**Implications**
The introduction of the Authority to purchase power would redistribute the risks involved in generation. These risks are:

- Construction: will the plant be delivered to time and to cost?
- Operation: will the plant achieve the expected levels of availability, efficiency and output?
- Demand: is there a need for the plant, or is there excess capacity?
- Fuel: are the plant's fuel and greenhouse emissions economically priced?

In the liberalized market, these risks are shared between the generators, electricity retailers and customers. Under the Authority, the construction and operation risks would be allocated to the generator but the demand and fuel risks would be passed on to customers.

The prices for construction and operation would continue to be set by competition and there would remain some incentive on generators to purchase fuel economically. However, the type of technology and fuel will be determined by the Authority.

Financing for new generation will be eased by this arrangement. Financiers will take comfort from the Authority's ability to pay the generators over a long period, given the ability to raise income from retailers and, if necessary, from customers.

This arrangement therefore retains the competitive pressures on construction and operation that exist in fully liberalized markets, but leaves the choice of timing and fuel type to the Authority. After all, the current market has not demonstrated much skill in promoting either new capacity or lower greenhouse gas emissions.

**Conclusions**
The current designs of the British wholesale power market and the European Emissions Trading Scheme do not appear to provide sufficiently strong signals to encourage the construction of new capacity nor to reduce emissions at a sufficiently high rate.

The introduction of an Authority to purchase power under long term contracts offers the potential to provide low greenhouse gas emitting generating capacity whilst retaining most of the competitive features of the liberalized market.

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# Time for a change?

The electricity industry has always seemed full of excitement and challenge. From the revolution of privatisation, the growing pains of the 1990s, the Neta price crash and the subsequent market consolidation, change has been a constant theme. Energy companies now pride themselves on their ability to cope with change – indeed, compared to the days of the CEGB, current organisations are positively agile. However, there are an increasing number of industry experts suggesting that we are on the cusp of the most radical changes that the industry has as yet experienced. Can this be true or are we simply continuing on the same, rather bumpy, road that we have been travelling along since privatisation, asks Dr Simon Skillings*? And what might real change involve – both from a business and policy perspective?

Energy policy throughout the 1990s was largely focused on reducing energy costs to the economy, albeit whilst trying to manage a profitable decline for the UK coal industry.

Major change was first signalled by the UK Government in the 2003 Energy White Paper which firmly placed climate change and security of supply at the heart of the policy agenda. It was recognised that the electricity market would have to deliver large amounts of investment instead of simply reducing prices for energy consumers and an extensive programme of policy reviews and consultations was initiated, setting a trend that has continued to this day. But how much has really changed over the last six years?

The overriding business imperative to diversify and consolidate has remained and this, along with the ongoing drive for cost efficiency, has been the central commercial focus for companies over recent years.

In policy terms, there is a new 'carbon' commodity risk to be managed, arising out of the EU emissions trading scheme, but there is little hard evidence that this has significantly changed investment incentives. Combined cycles gas

turbines remain the most compelling generation investment choice whilst companies still strive to achieve diversity in their overall generation portfolio.

Perhaps it is the Renewables Obligation that has driven the greatest change with investment in renewables now taking centre stage in most energy company investment plans.

However, the current rate of build is nowhere near enough to meet the ambitious 2020 targets agreed under the recent EU Renewable Energy Directive. Perhaps the level of the change is best illustrated by Ofgem which has struggled to find a new intellectual totem to cling to arising from its environmental and social objectives and it finds itself, perhaps unsurprisingly, continuing to focus on cost allocation in market rules alongside an ongoing agenda to prevent market abuse.

**The rolling trilemma**

Politicians often refer to the energy policy challenge in terms of striking a balance between the competing objectives of cost, climate and security of supply – the so-called ‘trilemma’.

However, experience tells us that political focus will tend to shift between these objectives over time as dictated by events and the political timetable. For example, there can be little doubt that the primary objective of the government at the moment is to reduce energy costs in an attempt to bolster efforts to kick start the economy and, unless a hitherto unforeseen security of supply crisis emerges, this is likely to remain the case this side of the next election.

It is tempting to see this lurching between policy objectives as a recipe for stagnation in policy development and many in the industry find it extremely frustrating that politicians appear unable to tackle, or even engage with, the major policy challenges ahead. However, the capacity of politicians to contemplate major policy change usually increases significantly following a general election and in one to two years time some huge questions will need to be addressed.

First, the mid-decade capacity crunch will be fast approaching and the need, or otherwise, to incentivise new power station build will have become increasingly apparent.

Second, the stretching nature of the carbon targets (which may have become even more stretching if international climate change negotiations later this year prove successful) will demand a review of the long term pricing of carbon.

Finally, strong measures to stimulate an active demand side to the market will be needed as this presents the most plausible route to maintaining security of supply in an energy system with a large proportion of intermittent renewable generation.

The answers to these questions will inevitably involve the need for investment – and it will be investment on a monumental scale. Investment will be needed in infrastructure and the associated supply chains, in enabling technologies such as smart grids and power storage and also in product development for end consumers. Many of these investments will be extremely long term and the projected returns subject to considerable risk.

The long term impact of the credit crunch is difficult to predict, but it is likely that the majority of investors will remain cautious about taking on significant levels of risk for some time to come unless, of course, returns are extremely attractive. A newly elected government will therefore be facing a difficult energy policy conundrum: how to trigger a huge step-up in risky investments at a time when investors are particularly risk-averse.

**A nudge or a kick?**

It is impossible to say how a new government will respond to this challenge since its actions will inevitably be driven by unpredictable future events. Broadly speaking, however, it is likely that one of two scenarios will unfold.

It may be that the industry will continue to plan and undertake sufficient investments such that there is no overwhelming case for an upheaval in the market arrangements.

Events may continue to drive government to continually shift focus from one short term issue to another as the policy trilemma continues to ‘roll’ between priorities. In this scenario, it will always be easier to construct arguments as to why it is better to ‘narrowly’ miss long term targets providing security of supply is maintained and the industry will experience a series of policy ‘nudges’ rather than any radical shift.

Alternatively, another one to two years of experience may confirm that the current market framework is failing to bring forward investment of the right sort and in the right scale. Climate targets and longer term security of supply may return and remain as the predominant political

imperatives and the new government may decide that now is the right time to contemplate a radical change to the market framework. Either scenario is possible but they have the potential to create very different futures for those operating in the energy industry.

More of the same will enable energy companies to continue to focus on achieving growth through major investments (organic and/or M&A) whilst managing costs and margins to deliver year on year earnings targets.

Within a few years we are likely to have five or even four large energy companies operating in the UK as part of international energy majors, each having to respond to various short term government policy initiatives whilst trying to deliver a coherent longer term investment plan. On the other hand, a world of radical change, by its very nature, creates great uncertainty.

However, any solution to the policy conundrum described above must involve sufficient risk being taken from the market to allow the necessary investments to proceed. The energy business is a risk business and any major changes to the way market risks are treated could be hugely significant for the companies involved.

### The risk business

There are many risks associated with electricity generation and sales including commodity prices, policy change, technical performance and competitor pricing strategies. The capital markets, however, tend to look to energy companies to deliver steady, low risk returns. This apparent contradiction has been reconciled by energy companies seeking to internally hedge their risks through the scope and scale of the business. Vertical integration reduces exposure to wholesale price, a diverse generation portfolio manages the risk of changes in commodity costs whilst an international footprint ensures that the business is not entirely dependent on the regulatory and policy framework in one market jurisdiction.

The consequence for energy companies is that they have needed to develop businesses with a wide range of capabilities and embrace a set of cultures that often make unhappy bedfellows. An energy policy that focuses on driving investment through socialising market risk has the potential to turn the existing business paradigm on its head. Imagine a world where energy retail businesses are able to focus on product innovation and growth without having to worry about managing wholesale price risks, where low cost finance can be readily obtained thereby liberating generation businesses to focus on the efficient and effective delivery of projects and their subsequent low cost operation, where markets for new technologies can be guaranteed, thereby enabling businesses throughout the supply chain to invest in building the necessary production capacity. Imagine a very different world.

Unfortunately, risks cannot be made to disappear and every risk removed from the market equates to a cost for energy consumers or taxpayers. Any fundamental review of the market arrangements will therefore need to strike a delicate balance between providing certainty for investors without creating the potential for large future liabilities for government. A precondition for such a policy shift is, therefore, that a policy focussed on overcoming major long term challenges will, by definition, need to place a lower priority on cost efficiency.

### Conclusions

Nobody knows the future. The trick for any business is to grasp the potential for change and implement a strategy most likely to create the future it desires. At a time of uncertainty, it is all too tempting to adopt a ‘wait and see’ approach. However, in a world of incremental change, this leads to stagnation since the awaited clarity never emerges, whilst in a world of radical change, it effectively requires the organisation to adapt faster than its competitors to the new circumstances, something to which few energy companies can realistically aspire.

This year there is a window of opportunity for businesses and policy makers to contemplate the need for radical market reform. Change can be an uncomfortable thought and there will be many good reasons to stick with the status quo. However, the consequences of failing to bite the bullet may ultimately be severe and, as is so often the case with change, once it is embraced a whole new world of opportunity emerges.

** Simon Skillings is director of Trilemma UK, an independent consultancy that has worked with DECC, Ofgem and a number of energy companies on energy policy and strategic issues.*

*He is running two one-day courses called Business, Policy and Regulation in the UK electricity market. The first will be held in Warwick on 8 May. The second will be held in London on 10 July.*
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