



**The Rt Hon Edward Davey MP**  
**Secretary of State**

Department of Energy & Climate Change  
3 Whitehall Place  
London  
SW1A 2AW  
[www.decc.gov.uk](http://www.decc.gov.uk)

Dr M W Weightman  
HM Chief Inspector  
Nuclear Directorate  
Health & Safety Executive  
Redgrave Court  
Merton Road  
Bootle  
Merseyside  
L20 7HS

June 2012

## **JAPANESE EARTHQUAKE AND TSUNAMI: IMPLICATIONS FOR THE UK NUCLEAR INDUSTRY**

I would like to use this opportunity to thank you and your team for all your hard work in the production of the final report on the events at Fukushima and the implications for the UK nuclear industry.

As you know, Government originally responded to the findings and recommendations of the report in December 2011, ahead of your June 2012 deadline. In light of this I hereby have the pleasure of attaching an update to the Government's December 2011 response in time for your implementation report at the end of this year.

DECC continues to work closely with your team and with industry to deliver the recommendations in your report, including through our collaboration on the National Strategic Framework for Nuclear Emergency Planning and Response, which we launched at the end of last year.

Thank you again for your continued work on this important issue.

**EDWARD DAVEY**

**Recommendation IR - 1: The government should approach the IAEA, in co-operation with others, to ensure that improved arrangements are in place for the dissemination of timely authoritative information relevant to a nuclear event anywhere in the world.**

**Recommendation FR – 9: The UK Government, nuclear industry and ONR should support international efforts to improve the process of review and implementation of IAEA and other relevant nuclear safety standards and initiatives in the light of the Fukushima-1 (Fukushima Dai-ichi) accident.**

#### Action

The Government has continued to work with its partners in the G8, G20 and other international fora to ensure better compliance with international conventions and push forward work on enhancing nuclear safety standards established under the auspices of the IAEA.

The UK has participated in the IAEA activities that led to the development of the Director General's Action Plan and will continue to work with the IAEA to help ensure the delivery mechanism for the Action Plan is both robust and realistic - especially bearing in mind the significance of the work it proposes.

In meeting the actions proposed by the plan the UK have already committed, through the UK's statement at the IAEA Ministerial Conference, to participate in further IRRS peer review missions. The UK has also become a member of IAEA's global assistance mechanism in the event of a nuclear emergency, RANET (Response and Assistance Network).

We have also fully participated in the EU stress test initiative, fulfilling the requirement to undertake a comprehensive assessment of safety at the UK's nuclear power plants.

We are also committed to working with our international partners to consider how the dissemination of information under the Convention on Early Notification of a Nuclear Accident can be further improved in terms of both efficiency and substance.

**Recommendation IR - 2: The Govt should consider carrying out a review of the Japanese response to the emergency to identify any lessons for UK public contingency planning for widespread emergencies, taking account of any social, cultural and organisational differences.**

### Action

The Government has carried out a review of the Japanese response to the widespread civil emergency that occurred following the Tohoku Earthquake and Tsunami of March 2011. We are now comparing our findings with our own civil contingency planning to identify whether there are lessons that can be learnt from the Japanese experience to improve our own planned response to (catastrophic) emergencies.

The review has considered:

- What happened in Japan: the earthquake and tsunami and their impact.
- The Japanese response to the range of diverse impacts that occurred across a large geographical area.
- The current phase of the review is focussing on:
  - Current UK risk identification, contingency planning and capacity building processes;
  - Key issues arising from the Japanese experience which have been read across with UK contingency planning – to enable us to identify lessons that may be learnt to make our planning even more robust.

We have consulted with, and gained valuable evidence from, the Japanese Government and the FCO, as well as a range of publically available reports that have already been written about the emergency. In order to complete this review in a timely way, we will use the evidence currently available to inform our thinking, but the Japanese response to this crisis is still ongoing and further evidence continues to emerge: it is unlikely that final conclusions will be able to be drawn before the Japanese have been able to complete and evaluate their response in full, we will therefore aim to publish our findings once the Japanese work has been completed.

**Recommendation IR - 3: The Nuclear Emergency Planning Liaison Group (NEPLG) should instigate a review of the UK's national nuclear emergency arrangements in light of the experience of dealing with the prolonged Japanese event.**

Action

In May 2011, the Nuclear Emergency Planning Liaison Group (NEPLG) agreed, in response to Recommendation 3 of the Interim Weightman Report, to conduct a review of the UK's national nuclear emergency arrangements in light of the experience of dealing with the prolonged Japanese event.

As part of that review and in further work the NEPLG examined the decisions and actions that were taken in Japan to protect the public, and considered any lessons that the UK could learn from those actions. This included a re-evaluation of radiation monitoring capacity/ capability and recommended that Central Government clarify the requirements for delivering the data and information in the event of a prolonged incident in the UK and that these arrangements be tested annually. Exercises of off-site emergency plans are being reviewed so that they regularly include aspects such as extendibility, dealing with prolonged events and the deployment of Reassurance Monitoring Units. The NEPLG work also assessed central government response arrangements and in particular the provision of scientific and technical advice in the event of a nuclear emergency in the UK or overseas to ensure that COBR has one source of advice and recommended that the Overseas Nuclear Emergency response plan be tested fully through the Nuclear Energy Agency International Exercise programme.

The report also recommended that the Office for Nuclear Regulation (ONR) should enforce a stronger testing regime which includes extendibility arrangements and overseas nuclear accident response. A range of options for taking forward extendibility have been debated and discussed via the NEPLG Local Authority (LA) Sub Group. This has also been supplemented with a number of face to face visits with several LA's to further discuss the enhanced clarity required for extendibility. A draft paper detailing the preferred ONR option has been produced and is currently

being finalised. Exploration of the legislative vehicle for implementation of extendibility has been concluded with advice provided by the Treasury Solicitors (TSoL) and ONR. Finally the work recommended that NEPLG and Central Government continued to work on the capacity and capability of the Emergency Services including emergency exposure levels to ensure that the Fire, Ambulance and Police Services have a clear understanding of radiation exposure levels and the circumstances in which they can carry out their work, recommending that emergency services and operators should liaise formally to determine emergency exposure. The recommendations referring to Emergency Services, in particular exposure levels for emergency responders have been handled by NEPLG. Further information on exposure levels for the Ambulance service are at: <http://www.parliament.uk/deposits/depositedpapers/2010/DEP2010-2022.pdf> For the Fire and Rescue service, information is contained in the Generic Risk Assessment found at: <http://www.communities.gov.uk/publications/fire/GRA5.5> In addition there is a new fire service 'HazMat' Manual that has a radiation chapter and this will be published at the end of June 2012. Guidance on Police exposure levels is currently in production and is due to be published shortly.

The opportunities and recommendations identified by NEPLG form part of a wider programme of work being taken forward by the Department of Energy and Climate Change (DECC).

In looking to answer the recommendations from the NEPLG work and other further work DECC has developed and agreed, with key delivery partners across Whitehall, industry and the regulator, a new National Strategic Framework. This Framework significantly strengthens governance arrangements and in particular provides clear lines of tasking, communication and decision making between operational delivery and Ministerial involvement.

As mentioned in the report, and driven by the new strategic framework, initial comprehensive assessments have been completed UK's capacity to plan for and respond to a nuclear emergencies – both at 'reasonably foreseeable' and

'reasonable worst case' scenario level and DECC/ NEPLG are currently developing options for closing any gaps where they are found to exist.

In addition, as part of addressing IR-3, DECC, under the new strategic framework, is also taking forward a number of international projects in order to better understand the risks the UK faces and strengthen our ability to respond. This work includes for example, a new joint UK-France framework on emergency planning and the international benchmarking of UK emergency arrangements. DECC, is also working with the NEPLG on the guidance for responding to malicious incidents and events overseas.

**Recommendation FR-6: The nuclear industry with others should review available techniques for estimating radioactive source terms and undertake research to test the practicability of providing real-time information on the basic characteristics of radioactive releases to the environment to the responsible off-site authorities, taking account of the range of conditions that may exist on and off the site.**

#### Action

The Office for Nuclear Regulation (ONR), the Met Office (MO), the Health Protection Agency (HPA) and the RIMNET team at the Department of Energy and Climate Change (DECC) continue to work together to further develop the capability to be able to respond quickly to any incident at a nuclear site anywhere in the world. The objective of this capability is for the UK to be able to draw upon the collective resources and expertise of the operators, regulators and others, as necessary.

The work has been building upon existing arrangements in place for incidents in the UK whilst developing an appropriate basis and supporting procedures for overseas responses. ONR and UK operators will advise on the plant status and potential source terms and progress has been made on the development of an initial set of pre-defined source terms in conjunction with the nuclear industry. MO have further developed their tools to model dispersion of radioactive materials in the atmosphere based on guidance provided by HPA on the most appropriate pathways and other dose factors required to estimate doses to individuals.

Together these provide an auditable means of rapidly assessing the potential impact of an incident on the UK or its citizens. Any results will be displayed using DECC's RIMNET system.

This work is being coordinated by DECC with input from other Government Department and Agencies, including GO Science. The aim is to have an initial tool available for use by Summer 2012.



**Recommendation FR-7: The Government should review the adequacy of arrangements for environmental dose measurements and for predicting dispersion and public doses and environmental impacts, and to ensure that adequate up to date information is available to support decisions on emergency countermeasures.**

#### Action

In the event of a radioactive release from a nuclear site, the operators are responsible for carrying out monitoring in the immediate vicinity with the Health Protection Agency (HPA) coordinating monitoring further afield; this information together with emergency plans is used for the immediate emergency response. These arrangements are kept under review by the National Emergency Planning Liaison Group. There are a number of other initiatives in this area, including a review of the Radioactive Incident Monitoring Network (RIMNET), which is the UK Government's emergency management system for overseas nuclear accidents, which comes under the Department for Energy and Climate Change. It supports, in addition to its original function, the national level response to civil and military incidents that may occur within UK borders.

In addition, HPA, the Environment Agency (EA) the Scottish Environment Protection Agency (SEPA) and the Northern Ireland Environment Agency (NIEA) all carry out or coordinate routine environmental monitoring for radionuclides. In the event of a radiological emergency, this routine monitoring would be enhanced if necessary and used to provide information that would support later decisions on emergency countermeasures. The Met Office has the capability for providing atmospheric dispersion information in real time following any incident in the UK and worldwide. Met Office is part of a collaboration, coordinated by DECC, with contributions from the Office for Nuclear Regulation (ONR) and HPA to develop a tool for estimating the spatial distribution of radiation doses in real time following a radiation release in the UK or elsewhere. The different initiatives should ensure that information is available to support decisions on emergency countermeasures.

**Recommendation FR-5: The relevant Government departments in England, Wales and Scotland should examine the adequacy of the existing system of planning controls for commercial and residential developments off the nuclear licensed site.**

Action

The ONR has included Dr Weightman's recommendation on planning controls around nuclear sites in their consultation response to the Government's proposed National Planning Policy Framework for England (NPPF). The NPPF has now been published and is available at:

<http://www.communities.gov.uk/publications/planningandbuilding/nppf>

Planning is a devolved matter and, as such, the Government's NPPF process only applies to England, however we will continue to work closely with our colleagues in the Devolved Administration on this issue.

**Recommendation FR-8: The Government should consider ensuring that the legislation for the new statutory body requires ONR to be open and transparent about its decision-making, so that it may clearly demonstrate to stakeholders its effective independence from bodies or organisations concerned with the promotion or utilisation of nuclear energy.**

#### Action

The work that is currently taking place on the creation of a statutory ONR has at its heart the transparency of the regulator and its relationship with Government (including bodies concerned with the promotion or utilisation of nuclear energy). The intention is for the statutory ONR's five year Strategy, annual plan, annual report and accounts to all be shown to Parliament as well as widely published by the statutory ONR itself. In addition, the Secretary of State will report to Parliament on any directions that he gives to the statutory ONR as well as the use of his powers such as making appointments to the statutory ONR Board. In addition, the statutory ONR will report every five years to Parliament on the functioning of the nuclear regulatory regime.

All of these measures, the creation of the statutory ONR's Board and giving the statutory ONR powers and duties over nuclear regulation in its own right (not currently the case), will lead to greater transparency. This will help to clearly show the statutory ONR's effective independence from anybody concerned with the promotion or utilisation of nuclear energy.

The inclusion of an Energy Bill in the second session of Parliament was confirmed by the Queen in her speech at the state opening of Parliament on 9 May 2012. The Energy Bill will contain provisions to create the Office for Nuclear Regulation as an independent statutory corporation. The Bill will be introduced when Parliamentary time allows.