



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.

Indiana Producing Plays and Basins

The oil and natural gas industry in Indiana began with the discovery of the Trenton gas field in 1886 in east-central Indiana; that gas field is now abandoned. Around 1940, significant oil production began in the oil fields of southwestern Indiana, which is part of the Illinois Basin. Use of advanced drilling technology increased Indiana crude oil production, but in 2017, the state’s oil production dropped to its lowest output level in a decade and accounted for less than 0.1 percent of U.S. total oil production. Its annual gas production is also small at [less than 0.1 percent of the U.S. total](#).

Indiana oil and gas production comes predominately from sandstone reservoirs, generally between depths of 1,000–3,000 feet, with as many as 25 individual reservoirs in a field, separated vertically or laterally. The [Indiana Department of Natural Resources \(DNR\)](#) recognizes more than 900 individual reservoirs across 500 small fields in southwestern Indiana. The New Albany Shale is an unconventional gas play that has undergone significant study and testing in southern Indiana and Kentucky ([Figure 1](#)). However, the play remains an emerging play in the region. The [U.S. Energy Information Administration \(EIA\)](#) estimates that current technically recoverable reserves for the New Albany



Figure 1: Indiana producing basins with major oil and gas plays outlined
Source: EIA

Indiana Oil and Natural Gas Statistics (EIA)

	2013	2014	2015	2016	2017	2018
Crude Oil Production (Average Thousand Barrels/Day)	7	7	6	5	5	5
Natural Gas Gross Withdrawals and Production (Average MMcf/Day)*	22	18	20	17	16	14
Natural Gas Gross Withdrawals and Production (Vented and Flared) (Mcf/Day)*	The state of Indiana does not maintain databases with this information.*					
Natural Gas Gross Withdrawals and Production (Oil Wells) (MMcf/Day)	The state of Indiana does not maintain databases with this information.*					
Natural Gas Producing Wells	921	895	899	807	N/A	N/A
Gas Producing Oil Wells	The state of Indiana does not gather data regarding the presence of gas producing oil wells or natural gas production from oil wells.*					

MMcf - million cubic feet

Mcf - thousand cubic feet

*Information provided by the Indiana Department of Natural Resources

2017 ranking among 32 U.S. oil and natural gas producing states — Oil: 23 Natural Gas: 24

stand at 11 trillion cubic feet (Tcf) of natural gas and 189 million barrels of oil. EIA estimates that proved reserves in Indiana are approximately [5 million barrels of oil](#) and [2.9 Tcf of natural gas](#).

Key Regulations Associated with Flaring and Venting

The Indiana Department of Natural Resources (DNR) is responsible for the prevention of waste and for the economic recovery of oil and gas. The DNR [Division of Oil and Gas](#) regulates petroleum exploration and production operations, including well spacing, exploration, permitting, drilling, completion, production, and abandonment operations. These statutes also regulate underground injection of fluids for enhanced oil recovery or for production fluid disposal and the underground storage of natural gas or other petroleum products in underground formations.

One Indiana oil and gas statute related to flaring and venting is within Indiana Code (IC) [Title 14](#), entitled *Natural and Cultural Resources* and [Article 37](#), *Oil and Gas*. Within Chapter 11 of this legislation, (Subsection 14-37-11-1, Waste), operators are prohibited from wasting natural gas. The implementation of this statute is assisted by Indiana Administrative Code (IAC) [Title 312](#), entitled *Natural Resources Commission*, [Article 29](#), *Oil and Gas* (Subsection 312 IAC 29-3-3), which also prohibits operators from wasting natural gas. This provision outlines the following situations in which venting or flaring is allowed: 1) well stimulation; and 2) flaring a safe distance from the well if it is not economical to market the natural gas.

Another relevant statute within IAC Title 312 is [Article 17](#), *Other Petroleum Regulation*. Subsection [312 IAC 17-2-3](#), *Prevention of Waste*, stipulates that a well operator that is drilling or plugging test holes must prevent the waste and escape of oil or gas. According to this rule, if a test hole penetrates a stratum containing

gas, the operator must shut the hole in to avoid the wasting gas. The DNR Division of Oil and Gas may require the operator to apply mud-laden fluid, case the gas stratum, or adopt another suitable method to arrest escape of the gas.

Indiana State Points of Contact

Indiana Department of Natural Resources: Division of Oil and Gas

For additional information on oil and gas production, regulations, and rules in Indiana, contact the DNR Division of Oil and Gas.

Website: <https://www.in.gov/dnr/dnroil/>

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