ENVIRONMENTAL POLICY FORUM

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The Rt. Hon. Vince Cable MP
Secretary of State for Business, Innovation and Skills
1 Victoria Street
London
SW1H 0ET

17 June 2013

Dear Secretary of State,

Hydraulic Fracturing (Fracking) of Shale in the UK

The Environmental Policy Forum (EPF) is a network of UK environmental professional bodies promoting environmental sustainability and resilience for the public benefit. The EPF's member bodies have a collective membership of around 40,000 environmental professionals – many of whom are individually chartered in environmental practice, science and engineering disciplines.

We have a vision of safe, secure, sustainable, diverse and resilient energy supplies that brings environmental benefit and with minimum acceptable harm to the environment bearing in mind the need for security of supply. As important, we also believe in appropriate investment to make UK plc a world leader in the development of low-carbon and carbon-neutral energy technologies. We urge the Government to share that vision by taking a number of strategic actions and by reviewing its commitment to hydraulic fracturing (fracking) of shale to extract gas. We, the undersigned, believe that fracking will pose a number of significant risks, and harmful environmental consequences, unless there is further independent research and the introduction of stringent controls and pre-conditions.

In particular, we consider that:

1) There is a paucity of reliable data on the environmental impacts of fracking for shale gas(e.g. the causality of induced seismicity, water contamination, fugitive emissions and air quality impacts). The UK should proceed cautiously, adopting the precautionary principle and not encourage fracking as part of this country's energy mix until there is more evidence that operations can be delivered safely, that environmental impacts are acceptable and that monitoring, reporting and mitigation requirements are comprehensive and effective.

2) Shale gas is a carbon based fuel and is not a sustainable energy source. Pursuing shale gas, even as a bridging fuel, will make it incredibly difficult for the UK to reach its climate change targets. Its development must not become a distraction from the urgent drive for

energy efficiency and clean renewable energy, and therefore fracking must not be pursued to the detriment of investment in these areas.

3) Fracking operations produce fugitive emissions that could seriously undermine any carbon benefits of using shale gas over coal due to the high global warming potential of methane. Some scientists claim that methane emissions from shale gas fracking are at least 30% more than and perhaps more than twice as great as those from conventional gas. If true, this boosts the climate changing impact of shale gas to such an extent that it is worse than coal, which is the most carbon-intensive fossil fuel. With claim and counter-claim on the impact of fracking on global warming, more research is needed to assess and accurately measure the amount of fugitive greenhouse gas emissions produced from fracking as part of an Environmental Risk Assessment, and into mitigation measures that can be put in place to prevent them.

4) Shale gas extraction requires considerable amounts of water and this must not be allowed to conflict with water use for public supply, water needed to maintain a healthy environment and that needed for food production. Climate change scenarios predict less water availability in the future and areas of future water shortages also coincide with areas of potential shale gas development. Over abstraction of water in some areas is already having an impact on sites designated at both the UK and the European level for nature conservation. So, whether the high levels of water required for fracking operations is appropriate and sustainable is doubtful and requires further research.

5) Shale gas extraction requires high pressure injection of chemicals and water into the ground. This can lead to contamination of, for example, groundwater, aquifers and downstream wetland sites through poorly cased wells. Stringent safety measures must be put in place, and enforced, to ensure the risk of pollution from well casing failure or for any other reason is minimised. Systems for monitoring well and field integrity must be put in place on all wells to prevent groundwater contamination with wells shut down quickly if induced seismicity, groundwater contamination or an uncontrolled release of gas to the atmosphere is likely, as is the case for conventional hydrocarbon wells.

6) The disruptive impacts of fracking operations on amenity are likely to be greater in the UK than in most other countries where fracking is now commonplace. The proximity of settlements and dense populations to fracking sites are likely to be greater. Local authorities should restrict or prevent fracking operations in areas of high environmental value or sensitivity and have regard to, and protection measures for, biodiversity, water resources and local communities. An Environmental Risk Assessment should be mandatory for proposed shale gas operations. The recent announcement that communities will be able to oppose wind farms should apply equally to proposals for fracking operations.

In a small and densely populated country, like the UK, sourcing gas that utilises fracking poses environmental challenges that are as great, at least, as other carbon emitting and environmentally damaging energy sources. It will require a robust regulatory regime to mitigate the risks and build public confidence. The key issues for regulators, in no particular order of priority, are:

- Water resource use
- Treatment and disposal of process water once used in the fracking process
- Potential contamination of the ground and aquifers

- The release of fugitive methane
- Local air quality impacts
- Landscape, waterways and visual amenity impacts
- Biodiversity and ecosystem impacts
- Induced seismicity
- Noise
- Carbon emissions
- Public confidence and trust

The EPF urges you to consider these matters with your Cabinet colleagues the Secretaries of State for Energy and Climate Change; Environment, Food and Rural Affairs; Communities and Local Government (and with your counterparts in Scotland, Wales and Northern Ireland) in order to develop a more holistic and cohesive policy on fracking that puts environmental sustainability first.

If you would like to discuss these and other related matters we would be delighted to meet you. The EPF is committed to assisting the Government with its energy policy, helping it to meet its environmental priorities and climate change targets.

Yours sincerely,

Nick Reeves OBE, CEnv
Executive Director
Chartered Institution of Water and Environmental Management

For and on behalf of:

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