

Europe told of potential shale gas bonanza

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Unconventional gas resources in Europe have the potential to reshape the continent's supply, reducing its dependency on Russia and the Middle East, says a report out on Friday.

The European study cautions, however, that several challenges need to be addressed – including environmental concerns – before commercial production from unconventional sources, such as shale gas, becomes a reality.

Such production has revolutionised [North America's energy market](#) and allowed the US, once a significant importer, to become [self-sufficient](#) in gas.

The prospects of such production in the rest of the world have attracted interest after new estimates highlighted the scale of the resource base.

A report by the US Energy Information Administration last month analysed 48 shale gas basins in 32 countries. The report, which excluded other potential regions such as Russia and the Middle East, estimated the technically recoverable resource in Europe at 624 trillion cubic feet compared with 862 tcf in the US.

The estimates are even higher than previous ones.

The new study, by the European Centre for Energy and Resource Security (Eucers), assesses the economic and geopolitical implications of recent estimates.

It says: "In theory ... Europe's unconventional gas resources might be able to cover European gas demand for at least another 60 years."

If only a fraction of the potential unconventional gas resource becomes available for European and other energy markets before 2020, the study says, it will offer the EU another domestic source, enabling greater diversification of gas demand and imports, as well as improving energy security for decades.

Unconventional gas could become "a major challenge for traditional exporters like Russia in the period between 2015 and 2030", the report adds.

Several of the world's largest oil groups, including [ExxonMobil](#) and [Chevron](#), have been securing land in Europe with a view to exploiting shale gas reserves. Chevron plans to drill its first well in Poland, where it has a leasehold of more than 400,000 hectares, 1m acres, later this year, while ExxonMobil has completed drilling its sixth shale gas well in north-west Germany since 2008.

Despite the potential, challenges remain before shale gas production becomes a reality. The Eucers report says "environmental concerns must be addressed" first and foremost, particularly as European population density is much higher than in the US.

Shale gas is trapped in rocks thousands of feet underground. It is released by fracturing rocks using high-pressured water in a process known as "hydraulic fracking". Fluids and other components such as sand are injected into a well bore under high pressure to force the release of gas from rock formations.

One of the biggest environmental concerns is the impact of such fracturing techniques on the water table. There have been reports of natural gas coming through household taps in the US.

In March, France ordered a ban on shale oil and gas drilling until two official reports were published next month.

The Eucers report points out that current environmental legislation in the EU is "not adequate" for ensuring environmentally friendly exploration and production of these resources.

The allocation of property rights remains another challenge.

Unlike in the US, where the owner of the land also owns the subsoil and receives revenues from the resources held within, in most European countries the state owns the rights and receives the royalties.

"In contrast to the US, Europe lacks any detailed and reliable geological study, making it difficult to estimate the potential for unconventional gas," the report says.

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