Maintaining and developing a safe and secure nuclear power industry in the UK

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About the NIA

- The voice of the UK civil nuclear Industry
- 260+ members across whole nuclear sector
- Members range from utilities to small enterprises
- 60,000 UK nuclear workers

www.niauk.org
NIA – membership diversity

- Utilities, contractors and vendors
- Fuel cycle and decommissioning
- Civil, process, design and multi-discipline engineering
- Project management, engineering, safety case and consultancy
- Equipment and component manufacturers
- Legal, financial, insurance, training and agency services

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UK Nuclear Industry

- Pioneer in nuclear generation
- Full fuel cycle capability
- Highly skilled workforce
- Mature and flexible supply chain
- Exemplary safety record
- World leader in decommissioning nuclear reactors and associated facilities
- At forefront of global nuclear renaissance
Waste management and decommissioning experience

- UK led the way in global nuclear development – our legacy is among the oldest and most complex
- Civil, military and medical legacy facilities
- 19 sites, including Sellafield and Dounreay
- Unique international challenges
- But… continually greater understanding and world-leading R&D
Export opportunities

- UK is developing world-leading skills in decommissioning
- Around 440 plants worldwide – all will need decommissioning
- This is an industry where UK can export skills and expertise
July 2006: UK Government Energy Review
“Government believes that nuclear has a role to play in the future UK generating mix alongside other low carbon generating options”

May 07: Energy White Paper
“the provisional view that nuclear could be in the public interest” - Alistair Darling

Jan 08: Nuclear White Paper
“go-ahead that new nuclear should play a role” - John Hutton
Where are we now…?

- **Justification**: Completed October 2010
- **GDA**: Conclusions, end 2011
- **National Policy Statements**: Approved July 2011
- **Electricity Market Reform**: Energy Bill, 22 May 2012
- **Investment approval for first plant**: end 2012
New Build Plans for UK

EDF Energy UK
(EDF Energy/Centrica Joint Venture)
2 x 1600 MW EPRs for Hinkley
2 x 1600 MW EPRs for Sizewell
4 operating by 2025

Horizon Nuclear Power Ltd
6000 MW operating by 2025 at Wylfa and Oldbury
Technology to be decided

NuGeneration Ltd
(Iberdrola/GDF Suez Joint Venture)
Up to 3600MW operating by 2023 at Moorside
Technology to be decided

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29 March 2012 - RWE npower and E.ON UK announce that they would no longer be proceeding with developing new nuclear generation in the UK.

It is expected that a new company or consortia will opt to purchase Horizon Nuclear Power and there has been wide international interest.
Emergency

• 11 March, major earthquake and tsunami hit north east Japan

• After initial shutdown, tsunami overwhelms emergency back-up at Fukushima

• Major nuclear accident attracts dramatic worldwide media attention
Chief Nuclear Inspector, Dr. Mike Weightman:

“I remain confident that our UK nuclear facilities have no fundamental safety weaknesses. No matter how high our standards, the quest for improvement must never stop.

“We will ensure lessons are learned from Fukushima. Action has already been taken in many cases, with work under way to further enhance safety at UK sites.“
“Neither the reviews undertaken by the Licensees for the stress tests, nor the earlier national reviews has indicated any fundamental weaknesses in the definition of design basis events or the safety systems related to the stress tests to withstand them for UK NPPs.”

- ONR, January 2012
Government Commitment

Minister of State for Energy and Climate Change, Charles Hendry MP, NNB 2011

“Nuclear is the cheapest low-carbon source of electricity around, so it can keep bills down and the lights on.

... around 5,000 jobs could be on offer at each of the eight sites we listed as suitable for development... all parts of the country could gain from a nuclear resurgence.

We must go forward with new nuclear. We will be a darker, less prosperous nation without it.”
Trend shows favourable opinion back to highest ever – though unfavourable opinion still above the baseline

Ipsos MORI poll. Base: All adults aged 16+ (1,000 – 2,000). Fieldwork December 2011
ONR is a statutory body with regulatory jurisdiction in the following principal areas:

- **Nuclear safety** – protecting the public from ionising radiation
- **Nuclear site health and safety** – securing the health, safety and welfare of people on licensed sites
- **Security of nuclear premises**
- **Nuclear safeguards** – ensuring compliance of safeguard obligations under the EURATOM Treaty and other international safeguards agreements; and
- **Transport of radioactive material** – by road, rail or inland waterway
Under the Energy Bill ONR is given powers to carry out the following:

- **Investigation** into any accident, occurrence or situation it wishes to investigate.
- **Report preparation and publication**
- **Hold inquiries**
- **Commission research**
- **Issue codes of practice**
The global nuclear renaissance provides a multi billion pound opportunity for the nuclear supply chain

A 16GW UK New Build Programme is likely to be worth £60Bn

Nuclear power capacity is still projected to grow from 393GW in 2009 to 630GW in 2035 (IEA, World Energy Outlook, 2011)

UK companies will be placed to take advantage as:
- New build nuclear in the UK is at the vanguard of global nuclear programmes
- Other build projects likely to follow elsewhere in Europe, Asia and the Middle East
- Nuclear projects give UK companies the opportunity to develop and demonstrate their capabilities in advance of supplying into global market
The Nuclear Supply Chain and Skills Action Plan

The NIA is working with Government to meet the following objectives:

• No delays to nuclear new build in the UK due to the quality and capacity of the global or domestic supply chain

• The domestic nuclear market provides a platform for export

• UK economic activity from the nuclear sector is maximised

• A supply chain for management of the nuclear legacy is developed and maintained
Key requirements of supply chain

- Develop a workforce to have an understanding of nuclear safety culture with the necessary skills to implement
- Develop robust quality assurance arrangements, including quality plans, with agreed hold points for independent inspection
- Deliver to agreed quality, manufacturing and construction plans
- Develop a culture of “If in doubt stop and ask”
NIA UK Capability Report

- The UK capability to deliver a new nuclear build programme (NIA 2006)
- Report updated in 2008
- New report in Summer 2012

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The Essential Guide to the new build nuclear supply chain

Stage One, February 2011

- Project Certainty
- Timescale
- Routes to Market
- Applicable Codes & Standards
- Roles & Requirements
- Quality Arrangements

1500+ copies distributed so far

Second stage expected Autumn 2012
Summary of UK industry capability

- UK Nuclear Industry has built nuclear quality plant and equipment in the past

- UK Industry is currently manufacturing high quality nuclear plant and equipment for
  - Current Nuclear Fleet
  - Reprocessing facilities
  - Decommissioning programme
  - Military programme

- A lack of Nuclear plant experience is not necessarily a bar to entry
In conclusion

A phased programme of new nuclear power station construction will provide:

- Large scale CO$_2$ avoidance
- Security of supply
- Cost competitive electricity
- Substantial numbers of high quality jobs
- Global opportunities for industry