

Topical Peer Review II

Fire protection
at nuclear installations

Plenary session Chair's introduction

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1 TPR process

2 From the NAR to the workshops

3 Expectations for this workshop

Fire protection at nuclear installations

1. TPR process

The purpose of TPR is to provide a mechanism for EU Member States to examine topics of importance to nuclear safety, to exchange experience and to identify opportunities to strengthen nuclear safety (Nuclear Safety Directive)

The topical peer review on fire protection will:

- Enable participating countries to review their provisions for fire protection to identify strengths and weaknesses
- Undertake a European peer review to share operating experience and identify findings: at EU-level, good practices and common issues/challenges; at national level, areas of good performance and areas for improvement
- Provide an open and transparent framework for participating countries to develop appropriate follow-up measures to address areas for improvement

Topical Peer Review II

Fire protection at nuclear installations

1. TPR process



Phase 0 : Preparation

- Choice of the topic
- Lessons learnt from the former TPR
- Terms of reference (TOR)
- Technical specifications
- Experts nominations
- Board Review of national selection of installations



Phase 1: National self assessment

- 2022-2023
- National assessment with regard to WENRA technical specification
- Publication of the national reports (NAR)



Phase 2: Peer review

2023-2024

2020-2022

- Peer review (desktop review, site visit, workshops)
- Peer review reports (summary report, country review report)



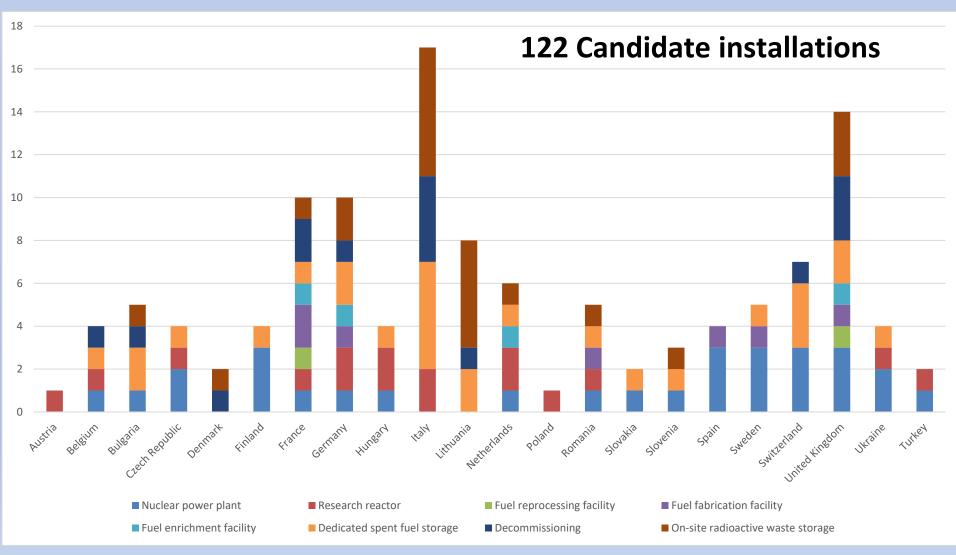
Phase 3 : Follow-up

2025 - ...

- National action plans
- ENSREG plan

Fire protection at nuclear installations

1. TPR process



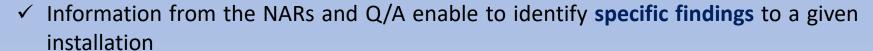
1. TPR process

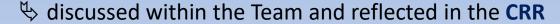
- The <u>Terms of Reference</u> document indicates the process for the topical peer review (desktop review, site visits, workshops, outputs...)
- The <u>Technical Specification</u> defines the structure and content of national assessment reports and by providing a reporting template. The scope of nuclear installations to be covered by the TPR was defined by WENRA.
- The review by the TPR experts organised by thematic areas:
 - √ fire safety analyses
 - √ fire active protection
 - fire prevention and passive protection
- The review by the TPR experts reported by country.



2. From the NAR to the workshops

- Each TPR expert responsible for around 20 installations of different types
 - ✓ Information from the NARs enable to see commonalities on topics, and as well differences based on the information from the NARs
 - proposal of topics of interest to the Thematic Group, discussed within this Group and with TPR Team
 - these **topics of interest** (TOI) confirmed (or not) by the additional information from the Q/A
 - reflected in the **draft summary report** with the aspects to be discussed for each topic









Transversal topic

Fire protection at nuclear installations

3. Expectations for this workshop

The objective of the thematic sessions is to enable thorough discussions on the topics of the draft summary report

Fire safety analyses	Prevention and passive fire protection	Active fire protection	Transversal
General methodologies for deterministic FSA	Management of fire loads	Strategy for the installation of fire detectors	Use of experience feedback
Approach to updating methodologies and data	Management of ignition sources	Issues for the installation of extinguishing systems	Compartmentation
Analysis of radioactive releases and their consequences	Inspection and functionality testing of fire dampers	Harmful effects of fire-fighting water	Combination of hazards
Fire PSA in NPPs: Conservative vs realistic	Ventilation management in case of fire	Firefighting - different responsibilities (licensee, on-site and off-site fire brigades)	Installations under decommissioning
Use and application of FSA to improve nuclear fire safety	Ageing management of fire protection SSCs	Availability of the off-site fire brigade and other services in case of simultaneous events	

3. Expectations for this workshop

Each session will include:

- an introduction of each topic of interest by TPR experts, reminding the topics, subtopics and the expected outcomes, with some questions to stimulate and focus the discussion on the subtopics
- discussions with all workshop participants animated by TPR experts
 - Licensees are expected to participate actively



Conclusion with overall points of consensus, divergences, potential 'good practices' and 'challenges' for all sub-topics, based on the discussion

An overview of the discussions will complement the report

Expectation for these sessions

An unique moment offering an opportunity to share approaches on fire protection by a large number of licensees of different types of installations

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Fire protection at nuclear installations

Good practice

Go beyond what is required in meeting the appropriate national or international standards.

Significantly superior what is observed in participating countries and having a clear safety benefit.

Challenge (EU wide)

Aspect common to many or all countries
Action at a European level to increase
available knowledge or produce beneficial
new techniques





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Fire protection at nuclear installations

Thank you for your fruitful participation!



38 experts from 17 countries + EC

Definition of findings

Good Practice: should be understood as an aspect of fire protection, which is considered by the TPR review Team to go beyond what is required in meeting the appropriate national or international standards.

It is identified in recognition of an arrangement, practice, policy or programme significantly superior to those generally observed in participating countries and having a clear safety benefit.

It is likely to be applicable to other participating countries with similar programmes and it is for each country to review and decide on its implementation in relevant nuclear installations to improve safety.

Challenge (EU wide): should be understood as aspects in the implementation of fire protection that are considered by the TPR Peer Review Team to be common to many or all countries and are areas where action at a European level, in addition to action at national level, would help to increase available knowledge, drive consistency or produce beneficial new techniques or technology to assist in enhancing fire protection at nuclear installations or the fire safety case.