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The Role of Gas in UK Energy Policy

Executive Summary
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UK energy policy has often mystified outsiders. Politicians and policy makers talk grandly of solving the energy “trilemma” of affordability, environmental sustainability and security of supply. Many energy experts seem ensnared in endless debates regarding the minutiae of the electricity supply sector whilst in the real world coal displaces gas in power generation, prices rise and, if the media headlines are to be believed, gas and electricity supplies are in danger – the familiar ‘lights going out’ story.

Unlike the electricity sector, the GB gas market has remained relatively free of direct government intervention and it has retained many of the features that made it the most liberalised market outside North America since the mid 1990s. Furthermore whilst demand for gas has declined of late, rather than having grown in line with some expectations, it is still a large and vital part of the nation’s energy mix; 48% of non transport consumption in 2013.

The paper addresses two primary questions:

- How has UK energy policy since 2000 impacted on the gas sector?
- Is there a case for an integrated natural gas strategy for the UK or, in other words, does the absence of such a strategy pose particular risks to the energy sector and the wider UK economy? If this is the case what specific policy initiatives might be directed at the gas market?

The UK gas market is a complex set of interactions and whilst a long-term future for gas is not assured it should continue to play a key role in the provision of heat and power in the UK for many years to come. There is the danger that policy initiatives aimed at a particular part of the energy chain will fail to address the specific needs and opportunities presented by natural gas. It is therefore essential that policy makers recognise and plan for the continuing large scale presence of gas in the energy mix.

Without this recognition, the lead times involved may mean the gas-related components of the portfolio are not available when required. This is a particularly pressing issue for new generation gas-fired power plant. The recent capacity auctions have not incentivised any additional projects and this could lead to inadequate reserve margins of reliable generation unless the market dynamics shift in favour of gas. In this context it should be noted that the lead time for new CCGTs, including planning and approval is between 4 and 8 years.

It is therefore suggested that the development of an integrated natural gas strategy for the UK would go some way to addressing the challenges of the trilemma whilst reducing risks to the energy sector and the wider UK economy. Developing such a strategy would not involve a major change in direction or the establishment of a new task force or regulatory body. It would rather be a requirement for all government departments and agencies to consider policy implications where they are relevant to the natural gas sector. The advantages of such an approach include:



- A more cost effective approach to transitioning towards a low carbon economy;
- Avoiding a supply crunch in the power market arising from, for example, delays to new nuclear plant combined with a sudden loss of existing facilities:
- The opportunity to develop a more reasoned, evidence based, approach to the gas retail market that maintains its attractiveness to existing and new suppliers.

A national strategy for gas should seek to ensure the following:

In terms of affordability:

- The continued recognition that wholesale gas prices are primarily shaped by global market developments. Policy choices should ensure that no measures damage the transparency and liquidity of the wholesale market as it is these features that make the UK an attractive destination for gas. This is particularly important given that a combination of slack demand in Europe and reduced rates of demand growth in Asia coupled with a looming surplus of LNG on global markets will put major downward pressure on UK wholesale prices in 2015 and beyond.
- Examining options for managing UKCS production in a way that maximizes output at periods of high demand which could potentially help to reduce (though not remove) price spikes.
- Notwithstanding the CMA recommendations the recognition that a market with six major suppliers is not necessarily a bad outcome compared with the alternatives such as a single buyer model whilst a move to control supplier margins could lead to a more risk averse purchasing policy that could raise prices. Nevertheless if the expected gas supply surplus does lead to major price falls it will be important for this to be reflected (and publically recognised as resulting) in lower retail prices. This may also provide opportunities for new entrants and policies that lower commercial barriers to entry should be pursued as a matter of urgency.
- Acknowledgement that falling demand can lead to increases in unit costs and charges for fixed assets. If very low gas demand forecasts do materialise the regulator and industry will need to work closely together to ensure the trade-offs between asset integrity, cost and efficiency are managed effectively. The risks associated with large scale asset stranding would need to be recognised and dealt with.

In terms of environmental performance:

- In view of the superior environmental performance of gas- over coal-fired power plant measures to move coal down the power generation merit order (or close these plant down) in favour of existing gas-fired power should continue to be pursued. The carbon price floor should play a role in this regard, depending on the level of the floor compared with the relative prices of gas and coal.
 - The moves to increase the level of commitment to carbon capture and storage (CCS) should receive greater impetus. Even under the relatively high DECC price projections CCS could be competitive with offshore wind and presents fewer technical and commercial risks with potential upside from enhanced oil recovery.
 - Moves to decarbonise heat should in the first instance focus on non-gas supply areas. Government should make explicit the recognition that there is a long term role for gas in heat provision and put renewed effort into making this supply chain more environmentally friendly. This could include additional measures to encourage the use of biogas, removal of old inefficient boilers, continued investments in home insulation and using smart meters and big data techniques to target measures at particularly energy inefficient buildings.
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Finally in terms of security of supply:

- The adoption of a holistic approach to gas supply security that in particular recognizes the continuing role of UKCS supplies. To this end the Treasury should work with DECC and the new Oil and Gas Authority to develop measures that provide appropriate incentives for the continuation of existing production and the bringing forward of new production of gas. This could include a “security of supply” rebate that applies to new developments of UKCS gas as well as incentives that encourage winter versus summer production. Some however might see such an initiative as an explicit ‘subsidy’ to UKCS production and therefore its likelihood of success is debateable.
- Whilst the government has agreed to implement the measures recommended in the Wood review measures to improve access to infrastructure should be pursued as a matter of urgency. The Wood Review did not rule out some form of open access regime and the OGA should call on Ofgem’s expertise in this area to progress matters.
- Close attention should be paid to the status of IUK and the Rough and Hornsea storage facilities. There is a danger that decommissioning critical assets due to poor profitability may merit some form of intervention, though this should be done on a holistic basis that compares the costs and benefit of all of the alternatives. It would not appear that the case against intervention to encourage new storage investment has changed though the case needs continuing evaluation. In any event it could be argued that the recent problems with Rough demonstrate the potential vulnerability of large offshore underground storage which in turn suggests that on-shore fast cycle facilities or additional LNG storage tanks at existing terminals are probably a more cost effective solution.

There should be little doubt that there will be a role for gas for the next two decades at least and the gas industry needs to ensure it can play this role effectively. The critical challenge for policy makers is to identify the ways in which the role can be integrated positively and effectively within the broader energy framework to ensure an equitable outcome for the industry and an optimal solution for consumers and taxpayers.

About the Author

Chris Le Fevre, Senior Visiting Research Fellow, joined the OIES in September 2012 and has published working papers on gas storage in Great Britain (January 2013) and the potential for natural gas as a transportation fuel in Europe (March 2014). He is presently working on a study of the impact of UK energy policy on the gas sector. Chris has worked as an independent energy consultant since 2002, specialising in commercial, strategic, and regulatory issues in the natural gas sector with particular focus on European and former Soviet Union markets. Chris has worked in the oil and gas industry for over 30 years. He has held a variety of positions to executive director level at Transco plc (now National Grid Gas plc) and British Gas. At Transco he was the director responsible for implementing the Network Code and the introduction of domestic competition. His roles in British Gas include establishing operations in a number of European countries including Spain, the former German Democratic Republic (East Germany), Hungary, and the Czech Republic. Before British Gas, he worked for Shell in exploration and production companies in the Netherlands and Malaysia. He is also a contributor to Oxford Analytica and, until 2011, sat on the boards of the Northern Ireland Utility Regulator and the South Central Strategic Health Authority.