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Final Edition**UT team: Boom to fizzle sooner****BYLINE:** Asher Price American-Statesman Staff**SECTION:** MAIN; Pg. A1**LENGTH:** 683 words

University of Texas researchers conducting a long-term study say natural gas production from some of Texas' major shale plays could peak within a decade, casting some doubt on federal estimates that envision a continual increase through 2040.

The UT findings contrast with more bullish, broader forecasts by federal researchers, suggesting long-term uncertainties with energy development, even as Texas finds itself in the throes of a golden age of drilling.

Natural gas extraction has boomed in recent years, due to the marriage of innovative drilling techniques and hydraulic fracturing, which involves the injection of water, sand and chemicals to release natural gas from shale formations deep underground.

In Texas, the novel method of gas extraction has spawned all the trappings of an old-

fashioned boom: the creation of thousands of jobs; the emergence of a cottage industry to serve the energy sector; the minting of new natural gas plants to generate electricity; the rutting of rural roads by heavy trucks, groaning with yet more natural gas equipment; the overwhelming of far-flung school districts, required to cater to the children of migrant workers in the new energy burgs.

But how long it will last is a matter of contention, even among the Texas researchers. Their project, being conducted over several years, is notable for the finer detail it brings to production forecasts.

The potential plateau for gas has less to do with the amount of the resource in the ground and much more with how expensive it becomes to extract and sell it.

The work shows that there remains a "substantial amount of natural gas in the earth," said principal investigator Scott Tinker, who heads the university's **bureau of economic geology**. "How much of that gas can be extracted economically remains to be seen: Technology and price are strong drivers of future production."

His comments stand in contrast to more bearish ones recently made to the journal *Nature* by Tad Patzek, another member of the UT research team and head of the University of Texas's petroleum and geosystems engineering department, for an article called "The Fracking Fallacy." The results are "bad news" and as companies try to extract shale gas as quickly as possible and ports are readied for export, "we're setting ourselves up for a major fiasco," he said.

Patzek, undergoing dental surgery, was not available for comment on Monday.

Regardless of if and when natural gas peaks, its production will be around for a while.

The Barnett Shale, for example, the 5,000-square-mile, millennia-old North Texas natural gas field, will produce gas through at least 2030, according to the UT research team, which includes geoscientists, economists and engineers.

The study forecasts a cumulative 44 trillion cubic feet of recoverable gas from the Barnett Shale, with annual production steadily declining from the current peak of 2 trillion cubic feet per year to about 900 billion cubic feet per year.

Americans used roughly 5 trillion cubic feet in 2013 to heat their homes and run their gas ovens, according to data from the U.S. Energy Information Administration.

By 2050, extraction from the Barnett Shale is likely to have wound down, the UT team's report says.

The U.S. Energy Information Administration, conversely, has said that shale development will still be on an upward curve as that date approaches.

"For natural gas, EIA has no doubt at all that production can continue to grow all the way out to 2040," agency director Adam Sieminski told the Columbia University Center on Global Energy Policy in 2013.

"The consensus viewpoint is that we have an amazingly abundant natural gas resource," said Dan Hill, head of the petroleum engineering department at Texas A&M University, who said that if anything, the studies underestimate the robustness of future gas development. (Hill, like Tinker, serves as a paid member of an oil and gas company advisory board; both also receive research support from oil and gas companies.)

"The gloom-and-doom comments are themselves a fallacy," Hill said.

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