

Why lifting the ban on fracking is not the answer to the UK gas crisis

October 2022



Background

- In 2019, the government introduced a [moratorium on fracking for shale gas](#). A report by the Oil and Gas Authority concluded that it is not possible with current technology to accurately predict the probability of tremors associated with fracking.
- In September 2022, the government announced [fracking for shale gas could continue](#) and that the ban had been lifted. Alongside the announcement, the government published a new review, commissioned in April, from the [British Geological Survey \(BGS\)](#) which considers any changes to the science around the practice.
- At the UK's last general election, the [Conservative party manifesto](#) committed to ban fracking in England, saying: "*We will not support fracking unless the science shows categorically that it can be done safely*".

What is fracking?

- Fracking is the process of drilling down into the earth before a high-pressure water mixture is directed at the rock to release the gas inside. The industry has been successful at producing gas in sparsely populated places like Texas (USA).
- It has previously been tried in the UK with backing from the government, with exploration at sites across the country where shale reserves had been discovered. However, several earthquakes were recorded near fracking sites in Lancashire. One earthquake [measured 2.9 on the Richter scale, contributing to the decision to ban fracking in 2019](#).
- Fracking for shale gas has [higher associated emissions than conventional gas](#) and serious environmental concerns remain around pollution, including groundwater contamination and methane leakage.
- Fracking also uses huge amounts of water (9.6 million gallons of water per well, in the USA).

What is the Government's proposal?

- The Prime Minister used her first major policy address to announce an end to the moratorium on fracking in England, saying it could "*get gas flowing in as soon as six months*".
- However, Parliament was told that fracking will be contingent on "*local support*". The Business Secretary has suggested [that fracking companies could be allowed to determine local support](#) and use financial incentives to buy local support near fracking sites.
- [The government](#) is also considering raising the limit on the size of earthquakes (seismic limits) that are allowed to take place on sites. The seismic limit is currently set at 0.5 magnitude in the UK.

Can fracking bring down gas prices?

- UK gas prices reflect the European gas prices due to our gas markets being interconnected. New shale gas would be similarly exposed to international markets.
- In the early 2010s, even [Cuadrilla](#) was unable to supply evidence that fracking would make any noticeable difference to UK household bills. [The CCC](#) and [NAO](#) found that shale gas *might* (depending on how much could feasibly be extracted, which is unknown) be able to replace some gas imports but would not lead to a reduction in household bills.

- In 2019 the UK Onshore Oil and Gas (UKOOG) published [projections](#) of potential future scenarios for shale gas extraction in the UK, which showed fracking producing volumes of gas in 2027 equivalent to just 4.7% of the UK's gas demand, based on average demand period 2015-2020. This also assumes no shale gas is exported overseas, which is unlikely.

How quickly can shale gas be brought on stream?

- [Cardiff University's economic research unit found](#) around 1016 fracking pads would need to be drilled to replace half of UK gas imports in the period to 2035, implying the construction (and eventual dismantling) of one shale gas pad roughly every 5 days over the fifteen years. It takes [3-5 months](#) to construct a pad after a successful planning application.
- At least 6,100 fracking wells would need to be drilled across the English countryside to replace even half of imported foreign gas.
- UKOOG estimates (which project 5% of UK gas demand by 2027) assume no issues with planning processes or protests, of the kind that have plagued fracking sites since their inception.
- Fracking would also require years of drilling before production could start – far from the quick fix that some are calling for. According to the best-case industry scenario, fracking would not produce enough gas to meet even 1% of UK demand for more than three years.

What are the likely constraints?

- The UK cannot replicate an American-style shale gas boom, as it is a relatively small and densely populated island nation compared to the US, which spans a continent.
- The Bowland Shale in the north of England is thought to contain about 1,300 trillion cubic feet (Tcf) of gas. However, only a small proportion of gas can actually be extracted [around 4%](#). This is because the shale geology of the UK is considerably more complex, faults are numerous, and drilling costs are substantially higher.
- Fracking will industrialise the countryside, entail thousands of vehicle movements, acres of land, the erection of new buildings and huge lighting fixtures, plus pipelines and decommissioning costs (which would likely be covered by taxpayers).
- Protests are likely to slow down site productions with several [anti-fracking groups](#) signalling they are prepared to fight any new shale exploration.
- Reducing safety requirements will likely result in the Government becoming embroiled in toxic litigation and undermine its credibility as an international climate leader.
- The UK has legally binding carbon budgets. To meet targets of a totally green power system by 2035 and a net zero economy by 2050, the nation's gas consumption will have to fall dramatically.

What do voters think?

- The most recent [government polling](#) finds just 17% of people support fracking, compared with 85% for renewable energy such as wind and solar.
- There is very strong public opposition to fracking, with [YouGov](#) consistently finding over half of respondents being against, while below a fifth are in support in the past few years. Support drops the closer a community is to a fracking site: [66% of Lancashire residents opposed fracking near their homes](#).
- [Conservative Environment Network](#) polling found less than half of Conservative voters supported fracking, compared to the roughly 90% that supported solar and offshore wind.
- Polling by [Ipsos Mori](#) showed that a majority of Britons (71 %) supported greater investment in renewable energy in the UK, compared to just 7 % who actively opposed it. In the same survey, a majority (51 per cent) supported ending investments in coal, oil and gas projects abroad.