

Study: Marcellus Shale investments will triple from 2008 to 2011

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An update to a 2009 Penn State study on the economic impact of drilling for natural gas in the Marcellus Shale strata, released Tuesday, projects that investment spending by the drilling industry will have tripled in Pennsylvania from 2008 to 2011.

Declaring the long-term outlook for Marcellus gas production "remarkable," the authors also project that by 2020, employment in Pennsylvania's natural gas industry would expand to 200,000 jobs and annual gains in state and local tax revenue would exceed \$1 billion.

According to the study by Timothy Considine, Robert Watson and Seth Blumsack of Penn State's College of Earth and Mineral Sciences, which was presented Tuesday to the General Assembly, Marcellus shale gas producers spent a total of \$4.5 billion to develop the shale gas resources in 2009. The group estimates that the spending generated \$3.9 billion in value added impact from spending on goods and services to support the drilling activity; contributed \$389 million in state and local taxes; and created more than 44,000 jobs.

For 2009, natural gas output averaged 327 million cubic feet per day of natural gas equivalents, including dry natural gas and petroleum liquids, with output at the end of the year reaching more than 500 mcf.

In a survey conducted for the study, in which gas producers were asked for estimates of drilling activity, spending levels and production rates, the authors wrote that results "clearly show a significant ramp-up in activity, with total spending increasing from \$3.2 billion during 2008 to more than \$4.5 billion during 2009."

They also said their survey found that drillers plan to increase their investment spending to \$8.8 billion for 2010 and to more than \$11 billion in 2011.

"This evidence confirms that the Pennsylvania Marcellus industry is poised for a substantial take-off in development," the study said.

While acknowledging that the projected economic impact from Marcellus activity in their update was similar to the forecast made in 2009 at a much earlier stage of the shale's development, the authors said the minor differences were attributed to a significant decline in natural gas prices and changes in the economy because of the current nationwide recession.

Despite the downturn, the study estimates a dramatic expansion of Marcellus gas production from just over 327 mcf per day in 2009 to more than 13 billion cubic feet per day by 2020. Using that estimate, employment would expand by 200,000 jobs and annual gains in state and local tax revenue would exceed \$1 billion.

However, the authors note that the imposition of any significant severance tax on Marcellus natural gas output "could induce a redirection of investment flows to other shale plays. Any revenues gained from a severance tax could be offset by losses in sales and income tax receipts resulting from lower drilling activity and natural gas production as producers shift their capital spending to other plays."

There are currently three different severance tax proposals at various stages of discussion in Harrisburg.

The industry practice of hydraulic fracturing, which uses water, sand and chemicals to release the gas molecules from the shale, also is under increased regulatory scrutiny. The Environmental Protection Agency is studying the fracking process, while Pennsylvania has proposed stricter regulations on drilling and wastewater disposal to address environmental concerns.

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