Shale gas is the same as North Sea gas. They are both the natural gas that we use to heat our homes. Shale gas is simply gas formed in Shale formations 1–5km underground.

What is Shale Gas?

What is fracking?

Fracking is a common process that has been widely used in the oil and gas industry for more than 50 years. Hydraulic fracturing has been carried out more than a million times in the United States.

The process involves drilling a narrow well between 1 and 5 kilometres deep. Fluid is injected into the rock many thousands of feet down. This creates tiny fractures between 1–5 mm wide. Gas that was trapped in the rock can flow through these fractures, into the steel-lined well and up to the surface. Fracking cannot be felt on the surface. It takes just a few days to create enough fractures to provide gas for 20–30 years.

NORTH SEA GAS DECLINE

GAS cm/y

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Source: Wood Mackenzie
SAFETY & THE ENVIRONMENT
The UK has one of the tightest regulatory regimes with much higher standards than in the US.

WATER SAFETY:
There has never been a recorded case of fracking itself causing water contamination
There are thousands of feet of solid rock between any frack site and drinking water supplies.
Some problems in the US have occurred due to poorly designed wells or reusing old wells. All INEOS wells will be brand new drilled to modern standards. They will have multiple layers of steel and concrete to ensure gas cannot leak.
All waste fluid will be treated and cleaned under approval from the Environment Agency.
More than 2000 onshore oil and gas wells have already been drilled in the UK.

AIR QUALITY:
Fracking has been used in the oil and gas industry for over 50 years
There has been more than 50 years of onshore oil and gas production in the UK with 2000 wells drilled.
Shale production is expected to be subject to the same robust safety and environmental regime.
Air quality is monitored in order to ensure staff and local communities are safe.
Dr John Harrison, director of Public Health England’s Centre for Radiation, Chemical and Environmental Hazards, has found that as long as hydraulic fracturing is carried out properly, the potential risks to public health are low.

EARTHQUAKES:
The minor tremors at Blackpool in 2011 occurred because drilling took place too close to a fault.
These were smaller than naturally occurring tremors in the UK every week.
INEOS will use state-of-the-art 3D underground mapping to highlight faults and ensure we do not drill too close.
The Royal Society and The Royal Academy of Engineering both recognise that shale wells in the UK have a lower risk of seismic activity than mining.
The Department of Energy & Climate Change standards, introduced since this event, ensure that seismic activity cannot go above magnitude 0.5, equivalent level to that caused by vehicles.

TIMESCALE
A well takes 3-5 months to construct. It then produces gas near-silently for around 20 years.
During construction there is some short-term disruption lasting 3–5 months.
Drilling takes 4–6 weeks. Noise is mitigated and keeps within World Health Organisation levels for both day and night.
In the US fracking takes a matter of hours, spread over a week, and is undetectable on the surface.

CHEMICALS:
98% of fracking fluid is water. 1.5% is sand. 0.5% is additives including some dilute chemicals. These are used to help the fluid into fractures and to prevent bacteria and scale build-up.
The chemicals used are commonly found in households in food and cleaning products.
Around 6-12 additives will be used per well. These will be approved by the Environment Agency and made public.
The Environment Agency confirms that the chemicals used in fracking fluid are non-hazardous in the concentrations used.
WHY INEOS?

INEOS is committed to being an excellent partner with local communities.

INEOS will consult with communities before any production goes ahead.

INEOS will share the benefits of shale, giving 6% of revenues to local homeowners, landowners and communities. This is estimated to be worth £2.5 billion.

INEOS is an experienced manufacturing company with sites around the UK and globally.

INEOS has an outstanding track record for safely managing onshore complex hydrocarbon/chemical processing facilities.

INEOS knows how to safely handle chemicals – it is what we do all day every day.

The INEOS team includes some of the world’s leading shale gas experts who have drilled thousands of wells without problems arising.

INEOS will meet or exceed all Environment Agency regulatory standards.

FURTHER FACTS:

- SEPA: www.sepa.org.uk/customer_information/energy_industry/unconventional_gas/frequently_asked_questions.aspx
- UKOOG: www.ukoog.org.uk
- Frackland Blog: www.frackland.blogspot.co.uk
- No Hot Air: www.nohotair.co.uk/index.php/library
- ReFINE: www.refine.org.uk
- Frac Focus: www.fracfocus.org

100km²

100km

10km

£375 MILLION

HOW INEOS WILL SHARE THE REVENUE

£250m HOME AND LANDOWNERS

£125m WIDER COMMUNITY

£2.5bn IN TOTAL COULD GO TO COMMUNITIES

INEOS Upstream
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#letstalkshale
e-mail: shale.information@ineos.com

The Boom: www.russellgold.net/books/the-boom

US EPA: www2.epa.gov/hydraulicfracturing

PENN State University: http://stateimpact.npr.org/pennsylvania/tag/fracking/

Range Resources: www.rangeresources.com

CONSOL Energy: www.consolenergy.com