

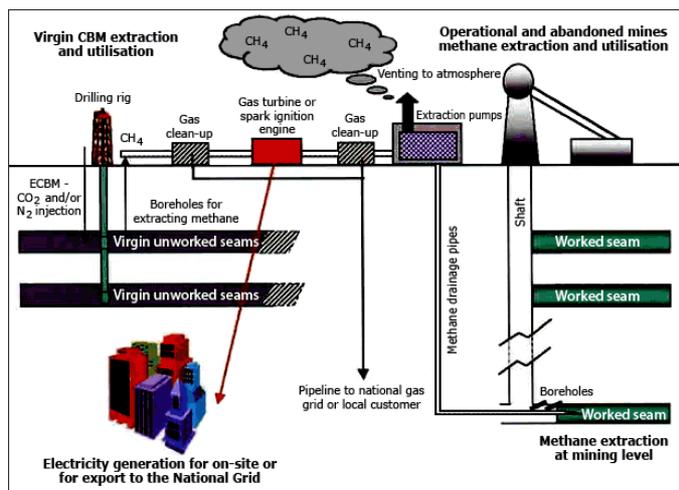
## Coal bed methane

Methane has been a hazard in coal mining throughout its history. With new drilling technologies it is possible to exploit this gas from abandoned or unused coal strata. Apart from free methane in the mines, which has usually already dissipated, there is a considerable amount of molecular gas retained within the deeper coal seams (usually down to 1.5 - 2 km), being trapped within the coal seams and under the considerable pressure from water and rock at those depths.

The horizontal drilling/fracking process would also be used to release this pressure by shattering the coal within the seam. As a result, the gas escapes from the coal seam and then flows, or is pumped, to the surface for use in industry, power generation and even domestic use. Because of the initial high pressure at the coal seam level it is likely there would be a certain amount of free flow to the surface, but eventually requiring a degree of continuously pumped water as in the fracking process.

Exploration and production of CBM would require the same surface infrastructure as the above mentioned fracking process, with similar environmental and amenity impacts on the area. It is possible the recovered CBM gas could be used at the recovery site to supply co-sited power stations if appropriate, or be injected into the existing national gas grid.

Both fracking and CBM would involve venting or flaring of the gas at the exploration stage to check for a viable flow and quantity. In the production phase venting and flaring would occur when required in certain operational and emergency circumstances. CPRE intend to encourage the industry into examining the use of "green caps" to replace flare and venting stacks in order to reduce emissions into the atmosphere.



Coal Bed Methane production site.

Access to the coal bed could be through existing mine shafts or drilling down to unworked coal seams.

The gas is initially returned to the surface under pressure from the surrounding water and rock strata.