Department of Energy & Climate Change

Resources vs Reserves

What do estimates of shale gas mean?

27 July 2013

Note on resources versus reserves

The British Geological Society report, published today provides an estimate of the gas in place in the Bowland-Hodder shale that underlies northern England. The report makes no estimate of the extent to which that gas might be recoverable. There is considerable confusion about the various terms used to describe gas resources underground. The BGS report should therefore be read with the following definitions in mind.

Definitions

Resources

Resources (which is what the BGS report has assessed) refers to an estimate of the amounts of oil and gas that are believed to be physically contained in the source rock – in this case, the Bowland-Hodder shale formation.

- There are many categories and classifications of resources. The BGS report uses one of these, the Gas in Place (GIP) which is an estimate of the total amount of gas that is trapped within the shale rock.
- In the absence of further information, which we do not have for the Bowland-Hodder formation, it is not possible accurately to predict reserves from a knowledge of resources. However, GIP estimates will always be much higher than associated reserves (the amount that is eventually recovered).
- Because of measurement uncertainty, the report provides a range of value for GIP rather than a single value. There is an 80% chance that the true GIP value lies within this range, a 10% chance that it lies below and a 10% chance that it lies above.

Reserves

Reserves refer to an estimate of the amount of oil or gas that can technically and economically be expected to be produced from a geological formation. DECC does not consider that there is sufficient understanding of the geology, or experience of the engineering or costs of production to make a reliable estimate of the Bowland-Hodder shale gas reserves at this stage. Estimates of reserves will develop and improve with increasing exploration drilling in the years ahead.

Other definitions

A further classification of resources but which is not used in the BGS report is the Technically Recoverable Resource (TRR). This is an estimate of the amount of gas that might be technically recovered if production were not constrained by economics. TRR estimates will therefore always be larger than reserves estimates.

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