

On Regulation of the Unconventional fossil fuels extraction

In the event of the extraction of shale gas by hydraulic fracking, we do not believe that the EU has sufficiently robust regulations in place to manage the serious risks attendant on this procedure.

There is a clear need of specific **On Shore** exploration regulations. At present there are none; the industry is virtually self-regulating according to regulations adapted from off shore gas extraction and there is considerable confusion surrounding the responsibilities of the various agencies involved.

Regulations need to cover cement quality (on site sampling and laboratory testing), cement bond logs, annular pressure readings (instruments used, calibration, how recorded in SCADA etc.), examination of formation integrity tests as they are executed, seismic monitoring, surface methane detection (baseline and operational), post tremor actions, flow back water storage and disposal (Permit), recycling of flowback, flowback water quantity verification, sourcing water from mains (pressure issues) and testing of local boreholes/wells.

Regular monitoring of such regulations must be independent and robust and will require funding.

There should also be regulation in place to determine the appropriate distance from both business and residential property that drilling may be permitted to take place, and factors such as noise, light and air pollution considered. Additionally, bonds should be established to provide for damage caused to water, roads, land and buildings that might be caused by this procedure.

Ladies and gentlemen

I have come here today to petition you on behalf of all those people throughout Europe who are threatened by unregulated fracking for Shale Gas. I ask you to consider a Moratorium on this practise **until** there is a properly formulated and funded regime of regulation in place throughout Europe.

I know that in my own country, there are at present no appropriate regulations being enforced. Addressing this matter becomes daily **more urgent** as in the present economic climate, cash strapped governments cast about for more revenue and an easy short term fix for their energy problems. **„A dash for gas“**

Our government, previously cautious about shale gas, have just appointed a Minister to the Department of Energy who is known for his fervent enthusiasm for shale gas, his climate change scepticism and his opposition to regulation.

Oversight of regulation is at present the responsibility of the Health and Safety Executive, working with the regulations devised for off shore drilling (off shore there are no people, no roads, houses or agricultural land). **Experts** in the field have informed me that the HSE **do not have the resources or the expertise to regulate on shore shale gas exploration**: indeed the head of the Oil and Gas division of the HSE, has stated in public **“what was there to inspect or test- most of the borehole is below the ground”!**

The only place in the UK where fracking has taken place is Lancashire. The firm concerned, Cuadrilla, have effectively been self-regulating, for during the two years they have been there, the HSE has not once inspected for well integrity, there has been no verification of flow back water quantity and no testing of the fracking chemicals. We have had two small earthquakes (which were however severe enough to damage one of the wells with as yet unknown results), and I understand **that flow back water has been discharged into the Manchester Ship Canal.**

As I speak the people of Lancashire are facing horizontal drilling with no effective regulation; I believe these people are at serious risk now.

And what is the possible gain?

Easy revenue for the Treasury and profit to the companies concerned are the only possible gains I can see.

And the losses? There is a very real threat to our water; every well drilled takes between 5 and 9 million gallons of water. A small proportion of that returns to the surface as a toxic cocktail containing not only the chemicals added to make fracking possible but also polluted with materials found in the shale formations and which can include heavy metals, arsenic, barium and naturally occurring radioactive materials. The larger proportion of water remains deep underground and **is permanently lost to the water cycle.**

In an increasingly water stressed world can we afford these losses?

Unregulated Shale gas development will contaminate our communities, degrading quality of life for hundreds of thousands of our citizens, harm human health and living ecosystems while **distracting us** from taking the immediate steps to develop sustainable energy, so necessary to curb Climate Change.

Is this the kind of future we wish for Europe? We need urgent action, and I believe a Europe wide moratorium (water and air cross national boundaries) on Hydraulic fracturing is absolutely necessary until at least such time as a properly funded regime of regulation can be put in place. **There are alternatives to gas but there are no alternatives to water!**

I am indebted to Michael Hill Chartered Engineer/shale gas expert for his valuable work on Regulation in the UK.