



Office for  
Nuclear Regulation

**Welcome**  
**ONR NGO Forum meeting**  
**26 June 2020**



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Nuclear Regulation

# Chief Nuclear Inspector's Update

Mark Foy

## NGO Requested Topics

- COVID-19 Industry Response
- Enforcement action taken by ONR
- Hunterston B
- Safety Directors' Forum: effectiveness of SSGs/LLCs
- Climate change – Vice Article

## Other topics of interest

## Q&A

## Status of industry - COVID 19

- **Industry responsibly pared back non essential** activities in early stages of pandemic
- **No impact on operation of UKs NPP units**, a small load reduction due to reduced demand
- **Sellafield placed in largely quiescent state**, facilities require ongoing manning and utilities to maintain nuclear safety
- **4 direct COVID-related fatalities** in the sector
- **Peak absence of 18-20% across the sector** (now around 5%), related to suspected COVID 19 illness and isolation due to household illness

# ONR Regulation

**To protect society by  
securing safe nuclear  
operations**

- Staff working from home, other than for essential business reasons
- Predominately remote regulation
- On site presence by exception - essential interventions only

- Targeted re-engagement
- Remote inspection
- Reinstatement of limited site based inspection – including social distancing measures etc
- Remote assessment and permissioning
- Site base investigations

- Balanced portfolio of remote and onsite inspections – compliance assurance, supporting permissioning decisions
- Reinstatement of face to face contact with dutyholders in COVID-19 secure environment.

## Enforcement Actions Taken by ONR

We have taken the following enforcement action since the previous NGO Forum meeting:

Action	Number taken
Enforcement Letters	22
Improvement Notices	2
Prosecutions	0
Enforcement Notice	1

## Hunterston B

- **The Graphite cores in AGR reactors are ageing**, leading to cracking and reductions in brick strength.
- **Consequent challenges** in demonstrating that the control rods can be inserted during a seismic event.
- **The safety case presented by the licensee is complex** and ONR assessors are working to ensure that it is properly understood and scrutinised.
- **Both reactors remain offline**, pending review of the safety documentation and satisfactory resolution of technical issues.



# Guidance on the conduct of Local Liaison Committees and Site Stakeholder Groups

- **ONR working to influence positive outcome**
- **Industry progress slower than anticipated: COVID 19; variable commitment from some in the sector**
- **Re-energised by NDA**
- **SDF Chair has reaffirmed commitment to a timetable in early July**
- **ONR will facilitate a session with NGO Forum representatives to ensure representation of views and balance approach**

*Nuclear Free Local Authorities*

## briefing



Date: 14<sup>th</sup> March 2017 No.156

**Subject: Nuclear Site Stakeholder Groups and Local Liaison Committees – are they fit for purpose? And how should wider nuclear policy stakeholder management improve?**

**1. Overview of report**  
This report has been developed by the NFLA Secretary on the request of the NFLA Steering Committee. It has involved a detailed survey of civil society non-governmental organisations (NGOs) and a number of councillors and council officers who attend and directly raise issues at the local level with the operation of civil and military nuclear sites around England, Scotland and Wales. The report comes out of observations from these representatives over the effectiveness of Site Stakeholder Groups (SSGs) in the civil sector and Local Liaison Committees (LLCs) (Torness, Hartlepool and Heysham are classed as LLCs as there are no current NDA facilities there) in the defence sector. Concerns remain that such groups are inconsistent in keeping the nuclear site licensee in check and that their membership is not sufficiently broad enough. The survey allowed such groups and member councils to freely put forward their views on such matters.

The report also looks at stakeholder management in the nuclear sector more broadly. The NFLA prides itself on seeking to represent its member authorities in all relevant nuclear policy stakeholder networks. It attends on behalf of its member authorities exhaustive stakeholder meetings with the UK Government, Scottish Government, Welsh Government, Republic of Ireland Government, Nuclear Decommissioning Authority, Office of Nuclear Regulation, the environmental agencies in England, Scotland and Wales, the Irish Environment Protection Agency and the local government groups NULEAF (Nuclear Legacy Advisory Forum) and SCCORS (Scottish Councils Committee on Radioactive Substances). It also interacts at the international level in the European Union and the United Nations, through its cooperation with CNFE and the Mayors for Peace. (1)

Experience in all of these forums is inconsistent and can at times be highly frustrating in attempting to influence policy and putting forward legitimate concerns that should be acted upon. A considerable number of these stakeholder events can be heavily unrepresentative and often do not allow for adequate, real and deep engagement on important parts of nuclear policy to initiate change. For example, a useful summary on the views of anti-nuclear groups on nuclear policy stakeholder engagement has recently been made by Professor Andy Blowers:

*"It needs to be said that the NGOs are experiencing considerable disillusion and frustration at the present time and a deep sense that their views and arguments are unheeded and routinely evaded as of little importance. Indeed, some NGOs question the purpose of engagement which sometimes seems more a process of legitimisation through consultation than one of interactive and open-minded engagement. Its significance lies more in the exchange of information and identifying areas of disagreement than in a more purposeful and mutual effort to understand, learn and review positions. There is a danger that the BEIS NGO Forum (as an example) becomes a 'dialogue of the deaf' rather than an arena for the development of consensus and cooperation or constructive disagreement as was originally intended." (2)*

Professor Andy Blowers, BEIS NGO Forum Co-Chair, December 2016

**THE LOCAL GOVERNMENT VOICE ON NUCLEAR ISSUES**

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## VICE article - Climate Change

A media article appeared on the VICE website\* June 2020

Referenced ONR, its Expert Panel on Natural Hazards, climate change etc.

### Save Yourself

## Exclusive: Climate Experts Predict 'Grim Future' For Nuclear Power

In FOI documents seen by VICE, academics advising the UK government's nuclear watchdog warn of a climate-invoked disaster.

By [Rick Lyons](#); illustrated by [Ella Strickland de Souza](#)

03 June 2020, 10:43pm  Share  Tweet  Snap

\*[https://www.vice.com/en\\_au/article/akwayk/ons-nuclear-power-stations-climate-warning-uk](https://www.vice.com/en_au/article/akwayk/ons-nuclear-power-stations-climate-warning-uk)

## VICE article - ONR Expert Panel

Kate Crowley, lecturer in climate risk and resilience at Edinburgh University -

*“Often these panels are created to a degree to be controversial,” .... “They may be there to deliberately put forward the worst case scenario, to push designers to think about new ideas and the black swan concept is exactly that – very much the worst case.”*

- Expert Panel on Natural Hazards: Meteorological & Coastal Flood Hazards Sub-Panel
- Independent, credible advice - Supports ONR’ specialists in decision making
- Members experts in their scientific fields - not on nuclear plant response to hazards

## VICE article – Heat Waves

*“significant heat waves of persistent high temperatures are likely to occur...potentially leading to a plant shutdown and the risk of an accident”...“It is possible,” one academic said, “that by the time HPC is decommissioned the planet will be 4C warmer with many extreme weather events”*

- Temperature rise taken into account in nuclear safety cases
- Defined conservatively - accounts for temperature rise due to climate change
- “risk of accident” - refers to a worst-case scenario if climate change isn’t taken into account
- HPC safety case - instantaneous high temperature of 44°C accounted

## Other topics

- CNI Annual Report on the performance of the nuclear industry
- CNIs Independent Advisory Panel
- Security Assessment Principles
- Defence sites in enhanced attention
- IAEA IRRS Report on Mission to UK (October 2019)



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**Thank you for listening**  
**Questions and Discussion**



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# Regulation of New Reactors – Independence & Integrity of the Process

Mike Finnerty, Deputy Chief Inspector and  
Director, New Reactors Division

## New Reactors – General Overview

### Hinkley Point C

- Construction progressing

### Sizewell C

- Expect Nuclear Site Licence application next week

### HPR 1000 GDA

- Progressing with Step 4

### Bradwell B

- Increasing engagement with prospective Site Licence company

### Small Modular Reactors/ Advanced Modular Reactors

- Modernised GDA Approach to accommodate SMRs/AMRs
- Discussions ongoing with government

# Regulation of New Reactors

Takes a 'layered' approach:

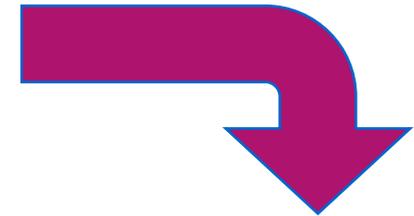
- Generic Design Assessment
- Site Licensing
- Site Specific Assessment, includes:
  - Development of Pre-Construction Safety Report
  - Organisational capability
  - Security considerations
  - Licence Conditions etc.
- Commissioning
  - Development of Pre-Commissioning Report
- Consent to operate

## Generic Design Assessment (GDA)

- GDA Process is an upfront, step-wise assessment of a generic reactor design
- Independent & Robust Process for assessing reactor designs
- Clear benefit in identifying and resolving key issues and design changes long before build
- Not a legally-binding process, but expectation from HM Government
- ONR/EA has developed modernised process, aimed at SMRs/AMRs
- Original process will continue for Chinese HPR 1000 Design

## Modernised GDA

- ONR to conduct its assessment in three steps (instead of the current four steps, and changed emphasis of steps)
- Greater emphasis on earlier engagement and agreement of scope / submissions throughout process
- Enhancement of flexibility in the assessment activities, but independence & integrity of process retained
- Potential for additional outputs (**GDA Statements**, as well as the **DAC** & **SoDA** as previously)
- Explicit opportunities for Requesting Party to make better and more effective use of existing submissions (e.g. to other sovereign Regulators)



Increased  
flexibility  
and  
efficiency



# Mature Technology Small Modular Reactors (SMRs)

- Typically less than 300MW(e), familiar technology designed for commercial use
- Safety Assessment Principles and Security Assessment Principles broadly fit for purpose
- GDA modernisation
  - guidance to Requesting Parties
  - new GDA technical guidance
- Need to understand approach to SMR deployment
  - e.g. Site licensing, construction, security, organisational capability, supply chain...

## Advanced Modular Reactors (AMRs)

- Broad range of advanced technologies, including:
  - liquid metal fast reactors
  - high temperature gas reactors
  - molten salt reactors
- Range of applications:
  - Increased flexibility – e.g. delivering electricity to grid
  - Increased functionality – e.g. production of heat or facilitating production of hydrogen
- Building ONR capability and familiarity with technology
- Advice to HMG on level of regulatory confidence in 7 AMR designs

## Conclusions

ONR's regulation of New Reactors takes place in stages and is robust

ONR assesses in detail:

- Safety and Security of Design
- Site specific aspects, e.g. flooding, seismic activity
- Compliance against Nuclear Site Licence conditions
- Quality of Construction, including supply chain
- Organisational Capability of Operator

All current and future new build projects will progress with same level of rigour



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**Thank you for listening**  
**Questions and Discussion**