

## Introduction

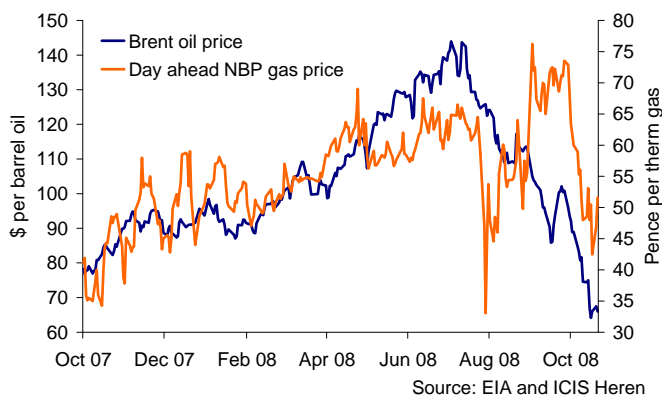
Concern about the impact of rising wholesale oil and gas prices on household and business fuel bills has been growing steadily over the past 12 months while simultaneously, oil and gas companies headquartered in the UK are reporting profits that are substantial in absolute terms. It is true to expect profits to rise when oil and gas prices climb sharply. However, the reality is much more complex. This fact sheet attempts to explain the relationships between price, profitability and investment, particularly in relation to the UK's offshore oil and gas industry.

## Price

Producing oil and gas from reservoirs deep underground is a high risk, high cost business, particularly in mature regions such as the North Sea. It requires spending on a large scale. Yet the price of the product is not determined by the companies producing the oil and gas but by global markets which respond to the fundamental economics of supply and demand as well as to wider geo-political factors. This tends to make prices highly volatile.

Having oscillated in the range \$50-80 per barrel throughout 2006 and for most of 2007, oil prices rose steadily from the end of 2007 until July 2008 when they peaked at \$147. Oil prices have since fallen to around \$65 per barrel (October 2008) and are currently fluctuating by up to \$5 each day. Gas has followed suit, with forward wholesale prices moving in step with the changing oil price as a result of the influence of continental indexation, and near term prices additionally responding to the supply-demand balance.

### Oil and gas prices October 2007 – October 2008



## Prices and investment

Oil and gas producers take investment decisions over a much longer time frame than in many other industries. Therefore companies spending billions of pounds in oil and gas projects which can last up to 30 years or more can expect to see the price for their product fluctuating widely over that time. This adds a different dimension to the risks associated with finding and extracting oil and gas, other than those of a technical or geological nature. Over the last ten years the UK wholesale gas

price has been as low as 4 pence per therm and as high as 195 pence per therm.

Within the same period the Brent oil price has fallen as low as \$9 per barrel yet has recently seen record highs of over \$145 per barrel.

## Why companies need to invest in the UK

According to the IEA, world energy demand is forecast to increase by 50% from 2005 to 2030, with oil and gas meeting 54% of demand at that time. Here in the UK, government figures suggest that we will continue to rely on oil and gas for 70% of our energy needs in 2020. The supply of oil and gas is directly related to the amount of capital injected. Production from our own fields has the potential to satisfy 65% of our oil and a quarter of our gas demand in 2020, provided the UK can attract the investment required to sustain new exploration, development and production activity. Importantly, to avoid a new round of oil price increases caused by tight supply in future, investment must be sustained during periods of low as well as high prices.

What we do not produce ourselves will have to be imported at the nation's expense, to the detriment of its balance of payments. The benefits of indigenous oil and gas production to the UK economy are not confined to the provision of primary energy; they range from tax revenues to jobs, from technological expertise and innovation to exports. In the journey towards a sustainable energy future, the UK needs to make the most of its home grown oil and gas and to do this, it must be perceived as an attractive place in which to invest.

## Profits

Profits announced by multi-national companies reflect the fluctuations in the oil and gas price and are earned from their activities around the world, not just in the UK, over many years of sustained high levels of investment. In fact, it is estimated that only about 10% of their profits can be attributed to the UK.

It should also be noted that the industry operates on a massive scale. Investments are made in terms of many billions of pounds and profits must be seen in that context. For example, the industry has spent £400 billion searching for, developing and producing the UK's oil and gas reserves so far, while drilling a single well in the North Sea today can cost up to £100 million.

As it becomes tougher and more costly to find, extract and process new supplies of oil and gas to meet the world's growing energy demands, companies need to deliver sufficient returns to cover rising costs and offset significant risk to retain the confidence of their investors over the full cycle of market ups and downs.

## Measures of profitability

A survey of UK oil and gas companies carried out by PricewaterhouseCoopers in 2008 covering 87% of the UK's production showed that while turnover increased between 2006 and 2007, pre-tax profit fell, suggesting an increase in the cost base and reduced profitability.

The use of the Return on Capital Employed (ROCE) measure by The Office for National Statistics (ONS) to compare the profitability of UK oil and gas producers to other sectors is fundamentally flawed. Indeed the ONS acknowledges this by providing the caveat that 'the nature of fixed assets leads to distortions in the average capital employed' for UK oil and gas companies. In essence this means that the long-term nature of the investments made by the industry is not taken into account which, as a result, tends to mean profitability is overstated.

ROCE is calculated by dividing operating profit by capital employed for a particular period. Its drawbacks in relation to the oil and gas industry are wide-ranging:

- ROCE reflects only short term movements in revenues, while oil and gas projects are long-term with much of the investment made up front (including money spent on unsuccessful exploration);
- ROCE is based on pre-tax profits. UK oil and gas producers, uniquely amongst British companies, pay a special, higher rate of tax so, when making comparisons between industries, to use their pre-tax operating profit in calculating ROCE is misleading. A more accurate way to compare this sector's profitability with the rest of the economy would be to calculate ROCE on a 'post special tax' basis.
- The distorted perception of capital employed in the industry leads to an under-estimation of capital employed and an over-estimation of ROCE because:
  - o Current UK oil and gas projects rely on infrastructure and investments which in many cases are more than 30 years old, but in calculating 'capital employed', the ONS ignores anything older than 10 years.
  - o The ONS definition of 'capital employed' does not reflect the substantial yearly expenditure on upgrading and extending the life of offshore assets (£1.5 billion in 2008) even though it delivers similar benefits to reported capital investment.
  - o Nor does it reflect the cost of decommissioning assets, estimated at £20 billion for the industry.

## Who benefits from oil and gas profits?

Profits are not only reinvested in new oil and gas developments but also find their way back to the ordinary householder in other ways, through the dividends paid out to shareholders. Many are largely institutional investors, who invest in the major oil companies on behalf of millions of Britons through mutual funds, pensions and individual retirement and personal portfolio accounts.

The UK government is also a big winner, particularly when oil and gas prices rise. Oil and gas producers are taxed at a much higher rate than any other business in the UK. While profit in all other sectors of the economy is taxed at 28%, in the case of oil and gas production, tax is levied at between 50 and 75%, depending on the age of the field. This means that for every £1 increase in profit from UK oil and gas production, the chancellor receives between 50 and 75p. A consequence of higher oil and gas prices in 2008/9 is that the Treasury will receive around £12-16 billion in tax from oil and gas producers, up to double the £8 billion they received in 2007/8.

## Conclusion - the challenge for UK oil and gas investors

38 billion barrels of oil and gas equivalent have been produced from the UK's offshore areas in the last 40 years. Oil & Gas UK estimates that up to 25 billion barrels remain and the government's highest prediction is 39 billion barrels. If recovery of the nation's oil and gas is to be maximised, projects will need to compete favourably with others around the world. While the UK has the advantage of the extensive infrastructure, expertise and technologies built up over the last 40 years' production, the maturity of the basin now presents many challenges to the incoming investor.

For example, the cost of developing and producing a barrel of oil and gas has almost doubled since 2005, due to the following factors:

- Competition for resources: high oil and gas prices mean global activity is buoyant with continued pressure on the rig market and high demand for skilled workers around the world pushing up costs globally. This affects mature basins more severely and has resulted in investment in the UK being only a third as efficient as it was five years ago.
- Infrastructure maintenance cost: while extensive infrastructure exists offshore in the UK, much of it is operating beyond the lifespan originally planned. To ensure the integrity of assets and continued safe operations, the infrastructure must be maintained at significant cost.
- Changing nature of oil and gas projects: discoveries are typically less than a tenth of the size of those made in the first ten years of exploration, hence they are less material, often more technically challenging and more expensive to extract than in younger basins around the world.