

Agenda

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In search of a lasting solution: the 2006 Energy Review

UK energy policy formation is still very much a 'work in progress'. The crucial tests will come when conflicts arise between security of supply, environmental policy and competition policy. At the same time, the international agenda is becoming increasingly influential in delivering UK energy policy goals. In light of the 2006 Energy Review report, Martin Brough, Oxera Director, discusses the evolution of UK energy policy

The 2006 Energy Review report, recently published by the UK Department of Trade and Industry (DTI), is a stepping stone towards a new White Paper on energy, which is to be published by 'around the turn of the year'.¹ The Review was launched in November 2005, with the aim of assessing progress towards meeting the long-term goals set out in the 2003 Energy White Paper:²

- to put the UK on a path to cut its CO₂ emissions by 60% by 2050, with real progress by 2020;
- to maintain reliable energy supplies;
- to promote competitive markets in the UK and beyond, helping to raise the rate of sustainable economic growth and improve productivity;
- to ensure that every home is adequately and affordably heated.

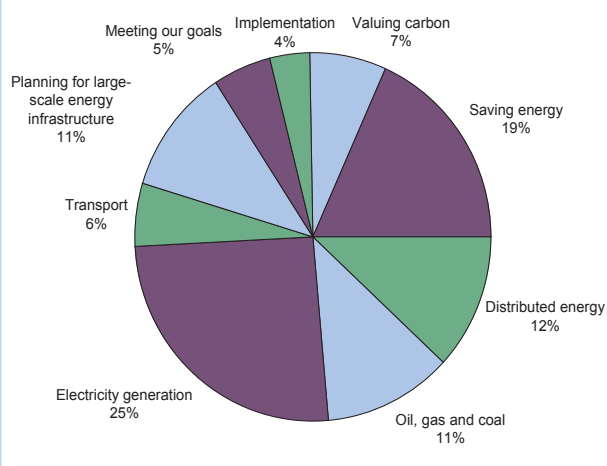
Although regarded by many as simply a nuclear review, in reality, the Energy Review has been much more wide-ranging. The report provides a strong signal about the direction of government policy, although the mechanisms by which goals will be achieved are still at the development stage.

Government objectives and mechanisms for delivery

Essentially, the government wants more of certain things than the market is likely to provide:

- more nuclear power stations, to replace those due to close in the coming years;
- more renewables (including co-firing);
- more energy efficiency and micro-generation;
- more infrastructure (eg, pipes and wires);
- possibly more clean coal—although this objective is less definitive.

Figure 1 Content of the UK Energy Review report



Although, according to the report, the government regards the current competitive and regulatory framework as sound, it is seeking to implement 'new policy initiatives' within that framework to address the challenges of security of supply and climate change. The broad thrust of the report is perhaps indicated by the amount of space devoted to each topic, as illustrated in Figure 1.

A key area of progress relates to simplifying and speeding up the planning process for nuclear generation, renewables and other infrastructure projects such as liquefied natural gas import facilities, new transmission lines and gas storage facilities.

The government proposes to speed up the planning process for new nuclear power stations, with a 'Statement of Need', which would prevent planning inquiries from reassessing the overall need for nuclear

power, and a strategic siting assessment, which would remove the need for a review of whether there are alternative sites for the new nuclear stations. The Committee on Radioactive Waste Management report will clarify arrangements for the long-term management of nuclear waste, and the Health and Safety Executive will assess new power station designs.

These measures should make it easier for private companies to develop options for new nuclear stations at lower cost and with shorter timescales. Whether they will be sufficient to encourage the investment required to build the stations remains an open question, and may depend in part on the emissions trading developments described below.

One area where the market has been tilted sufficiently to encourage new build is renewable generation. The government has pledged to extend the Renewables Obligation (from 15% to 20% as installed capacity grows) and to mitigate the risk of a collapse in Renewables Obligation Certificate (ROC) prices in the event of overbuild (by ensuring that the obligation remains above the level of actual renewable generation). In addition, the government is to consult on technology banding to promote certain technologies and reduce support for other developed technologies that no longer require full ROC funding. Such changes would not be introduced until 2009 at the earliest.

One of the most interesting areas for development, emissions trading is a crucial test of the government's desire to use market mechanisms to deliver policy goals. It is also a test of the government's ability to shape the international agenda to meet UK objectives.

Questions for the development of emissions trading

- Can the UK ensure that the national allocation plans (NAPs) for Phase II of the EU Emissions Trading Scheme (EU ETS) deliver a carbon constraint sufficient to provide a strong CO₂ pricing signal to 2012?
- Can principles be set out to ensure that companies have confidence in the long-term carbon price, given that there is not yet an international agreement in place for limiting carbon emissions beyond the current Kyoto period of 2008–12?
- If no global agreement can be reached, will Phase III of the EU ETS be credible? If no binding principles for Phase III can be reached, would a UK-only scheme be credible, or would it have unacceptable impacts on the competitiveness of UK industry?

From a practical point of view, there remains extensive scope for companies to influence decisions on long-run allocations, auctioning, post-2012 commitments and UK-only schemes.

As with the 2003 White Paper, transport receives relatively little attention, although the prospect of real action seems greater for issues such as biofuels, and the possibility of including aviation, and even road transport, in the EU ETS.

The report's focus on energy efficiency and distributed energy is greater than the media coverage of it would suggest. Although these elements comprise a large proportion of the targeted carbon savings by 2020, the use of market mechanisms in these areas is somewhat limited. The existing Energy Efficiency Commitment—an obligation imposed on energy supply companies—is to be extended, while building and appliance regulations are to be tightened

Introducing real-time information on electricity use to residential customers is cited as one way of encouraging energy efficiency, backed up by data from Canada showing an average reduction in bills of 6.5%. This could be a viable option, although in some ways it would seem to offer more benefits to the electricity industry than the environmental champions in that, as its most pronounced effect, it could switch load away from expensive peak times to cheaper off-peak times, increasing the average load factor for the industry but not necessarily cutting total energy use.

Evolution of energy policy

Behind the detail, there has been a noticeable shift in energy policy, even compared with the 2003 White Paper. To some extent, this can be seen by looking at the forewords to the two documents.

The following is from the Prime Minister's foreword to the 2003 Energy White Paper:

our energy system faces new challenges. Energy can no longer be thought of as a short-term domestic issue. **Climate change**—largely caused by burning fossil fuels—threatens major consequences in the UK and worldwide, most seriously for the poorest countries who are least able to cope. Our energy supplies will increasingly depend on **imported gas and oil** from Europe and beyond. At the same time, we need **competitive markets** to keep down costs and keep energy affordable for our businesses, industries, and households. [emphasis added]

However, the emphasis in the latest Energy Review report is somewhat different:

we now face two immense challenges as a country—**energy security** and **climate change**.
[emphasis added]

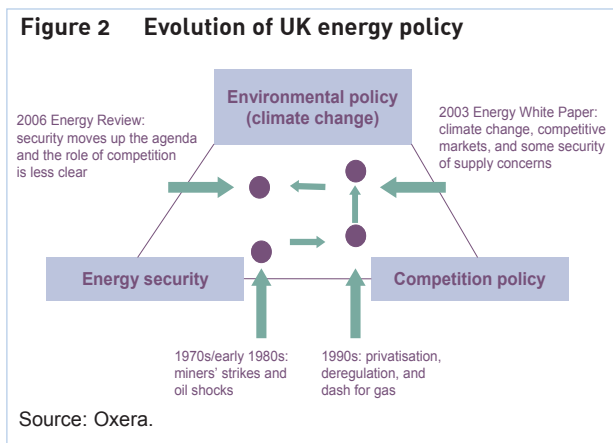
What has happened to competition? The word ‘competition’ does not appear once in the foreword to the Energy Review report, while ‘competitive markets’ are mentioned three times in the foreword to the 2003 White Paper. While the main body of the 2006 report looks at competition, its status does seem to have been downplayed somewhat.

The Energy Review marks a further step in the gradual evolution of energy policy over the past four decades, as illustrated in Figure 2. The policy framework can be considered as comprising three main dimensions—competition, the environment and security of supply. The focus on these dimensions has varied over time.

- In the 1970s and early 1980s, security of supply was at the top of the agenda, driven by oil shocks and the miners’ strikes and leading to concerns about international and domestic energy security. Environmental issues were not paramount. Furthermore, although the new Conservative government in the early 1980s was pro-market, it seemed that energy security issues at that stage would trump pure competition policy concerns should the two conflict.
- By the 1990s, the emphasis had shifted away from security concerns as oil prices eased (notwithstanding the spike at the time of the first Gulf War) and gas emerged in generation. It became tempting to view energy policy purely as competition policy. The ‘dash for gas’ and the coal crisis in the 1990s were presented as the outcome of a pro-competition policy, rather than being justified directly on environmental or security of supply grounds (they happened to coincide

with deregulated markets wanting to increase fuel diversity and move towards generation with lower sulphur and carbon emissions).

- By the time of the 2003 Energy White Paper, the emphasis was changing once again. Climate change had moved dramatically up the agenda; moreover, pricing carbon emissions into generation costs seemed to offer some easy wins because the marginal costs of existing coal and gas stations were fairly similar; thus, adding a price of carbon on top could tilt the balance away from coal generation towards gas generation at relatively little initial cost. In the longer term, replacement of coal capacity with new combined-cycle gas turbines (CCGTs) could also be achieved at apparently little additional cost; together with more action on energy efficiency and renewables, this could potentially compensate for the loss of the nuclear stations over the long term. Security of supply issues were raised, but it was generally assumed that these would be dealt with by ensuring that markets were working effectively.
- The 2006 Energy Review marks a further directional shift. Security of supply has moved up the agenda to such an extent that it is now unclear whether security issues would take precedence over environmental concerns should the two conflict. (In the context of the G8, climate change was a headline issue at the 2005 summit, while energy security is a headline issue in 2006—this may not be entirely due to the presidency shifting from the UK to Russia.) As noted above, although the government remains keen to emphasise the importance of competition, this now seems to be principally a mechanism for delivering security and environmental protection at acceptable cost, rather than as an end in itself. It may appear obvious that competition should not necessarily be regarded as an end in itself, but it has certainly been treated as such in the past.



Why is this debate important? These three aims may conflict with each other, and knowing which is likely to dominate when conflict arises can be key to making investment decisions. The 1990s seemed to be a special case whereby pushing for increased competition also seemed to provide security (or at least diversity) of supply as well as environmental benefits.

Understanding the role of competition in the analysis of the current Energy Review is important. On the one hand, the government is seeking to use market mechanisms to deliver policy goals. Many of the areas needing further development relate to defining the market mechanisms that will allow the desired outputs on security and the environment to be delivered by

competitive pressures. Parties wishing to influence the debate could therefore focus their efforts on mechanisms compatible with this aim.

On the other hand, it may prove difficult for the government to make a credible commitment to new mechanisms. If it is committed to a market mechanism, will it be happy to accept the verdict of the market on the required investments? What if the long-term carbon price is €15/tonne (driven by certified emissions reductions and action taken outside the EU) and the market decides that the best option is to build new dirty-coal stations and allow emissions to rise? What if the market decides it is 'happy' to gamble on gas security and replace existing nuclear stations with new CCGTs? What if customers are faced with real-time pricing and full marginal costs of carbon, and still decide to 'waste' energy? Will the government's faith in markets override any concerns it might have over security and environmental outcomes?

The international context

While it is not clear in the UK whether competitive markets sit happily with government concerns over security and the environment, it is even less clear whether the international framework for these issues is conducive to delivering UK domestic energy policy goals. Figure 3 illustrates some of the interactions between UK, EU and international policies.

As regards energy security, many of the measures proposed in the Energy Review should help to increase diversity in energy supply and promote investment in the infrastructure to deliver energy to end-users. However, the security of UK energy supplies is increasingly

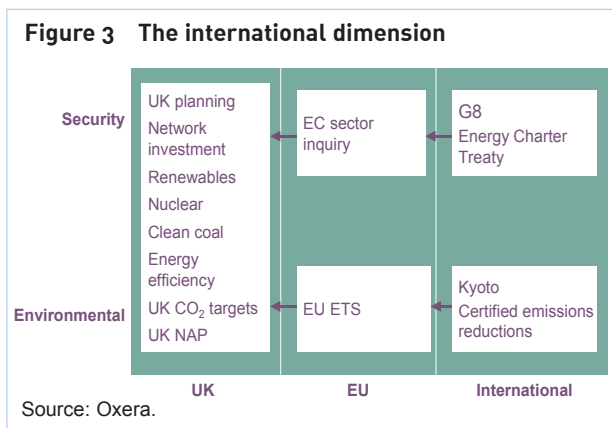
dependent on Europe. At the EU level, the UK is hoping that the EC energy sector inquiry will help to promote free markets for electricity and gas, making transmission capacity more widely available and ensuring more competitive energy prices. Even competition and infrastructure at the EU level will be of little use, however, if gas supply to Europe itself is not competitive. A significant issue at the G8 summit in St Petersburg has been energy security. The UK is keen to allow foreign investment in the Russian gas industry, with wider access to pipeline capacity. One way of achieving this could be to persuade Russia to ratify the Energy Charter Treaty, but Russia is showing little willingness to do so, and the Russian Parliament has recently passed legislation granting Gazprom monopoly control of Russian gas exports. If gas deliveries to Europe are dominated by Russia, Norway and Algeria, will competitive markets within the EU and UK deliver competitive prices and energy security as desired?

The importance of international action on environmental issues is even clearer. The UK has stated that one of the primary policy tools for driving towards a low-carbon economy is the EU ETS, even though the commitment of all Member States to a constrained carbon environment in the ETS is far from certain according to the draft NAPs for Phase II submitted to date. The credibility of the ETS itself is also in question post-2012, given the lack of consensus on international action beyond the current Kyoto agreement to 2012.

Conclusions

It is clear that the UK government does not consider that markets, left to themselves, will achieve desirable outcomes for energy security and environmental protection. It is equally clear that it wishes to use market mechanisms and competition to deliver its goals, both domestically and internationally. The challenge for the government and the private sector is to identify mechanisms that will deliver a sufficiently robust framework for private sector investment and an acceptable outcome for the government. Recognising and addressing conflicts between security, environmental and competition policies, and between domestic and international policies, will be crucial to finding solutions that will last.

Martin Brough



¹ DTI (2006), 'The Energy Challenge: Energy Review Report 2006', Cm 6887, July.

² DTI (2003), 'Our Energy Future: Creating a Low-carbon Economy', Cm 5761, February.

If you have any questions regarding the issues raised in this article, please contact the editor, Derek Holt: tel +44 (0) 1865 253 000 or email d_holt@oxera.com

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