METHANE GUIDING PRINCIPLES

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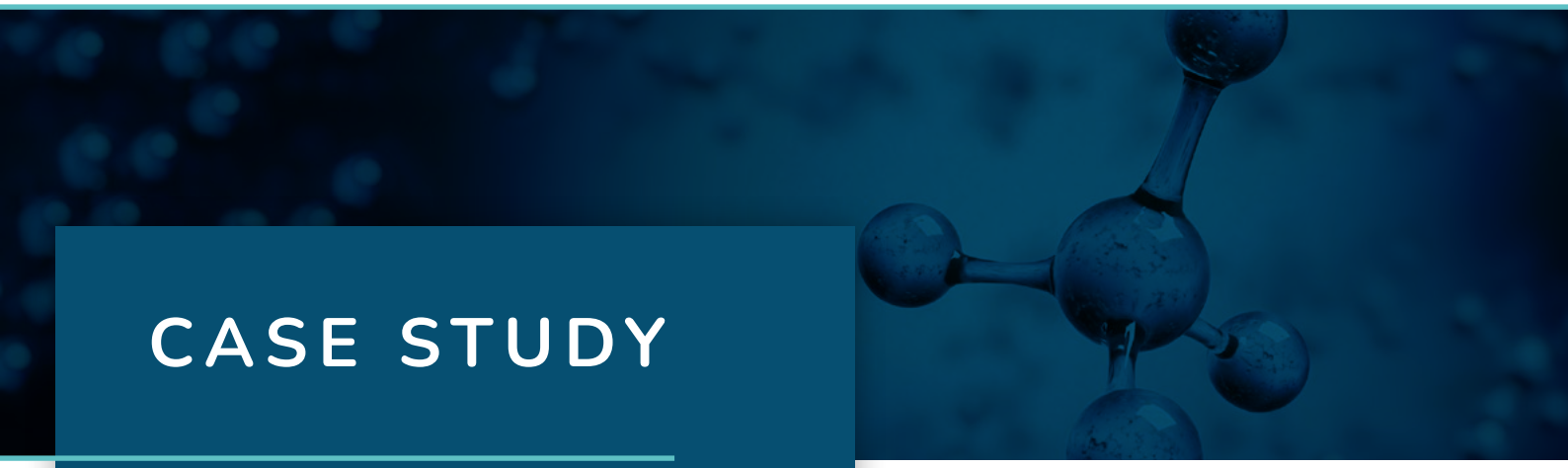

CASE STUDY

Curtailing flaring and venting: New Mexico Methane Strategy

On May 25, 2021, New Mexico approved new rules proposed by the Energy, Minerals and Natural Resources Department (EMNRD) that form a key part of the state's methane strategy of creating a statewide, enforceable regulatory framework for reducing oil and gas sector emissions. This case study lays out the process by which these rules were promulgated along with the key components of the regulation.

Context

In 2019, Governor Michelle Lujan Grisham established New Mexico's methane strategy via Executive Order 2019-003. The state is among the top producers of natural gas in the United States, and New Mexico's 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 signaled that the new regulations are about reducing waste and 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 group, and officials representing state, local and Native American governmental agencies.

Methane Waste Rules

The 2021 rules require oil and gas operators to attain a natural gas capture rate of 98% by the end of 2026. They apply to both upstream (production) and midstream (gas gathering and boosting) operations—encompassing wells, pipelines and gathering stations—within New Mexico.

The rules define venting and flaring of natural gas as waste and, as such, prohibit these activities except in limited circumstances (e.g. venting is allowed only when flaring is technically unfeasible or in emergency situations). These exceptions depending on the activities that are carried out (e.g. drilling, well completion, production).

The 98% capture rate requirement will be measured against a baseline capture rate established during the fourth quarter of 2021 and first quarter of 2022. Operators must demonstrate annual progress in improving this capture rate each successive year. The necessary improvement in capture rate is determined through a regulatory formula that sets higher required increases in capture rates for operators starting from a lower baseline.

Operators that fail to meet their annual capture requirements must submit a compliance plan to EMNRD for assessment. If the EMNRD determines the compliance plan to be insufficient, the rules allow 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 that comply with capture requirements.

To improve the consistency and completeness of emissions data available, the regulations also contain extensive reporting requirements. Operators must report the amount of natural gas lost due to flaring, venting or used during normal operations. Flared gas must be measured for all equipment associated with wells with an average daily production of 60,000 cubic feet of natural gas or more. Estimation is permissible in instances where installing measurement equipment is not practicable provided that the methodology can be independently verified. Operators must provide monthly reports of the volume of vented and flared natural gas and inform the methodology used to report these volumes.

A key design feature of the regulation is to foster innovation by allowing operators the flexibility to decide how to meet the performance standard.

The rules 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. The rules also incentivize operators to deploy more advanced leak detection and repair (LDAR) devices by allowing companies to earn credit towards their capture rate target by proactively locating and addressing methane leaks. By using devices from the state-approved Advanced Leak and Repair Monitoring (ALARM) technology list, operators can apply to deduct the volume of lost natural gas (up to 40% of total volume released) from their reported volume of natural gas. Monitoring technology such as aerial monitoring systems must be used at least twice per year to qualify for these deductions.

New Mexico's waste rules present an approach that blends high-level targets with a flexible scope for implementation, designed to encourage innovation. We hope that the regulation will help the United States to fulfill its pledge to Zero Routine Flaring by 2030. The MGP's Best Practice Guide on reducing methane emissions from flaring and the MGP Flaring Emission Mitigation Cost Tool can be valuable resources for individual operators in New Mexico in the pursuit of their 98% capture rate target.

Find out more

- GTI Energy
- IEA Regulatory Roadmap and Toolkit
- Colombia CATF

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