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UK Energy Review – still in search of an energy policy?

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The current UK Administration has already had two bites at the energy policy cherry – the *Review of Energy Sources for Power Generation* in 1998 and the White Paper *Our Energy Future – creating a low carbon economy* in 2003. Now comes a new attempt at setting out a long term energy policy – *The Energy Challenge* – published on 11 July this year.

In a way, this serial publication is refreshing – after a decade when the then Conservative Government denied having (or needing) an energy policy, three come along, hard on each others' heels. But the sheer frequency is also disturbing for an industry which needs to think long term – it suggests that the government has been having quite a few second (and third) thoughts. Have they got it right (or at least settled) third time round?

Unfortunately, this latest attempt fails the test in two main ways:

- It contains few specific proposals, more a series of wish-lists – actually translating these objectives into results will require a further raft of measures, most of which remain to be agreed.
- It does not resolve the underlying problem of energy policy – how does a government achieve important policy objectives in a liberalised market?

The last two White Papers foundered on similar problems. The 1998 White Paper, essentially a short-term fix for coal, which virtually ignored nuclear and said little about climate change, was soon overtaken by events. The 2003 Paper – at a time when, as many commentators pointed out, a decision was needed on nuclear – ducked the issue and went instead for a softer approach based on energy efficiency and renewables, but without effective policies to deliver the vision. The new review at least offered the opportunity to fix the mistakes of the previous efforts and set a long term policy direction which might now have some credibility. Unfortunately, like the Bourbons, the government does not seem to learn from its past mistakes.

Unfinished business

There is less to the White Paper than meets the eye; rather than settling future policy directions, it sets out a series of consultations, aspirations and good intentions, which may or may not come to fruition.

For instance, it's supposed strengthening of the Renewables Obligation is in fact heavily qualified. The government says it will extend Obligation levels to 20% "when justified by growth in renewable generation". This could be regarded as a welcome infusion of realism – all previous renewables targets have been missed. The UK, for instance, once had a target of 5% by 2000 (now long forgotten – the current figure, six years later, is around 4%). But in letting events determine the target, rather than vice versa, the government seems reconciled to further failure. Indeed, as the White Paper itself points out, many favoured sources, like offshore wind power, have not moved as fast as hoped, and the government seems to be expecting further disappointments, but it is not an encouraging approach to policy-making.

To remedy matters, the government has proposed a "banded" approach under which some renewables will be given more help than others. Their concern on the issue is understandable – some onshore wind farm projects are earning spectacular rates of return, while other projects are not getting enough support to make them viable – but it amounts to a new form of picking winners, an approach abandoned when the government introduced the present scheme and dropped its predecessor, the Non Fossil Fuels Obligation. Some forms of CO₂ reduction will apparently be better than others (or at least more expensive).

The government intends to consult on the new banding approach, which could be implemented (subject to various conditions) in two or three years time. Until that happens, the current delays with offshore wind and other projects which might qualify for the higher rate of support are only likely to get worse.

Carbon taxation One of the key problems with the European Emissions Trading Scheme (ETS) is that carbon prices have been volatile and unpredictable. The Scheme may therefore have encouraged some short term fuel switching but has failed to have any impact on investment. The government bravely says that it will solve the problem – providing clarity on future caps and signalling the direction of EU emissions reduction "much further into the future" [i.e. beyond 2012]. But it does not say how it will achieve this, apart from promising to "work with the Commission and other EU member states". Given the track record to date, and the uncertainty over the future of the Kyoto regime, this hardly amounts to a bankable commitment. There is, admittedly, a rather Delphic undertaking in the small print that "we will keep open the option of further measures to reinforce the operation of the EU ETS in the UK should this be necessary to provide greater certainty to investors" but until the government acts on this undertaking it is difficult to gauge its effect.

Nuclear Perhaps the greatest hole in the White Paper is in relation to nuclear. The government wants it to be built but does not make it clear how this will happen.

Its overall stance is confused – the government says it does not take a view on the future costs of different generating technologies (paragraph 5.96), then goes on to take exactly such a view, while at the same time maintaining that it is for private companies to decide whether to invest. But looking at the small print of the government's calculations is hardly encouraging for potential investors. The problem with nuclear power in a liberalised market is that it involves high capital costs and

high risks. The White Paper offers little comfort. Its figures suggest that the capital cost of nuclear (£1400/kW) is about three times that of a new gas plant (£440) – and of course, the costs of nuclear have been underestimated in the past. The White Paper suggests that nonetheless, because of the rise in fossil fuel prices, nuclear is economic – but that depends on rather favourable assumptions, for instance on CO₂ values. Hidden in the Annexes to the White Paper there is the straightforward admission that “nuclear generation has a small penalty relative to gas-fired generation in the central case” – and this penalty increases as the gas price falls from present levels and/or the nuclear cost increases.

This is hardly a firm basis for a high cost investment, and the government has not done much to remove the risks. For instance, a nuclear plant would take at least 10 years to build, probably more. In that time we could expect two or three elections (and who knows how many more White Papers). Given the history of nuclear across Europe – where more than half the countries commencing programmes subsequently abandoned them – and the fact that there is no real political consensus on nuclear (even within the Labour Party), the political risk must be considerable.

A second great uncertainty – on which the nuclear industry has specifically asked for more clarity – is over the carbon price. Nuclear only offers a good return on scenarios with relatively high carbon prices. Yet, as described above, the government has done little to remove the carbon price risk, beyond offering pious hopes (unless it decides to turn the small print referred to above into something tangible).

A third main risk area – waste and decommissioning costs – also remains open. The White Paper says that “satisfactory arrangements will need to be established for dealing with the costs of decommissioning and waste from nuclear new build” and sets out some broad principles, but does not actually create any arrangements. There is an implication that the government will take on the long term risk in exchange for fixed payments by the generators (which would at least introduce some certainty) but the key issue – the size of the payments – is not addressed. All the White Paper says is that the government “will engage with industry and other experts to develop the arrangements”.

Finally, there are the much discussed changes in planning legislation. These are not in fact wholly new – the government tried unsuccessfully to make similar change for all large projects a few years ago, and it is not clear that they will necessarily be more successful this time. Nor is it clear exactly what the government has in mind – it says it will not even come up with detailed ideas until the findings of other reviews (the Eddington Study and Barker Review) emerge, late this year. So again, there is a lot of unfinished business before anyone can really assess whether the new framework is favourable for nuclear.

Ducking the fundamental issue

The difficulty the government is having with nuclear is symptomatic of an underlying problem – how to square the circle of meeting energy policy objectives in a liberalised

market. On the one hand, the government is insistent that it is for market actors to make decisions about investment operation, fuel choice etc. On the other, it has specific aims in the areas of emissions and security, with which those decisions might or might not be compatible. In terms of high theory, the circle can be squared – for instance by long term, comprehensive trading schemes – but in practice existing instruments like the ETS are not up to the task.

Instead of facing up to this, past White Papers have sought refuge in fantasy land – producing comforting projections about the huge impact of energy efficiency programmes and the like – as a way of showing that the targets could be met without serious interference with market forces.

The trouble with this approach is that sooner or later it comes up against harsh reality – sometimes very soon, as shown in a revealing couple of paragraphs tucked away at the back of the latest document:

“In the 2003 Energy White Paper, projections showed UK carbon emissions reaching 135 MtC in 2020. We said that in order to demonstrate our leadership in tackling climate change and make real progress towards our 2050 carbon reduction goal we would need to make a reduction in emissions by 15 – 25 MtC to 110 – 120 MtC by 2020.

However, since 2003, emissions have risen on the back of strong economic growth and higher fossil fuel prices that have been favourable to coal-fired power generation. New projections suggest that UK carbon emissions will reach 146 MtC by 2020 on the basis of current policies. So we would now need to make bigger cuts in emissions of around 25 – 35MtC in order to reduce emissions to 110 – 120 MtC by 2020.”

In other words, whatever impact the 2003 measures are having (probably very little, as previous Comments have pointed out) they have been swamped by market developments, even over a three year time period – we are moving backwards fast, not forward.

Just why the government places so much confidence in its new 2020 forecasts and the new policy package is unclear. Essentially it is relying on the same sorts of measure as in previous White Papers. It has tiptoed towards stronger intervention – for instance, in the proposed new banded renewables obligation and in a modest strengthening of the energy efficiency commitment. But – given the failure of these policies to have any serious impact in the past – this hardly meets the scale of the challenge. (Energy efficiency, for instance, remains central to the government’s programme and suspiciously precise figures are given about all the carbon savings it will generate. But the White Paper fails to respond to recent House of Lords reports which have pointed out that the government is unable to measure the impact of its energy efficiency programmes and has no idea what savings, if any, they are achieving. It remains the case that nearly all the UK’s CO₂ reductions have come from power generation, principally the market driven switch to gas in the early 1990s, rather than from any climate change policies.)

Similarly it is unclear whether the government's cautious approach to nuclear will make any difference. It is unlikely that nuclear plant will be built on the basis of the White Paper alone, given the risks discussed above; whether completing the various pieces of unfinished business will be enough to encourage new build will remain uncertain until the details are known. This leaves open a huge question. One of the odder proposals in the White Paper is that the government will make a "statement of need" saying essentially that the country needs to have nuclear power but also that "it will be for the private sector to take decisions on proposing new power stations, based on commercial considerations". What if the country needs nuclear but the private sector does not decide to build it? The question is an important one but it remains unanswered – at least until the next energy review (on which DTI, if it is prudent, may already have started).