



The U.S. Department of Energy's Office of Fossil Energy and Carbon Management (FECM) 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 production, processing, transportation, and storage operations. Methane is a potent greenhouse gas (GHG) and minimizing its release across the oil and natural gas supply chain is critical to the realization of a net GHG benefit and reducing climate and environmental impacts of carbon-based fuels. This fact sheet was created by FECM to inform stakeholders on state-level production and regulatory activities, as they relate to natural gas flaring and venting. FECM's research portfolio includes efforts to reduce natural gas 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 methane release during upstream production operations, as well as midstream natural gas processing and transportation. While flaring activities in the prolific unconventional shale plays have steadily increased between 2011-2019 due to higher oil production levels and natural gas pipeline takeaway capacity constraints, this trend took a sharp downturn since 2020 as a result of significant decline in demand for oil. Other factors include federal and state regulatory efforts to reduce methane emissions, companies taking voluntary actions and measures to minimize flaring of associated natural gas, and additional pipeline projects connecting sources of supply and consumption.

Mississippi Producing Plays and Basins

Mississippi oil and gas production splits between the Black Warrior Basin in the northeast and the Mississippi Interior Salt Basin in the southwest (Figure 1) with much of the historical production coming from the lower half of the state. Unconventional gas shale formations in northern Mississippi include the Floyd-Neal and Floyd-Chattanooga formations located within the Black Warrior Basin, which extends across the Mississippi-Alabama border. The U.S. Geological Survey has assessed the Floyd Shale in the Black Warrior Basin as having an estimated 1.4 trillion cubic feet (Tcf) of gas, 7.6 million barrels of natural

gas liquids, and 5.9 million barrels of oil. Despite these numbers, it is not an economic target. The Tuscaloosa Marine Shale play extends into the southwest corner of Mississippi, and development of this play in Mississippi has centered in Amite, Pike, and Wilkinson Counties. The formation has seen limited development since 2016, however, the target formation is believed to have the potential to produce 7 billion barrels of light crude oil. Per the U.S. Energy Information Administration (EIA), the total proved reserves in Mississippi are estimated at 93 million barrels of oil and 0.17 Tcf of natural gas (2020). Mississippi is one of the few states with large underground salt caverns capable of storing natural gas,

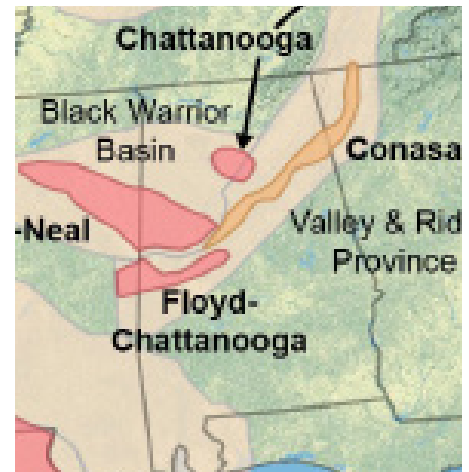


Figure 1: Mississippi basins and emerging unconventional oil and gas producing areas outlined
Source: EIA

Mississippi Oil and Natural Gas Statistics (EIA)

	2014	2015	2016	2017	2018	2019	2020
Crude Oil Production (Average Thousand Barrels/Day)	67	68	56	49	46	26	39
Natural Gas Gross Withdrawals and Production (Average MMcf/Day)	149	159	133	105	97	91	77
Natural Gas Gross Withdrawals and Production (Vented and Flared) (MMcf/Day) *	3.3	5.5	6	4	4	4	3
Natural Gas Gross Withdrawals and Production (Oil Wells) (MMcf/Day)	19.6	25	18	15	13.5	15.7	11
Natural Gas and Gas Producing Oil Wells (Thousands)	2.1	2.1	2.0	1.9	2.9	2.9	2.8

MMcf - million cubic feet

*Information provided by the Mississippi State Oil and Gas Board

Ranking among 32 U.S. oil and natural gas producing states — Oil: 15 (2021) Natural Gas: 21 (2020)

and the state has about one-fourth of total U.S. underground salt cavern natural gas storage capacity.

Mississippi Key Regulations Associated with Flaring and Venting

The Mississippi Oil and Gas Board ([MSOGB](#)) promulgates and enforces rules and regulations for oil and gas drilling, production, and storage, as well as the environmentally safe disposal of nonhazardous oil field waste in a manner that is consistent with federal and state regulations. The Mississippi Department of Environmental Quality (MDEQ) and its [Air Division](#) are responsible for controlling, preventing, and abating air pollution to comply with air emission regulations.

Mississippi does not have specific regulations related to flaring and venting of associated gas captured during oil production. However, according to [Rule 62](#) of the Mississippi Statewide Rules and Regulations, *Storage Tanks, Sour Crude Oil*, operators must recover all fumes and vapor in such tanks in a vapor recovery unit or flare it to the atmosphere. If operators opt to flare fumes and vapor, then they must utilize a flare stack with a permanent pilot attached so that the emissions do not

exceed applicable air quality standards. If operators use vapor recovery units, then standby facilities must be available for flaring fumes and vapors in case of a malfunction.

Mississippi State Points of Contact

Mississippi Oil and Gas Board

Contact MSOGB for more information about the oil and gas production and associated regulations in the state.

Website: <http://www.ogb.state.ms.us/>

Email: jnew@ogb.state.ms.us

Phone: 601-576-4920

Mississippi Department of Environmental Quality

Contact MDEQ for information about air permitting.

Website: <https://www.mdeq.ms.gov/air/>

Email: jbland@mdeq.ms.gov

Phone: 601-961-5112

Visit <https://www.energy.gov/fecm/findyourstate-natural-gas-flaring-and-venting-regulations-fact-sheets-state> for a digital version of this fact sheet that includes hyperlinks to information sources.

