



Office for  
Nuclear Regulation

# **Managing regulatory competence for nuclear safety and nuclear security - UK perspective**

**IAEA 63<sup>rd</sup> session of the General Conference - 19 September 2019**

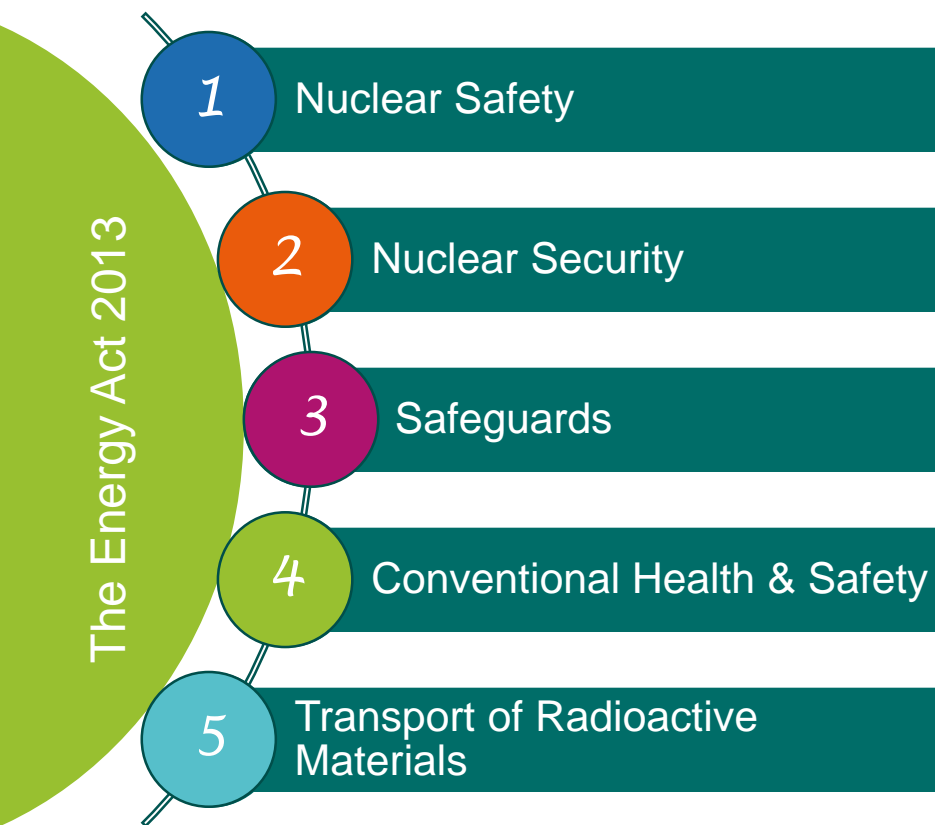
**Anthony Hart**

Technical Director, Office for Nuclear Regulation

# Relevant IAEA Guidance



# Office for Nuclear Regulation

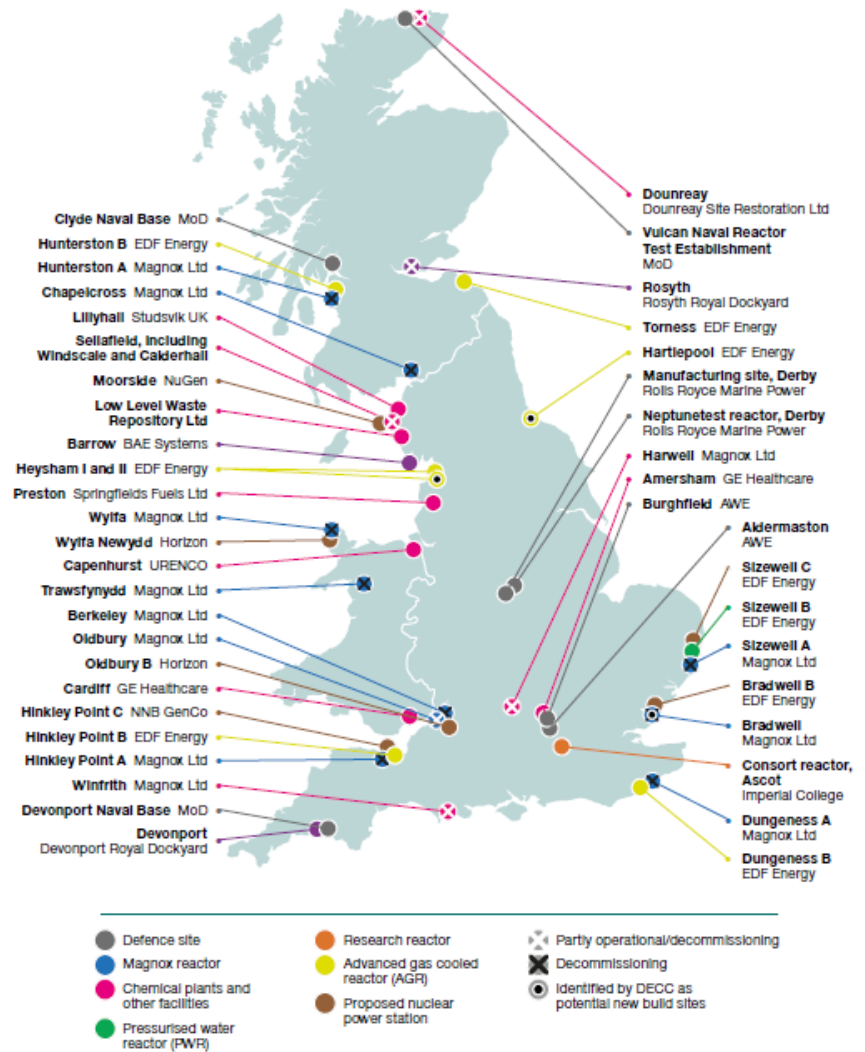


- First established as a nuclear regulator in 1959 under the first Nuclear Installations Act
- ONR was established as a statutory Public Corporation on 1 April 2014 under the Energy Act 2013
- The Energy Act 2013 provides ONR with five purposes:
  - Nuclear safety
  - Conventional health & safety on nuclear sites
  - Transport of radioactive materials
  - Security
  - Safeguards



# UK nuclear estate

- 11 Magnox Reactor sites (no longer operational)
- 7 Advanced Gas Cooled Reactor sites
- 1 Pressurised Water Reactor site
- Associated fuel cycle and waste facilities
- Research facilities
- Defence Authorised Sites
- New nuclear build site
- Numerous other transport and security dutyholders



# Key Challenges

## Industry Risk Landscape

- Ageing reactors
- Decommissioning
- New build



## Inspectorate Demographics

- Ageing staff
- University nuclear degrees stopping
- UK nuclear skills shortage



## The Energy Act 2013

- Extended regulatory responsibilities
- Expanding organisation



## Geopolitical

- UK Energy Policy
- Brexit – Safeguards withdrawal from Euratom
- Global security threat





Office for  
Nuclear Regulation

# 5-Year Recruitment Strategy

# 5-Year Recruitment Strategy

- Long term pay and reward deal (2014-18) placing ONR in the upper quartile for nuclear specialists
- Continue recruitment of fully qualified and experienced inspectors (Band 3)
- Introduce new routes to being trained as Nuclear Inspector:
  - From outside the nuclear industry with transferrable skills
  - Less experienced but with potential/technical capabilities
  - Nuclear Graduate programme
  - Degree Apprenticeships
- Use of new media channels to attract diverse pool of applicants
- New, easy-to-use, application process
- Recruitment skills training for managers to address unconscious bias.

# 5-Year Recruitment Strategy



29.4% increase in staff (486 to 629)

Band 3 Inspectors increased by 30.5%



47 people training to become inspectors via new recruitment routes



Average age of inspectors has reduced by 6.8% from 51.5 to 48



84% increase in female inspectors

5 fold increase in female applicants





Office for  
Nuclear Regulation

# Investing in our People



- Established in February 2019 to modernise our approach to learning and development
- Addressed gaps in our core training
  - Influencing and Negotiating
  - Resilience and Wellbeing
  - Emotional Intelligence
  - Introduction to Coaching Skills
  - Unconscious Bias
- Experiential learning opportunities
  - Tutorials – practice skills in safe environment
  - Coaching guides – practice and receive feedback on a range of regulatory topics

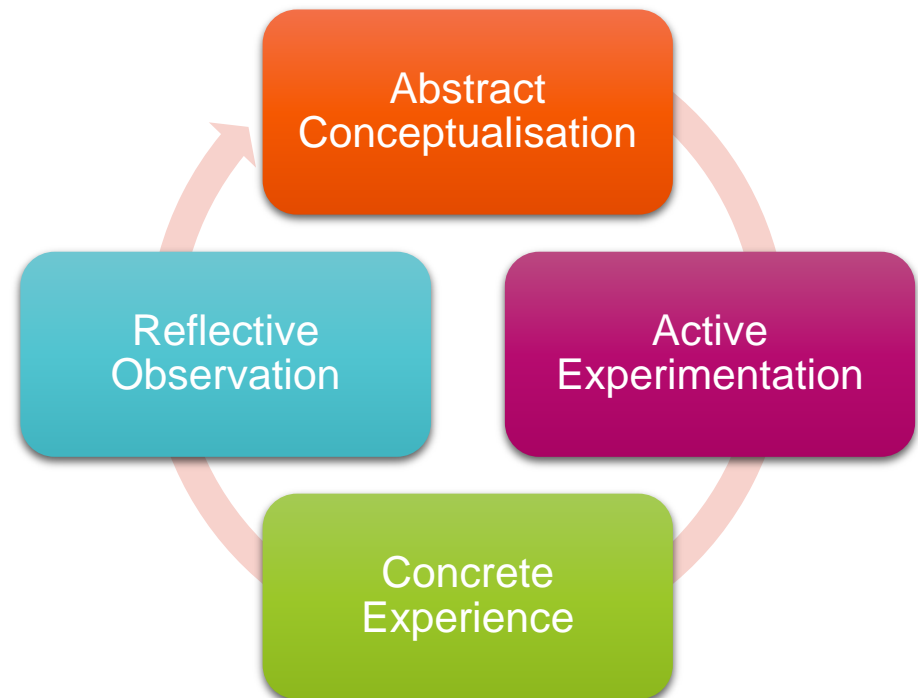


*"It helped immensely being based upon our own actual work rather than a hypothetical example"*

*- Tutorial attendee*

# Systematic Approach to Learning & Development

- **Phased approach** based on development needs of individual
- **Theory** – experiential learning, reading, e-learning, tutorials
- **Practical experience** – observing, joint inspections with experienced inspectors, secondments to industry
- **Gradual increase of responsibilities** – observed by Professional Lead
- **Learning /Reflection** – feedback, including from the licensee / duty holder





Office for  
Nuclear Regulation

# Investing in Leadership

# Investing in Leadership



## Technical Director

To ensure ONR is competently resourced to regulate the UK nuclear industry

x13



## Professional Leads

To ensure the capacity, capability and resilience of their specialism to meet the current and future regulatory demands



# Inspector Deployment



ONR Inspectors at site - copyright ONR





# Monitoring Capacity, Capability & Resilience

## 1. Ability to meet Current Demand

- Considers technical and behavioural capability

## 3. Managing Capability & Resilience

- Understanding capability gaps
- Succession Planning
- Resilience

## 5. Indicator of the overall capacity, capability and resilience of the specialism

Capacity, Capability & Resilience Score for Specialism:		Date Updated:	Period:	02/2019/20	03/2019/20	04/2019/20	05/2019/20	Trend			
Operational Integration		02-Jul-19	Overall Rating								
<b>Section A</b>											
<b>1. Meeting Current Demand [4-12 months]</b>				<b>2. Servicing Future Demand [1-5 years]</b>							
Rating	02/2019/20	03/2019/20	04/2019/20	05/2019/20	Trend	Rating	02/2019/20	03/2019/20	04/2019/20	05/2019/20	Trend
Comments	Over the next 12 months, resources demand from the Division looks to be reducing as 10 Major Projects conclude, less resources required for lower licensed decommissioning sites and potentially increasing profiles on PWB sites.				The demand is relatively already stable and predictably reducing. Resource planning is relatively firm from the Technical Directorate.						
1.1	The demand on specialism for the next 12 months is clear	Agree									
1.2	There are sufficient resources to meet the known demand	Agree									
1.3	There are sufficient technical & behavioural capability to meet the known demand	Agree									
<b>3. Managing Capability &amp; Resilience</b>				<b>4. Maximising Work Hours</b>							
Rating	02/2019/20	03/2019/20	04/2019/20	05/2019/20	Trend	[Note: This is used for the purpose of monitoring compliance with the Working Time Regulations]					
Comments	Further improvements could be made in allowing additional developmental postings for specialist inspector / regional roles to provide additional resilience and to better manage workloads. Succession plans are acceptable in the region with no immediate concerns. However, no detailed succession plans for the region are in place to address these.				The highest working hours relate to front line site inspectors with a relatively proportionate of time spent on travel. I will raise this in other with the ODR. There are no other significant concerns for these and working under normal hours.						
3.1	Understand the capability requirements across operations and have arrangements in place to manage them	Agree	4.1 How many of your staff are working in excess of their contractual hours (out of total)?								
3.2	There are appropriate succession plans in place to maintain capability over the next 5 years	Partially Agree	4.2 How many of your staff are working less than their contractual hours (out of total)?								
3.3	There are sufficient developmental plans in place to maintain capability over the next 5 years	Partially Agree	4.3 % of all in the average staff allocation (ASP)								
3.4	There is sufficient resilience across operations to maintain known delivery over the next 5 years	Agree	4.4 % of all in the maximum allocation (MP)								
			4.5 % of all in the maximum allocation in working the maximum? Site Inspector						4.6 Have discussions with the relevant CDRs/DNs and an indication that they have and sufficient resources in place to manage work		
<b>5. Overall Capacity, Capability and Resilience</b>											
1.4	Taking into account the above assessment, the capacity, capability and resilience across operations is acceptable and there are no significant risks to the delivery of ONR's core purpose				4. Update the overall rating in the top right hand corner 2. If other 'red', complete Section B						
Comments	The capacity, capability and resilience within Operational Integration are acceptable. Our key capability gaps remain with localisation, with significant steps underway to address this shortfall. Other areas for consideration are developmental opportunities for supporting remote site inspectors to provide operational resilience and managing workload.										
<b>Section B</b>											
1. What is your 'red in Green' about?											
1. Localisation capability development already in place 2. Strategic discussion of RDR on growing site inspector resilience											
1.2	Does your red in Green affect RDR?	Agree	Inform their RDR prior to RDR								
1.3	Does your red in Green affect the TD Risk Register?	Agree	Inform the RDR								
1.4	Does your red in Green affect?	Agree	Seek approval from Technical Director before								
<b>Recommended Request:</b>											
Clear reasons for escalation:											
Technical Director's Decision:											
Comments:	Signature:	Date:									

## 2. Ability to service future demand (1-5 years)

- For some areas this becomes less predictable into the future.

## 4. Workload on inspectors

- Excessive working hours can indicate under-resourced
- Helps us manage individuals' wellbeing

For any significant issues, the Professional Lead will indicate their improvement plan, and any recruitment is requested and justified.



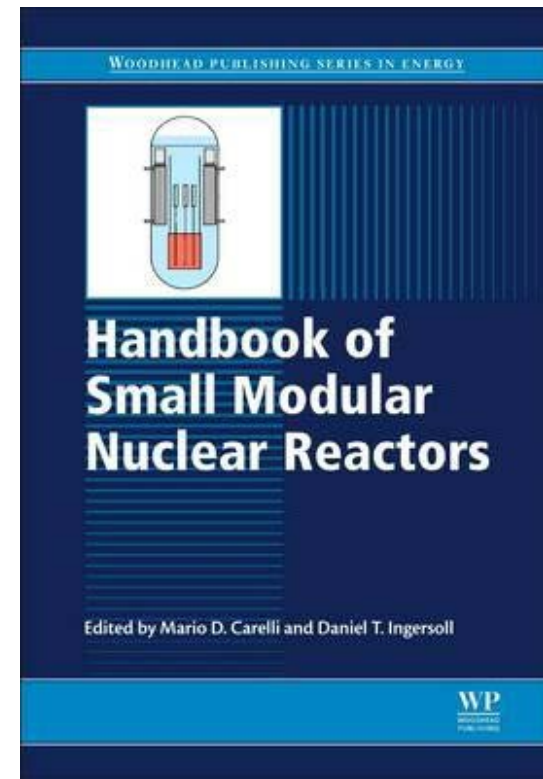
Office for  
Nuclear Regulation

# Responding to Change



# Responding to Change

- We are continually adapting our approach in response to the changes in our industry, political environment, generational differences and many more
- Anticipate emerging risks across industry
  - Long-term risks, new technology, new operations – what skills will we need?
- Dynamic political environment
  - Post Brexit – new safeguards regime, European influence
  - Global threats
- Adapting to generational differences
  - Digitisation
  - Greater turnover



# Responding to Change

## Industry Risk Landscape

- Ageing reactors
- Decommissioning
- New build

## Inspectorate Demographics

- Ageing staff
- University nuclear degrees stopping
- UK nuclear skills shortage

## The Energy Act 2013

- Extended regulatory responsibilities
- Expanding organisation

## Geopolitical

- UK Energy Policy
- Brexit – Safeguards withdrawal from Euratom
- Global security threat



# If you would like to know more about ONR

- Visit our website: [www.onr.org.uk](http://www.onr.org.uk)
- Follow us on Twitter: [@The\\_ONR](https://twitter.com/The_ONR)
- Sign up for our regular e-bulletin newsletter: [www.onr.org.uk/ebulletin/](http://www.onr.org.uk/ebulletin/)
- If you would like to speak with us regarding transport of radioactive substances, please email: [Class7@onr.gov.uk](mailto:Class7@onr.gov.uk)
- To speak with us regarding Safeguards please email: [UKSO@onr.gov.uk](mailto:UKSO@onr.gov.uk)
- If you have an enquiry of a more general nature, please email: [ONRenquiries@onr.gov.uk](mailto:ONRenquiries@onr.gov.uk)