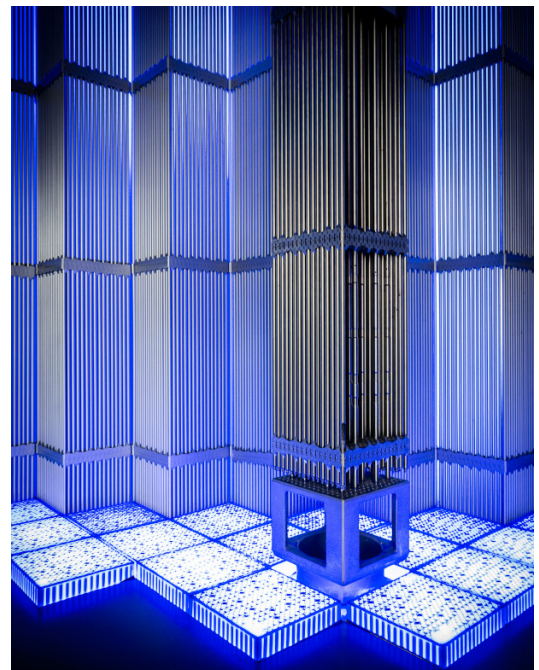




Meeting the Civil Nuclear Supply Chain Skills Challenge

The UK's plans to replace its nuclear electricity generation capacity, with estimated expenditure of £60bn up to 2030, are often in the headlines, for example with the decision of Hitachi to join the programme. There is also a major but less well known programme of nuclear decommissioning. The Nuclear Decommissioning Authority (NDA), formed in April 2005, oversees and manages the decommissioning and clean-up of the UK's older Magnox power plants, the reprocessing facilities at Sellafield and the former nuclear research and development facilities previously run by the United Kingdom Atomic Energy Authority (UKAEA). The Nuclear Decommissioning Authority is sponsored by the Department of Energy & Climate Change (DECC) and is responsible for 19 civil public sector nuclear sites. It plans to spend some £67.5bn on decommissioning up to 2020.

Day-to-day management and delivery of the 19 NDA site programmes is the responsibility of seven Site Licence Companies contracted to the NDA who directly contract with the supply chain for the necessary goods and services. Sellafield is the UK's largest and most hazardous nuclear site and it is managed by Sellafield Limited under a NDA contract.



The NDA's programme expenditure is public expenditure and has been scrutinised by the House of Commons Public Accounts Committee (PAC) who published a report on it at the start of February. The PAC recommended that the NDA and Sellafield Limited act with real urgency and improve project management to tackle the risks on the site in good time. It concluded that recent performance has not been satisfactory since in 2011-12, only 2 out of the Authority's portfolio of 14 major projects were being delivered on or ahead of the schedule for that year.

The PAC found that basic project management failings had occurred on major projects which could and should have been avoided and were not excusable by the uniqueness of the projects or the circumstances. Costs on one project had gone up by almost £250 million since 2009 and the project was 18 months behind its original schedule because of Sellafield Limited's failure to spot deficiencies in a key element of the design, or to adequately check the capability of the supply chain.

There will be an official reply to the PAC and we will have to wait to see what that says. It is likely that the reply will build on the National Nuclear Supply Chain Action Plan which was published in December 2012. This plan includes the objective to boost job creation in the nuclear industry, and to ensure that potential skills shortages do



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not act as a barrier to the future development of the industry in the UK. The Plan identifies the key skills issues for the programme:

- Defining the Industry skills requirements for the UK Nuclear Programme
- Ensuring robust, unified labour market intelligence for accurate workforce planning
- Ensuring funding is available for key training
- Ensuring availability of specific skills in key workforce groupings



The DECC Secretary of State co-chairs the Nuclear Industry Council with Lord Hutton of the Nuclear Industries Association which will oversee how the action plan is taken forward. Day to day management of the implementation of the plan is the responsibility of the Head of Supply Chain and Skills in DECC who will work with the Council and wider industry to ensure that a decent implementation structure is in place. The Plan recognises that the UK supply chain may need assistance in closing gaps in capability and competitiveness.

The Plan also recognises that the length of time since the last new build project, the high average age of the existing nuclear workforce and the scale of the UK's nuclear generation plans, make it essential to act now to prevent skills gaps developing over the course of the new nuclear programme. Within the plan, the development of an overarching skills strategy for the nuclear industry is the responsibility of the National Skills Academy for Nuclear, working in close partnership with Sector Skills Councils and Industry Training Boards.

The co-ordinated delivery of skills action across the sector, including in the key areas of Construction, Engineering Construction and Manufacturing, is to be progressed by the Nuclear Energy Skills Alliance (NESA) which brings together the skills bodies with Government to co-ordinate work on the skills challenges. NESA members are working with employers to research labour market intelligence for a Nuclear Workforce Tool. This project, led by Cogent with the input of all NESA member skills bodies, will help to define industry-wide skills requirements over the course of the nuclear programme with an evidence base for skills actions and workforce planning.

BIS has established the Nuclear Advanced Manufacturing Research Centre (AMRC) at Sheffield and Manchester Universities as part of the Advanced Manufacturing Catapult. The Nuclear AMRC works with companies to improve capabilities and performance along the nuclear supply chain. It has been awarded £37m by the Regional Growth Fund to support a large-scale programme of supplier development and manufacturing research in partnership with key industrial members.

The AMRC runs the Fit For Nuclear (F4N) programme which helps companies measure their current operations against the standards required to supply the UK's new generation of nuclear power stations, and take the necessary steps to enter the global market. F4N is delivered by the Nuclear AMRC with the Manufacturing Advisory Service



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in partnership with top-tier industrial partners. The initial diagnostic covers Strategy and Leadership, Design and Project Management, People Excellence, Process Excellence, Safety and Quality.

In addition £1m is available to establish new Knowledge Transfer Partnerships in the field of nuclear technologies for civil power generation, decommissioning and waste management. The aim is to help businesses improve their competitiveness, productivity and performance in the nuclear sector through better use of the knowledge, technology and skills that are available within the UK knowledge base.



Securing a commercial return on the enormous sums invested in nuclear generation depends partly on making sure that the supply chain operates according to the best project management disciplines during the construction phase. But equally important is world class operation and maintenance over the decades that these assets are in use. Some form of structured approach such as Total Productive Maintenance (TPM) is the key to securing optimal performance over the whole length of an asset's life. TPM is a structured approach to deploy a comprehensive set of tools and techniques in order to eliminate all losses across a whole organisation and throughout the value stream. TPM involves the capabilities of the whole workforce to ensure effective and sustainable improvements are implemented. Improvements to the organisation are made by improving the two core elements of people and equipment

Industry Forum has strength in depth in TPM and Paul Hardiman, Global Best Practice & Assessment Services Principal, SMMT Industry Forum, has been invited as the guest of honour at a TPM Excellence conference in Krakow, Poland on the 21st - 22nd March 2013.

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