Insiders Sound an Alarm Amid a Natural Gas Rush

“It’s time to get bullish on natural gas,” said Aubrey K. McClendon, left, chief executive of Chesapeake Energy. “This could have profound consequences for our local economy,” said Deborah Rogers, a committee member at the Federal Reserve Bank of Dallas.

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Natural gas companies have been placing enormous bets on the wells they are drilling, saying they will deliver big profits and provide a vast new source of energy for the United States.

But the gas may not be as easy and cheap to extract from shale formations deep underground as the companies are saying, according to hundreds of industry e-mails and internal documents and an analysis of data from thousands of wells.

In the e-mails, energy executives, industry lawyers, state geologists and market analysts voice skepticism about lofty forecasts and question whether companies are intentionally, and even illegally, overstating the productivity of their wells and the size of their reserves. Many of these e-mails also suggest a view that is in stark contrast to more bullish public comments made by the industry, in much the same way that insiders have raised doubts about previous financial bubbles.

“Money is pouring in” from investors even though shale gas is “inherently unprofitable,” an analyst from PNC Wealth Management, an investment company, wrote to a contractor in a February e-mail. “Reminds you of dot-coms.”
“The word in the world of independents is that the shale plays are just giant Ponzi schemes and the economics just do not work,” an analyst from IHS Drilling Data, an energy research company, wrote in an e-mail on Aug. 28, 2009.

Company data for more than 10,000 wells in three major shale gas formations raise further questions about the industry’s prospects. There is undoubtedly a vast amount of gas in the formations. The question remains how affordably it can be extracted.

The data show that while there are some very active wells, they are often surrounded by vast zones of less-productive wells that in some cases cost more to drill and operate than the gas they produce is worth. Also, the amount of gas produced by many of the successful wells is falling much faster than initially predicted by energy companies, making it more difficult for them to turn a profit over the long run.

If the industry does not live up to expectations, the impact will be felt widely. Federal and state lawmakers are considering drastically increasing subsidies for the natural gas business in the hope that it will provide low-cost energy for decades to come.

But if natural gas ultimately proves more expensive to extract from the ground than has been predicted, landowners, investors and lenders could see their investments falter, while consumers will pay a price in higher electricity and home heating bills.

There are implications for the environment, too. The technology used to get gas flowing out of the ground — called hydraulic fracturing, or hydrofracking — can require over a million gallons of water per well, and some of that water must be disposed of because it becomes contaminated by the process. If shale gas wells fade faster than expected, energy companies will have to drill more wells or hydrofrack them more often, resulting in more toxic waste.

The e-mails were obtained through open-records requests or provided to The New York Times by industry consultants and analysts who say they believe that the public perception of shale gas does not match reality; names and identifying information were redacted to protect these people, who were not authorized to communicate publicly. In the e-mails, some people within the industry voice grave concerns.

“And now these corporate giants are having an Enron moment,” a retired geologist from a major oil and gas company wrote in a February e-mail about other companies invested in shale gas. “They want to bend light to hide the truth.”

Others within the industry remain optimistic. They argue that shale gas economics will improve as the price of gas rises, technology evolves and demand for gas grows with help from increased federal subsidies being considered by Congress. “Shale gas supply is only going to increase,” Steven C. Dixon, executive vice president of Chesapeake Energy, said at an energy industry conference in April in response to skepticism about well performance.

Studying the Data

“I think we have a big problem.”

Deborah Rogers, a member of the advisory committee of the Federal Reserve Bank of Dallas, recalled saying that in a May 2010 telephone call to a senior economist at the Reserve, Mine K. Yucel. “We need to take a close look at this right away,” she added.

A former stockbroker with Merrill Lynch, Ms. Rogers said she started studying well data from shale companies in October 2009 after attending a speech by the chief executive of
Chesapeake, Aubrey K. McClendon. The math was not adding up, Ms. Rogers said. Her research showed that wells were petering out faster than expected.

Robbie Brown contributed reporting from Atlanta.

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