

EIA Expects Permian Basin Oil and Natural Gas Production to Increase and Make Up Most of U.S. Hydrocarbon Growth Through the End of 2020

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Abstract

Crude oil production in the Permian Basin is expected to increase to 4.5 million barrels per day (bbl/d) in October 2019, based on estimates from EIA's Drilling Productivity Report. As production in other regions fell throughout most of 2015 and 2016, the Permian provided a growing share of U.S. oil production. EIA's projects that tight oil production from the Permian Basin continues to increase through 2020. U.S. drilling activity is increasingly concentrated in the Permian Basin. The Permian now holds nearly as many active oil rigs as the rest of the United States combined, including both onshore and offshore rigs. With rising oil prices over the past year, the Permian continues to be attractive to drillers, as reflected in rising rig counts. As of September 24, 2019, the number of rigs in the Permian Basin reached 424, or about 46% of the 927 total oil- and natural gas-directed rigs operating in the United States. The Permian rig count reached as high as 568 in late 2014 before falling to a low of 134 in spring 2016. EIA forecasts total U.S. crude oil production to average 12.0 million bbl/d in 2019, up 1.0 million bbl/d from 2018. If achieved, forecast 2019 production would be the highest annual average on record, surpassing the previous record of 9.6 million bbl/d set in 1970. In 2020, crude oil production is forecast to rise to an average of 13.1 million bbl/d. Increased production from tight rock formations within the Permian region in Texas and New Mexico accounts for 0.7 million bbl/d of the expected 1.1 million bbl/d of crude oil production growth from December 2019 to December 2020. EIA expects most of the remaining

0.4 million bbl/d of growth to come from the Federal Gulf of Mexico, as several new projects are expected to come online by the end of 2020. The Permian region is expected to produce 5.6 million bbl/d of crude oil and 17 billion cubic feet per day (bcf/d) of dry natural gas mostly from Wolfcamp, Avalon/Bone Spring, and Spraberry formations by the end of 2020, which is roughly a 0.7 million bbl/d and 1.5 bcf/d increase from estimated December 2019 levels and would represent about 32% of total U.S. crude oil production and about 15% of total U.S. dry natural gas production in 2020 respectively. EIA projects for the first time natural gas production growth in the Permian basin to overcome production growth in the Appalachian basin. In the Permian region operators can continue to develop stacked formations and increase production, even with sustained prices lower than \$50/bbl. Increases in proppant intensity, lateral lengths, zip-fracking completions, and drilling in sweet spots have driven increased initial production (IP) rates and rig activity in the Permian, allowing it to remain one of the most economic regions for oil production. The Permian region rig count is projected to grow to 490 at the end of 2020.