## Vanda Lamm Nuclear Legislation in Hungary

# 1. General framework of nuclear legislation<sup>1</sup>

The first step of nuclear legislation in Hungary goes back to the 1960s when the Government adopted Decree 10 of 1964 relating to radioactive substances and preparations. The 1964 Decree was in force until a comprehensive act on atomic energy was adopted in 1980 (Act 1. of 1980), which was in effect until 1996 when it was replaced by Act CXVI of 1996. The Atomic Energy Act still in place.

The preparation for an act on atomic energy was started at practically the same time as Hungary's engagement in executing its nuclear program, at the beginning of the 1970s. The agreement with the former USSR concerning the erection of a nuclear power plant in Hungary was concluded on 28 December 1966, and the construction works at Paks started in 1974.<sup>2</sup> The four units of Paks Nuclear Power Plant are VVER-440/213, belonging to the second generation of Soviet-designed power stations; they were put into commercial operation between 1983 and 1987.<sup>3</sup> The total installed capacity of Paks Nuclear Power Plant is 1889 MWe.<sup>4</sup> In Hungary, the nuclear power's share of electricity production is almost 40%. Still, Paks is the only nuclear power plant in Hungary, operates as a shareholders' company under the name of MVM (Magyar Villamosművek Zrt.)Paks Nuclear Power Plant Ltd. It should be noted that in Hungary, there are two research reactors and three facilities used for the short term and long-term storage of radioactive wastes and nuclear fuels.<sup>5</sup>

<sup>&</sup>lt;sup>1</sup> That paper treats Hungarian legislation on peaceful utilization of nuclear energy and does not intend to deal with nuclear disarmament issues, although Hungary is a contracting party to the major nuclear disarmament conventions; thus it ratified the Treaty Banning Nuclear Weapons Tests in the Atmosphere, in Outer Space and under Water; the Treaty on the Non-Proliferation of Nuclear Weapons; the Treaty on the Prohibition of the Emplacement of Nuclear Weapons and other Weapons of Mass Destruction on the Sea-Bed and the Ocean Floor and in the Subsoil there of; and the Comprehensive Test Ban Treaty.

<sup>&</sup>lt;sup>2</sup> Paks is a town with 19000 inhabitants situated in the heart of Hungary 115 km south of Budapest on the right bank of the Danube river. The Power Plant is 5 km from the town.

<sup>3</sup> Paks-1 in August 1983, Paks-2 in November 1984, Paks-3 in December 1986, Paks-4 in November 1987. The design lifetime of the reactors were 30 years, however, a feasibility study on extending the operational lifetimes of the units by 20 years was carried out at the beginning of the 2000s and on the basis of the findings in November 2005, the Hungarian Parliament gave its consent to a 20-year life extension project for Paks Nuclear Power Plant. A service life extension of Paks 1 with 20 years was approved in 2012 by the HAEA. Similarly, service life extension is planned for the other units too. Thus, the four units scheduled closure has been considerably extended.

<sup>&</sup>lt;sup>4</sup> The four units capacity were increased first in the 1990s than between 2002 and 2009.

<sup>&</sup>lt;sup>5</sup> The Budapest Research Reactor of 10 MW started up in 1959, operated by the Centre of Energy Research of the Hungarian Academy of Sciences; that reactor is not only one of the most significant research equipment of physics in Hungary, but it also produces radioactive isotopes used primarily for medical (diagnostic) purposes. The other reactor is the training reactor of the Budapest University of Technology and Economics of 100 MW operated by the Institute of Nuclear Techniques of the University. The three storage facilities are operated by the State owned Public Limited Company for Radioactive Waste Management (originally it was called Public Agency for Radioactive Waste Management) established by the Hungarian Atomic Energy Authority in 1998. The Radioactive Waste Treatment and Disposal Facility at Püspökszilágy was built for low- and intermediate-level wastes, and it became full in 2005. The National Radioactive Waste Repository at Bátaapáti for the final disposal of low- and intermediate-

After many years of elaboration, it was only in 1996 that a comprehensive draft law on nuclear energy was finalized and was submitted by the Government to the Hungarian Parliament, which on 10 December 1996 adopted the new Atomic Energy Act (Act CXVI of 1996). The Act entered into force on 1 June 1997, with the exception of its provisions on the Central Nuclear Financial Fund (Art. 62-62), which entered into force half a year later, on 1 January 1998. The Act aims to regulate all activities connected with the peaceful utilisation of nuclear energy with the exemption of some activities, which due to the small extent of the risk involved do not create hazards to human life and health. Since the Act in some respect is a legislative framework which sets forth the basic principles governing the peaceful use of nuclear energy, its enactment made it necessary to adopt a series of new legislative provisions and to amend certain laws and regulations.

The Act governs the peaceful, safe and secured utilisation of atomic energy. Its fundamental objectives are to protect the population and the environment against the hazards generated by the peaceful uses of nuclear energy, and to improve the safety of all nuclear activities.<sup>6</sup>

Since its adoption, the Atomic Energy Act was amended several times, with some amendments as the consequences of Hungary's accession to international conventions and becoming a member of the European Union. By the amendments, not only were new provisions introduced in the Act, but some very detailed rules have appeared in it as well. As a consequence of these amendments, the Act become a rather complicated piece of legislation, which is still a general framework act, with some issues regulating in detail in the Act itself.

## 2. Central administrative organs and general rules of licensing

The Atomic Energy Act starts with definitions, such as nuclear material, nuclear installation, nuclear wastes, different nuclear activities, etc. From a legal point of view, it is interesting to mention that the Act, instead of the operator of nuclear installations, uses the term of "licensee", who is the legal person possessing the licenses of competent authorities as required for nuclear activities.

The general regime of licensing is regulated in Chapter III of the Act. According to the Act, the Government is primary responsible for the control and supervision of the safe application of nuclear energy, that governmental function is vested on the Hungarian Atomic Energy Authority (hereinafter: HAEA), as well as different ministries concerned thus establishing a divided authority and regulatory regime. The Act envisages a preliminary consent of the Parliament for the construction of a new nuclear installation, including the establishment of

level wastes of nuclear power plant. The third one is the Interim Spent Fuel Storage Facility at Paks for the safe interim storage of the used (spent) fuel assemblies of the nuclear power plant for a period of minimum 50 years, which is required for technical reasons before final disposal.

<sup>7</sup> Till May 2015 the act was amended by twenty-two (!) Acts of Parliament, in the 2000s there were years when the Act was amended three times a year. See Act LVIII. of 2002, Act XLII. of 2003, Act LXXXIII. of 2005, Act CIX. of 2006, Act LXXXII. 2007, Acts XLVI. and LXII. of 2008, Acts XLVII, LVI, and CLIV. of 2009, Act CLII. of 2010, Acts XXIX, LXXXVII. CLXXIV. and CCI. of 2011, Acts CCI. and CCXXIII. of 2012, Acts CI, CCXXVII, CCLII. of 2013, Act XXXV. of 2014, Act VII. of 2015.

<sup>&</sup>lt;sup>6</sup> The Act consists of seven chapters..

<sup>&</sup>lt;sup>8</sup> From the 1st January 2016 the questions connected with radiation safety were transferred from the power of the minister responsible for public health to the competence of the HAEA.

radioactive waste disposal facilities, and for the enlargement of an existing nuclear installation (Section 7. para.2.).

The Hungarian Atomic Energy Authority is the central governmental organ dealing with the use of nuclear energy. The Parliament invested with power the HAEA to perform the regulatory task in the field of nuclear energy. The regulatory function consists of licensing, approuving, inspecting, assessing, reviewing, and enforcing. Under the general regime of licensing, the HAEA is the regulatory body responsible for licensing the siting, construction, enlargement, commissioning, operation, modification, shutting down and decommissioning of nuclear facilities (Sections 12-19.)<sup>9</sup>

The work of the Hungarian Atomic Energy Authority is assisted by a Scientific Council giving opinion on the most important principle of scientific issues arising in connection with nuclear safety, non-proliferation of nuclear weapons, radiation protection and nuclear emergency response. The Council consists of 12 members being nationwide experts in the field of application of nuclear energy. The chair and members of the Scientific Council are appointed and relieved by the minister supervising the Hungarian Atomic Energy Authority.

The Hungarian Atomic Energy Authority coordinates the Hungarian participation in the frame programmes of the European Atomic Energy Community and cooperates with international nuclear organizations, thus with the International Atomic Energy Agency, the OECD Nuclear Energy Agency, Euratom, and other international organizations dealing with the peaceful utilization of nuclear energy.<sup>10</sup>

#### 3. Nuclear liability

In connection with nuclear liability, it should be mentioned that in 1989 Hungary acceded to the 1963 Vienna Convention on Civil Liability for Nuclear Damage (hereinafter: Vienna Convention), which concluded with world-wide aspirations under the aegis of the IAEA. It is also a contracting party to the 1988 Joint Protocol Relating to the Application of the Vienna Convention and the Paris Convention (hereinafter: Joint Protocol), which established a link between the 1963 Vienna Convention and the Convention on Third Party Liability in the Field of Nuclear Energy of 29 July 1960 (known as the Paris Convention). However, Hungary is still not a contracting party to the 1997 Protocol Amending the Vienna Convention (hereinafter: 1997 Protocol), although it was among the first States which signed the Protocol, but the ratification of that instrument is still missing. The other international treaty on nuclear liability elaborated in parallel with the 1997 Protocol, the Convention on Supplementary Compensation for Nuclear

<sup>10</sup> See Government Decree 112/2011 (VII.4.) on the scope of authority of the Hungarian Atomic Energy Authority in relation to European Union obligations and international obligations in connection with atomic energy, on the designation of co-authorities contributing to the regulatory proceeding of the Hungarian Atomic Energy Authority, and on the scientific council assisting the work of the Hungarian Atomic Energy Authority.

<sup>&</sup>lt;sup>9</sup> See also Act CI of 2013 and Act VII of 2015.

<sup>&</sup>lt;sup>11</sup>The Joint Protocol creates treaty relations among States that are contracting parties either to the Paris Convention or to the Vienna Convention thus mutually extending the benefits of the special regime of civil liability for nuclear damage set forth under each Convention to the victims of States belonging to the other convention, and eliminates conflicts which could arise from the simultaneous applications both Conventions to the same nuclear incident. On the Protocol see See O. von Busekist, *A bridge between two Conventions on Civil Liability for Nuclear damage: the Joint Protocol relating to the Application of the Vienna Convention and the Paris Convention*, Nuclear Law Bulletin, No.43.

<sup>&</sup>lt;sup>12</sup> On the 1997 Protocol see V. Lamm, *The Protocol Amending the 1963 Vienna Convention*, Nuclear Law Bulletin, 1998. June, 7-24.

Damage was not even signed by Hungary.<sup>13</sup>

One could say that the provisions of the Act (Sections 48-61) on nuclear liability are in line with the 1963 Vienna Convention and reflect the basic principles of nuclear third party liability set fourth in the convention. That system is based on private law bases and no state responsibility is involved. As it was already mentioned in 1997, the Vienna Convention was amended, introducing a higher compensation amount, broadened the definition of nuclear damage, extended the geographical scope of the Convention, reduced grounds for exoneration, extended prescription periods for personal injuries, etc. Thus, after the ratification of the 1997 Protocol, several provisions on nuclear liability of the Hungarian Atomic Energy Act should be changed.

According to the Act, the liability for nuclear damage is channelled to the licensee (operator) of the nuclear facility; in other words, the licensee of a nuclear installation where the nuclear incident occurs, or in case of an accident during the shipment of nuclear material, only the licensee is liable for nuclear incident. The licensee's liability is strict (no fault) and absolute, although the Act does not use the term of absolute liability. The principle of absolute liability is reflected also in the provisions on exonerations.

The licensee is exempted from liability if the nuclear damage is the consequence of a nuclear incident directly triggered by an unavoidable external cause, outside the scope of activity in the facility, thus armed conflict, war, civil war, armed uprising or a grave natural disaster of an extraordinary character; <sup>17</sup> or if the damage suffered by the injured party was caused by the injured party's gross negligence; or is the consequence of a wilful and unavoidable act or omission of the injured party which was expressly aimed at creating the danger.

The ceiling of the licensee's liability is 100 million SDRs, in case of an incident in a nuclear power plant, but it will be only 5 million SDRs for incidents occurring during transportation of nuclear materials. If the amount of 100 million SDRs proves insufficient for compensation of all victims, an additional amount of 200 million SDRs will be paid by the State

<sup>&</sup>lt;sup>13</sup> The Convention on Supplementary Compensation for Nuclear Damage (concluded in 1997, entered into force on 15 April 2015) establishes a global regime for compensation of nuclear damages by creating treaty relations among States that belong to the Paris Convention, the Vienna Convention or neither, while leaving the Joint Protocol intact, it provides additional sums to compensate victims of nuclear accidents. The entry into force of that Convention was delayed by the fact that according to its Article XX for the entry into force of the instrument, there are two requirements: on the one hand at least 5 States should deposit its instrument of ratification, and those States should have a minimum of 400,000 units of installed nuclear capacity, on the other.

On the Convention see B. McRae, *The Compensation Convention: Path to a Global Regime for Dealing with Legal Liability and Compensation for Nuclear Damage*, Nuclear Law Bulletin, 1998, No. 61, 17-35.

<sup>&</sup>lt;sup>14</sup> These principles are strict and exclusive liability of the operator of a nuclear installation, the operators' obligation to carry insurance or other financial security, limitation of liability in amount and time, jurisdiction ower actions lies exclusively with the courts of the contracting party within whose territory the nuclear incident occured, etc., it should be added that the Paris Convention is reflecting the same principles.

Cf. Sándor, István – Török, Gábor: *Az atomkárért való polgári jogi felelősség szabályozásának sajátosságai*, Jogtudományi Közlöny, 52:(10) 1997, 417-424.

<sup>&</sup>lt;sup>15</sup> <u>Kecskés, G:</u> *The concepts of state responsibility and liability in nuclear law.* Acta Juridica Hungarian Journal of Legal Studies 49:(2), 2008, 221-252.

<sup>&</sup>lt;sup>16</sup> In 2004 the Paris Convention was also amended, however, the Protocol amending the Paris Convention didn't enter into force till May 2015.

<sup>&</sup>lt;sup>17</sup> The grave natural disaster as a ground for exoneration was deleted from the Vienna Convention by the 1997 Protocol.

from public funds. These figures are not totally in line with the 1997 Protocol, since according to that, the liability of the operator may be limited by the Installation State for any one nuclear incident either a) to no less than 300 million SDRs; or b) to no less than 150 million SDRs provided that in excess of that amount and up to at least 300 million SDRs, public funds shall be made available by the Installation State. It is true that the 1997 Protocol has a special provision providing on the phasing in mechanism for a maximum of 15 years from the date of the entry into force of the Protocol, to a transitional amount of no less than 100 million SDRs in respect of a nuclear incident occurring, provided that public funds shall be made available by the Installation State to compensate nuclear damage between that lesser amount and 100 million SDRs. Since the Protocol entered into force in 2003, the provisions on the phasing in mechanism has no relevance any more.

The definition of nuclear damage includes not only loss of life, health impairment, and damage to property, but also costs connected with mitigation of damages and preventive measures, and in both cases, only the costs of reasonable and necessary actions are covered.

Following the world trends of increased emphasis on environmental protection, the Act regulates the question of environmental damage, some types of which it deems to be nuclear damage. Nevertheless, it does not ensure compensation for all environmental damage except in cases of damages to the environment arising concurrently, with loss of life, damage to the physical integrity and health of persons and damage to property. These environmental damages and costs of reasonable measures of reinstatement of the environment (the costs related to all reasonable and required actions carried out for the mitigation or restoration of damages) are principles embodied in conventions connected with the protection of the environment, including the approach that the extent of compensation for environmental damage is essentially equal to the costs of reasonable restoration of the environment.

It is also in view of the rules of international law that the Act has incorporated the provision that the amounts of liability for nuclear damage do not include any interest and other costs likely to be incurred in connection with compensation. This provision is primarily intended to protect the interests of the victims, for the amount of compensation as defined by the Act, i.e. 300 million SDRs, is exclusively available for compensation of the victims, and the costs connected with assessment of damage, registration of victims, judicial proceedings, etc. may not be paid from that amount.

Under the Act the licensee is liable for nuclear damage involving lost, stolen, jettisoned or abandoned nuclear materials for a rather long period, one of 20 years to be counted from the date of the nuclear incident. The period of prescription for other nuclear damage is to be ten years, double the period of prescription in Hungarian tort law and much longer than that established for damages resulting from ultra-hazardous activities. The victims may claim compensation within a 3 year limitation period, which starts on the date when the person suffering damage had knowledge or reasonably ought to have had knowledge of the damage and of the licensee liable for the damage. As it was already mentioned, the 1977 Protocol has extended the prescription period for loss of life or personal injury, and the victims having suffered health impairment have priority, and their right to compensation extinguishes only after thirty years from the date of the nuclear incident. Thus, after the ratification of the 1997 Protocol, the Hungarian law on the time of prescription for nuclear damages has to be amended as well.

The Act stipulates that if two or more facilities are operated at the same site by the licensee, in the perspective of nuclear liability, they are qualified as one nuclear facility.

Some groups of damage are excluded from the special liability regime established by the Act, and the licensee shall be liable for it in accordance with the Civil Code; such is the case if

the damage was caused to the nuclear facility itself or to any property on the site of that facility which is used or intended to be used in connection with that facility, or to the means of transport upon which the given nuclear material was placed at the time of the nuclear incident (Section 50).

According to Section 54. the licensee is obliged to provide for insurance and other financial security up to the amount of 100 million SDRs to the nuclear power plant. The insurer or financial guarantor may not suspend or cancel the insurance or financial security without giving a notice in writing at least two months in advance of the suspension or cancellation to the Hungarian Atomic Energy Authority. In case of transportation of nuclear materials, the insurance or financial security may not be cancelled or suspended during the transportation of nuclear materials. Government Decree 227/1997 (XII. 10.) determines, in detail, the insurance of nuclear installations and the amount of financial security.

Whereas the amounts under the Act were above the individual financial capacity of any insurer working on Hungarian market, the Hungarian Nuclear Insurance Pool has been established by 11 Hungarian insurers in 1996; since that time, the Hungarian Nuclear Insurance Pool underwent several changes and some insurers have left the Pool, others joined to it, thus at the beginning of 2015 seven insurance companies were members of the Pool. <sup>18</sup>

#### 4. Nuclear safety and security

The questions connected with safety and security of nuclear materials and nuclear installations, including the safety disposal of different nuclear wastes have a paramount importance for the civilian utilisation of nuclear energy. These questions are covered by international conventions to which Hungary joined, <sup>19</sup> and by several *soft law* norms (guidelines, safety codes, regulations, etc.) elaborated by international nuclear organizations.

The Atomic Energy Act contains the rules on nuclear safety, nuclear waste and spent fuel, and on nuclear security, and in formulating them, due account was taken of the norms elaborated by international nuclear organizations and of international conventions on that matter. The safety requirements of nuclear installations, controls and competences, etc. of the Nuclear Safety Directorate of the Hungarian Atomic Energy Authority are determined in Government Decree of 118/2011 (VII.11.). Regarding nuclear wastes, the Act expressly stipulates that the licensee is obliged to cover all the costs of the temporary and final disposal of nuclear wastes. (Section 63. para. 1.)

Government Decree 155/2014. (VI. 30) regulates in detail the safety requirements for facilities ensuring the interim storage or final disposal of radioactive wastes, and the same decree covers the corresponding authority competences and activities. That decree was made in compliance with the Council Directive 2011/70/Euratom of 19 July 2011 establishing a Community framework for the responsibility and safe management of spent fuel and radioactive waste. The Decree contains the safety code for storage and disposal facilities, the general requirements for the storage and disposal facilities, and the responsibility of the licensee. Under Section 8 para. 1. of the Decree, the licensee shall assume responsibility for the safe siting, construction, operation, closure, etc. of storage and disposal facilities and compliance with requirements on these activities. If suppliers are involved in safety related activities, the

<sup>&</sup>lt;sup>18</sup> These were: Allianz Hungária Zrt., CIG Pannónia EMABIT Zrt., Generali Biztosító Zrt., Groupama Garancia Biztosító Zrt., HDI Versicherung AG Hungarian Branch, Union VIG Biztosító Zrt., Uniqua Biztosító Zrt.

<sup>&</sup>lt;sup>19</sup> Hungary is a contracting party to the Convention on Nuclear Safety and to the Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management.

contractor's activity does not impair the licensee's responsibility. Still the licensee shall assume the responsibility for preserving the safety of the storage or disposal facility. (Section 11. para.1) The Decree provides that "the licensee shall ensure that until it is responsible for the storage or disposal facility that the appropriate human and financial resources required for the activities become available in due time" (Section 14.)

In Chapter VI the Act envisages establishing a Central Nuclear Financial Fund exclusively destined to finance the construction and operation of facilities for the final disposal of radioactive waste, the interim storage and final disposal of spent fuel, and the decommissioning of nuclear facilities. The financing of the Fund is intended to be secured from regular contributions by the licensees. The Fund is managed as a separate State fund pursuant to Act No. XXXVIII. of 1992 on Public Finance.

The security and the physical protection of nuclear materials and nuclear installations are focusing on the prevention and detection of unauthorized or criminal seizure of nuclear materials, and unauthorized or criminal acts directed to nuclear facilities. In its efforts to strengthen nuclear security, Hungary not only joined the major international conventions on these matters, <sup>20</sup> but in its national law, the necessary legislative measures were also made. Here one could refer to Government Decree 190/2011 (IX. 19) on the physical protection requirements for various applications of atomic energy and on the corresponding system of licensing, reporting and inspection; and to the decrees of the ministers of interior, justice, etc. <sup>21</sup>

### 5. Latest developments – the new Power Plant PAKS II

Although the agenda was to increase Hungary's nuclear power capacity since the 1980s, for various reasons it was only in 2007 that the so-called Teller Project was adopted with the aim to study the possibility and the feasibility to build new nuclear units. On 30 March 2009 on the basis of the findings of the Teller Project, the Hungarian Parliament gave its consent with an owerhelming majority (330 yes, 6 no, 10 abstention) to start to a study of the preparatory measures of building of a unit or units at the site of the Paks Nuclear Power Plant.<sup>22</sup>

The public had little information on the preparatory measures regarding the new nuclear power plant when the representatives of Hungary and the Russian Federation concluded an interstate agreement on the peaceful utilization of nuclear energy in Moscow on 14 January 2014. That agreement contains provisions not only on the cooperation, maintenance and development of the exsiting Paks Nuclear Power Plant, but also on the construction of a new power plant with Russian involvement. The new power plant will have two units, each of which will entail 1200

<sup>23</sup> Pomulgated by Act II of 2014.

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<sup>&</sup>lt;sup>20</sup> Hungary is a contracting party to the Convention on Physical Protection of Nuclear Materials, to the International Convention for the Suppression of Acts of Nuclear Terrorism, and ratified the Amendment of the Convention on Physical Protection of Nuclear Materials, which not yet entered into force.

<sup>&</sup>lt;sup>21</sup> See Decree 47/2012. (X. 4.) of the Minister of the Interior on the police tasks related to the use of atomic energy in the special conditions of acquiring the possession rights of certain materials, equipment and facilities connected with the application of atomic energy, as well as on the procedure for reporting their possession and operation; Decree 7/2007. (III.6.) of the Minister of Justice and Law Enforcement on the rules of accountancy for and control of nuclear materials; Decree 11/2010. (III. 4.) of the Minister of Transportation, Communication and Energy on the registration and control order of radioactive material and related data supply.

<sup>&</sup>lt;sup>22</sup> On 9 May 2012 the General Assembly of the MVM Zrt. which was the owner of the Hungarian Nuclear Power Plant decided to establish a project company with 100% of its ownership, the MVM Pa

ks II. Atomerőmű Fejlesztő Zártkörűen Működő Részvénytársaság (MVM Paks II Nuclear Reactor Development Closed Joint-Stock Company) to deal with the planning, preparatory measures and licences of the new power plant.

MWe, and the first unit is planned to be operational by 2023. Thus, the agreement covered three areas: construction of the new blocks, fuel supplies, and servicing; according to the agreement, Russia would provide Hungary with a loan to finance the construction of the two new blocks; the loan agreement was signed on 1 April 2014 in Moscow;.<sup>24</sup>

The next step was on 9 December 2014, when MVM Paks II Nuclear Reactor Development Closed Joint-Stock Company and the Russian Joint-Stock Company Nizhny Novgorod Engineering Company Atomenergoproekt signed three implementation agreements for two new 1200 MW nuclear reactor units to be constructed at the Paks plant. The agreements detail the key conditions of the Paks II project covering the design, procurement and construction parameters for the new units, the operation and maintenance of the units, the fuel supply and the handling and storage of spent fuel elements. The operation and maintenance of the plant will be carried out by Hungarian workers, and the operator of the new units will be the wholly state-owned Paks Nuclear Power Plant.<sup>25</sup>

According to the loan agreement, the Russian party is lending Hungary 10 billion Euros at variable interest rates to cover 80% of the two new power units project's total costs. The remaining 20% (and all cost overruns) will have to be covered by the Hungarian party.

The repayment of the loans will start after the commissioning of the two units are complete, no later than 15 March 2026. This means that the repayment would be due in any case from the 15 March 2026, even if the units were not commissioned. The repayment is envisaged for 21 years with following instalment: in the first seven years, 25% of the loan is to be repaid in 14 equal instalments, in the second seven years 35% of the loan is due in 14 equal instalments, and in the final seven years 40% of the loan is to be paid in 14 equal instalments. The interest rates were settled as follows: 4.5% for the first seven years, 4.8% for the second seven, and 4.95% for the last seven years. Every year there will be two payment dates: March 15 and September 15; all the payments should be executed in Euros. If Hungary will be in over a 15 day delay with the payments, there will be a heavy penalty, 150% of the original sum. If Hungary can't pay for an extended period (180 days to be precise), the Russian party can demand repayment in full. The complete is a seven will be a payment in full. The complete is a seven will be a payment in full. The complete is a seven will be a payment of the original sum. If Hungary can't pay for an extended period (180 days to be precise), the Russian party can demand repayment in full.

Under the agreement on fuel supply and handling of spent fuel, Hungary will import nuclear fuel exclusively from Russia for 20 years, and the Russian party is assumed to store the spent fuel in Russia for 20 years, or will reprocess them prior to returning them to Hungary.<sup>29</sup>

From the very beginning, the inter-state agreement with the Russian Federation on Paks II was criticized severly by Hungarian opposition parties and by NGOs both for political and environmental reasons.

According to a bill adopted by the Parliament (Act VII of 2015), the whole Project of Paks II has a special importance in view of the national economy of Hungary, and all the documentation, contracts, etc. relating to the Project on the ground of national security and

<sup>&</sup>lt;sup>24</sup> Approved and promulgated by the Hungarian Parliament on 23 June 2014 (Act of Parliament XXIV. of 2014). The bill passed with 110 votes for, 29 against and 19 abstentions; all opposition parties voted against the Russian loan except Jobbik (extreme right party) who abstained.

<sup>&</sup>lt;sup>25</sup> In October 2014, the shares of the project company were sold to the State via the Hungarian National Asset Management Company for HUF 10,157 billion (\$ 41.9 million).

<sup>&</sup>lt;sup>26</sup> Cf. Art. 3. of the loan agreement.

<sup>&</sup>lt;sup>27</sup> Cf. Art. 4. of the loan agreement.

<sup>&</sup>lt;sup>28</sup> Cf. Art. 5. of the loan agreement.

<sup>&</sup>lt;sup>29</sup> Cf. http://www.kormany.hu/en/prime-minister-s-office/news/contracts-signed-on-implementation-of-new-reactor-units-at-the-paks-nuclear-power-plant

intellectual property rights should be kept as classified information for 30 years (Section 5), thus excluding the possibility to having access on any gorund by the public to these documents for the given time-period. It should be added that under Act CXII of 2011 30 years is the maximum of time limit for restriction of access to certain specific information, thus the legislator in the case of Paks II has used the maximum time limit provided by law.

Paks II Project was followed with special attention by the European Union as well in the perspective of European law. Regarding the loan agreement, the question was raised whether is it a form of "state aid," which is forbidden by EU law, or whether it will give Paks II an undue advantage which will distort the Hungarian energy market. The supply agreement caused concerns by Euratom since the Euratom Supply Agency recommends diversified supply of nuclear fuels to EU users.

Since, at the time of this paper's submission, the negotiations with the EU are still in progress, it is difficult to give definite answers to the above mentioned questions.