

# Bridge to a low carbon future?



Map showing eventual coastline change after a 2 degrees C increase because of the melting of the Greenland ice sheet (7 metres sea level rise)

To stand any chance of averting global temperatures rising more than 2 degrees C above pre-industrial temperatures humanity has to stay within a strict “budget” of greenhouse gases. Above a 2 degree C increase it is likely that reinforcing feedbacks in the climate system would lead to even larger increases in temperature. (e.g. Melting snow and ice means that less solar energy would be reflected back into space and would instead be absorbed by the darker surfaces – so the planet would warm even faster.)

The government wants us to believe that because natural gas emits less CO2 than coal when it is burned that using shale gas instead of coal is part of a “bridge to a low carbon future”.

*It's a nice idea..... But it's wrong....*



If you were on a diet and you'd eaten too much one day then to have another cake in the evening could still take you over your daily calorie limit - even if it was a “low calorie cake for dieters”.

In fact, “Unconventional Gas” would only help to solve the climate crisis IF:

The gas is not used in addition to coal. Much US coal displaced by shale gas in US power stations fell in price and was bought by countries like Britain to be burned in British power stations. As a result our carbon emissions went up last year.

That's why the government's own advisers have written: “If any country brings any additional fossil fuel reserve into production, then in the absence of strong climate policies, we believe that it is likely that this production will increase cumulative emissions in the long run. This increase would work against global efforts on climate change” *MacKay and Stone Shale Gas Review, DECC, 2013.*

The government ignore this crucial point in the MacKay and Stone review!!!

Shale gas is also competition for renewables and distracts from the priority tasks of developing energy efficient buildings, agriculture and low energy ways of life.



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Scientists observe significant methane leaks in a Utah natural gas field

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By Katy Human

On a perfect winter day in Utah's Uintah County in 2012, researchers tested out a new way to measure methane emissions from a natural gas production field. Their results, accepted for publication in *Geophysical Research Letters*, a journal of the American Geophysical Union, constitute a proof-of-concept that could help both researchers and regulators better determine how much of the greenhouse gas and other air pollutants leak from oil and gas fields. The measurements show that on one February day in the Uintah Basin, the natural gas field leaked 6 to 12 percent of the methane produced, on average, on February days.



An even more serious problem is that all types of gas fields leak natural gas and unconventional gas fields (shale gas and coal bed methane) do too.

This is a serious problem because natural gas is mainly methane which is a very powerful greenhouse gas – 105 times more powerful than CO2 over a 20 year time span – or 33 times over 100 years.

Because of this some scientists think that if gas wells leak more than 3.2% of their production then developing and using unconventional gas is worse than coal for the climate crisis.

There are different techniques for measuring gas leakage – measuring leaks from equipment – or taking measurements from the air – flying airplanes over gas fields and measuring methane upwind and downwind. These suggest that methane leakage may be much higher than previously thought. Recent studies show one important US gas field leaking as much as 6 to 12% of its production – including out of equipment, venting, during initial drilling and out of fractures in the ground.. (See above)