

Insights



Welcome to the July 2009 INSIGHTS published by acumen7.

The members of acumen7 bring their skills and experience together so that they can offer innovative solutions to today's complex problems. Full details about our network can be found on www.acumen7.com

The purpose of this newsletter is to bring you new perspectives on key subjects to stimulate your own thoughts and ideas. In each edition (which are published bi-monthly), we look at an aspect of business we hope will be of interest to you as an industry leader.

GREEN SHOOTS? THE NUCLEAR POWER INDUSTRY IS MAKING PROGRESS IN THE UK



A significant change in both government and public attitudes, combined with progress in sorting out industry and ownership structures, means that real progress is being made with developing new nuclear capacity. But is progress fast enough? acumen7 member Tony Roulstone assesses the evidence.

There is now clearer evidence that nuclear power is making progress in getting ready for new build. Are these the first green shoots of nuclear renaissance?

Since the Energy Review of 2008, much has been accomplished which give cause for hope. Some of what has been accomplished is in line with the acumen7 report – 'Accelerating New Nuclear Build' published in 2007, available at www.acumen7.com/insights/nnb.pdf – but perhaps without the coherence and the urgency that was proposed by us at the time.

Attitudes have changed

The most significant change has been in the way that both Government and the public see nuclear power. While there remain a range of views, now the central opinion is the one reflected in the report by the Committee on Climate Change - which stated that:

- There is a strong economic case for nuclear power in the future UK electricity mix;
- Some of the arguments made against nuclear power – decommissioning costs and uranium availability – are not now valid, and
- In the longer term nuclear investment should grow well beyond the existing nuclear capacity.

The Committee on Climate Change was established during 2008 to provide independent advice and, to lead both opinion towards long term policies that deliver the changes in energy production and use, to cut UK carbon emissions by 80% by 2050.

Structures and ownership are being resolved

The second area of progress is with who will own and operate the new nuclear power stations:

- EDF has bought British Energy, with minority contribution from Centrica. Now they have both the capability and the financial strength to build the planned 4 stations - two at Sizewell and two at Hinkley Point.
- In parallel, the German utilities RWE and Eon (owners of National Power and Power Gen) are now working together. Recently, they have bought some of former Magnox sites from the NDA .
- Iberdrola (the owner of Scottish Power) have joined with SSE and GDF Suez with the intent of building nuclear stations in the UK.



The Flammanville site of Areva's new Evolutionary Power Reactor

Westinghouse AP1000 Reactor Cut-Away View

What's the hold up?

With these important pieces of progress the question is when will the first nuclear power station be started? The answer is bound up with the twin issues of safety regulation and planning.

The process of assessing reactor designs for compliance with UK safety law has begun, Two designs - EPR from Areva and AP1000 from Westinghouse - are moving through the NII safety licensing process. This will take at least another 2 years before the decision to invest in new stations can be made. Because the need for speed in construction is recognised, the benefits of modular construction and series ordering, as proposed by acumen7, are beginning to be considered.

The planning process is following a similarly long and complex route. HMG and the utilities are concentrating their efforts on sites close to existing nuclear power stations where the issues of nuclear power are well understood and therefore are less tractable. Under new planning laws the strategic case for nuclear power stations is being made by the Government to an Infrastructure Planning Commission. At a later stage, local planning applications will address specific site issues through a more traditional planning inquiry.

All this activity is being coordinated and driven forward by a new Office of Nuclear Development within the new Department for Energy and Climate Change. Establishing this type of focus was one of acumen7's main recommendations.

What else needs to be done?

There are some other ideas that acumen7 has promoted that have yet to be taken up by HMG. These include:

- While both the Government/Industry Nuclear Forum and the involvement of a small number of industry figures in the Office of Nuclear Development are welcome, the development of a jointly owned integrated plan for new build would address the urgency of the need for progress and the complexities of the challenge.
- There is a need to move beyond the Government's formal position of replacing nuclear with nuclear (as set out in the energy mix targets), to defining a larger role for nuclear in de-carbonising energy supply, by setting a challenging long term target for expanded nuclear capacity.
- The biggest challenge to investment in clean technologies, such as nuclear, is their ability to attract the large amounts of funding required. Because this investment will inevitably be repaid over a long period of time, what is required is either long term electricity off-take contracts, or a means of stabilising the base price of electricity. The Government has proposed carbon pricing as the means of directing investment to cleaner technologies, but the EU ETS is too immature and too uncertain to be a basis for investing the billions of pounds required for new nuclear.
- The rapid reconstruction of the UK's means of energy supply is recognised as an opportunity for the country to build a lead in these industries including nuclear, which will be required in due course by all developed countries around the world. The nuclear reactor designs being considered in the UK are French and US and the major components will come from their global suppliers. However, much equipment and the work of constructing new nuclear will be open to UK firms. The opportunity needs to be taken to create a UK supply chain for nuclear which can compete around the world.

We believe that these further measures would provide the sorely needed impetus to address the important, urgent and linked problems of Climate Change and Energy Security, in a manner that will be affordable and attract the multi-billion pound funding for new nuclear power stations.



Tony Roulstone is a nuclear engineer with twenty years experience; he was previously Chief Executive of Rolls-Royce Nuclear. At Rolls-Royce, he also held a variety of roles in both the power and aerospace parts of the business. He now provides business advice to major industrial and service clients in business strategy, selling and structuring very large change programmes.

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