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THE CONTROL OF SAFETY OF RADIOACTIVE WASTE MANAGEMENT AND DECOMMISSIONING IN HUNGARY

1. NATIONAL FRAMEWORK FOR MANAGEMENT AND REGULATION OF RADIOACTIVE WASTE AND DECOMMISSIONING

1.1 National framework

1.1.1 Overview of national policy

On 1 June 1997 the Act CXVI of 1996 on Atomic Energy entered into force in Hungary, expressing the national policy in the application of atomic energy. It regulates among others the basic aspects of radioactive waste management and authorises the Government and the competent Ministers to issue executive orders specifying the most important requirements in this field.

The Act requires that a licence for the application of atomic energy shall be granted only if the safe interim storage or final disposal of the radioactive waste and spent fuel generated by the licensed activity can be assured in accordance with the most recent proven results of science, internationally accepted norms, as well as experience.

The Republic of Hungary was among the first to sign the Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management, established under the auspices of the International Atomic Energy Agency, on 29 September 1997, and ratified it on 2 June 1998. The Convention was promulgated in Act LXXVI of 2001. In order to fulfil the obligations of Article 32 of the Convention Hungary presented national reports to the first and second review meetings and participated in the review processes.

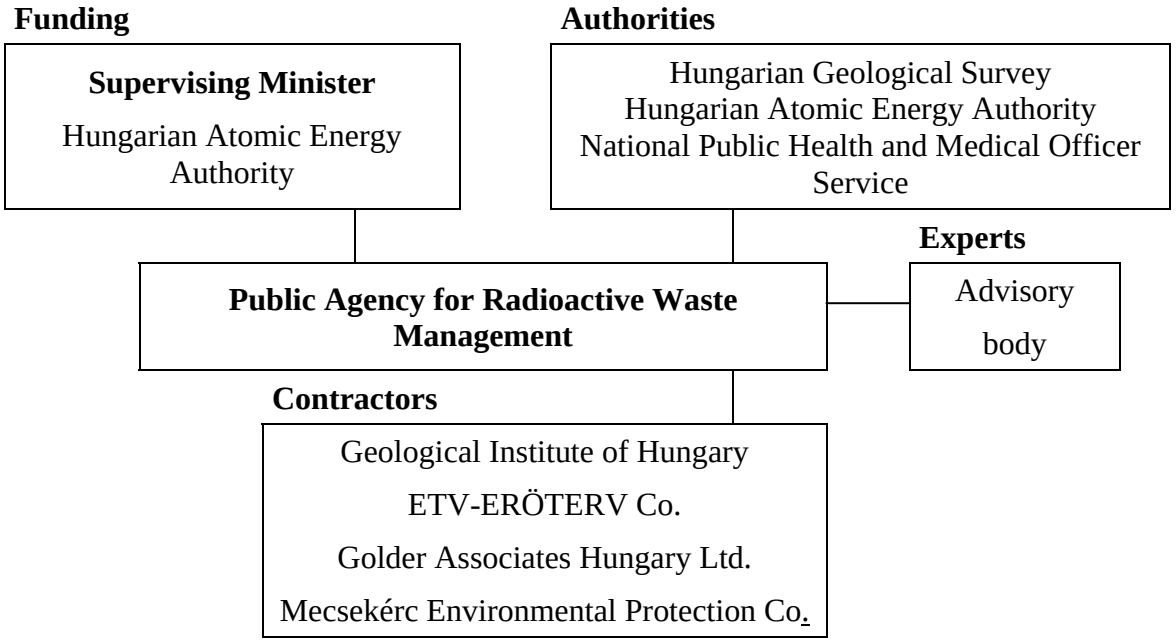
1.1.2 Overview of relevant institutions

According to the Act on Atomic Energy and Governmental Decree 240/1997. (XII.18.) Korm.* the Central Nuclear Financial Fund (CNFF) has been set up

* Korm. is the abbreviation of Kormány, that is government in English.

on 1 January 1998 to finance radioactive waste disposal, interim storage and disposal of spent fuel as well as decommissioning of nuclear facilities. As required by the Act, the Government authorised the Director General of the Hungarian Atomic Energy Authority (HAEA) to establish the Public Agency for the Radioactive Waste Management (PURAM), now in operation since 2 June 1998. The Minister supervising the HAEA has jurisdiction over the Fund, while HAEA is responsible for its administration.

PURAM performs the tasks related to the final disposal of radioactive waste, as well as to the interim storage and final disposal of spent fuel, and to the decommissioning of nuclear facilities. The scheme below illustrates the organisational chart of radioactive waste disposal in Hungary.



1.2 National, technical regulatory organisation(s)

1.2.1 Regulatory function

Key organisations with regulatory functions are the following:

The Minister of Health, through the National Public Health and Medical Officer Service (NPHMOS) performs the regulatory tasks with respect to radiation safety. NPHMOS is the responsible regulatory body for licensing and supervising the siting, construction, commissioning, operation, modification and closure of a radioactive waste disposal facility.

HAEA is the nuclear safety regulatory body. Facilities for the interim storage or final direct disposal of spent fuel are – as defined by the Act on Atomic Energy – nuclear facilities, falling under the regulatory competence of the HAEA. The HAEA has also regulatory tasks in connection with radioactive waste collection, handling and

treatment on the site of nuclear facilities as well as in safeguards, international transportation, packaging and recording of radioactive materials.

The Act on Atomic Energy authorises also the relevant Ministers to regulate various aspects of the application of atomic energy, falling into their scope of competence. In that undertaking they are supported by their appropriate organisations (see 1.2.2).

1.2.2 Organisation and resources

In radioactive waste management the licensing authority is the National Public Health and Medical Officer Service (on behalf of the Minister of Health). It is responsible also for the inspection and enforcement, based on a countrywide network. It is supported by the National Research Institute for Radiobiology and Radiation Hygiene.

In the licensing procedure all other public administration organisations participate as so-called special authorities, in their scopes of authority and responsibility identified by separate legal regulations. In accordance with the Act on Atomic Energy the responsible Ministers are enforcing – through their organisations – the following aspects in the licensing procedures:

a. through the National Headquarters of the Police: physical protection, the public security and domestic order;
b. through the Directorate General for National Emergency Management: the fire protection and emergency preparedness;
c. through the Veterinary and Food Control Services: food, plant and animal hygiene, as well as soil protection;
d. through the environmental protection inspectorates: environment protection, nature conservation and water quality protection;
e. through the Hungarian Geological Survey: geology;
f. through the building authority competent for the area: regional planning and building; and
g. through the Hungarian Mining Office: mining technology and mining safety.

2. REGULATORY ARRANGEMENTS

2.1 Primary legislation and general regulation

The most important laws, governmental decrees and ministerial orders are the following:

a. Act CXVI of 1996 on Atomic Energy;

b. Governmental Decree 114/2003. (VII. 29.) Korm. on the Scope of Duty, Authority, and Jurisdiction of Imposing Penalty of the Hungarian Atomic Energy Authority, and on the Activities of the Atomic Energy Co-ordination Council;

c. Governmental Decree 240/1997. (XII. 18.) Korm., on establishment of the organisation designated for implementing radioactive waste disposal and spent fuel, as well as decommissioning of nuclear installations, and on the financial source performing these tasks;

d. Governmental Decree 89/2005. (V. 5.) Korm. on the nuclear safety requirements of nuclear facilities and the related regulatory activities;

e. Governmental Decree 124/1997. (VII. 18.) Korm., on radioactive materials as well as equipment generating ionising radiation, exempted from the scope of the Act CXVI of 1996 on Atomic Energy;

f. Order of the Minister of Public Welfare 23/1997. (VII. 18.) NM defining the exemption levels (activity concentrations and activities) of radionuclides;

g. Order of the Minister of Health 16/2000. (VI. 8.) EüM on the execution of certain provisions of the Act CXVI of 1996 on Atomic Energy;

h. Order of the Minister of Health, Social and Family Affairs 47/2003. (VIII. 8.) EszCsM on certain issues of interim storage and final disposal of radioactive wastes, and on certain radiohygiene issues of naturally occurring radioactive materials concentrating during industrial activity;

i. Order of the Minister of Industry, Trade and Tourism 62/1997. (XI. 26.) IKIM on the geological and mining requirements for the siting and planning of nuclear facilities and radioactive waste disposal facilities;

j. Order of the Minister of Justice 14/2005. (VII. 25.) IM on the operation and administration of the Central Nuclear Financial Fund.

General regulations – beyond those contained in the Act on Atomic Energy Act and its executive orders – are laid down in the Act LIII of 1995 on the General Rules of the Protection of the Environment, including the regulation of public hearings.

2.2 Regulations concerning specific activities or facilities

2.2.1 Radioactive waste management

As prescribed by the Act CXVI of 1996 on Atomic Energy, the Parliament's prior approval (decision-in-principle) is required to initiate the establishment of a radioactive waste disposal facility.

No specific regulations and guidance were issued yet on radioactive waste management, but the above mentioned Order of the Minister of Health, Social and Family Affairs 47/2003. (VIII. 8.) EszCsM has special attachments containing the system of waste classification, the requirements of siting, design and safety assessment of repositories. The general research aspects for geological site suitability of nuclear

facilities and radioactive waste disposal facilities are specified in the Order of the Minister of Industry, Trade and Tourism 62/1997. (XI. 26) IKIM. Technical guidance is also given to the radioactive waste generators, outlining the main requirements of waste acceptance.

2.2.2 Decommissioning

Governmental Decree 89/2005. (V. 5.) on the nuclear safety requirements of nuclear facilities and the related regulatory activities has special annexes with detailed codes regulating the safety and licensing of nuclear facilities, and applying also to the management of radioactive waste in the nuclear facilities and to the management of spent fuel,as well as to decommissioning. The Nuclear Safety Codes are the following:

Regulatory procedures for nuclear power plants;

Quality management of nuclear power plants;

Design requirements for nuclear power plants;

Safety requirements for the operation of nuclear power plants;

Nuclear safety code for research reactors;

Nuclear safety code for spent fuel interim storage facilities.

2.3 Guidance on implementation

2.3.1 Radioactive waste management

See 2.2.1

2.3.2 Decommissioning

Nuclear safety requirements related to nuclear facilities (including their decommissioning) are contained in the Nuclear Safety Codes. The methods recommended for meeting the requirements were set forth in legally binding guidelines. According to our present legal system, these recommendations have to be published now in the form of legally not binding guides, issued by the Director General of the HAEA. An overall plan was prepared for the review of the existing 91 guidelines and for their publication as guides. The review of the 91 documents is a complex task, which may last for several years. In 2005, the Director General of the HAEA published 18 new or revised guides. Some of these documents are related to the management of radioactive waste and spent fuel in nuclear facilities and to decommissioning.

3. STATUS, STRATEGIES AND CURRENT ISSUES AT THE NATIONAL LEVEL

3.1 Status

3.1.1 Waste classification and quantities

I. General viewpoints of classification of radioactive wastes:

1. Radioactive waste is qualified as low and intermediate level radioactive waste, in which the heat production during the disposal (and storage) could be neglected.
   a) Low and intermediate level radioactive waste is short-lived, in which the half-life of the radionuclides is 30 years or less, and it contains long-lived alpha emitter radionuclides only in limited concentration (this concentration is 4000 Bq/g in the case of collecting packaging, and 400 Bq/g as average for the whole quantity of waste).
   b) Low and intermediate level radioactive waste is long-lived, in which the half-life of the radionuclides and/or the concentration of the alpha emitter radionuclides exceed the limits for short-lived radioactive waste.

2. Radioactive waste is high level waste, the heat production of which shall be considered during design and operation of storage and disposal.

3. Within the above classification the authority can prescribe more detailed classification for the low, intermediate and high level radioactive wastes.

II. Viewpoints of classification for low and intermediate level radioactive wastes:

1. The classification of the radioactive waste into low and intermediate level classes shall be performed based on the activity-concentration and exemption activity-concentration (EAC) of the radioisotope contained in it (Table 1).

Table 1

Radioactive waste class	Activity concentration (Bq/g)
Low level	1 EAC – 10^3 EAC
Intermediate level	> 10^3 EAC

2. If the radioactive waste contains more radioisotopes, then the classification shall be performed as follows (Table 2):

Table 2

Radioactive waste class	Activity concentration ratio
Low level	$\sum_i \frac{AC_i}{EAC_i} \leq 10^3$
Intermediate level	$\sum_i \frac{AC_i}{EAC_i} > 10^3$

where AC_i is the activity-concentration of the i^{th} radioisotope contained in the radioactive waste, while the EAC_i is the exemption activity-concentration of the i^{th} radioisotope.

Quantities of radioactive waste and spent fuel:

I. Yearly arising quantities

a) LILW from the NPP (4 units)
   – solid waste 190 m^3
   – liquid waste 270 m^3
b) Spent fuel from the NPP (4 units) 372 assemblies
c) other applications 20-30 m^3

II. Total amount

a) LILW from the NPP (operation and decommissioning) 39 000 m^3
b) Spent fuel from the NPP 11 100 ass.

The total quantity of waste from the Paks NPP has been estimated on the basis of a 30-year operating lifetime and waste production rates recorded to date during operation, pending on the waste treatment technology to be applied.

It has been assumed that the total decommissioning waste as conditioned for disposal will comprise about 17 000 m^3.

3.1.2 Installations in a decommissioning phase

There are no installations in the decommissioning phase at present in Hungary.

3.2 National strategies

3.2.1 Waste management

3.2.1.1 Low and intermediate level waste

In 1976, a radioactive waste treatment and disposal facility at Püspökszilágy was commissioned to condition and dispose of institutional LILW waste. The Radioactive Waste Treatment and Disposal Facility is a near-surface type repository with concrete trenches and disposal wells.

It was not intended to dispose there of radioactive waste from the NPP. The concept, laid down in the late 1960s for the management of radioactive waste of VVER type NPPs, was to store the waste on site and postpone the decision on conditioning and disposal until the decommissioning stage. This concept was revised by the competent Hungarian organs and a site selection started as early as 1983 with the aim to construct a LILW repository. This procedure was interrupted in 1990 due mainly to lack of public acceptance. In 1993 a new project was launched and its realisation is now in progress.

3.2.1.2 Spent fuel

The Paks NPP, just as other East European VVERs, was supplied with fuel by the Soviet Union. As part of the relevant agreement, the Soviet Union undertook to take back all spent fuel.

In 1992, however, Russia passed a legislation prohibiting the import of foreign spent fuel without sending back the high level waste and other products originating from the reprocessing as it was the case until that time for Hungary. Since 1992 the reshipment required therefore lengthy, case by case negotiation. At the same time Ukraine became a transit state and a trilateral governmental agreement was concluded between Russia, Ukraine and Hungary to provide an appropriate legal framework for the shipments. With storage space in its spent fuel pools running low, and future acceptance of spent fuel by Russia uncertain, the Paks NPP awarded a contract to GEC Alsthom Engineering Systems in 1992 for the construction of a modular vault dry storage (MVDS) system. In September 1997 the first fuel assemblies were received by the facility having now 11 vaults (each for 450 assemblies).

The interim storage of the spent fuel offers the possibility for Hungary to follow the “wait-and-see” strategy in closing the nuclear fuel cycle.

3.2.1.3 High level waste

Due to the interim storage of the spent fuel and the “wait and see” strategy in the back end of the fuel cycle there is no immediate need to establish a HLW repository before the middle of the century. However, as the HLW site selection process requires a very long period of time, exploratory work has been done in a clay-stone formation and

– based on existing data – a country-wide screening took place that confirmed the clay-stone as a potential site.

3.2.2 Decommissioning

Decommissioning is not a current issue for the Hungarian nuclear facilities. Though the design lifetime of the nuclear power units at Paks NPP was 30 years, a lifetime extension project is now in preparation. Nevertheless, the safety regulations require a preliminary decommissioning plan already during the operation of the facility, and for the purposes of funding, a cost estimate must be prepared too. To this end, a study was ordered from the Slovakian company, DECOM, investigating and comparing various decommissioning strategies for the nuclear power plant. The preferred option was to defer dismantling and site clearance for 70 years and to maintain the plant in a state of "supervised closure" in the interim. This option is the basis of the decommissioning cost calculations.

3.3 Issues at national level

3.3.1 Waste management

3.3.1.1 Low and intermediate level waste

The site selection project mentioned in 3.2.1.1. identified a potentially suitable site at Bátaapáti (Üveghuta), in a granitic host rock for a repository in mined cavities, 200-250 m below surface.

In 2001 a long-term research project and a research plan was elaborated and approved. There was a final report prepared on the performed geological investigations at the end of 2003, the main statements of which were the following: „The Bátaapáti (Üveghuta) site complies with all the requirements set forth in the Order (the relevant regulation), and thus, from geological point of view it is suitable for final disposal of low and interim level radioactive wastes." The competent geological authority, the South-Transdanubian Regional Office of the Hungarian Geological Service, has accepted this report by means of a resolution.

In 2004 a research program for 2004-2007 was prepared to select the exact place of the facility in the host rock and to collect the data necessary for the licensing and establishment of the facility.

The research work was supported from the beginning by the population of Bátaapáti and its vicinity. 75 per cent of the inhabitants of Bátaapáti took part in a local referendum held in July 10, 2005, and accepted the construction of the repository with a majority of more than 90 per cent. This decision was supported by council resolutions of the local governments of the surrounding settlements.

According to Section 7 (2) of the Act on Atomic Energy, for launching the preparatory work to construct a repository of radioactive wastes, a prior approval in

principle of the Parliament is necessary. The research programme for the final disposal of low and intermediate level radioactive waste in the area of Bátaapáti reached in 2005 such a degree of preparedness that requesting the approval of the Parliament became possible. The approval in principle of the Parliament, of November 21, 2005, certified that construction of the facility for final disposal of radioactive waste serves the interest of the society in large.

3.3.1.2 High level waste

The exploratory works, mentioned in 3.2.1.3 were executed in a clay-stone formation (the Permian Boda Claystone Formation), found in connection with the uranium mining activities, accessible from the mine in a depth of 1100 m. The uranium mine was to be closed because it was depleted, so the Government took the decision that the clay-stone should be explored as far as possible before the closure of the mine. A research programme was carried out and in 1998 it confirmed the preliminary suitability of the formation. In 2003, after the closure of the mine a new research programme was launched to select a site for an underground research laboratory in the clay-stone.

3.3.2 Decommissioning

In the case of Paks NPP no preliminary decommissioning plan was originally made. This situation was corrected in the early 1990s and since that time it has been updated regularly.

The Periodic Safety Review (2003) of the Budapest Research Reactor prescribed that a preliminary decommissioning plan be prepared for the facility. In the case of the Training Reactor this problem will be solved during the next Periodic Safety Review (2007). The IAEA effectively assists/supports these activities in the form of expert missions.

The Interim Spent Fuel Storage Facility was already designed by taking into account all relevant requirements of decommissioning and it has an adequate preliminary decommissioning plan.

4. CURRENT ISSUES AND PRIORITIES FOR THE REGULATOR

4.1 Waste Management

4.1.1 Issues and priorities

The regulatory evaluation of the safety upgrading of the Radioactive Waste Treatment and Disposal Facility in Püspökszilágy and the licensing process of the new LILW repository starting in 2006 will be a great challenge to the licensing authorities.

4.1.2 Developments in policy and regulation

As yet, there is no decision on the back-end of the fuel cycle, but - in order to calculate the future costs of radioactive waste and spent fuel management, as well as to assure the necessary funding - some assumptions need to be made. As a reference scenario the postulation of direct disposal of the spent fuel assemblies in Hungary was accepted.

In the foreseeable future a strategy for the fuel cycle back-end should be elaborated. In the course of the elaboration of the strategy it is worth while to examine various possibilities, including the shipment of spent fuel abroad.

4.2 Decommissioning

4.2.1 Issues and priorities

As mentioned in 3.2.2, decommissioning is not a current issue for the Hungarian nuclear facilities. Nevertheless this question has been covered in regulations, as the final phase of the life-cycle of the installations. As for all other phases, it requires a nuclear safety licence. For decommissioning, a multi-step licensing procedure is established, where the first step is to obtain the authorities' consent to terminate operation. A further requirement is a valid environmental protection licence based on environmental impact assessment and public hearing. As in all phases of the life-cycle of a facility, radiation protection authorities are involved in these licensing processes, and they license separately the appropriate radiation protection programme and radiation protection organisation. During the dismantling, decontamination and other steps, an ongoing task of the authority will be the control of the radiation situation within the facility and around it, and the monitoring of personal doses as well as the discharges and the radiation in the environment. Emergency plans have to be updated with new or likely scenarios and any necessary organisational changes required must be adjusted accordingly.

4.2.2 Developments in policy and regulation

The decommissioning plan shall be regularly revised in accordance with the regulations in force; and the results of the revision are to be submitted to the Hungarian Atomic Energy Authority. Based on the acquired experience a more detailed regulation might be necessary before the elaboration of the finalised decommissioning plan.

5. RESEARCH AND DEVELOPMENT PROGRAMME BY THE REGULATOR FOR BOTH WASTE MANAGEMENT AND DECOMMISSIONING

5.1 Functions

As regulated in the Act on Atomic Energy, technical support serving the regulatory control of the safe use of atomic energy shall be funded from the central budget.

In order to support its activities, the nuclear safety regulatory authority, the HAEA has concluded agreements with several scientific institutions. Such agreements establish its co-operation with the KFKI Atomic Energy Research Institute, the Institute of Nuclear Techniques at the Budapest University of Technology and Economics, the Department of Physical Chemistry at the Veszprém University, the Electrical Power Research Institute Ltd., and the Institute of Isotopes and Surface Chemistry.

In special cases, the tasks of the licensing authority of radioactive waste disposal facilities, the regional radiological centres of the National Public Health and Medical Officer Service are supported by the National Research Institute for Radiobiology and Radiohygiene.

5.2 Contents of R&D plans

The R&D plans discussed below are financed from the Central Nuclear Financial Fund.

5.2.1 Waste management

5.2.1.1 Low and intermediate level waste treatment

A liquid waste treatment technology is under development in Paks NPP. The aim is to remove cobalt, boron and cesium from evaporator concentrates. The possibility of application of other volume reducing technologies (incineration, supercompacting) has also been studied.

5.2.1.2 Low and intermediate level waste disposal

Most R&D performed in Hungary on LILW disposal served the identification of a suitable site for either a near surface or a mined cavity type repository, including site investigations, laboratory analysis of borehole samples, determination of rock characteristics (sorption, water permeability, isotope migration rates, etc.) and performance assessment.

Other important fields of R&D include waste characterisation, waste acceptance criteria, QA/QC programme and facility design.

5.2.1.3 High level waste

Based on preliminary assessments (see 3.3.1.2) the use of Permian Boda clay-stone formation in the Mecsek Mountain area is considered suitable for high level waste disposal. To evaluate the suitability of this formation as a location for a waste repository, systematic investigations are carried out to explore the clay-stone.

5.2.1.4 Back-end of the fuel cycle

Hungary will launch a long term research project comprising the major aspects of the back end of the fuel cycle in order to be prepared for a decision on the closure of the fuel cycle, by reprocessing (eventually supported by transmutation or other methods) or by direct disposal.

5.2.2 Decommissioning

Currently the R&D activity in this field is very limited, it comprises only the establishment of a decommissioning database for the nuclear power plant.

6. FINANCING OF RADIOACTIVE WASTE MANAGEMENT AND DECOMMISSIONING

According to the Act CXVI of 1996 on Atomic Energy the licensee, or in the case of budgetary organisations, the central budget shall be liable to cover the costs of the final disposal of radioactive waste, as well as the interim storage and final disposal of spent fuel, and of the decommissioning of a nuclear facility. The Act established the Central Nuclear Financial Fund to realise this goal. The relevant rules of the Act are the following:

> "Section 62. (1) The Central Nuclear Financial Fund (hereinafter the Fund) is a separate state fund pursuant to Act XXXVIII of 1992 on Public Finance exclusively earmarked for financing the construction and operation of disposal facilities for the final disposal of radioactive waste, as well as for the interim storage and final disposal of spent fuel, and the decommissioning (demolishing) of nuclear facilities.
> (2) The member of the Government exercising supervision over the HAEA shall dispose over the Fund. The manager of the Fund is the HAEA.
> Section 63. (1) The licensees are obliged to cover the costs of the final disposal of radioactive waste, as well as of the interim storage and final disposal of spent fuel, and of the decommissioning (demolishing) of nuclear facilities by contributing to the Fund.
> (2) In the case of nuclear facilities, the amount of payment shall be determined in a way that it fully covers all the costs arising as a result of the final disposal of radioactive waste and of the interim storage and final disposal of spent fuel generated during the total operating period of the facility and at the time of decommissioning, as well as all the costs related to the decommissioning of the nuclear facility.
> (3) The amount of payments is determined by the law on the annual budget on the basis of the cost estimate prepared by the organisation identified pursuant to

Section 40 taking into consideration the obligations under Subsection (2) and reviewed by the HAEA and - in relation to a nuclear power plant - by the Hungarian Energy Office.
(4) The payments made by the licensees may be accounted for within the category of other costs. In the case of a nuclear power plant, these should be taken into account when determining the price of electric energy.
(5) Payments made pursuant to the provisions under Subsections (1) and (2) constitute the source of income of the Fund.
Section 64. (1) The provisions on the separate state financial funds of Act XXXVIII of 1992 on Public Finance, amended several times, shall be applied to the financial management of the Fund, with the deviations included in this Act.
(2) In order to ensure that the Fund maintains its value, it shall receive subsidies from the central budget in a sum calculated on the average assets of the Fund in the previous year using the average of the central bank base rate in the previous year.
(3) The sum referred to in Subsection (2) shall be made available to the Fund by January 31 of every year.
(4) The assets of the Fund shall be kept separated in the unified treasury account.
(5) The manager of the Fund shall use the accumulated assets through the organisation identified in Section 40 exclusively for the purposes defined in Subsection (1) of Section 62."

A long-term plan (lasting up to the decommissioning of the various nuclear facilities), a medium-term plan (for five years), and an annual work schedule on the use of the Fund are being prepared by the Public Agency for Radioactive Waste Management. The long- and medium-term plans are to be reviewed annually and revised as required. The long- and medium-term plans and the annual work schedule are to be approved by the Minister supervising the Hungarian Atomic Energy Authority.

The payments into the Fund are defined in accordance with these plans. The annual payments into the Fund by Paks Nuclear Power Plant are proposed by the Minister supervising the Hungarian Atomic Energy Authority, in the course of the preparation of the Act on the Central Budget. Payments are based upon submittals prepared by the Public Agency for Radioactive Waste Management and approved by the Hungarian Atomic Energy Authority and by the Hungarian Energy Office. Payments by Paks Nuclear Power Plant are taken into account when the price of electric energy is being determined.

The institutes disposing of radioactive waste in the Radioactive Waste Treatment and Disposal Facility are also liable to contribute to the Fund in accordance with the official price list contained in a ministerial order. For nuclear installations financed from the central budget (research reactor and training reactor), the sources required to cover the payment into the Fund are provided by the central budget, when they arise.

The rate of payments into the Fund shall be specified in such a way as to provide appropriate sources for all costs of radioactive waste and spent fuel management and the decommissioning of nuclear facilities. These sources also provide coverage for public control and information activities as well as for the operational expenses of the existing repository.

ACRONYMS AND ABBREVIATIONS

HAEA	Hungarian Atomic Energy Authority
NPHMOS	National Public Health and Medical Officer Service
PURAM	Public Agency for Radioactive Waste Management
CNNF	Central Nuclear Financial Fund