



### **Briefing Paper on Fracking and Unconventional Gas Exploitation**

Fracking is a way of extracting gas from rocks far below the surface of the earth. A mixture of water, sand & chemicals is injected at very high pressure down a borehole. This fractures the rock, allowing shale gas to flow out. The gas is collected on the surface.

#### **Six reasons for NOT exploiting unconventional gas**

##### **1. Climate Change**

The argument in favour of shale gas is that it replaces coal but in order to prevent run away climate change  $\frac{3}{4}$  of existing fossil fuels, ie coal, gas and oil, MUST stay in the ground. Fracking will create more climate-changing gases - and is not compatible with our climate change targets.

##### **2. It detracts from the real solutions**

Support for unconventional gas slows the move to a low carbon economy by taking investment away from renewables - the real solutions of the future. A future based on renewable energy technology and cutting energy waste could provide many jobs - renewable energy could support 400,000 jobs across the UK by 2020 and an energy efficiency programme could create 71,000 new jobs by 2015 as well as lifting thousands of families out of fuel poverty.

##### **3. Environmental Damage**

There are 3 major concerns, pollution of water supplies, air pollution and fugitive emissions from methane leaks and waste water. Methane is a powerful greenhouse gas and the waste water has to be treated in a plant with a radioactive waste permit.

##### **4. Impact on Jobs**

At the peak of activity it is estimated the industry will provide 1000 jobs in Wales for 3-8 years, of which <200 will be locally filled. This has to be set against the jobs lost in agriculture, tourism and renewables.

##### **5. Minimal or no impact on energy prices**

Your energy bills won't go down - the UK Government and fracking companies have acknowledged that household energy bills won't fall as a result of fracking

6. Unpopular with local communities

Fracking is massively popular in local communities. There are uncertain and unacceptable local environmental risks, including water pollution, air pollution and substantial lorry movements, associated with a fracking site. Local fracking moratoriums are already in operation in 6 authorities in Wales. There are petitions for some of the others, including Pembrokeshire - follow the link below to sign the one appropriate for your own Authority.

<http://www.foe.cymru/fracking>

## What are the Unconventional gases?

### **Shale Gas**

This is methane (natural gas) obtained from solid rock by a process of hydraulic fracturing (fracking). Each well has a short productive life so to exploit an area many wells have to be drilled. The process requires large amounts of water (1.6 million litres per fracture) and produces waste water which requires processing in a licenced plant.

### **Coal Bed Methane (CBM)**

CBM is methane (natural gas) trapped in coal seams underground. To extract the gas, after drilling into the seam, it is necessary to pump large amounts of water out of the coal seam to lower the pressure. It is often also necessary to frack the seam to extract the gas. There are a similar catalogue of negative environmental and social effects as with Shale Gas. This includes methane migration, toxic water contamination, air pollution, increased carbon emissions and a general industrialisation of the countryside. Impacts that are specific to CBM include depletion of the water table and potentially subsidence

### **Underground Coal Gasification (UCG)**

UCG is a process for exploiting coal that cannot be mined because the seams are too deep, thin or fractured. The process involves using the same sort of drilling technology usually used for fracking to get air/oxygen into the coal seam and then set the seam on fire. By controlling the amount of oxygen injected it is then possible to only partially burn the coal and bring the gases produced to the surface where they can be burned to produce energy. A witches brew of toxic and carcinogenic coal tars are produced in the burn cavity. The process is associated with serious groundwater contamination and massive carbon emission.