

Case Study on New Mexico Methane Strategy – EMNRD Methane Waste Rule

Introduction

On May 25, 2021, New Mexico approved new rules proposed by the Energy, Minerals and Natural Resources Department (EMNRD) that require oil and gas operators in the U.S. state to capture 98% of their natural gas waste by the end of 2026. The new regulations (New Mexico Administrative Code (NMAC) Title 19, Chapter 15, Part 27 - 19.15.27.8 NMAC) form a key part of the state's methane strategy to create a statewide, enforceable regulatory framework for reducing oil and gas sector emissions. The rule applies to both upstream (production) and midstream (gas gathering and boosting) operations – encompassing wells, pipelines and gathering stations – within New Mexico.

Policy Details – Performance Target, Enforcement, Reporting Requirements

The ruling declares the venting and flaring of natural gas as waste and, as such, prohibits these activities except in limited circumstances – with flaring over venting required except when flaring is technically unfeasible or in emergency situations. These exceptions differ across drilling, well completion or recompletions, and production.

The regulation sets a performance standard for operators to capture no less than 98% of natural gas produced by the end of 2026. Operators establish a baseline capture rate over the fourth quarter of 2021 and first quarter of 2022 and must demonstrate annual progress in this capture rate each successive year. Operators must increase their capture rate annually based on a regulatory formula that sets higher increases in capture rates for operators starting from a lower baseline.

Operators that fail to meet its annual capture requirements must submit a compliance plan to EMNRD for assessment. If the EMNRD assesses the compliance plan to be insufficient, the ruling allows for the EMNRD to suspend approved drilling permits for wells not yet spudded. The EMNRD may also take additional legal action when an operator fails to comply with its annual capture requirement, including shutting in wells and assessing civil penalties. New drilling permit applications must also include natural gas management plans to comply with capture requirements.

To improve the consistency and completeness of emissions data available, the regulations contain extensive reporting requirements. Operators must measure or estimate the natural gas loss due to flaring, venting or used during normal operations. Flared gas must be measured for equipment associated with wells producing an average daily production of 60,000 cubic feet of natural gas.

Estimation methodologies are permissible for instances where installing measurement equipment is not practicable provided the methodology can be independently verified. Operators must provide monthly reports of the volume of vented and flared natural gas and provide the methodology used to report these volumes.

Innovation & Incentives for Advanced Leak Detection and Repair

A key design feature of the regulation was to foster innovation by allowing operators the flexibility to decide how they will meet the performance standard. The ruling does not mandate specific technologies that operators must use, and this is viewed as an important driver in spurring innovation in industry.

The regulations stipulate routine audio, visual and olfactory inspections requirements – the frequency of which is dependent on a range of factors including well production capacity, whether an operator is on site and whether there is remote or automated monitoring technology. However, operators are incentivized to deploy more advanced leak detection and monitoring technology. The EMNRD rules allow companies to earn credit towards their capture rate target by locating and addressing methane leaks. Leaks must be isolated within 48 hours of field verification and repaired within 15 days or by a date approved by the EMNRD. Discrete monitoring technology such as aerial monitoring systems must be used at least twice per year to qualify for the credits. Operators that use a state-approved list of Advanced Leak and Repair Monitoring (ALARM) technology for identifying and repairing leaks can apply to deduct the volume of lost natural gas (up to 40% of the volume released) from their reported volume of natural gas.

Policy Development

Governor Michelle Lujan initially established New Mexico's methane strategy in Executive Order 2019-003. The state is among the country's top producers of natural gas and in New Mexico, the natural gas and petroleum sector accounts for approximately 60% of the state's methane emissions. By defining the venting and flaring of natural gas as waste, the state has been successful in messaging that the new regulations are about reducing waste and reducing losses in state royalty and severance taxes collected on natural gas production. The state estimates that vented or flared natural gas in 2018 equated to approximately \$10 million in lost state revenues.

Stakeholder outreach was a key part of policy development with the EMNRD working over two years to gather input and obtain buy-in from industry representatives, environmental groups and officials representing state, local and Native American governmental agencies.

Under the state's methane strategy, the EMNRD methane waste ruling is intended to complement additional planned regulation developed by the New Mexico Environmental Department to target the emissions of volatile organic compounds (VOCs) and oxides of nitrogen (NOx) from oil and

gas industry equipment. These gases are ozone precursors that can contribute to harmful air quality and adversely impact human health. Though not directly targeting methane emissions, these rules incorporate air quality issues – public health and environment priorities – into the broader state methane strategy.

References

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- <https://www.emnrd.nm.gov/ocd/wp-content/uploads/sites/6/Ocd-Exhibit4-PowerpointPresentation.pdf>
- <https://www.nmlegis.gov/handouts/WNR%20090519%20Item%203%20NMED%20and%20EMNRD%20Methane%20Strategy.pdf>

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