

Myth: #1 We no longer need gas

Fact: Last year 40% of our electricity was provided by gas and over 85% of the UK population use gas for heating and cooking. We also need gas as to make petrochemicals which are used in everyday items such as plastics, fertilizers, synthetic fibres, cosmetics and medicines.

Rebuttal:

Climate change means that we urgently need to reduce how much gas we need. Transitioning away from a reliance on gas is the best option to improve energy security and reduce energy bills.

- Friends of the Earth's [briefing](#) shows how we can do this with better insulation and using heat pumps and, in the future, maybe hydrogen rather than gas.
- We are already moving away from using gas to generate electricity: when Cuadrilla test-fracked in Lancashire in 2011, renewables generated around 10% of UK electricity. Now they generate a third. Renewables are getting cheaper
- We shouldn't be fracking for gas to produce plastic, which is often used for mere moments before going on to linger in our environment for hundreds of years. The biggest would-be frackers, Ineos, want shale gas as a petrochemical feedstock. Ineos are the biggest producers of plastic in the UK and the EU. The vast majority of plastic waste doesn't get reused or recycled. It's out there lingering in the natural environment – polluting our soil and seas.

Myth #2: Using gas is incompatible with our climate change commitments

Fact: Every scenario proposed by the Committee on Climate Change to meet our legally binding carbon reduction commitments includes demand for natural gas. A mix of gas and renewables will enable us to meet our climate targets and the Government continues to invest billions into renewable energy through the Contracts for Difference programme.

Rebuttal:

- The government has [accepted](#) that we need to keep at least 80% of known fossil fuel reserves unused if we want to keep the global temperature rise to 2 degrees. This doesn't include UK shale gas and we would need to keep more fossil fuels unburned to keep to 1.5 degrees.
- [Analysis](#) by Oil Change International shows that emissions from gas and oil wells and coal mines already in operation or being constructed would exceed the carbon budget for a likely chance of keeping to 2 degrees. So that is more than we can safely afford to burn: there's no room for any new exploration or production.
- If we start producing UK shale gas instead of importing gas from, say, Qatar, then how can we ensure that Qatar won't simply sell the gas they don't sell to us to someone else? We can't. UK shale gas would be in addition to other gas, not a replacement for it.
- And if we're talking scenarios: among the most-respected scenarios are National Grid's annual [Future Energy Scenarios](#). Only two of the four scenarios they published this year met the Government's climate targets – and both of them assumed no shale gas.
- The CCC has told government that unless 3 tests are met, fracking could risk breaching climate change targets. These tests haven't been met – and there is no prospect that they can be met.

Myth #3: Shale gas extraction will industrialise the countryside and our national parks

Fact: There will be no hydraulic fracturing in National Parks. In 2016 we confirmed that shale exploration wells will not be able to be drilled in protected areas. A shale gas site is typically the size of a football pitch. Drilling only takes 4-8 weeks and once the wells are drilled the large equipment is taken away. Wells can be returned to their pre-drilling state in as little as 3 years.

Rebuttal:

- Fracking is allowed under national parks – meaning the outskirts of these beautiful landscapes could be fracking sites.
- [Over 17,000 square kilometres](#) of the English countryside is licensed for possible fracking. [Analysis](#) for Friends of the Earth shows that to replace half of estimated gas imports from 2021 – 2035 would need over 6,000 gas wells to be drilled and fracked: the equivalent of more than one a day. Many of these would be in the

countryside. The wellsites could cover the same area as 4,900 football pitches. And 6,000 wells could mean over 6 million lorry movements, many on country roads.

- Fracking firm INEOS wants to hunt for shale gas in Sherwood Forest, one of our country's most beloved and historic green spaces, and its fracking plans threaten a swathe of central England. If a national treasure like Sherwood Forest is under threat, where will it stop?

Myth #4: Noise from shale gas sites will disrupt communities

Fact: Noise is carefully managed and regulated by the Local Authority. The planning process considers and regulates noise impacts to local people and authorities can impose restrictions. Shale gas operators will also use noise abatement fencing to further minimise any noise

Rebuttal:

At Kirby Misperton in rural Ryedale in North Yorkshire, the local council set noise limits for Third Energy's operations. A [report](#) on the Environment Agency website shows that during the 'pre-stimulation workover' phase of work (part of the work before fracking starts) in October 2017, these permitted limits were regularly breached. Enforcement of such planning conditions is discretionary.

Myth #5: Extracting shale gas will contaminate the water supply

Fact: The Environment Agency will not permit any activity where there is a risk of contamination of our water supplies. Furthermore, high volume hydraulic fracturing for shale gas is banned at depths of less than 1000m. This depth is far below drinking water supplies which are typically found up to about 250 metres deep.

Rebuttal:

The British Geological Survey, the Government's advisers on geo-science, have [said](#) that "*Groundwater may be potentially contaminated by extraction of shale gas both from the constituents of shale gas itself, from the formulation and deep injection of water containing a cocktail of additives used for hydraulic fracturing and from flowback water which may have a high content of saline formation water*"

Myth #6: Shale gas extraction is incredibly water intensive

Fact: A typical shale well uses less water over a decade than a golf course uses in a month and a coal-fired power plant uses in 12 hours. Companies will only be allowed to use water for hydraulic fracturing if there is enough supply locally without effecting drinking water supplies or the environment.

Rebuttal:

An [Environment Agency report](#) found that, in 2003, golf courses irrigating tees, fairways and greens used an average of 33,700 cubic metres of water per year. Most of this would typically be during the summer but it's a monthly average of around 2,800 cubic metres. However Cuadrilla's [Environmental Statement](#) for Preston New Road states that, during fracking, they will use **765 cubic metres of water a day**.

Myth #7: Shale gas causes earthquakes

Fact: The risk of an earthquake from shale gas extraction is very low. The Oil and Gas Authority regulates for seismicity and requires operators to stop activity if any seismicity is measured, even if it is lower than tremors caused by a rollercoaster.

Rebuttal:

The last fracking in the UK - in Lancashire in 2011 - was stopped because of earth tremors. Following this, the Government introduced a 'traffic light' system to address concerns. But, even before any more fracking has taken place, the Government is [suggesting](#) that it might relax the regulations.

Myth #8: Shale gas extraction requires the use of nasty chemicals

Fact: The chemicals that will be used in the UK are non-toxic and won't harm the environment and are similar to those found under a typical kitchen sink. Under EU and UK regulation operators are required to publish all of the chemicals they are going to use on site.

Rebuttal:

'Toxic' and 'hazardous' are different risk grades, carefully defined in EU law, with 'hazardous' being the higher risk. The Environment Agency has a policy against the use of 'hazardous' chemicals in connection with fracking, but no such absolute restriction on using toxic chemicals.

And what do you have under your sink? Do you have frack sand – which US government agency [reports](#) show pose a risk of silicosis and lung cancer? The Environment Agency has given Cuadrilla permission to use [7,500 tonnes](#) of frack sand at Preston New Road.

Myth #9: Local communities don't get a say in the decision

Fact: Local communities must be fully involved in planning decisions and any planning application – whether decided by councils or government – will continue to require a full consultation with local people.

Rebuttal:

The government [wants](#) to change planning rules so that exploratory drilling – the precursor to fracking – will be treated as 'permitted development' (rules designed to make it easier to put up a garden shed or a small home extension). This will take decision-making away from local councils and stifle the voice of local people.

And if a company gets to the stage of wanting to go into production of shale gas, the government is [proposing](#) to class this as 'nationally significant infrastructure'. This would mean decisions being taken by a national body rather than a local council, again reducing the voice of local people.

Myth #10 Shale gas extraction is harmful to human health

Fact: The UK has world class regulation to ensure that shale exploration can happen safely, Regulators, Operators and Government are working closely together to ensure there is no risk to public health from any shale gas extraction or associated works.

Rebuttal:

UK regulation is not world class. There are serious shortcomings in the regulations themselves and there have been problems in practice.

Fracking was banned in New York State because of the '[significant](#)' risks to public health. It has also been banned or put on hold in Scotland, Wales, Northern Ireland, Republic of Ireland, France and Netherlands.

The United Nations Environment Programme has [said](#) that "*fracking may result in unavoidable environmental impacts even if [gas] is extracted properly, and more so if done inadequately*"

There is a growing body of peer-reviewed medical and scientific evidence showing links being fracking and associated activity and human health in the US where fracking has boomed. According to an [analysis](#) of literature, 84% of peer-reviewed public health studies on fracking published between 2009 and 2015 contain findings that indicate public health hazards, elevated risks, or adverse health outcomes. We would be foolish to ignore this evidence.