

Factory Farms, Fracking, and New Mexico's Methane Emergency

With every day that the status quo continues, the chance of keeping global temperature rise below the 1.5-degree Celsius tipping point slips further and further away.¹ Much focus remains on cutting carbon dioxide (CO₂) emissions, the largest source of greenhouse gas emissions and warming.² But reducing its more insidious counterpart, methane, is even more essential in stabilizing global climate and reducing short-term warming. Banning the largest sources of methane emissions — factory farm expansion and fracking — is the quickest and only way to secure New Mexico's future.

Methane's Importance

Since the Industrial Revolution, greenhouse gas emissions have skyrocketed, filling the air with an overabundance of gases and amplifying the Earth's natural warming effect.³ Methane is responsible for a third of total warming since then,⁴ with a warming effect 86 times stronger than CO₂ on a 20-year timescale.⁵ A short-term pollutant, methane stays in the atmosphere for only around 12 years.⁶ Despite this shorter lifespan, it traps significantly more atmospheric heat than CO₂ and contributes to the formation of other greenhouse gases, giving it a higher global warming potential than CO₂.⁷ This means that reducing the rate of emissions is essential to stabilizing long-term temperature rises,⁸ while providing more immediate climate-cooling effects.⁹

Factory Farms

The agricultural sector is the fourth largest greenhouse gas source in New Mexico.¹⁰ Dairy is New Mexico's largest agricultural sector,¹¹ with over 99 percent of the state's 280,000 cows living on mega-dairies.¹² Food & Water Watch (FWW) estimates that methane emissions from these mega-dairies^a equaled up to 106,400 metric tons in 2022.¹³ This is equivalent to 2.2 million cars driving for a year, or over 23 billion miles driven.¹⁴

Most of these emissions come from manure management, a sector where emissions have risen nearly 20 percent between 2005 and 2018.¹⁵ The U.S. Environmental Protection Agency estimates that dairy cows account for 97 percent of all manure emissions, dwarfing beef cattle's 2 percent contribution.¹⁶ FWW estimates that mega-dairy manure management emissions exceeded 64,800 metric tons of methane in 2022¹⁷ — equivalent to over 1.3 million cars driven for a year.¹⁸ In

^a In this analysis, mega-dairies are defined as those with 500+ head.

comparison, manure deposited in fields by grazing cattle releases little to no methane. The rapid industrialization of U.S. agriculture systems and the collapse of family-scale farms are to blame for a more than doubling of U.S. methane emissions from dairy manure over the past thirty years, while total dairy cows remained about the same.¹⁹ Today, the state has about 34 percent fewer family-scale dairies (under 500 head) compared to just five years ago.²⁰

The remaining methane emissions come from enteric fermentation, a process within the digestive system of ruminants.²¹ FWW estimates that enteric fermentation emissions from New Mexico's mega-dairies accounted for 41,500 metric tons of methane in 2022,²² equivalent to 850,000 cars driven for a year.²³ New Mexico houses some of the country's largest herds, with the average mega-dairy confining over 3,600 cows.²⁴ Nearly all the state's dairy industry growth has occurred in just five southern counties, where the infamous stretch of mega-dairies along I-10 from Las Cruces to El Paso, Texas earned the nickname "Dairy Row."²⁵ Many of these communities are low-income areas and/or communities of color, making mega-dairies an environmental justice issue in New Mexico.²⁶

Fossil Fuels

Contrary to the urgent need to eliminate fossil fuels, New Mexico's fracked gas production is on the rise, doubling between 2019 and 2022.²⁷ New Mexico ranked seventh in the nation for gas production in 2022, pumping out 6 percent of U.S. natural gas withdrawals.²⁸ FWW estimates that drilling, processing, and transporting New Mexico's shale gas production in 2022 polluted the air with nearly 1.69 million metric tons of methane.²⁹ This is equivalent to 34.5 million cars driven for a year, or 370.8 billion miles driven.³⁰

New Mexico is home to a multitude of oil and gas basins, but the Permian and San Juan basins accounted for 97 percent of the sector's emissions in 2020.³¹ Almost all wells in the San Juan Basin have been fracked.³² These locations raise major environmental justice questions, as the San Juan Basin is overlaid by historical and culturally significant Indigenous land, including for the Pueblo and Diné tribes.³³ Aside from the methane emissions produced, fracking poses a host of other human health risks from polluted air and water.³⁴

Urgent Need to Reduce Methane

These risks are very real for residents across the state, where fracking continues to poison the air. Methane emissions help form ground-level ozone, an unhealthy pollutant that poses respiratory and circulatory mortality risks.³⁵ Even just a few hours of exposure increase a person's risk of worsening illness, hospital admission, or death.³⁶ The American Lung Association ranked Eddy County as the eighteenth worst county in the U.S. for ozone pollution, while state records show that eight counties are approaching or exceeding national ozone standards.³⁷ Ozone concentrations have worsened in the last few years, including in the San Juan Basin and parts of the Permian Basin.³⁸ With only 50 percent of New Mexican fossil fuel operators in compliance with air quality requirements,³⁹ it is no surprise that these regions are seeing dangerous air pollution levels.

To protect New Mexicans and their future, the state must take immediate action to end the destructive industries that are producing climate-destroying methane.

Food & Water Watch recommends:

- New Mexico must ban all fossil fuel production, particularly dangerous fracking wells, and elected officials must stop falling for industry scams like water reuse that will only further entrench the industry.
- New Mexico's governor and legislature must also act to begin the transition to a more sustainable food and farm system – one which prioritizes small family-scale farms over industrial mega-dairies.
- New Mexico's elected officials must stop supporting and incentivizing false solutions that will not solve the climate crisis and must amend the recently passed Clean Fuel Standard to explicitly exclude factory farm gas as a low carbon fuel.

Endnotes

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