act, and Resource Conservation and Recovery Act, will: (i) revise emissions guidelines for new and existing fossil fuel-fired electric generating units (“EGUs”); (ii) set technology-based emissions standards for mercury and other hazardous air pollutants emitted by units with a capacity of more than 25 megawatts; (iii) revise discharge limits for flue gas desulfurization (“FGD”) wastewater, bottom ash transport water (“BATW”), combustion residual leachate (“CRL”) and legacy wastewater; and (iv) adjust regulations for inactive coal combustion residual (“CCR”) surface impoundments at inactive electric utilities. The rules are slated to become effective later in 2024. Given the ramifications of these new rules for the power sector, however, certain states and industry groups are already challenging some of these final rules, and the final efficacy of these rules remains uncertain. This *Alert* will discuss the major requirements of each of these new rules along with expected legal challenges, building upon our prior [Alert](#) on this topic.

EPA’s Rule to Revise GHG Standards and Guidelines for Fossil Fuel-Fired Power Plants

Overview

EPA's final rule includes four actions regulating GHG emissions from new, modified, reconstructed and existing fossil fuel-fired EGUs (the "GHG Emissions Rule"). The GHG Emissions Rule: (i) finalizes revisions to emissions guidelines for existing fossil fuel-fired EGUs, including both coal-fired and oil/gas-fired steam generating EGUs; (ii) finalizes revisions to the New Source Performance Standards ("NSPS") for GHG emissions from fossil fuel-fired steam generating units that undertake large modifications; (iii) finalizes revisions to the NSPS for GHG emissions from new and reconstructed fossil fuel-fired stationary combustion turbine EGUs; and (iv) repeals the 2019 Affordable Clean Energy ("ACE") rule. EPA originally proposed the GHG Emissions Rule in May 2023, which we discussed at length in our [prior publication](#) (the "GHG Emissions Proposed Rule"). The GHG Emissions Rule was published in the Federal Register on May 9, 2024, and will take effect on July 8, 2024.

Substance of the Rule

The GHG Emissions Rule finalizes emissions standards and the best system of emission reduction ("BSER") for existing natural-gas and oil-fired steam generating units. Certain enumerated units are exempt from the new requirements, including based on certain federally enforceable permit conditions (i.e., with net-electric sales limitations, capability of combusting 50% or more non-fossil fuel, or combined heat and power units), and based on additional specified parameters that must be met. The GHG Emissions Rule includes a number of complex compliance calculations and data collection and monitoring requirements, including for compliance demonstration purposes.

For intermediate and base load units subject to the rule's requirements, routine methods of operation and maintenance are BSER. The GHG Emissions Rule also includes presumptive standards for existing natural-gas and oil-fired steam generating units that are slightly higher than the standards included in the proposed rule. For base load sources (i.e., sources with annual capacity factors greater than 45%), the presumptive standard is 1,400 lb. per megawatt-hour on a gross-output basis ("CO₂/MWh-gross"). For intermediate load sources (i.e., sources with annual capacity factors greater than 8% and less than or equal to 45%), the presumptive standard is 1,600 lb. CO₂/MWh-gross. For low load (i.e., sources with annual capacity factors less than 8%), EPA has created a uniform fuels BSER and presumptive input-based standards of 170 lb. CO₂/MMBtu for oil-fired sources and 130 lb. CO₂/MMBtu for natural gas-fired sources. EPA has implemented a compliance deadline of January 1, 2032, to meet these standards.

Additionally, the GHG Emissions Rule finalizes emissions standards for three subcategories of new and reconstructed fossil fuel-fired combustion turbines. For base load combustion turbines, there are two components to the BSER: (i) highly efficient generation (based on emissions rates that the best performing units are achieving); and (ii) utilization of CCS with 90% capture. EPA has implemented a compliance deadline at initial startup for the first component of the GHG Emissions Rule's effective date and a compliance deadline for the second component of January 1, 2032. For intermediate load combustion turbines, the rule requires highly efficient simple cycle generation to meet the emissions standard. For low load combustion turbines, the rule requires the use of lower-emission fuels to meet the emissions standards.

The GHG Emissions Rule also finalizes the NSPS for coal-fired steam generating units that undertake large modification (i.e., a modification that increases the hourly emission rate by more than 10%) to mirror emission guidelines for existing coal-fired steam generators and would require usage of the BSER of CCS with 90% capture. These units have a presumptive standard of 88.4% reduction in the annual emission rate, and GHG Emissions Rule includes a compliance deadline of January 1, 2032, for implementing CCS. However, EPA clarified that the GHG Emissions Rule includes a separate subcategory for existing coal-fired steam generating units that demonstrate a plan to permanently cease operations of such units before January 1, 2039. For existing units in that category, the BSER is co-firing with natural gas at a level of 40% of the unit's annual heat input, with a presumptive standard of 16% reduction in the annual emission rate. These units have a compliance deadline of January 1, 2030, to implement this technology. The GHG Emissions Rule also includes an applicability exemption for existing coal-fired steam EGUs that demonstrate a plan to permanently cease operations of such EGUs prior to January 1, 2032. EPA determined that units retiring prior to January 1, 2032, generally do not have cost-reasonable options for improving their GHG emissions performance, so units that will permanently cease operations prior to that date will not be subject to the GHG Emissions Rule.

While the GHG Emissions Proposed Rule considered low-GHG hydrogen co-firing as a BSER pathway, the finalized GHG Emissions Rule does not. EPA cited uncertainties identified for specific criteria used to evaluate low-GHG hydrogen co-firing as a potential BSER and determined that these uncertainties prevented EPA from including low-GHG hydrogen co-firing as a component of BSER in the GHG Emissions Rule.

Addressing Grid Reliability Concerns

During the rulemaking process, EPA received numerous comments regarding the impact these new rules could have on power grid reliability. To address these concerns, the GHG Emissions Rule grants to states the option to allow a compliance date exemption for existing sources of up to one year under certain circumstances, where the sources are installing control technologies to comply with the new NSPS. The GHG Emissions Rule also allows states to include a reliability assurance mechanism of up to one year that, under limited circumstances, would allow existing sources that planned to cease operating by a certain date to temporarily remain available to support reliability. However, the GHG Emissions Rule mandates that any extensions exceeding one year must be addressed through a state plan revision. States must also show an adequate demonstration of need and provide certification of such need by a reliability authority and obtain approval from the relevant EPA Regional Administrator. EPA noted that the Federal Energy Regulatory Commission will be consulted for any extension requests exceeding six months. Lastly, for new fossil fuel-fired combustion turbines, the GHG Emissions Rule creates a mechanism whereby baseload units can request a one-year extension of the CCS compliance deadline under certain circumstances.

Differences From GHG Emissions Proposed Rule

In the GHG Emissions Rule, EPA clarified that it is not finalizing the NSPS for newly constructed or reconstructed fossil fuel steam EGUs (as was proposed in the GHG Emissions Proposed Rule) because EPA anticipates that few of these EGUs will be constructed or reconstructed in the foreseeable future. However, EPA noted that it is aware that a new coal-fired power plant is under consideration in Alaska.

EPA's Rule to Revise Mercury Air Toxic Standards

Overview

Section 112 of the Clean Air Act ("CAA") allows EPA to set standards for major sources of hazardous air pollutants ("HAPs") using maximum achievable control technologies ("MACT"). The MACTs require the maximum degree of reduction in emissions of HAPs and can include a prohibition of HAPs emissions where possible. EPA's final rule includes actions that further regulate coal- and oil-fired EGUs (the "MATS Rule"). The MATS Rule finalizes revisions to the national emissions standards for HAPs proposed on April 24, 2023 (the "MATS Proposed Rule"). The MATS Rule was published on May 7, 2024, and will take effect on July 8, 2024.

Substance of the Rule

In the MATS Rule, EPA introduced more stringent emissions standards for non-mercury HAP metals using filterable particulate matter (“fPM”), which acts as a surrogate for the non-mercury HAP metals. The MATS Rule decreases the emission standard from 0.030 pounds of fPM per million British thermal units (“MMBtu”) to 0.010 lb/MMBtu of fPM for all affected coal-fired EGUs and eliminates the low-emitting EGU program for fPM. Coal and oil-fired EGUs will need to demonstrate compliance with the new fPM standard by using a particulate matter continuous emission monitoring system. Previously, compliance could have been demonstrated using quarterly performance testing.

Based on public comments, EPA is lowering, rather than removing, the existing alternative emission limits for individual non-mercury HAP metals like lead, arsenic, chromium, nickel, cadmium, and for the total non-mercury HAP metals to 0.010 lbs/MMBtu. Owners and operators of EGUs seeking to use these alternative standards must request and receive approval to use a HAP metal continuous monitoring system as an alternative test method.

EPA also adjusted the mercury emission standards for existing lignite-fired EGUs, which will align the standards for lignite-fired EGUs to the standards of other coal-fired EGUs. The new standard will be 1.2 pounds of mercury per trillion BTUs (“TBtus”) (reduced from 4.0 pounds of mercury per TBtu) or an alternative output-based standard of 0.013 pounds per gigawatt-hour.

The MATS Rule also removes one of two prior options for defining the startup period for MATS-affected EGUs. Under the previous regulations, startup ends: (i) when any of the steam from the boiler is used to generate electricity for sale over the grid or for any other purpose, including on-site usage; or (ii) four hours after the EGU generates electricity that is sold or used for any other purpose (including on-site usage) or four hours after the EGU makes useful thermal energy for industrial, commercial, heating or cooling purposes, whichever is earlier. The MATS Rule removes the second option, and now only allows use of the first option, which EPA noted was already used by the majority of EGUs.

Notably, EPA did not propose and is not finalizing modifications to the hydrogen chloride emission standard or the alternative sulfur dioxide emission standard, which serve as a surrogate for all acid gas HAPs for existing coal-fired EGUs. The MATS Rule also did not reopen the 2020 Residual Risk Review, which found that risks from the coal- and oil fired EGU source category due to emissions of air toxics are acceptable and that the existing national emissions standards for hazardous air pollutants provide an ample margin of safety to protect public health. EPA has instead partially granted a

petition for the review of the 2020 Residual Risk Review by reviewing the startup and shutdown provisions from the MATS Proposed Rule and will respond to other aspects of the petition in a separate action.

Differences From MATS Proposed Rule

Unlike in the MATS Proposed Rule, EPA will not require the use of a particulate matter continuous emission monitoring system for existing integrated gasification combined cycle EGUs, citing technical calibration issues with emission monitoring systems.

EPA's Rule to Reduce Pollutants Discharged Through Wastewater From Steam-Electric Power Generation

Overview

EPA's final rule to reduce wastewater pollutants (the "Wastewater Rule") includes actions to tighten effluent limitations and guidelines ("ELGs") for wastewater discharges from steam electric power generating point source category applicable to FDG wastewater, BATW, CRL and legacy wastewater at existing sources (e.g., coal ash ponds in surface impoundments) discharged from new and existing sources. In addition, the Wastewater Rule establishes numeric discharge limitations for mercury and arsenic for CRL that is discharged through groundwater and for legacy wastewater from certain surface impoundments and eliminates less stringent requirements for two subcategories of facilities, high-flow facilities and low-utilization energy generating units.

Prior to the Wastewater Rule, EPA's most recent updates to the ELGs for steam EGUs were promulgated in 2015 and in 2020. In a separate direct-to-final rule in 2023, EPA created a subcategory of EGUs planning to cease the combustion of coal by 2028 and subjected those EGUs to less restrictive standards than those standards promulgated in the 2015 and 2020 rules. EPA originally proposed the new rule in March 2023 as a supplemental rule (the "Wastewater Proposed Rule"). The Wastewater Rule was published in the Federal Register on May 9, 2024, and will take effect on July 8, 2024.

Substance of the Rule

For existing sources that discharge directly to surface water, with certain exceptions, the Wastewater Rule establishes the following effluent limitations based on Best Available Technology Economically Available ("BAT"): (i) a zero-discharge limitation for

all pollutants in FGD wastewater, BATW and CRL; and (ii) numeric (non-zero) discharge limitations for mercury and arsenic in unmanaged CRL and for legacy wastewater discharged from surface impoundments during the closure process if closure has not commenced under the Coal Combustion Residuals regulations as of the Wastewater Rule's effective date.

The Wastewater Rule also eliminates the 2020 rule's less stringent BAT requirements for high-flow facilities and low-utilization electric generating units, except to the extent applicable to EGUs planning to permanently cease coal combustion by 2034 (a new subcategory created by the Wastewater Rule), or to the existing subcategory of EGUs planning a permanent cessation of coal combustion by 2028. For both the existing and new subcategories of EGUs, EPA finalized additional reporting and recordkeeping requirements and zero-discharge limitations applicable after EGUs cease coal combustion, and procedural requirements for facilities to demonstrate permanent cessation of coal combustion or that permanent retirement will occur. For EGUs ceasing coal combustion by 2034, the Wastewater Rule retains the 2020 rule's requirements for FGD wastewater and BATW, and the pre-2015 Best Professional Judgment-based requirements for CRL, rather than requiring the more stringent zero-discharge requirements for these waste streams. After these EGUs permanently cease coal combustion, the EGUs must meet limits for arsenic and mercury based on chemical precipitation for CRL.

Where BAT limitations in the Wastewater Rule are more stringent than previously established BAT limitations or Best Practicable Control Technology Currently Available, new limitations for direct dischargers do not apply until a date determined by EPA that is as soon as possible following the date that is 60 days after May 9, 2024, but no later than December 31, 2029. For indirect dischargers (i.e., discharges to publicly owned treatment works ("POTWs")) the final rule establishes pretreatment standards for existing sources that are the same as the BAT limitations, except with respect to limits for total suspended solids ("TSS"), which do not pass through POTW filtration systems. Pretreatment standards are directly enforceable and apply as of the date that is three years after May 9, 2024.

Lastly, the Wastewater Rule requires facilities to post certain information, such as details of discharges and wastewater treatment systems in use, to a publicly available website within 60 days of May 9, 2024 pursuant to 40 CFR 257.107 reporting requirements.

Differences From Wastewater Proposed Rule

In the Wastewater Rule, EPA provides a revised description of the steam electric power generating industry to incorporate major changes such as additional retirements, fuel conversions, ash handling conversions, wastewater treatment updates and updated information on capacity utilization, instead of relying on previous general descriptions of the industry seen in the Wastewater Proposed Rule.

EPA's Rule on Legacy Coal Combustion Residuals

Overview

EPA's final rule published in the Federal Register on May 8, 2024, finalized changes to the CCR regulations specific to the control and cleanup of CCR for inactive surface impoundments at inactive electric utilities, otherwise known as legacy CCR surface impoundments (the "Legacy CCR Rule"). The Legacy CCR Rule amends EPA's 2015 CCR Rule, which did not impose any requirements on inactive facilities, in response to a 2018 decision by the U.S. Court of Appeals for the District of Columbia Circuit. The Legacy CCR Rule largely requires legacy CCR surface impoundments to conform to existing requirements for inactive CCR surface impoundments at active facilities, with certain exceptions for location restrictions and liner design criteria. The Legacy CCR Rule was originally proposed in May 2023 (the "Legacy CCR Proposed Rule") and was discussed at length in our prior [Alert](#). The Legacy CCR Rule is scheduled to become effective on November 4, 2024. Potential litigants will have 90 days from the May 8, 2024, publication date to file lawsuits challenging the Legacy CCR Rule.

Substance of the Rule

The Legacy CCR Rule expands the universe of facilities previously subject to CCR regulation, providing that impoundments that contained CCR and liquids on or after October 19, 2015, located at power plants that stopped generating power prior to that date, are subject to the new regulations, even if all CCR and liquids were removed from the impoundment prior to the effective date of the Legacy CCR Rule. If the facility completed closure by removal before the effective date of the Legacy CCR Rule, the facility is only required to post documentation on its CCR website that it has met the standards for regulatory closure or partially meet requirements, as applicable. Certain compliance requirements related to security, documentation and inspection become effective on the effective date; other design and operating criteria deadlines range from two to 18 months after the effective date, with groundwater monitoring and corrective action requirements effective 30 months after the effective date; written closure and post-closure plans due within 36 months of the effective date, and

initiation of closure and attendant requirements within 42 months of the effective date.

Further, previously unregulated solid waste management of CCR that involve the direct placement of CCR on land at CCR facilities will now be subject to a set of additional requirements. Coal Combustion Residual Management Units (“CCRMUs”) are subject to the Legacy CCR Rule if located at: (i) a facility currently regulated under the 2015 CCR Rule; (ii) an inactive facility with a legacy CCR surface impoundment; or (iii) a facility that, on or after October 19, 2015, produced electricity for the grid but was not regulated under the 2015 CCR Rule because it had ceased placement of CCR in onsite CCR units and did not have an inactive CCR surface impoundment. Owners or operators of any of covered CCR facilities are required to conduct a facility evaluation to identify and delineate any CCRMUs containing one ton (or more) at the facility and document the findings in two reports. In addition, owners or operators of a covered CCR facility are required to ensure that all identified CCRMUs containing 1,000 tons or more comply with the existing requirements in 40 CFR part 257, subpart D for groundwater monitoring, corrective action (where necessary), and in certain cases, closure and post-closure care requirements. CCRMU compliance requirements start slightly later than inactive CCR surface impoundments at inactive facilities.

Differences From Legacy CCR Proposed Rule

After considering feedback from numerous commenters, EPA is allowing for a longer period prior to the effective date of the Legacy CCR Rule (i.e., the Legacy CCR Rule is scheduled to be effective in November 2024, rather than July 2024 when the other final rules discussed in this *Alert* are effective) and for implementation of certain required actions. New definitions for “infiltration” and “liquids” were also added to the Legacy CCR Rule to address public comments, as well as issues in ongoing litigation in the U.S. Court of Appeals for the District of Columbia Circuit. The Legacy CCR Rule also establishes a subset of requirements for legacy CCR surface impoundments closed prior to the Legacy CCR Rule’s effective date, including those that qualify for deferral because they were conducted in accordance with substantially equivalent state or federal requirements.

Challenges to the Final Rules

Looming Legal Challenges Signal Fight Over Future of Power

Section 111(d) of the CAA authorizes EPA to regulate existing power plants by setting performance standards to reduce pollutant emissions; however, the limits of EPA’s

authority to regulate under Section 111(d) of the CAA will be a point of contention for the GHG Emissions Rule in particular. Agencies historically had deference to act in the absence of clear Congressional intent on an ambiguous statute or with Congress' intentional delegation of authority; however, the Supreme Court has repeatedly found that when agencies promulgate a regulation or rule on an issue of major national significance, that action must be supported by clear congressional authorization, also known as the major questions doctrine. One of the most notable recent demonstrations of the major questions doctrine occurred in *West Virginia v. EPA* where the Supreme Court ruled in 2022 that EPA had to adjust its approach to power plant emissions rulemaking to focus on implementing technology-based changes within the individual plant "fence line," rather than encouraging a system-wide "generation shifting" approach.

In May 2024, 27 states and the National Rural Electric Cooperative Association ("NRECA"), along with the National Mining Association ("NMA") and America's Power, jointly filed petitions before the D.C. Circuit, requesting that the court unravel the GHG Emissions Rule, as it "exceeds [EPA's] statutory authority, and otherwise is arbitrary, capricious, an abuse of discretion, and not in accordance with law." The petitioners allege that the GHG Emissions Rule ignores the Supreme Court's holding in *West Virginia v. EPA*, which the West Virginia attorney general's office said warned EPA not to use a narrow regulation to force coal-fired power plants into retirement. The petition also alleges that the GHG Emissions Rule strips states of discretion, while using technologies that "don't work in the real world." Further, the West Virginia attorney general stated that his office plans to file a motion to stay the GHG Emissions Rule as soon as possible.

The GHG Emissions Rule lawsuit was filed a day after 23 states, led by North Dakota and West Virginia, filed a petition for review of the MATS Rule. Echoing similar criticisms, North Dakota Attorney General Wrigley stated in a press release that, in enacting the MATS Rule, the Biden administration has intentionally set impossible standards to destroy the coal industry and has ignored its statutory limitations.

The Supreme Court recently heard two cases with the potential to reverse or narrow the so-called Chevron doctrine, a doctrine which grants administrative agencies discretion to reasonably interpret ambiguous statutory language. Such a ruling could open new avenues to challenge EPA's final rules. Kirkland will continue to monitor challenges brought to this suite of power plant rules.

Potential Congressional and Executive Actions

Certain members of Congress have expressed an intent to oppose the GHG Emissions Rule through congressional action. For example, Democratic West Virginia Senator Joe Manchin issued a press release stating that he would oppose all EPA nominees until the new standards are halted. If Senator Manchin stands firm in this pledge, the successful confirmation of future EPA nominees would require the support of every other remaining Democrat in the Senate based on the current political make up. Further, U.S. Senator Shelley Moore Capito (R-W.Va) pledged to introduce a Congressional Review Act resolution of disapproval to overturn the new rule after it is finalized. The Congressional Review Act can be used to overturn recently finalized rules with the passage of resolutions by a simple majority in each chamber of Congress. The President can veto such a measure should it be successful in Congress. It is unlikely that these congressional measures would succeed given the current makeup of Congress and the current President. However, it is possible the process will extend past the 2024 election, and a new Congress and Presidential Administration could be less supportive of the rules, although the Congressional Review Act would likely not be a fruitful option to overturn this slate of rules post-election, given that the final rules will have already taken effect. A future administration opposed to the new rules could require EPA to pass new rules undercutting or significantly modifying the final rules, much as former President Trump did with the ACE Rule, which replaced the Obama era Clean Power Plan in 2019. For example, U.S. Representative Carol Miller (R-W.Va.) and Senator Capito introduced the Protect Our Power Plants Act to stop the EPA from finalizing, implementing or enforcing these rules.

Next Steps for the Final Rules

All four final rules were published in the Federal Register in May 2024 and will take effect in July 2024, with the exception of the Legacy CCR Rule which will take effect in November 2024. Challenges to the rules commenced immediately, with 27 states and industry trade groups challenging the GHG Emissions Rule, and 23 states challenging the MATS Rule in federal court (discussed above). While these challenges play out, investors, companies and organizations with interests in power plants should follow the implementation of the final rules, including the potential for additional legal challenges, and consult with counsel and other advisors on potential next steps to take. Kirkland will continue to monitor any challenges to the final rules and provide guidance regarding implementation.

Authors

Paul D. Tanaka, P.C.

Partner / Bay Area – San Francisco / Houston

James Dolphin, III

Partner / Houston

Jonathan E. Kidwell

Partner / Dallas

Stefanie I. Gitler

Partner / Washington, D.C. / Houston

Emily Tabak

Partner / Salt Lake City

Alex Noll

Associate / Houston

Anna Todd

Associate / Houston

Alyssa Huang

Associate / Houston

Related Services

Practices

- Environmental

Suggested Reading

- 15 May 2024 Press Release Kirkland Advises iQor on Sale of Majority Stake to Mill Point Capital

- 30 April 2024 Press Release Kirkland Advises Generate Capital in Investment in Pine Gate Renewables
- 29 April 2024 Kirkland Alert PFAS Update: EPA Designates PFOA and PFOS as Hazardous Substances Under CERCLA

This publication is distributed with the understanding that the author, publisher and distributor of this communication are not rendering legal, accounting, or other professional advice or opinions on specific facts or matters and, accordingly, assume no liability whatsoever in connection with its use. Pursuant to applicable rules of professional conduct, this communication may constitute Attorney Advertising.

© 2024 Kirkland & Ellis International LLP.