

IAEA Perspectives on the EU Stress Tests and Peer Review

Second Public Meeting

Post-Fukushima Stress Test Peer Review

Before I provide you with the IAEA's perspectives on the EU stress tests and peer review, let me put my remarks in context of the IAEA's mission and the work we have undertaken in response to the Fukushima accident.

IAEA Mission and Action Plan

The IAEA vision is to provide a strong, sustainable and visible global nuclear safety and security framework, working to protect people, society and the environment from the harmful effects of ionizing radiation. The Fundamental Safety Principles of the IAEA state that, "The prime responsibility for safety must rest with the person or organization responsible for facilities and activities that give rise to the radiation risks" and that, "An effective legal and governmental framework for safety, including an independent regulatory body, must be established and maintained." These principles are included in the IAEA Action Plan on Nuclear Safety that states, "The responsibility for ensuring the application of the highest standards of nuclear safety and for providing a timely, transparent and adequate response to nuclear emergencies, including addressing vulnerabilities revealed by accidents, lies with each Member State and operating organization." All Member States unanimously approved the Action Plan at the IAEA's General Conference in 2011.

The first action in the IAEA Action Plan on Nuclear Safety is for Member States to promptly undertake a national assessment of the design of nuclear power plants against site specific extreme natural hazards and to implement the necessary corrective actions in a timely manner. National assessments of the safety of nuclear power plants have been carried out to identify lessons learned from the accident and potential safety improvements. These reviews were carried out by operators across the European Union to reassess the safety margins of nuclear power plants, and then reviewed by the national regulators to identify areas that need particular attention in light of the Fukushima accident.

IAEA Safety Assessment Methodology and the ENSREG Methodology

In response to these lessons and to the action plan, the IAEA has developed a methodology for assessing the safety vulnerabilities of a nuclear power plant based on the IAEA Safety Standards and informed by the experience gained from implementation of the ENSREG stress test methodology, as well as other countries' assessments. The Agency's methodology has been made available to Member States.

The stress tests and peer reviews carried out by the ENSREG methodology addresses the topical review areas including external hazards, loss of safety systems and severe accident management which are similar to and in line with the IAEA methodology.

In January 2012, an IAEA international expert mission was conducted in Japan to review the country's approach for assessing safety at the nation's nuclear power plants in accordance with IAEA safety assessment methodology; Japan's approach drew heavily on the ENSREG stress test methodology. All three methodologies provide practical methods to assess whether structures, systems, components and operator actions are sufficiently resilient to be able to fulfill necessary safety functions when extreme events occur.

IAEA International Expert's Meeting (IEM) on Reactor and Spent Fuel Safety

At the IAEA's recent International Expert's Meeting on Reactor and Spent Fuel Safety, held in March, 2012, over 230 experts from 44 IAEA Member States and four international organizations undertook wide-ranging and open discussion to analyse all the relevant technical aspects of reactor and spent fuel safety in light of the accident.

While the Member States' analyses were independent and utilized different approaches to study different aspects of the accident, the set of conclusions converged around similar recommended actions to be taken and determined that significant issues have not been overlooked.

Member States analysed and shared several common safety improvement priorities (e.g., enhancing nuclear power plant protection against extreme events, earthquakes, tsunamis,

flooding, and tornadoes and their consequences, such as total "station blackout", loss of reactor and spent fuel pool cooling, and so on). Experts also recommended that more attention be paid to implementing stronger accident mitigation measures and improving emergency management capabilities.

This International Expert's Meeting addressed a number of important issues, however more remains to be learned and continuing assessments will progressively allow for an even deeper analysis of the accident.

The IAEA will prepare a full report on all of the important information presented at this experts meeting. It is envisioned that another International Experts' Meeting of similar scope will be convened in the future. Lessons derived from the meeting will inform the Action Plan on Nuclear Safety and will also be evaluated for possible incorporation into IAEA safety standards.

IAEA Perspectives and Observations

We welcomed the ENSREG invitation to observe the peer review process that was described this morning. So let me give you the Agency's initial observations and perspectives on the EU stress tests and peer reviews.

- The topics reviewed (External Hazards, Loss of Safety Systems and Severe Accident Management) were similar to and in line with the IAEA methodology.
- The adherence and compliance with the IAEA safety standards constitutes a core of the stress tests analysis and, in the important aspects, the EU Stress Tests are consistent with the IAEA Methodology.
- The stress tests demonstrated a strong voluntary effort for safety, going beyond licensing or periodic safety review evaluations.
- There was a highly commendable effort for developing specifications, conducting the stress tests and the reviews in a very tight schedule.
- There was a strong commitment to safety and transparency, with involvement of more than two hundred participants in the cross review of national reports and reports made available to the public and other stakeholders.

- The stress test topical review provided Member States with agreed recommendations and suggestions for safety enhancement.
- The EU stress tests results are a good benchmark for improving nuclear safety. The IAEA will use these results for improving the IAEA safety standards.

Conclusions:

The IAEA commends the EU on their strong commitment to safety and transparency in conducting these stress tests and peer reviews. The IAEA is committed to continuing to work with Member States to strengthen the nuclear safety framework through the implementation of the Action Plan on Nuclear Safety, incorporating the lessons learned and the results from these and other stress tests and through continued dialogue in future international expert's meetings.

To that end:

- In June an IEM will be held on Enhancing Transparency and Communication Effectiveness in the Event of a Nuclear or Radiological Emergency.
- In August there will be an Extraordinary Meeting of the Convention on Nuclear Safety that will further explore each Contracting Party's response to the Fukushima Accident.
- In September an International Expert's Meeting is currently being planned to discuss Earthquakes and Tsunamis
- Additional International Expert's Meetings are being planned for 2013 and will be announced in due course.
- And finally, the IAEA peer review services are a significant contribution to the application of the IAEA Safety Standards. Member States have recognized the value of these peer review services to improve the governmental and regulatory framework, operational safety and emergency preparedness and response. The IAEA is fully available to provide all its peer review services to Member States.

Thank you.