The UK Nuclear Industry Skills Challenge

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Areas to cover

- Nuclear Sector Skills Strategy and external context
- UK Nuclear Sector – Demand Profile
- Skills Gaps
- NESA Plan
- NDA People Strategy
  - Key Deliverables
  - Targeted interventions
- Regional Initiatives

Recognition is that answer to many problems are in collaboration and not competition... Organisations alone cannot nurture the necessary talent given the long lead times for training and uncertainty about their own future skills demand.
Context and Objectives

- **Nuclear Sector Skills Strategy (2015)**
  - ‘The UK is entering a new stage in its nuclear history. The construction of new nuclear power plants, a growing decommissioning portfolio and replacement of the UK military’s deterrent programme will create enormous investment in the sector over the next decade’

- **The UK Government and industry has a clear vision for the UK nuclear industry:**
  - To be supported by a workforce with the skills, capability and capacity required to successfully deliver current and future UK nuclear programmes with the highest standards of nuclear professionalism, safety and competitiveness.
  - For the UK nuclear industry and its approach to skills and workforce development to be recognised as an example of international best practice.

- **Energy Act 2004**
  - NDA will ‘promote and to secure the maintenance and development in the UK of a skilled workforce able to undertake the work of decommissioning nuclear installations and of cleaning up nuclear sites

- **NDA Mission**
  - Deliver safe, sustainable and publicly acceptable solutions to the challenge of nuclear clean up and waste management. This means never compromising on safety or security, taking full account of our social and environmental responsibilities, always seeking value for money for the tax payer and actively engaging with stakeholders
Key external influences

- **Government Energy strategy**
  - Pace of nuclear new build
  - Balance of investment with renewables - Up to £110 billion investment in electricity infrastructure to 2020

- **Government Spending review**
  - Value for Money

- **Government skills policy and frameworks**
  - UK Commission for Employment and Skills (UKCES)
  - UK Government Nuclear Sectors Skills Strategy
  - Nuclear Energy Skills Alliance (NESA)
  - Focus on employer ownership & collaboration across sector

- **Workforce demographics**
  - Next 15 years at least 34% of the workforce will reach pensionable age
  - Implied recruitment of 18% of existing population

- **Competition for people & scarce skills**
  - Civil and Defence Nuclear Workforce will increase by 35% by 2021
  - Impact of Nuclear new build & National infrastructure projects
  - Ability to attract talent into decommissioning
Key internal factors

• **Shortage of supply of key skills requiring resourcing solutions**
  – Programme & project managers
  – Engineering disciplines

• **Intra estate competition for skills and talent**
  – Getting the balance right between collaboration (e.g. nuclear graduates) & competing
  – Avoiding intra estate wage drift

• **Supply Chain Capacity and Capability**
  – Increasing demand and subject to the same labour market pressures

• **Barriers to mobility and transferability**
  – Ability, ease and desire to transfer or relocate within and across SLCs

• **Prevailing culture and systems**
  – Parochialism v estate wide needs
  – Effectiveness, quality and integration of management information and data
Understanding the demand for labour and potential supply

- Investment in quality LMI
- Gives good trends, and overall messages
- Temptation to over-analyse – when actually the high level data is enough
- Useful ‘evidence’ for action – both in terms of Governmental action and for education providers to be reassured about future demand
Civil and Defence Nuclear Workforce Demand

- Oldbury
- Sizewell C
- Moorside
- Wylfa Newydd
- Hinkley Point C
- New Build Civils
- New Build Manufacturing
- Existing Manufacturing
- Civil Supply Chain
- Decommissioning
- Existing Generation
- Defence Supply Chain
- Defence (MoD and Tier 1 Partners)
- ONR

Year


Workforce vs TEs in year

0 20000 40000 60000 80000 100000 120000
Implications for the NDA estate
The Recruitment Challenge
Pinch-point areas

Decommissioning and new-build pinch-point areas
• Control and Instrumentation
• Project and Programme Management
• Steel fixers
• Concreters
• Civil engineering operatives
• Electrical engineers
• Scaffolders

Other professions where there is a risk of shortfalls which requires monitoring are:
• Safety Case Specialists
• Commissioning Engineers
• Heavy Electrical Engineers
• Nuclear Chemists
• Health Physicists
• Radiological Protection Advisors
How to address the future challenges – the skills life-cycle

01 SECTOR ATTRACTION
Attract more people into the sector and increase workforce diversity of their careers.

02 RECRUITMENT & RETENTION
Increase the number of people choosing careers in the sector at all levels and career stages, retaining them in the sector for the length of their careers.

03 PINCH POINTS
Address specific predicted future skills shortages as those identified via the NESA NWA at technical and professional level.

04 PROFESSIONAL DEVELOPMENT
To develop a suitably skilled workforce trained to common industry agreed standards with the required levels of nuclear professionalism.

05 KNOWLEDGE MANAGEMENT & TRANSFERABILITY
Expertise and knowledge to be retained for future generations to support the nuclear programme.
Vision and Focus of NDA Estate Wide People Strategy

• Vision
  – ‘Achieving success in delivering key NDA estate wide outcomes through having people with the appropriate skills in the right place at the right time’

• The strategy will addresses how we will;
  – Mitigate risks of skill shortages and wage inflation caused by current labour market developments
  – Support improvements to resourcing practices and solutions
  – Retain and develop the skills and talent we need
  – Optimise the ability to utilise the people who already work for the estate through improved mobility and transferability
  – Ensure value for money

• Will be integrated with the NDA Strategy III requirements and the People Strategy delivery plan will require integration with the Life Time Plans and Performance Plans of the SLCs.

• A key dependency will be a requirement for the NDA, SLCs, Subsidiaries to collaborate across the Estate and with other external bodies and collaborative partnerships (NSA-N NESA, etc) to deliver outcomes which are in the interests of the estate as a whole and the NDA’s overall mission.
Estate Wide Collaboration

• NDA expects its SLCs and Subsidiaries to develop good multi-way collaborative relationships to provide for effective estate wide planning with good management of key interfaces to deliver optimal estate wide solutions to allow the NDA to operate in a planned manner and deliver our plans & objectives.

• NDA is looking for active engagement in delivering estate wide opportunities/initiatives which bring significant benefits to both NDA and SLCs. For example efficiencies, sharing of lessons learnt, reduction in programme timescales, reduction in costs, in support of contractual obligations.
NDA People and Skills Strategy

Skilled and diverse talent in the right place at the right time

- Mobility & transferability
  - Standard operating principles to deliver Value for Money solutions
  - Transition & redeployment processes

- Resourcing
  - Estate wide forecasting principles and data to map demand & supply
  - Targeted & diverse attraction strategy

- Skills
  - Collaborative solutions to close priority skill gaps
  - Driving synergies to ensure Return on Investment and Value for Money of L&D

- Resourcing
  - Targeted deployment of industry wide solutions
  - Collaborative resourcing solutions
Current and planned initiatives

- **Sector Attractiveness** – UTC’s STEMnet, Big Rig, Energy Foresight
- **Recruitment and Retention** – apprenticeships/higher apprenticeships, degree level apprenticeships, NuclearGrads
- **Professional Development** – NCfN, NS4P, Infrastructure
- **Pinchpoints** – directed interventions
- **Knowledge Management/transferibility** – Terms and Conditions reform, NTN, Nuclear Industrial Partnership – training of research fellows and specialist learners
Achievements: Infrastructure

- **Energus £21.5M (NDA £5M, NSAN Flagship)**
- **Dalton Cumbria Facility £20M (NDA £10M)**
- **BEC Construction Skills Centre £7M (NDA £2M)**
- **Energy Skills Centre Bridgwater £8M (NDA £0.5M, NSAN Flagship)**
- **Energy Centre Anglesey £6M (NDA £1.5M, NSAN Flagship)**
- **Engineering Skills Centre Thurso £7M (NDA £2M, NSAN Flagship)**
- **Energy Coast UTC £7.8M (DfE)**
- **Summergrove Accommodation Facility Refurb £2.3M (NDA £1.5M)**
Any questions?

- Thank you for listening