



Wyoming Natural Gas Flaring and Venting Regulations

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.

Wyoming Producing Basins and Plays

Wyoming has [16 of the nation's largest natural gas fields](#), including the Pinedale and Jonah Fields, which rank among the top 10. The state is home to Bighorn, Denver, Greater Green River, Hanna, Laramie, Powder River, Wind River, and Shirley Basins ([Figure 1](#)). As of 2021, crude oil and/or natural gas are produced in 21 of Wyoming's 23 counties. Wyoming was the eighth-largest crude oil producing state in the nation in 2021, accounting for slightly more than 2% of U.S. total crude oil output. The state was the 10th-largest natural gas producer, and accounted for about 3% of U.S. marketed gas production. According to



Figure 1: Producing basins in Wyoming with major unconventional oil and gas plays outlined. Source: EIA

the [Wyoming Oil and Gas Conservation Commission](#) (WOGCC), 7 fields of the top 10 cumulative oil-producing fields in

the state are located within the Bighorn, which also has 2 additional fields ranking within the state's top 25 highest-producing fields. According to the U.S. Energy Information Administration (EIA), proved reserves are [0.8 billion barrels of oil](#) and [13.13 Tcf of natural gas](#) (2020).

Wyoming Key Regulations Associated with Flaring and Venting

The [WOGCC](#) is the state agency authorized to regulate oil and gas drilling and production on state-owned and private land. The U.S. Bureau of Land Management or the U.S. Forest Service regulates drilling on federal land. The Wyoming Department of Environmental

Wyoming [Oil](#) and [Natural Gas](#) Statistics (EIA)

	2015	2016	2017	2018	2019	2020	2021
Crude Oil Production (Average Thousand Barrels/Day)	237	198	207	241	280	243	232
Natural Gas Gross Withdrawals and Production (Average MMcf/Day)	5,468	5,050	4,700	4,715	4,240	3,755	3,568
Natural Gas Gross Withdrawals and Production (Vented and Flared) (MMcf/Day)	9.5	32	25	24.5	24	12.5	N/A
Natural Gas Gross Withdrawals and Production (Oil Wells) (MMcf/Day)	160	146	153	56.5	83.4	85.5	N/A
Natural Gas and Gas Producing Oil Wells (Thousands)	29.9	28.1	27.7	31.3	29.7	28.7	N/A

MMcf - million cubic feet

2021 ranking among 32 U.S. oil and natural gas producing states — [Oil](#): 8 [Natural Gas](#): 10

Quality is not involved with flaring or venting; it only has requirements related to Tank Flashing Controls if a well operation surpasses an uncontrolled emissions threshold.

Authorization for Flaring and Venting of Gas is included within WOGCC's Rules and Regulations under [Chapter 3, Section 39](#). Effective in April 2016, this guidance allows for flaring and venting during the following situations: emergencies or upset conditions that result in unavoidable short-term venting or flaring; well purging and evaluation tests; production tests (maximum of 15 days); low-rate casing head gas from individual oil wells (less than 60 thousand cubic feet/day).

The WOGCC requires that well owners/operators apply for authorization for

flaring or venting in any other situation the rule outlines the application components. Special approval is also necessary for venting gas that contains a hydrogen sulfide content in excess of 50 parts per million. This is specifically related to venting in controlled environments as a necessary safety measure and does not apply to fugitive emissions from production equipment, which the Department of Environmental Quality regulates.

Wyoming's Taxation and Revenue Statute, Title 39, also impacts natural gas flaring in the state. Section §39-14-205 exempts flared gas from the state's

6 percent natural gas extraction severance tax. As a result, operators extracting oil

can dispose of natural gas by burning it off free of charge.

Wyoming Agency Points of Contact

Wyoming Oil and Gas Conservation Commission

Contact WOGCC for information about Wyoming's natural gas flaring and venting regulations.

Website: wogcc.wyo.gov/

Email: Tom.Kropatsch@wyo.gov

Phone: 307-274-7487

Wyoming Department of Environmental Quality (DEQ); Air Quality Division

Contact DEQ for more information about air quality regulations.

Website: <http://deq.wyoming.gov/>

Email: Wyodeq@wyo.gov

Phone: 307-777-7937

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.



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