Europe seeks new fuel, cautiously

Energy companies across Europe are probing the ground for natural gas trapped in shale rock, hoping to replicate an American boom that has given consumers in the United States a major new supply of affordable fuel.

In countries like Britain, Germany and Poland, exploratory drilling is under way, or about to begin, as engineers try to determine how much shale gas is present and how easy it will be to retrieve. New technologies for extracting natural gas from stone have raised worries about contamination of drinking water while also driving a huge drilling expansion in the United States, helping push prices down by two thirds since 2008 and reducing dependence on imports.

Shale gas production accounted for 14 percent of U.S. natural gas production in 2009 and is expected to reach 45 percent by 2035, the U.S. Energy Informational Agency estimates.

“It was an amazing story in the U.S. this very rapid increase in the availability of shale gas,” said paul Steven, seniors research fellow for energy at Chatham House, a London research institute. European exploration has big potential too, he added, but “the problem is there are a great many barriers to converting that potential into actual molecules of gas.”

It is far too early to know how much extraction will be possible in Europe, said Mr. Stevens and other analysts. Hurdles in Europe, Mr. Stevens said, include technical issued like the size, depth and clay content of European shale field; environmental regulations, which are generally tighter than in the United States; and the Continent’s higher population density. “I would guess it will eventually happen, but I think it’s going to be a lot slower than a lot of people are guessing,” he said. “It is not going to be the sort of spectacular change we’ve seen in the United States.”

The five year ago American boom has been driven by technologies including horizontal underground drilling and hydraulic fracturing, known as “fracking,” which uses high – intensity spraying of water, sand and chemicals to break up stone hundreds, or even thousand, of meters beneath the surface.

The Oscar – nominated documentary “Gasland” has highlighted worries about the practice’s environmental effect, particularly fears that fracking fluids and contaminated water are poisoning nearby aquifers. The U.S. environmental Protection Agency plans to release initial results of a review on fracking next year.

Many in Europe share such worries. France recently halted drilling, pending an environmental study. In the British House of Commons, the Energy and Climate Change Committee is holding an inquiry on shale gas exploration, which it estimates could eventually meet 10 percent of the country’s needs.

But with much of the Continent dependent on Russia for natural gas supplies, politicians and regulators are likely to be tempted by a reliable new source, and big energy companies like Exxon Mobil are already staking their claims. While American finds – estimated by the U.S. government at 827 trillion cubic feet, or 23.4 trillion cubic meters, enough for an estimated 36 years – are so big, they have turned anxiety about dependence on imports into hopes of becoming a natural gas exporter; European reserves are likely to meet only a small slice of the Continent’s energy needs.

“The amounts would not transform the whole of the energy situation. It would not take over,” said Brian Horsfield, director of GASH, an industry financed shale gas research project. “But it’s a bargaining chip, it’s component of the energy mix, and it’s good to have some energy under your own feet.”

With global temperatures rising some say that pursuing new sources of fossil fuels is a recipe for disaster.

If there is any hope of keeping global temperature increases to 2 degrees Celsius (3.6 Fahrenheit), as world leaders promised at the 2009 Copenhagen climate meeting, “then the math shows there is no space left for shale gas, or for that matter for other fossil fuels, but you certainly wouldn’t add another one to the mix,” said Kevin Anderson, a professor at the Tyndall Center for Climate Change at the University of Manchester in England.

“I think there will be a big push for it – this is the petrochemical industry, there’s always a big push,” Mr. Anderson added. “We’re all locked into fossil fuels, they are hugely influential in terms of government, employment, tax revenues. We’ve got to move off the in a time frame we can hardly imagine.”

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