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# The EPA's Latest Efforts to Regulate Greenhouse Gas Emissions

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*Special to the Legal*

In Executive Order 14008, President Joe Biden made climate change a priority of his administration and established a goal of net-zero emissions economywide by 2050. The U.S. Environmental Protection Agency (EPA) has taken aggressive steps to reduce greenhouse gas (GHG) emissions across industry sectors. In the last few months, the EPA has finalized several regulations pertaining to GHG emissions, including revising the Greenhouse Gas Reporting Rule (GHGRR); issuing new source performance standards (NSPS) applicable to fossil-fuel powered power plants; and finalizing updated standards applicable to the crude oil and natural gas sector. This article provides an overview of these three recent EPA actions.

## REVISIONS TO THE EPA'S GHG REPORTING PROGRAM

On April 25 and May 14, the EPA revised the GHGRR to expand the scope and accuracy of GHG reporting. 89 Fed. Reg. 31805 (Apr. 25, 2024) and 89 Fed. Reg. 42062 (May 14, 2024). The revisions primarily pertain to Municipal Solid Waste (MSW) Landfills and Petroleum and Natural Gas Systems, codified in Subparts HH and W of 40 CFR, Part 98, respectively. The EPA also added five subparts, bringing the following industries within the program's purview: geological sequestration of carbon dioxide; coke calciners; calcium carbide production; caprolactam, glyoxal, and glyoxylic acid production; and ceramics production.

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Under Subpart HH, MSW landfills must now identify the following information for each methane measurement location within gas collection systems: the type of destruction device, total annual hours where gas was sent to the destruction device; parameters indicative of effective operation; and the fraction of recovered methane reported for the measurement location directed to the destruction device. Modeling equations have been updated to account for methane emission events that were previously not "well quantified" by omitting from operating hours times when collection systems are "shut down" or "poorly operating," and times when destruction devices are "poorly operating." The EPA also updated the factors used to model methane generation at landfills (i.e., degradable organic carbon (DOC) and k values) to encompass "uncharacterized waste." The EPA believes these updates will increase the accuracy of methane emissions modeling based on waste streams at MSW landfills. Moreover, effective Jan. 1, 2025, reporters will be required to apply collection efficiencies that are 10% below the previous version of the rule.

Under Subpart W, the EPA now requires previously unreported petroleum and natural gas system sources—such as other large release events, nitrogen removal units, produced water tanks, mud degassing, and crankcase venting—to report methane emissions. The revisions also add calculation methodologies that allow for direct emissions measurements for certain sources and include strengthened reporting requirements. To reduce regulatory burden, the EPA has stipulated that compliance qualifications with the GHGRR fulfill those outlined under the revised NSPS for Oil and Gas Facilities, discussed later in this article.

## THE POWER PLANT RULE

For years, the EPA has attempted to regulate GHG emissions from fossil fuel-fired power plants, first through the Obama administration's Clean Power Plan, then the Trump administration's Affordable Clean Energy (ACE) Rule. On May 9, the Biden administration finalized the Power Plant Rule (the PPR) to reduce carbon dioxide emissions from fossil fuel-fired power plants (a.k.a. electric generating units or EGUs). 89 Fed. Reg. 39798 (May 9, 2024). The PPR, effective July 8, 2024, repeals the ACE Rule, establishes GHG emission guidelines applicable to

existing fossil fuel-fired steam generating EGUs, and revises the NSPS for GHGs for new, reconstructed, and modified fossil fuel-fired stationary combustion turbine EGUs.

The PPR is premised on the use of carbon capture and sequestration/storage (CCS) and natural gas co-firing to reduce emissions from existing coal-fired power plants. EGUs that will permanently cease operation by Jan. 1, 2032, have no emission obligations. Units ceasing operations before Jan. 1, 2039, must comply with an emission rate based on 40% natural gas co-firing by Jan. 1, 2030. Units operating after Jan. 1, 2039, must comply with an emission rate based on the application of CCS with 90% capture by Jan. 1, 2032. Large modifications to existing EGUs that increase an hourly emission rate by more than 10% are required to comply with an emission rate based on 90% CCS.

The PPR also requires new and reconstructed EGUs to similarly reduce emissions based upon the operational time of each unit. "Baseload units" (operating more than 40% of the time) must reduce emissions equivalent to 90% CCS by Jan. 1, 2032. "Intermediate" EGUs (operating 20%-40% of the time) are required to meet a performance threshold of an efficient simple cycle plant, or 1,150 pounds of CO2/MWh. Low load EGUs (operating less than 20% of the time) must use lower-emitting fuels.

Lastly, EPA formally repealed the ACE Rule, finding that the rule inappropriately relied on heat rating improvements that provide negligible CO2 emissions reduction or increase emissions; improperly rejected the use of CCS and natural gas co-firing; and failed to provide states with adequate guidance on the degree of emission limitations that must be reflected in the standards of performance.

The EPA asserts that the PPR complies with the Supreme Court's ruling in *West Virginia v. EPA,* 577 U.S. 1126 (2022), which struck down the Clean Power Plan based on the "Major Questions Doctrine." To date, 25 states, led by West Virginia, have formed a coalition to oppose the PPR, alleging the PPR reaches beyond EPA's scope of authority, and asking that the D.C. Circuit stay its implementation.

## REVISED NSPS FOR THE OIL AND NATURAL GAS SECTOR

On March 8, 2024, the EPA finalized the "Methane Rule." 89 Fed. Reg. 16820 (March 8, 2024). The Methane Rule revises existing NSPS for Crude Oil and Natural Gas Facilities under 40 C.F.R. Part 60, Subparts OOOO and OOOOa, establishes a new NSPS for sources that commenced construction, modification or reconstruction after Dec. 6, 2022, (Subpart OOOOb), and establishes presumptive emissions guidelines (EGs) for existing sources that commenced construction, modification or reconstruction before Dec. 6, 2022, (Subpart OOOOc). While the changes to Subparts OOOO, OOOOa, and OOOOb take effect May 7, 2024, the EGs are only effective three years after the EPA approves a state implementation plan implementing the requirements (by March 9, 2029).

The Methane Rule changes the requirements for Crude Oil and Natural Gas Facilities in three notable ways. First, the rule establishes a new "Super Emitter Program" for existing sources (subject to Subparts OOOO, OOOOa, and OOOOc) and new sources (subject to Subpart OOOOb) under which the EPA will certify third parties to use remote-sensing technologies to identify "super-emitter leaks" (emissions events located at or near oil and gas facilities with quantified emission rates of > 100 kilograms of methane per hour). Owners and operators in the vicinity must then investigate and address the cause of the leak, and report the results to the EPA. Second, Subpart OOOOb expands the types of sources subject to regulation to include compressors at centralized tank batteries, liquids unloading, and associated gas from oil well located at oil and natural gas well sites, and process pumped located at natural gas gathering and boosting compressor stations.

Lastly, the rule restricts the use of natural gas flaring. New sources under Subpart OOOOb must phase out routine flaring from new oil wells. After a phase-in period, absent safety concerns or defined malfunctions, gas must be routed to a sales line, used onsite as fuel, or reinjected into the wells. Under Subpart OOOOc, existing wells emitting < 40 tons of methane per year may use flaring if the flare or control device achieves 95% emission reduction. Existing wells emitting > 40 tons per year are prohibited from flaring absent a showing of technical infeasibility. Twenty-four states have challenged the Methane Rule, asking the U.S. Court of Appeals for the D.C. Circuit to vacate it entirely. The EPA has also granted industry members' petitions for reconsideration on technical issues relating to flaring.

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The EPA continues to plow ahead promulgating regulations to reduce GHG emissions. Although this article discusses three recent actions, additional actions are on the horizon, and will be necessary for the Biden Administration to achieve its lofty climate change goals.

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