Barnett Shale Output to Fall, But Volumes Will Remain Significant

Drilling activity in the gas-prone Barnett Shale play of North Texas has tapered off in recent years as a result of persistent weakness in natural gas prices (OD Nov.1’12).

Nevertheless, the Barnett -- which kicked off the US shale drilling boom in the early 2000s -- looks set to continue delivering significant volumes of natural gas over the next two decades.

A report compiled by the Bureau of Economic Geology (BEG) at the University of Texas forecasts that output in the Barnett Shale will decline steadily from the current peak of 2 trillion cubic feet per year to about 900 billion cubic feet per year by 2030.

The report estimates that cumulative production of Barnett Shale gas through 2050 will reach 44 Tcf, of which just over 12 Tcf has already been produced.

That is based on a base case natural gas price assumption of $4 per million Btu -- slightly higher than current prices in the mid-$3 range (OD Feb.25’13). It also assumes that no new wells are drilled after 2030.

The report estimates that the Barnett holds 86 Tcf of technically recoverable gas, including the volumes already produced to date. Estimates of technically recoverable reserves do not take into account the impact of prices on the volumes that are ultimately produced.

The University of Texas team estimates that the oil and gas industry will need to drill another 13,000 wells in the Barnett Shale by 2030 to achieve the production volumes that it forecasts.

Scott Tinker, director of the Bureau of Economic Geology and the study's principle investigator, noted that the Barnett Shale still holds numerous promising drilling locations across the 8,000 square miles covered by the study.

Tinker said these locations, which are forecast to remain economic at low gas prices, were likely missed during the industry's earlier efforts to delineate the prolific gas play.

"Drilling in the better rock won't last forever," he said. "But there are still a few more years of development remaining in the better rock-quality areas."

The study's authors analyzed production data from more than 16,000 individual wells drilled in the Barnett Shale through mid-2011 to reach its conclusions.

Devon Energy and Exxon Mobil -- two of the larger producers in the play -- provided industry feedback on the report, while funding was provided by the nonpartisan Alfred P. Sloan Foundation.

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