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Public meeting  
Post-Fukushima stress tests peer review

## Can the stress tests be saved from greenwash?

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### Introduction

This meeting is not meant to evaluate the entire stress test procedure as started by the Council conclusions in March last year. I will therefore refrain from a more thorough criticism on the over-all process, and only remind you that there is large concern among the public about two points:

- The fact that there is **no assessment of off-site emergency response**. This is especially important because the EU and Switzerland have 47 power stations with 111 reactors with over 100 000 inhabitants living in a 30 km radius. Of these, seven power stations have 13 reactors with over a million people in that radius.<sup>1</sup> Greenpeace supports the idea of some EU member states starting a third track of the stress tests to fill this gap.
- The fact is that what has become public about **the security track** is mainly addressing theft of fissile materials but does not analyse in depth the risks of terrorist attack, cyber-attacks and acts of war.  
In Germany, the regulator demanded last week reinforcement of operating nuclear facilities because of new findings concerning terrorist attacks. Also, the final shut-down of eight German nuclear power stations was related to resistance against terrorist attacks. An insufficient security analysis will give an inadequate picture of how safe nuclear facilities are.

This meeting is organised to give input to the peer-review groups for the third part of the assessment of some specific aspects of technical safety of nuclear power stations and other nuclear installations. I have been asked to give observations from the side of civil society. I speak on behalf of Greenpeace, but I cannot claim to represent all NGOs. Civil society organisations should be given more space to provide their input to the peer-review groups for the countries of their concern. I will come back to that later.

Can the stress tests be saved from becoming greenwash? I want to start with some general observations.

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<sup>1</sup> Cochran, Thomas B., Matthew G. McKinzie, *Global Implications of the Fukushima Disaster for Nuclear Power*, Washington D.C. (2011) Natural Resources Defense Council;  
[http://docs.nrdc.org/nuclear/nuc\\_11102801.asp](http://docs.nrdc.org/nuclear/nuc_11102801.asp)

We have excluded power stations under construction, as well as reactors closed down permanently after the Fukushima reactor.

1. **National regulators hijacked the peer-review system and undermined its credibility.**

This is a severe allegation. But when publishing the national reports – before the peer-reviews started, virtually all regulators already stated in press releases and at press conferences that their nuclear power stations were OK (even if some recognised that some further measures would be needed to increase safety). Even the French regulator ASN, which was the most outspoken in its communication, failed to acknowledge that the publication of the report was only the second step in a three-step procedure and that no conclusions could be drawn before the peer-reviews were finished. This “everything is all-right” communication by almost all regulators was highly misplaced in content, because individual reports show that Fukushima has unearthed a large swathe of important safety concerns that need to be addressed in some form or another. But more importantly, by this behaviour, you as regulators (or maybe only your communication departments?) have made a truly independent assessment by the peer-review teams virtually impossible – no regulator or TSO, and therefore none of the members of the peer-review teams, can afford to create the image that regulators have made a mistake by their early take on the results. By not fully honouring the fact that the peer-reviews still are to verify the regulator findings, the European regulators have basically hijacked the peer-review system with their conclusions, press conferences and press releases. I challenge the peer-review teams to refute my fear. Can you save the stress-tests from becoming greenwash?

2. **Can you think the unthinkable?** – Most operators and unfortunately also several regulators do not seem able to do that. Scenarios (in one example, any damage to the pressure vessel) are dismissed as “hypothetical” instead of taken seriously into account. Let me be clear: damage of the pressure vessel in Fukushima was as hypothetical as it is in a VVER 440/213 reactor under unknown catastrophe circumstances.

3. **Can you live up to your own standards?** – During the peer-reviews, we demand that you adhere to the strictest interpretation of terms of the WENRA reactor safety reference levels. For hazard analysis there exist no common agreed criteria – so, during the first round of peer-review, national hazard assumptions should be put into perspective against the “highest standards for nuclear safety”, as demanded by the European Council in March 2011.<sup>2</sup> That means no compromises (between regulators or with the industry), but the highest standards available among you.

4. **Can you raise the next issues?** Most operators and regulators stuck to the bare minimum of issues to be taken into account, only some went beyond. That means that several very obvious points are not always assessed:

- Robustness of emergency operation rooms (on-site and off-site)
- Adequacy of seismic data – many operators used quite old seismic data.
- Autarky times of 10 hours can be found for many reactors – this is simply not enough.
- There is heavy reliance on “foreseeing” events, especially floods and heavy weather.
- Nobody assessed what to do with radioactive cooling water run-off during a heavy accident – whether run-off to ground water or surface water can be prevented, whether there is sufficient storage capacity for radioactive water and where.
- Availability of emergency personnel (“liquidators”) during a severe emergency is not sufficiently seriously dealt with.
- Ageing has not been (properly) included in most reports.

2 European Council, EUCO 10/11, CO EUR 6, CONCL 3, 25 March 2011, Conclusions [http://www.consilium.europa.eu/uedocs/cms\\_data/docs/pressdata/en/ec/120296.pdf](http://www.consilium.europa.eu/uedocs/cms_data/docs/pressdata/en/ec/120296.pdf)

5. **Can you call the bluff?** Peer-review teams must **compare the reports with earlier domestic assessments**. There are cases where the current stress-test reports are giving a completely different picture than the regular assessments. As one of my colleagues put it in his review of his national regulator report: *“It totally and fundamentally disagrees with any Safety Assessment Review done by XXXX for (at least) twenty years. Buildings have overnight miraculously got more than three times as strong regarding earthquakes (HCLPF peak ground acceleration / fragilities). Other buildings simply disappeared from the equation, regardless of equipment that is mounted there and listed with their “supposed” safety function in the EU stress test report. A lot of equipment has miraculously gotten earthquake proof after decades of debate by the local anti-nuclear group that it should be.”*
6. **Can you clear out the fog?** Although it is clear that an **airplane crash** is more than “just” loss of power and ultimate heat sink, and the Commission promised assessment of airplane crashes in its memo of May, only a few operators have addressed this issue. It is important that either ENSREG openly and publicly admits this issue will not be assessed under this line of the stress tests, or that operators should be asked to assess this properly. Clarity is part of proper transparency.

## Some concrete issues to be looked at

This is, of course, far from a comprehensive list. It is based on the input from my colleagues and from that I have only selected three issues to highlight here publicly. Others will be sent to the JRC website or otherwise be forwarded to the respective peer-review group.

7. **Lack of a true secondary containment.** Those regulators where this plays a role (Switzerland, Spain, Hungary, Slovakia, Czech Republic and the UK) do not take the issue seriously. The lack of secondary containment in Fukushima did add to the complexity of the catastrophe. Providing lists of functions of the existing containment structure does not take away the structural weakness of power plants without secondary containment in comparison with those that have. This is especially relevant because many of these reactors are up for lifetime extension.
8. **Multi-reactor failure or multi-installation failure** (including waste storages, shut-down reactors, reactors under decommissioning). This is too often not taken into account or only just touched upon. Similarly, influence of nearby industrial installations that may be caught up in the same natural or human induced emergency.
9. Introduction of **mobile generators and pumps** is interesting, but also needs better thinking about how these function practically under emergency situations, and above all whether fuel is reachable and people are available under these circumstances.

## Transparency issues and openness

10. **National public seminars** were not held as promised.

11. Many operators and regulators refused to give **access to the operator reports**.
12. Many of the published **operator reports are only available in the local language** – in Belgium, French-speaking Wallonians are not even able to read the report on Doel and Dutch-speaking Flemish the one on Tihange. How are you going to read them, dear peer-reviewers? Google translate? Or not at all? Operator reports need to be available in English as a minimum requirement.
13. Many of the **reports lack proper sourcing of data**.
14. None of the regulators has had the courage to take up **independent NGO or academic experts** during their review of the operator reports.
15. There is no transparency about how **suggestions for the peer-review process** over the website will be taken into due account – suggestions are solicited only anonymously and no correspondence will take place. I just remind you that under the Aarhus Convention, these suggestions must be taken into due account.
16. This seminar for input to peer-review teams is overshadowed by a limited group of talking heads with **too limited input from the audience**.
17. **Peer-review team lists** have not been published yet – it is not possible to assess who, from which background (regulator, TSO, independent), will review which country. Show us with full openness that we can trust you there.
18. We demand ENSREG and its members to open up **better possibilities for NGOs and independent (academic and other) experts to give input** to the peer-review teams, preferably in the form of a hearing, but also in written form – possibilities that go beyond the current seminar and website.

## Conclusion

A lot of work has gone into the stress tests so far, but it is still too much business as usual. If it remains that way, no power station will fail the tests but the tests themselves will fail to gain credibility.

This means, that decision makers - be they corporate or political - will not have sufficient information for their task to draw proper conclusions.

Or what is worse, some of them, like the governments of Spain and the UK or the utilities EdF, CEZ and Slovenské Elektrárne, seem to have chosen not even to wait for the peer-reviews at all. It is difficult to establish here who influences the conclusions into which direction for which reason, but nuclear safety is clearly not the priority.

The process so far has only increased our scepticism. Yet, it is not too late.

**The peer-reviews are the last chance to prove us wrong in our growing belief that the stress tests are little more than greenwash.**