

## **Statement by David Hughes**

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On U.S. Government Forecasts For  
A Lasting Tight Oil & Shale Gas Boom”

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Tight oil and shale gas have been touted as an energy savior for the United States. The simple fact of the matter is that the actual well data coming from the tight oil and shale gas plays that are supposed to deliver that salvation contradict this view.

The Department of Energy's forecasts—the ones everyone is relying on to guide our energy policy and planning—are overly optimistic based on what the actual well data are telling us. By asking the right questions, you soon realize that if the future of U.S. oil and natural gas production depends on resources in the country's deep shale deposits, as the Energy Department contends, we are in for a big disappointment in the longer term.

Oil production from the Bakken and Eagle Ford plays, which constitute nearly two-thirds of U.S. tight oil production, will likely peak sometime this decade—a little earlier than the DOE projects—and then drop to a fraction of today's totals by 2040, far below the projections of the U.S. Energy Information Administration, the statistical arm of the DOE. Meeting DOE's reference case forecast for tight oil production by 2040 is highly unlikely, barring the discovery and exploitation of as yet unknown additional plays on the scale of the Bakken or Eagle Ford over this period.

Although shale gas production will rise in the short term, until the 2020 timeframe, the DOE's assumption that growth will continue to levels more than 100 percent higher than today by 2040 is not supported by the data. An analysis of seven major shale gas plays comprising 88 percent of DOE's forecast production through 2040 suggests production rates will be about one-third of the DOE's forecast in 2040 for these plays, and that production from these plays will peak as early as 2016. The DOE assumes that between 75 percent and 110 percent of all proved reserves plus unproved resources from these plays can be recovered at comparatively low prices by 2040, a proportion that strains credibility—especially given that unproved resources, which make up the bulk of what's left, are uncertain estimates without price constraints.

Several of the major shale gas fields have already peaked and will require significantly higher prices to slow or temporarily reverse declines. Production from the Marcellus Shale, along with associated gas production from the Eagle Ford and Bakken tight oil plays, appears to be supporting overall U.S. natural gas production with strong growth. But, four of the top seven shale gas plays are in decline, with the Haynesville, once the largest shale gas play in the United States, now down 46 percent from its peak rate of production.

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Getting it wrong on future tight oil and shale gas production comes with a high vulnerability on energy security and infrastructure investment issues. Planned LNG exports, possible crude oil exports, repatriation of manufacturing, investments in gas-fired electricity generation and pipeline infrastructure, are all predicated on the assumption of cheap and abundant oil and gas for the foreseeable future.

This report's analysis suggests that DOE is seriously overestimating future tight oil and shale gas production and is offered as an alternative view based on actual production data.

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