EU SECOND TOPICAL PEER REVIEW (TPR II)
FIRE PROTECTION AT NUCLEAR INSTALATIONS

NATIONAL ACTION PLAN OF THE REPUBLIC OF BULGARIA

NUCLEAR REGULATORY AGENCY

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1. Introduction

In the development of the Bulgaria's NAcP following the Topical Peer Review on Fire Protection the findings identified in the Bulgaria's Country Review Report and further discussed during the workshop were taken into account. The applicability of the other findings from the peer review to the reported installations was duly assessed. The findings and planned actions are related both to the reported and represented installations.

2. Follow-up of findings from the peer review – national areas for improvement

2.1 AFI (BG-AFI-1) NPP Kozloduy Unit 5 - the need for replacement of fire detectors due to ageing management

2.1.1 Identified action(s) and implementation progress

The modular fire alarm control panels were replaced between 2018 and 2020 with modern, high-end fire alarm control panels. The fire detectors are currently being replaced. To ensure the continued functionality of the fire alarm systems until the detector replacement process is complete, Kozloduy NPP maintains a sufficient stock of operational fire detectors and control modules of the older type.

2.1.2 Applicability to represented installations

Applicable both to Units 5 and 6 of Kozloduy NPP.

3. Follow-up of other findings resulting from the self-assessment

3.1 NPP Kozloduy Unit 5

3.1.1 Fire Safety Analysis

- No weaknesses were identified.

3.1.2 Fire Prevention

- No weaknesses were identified.

3.1.3 Passive Fire Protection

- No weaknesses were identified.

3.1.4 Active Fire Protection

3.1.4.1 Lack of an automatic fire extinguishing system for the diesel fuel tanks in Circulation water pumping station 3 and 4.

The room is equipped with an automatic fire detection system and additional portable fire extinguishers. To eliminate the potential risk, an automatic dry-powder fire suppression system was installed above the diesel fuel collection basin for each of the two units. The system for Unit 6 was completed in October 2023, and the one for Unit 5 in February 2024. This is a localized automatic dry-powder fire suppression system suitable for extinguishing Class B fires—fires involving liquids or liquefiable solids.

This was discussed in detail in the country review workshop.

3.2 Wet SFSF Kozloduy Site (PSFSF)

3.2.1 Fire Safety Analysis

3.2.1.1 In 2023 an inspection of the insurance risk at Kozloduy NPP made by the nuclear insurance pool indicated that the Fire Hazard Analysis (FHA) of the PSFSF is not up-to-date.

As a result, an update of the FHA was contracted and conducted. The FHA is currently under review and acceptance process.

3.2.2 Fire Prevention

- No weaknesses were identified.

3.2.3 Passive Fire Protection

- No weaknesses were identified.

3.2.4 Active Fire Protection

- No weaknesses were identified.

4. Overall conclusions

As a result of the review of the country-specific findings, as well as other applicable findings from the peer review, only one measure has been identified for implementation.

Annex A - Summary table of the actions planned/implemented

Section of NAcP	Reference no of the finding	Installation type/name	Thematic	Finding	Action	Deadline	Regulatory authority's comment on progress
2	BG-AFI-1	NPP Kozloduy Units 5 and 6	Active Fire Protection	The need for replacement of fire detectors due to ageing management.	The existing detectors of the modular fire detection system are to be replaced with a new generation. A phased replacement of the detectors in both units is underway, with the completion of the replacement for Unit 6 scheduled for 2027 and for Unit 5 for 2028.	2028 for Unit 5; 2027 for Unit 6	