

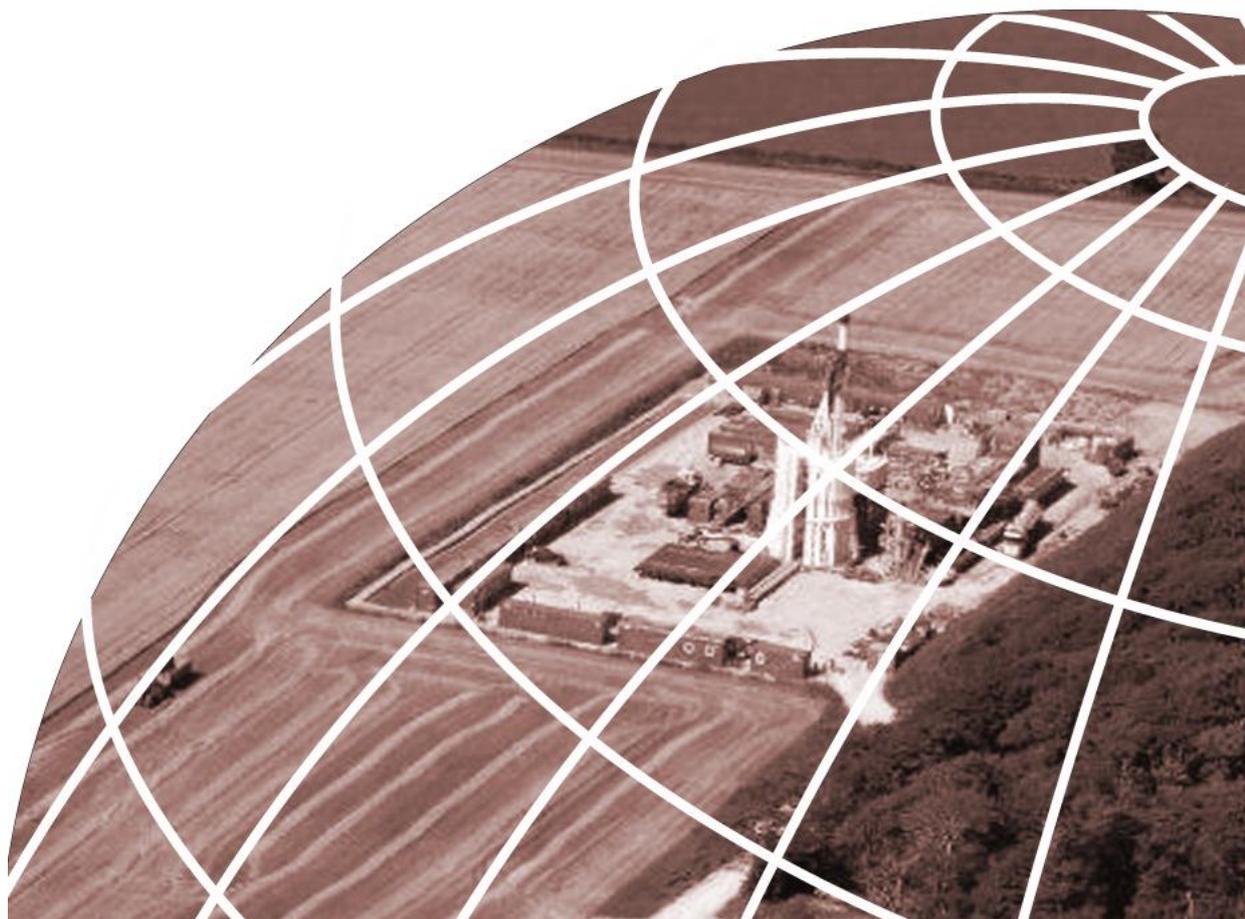
THE
ENERGY CONTRACT
COMPANY

Global Oil & Gas Expertise.

ECC INSIGHT UK SHALE GAS

Can the UK replicate the success story of the US?

February 2013



Shale gas could change the face of the UK energy market in the long-term

With the UK Government's recent decision to allow the resumption of hydraulic fracturing, or fracking, used to tap the country's potentially huge shale gas reserves – albeit subject to stringent regulatory controls – the prospects of a “cheap” source of gas and concerns over possible environmental impacts continue to spark debates over its place in the future UK energy mix.

The Energy Contract Company (ECC) sees significant potential for the UK to economically develop its shale gas reserves; however such reserves will not in the near future offer a cheap source of natural gas to the UK market. A repeat of the success experienced in the US over the last few years is therefore highly unlikely. Nevertheless, ECC believes shale gas will provide the UK with a long-term, economic source of large quantities of gas, along with significant and wide-ranging economic benefits, associated in particular with new investment and job creation.

A report prepared and published by ECC in 2012 shows that the development of UK shale gas would help to meet a significant portion of the UK's gas requirements, increasing the security of supply and benefiting the national economy greatly. The Financial Times discussed the findings of this report in their article *Shale gas study says benefits are limited*. It is clear however that this article misses the crucial point. Whilst the recoverable reserves may be significantly less than the gas in place – or the headline numbers in the press – the gas reserve potential is still very large, as is discussed in the article *Shale and hearty welcome* published by The Economist. The conclusions reached by ECC include:

- UK shale gas will not be a “cheap” source of gas for the initial developments and there is unlikely to be a repeat of the US experience. The abundance of US shale gas production is related to the lease

requirements for continued drilling activity.

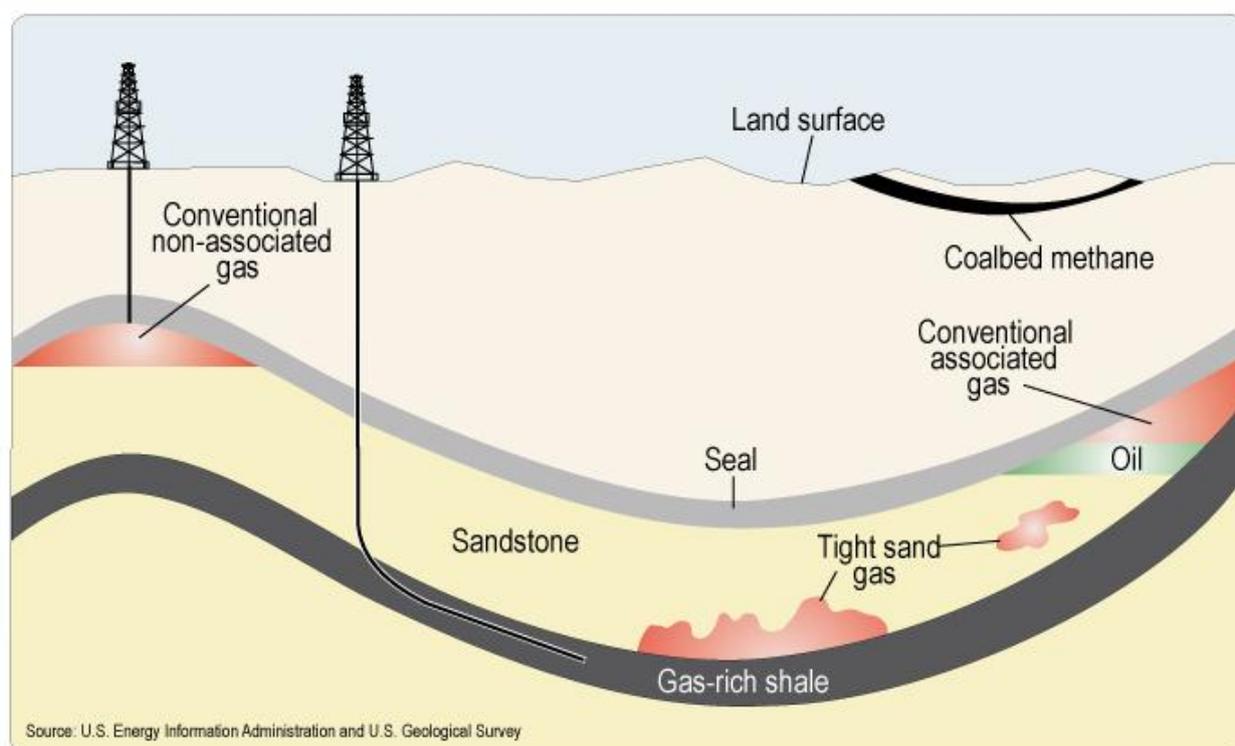
- Continued advancements in technology – particularly in multi-lateral well drilling and completions – will enable multiple wells to be drilled from a single drill pad, increasing production rates and decreasing unit costs.
- Shale gas should be economically competitive with imports and will help to provide a reliable, secure supply of natural gas for the UK market. The lack of long-term supply contracts in the UK means shale gas production will not be market constrained and LNG imports will most likely be backed out.
- Gas deliveries into the regional distribution systems are now considered part of the NBP, giving regional shale developments access to the low pressure grid and the NBP trading point. However the volumes which can be marketed in this way will be relatively small and dependent upon local infrastructure and conditions.
- Natural gas – from both conventional and unconventional sources – will be an important transitional fuel to a low carbon economy. In particular, it could have a major role in future gas fired power generation and associated carbon capture and storage initiatives, delivering power to UK customers with significantly reduced carbon emissions. Gas fired power generation is also likely to provide any shortfall in electricity supply either due to delays in construction of nuclear power plants or lack of wind to drive wind turbines.
- We now believe that the future potential contribution of indigenous shale gas to the UK market's needs could be greater than the 27% base case initially forecast in the ECC report. This contribution is now estimated to be between a third and a half of UK demand. ECC estimates that the various Bowland shale deposits located in the UK could hold reserves of

20-40 trillion cubic feet (tcf), rising to 70 tcf in the high case.

- With an estimated total investment of £95 billion required to develop the 10 Bowland shale deposits alone, ECC believes shale gas development in the UK would have the impact of backing out imports, increasing the security of supply, reducing the balance of payments, increasing the revenue to the exchequer and creating jobs.

- Furthermore, the UK oil and gas service industries, with world-class expertise developed over many years of North Sea oil and gas activity, would have the opportunity to become world leaders in shale gas and shale oil technology, and have a significant hand in setting the appropriate European standards.

To purchase or receive more information about the ECC UK Shale Gas report, please email sbusby@energy-contract.com



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