



# **Lessons Learned on Regulatory Framework Development and Decommissioning Planning in the Czech Republic**

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Regional Workshop for Central Governments and Regulatory Bodies on the Development of Strategies and Regulatory Requirements for Decommissioning

4 – 7 April 2022

Virtual event

## Development of Regulatory Framework (1/3)

- Currently valid national regulatory framework was developed in 2010 – 2017
- Why a new regulatory framework has been developed?  
Old Atomic Act from 1997 :
  - has been amended many times (more than 25 times)
  - was outdated in terms of substance, as it was not sufficiently flexible to respond to various non-binding recommendations of the international expert community (IAEA, WENRA, OECD/NEA) and thus to technological developments in the field of SÚJB competence
  - was outdated even in terms of legislation and technical aspects. The fundamental problem was the incorrect (too broad, general) formulation of the statutory powers to issue implementing legislation

## Development of Regulatory Framework (2/3)

- Decommissioning area is covered by the new Decree No. 377/2016 Coll., on the requirements for the safe management of radioactive waste and on the decommissioning of nuclear installations or category III or IV workplaces, which redefined:
  - cat. III workplace decommissioning requirements
  - scope and method of decommissioning
  - details on the content of the concept for the safe decommissioning of a cat. IV workplace and on the decommissioning plan and safety case for a cat. III or IV workplace

## Development of Regulatory Framework (3/3)

### Reference documents:

- old regulatory Framework (1997-2002)
- IAEA Safety Series Standards
  - IAEA GSR Part 6, Decommissioning of Facilities (2014)
  - IAEA SSG-47 Decommissioning of Nuclear Power Plants, Research Reactors and Other Nuclear Fuel Cycle Facilities (drafts, published in 2018)
  - IAEA SSG-49 Decommissioning of Medical, Industrial, and Research Facilities (drafts, published in 2019)
- IAEA TECDOC Series No. 1816 Model Regulations for Decommissioning of Facilities (2017)
- WENRA WGWD Report on Decommissioning SRL v2.2 (2015)

## How to use the TECDOC Series No. 1816 Model Regulations? (1/4)

- This TECDOC can be used by Member States for developing regulations for all aspects of decommissioning:
  - planning, conducting,
  - completion and termination.
- Applicable to the broad range of regulatory systems to cover all types of facilities, at all stages of their life cycle, including existing ones that need to be decommissioned, considering the graded approach principle.
- This TECDOC covers related radioactive waste management that need to be addressed within the regulatory framework of a Member State

## How to use the TECDOC Series No. 1816 Model Regulations? (2/4)

- The model regulations has to be used as a basis for:
  - adapting to their own regulatory framework
  - for review existing regulation against latest IAEA Standards and international good practices (WENRA)
- Chapters 1 to 6 are generic and similar to other model regulations (see radioactive sources and waste)
- Chapter 7 details the regulations for decommissioning into specific articles addressed in 8 different parts
 

Part I	• General provisions
Part II	• Protection of people and environment
Part III	• Management of decommissioning
Part IV	• Decommissioning strategy
Part V	• Financing of decommissioning
Part VI	• Planning of decommissioning
Part VII	• Conduct of decommissioning
Part VIII	• Completion and termination

## How to use the TECDOC Series No. 1816 Model Regulations? (3/4)

Lessons learned/issues discussed by the development of Model regulations:

- National Policy and Strategy
  - in general, no need for national decommissioning policy and strategy often included in national policy and strategy for RAW management; it depends on member states approach
  - distinction between policy and strategy has been addressed in the chapter 2 for clarification
- Graded approach - the purpose of the concept of graded approach is to define the level of detail to be developed by the licensee to comply with the requirements according to the magnitude of the risks during decommissioning



## How to use the TECDOC Series No. 1816 Model Regulations? (4/4)

- Selection of decommissioning strategy
  - interpretation of the article 5.1 of GSR Part 6 has been discussed on “the preferred decommissioning strategy”
  - immediate dismantling should be the basis for the development of the initial decommissioning plan
- Facilities specificities - requirements are not “facility oriented”



## Case Study (PE2) - Compliance with WENRA SRLs on Decommissioning (1/4)

- SRLs developer by the Working Group on Waste and Decommissioning (WGWD), which is one of four WG established by WENRA (RHWG, WGRR, NFCWG)
- Decommissioning SRLs objective
  - SRLs oriented toward the licensees of decommissioned facilities, who are responsible for their safety
  - SRLs can also be used by the regulatory body for the review and assessment of decommissioned facilities' safety
- Scope of facilities - nuclear reactors (of any power), fuel reprocessing facilities, fuel manufacturing facilities, uranium concentration and conversion facilities, uranium enrichment facilities, ...

## Case Study (PE2) - Compliance with WENRA SRLs on Decommissioning (2/4)

- Scope of SRLs - address mainly the radiological hazards resulting from the activities associated with the decommissioning of facilities, primarily with decommissioning after a planned shutdown
- SRLs based on IAEA Safety Standards
- Structure of 62 SRLs (Safety areas):
  - Safety management
  - Decommissioning strategy and planning
  - Conduct of decommissioning
  - Safety verification

## Case Study (PE2) - Compliance with WENRA SRLs on Decommissioning (3/4)

- Scope of Case Study – self-assessment (review of compliance of existing national regulatory framework with SRLs on decommissioning strategy and planning ;Safety Area 2.2; SRLs DE-15 - 29) and benchmarking
- Benchmarking = review and validation of national positions within one ore more groups of MS involved in RW scrutinizing and questioning each other's justifications of national positions;
- Coding system to be used for each SRL:
  - A. Already harmonised in substance
  - B. Differences exist, but can be justified
  - C. Differences exist, which should be addressed for harmonisation

# Case Study (PE2) - Compliance with WENRA SRLs on Decommissioning (4/4)

- Case Study template

SRL	SRL TEXT	NATIONAL LEGISLATION REFERENCE INFO/TEXT	SELF- ASSESSMENT	BENCHMARK.	JUSTIFICATION/ EXPLANATION	ACTION PLAN
<b>2.2.1 SAFETY ISSUE: FACILITATING DECOMMISSIONING DURING DESIGN, CONSTRUCTION AND OPERATIONAL PHASE</b>						
DE-15	The licensee shall take account of the need to decommission a facility at the time it is being planned, designed, constructed and operated. Measures, including design features, contamination and activation control, shall be described and justified.	Article xxx (Act/Decree/...): "..."	A/B/C	A/B/C		To review Act/Decree ...
DE-16	The licensee shall undertake a baseline survey, including radiological conditions of the site before construction, for comparison with the proposed end-state after decommissioning. For those practices for which such a baseline survey has not been done in the past, data from analogous, undisturbed areas with similar characteristics can be used instead of preoperational baseline data.					
<b>2.2.2 SAFETY ISSUE: DECOMMISSIONING STRATEGY</b>						
DE-17	The licensee shall establish a decommissioning strategy for its facility. This decommissioning strategy shall be consistent with existing related national strategies and regulatory requirements, e. g. on decommissioning or radioactive waste management.					
DE-18	The decommissioning strategy shall be documented including a description of the options, overall timescales for the decommissioning of the facility and the end-state after completion of all decommissioning activities. The reasons for the preferred option shall be explained, and options not involving immediate dismantling shall be rigorously justified.					



# Thank you for your attention!

