WRITTEN QUESTION TO THE MINISTER FOR PLANNING AND ENVIRONMENT
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ANSWER TO BE TABLED ON TUESDAY 18th FEBRUARY 2014

Question

Does the Minister accept that in the USA, fracturing of underground rock by the process known as 'fracking' has caused contamination of groundwater with both the gas and chemicals used in the process?

Given that Jersey's geology is such that substantial amounts of groundwater flow through faults and crevices in the rock below, will the Minister guarantee to commission a comprehensive study of the possible risks associated with fracking locally, before any consideration of using the process is entered into?

Answer

As with any complex industrial process, hydraulic fracturing (commonly referred to as 'fracking') has occasionally resulted in accidents, particularly in the early development period. The Minister is aware that some groundwater contamination connected with the hydraulic fracturing process has occurred in the USA but precise details, particularly regarding the scale and distribution of such contamination incidents is difficult to gauge, given the amount of conflicting and often inaccurate information generally available on the internet and in the media generally.

Since its inception in the late 1940s, millions of fracking events have been carried out around the world, (including in oil and gas wells in the North Sea), without incident. Hydraulic fracturing can undoubtedly be carried out safely if the correct regulatory regime, environmental protection and proper monitoring regimes are put in place before the process is permitted to be used.

The geology beneath Jersey is not conducive to the formation of hydrocarbon gases that are commonly obtained by the process of fracking.

A prime requirement for the formation of hydrocarbon gases at depth in the sub-surface is the presence of organic rich rocks. Whilst shales do underlie parts of the Island, there is no evidence to suggest that any of the shales contained any organic material, let alone was ever rich in organic material. The shales beneath Jersey were laid down in excess of 600 million years ago during the Pre-Cambrian, a period that pre-dates the first detectable life forms on the planet. Elsewhere, shale gas is found in much younger rocks, for example Devonian and Carboniferous strata, in which organically rich rocks do occur. None of these younger rocks are present beneath Jersey or beneath the sea bed in the vicinity of the Island. In addition hydrocarbon gases do not form in igneous rocks, such as the granites and volcanic rocks that underlie much of Jersey. In the absence of organic material in the shales, it is highly unlikely that any shale gas is present beneath the Island.

In the highly unlikely event that a potential hydrocarbon gas resource were to be identified beneath the Island, the Department of the Environment would seek advice and assistance from relevant authorities and institutions outside the island, (for example the UK Environment Agency, the Health and Safety Executive, and the British geological Survey), that have extensive experience in the regulation and monitoring of hydraulic fracturing operations. By this means, all potential risks, including potential impacts on groundwater resources, could be fully understood. This would enable the development of appropriate mitigation and regulation policy before there is any consideration of permitting hydraulic fracturing operations to occur beneath the Island.

It is worth noting that I shall shortly be bringing before the Assembly the Energy Plan: Pathway 2050. This document outlines a low carbon future for Jersey that seeks to reduce the Island's carbon emissions by up to 80% by 2050 based on a 1990 baseline. Within that framework I do not anticipate the use of (hydro-carbon rich) gas generated from fracking either on Jersey or in its territorial waters.