Texas Producing Plays and Basins

Texas has several basins (Figure 1) with combined potential gas resources totaling nearly 500 trillion cubic feet (Tcf). According to the U.S. Energy Information Administration (EIA), proved reserves are 17.33 billion barrels of oil and 115.25 Tcf of natural gas (2017). The Permian Basin, the most prolific oil-producing basin in the United States, has an estimated tight oil recoverable-resource potential of 20–75 billion barrels. Texas is also home to one of the most established natural gas shale plays, the Barnett Shale, which contains 19.2 Tcf of proved reserves. There are also substantial proved reserves in the Eagle Ford Shale Play (27.4 Tcf) and the Haynesville Shale (13 Tcf). Texas accounts for more than 25 percent of U.S.

marketed natural gas production, making it the leading natural gas producer among the states.

Key Regulations Associated with Flaring and Venting

The Railroad Commission of Texas (RRC) and the Texas Commission on Environmental Quality (TCEQ) are responsible for establishing standards and enforcing regulations for oil and natural gas exploration and production. RRC broadly regulates oil and natural gas production while TCEQ regulates air emissions and water pollution. RRC has jurisdiction over permitting of flaring.
operations with respect to prevention of waste of natural resources.

Upstream oil and gas operations that typically require air emissions permits from TCEQ may be eligible for authorization through a standard air quality permit for oil and gas facilities, a new source review permit, or a specific air permit by rule for projects in the 15 counties located over the Barnett Shale. TCEQ addresses the control of natural gas flaring and venting in the State Air Quality Implementation Plan adopted in 2004 and approved by the U.S. Environmental Protection Agency in 2006. Pursuant to the Texas Air Quality State Implementation Plan (SIP), the regulation entitled 30 TAC 115.720-115.729: Vent Gas Control) is part of Chapter 115, Control of Air Pollution from Volatile Organic Compounds. This policy requires that the owner or operator of each affected flare or vent gas stream adhere to reporting and record-keeping requirements, including the development and implementation of a Quality Assurance Plan.

As outlined in Texas Administrative Code (Statewide Rule 32, Title 16, Part 1, Chapter 3 §3.32), well operators are allowed to flare during tests for well potential. The regulations depend upon the duration of the gas release. All gas releases lasting less than 24 hours may be vented to the air, unless flaring is necessary for safety reasons (contact RRC District Office for verification). RRC requires well operators to apply for permits in order to flare for more than 10 days following well completion, as well as for most short-term requests. If the RRC approves the application, then it will grant a 45-day flare permit. Operators must provide additional documentation for an extension beyond the 45 days. The RRC reports that operators make extension requests most often when they are awaiting completion of pipeline construction. The RRC also reports that most requests for flaring permits are related to flaring casing head gas from oil wells.

Texas Agency Points of Contact

Texas Railroad Commission: Oil and Gas Division; Engineering Unit
Contact the RRC Engineering Unit with any questions about the RRC permitting process for venting/flaring of casing head gas and well gas pursuant to Statewide Rule 32.
Website: http://www.rrc.state.tx.us/
Email: Terry.Edwards@rrc.state.tx.us
Phone: 512-463-6785

Texas Commission on Environmental Quality: Air Permits Division; Permit by Rule Section
Contact the TCEQ regarding industrial air permitting requirements in Texas.
Website: https://www.tceq.texas.gov/
Email: airperm@tceq.texas.gov
Phone: 512-239-1250

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.