

# Missouri Natural Gas Flaring and Venting Regulations

The U.S. Department of Energy's Office of Fossil Energy (FE) supports research and development of technologies that can reduce the volume of natural gas (e.g., methane) flared or vented (released) into the atmosphere during crude oil and natural gas exploration, production, processing, transportation, and storage operations. This fact sheet was created by FE to inform stakeholders on state-level production and regulatory activity regarding natural gas flaring and venting. FE's research portfolio includes efforts to reduce methane (and other hydrocarbon) flaring through the application of improved technologies to capture and utilize small volumes of natural gas at remote locations, as well as technologies to reduce (primarily) methane release during midstream gas processing and transportation. Intermittent flaring that occurs as a result of routine well testing, production facility process shutdowns, or facility and pipeline infrastructure maintenance, are normal aspects of safe oil and natural gas production. Increases in domestic oil and natural gas production have resulted in significant infrastructure buildouts, however, natural gas pipeline capacity constraints have led to regional increases in the flaring of associated gas in some unconventional plays (e.g., Permian Basin in Texas and New Mexico and Bakken Shale in North Dakota) in order to enable oil production.

## Missouri Producing Plays and Basins

There are currently three potential areas for conventional oil and gas production in Missouri: the Forest City Basin in the northwest corner, the Lincoln Fold anticline in the northeast corner, and the Mississippi Embayment in the southeast corner of the state (Figure 1). According to the U.S. Energy Information Administration (EIA) Missouri produces small amounts of oil and natural gas annually. Commercial oil production continues from a limited number of wells, and while there is only one commercial gas well in the state, the Missouri Department of Natural Resources reports that there



Figure 1: Missouri oil and gas producing areas *Source: EIA* 

are several dozen private gas wells used to heat homes and small businesses. Oil in Missouri is typically produced from shallow depths, starting at around 150 feet, and it is often heavy, viscous crude. While coalbed methane has not yet been

produced economically in Missouri, given Missouri's extensive coal deposits, there may someday be development given the right economic conditions.

Missouri's oil production averages less than 10,000 barrels per month with production occurring in the northwest near the border with Kansas and Nebraska, as well as in the east near St. Louis. Missouri produced minor amounts of natural gas in the past, but, except for a few wells that supply natural gas for private use, production in the state has ceased. The state also has the potential for coalbed methane production due to coal deposits that are in northern and western Missouri, with approximately one-third of the state sitting on top of coal seams.

#### Missouri Oil and Natural Gas Statistics (EIA)

	2013	2014	2015	2016	2017	2018
Crude Oil Production (Average Barrels/Day)	545	537	408	337	310	263 *
Natural Gas Gross Withdrawals and Production (Average Mcf/Day)	24.7	8.2	2.7	2.7	2.7	N/A
Natural Gas Gross Withdrawals and Production (Vented and Flared) (Mcf/Day)	0	0	0	0	0	N/A
Natural Gas Gross Withdrawals and Production (Oil Wells) (Mcf/Day)	2.7	N/A	0	0	0	N/A
Natural Gas and Gas Producing Oil Wells	8	7	N/A	5	5	N/A

MMcf - million cubic feet

Mcf - thousand cubic feet

2017 ranking among 32 U.S. oil and natural gas producing states — Oil: 30 Natural Gas: 32

<sup>\*</sup> Data from Missouri Department of Natural Resources

### Missouri Key Regulations Associated with Flaring and Venting

The Missouri Department of Natural Resources (DNR) oversees the state's oil and gas production laws and regulations. The State Oil and Gas Council, which operates within the Missouri Geological Survey at the DNR, publishes rules and regulations that apply to oil and gas drilling and producing operations. Chapter 259, Revised Statues of Missouri provides the council with specific authority to govern the oil and gas industry, which includes establishing standards for well drilling and operation, underground storage of hydrocarbons, and the production of oil and gas. The council also has the authority to establish fees with which it may administer the law.

The Missouri Air Conservation Commission of the DNR regulates emissions as described in the Air Conservation Law (Chapter 643, Revised Statutes of Missouri). The commission's duties include adopting, amending, and rescinding rules; making decisions on appeals from enforcement orders and permit conditions; and approving plans for meeting national standards in nonattainment areas according to the National Ambient Air Quality Standards. The DNR's Division of Environmental Quality monitors air quality through its Air Pollution Control Program.

Missouri does not have upstream-related flaring and venting-related regulations. However, <u>Chapter 259.060</u> of the Title XVI, Conservation, Resources and Development statute prohibits waste of oil and gas in the interest of conservation of natural resources.

### Missouri State Points of Contact

Missouri Department of Natural Resources; Missouri Geological Survey/State Oil and Gas Council

Contact this office for more information about oil and gas production in Missouri.

**Website**: <a href="https://dnr.mo.gov/geology/geosrv/ogc/">https://dnr.mo.gov/geology/geosrv/ogc/</a>

Email: geology@dnr.mo.gov

**Phone**: 573-368-2100

Missouri Department of Natural Resources; Air Conservation Commission/Air Pollution Control Program

Contact this office for more information about air emission restrictions in Missouri.

Website: <a href="https://dnr.mo.gov/env/apcp/macc.htm">https://dnr.mo.gov/env/apcp/macc.htm</a>

Email: cleanair@dnr.mo.gov

**Phone**: 573-751-4817

Visit <u>energy.gov/fe/state-natural-gas-flaring-and-venting-regulations</u> for a digital version of this fact sheet that includes hyperlinks to information sources.

