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Behind Veneer, Doubt on Future of Natural Gas

By **IAN URBINA**

Energy companies have worked hard to promote the idea that natural gas is the fossil fuel of tomorrow, and they have found reliable allies among policy makers in Washington.

“The potential for natural gas is enormous,” President Obama said in a speech this year, having cited it as an issue on which Democrats and Republicans can agree.

The Department of Energy boasts in news releases about helping jump-start the boom in drilling by financing some research that made it possible to tap the gas trapped in shale formations deep underground.

In its annual forecasting reports, the United States Energy Information Administration, a division of the Energy Department, has steadily increased its estimates of domestic supplies of natural gas, and investors and the oil and gas industry have repeated them widely to make their case about a prosperous future.

But not everyone in the Energy Information Administration agrees. In scores of [internal e-mails and documents](#), officials within the Energy Information Administration, or E.I.A., voice skepticism about the shale gas industry.

One official says the shale industry may be “[set up for failure](#).” “It is quite likely that many of these companies will go bankrupt,” a senior adviser to the Energy Information Administration [administrator predicts](#). Several officials echo concerns raised during previous bubbles, in housing and in technology stocks, for example, that ended in a bust.

Energy Information Administration employees also explain in e-mails and documents, copies of which were obtained by The New York Times, that industry estimates might overstate the amount of gas that companies can affordably get out of the ground.

They discuss the uncertainties about how long the wells will be productive as well as the high prices some companies paid during the land rush to lease mineral rights. They also raise concerns about the unpredictability of shale gas drilling.

One senior Energy Information Administration official describes an “irrational exuberance” around shale gas. An internal Energy Information Administration document says companies have exaggerated “the appearance of shale gas well profitability,” are highlighting the performance of only their best wells and may be using overly optimistic models for projecting the wells’ productivity over the next several decades.

While there are environmental and economic benefits to natural gas compared with other fossil fuels, its widespread popularity as an energy source is relatively new. As a result, it has not received the same level of scrutiny, according to some environmentalists and energy economists.

The Energy Information Administration e-mails indicate that some of these difficult questions are being raised.

“Am I just totally crazy, or does it seem like everyone and their mothers are endorsing shale gas without getting a really good understanding of the economics at the business level?” an energy analyst at the Energy Information Administration wrote in an April 27 e-mail to a colleague.

Another e-mail expresses similar doubts. “I agree with your concerns regarding the euphoria for shale gas and oil,” wrote a senior official in the forecasting division of the Energy Information Administration in an April 13 e-mail to a colleague at the administration.

“We might be in a ‘gold rush’ wherein a few folks have developed ‘monster’ wells,” he wrote, “so everyone assumes that all the wells will be ‘monsters.’ ”

The Energy Information Administration’s annual reports are widely followed by investors, companies and policy makers because they are considered scientifically rigorous and independent from industry. They also inform legislators’ initiatives. Congress, for example, has been considering major subsidies to promote vehicles fueled by natural gas and cutting taxes for the industry.

In any organization as big as the Energy Information Administration, with its 370 or so employees, there inevitably will be differences of opinion, particularly in private e-mails shared among colleagues. A spokesman for the agency said that it stands by its reports, and that it has been clear about the uncertainties of shale gas production.

“One guiding principle that we employ is, ‘look at the data,’” said Michael Schaal, director of the Office of Petroleum, Natural Gas and Biofuels Analysis within the Energy Information Administration. “It is clear the data shows that shale gas has become a significant source of domestic natural gas supply.”

But the doubts and concerns expressed in the e-mails and correspondence obtained by The Times are noteworthy because they are shared by many employees, some of them in senior roles. The documents and e-mails, which were provided to The Times by industry consultants, federal energy officials and Congressional researchers, show skepticism about shale gas economics, sometimes even from senior agency officials.

The e-mails were provided by several people to The Times under the condition that the names of those sending and receiving them would not be used.

Some of the e-mails suggest frustrations among the staff members in their attempt to push for a more accurate discussion of shale gas. One federal analyst, describing an Energy Information Administration publication on shale gas, complained that the administration shared the industry’s optimism. “It seems that science is pointing in one direction and industry PR is pointing in another,” wrote the analyst about shale gas drilling in an e-mail. “We still have to present the middle, even if the middle neglects to point out the strengths of scientific evidence over PR.”

The Energy Information Administration, with its mission of providing “independent and impartial energy information to promote sound policymaking” and “efficient markets,” was created in response to the energy crisis of the 1970s because lawmakers believed that sound data could help the country avoid similar crises in the future.

As a protection from industry or political pressure, the Energy Information Administration’s reports, by law, are supposed to be independent and do not require approval by any other arm of government.

Its administrator, Richard G. Newell, who announced this month his plans to resign to take a job at Duke University, has hailed the prospects for shale gas, calling it a “game changer” in the United States energy mix. “The energy outlook for natural gas has changed dramatically over the past several years,” Mr. Newell told the Natural Gas Roundtable, a nonprofit group tied to the American Gas Association. “The most significant story is the transformative role played by shale gas.”

A number of factors have also helped create more interest in shale gas. The nuclear disaster in Japan in March has focused attention on the promise of natural gas as a safer energy source.

And last year, as energy market analysts warned about tougher federal regulations on oil and coal, particularly after the BP oil spill and the Massey coal mining accident, they also pointed to natural gas as a more attractive investment.

But a look at the Energy Information Administration's methods raises questions about its independence from energy companies, since the industry lends a helping hand to the government to compile those bullish reports.

The Energy Information Administration, for example, relies on research from outside consultants with ties to the industry. And some of those consultants pull the data they supply to the government from energy company news releases, according to Energy Information Administration e-mails. Projections about future supplies of natural gas are based not just on science but also some guesswork and modeling.

Two of the primary contractors, Intek and Advanced Resources International, provided shale gas estimates and data for the Energy Information Administration's major annual forecasting reports on domestic and foreign oil and gas resources. Both of them have major clients in the oil and gas industry, according to corporate tax records from the contractors. The president of Advanced Resources, Vello A. Kuuskraa, is also a stockholder and board member of Southwestern Energy, an energy company heavily involved in drilling for gas in the Fayetteville shale formation in Arkansas.

The contractors said they did not see any conflict of interest. "Firstly, the report is an extremely transparent assessment," said Tyler Van Leeuwen, an analyst at Advanced Resources, adding that many experts agreed with its conclusions and that by identifying promising areas, the report heightened competition for Southwestern.

Intek verified that it produced data for Energy Information Administration reports but declined to comment on questions about whether, given its ties to industry, it had a conflict of interest.

Some government watchdog groups, however, faulted the Energy Information Administration for not maintaining more independence from industry.

“E.I.A.’s heavy reliance on industry for their analysis fundamentally undermines the agency’s mission to provide independent expertise,” said Danielle Brian, the executive director of the Project on Government Oversight, a group that investigates federal agencies and Congress.

“The Chemical Safety Board and the National Transportation Safety Board both show that government agencies can conduct complex, niche analysis without being captured or heavily relying upon industry expertise,” Ms. Brian added, referring to two independent federal agencies that conduct investigations of accidents.

These sorts of concerns have also led to complaints within the administration itself.

[In an April 27 e-mail](#), a senior petroleum geologist who works for the Energy Information Administration wrote that upper management relied too heavily on outside contractors and used “incomplete/selective and all too often unreal data,” much of which comes from industry news releases

“E.I.A., irrespective of what or how many ‘specialty’ contractors are hired, is NOT TECHNICALLY COMPETENT to estimate the undiscovered resources of anything made by Mother Nature, period,” [he wrote](#).

Energy officials have also quietly criticized [in internal e-mails](#) the department’s shale gas primer, a source of information for the public, saying it may be “on the rosy side.”

The primer is written by the Ground Water Protection Council, a research group that, according to tax records, is partly financed by industry.

The Ground Water Protection Council declined to respond to questions.

Tiffany Edwards, a spokeswoman for the Department of Energy, said that the shale gas primer was never intended as a comprehensive review and that further study was continuing.

Asked about the views expressed in the internal e-mails, Mr. Schaal says his administration has been very explicit in acknowledging the uncertainties surrounding shale gas development.

He said news reports and company presentations were included among a range of information sources used in Energy Information Administration studies. Though the administration depends on contractors with specialized expertise, he added, it conforms with all relevant federal rules.

And while production from shale gas has not slowed down and may not any time soon, he said, a lively debate continues within the administration about shale gas prospects.

Robbie Brown contributed reporting from Atlanta. Kitty Bennett contributed research.