Davis Polk

EPA announces final rule aimed at significant methane reductions from oil and gas operations

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On December 2, 2023, EPA announced its final rule regulating methane and volatile organic compounds emissions from the oil and gas industry. The rule updates current standards applicable to new facilities and extends them to existing facilities, and is estimated by EPA to significantly reduce methane emissions. This client update provides an overview of the key elements of the rule, and discusses noteworthy changes from EPA's earlier proposals and key takeaways.

Overview

On December 2, 2023, at the 28th UN Climate Change Conference in Dubai, United Arab Emirates, known as COP28, the U.S. Environmental Protection Agency (EPA) released its final rule under the Clean Air Act (the CAA) to reduce methane emissions and other air pollutants from new, modified and reconstructed facilities in the oil and gas industry (the Final Methane Rule). The Final Methane Rule is aimed at significantly reducing methane emissions – an approximately 80% reduction, according to EPA estimates – through a variety of measures, including:

- **Leak detection and repair:** Periodic inspections of well sites and compressor stations for leaks of methane (referred to as fugitive emissions in the Final Methane Rule) are required. The frequency of these inspections varies based on the type of facility and survey method. Follow up repairs and inspections are required on a prescribed timetable.
- **Restrictions on flaring and venting of methane:** Routine flaring of gas at most types of oil well sites will be fully phased out over time. Venting of methane must be eliminated or minimized during well liquids unloading, and process controllers (formerly referred to as pneumatic controllers) and pumps are generally required to meet a zero-emissions standard.
- **Third-party monitoring of "super emitter" events:** The Super-Emitter Response Program provides a process for third parties to monitor large methane releases and report them to EPA, which in turn can require owners or operators to investigate and address the releases and report the results to EPA.

The Final Methane Rule is the culmination of a key element of the Biden administration's climate change agenda, which was set into motion in an executive order issued at the outset of the administration. The rule builds on the November 2022 Supplemental Proposal and November 2021 Proposal, and it reflects input provided by various stakeholders during EPA's public comment period. While the Final Methane Rule largely retains the November 2022 Supplemental Proposal, it includes changes from the earlier proposal designed to address industry concerns in certain respects, such as increased EPA oversight and involvement in the Super-Emitter Response Program, longer timelines for compliance with certain required equipment upgrades and work practice improvements, and the finalization of regulation of existing sources under state plans. Other provisions, however, such as a near-total phase out on flaring at well sites and new regulations on storage vessels, may increase compliance burdens on the oil and gas industry as compared to the earlier proposals.

The Final Methane Rule includes new source performance standards (NSPS) applicable to new, modified and reconstructed sources after December 6, 2022. Due to the mechanics of Section 111 of the CAA, the Final Methane Rule establishes emissions guidelines as well as corresponding performance standards that EPA considers "presumptive" for sources in existence as of December 6, 2022, which largely mirror the NSPS in the Final Methane Rule.

Key provisions[1]

Leak detection and repair at well sites and compressor stations

- **Inspection frequency.** The Final Methane Rule requires inspections for methane leaks on a wider and more frequent basis than current rules:
  - quarterly audible, visual and olfactory (AVO) inspections for single wellhead only and small well sites,
  - quarterly AVO inspections and semiannual optional gas imaging (OGI) inspections for multi-wellhead only well sites,
  - bimonthly AVO inspections and quarterly OGI inspections for well sites with major production and processing equipment and centralized production facilities, and
  - monthly AVO inspections and quarterly OGI inspections for compressor stations.

In contrast, current rules require semiannual OGI inspections for well sites and quarterly OGI inspections for compressor stations.

- **Leak repair timelines.** In general, operators have 15 days to make an initial attempt to repair a leak detected through AVO and another 15 days for a final repair. For OGI inspections, the first repair attempt must occur within 30 days after leak detection and a final repair must occur within 30 days after the first attempt.
- **Use of alternative detection technologies.** The Final Methane Rule permits the use of alternative methods using advanced technologies such as on-site sensor networks or aerial flyovers using remote sensing technologies as well as continuous monitoring systems. The required frequency of the testing varies depending on the detection threshold of the technology (e.g., less frequent testing would be required with technologies with a lower detection threshold). The Final Methane Rule provides additional flexibility compared with the November 2022 Supplemental Proposal by allowing the use of a combination of different technologies. The use of alternative technologies are subject to approval by EPA in accordance with standards outlined in the Final Methane Rule.
- **Well closure requirements.** Leak inspections are required until the closure of the well. After well closure is complete, a final OGI inspection of the site must be conducted and any emissions detected must be eliminated. In addition, facilities must submit a well closure plan to EPA.

The Super-Emitter Response Program

The Final Methane Rule establishes the Super-Emitter Response Program, which allows third-parties to use remote sensing technologies such as satellites or aerial surveys to monitor facilities for leaks of methane of over 100 kg/hour or more, known as super-emitter events. Key elements of the program, which differ in important ways from the November 2022 Supplemental Proposal, are summarized below.

- **Third-party certification.** In response to industry comments, the Final Methane Rule provides more detail regarding the process for EPA approval of third parties wishing to participate in the program. Under the Final Methane Rule, third parties are required to seek EPA certification in advance by submitting a variety of information to EPA, including the monitoring technology they plan to use, which is subject to the same review process applicable to the use of alternative technologies by facilities to satisfy leak detection requirements under the Final Methane Rule described above. To help to ensure that third parties do not enter a facility's property, the Final Methane Rule also limits the range of technologies that can be used by third parties to those that operate remotely. The Final Methane Rule also provides details for the standards governing decertification of a third party by EPA (e.g., if EPA finds substantial, repeated errors in the third-party's reporting or the third party uses technologies not included in its certification).
- **Notification procedures.** Upon identifying a super emitter event, the certified third party reports the information to EPA, which then evaluates the data for completeness and accuracy. Once EPA completes its review, it will then notify the owner or operator of the facility alleged to be a super-emitter. This notification triggers a requirement for the

facility to conduct an investigation, report the results to EPA and address any leaks it identifies. EPA's "gatekeeping" role in the process under the Final Methane Rule is meant to address industry opposition to the November 2022 Supplemental Proposal, which provided that the third-party monitor would notify the allegedly responsible facility directly. In addition, under the Final Methane Rule, third-party notifications are made public by EPA on a "Super-Emitter Program Portal" once it meets EPA's review standards; however, the event is not publicly attributed to a particular company until the attribution is confirmed by the company's response (or by EPA if the company fails to respond).

Restrictions on flaring of natural gas

- **Limitations on flaring of associated natural gas at oil wells.** The Final Methane Rule phases in over time a total ban on flaring of natural gas from new oil wells except in emergencies. This contrasts with the November 2022 Supplemental Proposal, which allowed flaring if it was technically infeasible or unsafe to retrofit the equipment needed to utilize the gas, transport it to market or reinject it. At existing oil wells that emit above 40 tons per year and modified and reconstructed oil wells at any emissions level, flaring is only permitted if there are no available sales lines to collect the gas and the facility demonstrates that alternatives to routine flaring are not feasible. Routine flaring is only permitted at existing oil wells at or below the 40 tons per year emissions threshold (another departure from the November 2022 Supplement Proposal, which would have imposed flaring restrictions for these wells).
- **Other regulations on flaring.** Flares that are permitted to be used under the Final Methane Rule are subject to a variety of standards and work practice requirements designed to ensure that they achieve a 95% reduction in methane emissions.

Standards for equipment

- **Zero-emissions standards for most pneumatic pumps and controllers.** All pneumatic pumps must meet a zero-emissions standards (for example, by powering the pump with electricity or routing the natural gas to a process), with the exception of sites with three or fewer natural gas-driven diaphragm pumps where electricity is unavailable. At these sites, natural gas must either be routed to a vapor recovery unit or other control device if available onsite. Pneumatic controllers (called process controllers in the Final Methane Rule) must also meet a zero-emissions standard other than sites in Alaska without access to electricity.
- **Non-well site compressors.** New, modified, and reconstructed wet seal centrifugal compressors not at well sites are subject to a 95% emissions reduction standard or a requirement to monitor or repair the compressor to ensure a certain volumetric flow rate is not exceeded depending on the type of compressor. All other non-well site compressors, including new, modified, and reconstructed dry seal or reciprocating compressors as well as existing compressors of any type are subject to volumetric flow rate standards of varying levels rather than an emissions reduction standard.

Regulating venting during oil and gas operations

- **Liquids unloading.** The Final Methane Rule requires that facilities employ practices that "minimize or eliminate venting of emissions" during liquids unloading. If the facility employs practices that do not eliminate venting, the facility must adopt a best management practice plan that includes criteria specified in the Final Methane Rule designed to reduce venting to the "maximum extent possible." Alternatively, facilities have the option of adopting a numeric emissions reduction standard of 95% by routing emissions to a control device.
- **Well completions.** For most non-wildcat[2] and non-delineation wells,[3] facilities must route all flowback to a storage or completion vessel and separator and use any recovered gas as an onsite fuel source or other purpose. If reuse is not technically feasible, recovered gas should be combusted. For wildcat or delineation wells (and non-wildcat and non-delineation low pressure wells), all flowback must be routed to a completion combustion device or well completion vessels, or a separator must be used with any recovered gas sent to a completion combustion device. If combustion would be hazardous or adversely impact the environment, venting is permitted.

Timelines

As discussed above, existing sources are regulated under plans prepared by states and approved by EPA pursuant to Section 111(d) of the CAA. While the November 2022 Supplemental Proposal gave states 18 months to complete that work, the Final Methane Rule allows states 24 months to submit regulatory plans to EPA for approval after the publication of the final rule. Additionally, under the Final Methane Rule, states may give existing facilities 36 months after the

deadline for state plan submission to adhere to the state regulatory standards, meaning existing facilities may have up to five years after the publication of the Final Methane Rule to comply with state requirements (or the standards set by EPA in the absence of an approved state plan).

Integration with the IRA's methane fee

The Methane Emissions Reduction Program established in the Inflation Reduction Act of 2022 (the IRA), which imposes fees on methane emissions that exceed certain defined thresholds from onshore and offshore oil and natural gas facilities that are subject to EPA's greenhouse gas reporting rule[4] starting in 2025 (the Methane Fee), overlaps significantly with the Final Methane Rule. As discussed in our prior client updates (here and here), the IRA includes a "safe harbor" whereby facilities would be exempt from the Methane Fee if they comply with methane standards established by EPA under Section 111(b) or (d) of the CAA if such standards are (1) in effect in all states, and (2) determined by EPA to achieve equivalent or greater emissions reductions compared to those set forth in the November 2021 Proposal. However, this safe harbor is unlikely to provide protection prior to the Methane Fee becoming effective in 2025. As discussed above, the timeline for regulations for existing sources under Section 111(d) will not become effective until the late 2020s. In addition, EPA has yet to make an "equivalency" determination regarding the Final Methane Rule. While in the November 2022 Supplemental Proposal, EPA solicited comments on how this "equivalency" determination should be made, in the preamble to the Final Methane Rule, EPA indicated that this determination is outside the scope of this rulemaking. The design and administration of the Methane Fee – including new rules on how methane emissions are to be reported under EPA's greenhouse gas reporting rule – itself is the subject of a separate EPA rulemaking.

Key considerations

- **Impact on the oil and gas industry.** According to EPA, the overall costs to industry is estimated to range from $22 to $31 billion over the period 2024-2038. Certain sectors of the industry are likely to be more significantly impacted than others. On the one hand, many larger oil and gas companies have been anticipating limits on methane for many years and therefore may be relatively well positioned to comply. In fact, the Final Methane Rule was announced on the same day a group of 50 of the world's largest oil and gas producers announced at COP28 the Oil and Gas Decarbonization Charter, which includes a pledge to reach "near zero" emissions at oil and gas production facilities and eliminate routine flaring by 2030. On the other hand, the impact of the rule on existing, lower production wells, which are often operated by smaller companies, is likely to be significant. These facilities – particularly those in states that do not already regulate methane from existing facilities, such as Texas and North Dakota – will be required to make significant investments in zero-emission or low-emission equipment to comply with the Final Methane Rule. Although existing facilities will have several years to comply, these investments may not make economic sense for low production wells. In fact, the Independent Petroleum Association of America cited estimates that the impact of the November 2022 Supplemental Proposal on existing facilities would lead to the shutdown of 300,000 of the nation's 750,000 low production wells.
- **The looming IRA Methane Fee.** As noted above, the safe harbor language in the IRA is unlikely to go into effect in time to protect companies from being subject to the Methane Fee. Accordingly, companies that are within scope of the Methane Fee – onshore and offshore oil and natural gas facilities that are subject to EPA's greenhouse gas reporting rule – may incur fees for 2024 methane emissions beginning in 2025. According to one study, fees for estimated emissions for 2024-2026 based on company-reported data could result in $400 million in fees for the industry, though that number increases to $4.8 billion based on data derived from direct satellite observation of active wells. Further uncertainty stems from the fact that, in accordance with the IRA, EPA issued a proposed rule in July 2023 to update the greenhouse gas reporting rule as it pertains to methane emissions from the oil and gas industry. This rulemaking is likely to increase the number of companies exceeding the reporting threshold under the greenhouse gas reporting rule, thereby subjecting them to the Methane Fee.
- **Legal and political hurdles.** Opponents of the Final Methane Rule can be expected to file legal challenges in federal court. State officials in Texas, Oklahoma and Wyoming have criticized the rule and may oppose it in court as they did in response to EPA's 2016 methane rule. And while criticism from industry has been mixed to date, industry groups may join these efforts as well. The legal basis of any such challenges remains to be seen. While many comments on the November 2022 Supplemental Proposal questioned whether the Super Emitter Response Program impermissibly "farmed out" EPA's enforcement role to third parties, the modifications made to this program in the Final Methane Rule to increase EPA's role would seem to address these concerns. Other potential challenges may focus on cost or the feasibility of the technology mandated by the rule. Given the Supreme Court's current general tendency to be restrictive in its interpretation of the scope of federal agency authority, federal courts may be receptive to such

challenges. Finally, looking further ahead to the 2024 federal elections, a change in the party controlling the White House will likely cause the Final Methane Rule – as well as other elements of the current EPA's climate change agenda – to be repealed and replaced.

Law clerk Shefain Islam contributed to this client update.

If you have any questions regarding the matters covered in this publication, please reach out to any of the lawyers listed below or your usual Davis Polk contact.

Michael Comstock
+1 212 450 4374
michael.comstock@davispolk.com

David A. Zilberberg
+1 212 450 4688
david.zilberberg@davispolk.com

1 Unless stated otherwise, the provisions summarized below serve as both the NSPS for new, modified and reconstructed sources as well as emissions guidelines to be met by state plans for existing sources.

2 A "wildcat" well is a well drilled outside known fields or is the first well drilled in an oil or gas field where no other oil and gas production exists.

3 A "delineation" well is a well drilled to determine the boundary of a field or producing reservoir.

4 Generally, facilities with over 25,000 metric tons in CO2 equivalent emissions per year.