

# **National Programme for Management of Spent Nuclear Fuel and Radioactive Waste in the Slovak Republic**

## **Extract**

## **INTRODUCTION**

This extract is provided in order to present the basic concept of the document "National Programme for Management of Spent Nuclear Fuel and Radioactive Wastes in the Slovak Republic" which is the update of the current National Policy and National Programme conducted according to the EU Directive 2011/70/Euratom. Since the updated document (strategic document with national impact) is a subject of ongoing strategic environmental assessment process (SEA).

### **A Brief Description of the Document Development and the Reasons for Update Thereof**

The first document describing in more detail the final stage of the Slovak nuclear power engineering, together with a financial assessment thereof, was developed based on the requirement of the then valid Act No. 238/2006 Coll. on the National Nuclear Fund for the Decommissioning of Nuclear Installations and for the Management of Spent Nuclear Fuel and Radioactive Waste (the Nuclear Fund Act), and on amendments to certain acts which, in Section 3, defined the requirement to develop a proposal for the "Strategy of the Final Stage of Nuclear Power Engineering in the Slovak Republic" as one of the basic duties of the newly established Board of Governors, with a deadline for a submission thereof to the Ministry of Economy of the Slovak Republic by 30 June 2007. The subject thereof was to describe the decommissioning of nuclear installations, the management of spent nuclear fuel, and the management of radioactive waste, and to estimate the costs of implementing these activities.

The Strategy of the Final Stage of Nuclear Power Engineering in the Slovak Republic strategical document was assessed in terms of environmental impacts according to points 2.7, respectively 2.8 of Annex 1 to the Act No. 24/2006 Coll. on the Environmental Impact Assessment, and on amendments to certain acts (hereinafter referred to as "Act No. 24/2006 Coll."). As it was a strategic document with a nationwide impact; the entire process was carried out pursuant to Section 17 of the Act No. 24/2006 Coll. The result of the assessment process was the Statement issued by the Ministry of the Environment of the Slovak Republic pursuant to the Act No. 24/2006 Coll. on Environmental Impact Assessment, and on amendments to certain acts, under the number 5131/2007-3.4/hp dated 15 May 2008. Subsequently, by Resolution No. 328, the Government of the Slovak Republic, at its meeting held on 21 May 2008, approved the Strategy of the Final Stage of Nuclear Power Engineering in the Slovak Republic developed by the Board of Governors of the National Nuclear Fund and tasked the Ministers of Economy, Environment, Health, and Finance, as well as the Chairperson of the NRA SR, to provide for the implementation thereof by 31 December 2013. Provision of Section 3 of the Act No. 238/2006 Coll. on the Nuclear Fund of 16 March 2006 imposed on the NNF Board of Governors to submit to the Ministry of Economy an updated draft Strategy every five years. The update was named the Strategy of the Final Stage of the Peaceful Utilization of Nuclear Power Engineering in the Slovak Republic. The formulation of the update of the Strategy was approach in line with the relevant requirements of Council Directive 2011/70/Euratom, which establishes a Community framework for the responsible and safe management of spent fuel and radioactive waste.

Pursuant to the Section 17 of the Act No. 24/2006 Coll., the notification of the strategic document with a national impact was delivered to the Ministry of the Environment of the Slovak Republic on 30 October 2012 and, on 6 December 2012; it was published on the websites of the MoE SR, ME SR, and NNF pursuant to the Section 6 of the Act No. 24/2006 Coll. and, on 6 December 2012, in a mass information medium with nationwide impact (SME newspaper). The entire documentation of the Strategy of the Final Stage of the Peaceful Utilization of Nuclear Power Engineering in the Slovak Republic was published on the mentioned websites.

In the course of the investigative procedure, no comments were received on the notification of the strategic document with a national impact named Strategy of the Final Stage of the Peaceful Utilization of Nuclear Power Engineering in the Slovak Republic. The public did not specifically comment during the investigative procedure. The public hearing took place on 22 January 2013; the public did not participate in the hearing itself.

Based on the announcement of a strategic document with a national impact, and after the conclusion of the investigative procedure, the Ministry of Economy of the Slovak Republic, in cooperation with the Ministry of the Environment of the Slovak Republic, issued, pursuant to Section 7 and Section 17 of Act No. 24/2006 Coll. on the Environmental Impact Assessment, and on amendments to certain acts, as amended, Decision No. MoE SR 2727/2013-4100 and ME SR No. 2909/2013-3.4./hp dated 30 April 2013: "Amendment to the strategic document with a national impact "Strategy of the Final Stage of the Peaceful Utilization of Nuclear Power Engineering in the Slovak Republic", in which it was stated that it will not be further assessed pursuant to the Act No. 24/2006 Coll. on Environmental Impact Assessment, and on amendments to certain acts, as amended".

The Strategy of the Final Stage of the Peaceful Utilization of Nuclear Power Engineering in the Slovak Republic strategic document was approved by the Government of the Slovak Republic on 15 January 2014, by Resolution No. 26/2014.

After the Council Directive 2011/70/Euratom was issued, which established the Community framework for responsible and safe management of spent fuel and radioactive waste, and was transposed into the Act No. 143/2013 Coll. dated 21 May 2013, which amends the Act No. 541/2004 Coll. on the Peaceful Use of Nuclear Power (the Atomic Act), and on amendments to certain acts, as amended, and amending Act No. 238/2006 Coll. on the National Nuclear Fund for the Decommissioning of Nuclear Installations and for the Management of Spent Nuclear Fuel and Radioactive Waste (the Nuclear Fund Act), and on amendments to certain acts, as amended, the NNF Board of Governors considered how to fulfil the provision of this Act, which concerns the development of the National Policy and National Programme for responsible and safe management of spent fuel and radioactive waste. A variant was considered to supplement the already prepared Strategy of the Final Stage of the Peaceful Utilization of Nuclear Power Engineering in the Slovak Republic document with a separate document that will indicate the quantities and streams of radioactive waste, or the finally implemented variant to prepare an update of the Strategy of the Final Stage of the Peaceful Utilization of Nuclear Power Engineering in the Slovak Republic document in line with the requirements of the Act No. 143/2013 Coll. dated 21 May 2013, which amended the NNF Act. The preparation of the update of this strategic document began in 2013; it was submitted to

the Government of the Slovak Republic as “Draft of the National Policy and National Programme for Handling of Spent Nuclear Fuel and Radioactive Wastes in the Slovak Republic as an update of the Strategy of the Final Stage of the Peaceful Utilization of Nuclear Power Engineering in the Slovak Republic strategic document”. In July 2015, this document was approved by Government Resolution No. 387; it consisted of two partial documents, namely:

- The National Policy for Handling of Spent Nuclear Fuel and Radioactive Wastes in the Slovak Republic, and
- The National Programme for Handling of Spent Nuclear Fuel and Radioactive Wastes in the Slovak Republic.

### **The Purpose of the Updated Document and Its Breakdown**

The target group of this document is the government, relevant ministries, regulatory and supervisory institutions, holders of licenses in the field of nuclear energy and management with radiation sources, professional and business organisations performing activities related to the peaceful utilization of nuclear power engineering and its final part, or to the management of radioactive materials and disused radioactive sources, and other entities interested in this area or affected by the events in it. The document is an integral part of the national framework; it shall serve as a source of information, a guide for the decision-making process, and a plan for the overall procedure enabling achieving safety in the said process and monitoring its development and progress, informing the public and its involvement in the decision-making process, as well as declaring the fulfilment of obligations of the Slovak Republic arising from the international treaties within the EU, or within the IAEA.

The scope thereof deals with the spent nuclear fuel and all types of radioactive waste in the Slovak Republic, including institutional as well as disused radioactive sources in all phases of their management, from their production to their safe disposal in a repository. It deals with nuclear installations with regard to their decommissioning with the aim of releasing locations, taking into account mutual ties and connections while simultaneously specifying the short-and long-term needs, tasks and partial and strategic goals for the period from 2022 to 2030, with a view to the next period.

The document (138 pages in Slovak version) consists of three main parts:

- National policy;
- Legislative, regulatory and organisational framework; and
- National Programme for Handling of Spent Nuclear Fuel and Radioactive Wastes in the Slovak Republic.

The structure of the document is as follows:

## **INTRODUCTION**

### **A. THE NATIONAL POLICY FOR HANDLING OF SPENT NUCLEAR FUEL AND RADIOACTIVE WASTES IN THE SLOVAK REPUBLIC**

#### **A.1. The National Policy Principles**

A.1.1. General Principles

A.1.2. Principles Based on Specific Conditions in the Slovak Republic

A.1.3. Application of Policy Principles

#### **A.2. Bases of National Policy**

A.2.1. In the area of SNF management

A.2.2. In the area of disposal of RAW, RMUO and IRAW

A.2.3. In the field of decommissioning of nuclear installations

A.2.4. In the area of funding FSNE and RAW management

#### **A.3. Policy Objectives**

#### **A.4. Procedure for Achieving Policy Objectives**

### **B. LEGISLATIVE, REGULATORY AND ORGANISATIONAL FRAMEWORK FOR HANDLING OF SNF AND RAW**

#### **B.1. Legislative Framework**

B.1.1. Legislation

B.1.2. National Strategies

B.1.3. International and Interstate Agreements, Treaties and Contracts

#### **B.2. Infrastructure and management of National Policy and National Programme**

B.2.1. Organisations and Other Actors Concerned

B.2.2. Powers and Responsibilities

B.2.3. Decision-Making Processes

### **C. NATIONAL PROGRAMME FOR MANAGEMENT OF SNF AND RAW IN THE SR**

#### **C.1. Description of Nuclear Installations and Origin of Spent Nuclear Fuel and Radioactive Waste**

C.1.1. Nuclear installations for Electricity Generation

C.1.2. Non-Reactor Nuclear Installations

C.1.3. Institutional RAW and RMUO

**C.2. Management of SNF and RAW in Slovakia**

C.2.1. Inventory of SNF and RAW

C.2.2. SNF Management

C.2.3. RAW Management

C.2.4. IRAW and RMUO Management

**C.3. Decommissioning of NI**

C.3.1. General strategy for the decommissioning of nuclear installations

C.3.2. Decommissioning of A1 NPP

C.3.3. Decommissioning of V1 NPP

**C.4. RAW Repositories**

C.4.1. National RAW Repository

C.4.2. Deep Geological Repository

C.4.3. The main steps in the development of DGR for the near future

**C.5. Education, Science and Research**

C.5.1. Education

C.5.2. Area of Research, Development and Demonstration Activities

**C.6. Transparency and Public Involvement**

C.6.1. Legal Framework for Public Information and Involvement

C.6.2. Public Information and Participation Procedures

C.6.3. Potential for communication with the local authorities on the final stage of the NPP

**C.7. Funding of the Final Stage of Nuclear Power Engineering (FSNE)**

C.7.1. FSNE-Funding Philosophy

C.7.2. Funds for FSNE, RMUO and Radioactive Sources

C.7.3. Decommissioning Costs of NI

C.7.4. Costs for the Management of SNF

C.7.5. Costs of Deep Geological Repository

C.7.6. The costs of decommissioning of the non-reactor nuclear installations and costs of closure of NRAWR

- C.7.7. Costs of Disposal of RMUO
- C.7.8. Financial Guarantees for Radioactive Sources
- C.7.9. Historical Debt
- C.7.10. Valuation of the Funds of the National Nuclear Fund
- C.7.11. Methodology for Calculating Mandatory Contributions and Payments to the NNF
- C.7.12. Provision of funds from the NNF
- C.7.13. Expected development of NNF resources for the FSNE
- C.7.14. Expected impacts of the National Programme
- C.8. Tasks and objectives**
- C.9. Key Indicators for Monitoring Progress**
  - C.9.1. Key Indicators for Monitoring Progress
- C.10. References**
- C.11. Annex (List of recommendations, suggestions and good practice of the ARTEMIS mission to Slovakia)**

List of abbreviations used in this extract:

DGR	Deep Geological Repository
EU	European Union
FSNE	The final stage of nuclear power engineering
IAEA	International Atomic Energy Agency
IRAW	Institutional Radioactive Wastes
ME SR	Ministry of the Environment of the Slovak Republic
MoE SR	Ministry of Economy of the Slovak Republic
NI	Nuclear installation
NNF	National Nuclear Fund
NPP	Nuclear Power Plant
NRA SR	The Nuclear Regulatory Authority of the Slovak Republic
NRAWR	National Radioactive Waste Repository in Mochovce – nuclear installation
RAW	Radioactive waste
RMUO	Radioactive materials of unknown origin
SNF	Spent nuclear fuel