

Post-  
Fukushima  
accident

## Action plan

Follow-up of  
the peer review  
of the stress tests  
performed on  
European nuclear  
power plants

## **Action Plan**

### **Follow-up of the peer review of the stress tests performed on European nuclear power plants**

#### **Vision**

1. In March 2011 the European Council requested that ENSREG and the European Commission should review all EU nuclear plants on the basis of a comprehensive and transparent risk and safety assessment (“stress tests”) in light of the Fukushima lessons learned. Neighbouring countries were invited to participate. Stress tests were conducted by licensees and reviewed by the national regulators who prepared national reports. The national reports were peer reviewed through a process organised and overseen by ENSREG. Country visits were undertaken as part of the peer review. The national European regulators and the European Commission as ENSREG have endorsed the peer review report and the recommendations that finalised the stress test review and published a joint statement dated 26 April 2012, which concluded that follow-up activities would occur through an action plan. The European Council of 28 and 29 June 2012 “invited Member States to ensure the full and timely implementation of the recommendations presented in the report from ENSREG further to the completion of the nuclear safety stress tests. The Commission and ENSREG have agreed that further work is needed.”
2. The ENSREG action plan will assist in assuring that the conclusions from the stress tests and their peer review result in improvements in safety across European nuclear power plants. It will also assist, through further peer review, in ensuring that the recommendations and suggestions from the stress test peer review are addressed by national regulators and ENSREG in a consistent manner.
3. The action plan is built on existing instruments like the Convention on Nuclear Safety (CNS) with a goal of using existing resources effectively. The action plan should promote the role of Europe in enhancing standards for world-wide nuclear safety through continuous improvement, showing a clear commitment to openness and transparency.

#### **Peer Review Follow-up**

##### **Member States and ENSREG Actions**

4. Each national regulator will consider the results of the peer review as they are published in the ENSREG main and country reports.
5. Each national regulator will develop and make public its national action plan associated with post-Fukushima lessons learned and stress test peer

- review recommendations and suggestions by the end of 2012. The final content of the national action plan should also take account of relevant output from the extraordinary meeting of the CNS (see annex).
6. The national action plan will provide an update on the implementation status of:
    - a. National regulator conclusions from their national stress tests as documented in their national reports;
    - b. Recommendations in the ENSREG main and country peer review reports;
    - c. Additional recommendations arising from the CNS; and,
    - d. Additional activities derived from national reviews and related decisions.
  7. ENSREG will prepare by September 2012, a consistent compilation of stress test peer review recommendations and suggestions to assist the preparation or review of national action plans by national regulators.
  8. An ENSREG workshop (with other European countries that participated in the peer review) will be held in February/March 2013 to discuss contents and status of implementation of the national action plans. The main goal for the workshop is to present national action plans and to peer review these via a common discussion (Further details of this workshop require development). This should provide an insight into how the European countries will report to the CNS and should help consistency, as well as promote sharing of good practices.

## **WENRA Actions**

9. ENSREG strongly supports the actions defined in the WENRA Conclusions published on the 24 May 2012 (<http://www.WENRA.org>). These conclusions are in line with the conclusions of the European stress tests and peer review. ENSREG invites WENRA to provide an update on a routine basis regarding progress of the work. ENSREG encourages WENRA, involving the best available expertise from Europe, to focus on developing actions from its conclusions on the following topics:
  - natural hazards (T.1);
  - containment in severe accident (T.2);
  - accident management (T.3); and,
  - mutual assistance amongst regulatory bodies in responding to nuclear accidents in one of its member states (I.4).
10. ENSREG recognises the importance of the Periodic Safety Review (PSR) process. ENSREG encourages WENRA, including the best available expertise from Europe, to undertake a review of the associated Reference Levels, particularly with respect to external hazards.

11. ENSREG highlights the importance of WENRA making the results of the above mentioned actions publicly available.

### **Follow-up Fact Finding Site Visits**

12. In the context of this action plan, ENSREG will organize a set of follow-up fact finding site visits. These site visits shall focus on information exchange with respect to measures taken, planned or under consideration to improve safety as part of the national action plans. The information gathered during these site visits will be used as input to the workshop in 2013 by which ENSREG will follow-up the national action plans.
13. These follow-up fact finding site visits should also promote further cooperation and confidence building between European countries.
14. The sites to be visited will be proposed by national regulators and agreed to by ENSREG. The exact list of sites will be subject to confirmation by the relevant national authorities.
15. To aid consistency, the team members for the follow-up fact finding site visits will be a sub-set of the previously established country review teams (typically 3 reviewers), provided this can be supported by the relevant regulators.
16. A sufficient number of visits will take place up to September 2012 to support the preparation of national action plans and the October EC report to the European Council.

### **Additional Actions**

#### **Off-site Emergency Preparedness**

17. The Fukushima accident highlighted the need for robust off-site emergency preparedness arrangements. ENSREG places a high priority on this topic. To enable improvements, the following activities are proposed:
  - a. ENSREG will ask HERCA and WENRA jointly to develop improved guidance on mutual assistance between regulators (WENRA action item I.4), and,
  - b. ENSREG recommends that a joint European study including EC, ENSREG and others, as appropriate, be performed to identify issues to be treated in order to implement effective off-site emergency preparedness (beyond mutual assistance) at the European level in the event of a severe accident which has radiological consequences in several European countries. This study should encompass all aspects of off-site emergency preparedness including health, disaster management/civil protection and food safety organizations.

18. ENSREG also notes that the EC is commissioning a study to review off-site emergency preparedness arrangements across the EU member states.
19. ENSREG recognizes the relevance of the IAEA Emergency Preparedness Review (EPREV) methodology in this field.

### **Aircraft Crash**

20. Feedback from the public interactions has shown interest in the topic of deliberate aircraft impact.
21. This topic was treated by the Ad-Hoc Group on nuclear security which recognised there was already existing work from design basis accidents and post 9/11 analyses. The Ad-Hoc Group proposed additional follow-up activities to be considered by operators and/or competent authorities.
22. Should such additional follow-up activities be undertaken, ENSREG is willing to support them in the areas of its competence. It is noted that the work done on loss of safety systems and severe accident management of the stress tests are relevant to all large accidents regardless of the initiating event, including aircraft impact.

### **IAEA Action Plan on Nuclear Safety**

23. This ENSREG action plan will be used to contribute to the IAEA action plan on nuclear safety in a number of areas, including:
  - a. Assessments of new learning from Fukushima;
  - b. Emergency preparedness standards and guidance;
  - c. IAEA safety standards (from the ENSREG/WENRA tasks);
  - d. Communication and dissemination of information;
  - e. IAEA peer review process development and implementation; and,
  - f. Research and development.

### **Transparency and Public Involvement**

24. The principles for openness and transparency as stated in the declaration of ENSREG and the European Commission on 13 May 2011 have already been applied to the European stress tests and peer review. They shall also apply to the follow-up action plan.
25. All national action plans and the ENSREG action plan shall be made available to the public in accordance with national legislation and international obligations, provided that this does not jeopardize other interests such as security recognised in national legislation or international obligations. The links to the national action plans will be provided on the ENSREG website.
26. The results of the regulatory workshop referred to in paragraph 8 will be made public and will be discussed in the subsequent ENSREG conference

which will take place later in 2013 and cover developments in a number of regulatory areas including the ENSREG action plan.

### **Implementation of the Action Plan**

27. Activities in delivery of the action plan will be coordinated by the ENSREG working group on nuclear safety.

## **Annex - Background Information**

This annex provides some background information on the different organizations involved in the action plan, the outputs of the stress tests and peer review as well as the extraordinary meeting of the Convention on Nuclear Safety.

### **Interested Organisations**

ENSREG - European Nuclear Safety Regulator's Group - An independent authoritative expert body composed of senior officials from national regulatory or nuclear safety authorities from all 27 member states in the European Union and from the European Commission.

HERCA – Heads of the European Radiological protection Competent Authorities - HERCA is a voluntary association in which the heads of radiation protection authorities work together in order to identify common issues and propose practical solutions for these issues.

IAEA -International Atomic Energy Agency - An organisation within the structure of the United Nations Organisation which, among other functions, develops safety standards, performs international safety peer reviews and provides secretariat for the Convention on Nuclear Safety.

WENRA -Western European Nuclear Regulators Association - European network of chief regulators of EU countries with nuclear power plants and Switzerland as well as other interested European countries which have been granted observer status.

### **Outputs of the Stress Tests and Peer Review**

Through the conduct of the stress tests, there were several types of reports prepared which are publicly available and linked to the ENSREG website.

- Licensees prepared reports on their assessments,
- Regulators prepared national reports based on their review of the licensee reports, and
- ENSREG prepared a peer review report that includes a main report with European-level conclusions and country reports with country-specific conclusions.

### **Convention on Nuclear Safety**

An extraordinary meeting of the CNS has been organised for August 2012. The outcome from this meeting is expected to identify actions taken by the Contracting Parties and to include post-Fukushima topics to be addressed and considered in the next Review Meeting of the CNS, scheduled for 2014.