

## MYTH #8: “Fracking is a bridge fuel to a low-carbon economy.”



**FACT:** It is true that burning gas in power stations does produce less CO<sub>2</sub> compared to burning coal. However, by focusing only on CO<sub>2</sub> emissions, supporters of fracking are not telling the whole story.

A far more dangerous greenhouse gas is **methane** – the main gas produced by fracking – which is **86 times more potent than CO<sub>2</sub> over a 20-year time frame**, according to the Intergovernmental Panel on Climate Change (IPCC). This was widely reported in the press when the IPCC report was released – see this reports in Scientific American (<https://www.scientificamerican.com/article/how-bad-of-a-greenhouse-gas-is-methane/>) and EDF (<https://www.edf.org/climate/methane-crucial-opportunity-climate-fight>) or Clean Technica (<https://cleantechnica.com/2013/10/04/ipcc-warns-methane-traps-much-heat-thought/>) – or if have time and want to get the information from the horse’s mouth, you can read the original IPCC report ([https://www.ipcc.ch/site/assets/uploads/2018/02/AR5\\_SYR\\_FINAL\\_SPM.pdf](https://www.ipcc.ch/site/assets/uploads/2018/02/AR5_SYR_FINAL_SPM.pdf)).

However, policymakers – encouraged by the oil and gas industry – typically ignore methane’s warming potential over 20 years (GWP20) when releasing countries’ figures about fracking. Instead, they describe methane’s warming impacts over a century, which makes the gas appear more benign than it is, experts said. The 100-year warming potential (GWP100) of methane is 34, according to the IPCC. And 34, while huge compared to CO<sub>2</sub>, is nowhere near as big a number as 86. And – crucially – the arguments relating to ‘fracking as a bridge fuel to a low-carbon economy’ are entirely about the next twenty years.

According to Scientific American, there is no scientific reason to prefer a 100-year time horizon over a 20-year time horizon; the choice of GWP100 is simply a matter of convention – one that strongly favours the fracking industry in downplaying the effect of fugitive methane on their claims that gas is a ‘green fuel’. And, as anyone following the climate debate knows, it’s the next 20 years that are crucial if we are to stop global temperatures rising above 2 degrees, and causing irreversible climate change. **And – crucially – the arguments relating to the ‘fracking as a bridge fuel to a low-carbon economy’ are entirely about reducing greenhouse gases in the next twenty years.**

### **How much methane is leaking into the atmosphere from fracking?**

Studies vary in their methods and measurement of fugitive (i.e. leaking) methane, but there is a growing consensus that up to 10% may be lost to the atmosphere during exploration and production, and that even more is lost from leaking abandoned wells. This would make fracked gas even more damaging for the climate than coal.

According to the Texas Tribune

(<https://www.texastribune.org/2015/07/07/new-study-adds-fuel-debate-fracking-and-climate/>), well pads, compressor stations, processing plants and other equipment used in gas production across the 25-county region leak 50% more of the greenhouse gas than the federal Environmental Protection Agency (EPA) has estimated, according to the 11 peer-reviewed papers (<https://pubs.acs.org/doi/pdf/10.1021/es506359c>) published in the journal *Environmental Science and Technology*.

In fact, some methane leaks are so big that they can be seen from space. This report from NASA ([https://science.nasa.gov/science-news/science-at-nasa/2014/09oct\\_methanehotspot/](https://science.nasa.gov/science-news/science-at-nasa/2014/09oct_methanehotspot/)) shows how much methane is leaking from fracking well-sites across the USA. This report on leaks from New Mexico ([https://science.nasa.gov/science-news/science-at-nasa/2014/09oct\\_methanehotspot/](https://science.nasa.gov/science-news/science-at-nasa/2014/09oct_methanehotspot/)) shows that if anything, the problem has been underestimated.

Also, in Pennsylvania – the state where MP Kevin Hollinrake visited for a few days and declared that he was ‘reassured’ about fracking (<https://www.bbc.co.uk/news/uk-england-york-north-yorkshire-34359652>) – showed that hundreds of abandoned wells there were leaking methane

(<https://www.theguardian.com/environment/2014/jun/20/fracking-wells-pennsylvania-leaking-methane>).

Abandoned wells are not currently included in methane leak estimates by the EPA, meaning the amount of methane going into the atmosphere could be significantly higher.

### **But that couldn’t happen in the UK, could it? I mean, we have gold-standard regulations that would prevent this?**

A recent study by Durham University’s gas industry funded research group, ReFINE, looked at 102 abandoned conventional gas wells across the UK, and found that **30% were quietly leaking methane** (<https://drillordrop.com/2016/01/26/study-finds-methane-leaks-from-30-of-abandoned-wells-but-emissions-less-than-farming/>).

While the amount of methane from each well was relatively small, what is interesting is that these wells are not being monitored by any of the regulatory bodies in charge of the onshore oil and gas industry. Fast-forward 50 years and imagine what would happen if tens of thousands of fracking wells are drilled, and then abandoned. Currently a fracking company only has responsibility to monitor these wells for five years after abandonment. The responsibility then falls to the landowner.

The bottom line is this. Natural gas as an energy source for electricity production is less of a contributor to global warming than coal only if less than 3.2 percent of methane escapes during production. Recent measurements (as reported here in the Washington Post ([https://www.washingtonpost.com/?reload=true&\\_id=1656010340544](https://www.washingtonpost.com/?reload=true&_id=1656010340544))) estimate that between 2.3 percent and 17.3 percent of gas escapes.

***“You can be in favour of fixing the climate. Or you can be in favour of exploiting shale gas. But you can’t be in favour of both at the same time.”*** John Ashton, former Special Representative on Climate Change to the Foreign Secretary, 2006-2012.

Then we come on to a relatively new myth, which seems to have appeared because the industry knows how worried everyone is about proliferation of wells and the industrialisation of the countryside.