

diately accepted by the Minister and by the nuclear industry leaders who were consulted in its preparation and are applauded in its pages. EDF welcomed the report 'which will further enhance our strong nuclear safety performance and new build plans'. The issuing of the next Energy National Policy Statement – the basic document for future energy development – will follow 'as soon as possible' and will not await Weightman's full report in September.

In this way reference to regulators has been used as a way to defend and even speed up lagging policies. The press, the companies and their corporate lawyers have hailed the interim report as 'a green light' for nuclear new build.

**Sources;** Press (mostly on line) in UK, Germany, Japan and USA, especially the Guardian, Independent, Wall Street Journal, The Japan Times and Der Spiegel (in English); COMARE, 14th Report, (2011), Dr Ian Fairlie, comment

on COMARE published by the nuclear Free Local Authorities [www.nuclearpolicy.info/docs/.../A196\\_\(NB82\)\\_COMARE\\_report.pdf](http://www.nuclearpolicy.info/docs/.../A196_(NB82)_COMARE_report.pdf); Parliamentary Debates; NuClear News No. 29 May2011; Company and corporate legal sources e.g. [nuclearmatters.co.uk](http://nuclearmatters.co.uk); [www.pinsentmasons.com](http://www.pinsentmasons.com); Office for Nuclear Regulation, Health and Safety Executive, 'Fukushima - Interim Lessons Learnt'. **Contact:** Richard Johnson, Chair East Midlands Campaign for Nuclear Disarmament

## LITTLE STRESS WITH STRESS TEST

**The stress tests for European Union (EU) nuclear power plants were suggested by the Austrian Minister for the Environment right after the Fukushima disaster, without concrete ideas how they should be performed. The idea was quickly adopted by Brussels and hijacked by the nuclear establishment, namely WENRA. Stress tests are defined as: "Reassessment of safety margins of nuclear power plants in the light of the events at Fukushima: extreme natural events challenging the plant safety functions and leading to severe accidents."**

(728.6144 Global 2000 – The Western European Nuclear Regulators' Association (WENRA) outlined a proposal, which was put up for public commenting until May 5. Slightly more resistance than expected became visible in the run-up to agreeing on the WENRA stress test outline by EU member states: ENSREG, created in 2007, the until this point hardly known Group nuclear regulators (European Nuclear Safety Regulators Group) represents also the non-nuclear EU-27 countries. In ENSREG, some countries, mainly Austria and Germany, did not accept the WENRA suggestions and asked for much more stringent testing – with outspoken support by EU Commissioner Oettinger, wanted more stringent stress test. However, the operator countries tried to stay in the usual routine of testing– under the political leadership of UK and France.

Negotiations were really tough, especially the EU Commission warned that negotiations might break down and no stress test and nothing similar would be achieved. The compromise was presented on May 25. (see box: EC-Memo)

Yes: plane crash will be included in the tests – but only in an implicit manner  
No: Terror is not a task of majority of ENSREG regulators, therefore terror attacks cannot be included. This matter will be discussed with the Council to determine who is responsible (intelligence, police etc.).

This part of the stress test is really

not clear, it is a compromise, because Austria and Germany wanted to include air crashes, but the big nuclear countries are against. Therefore the robustness of nuclear power plants in case of external impacts are stressed regarding their ability to guarantee cooling and safe shut down (ultimate heat sink and power supply). An explosion near the plant or an air crash both challenges the structure of containment and other essential buildings directly or for example due to a fire. Severe accident management is stressed in all these events. In this context the robustness of structures, systems and components has to be proofed; weak points are to be identified and improvements should be proposed. Subject of the stress test is not the initiating event (air crash, flooding, explosion or fire) but the capability of the plant to maintain, control, safe shut down and core cooling without external support as long as necessary (the lesson from Fukushima: it could be weeks to reclaim control over the nuclear power plant).

The Stress test is defined as: "Reassessment of safety margins of nuclear power plants in the light of the events at Fukushima: extreme natural events challenging the plant safety functions and leading to severe accidents." (ENSREG Annex 1 EU 'Stress test' specification)

The stress test will be conducted in 3 phases:  
-1: started already on June 1: the operators/utilities make a report based on

stress test criteria  
-2: until August 15 the reports of the operators will be submitted to the national regulators, they will review the reports until September  
-3: September: the European part of the test starts; teams from member states conduct peer reviews, also in the field to check the reports of phase 1 and 2 as well as the nuclear power plants. Those teams will consist of different experts from national regulators and EU Commission experts.

The Council will receive the final report for 9 December meeting. EU Commission might suggest measures on how to continue. Tests will be prolonged into 2012.

In addition: In mid June, the member states energy ministry representatives will invite the EU neighbouring countries (Switzerland, Russia, Ukraine, Armenia and Turkey) to join the stress test effort. Switzerland already presented the first stress test results, at the same time the Swiss government decided the phase-out.

The information which has to be prepared by the operator is listed in Annex 1:  
\* All natural disaster esp. earthquakes and floods, need to be reassessed, in terms of return period and severity;  
\* The evaluation methodology has to be described as well as the reasons for the chosen design basis; and a conclusion on the adequacy of the design basis.  
\* Combinations of those disasters should be included.

- \* Provisions to protect the plant against natural disasters
- \* Plant compliance with the current licensing basis

Evaluation of safety margins, weak points and provisions to improve the robustness are also to be specified; In the end assessment of the range of disaster severity the plant can withstand without losing confinement integrity.

The most important functions needed during any emergencies in a nuclear power plant should be secured: Availability of power supply, and heat removal must be evaluated regarding redundancy and diversity. The time power sources and water supply can operate without external support has to be assessed. Provisions to prolong this time and increase the robustness of the plant are to be indicated. An evaluation of robustness of essential structures, systems and components which are needed for severe accident management is also foreseen.

A lesson from Fukushima is not that not only one reactor, but several plus the spent fuel pools can be affected by a major (natural or man-made) disaster at

the same time.

The set-up of the stress test as described above might lead to useful results. Reports of each phase will be made public. It will be crucial that the public stays involved and closely follows the process, because the stress-tests are voluntary and the extent and depth of testing will be determined by national regulators. Some of the regulators already made clear that they do not

the Czech regulator does not see much news, only admitted that the issue of flooding might have changed since the plants were designed and sited due to climate change.

A quick calculation of high-risk reactors – older than 30 years (44 reactors) or lack of containment (12 reactors) or situated in a seismic region (5 reactors) and the 6 BWRs – gives the number of 67 reactors out of the 143 to be tested in the EU.

**EC- MEMO 11/339 of 25 May 2011:**

*“What will be assessed in the stress tests?”*

*It will be assessed whether the nuclear power plant can withstand the effects of the following events:*

*1- Natural disasters: earthquakes, flooding, extreme cold, extreme heat, snow, ice, storms, tornados, heavy rain and other extreme natural conditions.*

*2- All man-made failures and actions. These accidents can be: air plan crashes and explosions close to nuclear power plants, whether caused by a gas container or an oil tanker approaching the plant, fire. Comparable damaging effects from terrorist attacks (air plane crash, explosives) are also covered.”*

Interesting detail: EU Commissioner Oettinger believes, that the EU Commission will be invited when planning of new NPP is on the table. However, Bulgaria already announced that the planned NPP Belene is not to be stress-tested. The EU Commission also announced that the safety directive will be updated soon.

**Source and contact:** Patricia Lorenz, Antinuclear Campaigner, FoEE/Global 2000 Neustiftgasse 36, A-107- Vi-

enna, Austria  
Email: patricia.lorenz@foeeurope.org

expect to go much further than their routine testing. The first one to state that was the ENSREG chairman Mr. Stritar who pointed out the regulators are continuously testing and improving nuclear safety in their countries, also

## IN BRIEF

**Municipalities try to block Danish plans for a final LILW repository.** The five Danish municipalities that host the six sites designated by Danish Decommissioning (DD) as a potential final low- and intermediate-level radioactive waste repository (see In Brief, Nuclear Monitor 727, 27 May 2011) have all refused to host it. On 26 May they sent a letter to the Danish interior and health minister, Bertel Haarder, suggesting that Risø National Laboratory on the island of Zealand, where almost all of the radioactive waste has been produced at three research reactors, should be the place, where the waste is kept in the future. If that is not possible, a deal should be struck to send the up to 10.000 cubic metre radioactive waste abroad to a country experienced in dealing with it. The municipalities were dissatisfied that they had not been consulted in advance and that they had to hear of DD's recommendations through the press. The minister dismissed the protests, arguing that the decision where to place the waste is several years off in the future and that there would be plenty of time to discuss the final location. However, locating the waste will not be up to him because the Danish interior and health ministry that has so far overseen the process is expected to give up its responsibilities after the completion of the pre-feasibility studies that has now been submitted. Since 2009 three other ministries have been fighting each other in order not to have to take charge of the project. The whole process has been heavily criticised in the media as well as from political opposition parties. Most recently, the Swedish NGO Office for Nuclear Waste Review (MKG) has criticised DD for not acknowledging that some of the waste is high-level radioactive waste and that it has failed to distinguish between short and long lived intermediate-level radioactive waste. According to MKG, apart from being designed to store only the short lived low- and intermediate-level waste and not the long lived, the planned Danish repository does not live up to Swedish standards, mainly because the safety analysis is too short-term.

**Ingeniøren, 29 March 2011 / Jyllandsposten, 15 April 2011 / Radio Denmark, 26 May 2011**

**Sit-in against Jordan nuclear program in capital Amman.** On May 31, Jordan witnessed its first anti-nuclear action. Not a spectacle in terms of number of people and methods applied, the participants comprised many concerned Jordanian citizens who are worried of the highly dangerous potential impacts of nuclear energy in Jordan. It included people from various disciplines of life, connected with their fear about the country's nuclear program, which calls for the establishment of a 1,000 megawatt (MW) nuclear reactor. Wearing black T-shirts reading “No to a nuclear reactor”, the 40 protesters expressed concern over the effects of a nuclear reactor and uranium mining on public health and the environment.