

Scotland's Energy Future

This submission is by Reach Coal Seam Gas Limited, ReachCSG. ReachCSG is an oil and gas company specialising in shale gas. In the Central Belt of Scotland Reach CSG has held the hydrocarbon licence PEDL162 since 2008. In 2014, INEOS entered the licence taking 80% and leaving Reach CSG with 20%.

Reach CSG is a Scottish company based in Aberdeen. In England Reach CSG has an onshore licence and three undeveloped offshore gasfields.

This submission addresses the questions most relevant to shale gas in Scotland.

Consultation Questions

5 What overall role should be played by various elements of the energy landscape, for example:

- *Different sources of renewable energy;*
- *Offshore oil and gas;*
- ***Unconventional oil and gas;***
- *Nuclear power;*
- *Energy storage;*
- *Others*

5.1. Shale gas is identical to and indistinguishable from the gas from Offshore gasfields. It is the same as the gas we use for central heating and cooking. Only those hostile to shale gas continue to refer to shale gas as “unconventional” gas. Opponents use the term “unconventional” because it implies that shale gas is in some way unconventional – it is not. The shale gas industry is part of the oil and gas industry. Organisations that are hostile to shale gas are also hostile to all oil and gas production. A notable exception, however, is the Scottish Government which supports offshore oil and gas while being hostile to onshore shale gas.

5.2 Oil production in Scotland started in 1851. Scotland was not the first country to produce oil but it was the most successful. This oil production led to major developments in oil refining and as a result a large demand for oil products was created. This new demand for oil products stimulated the search for oil around the world and resulted in the first modern-day oil well being drilled in the Titusville Pennsylvania in 1859. Over the next 100 years an estimated 75 million barrels of oil and 500 Bcf of gas were produced (equivalent in volume to several North Sea oil and gas fields) from the shales of West Lothian. Initially the oil was produced from a thin layer of shale at Torbanehill near Bathgate. Later the much thicker deposits in the Dinantian West Lothian Oil-shale Formation were

used to produce the oil although there was also oil produced from other shales mostly in the Lower Coal Measures and Limestone Coal Formation.

5.3 For shale gas, prospective Carboniferous shales are buried beneath the Central Belt in the area from Glasgow to Edinburgh, the Lothians, Falkirk, Clackmannan and Fife. The areas prospective for shale gas are identified in the BGS DECC 2014 report (Monaghan). This report estimates the shale oil in-place resource to be 3.2 - 6.0 - 11.2 billion bbl (421-793-1497 million tonnes) and the in-place shale gas resource 49.4 – 80.3 – 134.6 tcf (1.40 – 2.27 – 3.81 tcm). The West Lothian Oil-Shale formation makes the largest contribution to this estimated resource. The Scottish Government has commissioned and published several studies including: a BGS study on faulting and earthquakes (Baptie); a study on the economics of shale gas (KPMG); and a report by the Scottish Government Independent Expert Panel on Unconventional Gas (Masters).

5.4 The Geological Society in its submission to this consultation makes some rather misleading comments on shale gas: *“Geological studies of Scotland suggest that the shale petroleum potential in Scotland would likely be for shale oil, with a relatively minor potential for shale gas. There are debates as to the potential resource and extractable reserve, and there are diverse views in the geoscience community and more widely as to whether these are likely to be significant in a national (UK-wide) sense.”* The shale gas resource in Scotland is indeed minor **relative to the resource in England** but it is not at all minor compared to the remaining gas resource in the Scottish section of the North Sea. Indeed if the Scottish Government had encouraged shale gas then onshore shale gas production in Scotland would in a few years time have exceeded Scottish offshore gas production. In a UK-wide sense the Geological Society is correct to suggest that Scottish shale gas production may not be significant but on a Scottish scale it could have been. Scotland is likely to start to be net importer of gas in about five years time. Onshore shale gas could have kept Scotland self-sufficient in gas for decades into the future.

9 What account should be taken of the environmental and social impacts on those living elsewhere in the world, of the international energy supply chains on which we may choose to rely?

Like locally-produced food, locally-produced energy is better for the environment, local communities and the economy. Scotland should produce as much local renewable electricity as it can afford and locally produced (shale) gas for heating.

10 What actions can be taken, and by whom, to ensure that energy is accessible to all at an affordable cost for those on low incomes; and that any changes in energy provisions and associated tariffs are understandable and acceptable?

A large number of homes are not connected to the gas grid in both urban and rural areas. Often the homes without gas are in some of the most deprived areas of cities. There is a strong link between those not on the gas grid and fuel poverty – gas is much cheaper for heating than electricity. A scheme to increase the number of homes connected to gas would reduce fuel poverty.

13 How can we best encourage objective, evidence-informed debate around energy while also acknowledging the differing perspectives and priorities held by businesses, civil society and government?

13.1 In Scotland many people leave school with a dislike of science. Organisations that campaign against shale gas exploit this fact and successfully “spook” people by always using science words for everyday things, for example “methane” instead of “gas” and “silica” instead of “sand”. These organisations also promulgate a fear of geology that is medieval.

13.2 The Royal Society of Edinburgh has an important role and duty to counter organisations that use a fear of science to gain public support. The Royal Society of Edinburgh should raise concerns when the Scottish Government makes decisions that are not evidence-based.