



European Nuclear Safety Regulators Group

1st Topical Peer Review

Public event – 22nd November 2018

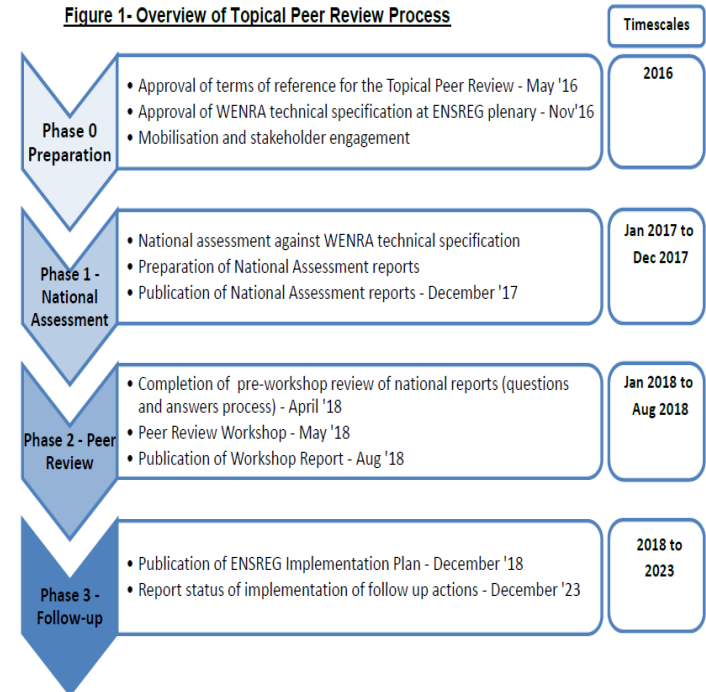
Brussels

P. Tiippana
TPR Board Chairman

Content

- Background
- TPR process
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Figure 1- Overview of Topical Peer Review Process



Reinforced Euratom legal framework

1957

Directive 2009/71/Euratom
Nuclear Safety
of nuclear installations

Directive 2011/70/Euratom
Spent Fuel and Waste Management

Directive 2013/51/Euratom
Euratom Drinking Water Directive

Directive 2013/59/Euratom
Basic Safety Standards

Directive 2014/87/Euratom
amending Directive 2009/71/Euratom

2009

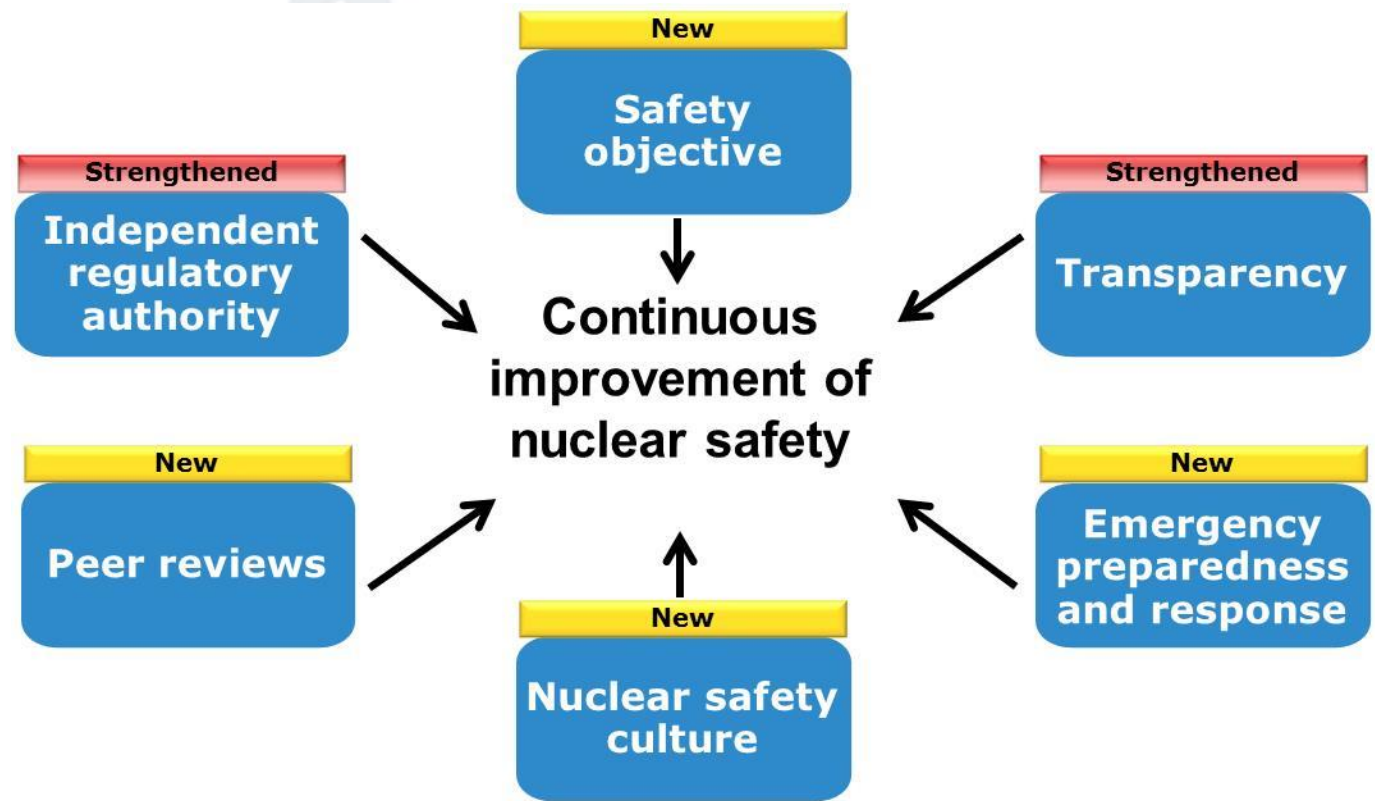
2011

2013

2014

2017

Directive 2014/87/Euratom



1st Topical Peer Review

➤ Council Directive 2014/87/EURATOM

Introduces a **European system of Topical Peer Review (TPR)** which will commence in 2017 and every six years thereafter

➤ **"ageing management of nuclear power plants"** defined as 1st topic during ENSREG 30th Meeting in July 2015

➤ Covers Nuclear Power Plants and Research Reactors (with a power of 1MWth or more)

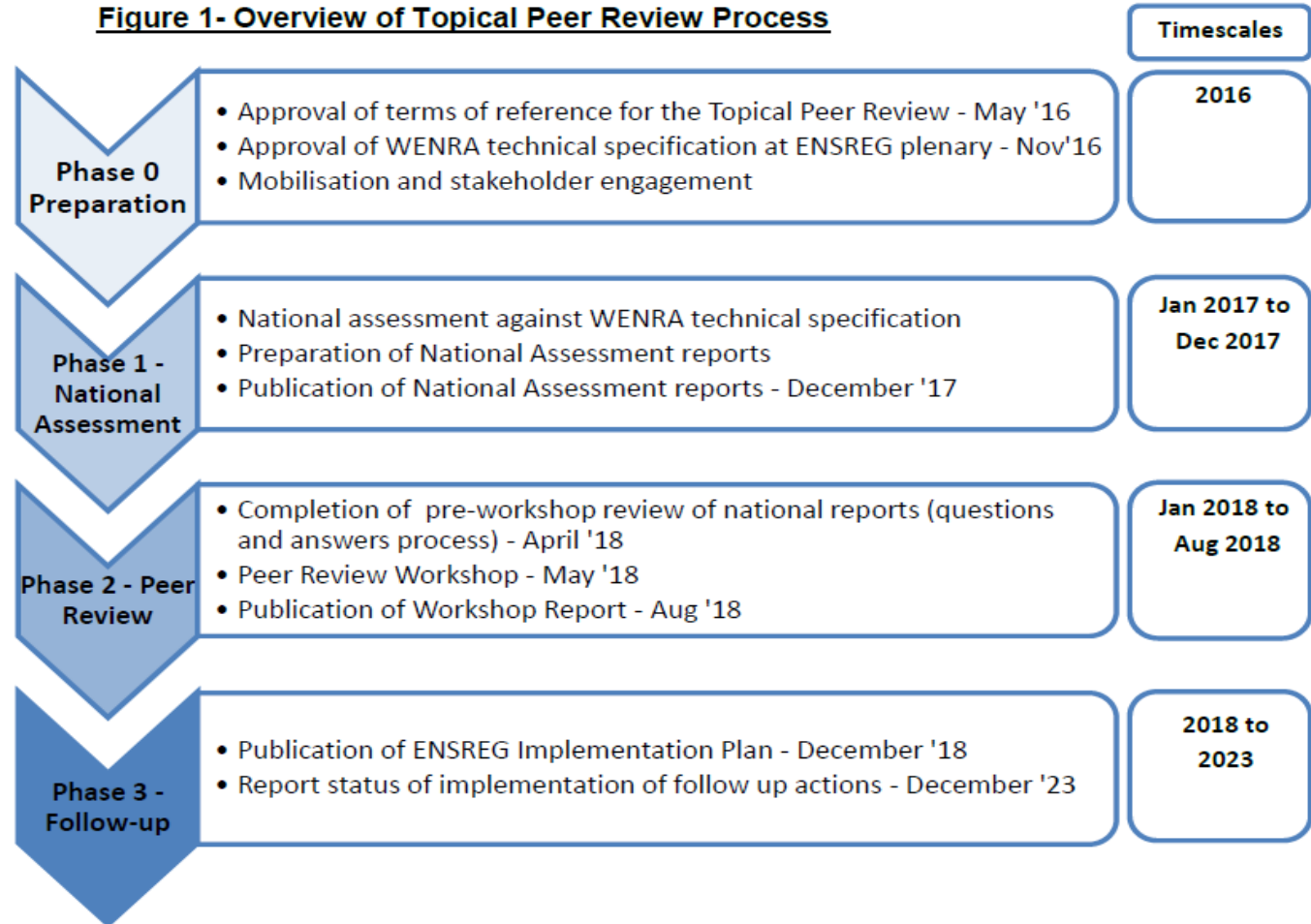
- Includes reactors in operation and under construction
- Plants that are in final shutdown not included
- Obsolescence not included within the proposal

➤ Ageing Management Programmes

- Electrical cables, Concealed pipework, Reactor Pressure Vessels, Concrete containment structures

1st TPR process overview for 2016-2018

Figure 1- Overview of Topical Peer Review Process



1st Topical Peer Review – preparation 2016-2017

- Development of the ENSREG Terms of Reference (ToR) + WENRA Technical Specification (TS) + Stakeholders Plan in 2016
- ToR submitted to Public Consultation on the ENSREG Website from the 1st August to the 30th September 2016
- TS submitted to Public Consultation on the WENRA Website from the 28th October to the 30th November 2016
- Comments on the ToR and TS received from FoEE, ENISS, IAEA, etc. and taken into account in the final versions
- All 3 documents approved by ENSREG in January 2017 and published on the ENSREG Website in February 2017
- <http://www.ensreg.eu/background>

1st Topical Peer Review – Organisation

- Board, 5 Rapporteurs and 41 Experts (from countries, and EC)
- Commission (role of observer and secretariat)
- Participants – 19 countries

TPR Board		
Chair	STUK (FI)	Petteri TIIPPANA
Vice Chair	ASN (FR)	Sylvie CADET-MERCIER
EC Official	EC	Massimo Garribba
Country Group (AMP)	UJD (SK)	Mikuláš TURNER
RPV and Calandria	ASN (FR)	Laurent STREIBIG
Cables	BMLFUW (AT)	Bojan TOMIC
Concrete Containment and PCPCVs	CSN (ES)	Carlos ANTA
Concealed Pipework	ONR (UK)	Ian BRAMWELL
Secretariat	EC	Ghislain PASCAL

1st Topical Peer Review

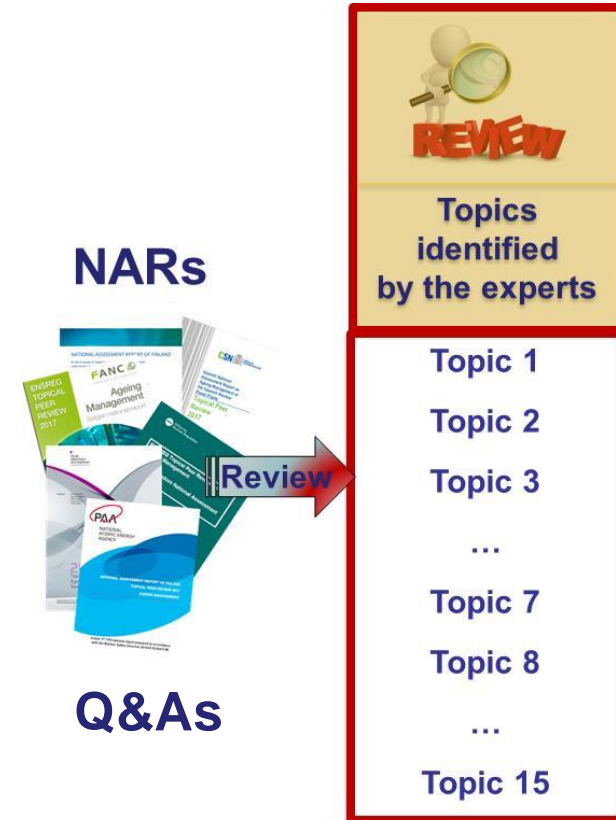
- ✓ 19 countries in total with NPPs and/or research reactors

Belgium	Italy	Sweden
Bulgaria	Netherlands	United Kingdom
Czech Republic	Poland	Norway
Finland	Romania	Switzerland
France	Slovak Republic	Ukraine
Germany	Slovenia	
Hungary	Spain	

- ✓ Reports received during the 1st week of January 2018 and published on the ENSREG Website
- ✓ Public Consultation on the reports launched from the 8 January and 28 February 2018, about 2300 questions were raised and answered by 25th of April
- ✓ Workshop in Luxembourg 14.-18.5.2018
- ✓ Finalization of the report and country specific findings until September 2018 – Approval by ENSREG 4.10.2018

Pre-work for the May Workshop

- ✓ **Expert review conducted by 5 Project Managers, 5 Rapporteurs and 41 Experts in 5 groups**
 - Ageing Management Programmes,
 - Electrical cables,
 - Concealed pipework,
 - Reactor Pressure Vessels,
 - Concrete containment structures
- ✓ **Experts reviewed national reports, Questions and Answers under the guidance of PMs**
 - Goal was to identify common issues and country specific issues to be discussed in the May workshop
- ✓ **Preliminary lists of common issues were submitted to the National Points of Contacts prior to the workshop**



Workshop in May

- Programme consisted of national presentations and generic discussions
 - National presentations on AMPs and Thematic Areas - Results from the self-assessments and Q&A
 - Discussions on AMPs and Thematic areas facilitated by the PMs and Experts - Generic findings
- Preliminary findings
 - Identified and discussed by the experts, PMs and rapporteurs
 - Allocated to the countries based on the NAR, Q&As and discussions during the workshop
 - Preliminary generic and country specific results presented on Friday

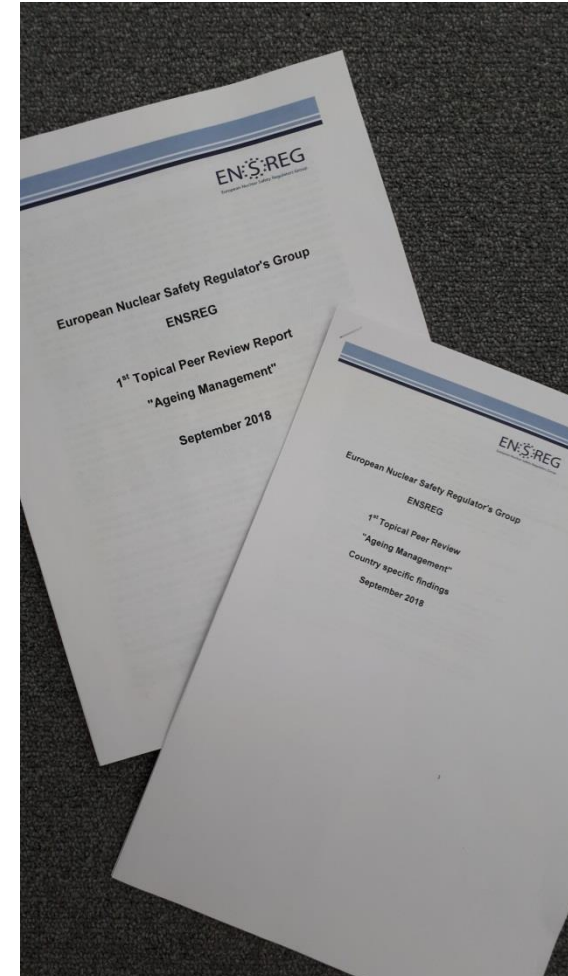


Monday 14/05		
Opening Session (room Schengen I+II)		
09:00 – 09:30	Country Group 1 (room Hollenfels)	Country Group 2 (room Schengen I+II)
09:30 – 10:15	15 min presentation + 30 min questions	15 min presentation + 30 min questions
10:15 – 11:00	SL	ES
11:00 – 11:15	CEZ	FI
11:15 – 12:00	SE	BG
12:00 – 12:45	UK	DE
12:45 – 13:15	IT	PL
13:15 – 14:00	Lunch Break	
14:00 – 14:45	SK	FR
14:45 – 15:30	HU	NL
15:30 – 15:45	Coffee Break	
15:45 – 16:30	RO	BE
16:30 – 17:15	SW	UA
17:15 – 17:45	NO	
17:45 – 18:30	Meeting of Country Group (experts + rapporteurs + PMs)	

Tuesday 15/05	
Review of Ageing Management Programmes in the EU (room Schengen I+II)	
09:00 – 11:00	Thematic discussions on "Ageing Management Programmes"
11:00 – 11:30	Coffee Break
11:30 – 13:00	Thematic discussions on "Ageing Management Programmes"
13:00 – 14:00	Lunch Break
14:00 – 16:00	Thematic discussions on "Ageing Management Programmes"
16:00 – 16:30	Coffee Break
16:30 – 18:30	Meeting of Country Group (experts + rapporteurs + PMs)

After the Workshop

- Five TPR Board meetings to finalize the report and country specific findings
- Countries had the possibility to provide feedback on country specific findings in June
- Draft report and country specific findings were submitted to countries for review and comments in September
- Report and country specific findings were submitted to ENSREG for Approval 24.9.2018
- ENSREG approved the report and country specific findings on the 4th of October 2018



Main outcomes of the TPR 1/3

- The peer review met its generic goals and objectives set out in the Directive and in the Terms of Reference
 - The review process for the TPR (defined by WG1) was generally followed in the preparation of National Assessment Reports, their peer review and the development of the report
 - Although there were differences in the level of detail and presentation, all National Assessment Reports addressed the topics (presented in WENRA's TS) reasonably well, providing a sufficient overview of the Ageing Management Programmes
 - National Assessment Reports, the answers provided to the questions from the public consultation phase, the presentations and discussions at workshop in May 2018, enabled peers to conduct a desktop review

Main Outcomes on the TPR 2/3

- For NPPs – Ageing Management Programmes exist in all countries, they are in line with the IAEA Safety Standards and WENRA Safety Reference Levels and no major deficiencies were identified
 - However, improvement areas were identified for the AMPs as well as for the thematic areas
- For Research Reactors Ageing Management Programmes are neither regulated nor implemented as systematically and comprehensively as they are for NPPs, and therefore require further attention from both regulators and licensees

Main outcomes of the TPR 3/3

- Self-assessment results constitute the basis for countries to enhance their Ageing Management Programmes
- There is evidence based on the National Assessment Reports and their peer review that improvements have already been made or are on-going as a result of the Topical Peer Review
- Countries will establish National Action Plans to address findings resulting from their self-assessment and the peer review
- The delivery of National Action Plans will further improve the ageing management of both Nuclear Power Plants and Research Reactors

Recommendations to ENSREG



- The scope of this peer review was Nuclear Power Plants in operation and under construction, and Research Reactors with thermal power of 1 MW or above. The generic outcome of the peer review was that the regulation and implementation of the Ageing Management Programmes is more systematic and comprehensive for Nuclear Power Plants compared to Research Reactors. There are also other nuclear installations in operation in the EU which were not covered by the peer review. The Board recommends that countries explore the regulation and implementation of Ageing Management Programmes of other risk significant nuclear installations while developing and implementing National Action Plans to ensure they exist and are effective.

Recommendations to ENSREG



- According to the Directive "*Member States should establish national action plans for addressing any relevant findings and their own national assessment*". The countries' National Action Plans should address the results of the self-assessment and respond to the country specific findings allocated to them for reaching the Topical Peer Review expected level of performance. Furthermore, the Board encourages countries to explore all generic findings of this peer review and to study their applicability to improve the regulation and implementation of Ageing Management Programmes at each Nuclear Power Plant and Research Reactor.

Recommendations to ENSREG



- The challenges identified by the peer review are Europe-wide and difficult to resolve for individual countries. The Board recommends the European Nuclear Safety Regulators Group (ENSREG) to ask the Western European National Regulators Association (WENRA) to address identified challenges in collaboration with European Technical Safety Organisation Network (ETSON) when applicable.

Recommendations to ENSREG



- The Board recommends the European Nuclear Safety Regulators Group to ask the International Atomic Energy Agency and Western European National Regulators Association to consider addressing Topical Peer Review findings in their safety standards or Safety Reference Level documents. This could ensure more consistent implementation and application of Ageing Management Programmes and further improvement of nuclear safety globally.

Recommendations to ENSREG



- As per the Directive these Topical Peer Reviews will be conducted every six years. Conducting the first peer review has been a challenge and has required significant resources from the participating countries and the European Commission. The Board recommends the European Nuclear Safety Regulators Group to ask its Working Group 1 to collect feedback from the countries and from the Board to draw lessons learned from this peer review to ensure efficiency and effectiveness in the future peer reviews

Conclusions

- ✓ TPR has met its goals set in the Directive and Terms of reference
- ✓ Improvement areas exist for NPPs, but no major deficiencies in NPPs's Ageing Management Programmes were identified
- ✓ Research Reactors Ageing Management Programmes are neither regulated nor implemented as systematically and comprehensively as they are for NPPs
- ✓ Countries and ENSREG will establish action plans by September 2019 to address the results of the TPR
- ✓ The delivery of Action Plans will further improve the ageing management of both Nuclear Power Plants and Research Reactors
- ✓ Lessons need to be learned for the forthcoming TPR



European Nuclear Safety Regulators Group

Thank you for attention