



CASTLETOWN LAW

A New Beginning

for the Nuclear Industry in the UK



Introduction

Without wishing to be too critical of the state of the direction of NNB in the UK, it does seem opportune to consider the need for change. The reasons are complex and multiple but at the core is the fundamental issue of the government trying to manage an industry that it does not fully understand and which it has no determination to see succeed.

Industry also must take some responsibility for a failure to identify the shortcomings of approaches being taken and the absence of a voice which is effective in presenting an alternative to what government was doing.

In my view this stems from a misconception in government at the outset that NNB could be delivered through private finance and without being underwritten by Government. This set the industry on the wrong course and it has been trying to find its way back to the right course ever since.

Evidence of the lack of understanding is the multiple and often misguided consultations, delays in publishing green and white papers and the absence of attention to some of the great work done in the parliamentary committees from 2007 up until now. If more evidence is needed just look at the papers that people of eminent standing in the industry have written about the topic over the past few years.

What does a new beginning mean for the UK?

From a legal point of view the advent of leaving the EU may well make the UK a more attractive place for inward investment, it may also allow government to support major initiatives and the constraints of some of the less beneficial regulation imposed by the EU may be removed. The UK as part of treaties with other countries may well benefit from the ability to export its immense repository of nuclear knowledge.

In the UK we consider our approach to regulation of nuclear installations to be the gold standard. Experience from outside the UK suggests the regulatory structure in the UK is seen as an unnecessarily pedantic and costly process, which acts as a major disincentive to participation. As other nuclear states emerge, the industry internationally is more interested in those where the cost of delivery is more manageable and the outcomes no less safe than in the UK.

The ONR functions as a statutory body under the direction of ministers (government). It may be that ministers should listen more widely to industry to understand what ministers should be directing the ONR to do in terms of regulating the nuclear industry in the UK. It is suggested that the environment created by the regulator should be one which is designed to enable success.

What is it that needs to be regulated?

At the time when the ONR and the OND were established, the concept was to have a single technology solution onto which the ONR could throw all their resources and achieve a robust solution for the UK nuclear sector. That approach changed very quickly as the financial interests of overseas developers were brought to bear. The ONR became overstretched and the process became more tortuous than was intended.

That single technology concept was in consideration of large (1000MW+) single technology delivery. Times have changed and the needs of the industry have changed. To meet the needs of the industry, a revisit of the ONR structure function and delegated role should be looked at.

We should now be considering regulation and licencing for large technologies (of which there may be several), modular technologies, fusion technologies, floating facilities, offshore facilities, smaller sites, combined sites and international application of the solutions under consideration by the some of the more advanced developers in the UK on the basis of international deployment of UK nuclear technology and skills.

It may also be that the view that the ONR is designed to regulate a new industry which has limited capability in the nuclear sector, needs to be revisited when the UK has some of the most capable nuclear engineering professionals in any industry in the world. That is not to say the ONR doesn't respect the industry view. In fact the opposite is probably the case but the directions given to the ONR shackle its ability to be permissive of proposed approaches to regulatory compliance.

Although in the UK we are adopting nuclear technologies which are already regulated and approved in advanced nuclear countries, we are requiring the developers to have their technologies approved as if they were entrepreneur developers of technology which has no track record. This is counterproductive and inordinately time consuming. The considerations are many and complex but the industry is full of exceptionally talented people and their ability to deliver a safe and secure outcome to the challenges should never be doubted.

The reflected thoughts of the industry were summed up in the 3rd Report of the House of Lords Select Committee on Science and Technology in 2016-17.

"In light of the strongly critical evidence we have received, the Government needs to review and refresh the 2013 strategy for nuclear energy, in conjunction with the NIC and take swift action and concrete steps towards its further implementation. Furthermore, this strategy must be widely publicised and provide both a clear vision and consistency for the long term in conjunction with other existing or planned technologies."

Although the government has had other distractions, it did announce several deals including the nuclear sector deal. Although welcome, the announcement of a package within a structure that is not delivering key objectives, is unlikely to be fully successful.

What should we do?

The question which Lord Hutton asked at the time of the Select Committee investigation was:

“Do we want to be a top-table nuclear nation, which is the role we have always occupied and done so brilliantly for the last 60 years, or are we going to settle for some other role which might not be the full-spectrum range of capabilities that we have got used to.”?

Rolls Royce in their proposals for Small Modular Reactor nuclear power stations referred to the need for a “National Endeavour” which has all the connotations of working together towards a single objective.

The single national purpose may be broader than the ideal of leading the world in SMR technology and it may require the different elements and interest groups to recognise a joint benefit in a different approach. This different approach was also touched on in the 2016-17 report, but little has been heard of it since.

The idea of merging the NNL and the UKAEA and perhaps the AMRC into a single body covering all technologies (fission and fusion) was identified and supported in the report. Although some of the evidence taken suggested a degree of self interest in maintaining autonomy of some agencies and although the 2016-17 report found it did not see any great advantage in merging the two at that time, the clear finding that the NNL had a confused public and commercial role, meant change had to be considered. The inputs of NIRO, NNL and NDA to government are opaque and seen by industry as often self-serving rather than progressive and so the finding seems to ignore the cellular approach of agencies in speaking to government and the benefit that a single body focused on the success of the industry might achieve.

The nuclear industry requires a long-term strategy and stability in policy. The approach of government to decision making is redolent of lack of sufficient knowledge of the subject matter, which is entirely understandable given the complexity in the nuclear industry. However, decisions and lack of decisions by successive government ministers and changes of direction on policy and approach, has been less than helpful to the successful outcomes we all want for the nuclear sector in the UK.

Addressing the needs of regulating advanced nuclear technologies, the completion of deliberations on Regulated Asset Based Model for funding (see the paper on this by my colleague Simon Stuttaford) and a structure which is more suited to delivering national objectives, are three imperatives which the government can address by taking a strong policy decision to recognise its own inability and to direct through appropriate structures, the delivery of the industry the country needs.

Conclusion

If there is any doubt about the need for decision making, a non-governmental industry leader and a statement of clear objectives read the most recent ministerial statement which the office of circumlocution would be proud of: [BEIS Advanced Nuclear Technologies 2019](#).

Go to the last page which cites only 17 of the forest of papers that have been produced on the subject in the past five years.

If we want to achieve the position posited in the question of Lord Hutton, then there must be swift and concrete decisions made.

More consultations and deliberation may impact adversely on the industry in the UK; the industry knows what is needed. Government has for too long not been willing to listen and industry too limited in vocalising its concerns over the deadlock caused by the indecision of those tasked to deliver the outcomes needed. Our standing internationally has been diminished and we need to regain our position.

A single body created out of NNL, UKAEA and NAMRC could be tasked by government to deliver specific objectives and could be funded jointly from government and commercially. The ONR can be re-tasked with proper funding and resources. Those two fundamental roles can be the backbone of a revitalised industry in the UK. Such a body could address the difficulties which beset the NDA and its role in the industry.

The demand for energy globally is undoubtedly going to create opportunities for leaders in low carbon generation. If the UK wants to be a leader in the global nuclear industry, it has to move now and make the decisions which will secure our indigenous nuclear capability and allow our industry to be a force in the world energy sector.

And Finally

For all those who don't know how to respond to the spurious risks raised about the safety of nuclear, please read these two papers:

[What is the Safest Form of Energy](#)

[Deaths per TWH by Energy Source](#)

Both of these papers support the position in the paper by visualcapitalist.com called The Safest Source of Energy Will Surprise You.

<https://www.visualcapitalist.com/worlds-safest-source-energy/>

Thank you for taking the time to think about this.



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Andrew Renton

28/ 8/2019