Public meeting: Post-Fukushima stress tests peer review
Brussels, 17 January 2012

Opening Remarks

Patrick Majerus from the Ministry of Health, Luxemburg who was chairing the event welcomed everyone to the first public meeting on the Post-Fukushima stress tests peer review. The event was organised by the European Nuclear Safety Regulators Group (ENSREG), the European Commission and the Stress Tests Peer Review Board.

Mr Majerus reminded everyone that stakeholder engagement is an important aspect of the peer review process and the meeting provided the audience with an opportunity to hear a wide range of views and raise any questions. All of the organisations that played a role in developing the stress tests and peer reviews were present at the meeting to deliver presentations and answer questions. It was the first event of its kind and an important milestone in the stress test process.

Mr Majerus outlined the day's events, including an overview of the stress test and the peer review process. The morning session included presentations from the European Commission, ENSREG and Western European Nuclear Regulators' Association (WENRA).

The afternoon session would provide an alternative view from other organisations that have a role to play in nuclear safety, European Atomic Forum (FORATOM), Association Nationale des Commissions et Comités Locaux (ANCCLI), European Trade Union Confederation (ETUC) and Greenpeace. These organisations represent the reactor operators, information councils, trade unions and non-government organisations.

The audience were reminded that the programme incorporated two sessions that would allow them to address questions to the speakers.

Introduction

Philip Lowe, Director-General for Energy of the European Commission explained that Europe needed safe, secure, sustainable energy at affordable prices. Nuclear power could provide a contribution, on the condition to improve safety and security. Those with leadership roles in European nuclear power could demonstrate their responsibility by promoting legally binding safety standards. This move to harmonisation of licensing and certification standards would be welcomed by industry.

Mr Lowe explained that the stress tests go beyond what is already required for nuclear safety but indicated that security aspects of the stress tests will be handled in a separate process by a dedicated Council working group. If any changes are required to address safety issues raised during the stress tests, a revision of EU nuclear safety legislation will be explored.

Presentation of the stress tests and peer review process

Stress tests overview

Andrej Stritar, ENSREG Chair, outlined the peer review timetable and process, which was endorsed by ENSREG in October 2011. The final peer review report is due to be delivered on the 25 April and the final European Commission report to the European Council end of June 2012. The purpose of the stress tests and peer review process was to achieve continuous improvement in all aspects of nuclear safety. The stress tests are not meant to be a detailed safety re-analysis of individual nuclear power plants but a very condensed review in a form similar to the periodic safety review. One of objectives of the peer review will be to improve harmonisation of the safety levels of all European nuclear power plants.

WENRA support activities for ENSREG

Hans Wanner, WENRA Chair outlined WENRA's role in the process. He reminded the audience that the stress tests were the first international benchmark in nuclear safety and that one of the outputs should be a comparable level of high nuclear safety standards across Europe. Mr Wanner commented that WENRA, like other organisations, has a strong commitment to continuous improvement. He explained that although safety is the responsibility of the operator, a common approach to nuclear safety must be clear. He quoted that the stress test carried out in Switzerland had already revealed new evidence that they have begun to act upon. He emphasised the importance that all recommendations for improvement must be acted upon quickly and consistently.

Peer Review Board Chair

Philippe Jamet echoed previous messages that one of the key outcomes of the stress tests and peer review was to explore ways to improve nuclear safety. He explained that WENRA and ENSREG had prepared the specification for the peer review process. He explained the peer review process has two phases; a topic review looking at three areas (external hazards; loss of safety systems and accident management) and a country review. The topical reviews, as well as country reviews will take place in parallel. Mr Jamet reminded the audience that the outcome of the peer review will be presented in a final report, including the 17 country reports attached as annexes. The final report will be presented to ENSREG to be approved on 25 April when it will be published. ENSREG will then hold a second public meeting to discuss the outcomes of the peer review process and report with stakeholders and the public. Mr Jamet stressed the importance of transparency and public engagement and stated that the public have been given the opportunity to contribute to the report through questions raised at the public meeting and through the ENSREG website, which was open to the public for questions from 1 – 20 January.

Mr Jamet concluded that the peer review will bring many challenges including addressing different views and standards of nuclear safety, but the aim still remains to enhance nuclear safety. The Peer Review Board intends to share any new knowledge gained through the peer review process as Europe has an important role to play in enhancing safety worldwide.

Topics and perspectives of peer reviews

Stress Tests Topic 1 – External Hazards

Dave Shepherd from the UK outlined the role of Topic 1 for external hazards. His presentation reminded everyone of the events at Fukushima and some of the preliminary results of early investigation from the information available. Mr Shepherd explained that his team would be identifying how nuclear plants had prepared for external hazards e.g. earthquake, flooding and extreme weather (wind, temperature, snow, lightening and drought). The team will be checking for compliance and the assessment of robustness beyond design basis. If any issues are identified they will be summarized in the final report. The teams review results will be reported to ENSREG and form part of the final report.

Stress Tests Topic 2 – Loss of Safety Systems

Ervin Liszka from Sweden explained that his teams' focus would be the consequences of loss of essential safety systems on site, i.e. electric power, station blackout, ultimate heat sink (loss of cooling water) or a combination of factors. The stress tests examine loss of safety systems similar to those that resulted at Fukushima and judge a plants ability to continue operating and protect fuel for as long as possible. They will be examining measures taken to mitigate the consequences and to avoid severe fuel damage. Their review will be looking to identify any weak points and cliff edge effects where improvements are required to plant design and operation.

Stress tests Topic 3 – Accident Management

Jozef Misak from Slovakia outlined that robustness of defence in depth was essential for successful management, and that his team would be looking for verification of this through the stress tests. He commented that severe accidents might result from common cause failures' possibly initiated by external hazards (earthquake and flood). He stressed that prevention of loss of containment integrity was extremely important and could be achieved through comprehensive, quality assessments. His teams review will examine the capability of accident management with a loss of national infrastructure.

Perspectives of Member States without nuclear power

Andreas Molin from Austria stated that although there is a no common view from states without nuclear power, a broad consensus has been gained through ENSREG. He advised that those countries without nuclear power have equal footing in any decision making process to ensure comprehensive, transparent risk and safety assessment. He questioned if there should be a

third track in the peer review process to address off-site emergency preparedness, which is currently out of scope of the stress tests.

Perspectives on the stress tests and peer review

European nuclear industry

Jean-Pol Poncelet from FORATOM spoke on behalf of the European nuclear industry. He explained that FORATOM is a Brussels based trade association representing 17 national nuclear organisations, comprising of over 800 firms. The view of industry was to support ENSREG to address initiating events, loss of safety systems and emergency response. He outlined the scope and methodology of the stress tests. He asked 'how safe is safe enough' and invited this to be defined. He acknowledged that some improvements were already in progress but stated that the stress tests results did not indicate a fundamental breakthrough in safety analysis. He highlighted the fact that although there are some generic nuclear designs, all plants are different and would need differing measures to protect the public. He concluded that people must remain at the core of a safety case, which needs to be addressed.

Association Nationale des Commissions et Comités Locaux (ANCCLI)

Monique Sené represented the local committees association. She immediately highlighted that some members found it difficult to read the reports produced in advance of the meeting due to the size of the reports and some of the technical content. She pointed out that in her view the reports did not really address human elements or consider how people react to extreme events.

She requested clarity of the reference levels used to describe earthquakes, as there was some variation in some country reports. She explained that consistency of reference levels is important, specifically if real lessons are to be learnt and to enable the public to understand reports more fully. She also noted that off site emergency services response did not appear to have been addressed in the reports, particularly the timing of such a response. She thought it important that external hazards were addressed as they may offer some valuable information from which lessons can be learnt. She explained that their analysis had been compiled very quickly, but stressed the importance that local communities are kept informed and involved in the nuclear safety arena. She concluded that a change in legislation might force public engagement to become part of the process.

European Federation of Trade Unions

Marc Sapir thanked ENSREG for the invitation to speak at the event as it was the first time ETUC had been able to take part in this type of public meeting. Marc stated that he wanted to see all stakeholders involved in this process. He reminded the audience that there was no such thing as zero risk and we must exercise maximum caution and control following Fukushima. ETUC

believe the stress tests should be based on the latest data and knowledge and utilise/analyse human factors. There should also be protection for employees who identify inadequate safety provisions. Proper management of workers throughout the sector is essential, especially during an accident. He requested that more information relating to the stress tests is made public. He concluded by stating that the outcome of the peer review must be a supported by a commitment to deliver the work required to upgrade old reactors.

Greenpeace

Jan Haverkamp from Greenpeace called for a third track to be introduced to the stress test process to address off-site emergency response. He commented that he thought the security track concentrated only on the misappropriation of nuclear material. He also questioned why some regulators claim to have 'passed' the stress test when the reviews had not yet been completed? He agreed with other speakers that we need to achieve the highest standards in nuclear safety. Mr Haverkamp asked for clarity about the inclusion of air crash in the stress tests (NOTE: this was addressed during the question and answer session).

Mr Haverkamp's presentation raised several important points relating to multi-reactor failure, loss of secondary containment and mobile generators and pumps. He asked for and emphasised the importance of better public engagement and more accessible venues to enable people to attend public meetings. He questioned how the public could be expected to feed their views into the process. He concluded by stating that Greenpeace did not want the outcome of the stress test and peer review to be 'business as usual' and questioned why some countries were issuing conclusions before the end of the peer reviews.

Summary of Question and Answer sessions

A question and answer session moderated by Ann McGarry from Ireland took place following the morning session and then again in the afternoon.

A summary of both of these sessions is below.

The two question and answer sessions combined took two and a half hours. A number of questions were raised on a similar theme so they have been addressed under topics. Questions posted to the ENSREG website from 1-20 January are also addressed here.

Topic: Public Involvement

- How are you responding to questions raised after Fukushima?
- What are your plans for publishing draft reports and making them available to the public?
- How do you intend to share new information and make the outcomes visible?
- Is there any future public interaction planned?

- What is being done to improve public awareness?

Responses:

- We are still gaining a better understanding of the lessons learnt from what happened in Japan. The stress tests are only the first step, as not all the issues are known. We will continue to improve our knowledge and develop work programmes to make improvements to safety.
- The ENSREG website was highlighted to the public to invite them to pose questions on the stress tests and peer review process from 1-20 January. A summary of questions raised (relevant to the peer review) will be taken into account in the review process and final report.
- Draft reports will not be published as they are working documents but all final reports will be made available. Country reports are expected to be available after 25 April before the second public meeting in May.
- The peer review process will look at increased threat levels to cliff edge effect to beyond the original design basis to identify areas for improvement.
- Invitations to the public meeting were posted via the ENSREG and national regulators websites.
- Some national regulators have planned their own public awareness events while others have invited questions directly.
- Monthly updates on the progress of the peer review will be posted on the ENSREG website and further information will be made available before the next public meeting in May.

Emergency Preparedness

- Why was emergency preparedness issues not addressed in the stress tests?

Response:

- Due to short timescales and the responsibilities of the national regulators, emergency preparedness is not covered under the stress tests specifications. They may be examined at a later stage.

Security

- Are deliberate and unintentional air crash considered in the report?
- What about the impacts of external events and accident management?
- What comparable safety margins are used to describe cliff edge effects?
- How will you reassure the public?

Response

- The ENSREG specifications do not include an aircraft crash as an initiating event. On the other hand, Topics 2 and 3 consider loss of safety systems and severe accident management independently from the initiating event. An aircraft crash is actually one of the events that could lead to such

situations. Therefore, Topic 2 and 3 will be very useful in assessing important consequences of aircraft crashes. Moreover, it was highlighted several times that, given the circumstances, the ENSREG strategy was to focus the stress tests on finding possible lessons learned directly relating to initiating events that actually caused the Fukushima event.

- The security track will explore loss of safety function but results would be confidential due to the sensitive nature.
- Questions outside the scope of the stress tests can be addressed to individual national regulators.

Stress test peer review process

- What is the timetable for peer reviews?
- Can you explain what reviews will cover?
- How will you share information?
- How will you evaluate new information?
- Who is paying for the peer reviews?
- How can you gain consistency of operating standards?
- How do you intend to involve NGO's and others?

Response

- The general stress test peer review timetable has been placed onto the ENSREG website. Each review team will spend four or five days in a country, including a planned visit to confirm discussions and findings. The peer review will review what the national regulator has done. They are not a complete safety assessment and will not be duplicating the review but checking the proceedings to achieve good reference levels against the agreed ENSREG standards
- The stress test process is carried out in a very different way from what has been carried out in the past. The starting point is confirming that existing plants meet design and compliance standards.
- We are progressively inventing new processes and will need to complement this with safety assessments. We will need a definition in future but not yet – this is only the first stage of the process.
- Sharing the outcome of the peer review between countries will be discussed at the next Board meeting. Level of design and international standards are not consistent throughout but the WENRA reference Levels and the International Atomic Energy Authority (IAEA) standards are being used as the benchmark. Development of standards takes time to gain consensus amongst all countries.
- The peer review process is not the end point. Our long-term aim is to learn from Fukushima. The report is not the end of the story as further assessments may be required, which will take time. It is reasonable to take into account as far as possible the most important lessons.
- If improvements are needed, the costs will be borne by the operators of the plant.
- The adopted stress test standards were introduced to the legal system and all operators are required to achieve them.

- The stress tests are not just looking at the existing standards but at unforeseeable events.
- Comprehensive risk and safety assessment criteria and methodology is published and made public.

Conclusions

After the second round of questions Patrick Majerus who was chairing the event summarised the final conclusions derived from the event. The conclusions of Mr Majerus are provided separately in written form. The conclusions can be found on the ENSREG website at the following address –

http://www.ensreg.eu/sites/default/files/Majerus%20Conclusions.pdf

After providing the conclusions, Mr Majerus closed the event.