

## Should Europe be fracking?

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The global energy community is abuzz with excitement about ‘fracking’ a new technology in hydraulic fracturing that has opened previously inaccessible reserves of natural gas trapped inside shale formations. The boom in shale gas production has allowed the US to become almost self-sufficient in gas. Development of shale gas in Europe is lagging, with exploration proceeding only hesitantly and production not even started. Many observers are lamenting that Europe is about to miss out on the next energy revolution.

However, critics of Europe’s apparent lack of enthusiasm for ‘fracking’ miss two key points.

First of all, the geological endowments of Europe and the US are different. There is a huge difference between potential deposits hidden somewhere in large shale formations, and recoverable reserves that can actually be extracted economically. Estimates by the International Energy Agency (IEA) suggest that the really important recoverable reserves of shale gas are in the US and China, not Europe.<sup>1</sup> Moreover, even these estimates are really not much more than educated guesses because shale formations have been subject to intense exploration for decades only in the US. This process is starting only now in Europe. The country in Europe with the most favourable geology seems to be Poland, which might become a significant producer on a local scale in about 10 years. This is a fortunate coincidence because this would probably make it politically easier for the country’s policy-makers to diminish the existing national subsidies to local coal production (and consumption), which do not make any sense from an economic or environmental point of view.

Secondly, licensing exploration and production of raw materials are decided at the national level and are not a competence of the European Union. Thus, the EU certainly cannot be faulted for the slow development of shale gas in Europe.

One has to admit, however, that in Europe the ‘Nimby’ phenomenon (Not In My Back Yard) is much more important. It might be true that Europeans are too sensitive to environmental concerns, but incentives also play a role. In Europe the ownership rights to natural resources belong typically to the state, not (as in the US) the individual owner of the piece of land under which it lies. This means that in Europe local residents have a tendency to oppose fracking whose environmental consequences they fear, but whose benefits they will not see

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<sup>1</sup> For more details, see Jonas Teusch, “Shale Gas and the EU Internal Gas Market: Beyond the Hype and Hysteria”, CEPS Working Document No. 369, CEPS, Brussels, September 2012.

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because they are going to the government. By contrast, in the US, the local residents benefit handsomely from being able to sell their ownership rights to the gas companies, providing a strong counter-balance to any fears of environmental costs.

A seldom-mentioned reason for the shale gas boom in the US is that its development has benefitted from important tax incentives. There is no reason why Europe should emulate this example. There is a role for governments in supporting the development of new technologies, such as fracking. But once the technology has been developed there is no reason why one form of production of gas should be subsidised via tax breaks.

But the really crucial point about fracking that is always overlooked is that shale gas, like all natural resources, can only be used once. The real issue is thus not whether this resource should be developed in Europe, but when it should be used: today or tomorrow?

Europe is already a heavy user of gas, but its consumption is stagnating (along with its economy). Despite the hype about the shale gas revolution, the extraction cost of (onshore) conventional gas remains below that of fracking. And lots of pipelines have already been built so that the marginal cost of bringing this 'conventional' gas to Europe is rather low. From an economic and environmental point of view, fracking is thus unlikely to bring large benefits for Europe and shale gas might just substitute for conventional gas which is plentiful.

In an environment of ultra-low interest rates, the economic cost of being late is low. The best option for Europe might thus be just to wait and let the market operate. Fracking is not yet a mature technology and thus very likely to further improve over time. Perhaps Europe will become a leader in 'advanced fracking' when the shale gas deposits in the US will have already been exhausted.