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Perspective on the "stress tests" and peer review

the European Nuclear Industry view

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Second Public meeting
post-Fukushima stress tests peer review
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who are we?

- **FORATOM** is the Brussels-based association of nuclear industry in Europe:
  - 17 national nuclear associations active across Europe
  - nearly 800 firms represented
- **ENISS** *(European Nuclear Installations Safety Standards)* was set up in 2005 under the umbrella of FORATOM
  - ENISS currently represents the nuclear utilities and operating companies from 16 European countries with nuclear power programmes, including Switzerland

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safety reassessment: *timeline*

- *March 15, 2011:* Energy Commissioner Oettinger, industry CEOs and European Regulators met in Brussels, launched the ***safety reassessment*** initiative ("stress tests")
- *Oct. 31st: the Licencees issued their reports*
- *Dec. 31st: Final Regulators reports*
- *Jan. to April 2012: start and completion of the Peer Review process*
- public consutation

➔ *we are here today*

- *June 28th-29th 2012: European Commission due to globally report to* ***European Council***

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the peer review process in summary

- three topical reports
  - ***initiating events*** (IE)
  - consequential ***loss of safety functions***
  - ***severe accident management***

- 17 Country reports
- Peer Review Board report endorsed by the EC and ENSREG on 26 April

= an impressive amount of work

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how was it achieved?

- from the very start of the process, ***industry*** brought its ***strong support*** to the initiative
- industry was fully involved and mobilised (significant resources; met every deadline in the tight schedule)
- all nuclear operators / regulators applied the methodology as defined in ENSREG May 24 letter
  - the specifications were rather stringent: no studies had so far been performed on prolonged total loss of electrical power / heat sink
- ***operators*** and ***regulators*** worked in ***close concert***
  - licensees reports were carefully reviewed by National Regulators and Regulators reports were peer reviewed : high quality outcomes / strong results
- total ***transparency:***
  - all stakeholders informed via websites (publication of reports)
  - the opportunity to participate in public meetings and to submit suggestions and comments

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main results

- “all countries have taken significant steps to improve the safety of NPPs”
- European plants are globally safe - they fully comply with the IAEA safety standards thanks in particular to PSR (defined as a systematic re-assessment of the overall safety of a NPP, required to be carried out typically every 10 years)
- “overall consistency in the identification of strong features / weaknesses and suggested, or proposed ways to increase plant robustness”
- every NPP is specific but some common insights to prevent & mitigate severe accidents
  - design level
  - portable components
  - SAM features
- four main areas of improvements already introduced

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a few comments (1)

- the EU safety assessment: ***a clear success***
  - unprecedented transparency and cooperation among safety authorities
  - process and schedule fully respected
  - technical recommendations leading to required improvements (investments)
- the EU, ***a pioneer*** in the global context
  - exchanges with non nuclear Members States
  - caring for non EU countries (Russia, Ukraine, etc.)
- EU to acknowledge the results achieved, promote the process internationally

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a few comments (2)

- WENRA's achievements to be strongly promoted
  - an example of cooperation between strong and independent national safety authorities
  - an efficient and pragmatic way to progress towards harmonisation of safety standards
  - a model for the European safety framework (Safety Directive)
- WENRA's recognition (*vs.* IAEA, NRC, etc.) to enhance the development of guidance on the assessment of natural hazards and of required safety margins beyond the design basis
  - industry ready and available with its knowledge, experience
  - *caution:* safety a global issue, consider each new step carefully

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a few comments (3)

- the "stress tests" confirmed the effectiveness of the safety strategy already implemented by European industry:
  - permanent safety improvements identified in the programs (maintenance, changes, PSR)
  - ENSREG underlines the importance of PSR; industry open-minded vs. any useful feedback
- the process is not over!
  - commitments by licensees / national action plans
  - "additional visits": what does it mean, imply?
  - potential new topics: "emergency preparedness"

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conclusion

- ***back to the basics:*** secure, competitive and low-carbon energy sources are essential to meeting demographic, economic and geopolitical challenges – nuclear vital in that respect
- nuclear safety: was and will remain ***industry's top priority***
  - integration of human, technical, organisational and regulatory issues
- the exercise confirmed the industry belief that Peer Review allows for sharing best practices and contributes to global improvement
- FORATOM/ENISS to go on participating in the post Fukushima activities, sharing the lessons learned and turning it into an actual asset

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