

# Fracking: Frequently Asked Questions

## **“What is fracking?”**

Fracking is a process used to extract gas locked in rock formations thousands of metres below the Earth’s surface. A mixture of chemicals, sand and water is injected deep underground at high pressure to fracture the rocks and release the gas, called shale gas.

## **“Isn’t fracking tried and tested technology?”**

Fracking has been used since 1947 but today’s technology is very different. Fracking today involves drilling several horizontal wells from one well pad, using millions of gallons of water mixed with tonnes of chemicals at incredibly high pressure. All of these processes are relatively new. The Advertising Standards Authority has said Cuadrilla can’t refer to fracking as ‘proven safe technology’ without qualifying this.

## **“Won’t shale gas cut energy bills like it did in the US?”**

Things are very different in the UK. Experts say it’ll cost up to 50% more to produce the gas here for reasons including higher population density and no established UK onshore drilling industry. One leading analyst company has said that going for shale gas to cut energy bills is “*wishful thinking*”. Even Energy Secretary Ed Davey has said that “*North Sea Gas didn’t significantly move UK prices – so we can’t expect UK shale production alone to have any effect*”. And fracking just keeps us hooked on gas. Wholesale gas prices have rocketed in recent years and are forecast to carry on rising – up to 40% by 2020.

## **“Isn’t it better to have our own gas rather than import it?”**

The priority isn’t to find more gas, but to cut back on how much gas we need through energy efficiency and using renewable energy. The UK is fortunate in having huge renewables potential, from the wind, waves and sun. Just because the gas is drilled in the UK doesn’t mean it will be used in the UK – if companies can earn more by selling it abroad, they will. We will need gas in the future, but much less, and we can get this from conventional sources. Fracking is a risk we don’t need to take.

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For more than 40 years we’ve seen that the wellbeing of people and planet go hand in hand – and it’s been the inspiration for our campaigns. Together with thousands of people like you we’ve secured safer food and water, defended wildlife and natural habitats, championed the move to clean energy and acted to keep our climate stable. Be a Friend of the Earth – see things differently.

**“There are no known examples of water contamination from fracking”**

This is an example of industry weasel words - referring to fracking alone rather than fracking and related activities. And there is plenty of evidence: peer-reviewed scientific papers show methane levels in US drinking water wells 17 times higher in areas with gas drilling. And the US Environmental Protection Agency has concluded that contaminated groundwater near Pavillion, Wyoming was likely to be due to fracking.

**“Doesn't fracking use chemicals you can find under your sink?”**

It has been hard to find out what chemicals the fracking industry uses because it negotiated an exclusion from federal regulation in the US. Analysis of 350 chemicals known to be used in fracking shows a quarter could cause cancer and up to half could affect the nervous and immune systems. Industry reporting showed that cancer-causing chemicals such as formaldehyde and naphthalene were used in a third of all US fracking operations in 2011 and 2012.

**“Won't fracking help us tackle climate change?”**

Even if burning shale gas emits less carbon emissions than coal (and at best the academic jury is still out), it's still a fossil fuel. Avoiding the worst impacts of climate change means getting off fossil fuels as quickly as possible. The Government's official climate change advisors say that plans to triple our gas capacity – advocated by the Chancellor – are incompatible with our mandatory targets to cut carbon emissions. And DECC's chief scientist has written that *“without global climate policies ... new fossil fuel exploitation is likely to lead to an increase in cumulative greenhouse gas emissions and the risk of climate change”*.

**“Is other unconventional gas a threat to people and the environment?”**

Other unconventional forms of gas including coal bed methane (CBM) and underground coal gasification (UCG) are also a threat to the climate. Like fracking for shale gas, they involve extracting and more fossil fuels that the UK can't afford to burn if we are going to play our part in tackling climate change.

**“Can't shale gas and renewables work together?”**

The Government wants to carry on using gas as a main source of electricity generation for decades to come. But this 'dash for gas' causes doubt about whether the Government is serious about renewables. This is dissuading the renewables industry from investing in the UK. We have to base our energy future on energy saving and using renewable sources. We'll need some gas in the future, but as back-up to renewables, not as a main source of power generation.

**“Aren't the wells safe?”**

Industry figures from North America show that 6% of fracked gas wells drilled leak immediately, and 50% within 30 years. And it's not just leaking wells we need to worry about – it's all the other related activities too, such as transporting the fracking chemicals and transporting and disposing of the contaminated wastewater.

**“We'll have proper regulation, unlike the US, so won't that make it safe?”**

Regulation will be tougher in the UK, but this can only make the industry safer – it cannot make it safe. Other countries, such as Australia, have tried and failed to use regulation to make the unconventional gas industry safe. The United Nations Environment Program has said *“Fracking may result in unavoidable environmental impacts even if unconventional gas is extracted properly”*.

**“The earthquakes in Lancashire were tiny and no-one felt them”**

Many people in Lancashire felt the earthquakes and reported minor damage to homes. And what happens underground is even more worrying: what impact could an earthquake have on a well? Could they damage the concrete and steel casings that line the well and make leaks of gas and fracking fluid more likely? The Lancashire earthquake buckled the casing of the fracked well. We don't yet know what impact this had, but it raises important questions for the future. The Environment Agency is concerned that such earthquakes could increase the risk of methane leakage and water pollution.

**“Won't fracking create lots of jobs which we desperately need?”**

Investing millions of pounds in any industry will create jobs. But US experience shows firstly that the industry's jobs claims are frequently over stated, and secondly that many jobs in fracking go to itinerant experts, not local people. And the industry never talks about the negative impacts on existing economic sectors like agriculture and tourism. With some of the best wind, wave and tidal power in Europe, the UK is well placed to be at the forefront of the global clean energy revolution, with the potential to create tens of thousands of jobs.

**“Aren't the only opponents of fracking misinformed NIMBYs and green scaremongers?”**

Local people fighting fracking have well-founded concerns for their health and local environment, based on evidence from countries like the US and Australia. And it's not just local people and green campaigners raising concerns about fracking. For example, the French and Bulgarian Governments and the US state of Vermont have banned it, the National Trust has a presumption against it on National Trust land, over 50 MPs have signed EDMs calling for a moratorium, the Green Party opposes it, and the United Nations Environment Program says even if fracking is done properly, it may cause unavoidable environmental impacts.

**“The Government says it will make fracking happen – how can you stop it?”**

Widespread opposition has already helped stop fracking in France and Bulgaria, and got temporary bans in Holland and parts of the US, Germany, Switzerland and Austria, and the same can happen in the UK. Many of the regions where fracking is proposed are in Tory heartlands or areas where marginal seats will decide who wins the next General Election, like the East Midlands. What happened in Balcombe shows the strength of feeling in affected communities across the country.

**What are the solutions to our energy needs?**

Cutting energy waste and developing the UK's huge renewable energy potential will secure affordable power long-term and protect our environment. The Government needs to set a legally-binding target to take fossil fuels out of our power sector by 2030, to drive forward investment in renewable energy and UK supply chains. Going green will put the UK at the forefront of a clean energy revolution – creating hundreds of thousands of jobs. But those jobs are hanging in the balance - if we don't invest, we risk losing jobs abroad to Europe and China.

**How popular is fracking compared to renewable energy?**

YouGov polling in August 2013 showed that people would rather the Government invests money in renewables than in fracking – 78% think the Government is right to spend money encouraging solar and tidal power compared to just 40% who back spending on shale gas.

**Isn't green energy making our bills more expensive?**

Gas is by far the biggest driver of bill increases – it has been pushing up our bills for decades. Government figures show that low-carbon measures only account for 7% of the average dual fuel bill. The Government needs to minimise the financial impact of fuel bill rises on vulnerable and fuel poor households by better insulating our homes and workplaces. Ministers should use money raised through carbon taxes to pay for a comprehensive national energy efficiency programme.

**Don't we face an energy crisis – how can we be sure to keep the lights on?**

UK electricity demand is predicted to exceed supply for three hours a year in 2015/2016, and the National Grid has plenty of tools and published plans to manage this situation and keep the lights on. The best way to further minimise any risks is to reduce demand for electricity, by saving as much as possible in our homes and workplaces – for example through more energy efficient lighting and appliances. Fracking couldn't help our medium-term energy crisis: even if the industry was able to move ahead as fast as it wants, we wouldn't see significant production until the next decade.