

Seven reasons why we don't need shale gas

Shale gas is not the answer to the UK's energy problems. Reports of a Government and Industry roundtable in the Independent on Sunday confirm this view, with Government Ministers conceding that: *shale gas has the potential to be deeply controversial without securing major benefits in lowering carbon emissions or reducing energy costs*¹.

The climate change impacts of an over-reliance on gas are serious: the Committee on Climate Change has said that, to meet our carbon budgets, electricity generation must be almost entirely decarbonised by 2030 and has written to Ed Davey warning about the risk of a second 'dash for gas'². Additionally, fracking has been linked to earthquakes, water contamination and air pollution. A switch to renewable energy and a focus on reducing our energy use are essential to ensure a clean, safe, affordable and secure energy supply. It would also provide significant benefits with a recent report for the Renewable Energy Association by Innovas saying the UK's £12.5 billion renewables industry could support 400,000 jobs by 2020³. Research by Ernst & Young has shown wind power provides twice as many jobs as gas⁴. With Lancashire's abundant renewable resources and skills base the county is ideally placed to take advantage of a new green industrial revolution.

Opposition to shale gas is growing in Lancashire⁵ and across the world: fracking is banned in France, Bulgaria and the US state of Vermont. There are moratoriums in Holland, South Africa, parts of Switzerland and Austria, US states including New York and New Jersey. Reports say moratoriums could be imminent in Germany and the Czech Republic⁶.

This briefing sets out seven reasons why shale gas is a dangerous distraction.

1. Shale gas is neither quick to develop nor a significant source of fuel in the UK

- National Grid Executive Director Nick Winser told Utility Week magazine that National Grid did not expect shale to have a major impact in Europe this decade, "*if ever*"⁷.
- Mark Hanafin, managing director of the energy production division of Centrica, said "*UK shale production... I think it's important and we should develop it, but I don't think it's going to be a game changer*"⁸.
- According to the Independent on Sunday, Energy Secretary Ed Davey, speaking after a Downing Street summit, said industry experts were "*clear that it would take time for shale gas to be exploited in the UK*" and cautioned that the reserves "*are not quite as large as some have been speculating*".
- Financial analysts do not expect an overnight transformation: for example, Ernst & Young say the speed of development in Europe will be evolutionary rather than revolutionary⁹.

2. Shale gas won't help cut energy bills

- Deutsche Bank has said "*we do not expect the impact of shale-gas production on EU gas prices to be anywhere near as great as has been the case with US shale-gas production*"¹⁰.
- Pöyry found in their report for OFGEM that only a shale gas boom in Europe would lead to significantly lower gas prices in the UK, and that this was a 'a low probability outcome'. More likely were scenarios with slower or much slower rates of development¹¹.

3. Shale gas won't help tackle climate change

- The Committee on Climate Change has said that we need to almost entirely decarbonise our electricity supply by 2030. However research from Bloomberg Energy Finance suggests that the

amount of new gas-fired power station capacity that comes online by 2016 could be twice as much as the Government predicts for the rest of the decade¹².

- Peer-reviewed evidence suggests shale gas is more polluting than conventional gas, and could be more polluting than coal.¹³ Researchers in the US have concluded that “Compared to coal, the footprint of shale gas is at least 20% greater perhaps twice as great on the 20 year horizon and is comparable to coal over 100 years.¹⁴ At best, the academic jury is still out.
- At the global level we have 120 years’ worth of known conventional gas resources. As Oxford academic Professor Dieter Helm has said, this is “*more than enough to fry the planet several times over*”¹⁵. We don’t need more gas.
- In their June 2012 report the Royal Society and the Royal Academy of Engineering called for urgent research into the climate impacts of shale gas.
- The International Energy Agency has concluded that relying on shale gas to meet our future energy needs will cause catastrophic climate change and is not the silver bullet for energy security the industry claims.

4. Fracking could contaminate water supplies

- There is considerable evidence from the US of fracking leading to contaminated water supplies in towns in Pennsylvania, Wyoming, Colorado and Texas. Causes include spills from wells, leaking wastewater pits and faulty well casings.
- Last year the US Environmental Protection Agency released a draft report concluding that fracking likely led to methane contamination of deep groundwater near the town Pavillion, Wyoming and that shallow groundwater contamination was likely due to surface spills of fracking wastewater¹⁶.

5. Fracking is linked to increased air pollution

Studies in the US have linked fracking to increased air pollution and respiratory problems¹⁷:

- Monitoring in Texas has found levels of benzene - a known carcinogen - more than five times permitted limits near shale gas wells.
- A hospital system in Texas serving six counties with intensive shale gas development reported asthma rates three times higher than the state’s average.
- Parts of rural Wyoming with a lot of drilling and fracking have recorded low level ozone pollution at concentrations above those in Los Angeles.

6. Fracking triggers earthquakes

- Fracking hit the headlines last year when it triggered earthquakes in Lancashire. These shook houses on the surface but the greater concern is about the impacts underground: did it damage the integrity of the well? Structural damage to wells increases the chances of fracking fluid or methane escaping, with potential risks to water sources. The company involved, Cuadrilla, claims well integrity was not affected but the evidence is inconclusive.
- Lancashire is not the only place where fracking and related activities have triggered earth quakes: a US Geological Survey has found a ‘remarkable’ increase in earthquakes that are almost certainly man-made, with drilling or the injection of drilling waste water cited as a likely cause¹⁸.

7. Fracking won’t boost the Lancashire economy – but renewables will

- Cuadrilla claims shale gas will support the Lancashire economy – but local jobs would be limited while its environmental impact puts at risk the county’s vital farming and tourism sectors. Tourism brings in £200 million to the Fylde economy alone¹⁹.
- Lancashire has an abundance of renewable resources and an engineering and manufacturing skills base which could be at heart of a renewables supply chain to power the country. Over 100,000 jobs are expected to be created in offshore wind and 70,000 in energy efficiency over the next decade²⁰.

Friends of the Earth believes the answer to the UK’s energy problems is clean British energy, using our vast potential for wind, wave and solar power. This is also popular with the public: a recent poll shows 85% of people want to see more energy produced from renewable sources and two-thirds said they wanted renewables to be providing more of their electricity in 10 years, compared to 2% for gas²¹.

Further information

Briefing:

A full briefing on shale gas and fracking is at http://www.foe.co.uk/resource/briefings/shale_gas.pdf

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¹ <http://www.independent.co.uk/environment/green-living/government-backtracks-on-fracking-7768853.html>

² http://downloads.theccc.org.uk.s3.amazonaws.com/Letters/EdwardDaveyMP_Letter270312.pdf

³ <http://www.r-e-a.net/news/report-on-employment-and-skills-in-the-uk-renewable-energy-sector-to-be-launched-with-greg-barker>

⁴ <http://www.nytimes.com/2011/10/27/business/global/economic-slowdown-challenges-renewable-energy.html>

⁵ There are residents groups opposing fracking in the Fylde, West Lancs, Hyndburn, Preston, the Wyre and North Lancs.

⁶ <http://www.spiegel.de/international/germany/germany-rejects-fracking-to-tap-natural-gas-a-831764.html> and

http://www.mzp.cz/en/news_120509_shale_gas

⁷ http://www.utilityweek.co.uk/news/news_story.asp?id=196917&title=Gas+operations+keep+National+Grid+returns+buoyant+-+with+shale+unlikely+to+change+things

⁸ <http://www.independent.co.uk/environment/green-living/government-backtracks-on-fracking-7768853.html>

⁹ [http://www.ey.com/Publication/vwLUAssets/Shale-gas-in-Europe_revolution-or-evolution/\\$FILE/Shale-gas-in-Europe_revolution-or-evolution.pdf](http://www.ey.com/Publication/vwLUAssets/Shale-gas-in-Europe_revolution-or-evolution/$FILE/Shale-gas-in-Europe_revolution-or-evolution.pdf)

¹⁰ <http://www.longfinance.net/programmes/london-accord/499.html>

¹¹ http://www.ofgem.gov.uk/About%20us/PwringEnergyDeb/Documents1/033_PublicReport_UnconventionalGasOfgemLogo_v4_1.pdf

¹² <http://bnf.com/WhitePapers/download/64>

¹³ <http://www.springerlink.com/content/c338g7j559580172/> and <http://www.postcarbon.org/reports/PCI-Hughes-NETL-Cornell-Comparison.pdf>

¹⁴ http://www.climateactionprogramme.org/news/shale_gas_worse_for_climate_than_coal/

¹⁵ <http://www.guardian.co.uk/commentisfree/2011/oct/18/energy-price-volatility-policy-fossil-fuels>

¹⁶ <http://documents.foodandwaterwatch.org/doc/FrackingCrisisUS.pdf>

¹⁷ ibid

¹⁸ <http://eenews.net/public/energywire/2012/03/29/1>

¹⁹ <http://www.lancashireandblackpool.com/insights-and-statistics/lancashire-tourism-statistics>

²⁰ <http://www.businessgreen.com/bg/news/2183509/offshore-wind-create-100-jobs-2020-mainstream>

²¹ http://www.foe.co.uk/resource/press_releases/clean_british_energy_23042012.html