

Marcellus, Utica/Point Pleasant provide 91% of U.S. Shale Gas Production Growth Since Start of 2012

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ABSTRACT

The productivity of natural gas wells in the Marcellus and Utica/ Point Pleasant is steadily increasing because of ongoing improvements in precision and efficiency of horizontal drilling and hydraulic fracturing occurring in the Appalachian region. Since January 2012, natural gas production from the Marcellus and Utica/ Point Pleasant has accounted for 91% of the increase in natural gas production from low permeability formations reported in EIA's Drilling Productivity Report (DPR). The DPR provides a month-ahead projection of both oil and natural gas production for the seven most significant shale formations in the United States. The DPR identifies trends in total production and rig productivity, expressed as new-well gas production per rig. The May 2017 edition of the DPR noted that average new-well gas production per rig in the Marcellus play was 3.2 million cubic feet of natural gas per day (MMcf/d) in January 2012. In June 2017, new-well gas production per rig increased to 13.4 MMcf/d. This trend corresponded with an overall increase in the amount of natural gas produced in the Marcellus play during the same period. The DPR also indicates that the Marcellus play produced an estimated 6.3 billion cubic feet of natural gas per day (Bcf/d) in January 2012, increasing to 19.2 Bcf/d in June 2017. The Utica play also experienced significant gains in rig productivity and production. In January 2012, new-well gas production per rig in the Utica play averaged 0.31 MMcf/d. June 2017 new-well gas production per rig is 10.6 MMcf/d. The DPR also indicates that the play's total natural gas production increased rapidly over the same period: production in June 2017 was almost 30 times higher than in January 2013 (4.4 Bcf/d and 0.15 Bcf/d, respectively). Increases in natural gas production from the Appalachian region occurred because of many factors, including: greater use of advanced drilling techniques; increased number of stages used in hydraulic fracturing operations; increased use of techniques such as zipper fracturing; and use of specific components during well completion. EIA's latest data show that natural gas produced from U.S. shale formations now accounts for 62% of total U.S. dry natural gas production. Collectively, shale gas production from the Marcellus and Utica plays increased by 17.1 Bcf/d from January 2012 to June 2017, making the Appalachian region the driving force behind overall U.S. natural gas production growth.