



OIL AND GAS METHANE POLLUTION IN OHIO: THREATS AND OPPORTUNITIES

Methane: Quick Facts

- Methane is the chief component of natural gas¹, which can also be a by-product of oil production. The oil and gas sector is the largest contributor to methane emissions, accounting for one-third of the total.²
- Methane emissions can occur at any stage of the oil and gas supply chain (i.e., drilling and production, processing, transmission, storage, and distribution to end users), but most arise during the production phase.³ Methane typically is released through venting (direct release), flaring (burning), or through leaks in oil and gas infrastructure.⁴
- Other harmful pollutants also are emitted by the oil and gas sector, including volatile organic compounds (VOCs) and air toxics like benzene (a known carcinogen) that can cause a range of harmful health effects, such as asthma and some cancers, as well as environmental impacts.
- Methane waste is a significant contributor to climate change, which endangers wildlife, outdoor recreation, human health, and the environment.
- Common-sense federal regulations to reduce methane pollution will help retain or capture this valuable resource and thereby better ensure it can be used to help power homes and businesses, generate revenues, and reduce its impacts as well as those of other damaging pollutants.

Wildlife and Human Health Impacts

- Rates of asthma in Ohio currently are higher than the national average, with more than 275,000 children in the state suffering with asthma every day.⁵ Regulating methane emissions will help Ohioans reduce this risk.
- Oil and gas wells and associated infrastructure can fragment wildlife habitat for a variety of species, compounding harm for wildlife already impacted by a rapidly-changing climate. This can hinder migration routes, limit access to food, water, and other resources, and ultimately can lead to species population declines. Wildlife also can be harmed as a result of spills, chronic leaks, and crude oil releases.
- Climate change—partly fueled by methane pollution—is leading to rapid shifts in the habitat, landscapes, and seascapes that American wildlife depend on, placing numerous species at risk of decline or extinction if current rates of emissions continue unabated.⁶
- Loss of wildlife affects hunters and anglers, as well as wildlife watchers, outdoor recreational businesses, and wildlife managers.⁷
- One of the most endangered species in the Cuyahoga Valley National Park, the Indiana bat, is expected to lose most, if not all, of its summer range in Ohio – a range female bats use to rear their young.
- Bat populations in the region have already suffered a dramatic decline due to fungal disease, having declined to 72 percent of their previous levels in 2011.⁸ Bats are an important component of ecosystems as they eat large quantities of insects, including pests that can harm crops. Therefore, this decline can impact agricultural revenues.



Indiana bat. Photo: USFWS.

Impacts of Methane Waste on the Economy

- Ohio joined Colorado and Wyoming in 2014 to require operators to fix emissions from leaking equipment identified during quarterly inspections.⁹ The state had previously suffered accidents and negative public health impacts from oil and natural gas sector development. In 2014 alone, oil and gas facilities in Ohio wasted enough methane to fuel more than 8,500 homes.¹⁰
- Ohio stands to reap economic benefits from strong federal rules that would level the playing field and help maintain economic competitiveness for Ohio in relation to neighboring states that lack adequate safeguards.
- Moreover, in Ohio, fifteen companies already specialize in fixing pollution leaks and, as a result, are boosting local communities with good-paying jobs.
- On average, the 33,000-acre Cuyahoga Valley National Park in Ohio has about 2.5 million visitors annually, and contributes \$203 million to Ohio's economy.
- In 2011, total expenditures on wildlife watching, hunting, and fishing in the U.S. amounted to \$54.9 billion.¹¹ A rapidly-changing climate threatens this outdoor economy. Fees and taxes paid by hunters and anglers support non-game conservation programs run by state wildlife agencies, so a decline in outdoor recreation means a decrease in the funds for such programs.¹²

Policy Recommendations

In May 2016, the Environmental Protection Agency finalized a rule to reduce methane and volatile organic compound (VOC) emissions from new and modified oil and gas sources, including regular methane leak inspection and repair requirements.¹³ This rule provides companies with methods by which to align the final standards with state-specific requirements. EPA estimates that this rule will result in net climate benefits of \$170 million in 2025. While additional emissions reductions can and should be achieved, ***NWF urges Congress to defend the new and modified source rule so that it can bring about much-needed pollution reductions for the benefit of our wildlife and economy.***

¹ U.S. EPA 2014. Overview of Greenhouse Gases: Methane Emissions. <https://www3.epa.gov/climatechange/ghgemissions/gases/ch4.html>.

² *Ibid.*

³ ICF International "Methane Emissions from the Oil and Gas Industry: 'Making Sense of the Noise,'" 2015, page 4. <http://www.icfi.com/insights/white-papers/2015/methane-emissions-from-the-oil-and-gas-industry>

⁴ U.S. Government Accountability Office (GAO) 2016. *Oil and Gas, Interior Could Do More to Account for and Manage Natural Gas Emissions*, page 6. <http://democrats-naturalresources.house.gov/imo/media/doc/Interior%20Could%20Do%20More%20to%20Account%20for%20and%20Manage%20Natural%20Gas%20Emissions.pdf>

⁵ American Lung Association 2016. Report Card: Ohio. <http://www.lung.org/our-initiatives/healthy-air/sota/city-rankings/states/ohio/>

⁶ U.S. National Climate Assessment 2014, Ecosystems and Biodiversity. <http://nca2014.globalchange.gov/highlights/report-findings/ecosystems-and-biodiversity#statement-16341>

⁷ NWF 2015. Game Changers: Climate Impacts to America's Hunting, Fishing, and Wildlife heritage. <http://www.nwf.org/News-and-Magazines/Media-Center/Reports/Archive/2015/11-16-2015-Game-Changers.aspx>

⁸ U.S. Fish and Wildlife Service (USFWS) 2013. Climate Change Projected to Alter Indiana Bat Maternity Range. <http://www.srs.fs.usda.gov/news/537>

⁹ Williams, A. 2016. Ohio Gov. Kasich Moves to Reduce Environmental Impact of Natural Gas Industry. Environmental Defense Fund (EDF). <https://protect-us.mimecast.com/s/8JQZBds97b5FV?domain=blogs.edf.org>

¹⁰ EDF. Ohio's Methane Pollution Problem: Reducing oil and gas methane emissions benefits Ohio communities. https://www.edf.org/sites/default/files/content/methane_fact_sheet_ohio_final_for_1115.pdf

¹¹ USFWS 2012. 2011 National Survey of Fishing, Hunting, and Wildlife-Associated Recreation. <http://www.census.gov/prod/2012pubs/fhw11-nat.pdf>

¹² Voggesser, Garrit, "Big Impacts on Big Game, Voices from the Field: Sportsmen Speak Out," NWF Blog, November 17, 2015. <http://blog.nwf.org/2015/11/big-impacts-on-big-game/>

¹³ EPA 2016. EPA's Actions to Reduce Methane Emissions from the Oil and Natural Gas Industry: Final Rules and Draft Information Collection Request, pages 1-2. <https://www.epa.gov/stationary-sources-air-pollution/epas-actions-reduce-methane-and-volatile-organic-compound-voc>