



HUNGARIAN ATOMIC ENERGY AUTHORITY Nuclear Safety Bulletin

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RECENT DEVELOPMENTS IN NUCLEAR SAFETY IN HUNGARY June 2023

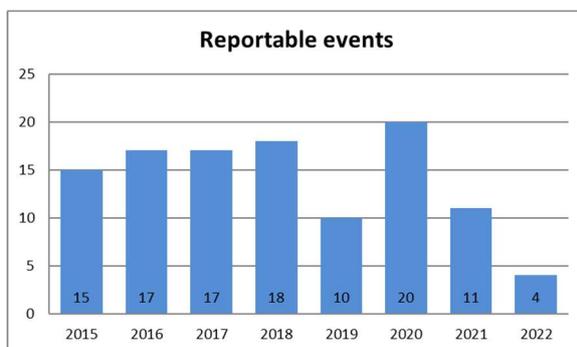
General

2022 annual safety performance assessment of nuclear facilities

The Hungarian Atomic Energy Authority (HAEA) regularly evaluates the safety performance of operators of nuclear facilities. The main sources of data for the assessment are regular reports and event reports of the licensees, the protocols of regulatory inspections including regular and comprehensive inspections focusing on specific areas, and reactive inspections.

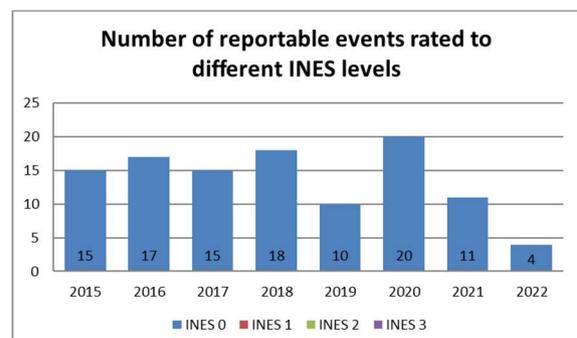
A brief extract is provided below from the annual safety performance assessment. The safety performance data is taken from the first and second quarterly reports of Paks Nuclear Power Plant (Paks NPP) and the first semi-annual reports of the other licensees.

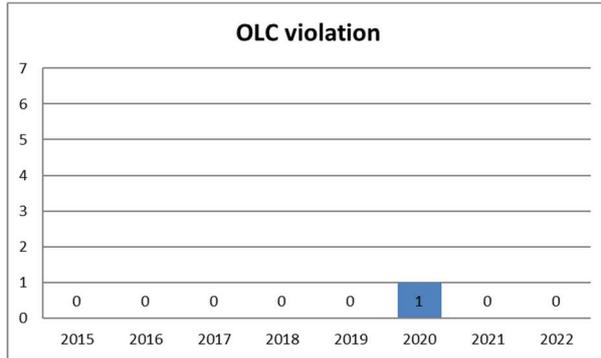
Paks Nuclear Power Plant



In 2022, four reportable events occurred. It can be concluded that the safety of the operating units of the power plant and the entire facility met expectations for the entire year.

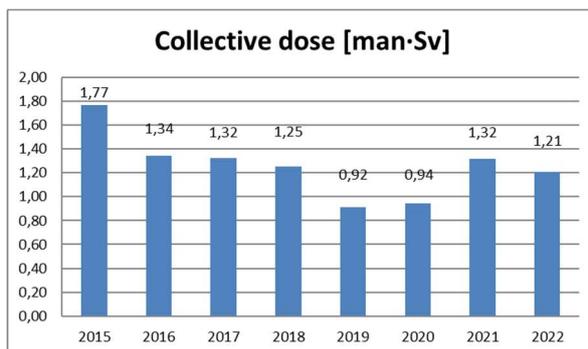
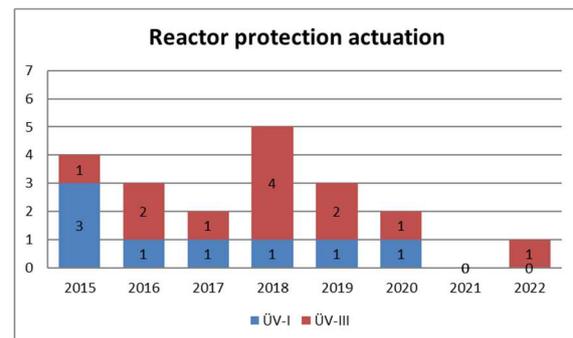
Four events have been reported by the NPP altogether, all of them were of category „below scale” corresponding to Level-0 on the seven-level International Nuclear Event Scale (INES). No event classified as INES 1 or higher has occurred since 2012.





There was no OLC (Operational Limits and Conditions) violation in 2022.

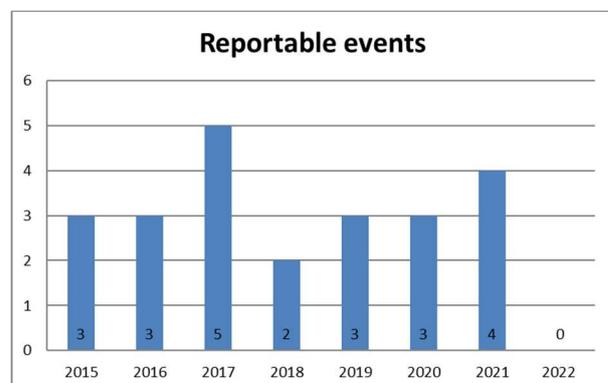
One automatic reactor protection actuation occurred in 2022. One SCRAM-III occurred due to exceeding the neutron flux limit during the physical measurement program of the reactor startup.



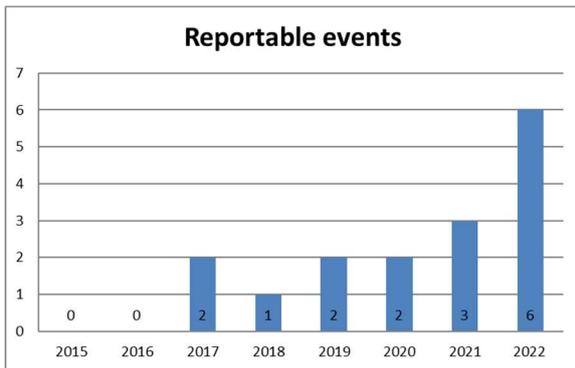
The collective dose of the workers decreased in 2022 compared to the previous year, therefore it is as low as in the previous years.

Budapest Research Reactor

No reportable event occurred at the Budapest Research Reactor, indicating a decrease compared to previous years.



BUTE Training Reactor

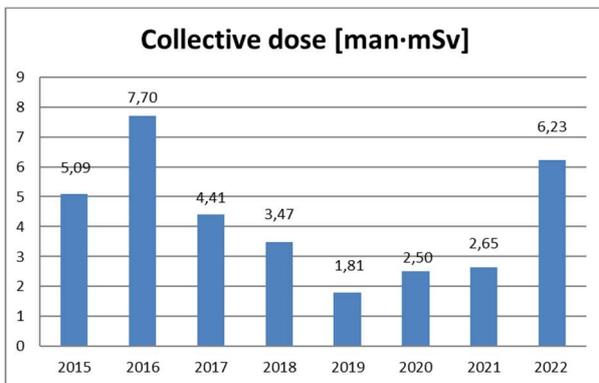


Six reportable events occurred in 2022, which can be considered a high number compared to previous years. Five of the six incidents were related to a failure of a safety protection system.

Failures in safety protection system are linked to the ageing of systems. During 2022 there were the failure of a primary pH meter, a measuring chain and the Radiation Protection Control System, and there were two instances of safety rod drops. There has been a significant increase in the number of failures compared to previous years.

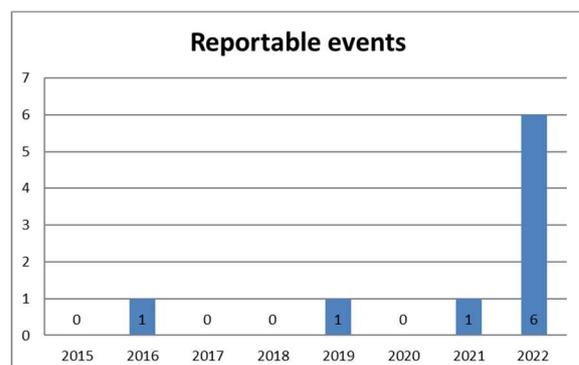


Interim Spent Fuel Storage Facility



In 2022, the collective dose of workers increased compared to previous years due to the larger volumes of storage and maintenance work. However, the individual annual exposure of workers was a fraction of the limit.

In 2022, there were six reportable events, one of which involved OLC violation in connection with the refilling of the gas space, and was classified as an INES 1 event.



Based on the comprehensive safety performance assessment it can be stated that during 2022 the nuclear safety of facilities inspected by the HAEA were at appropriate level, as in previous years. However, the high number of incidents at the BUTE Training Reactor and the Interim Spent Fuel Storage Facility justify increased regulatory oversight of the facilities.

Legal changes of the second half of 2022

Recent legislative changes have been made in order to improve the efficiency of the regulatory procedures by amending Act CXVI of 1996. (Act on Atomic Energy) accordingly, and new HAEA decrees have been issued. **1. Changes concerning the regulatory procedure**

(a) The possibility of remote data transfer is extended; besides the oversight of nuclear power plants, the HAEA will be able to use remote monitoring throughout the entire supervisory activity, including all along the oversight process of other nuclear facilities and radioactive waste repositories.

(b) Related to the license applications submitted to the HAEA, the modification sets a deadline for the authority to do so for the first time, the length of which depends on the type of the procedure.

(c) By the new provisions in the Act On Atomic Energy the HAEA can be combine regulatory processes into one in case the subject of the processes are related and it advisable to decide taking into account all these processes . (The new provisions mainly affect the field of radiation protection, because from January 1, 2016, the HAEA acts as a radiation protection authority, and in the field of radiation protection, it is common that several license applications need to be submitted to perform an activity. These can be combined at the request of the client.)

(d) The list of co-authorities to be involved in certain procedures of the HAEA as well as the range of specialized issues examined by them is supplemented.

(e)

Further amendments to the Act on Atomic Energy clarified the concept of the building and structure related to a nuclear facility and radioactive waste repository. It is now more specified which special buildings and structures belong to the competence of the authority of the atomic energy oversight organization.

2. Information about new facilities within the safety zone

In order to guarantee the safety of nuclear facilities and radioactive waste repositories, the amendment to the Act on Atomic Energy created the possibility that, with the start of the licensing procedure for activities within the safety zone of nuclear facilities and radioactive waste repositories, licensees of other nuclear facilities and radioactive waste repositories

affected by the given activity can get access to information about the activities and also to the related confidential business information that potentially affect their facilities.

3. Central Nuclear Financial Fund

Complementary provisions concerning the responsibilities of the manager of the Central Nuclear Financial Fund (CNFF) were added to the Act on Atomic Energy. Cost plan for the use of support of municipal associations together with the preliminary position of the CNFF Expert Committee has to be submitted by the head of the CNFF to the minister responsible for energy policy for approval. Regulations stipulating how municipal associations can draw support from the CNFF have been clarified.

4. New HAEA Decrees

In the second half of 2022, the HAEA issued four decrees, which replaced the legislation previously regulating specific fields. The content of the HAEA decrees remained unchanged comparing to the repealed relevant legislation.

- 8/2022 (XII. 15.) HAEA Decree on replacement of the President of the Hungarian Atomic Energy Agency in the scope of issuing decree
- 9/2022 (XII. 29.) HAEA Decree on the safety requirements for facilities ensuring interim storage or final disposal of radioactive wastes and the corresponding authority activities
- 10/2022 (XII. 29.) HAEA Decree on special professional training of the employees employed in the nuclear facility and on the range of persons entitled to continue activities related to the application of nuclear energy
- 11/2022 (XII. 29.) HAEA Decree on certain administrative procedures of the Hungarian Atomic Energy Agency and on the fees to be paid for its administrative services

Successful "About atomic energy - for everyone" event in December

After a nearly three years hiatus, on 13 December the HAEA held its "About atomic energy - for everyone" event again, in cooperation with the Budapest University of Technology and Economics and the TIT Studio Association. The university auditorium was almost full: more than 330 students and teachers attended the event. At the exhibition lot of questions were raised, and the audience paid close attention to the presentations, which clearly indicates the relevance and necessity of the event. For the HAEA it is important to have direct contact with the future generation in order to be able to provide first-hand information and correct answers to students' questions about the use of atomic energy. The primary goal of the event is to get students interested in the natural sciences and engineering faculties, since the current high school students will become the professionals of the future. In the spirit of this (continuing the practice of the pre-pandemic situation), the HAEA will continue to organize the program "About atomic energy - for everyone" twice a year in cooperation with various universities in Hungary.

In his opening speech, Mr. Tibor Czigány, rector of the university, thanked the HAEA for cooperating with the University for this event, highlighting the fact that the Budapest University of Technology and Economics is the only university in Hungary offering training for nuclear specialists. He emphasized that many different specialists are needed in the field of nuclear energy, such as electrical and mechanical engineers, chemists, architects, and at the same time invited the audience to visit the University's exhibition booth to find detailed information on its training opportunities in this field.

Ms. Andrea Beatrix Kádár, president of the HAEA thanked the University for hosting the event and taking an active part in the program, not only providing the venue, but also as an exhibitor and lecturer. In her opening remarks, the president emphasized that nuclear energy is used in many areas; it plays an important role not only in electricity production but also in medical and agricultural applications. The nuclear industry can provide long term career opportunities for those interested and educated in the field.

The lectures covered the types of radiation and their effects on life, the lessons learned from nuclear accidents, the role of nuclear power plants and renewable energy in the sustainable energy mix, the future perspectives of the use of nuclear energy, and how nuclear forensic analytics is used during an investigation.

At the interactive exhibition, the Public Limited Company for Radioactive Waste Management (PURAM) gave an overview on the management of radioactive waste, the Paks NPP developed a phone application to provide information in an entertaining way, the Ministry of Interior National Directorate General for Disaster Management presented a number of protective equipment, and visitors could also take radiation measurements. The Hungarian Nuclear Society provided information on fusion energy and the operation of the international thermonuclear experimental reactor, while the HAEA presented the various fields, starting from medical applications through energy production and radioactive waste storage to the management of emergencies.

Nuclear emergency preparedness

Information on nuclear emergency preparedness

The personnel of the Emergency Response Organisation of the HAEA (HAEA ERO) were able to successfully practice their nuclear emergency response tasks on several occasions in 2022 and 2023 as well.

The colleagues participated in two exercises in November 2022, one was a national nuclear emergency response exercise based on the practice of the Paks NPP, and the other was an international ConvEx-2a exercise organized by the International Atomic Energy Agency (IAEA). On both occasions, members of the Management Group, the Nuclear Group, and the

Radiological Group from the HAEA ERO staff were able to demonstrate their readiness. On the occasion of the successfully completed exercises, the good experiences, and any suggestions for improvement were collected and recorded in the evaluation report.

The international ECUREX exercise was held at the end of 2022 and in April 2023, in which the HAEA ERO also participated. Within this framework, the Management Group had the opportunity to test international communication.

With the cooperation of the HAEA, Hungary has been decided to join the INEX-6 international exercise organized by the OECD Nuclear Energy Agency (NEA), the duration of which will last from January 2024 to March 2024. The concept of INEX-6 is to conduct a modular table-top exercise aimed at testing national measures for the longer-term recovery phase of nuclear emergencies. This will be the first time the recovery measures to be tested internationally.

The first annual meeting of the Nuclear Emergency Management Technical Scientific Section (NEM TSS) of the Scientific Council of the Disaster Management Interministerial Coordination Committee was held on 1 March 2023. The meeting was chaired by the president of the HAEA as the chair of NEM TSS. Members of the NEM TSS – among other topics in progress – discussed about the country's intention to join the international INEX-6 exercise.

The HAEA, as the contact point in Hungary for the Response Assistance Network (RANET) which has been established to promote immediate international assistance based on the IAEA's rapid notification and assistance agreements, organized the tripartite RANET meeting between the Hungarian parties interested in the Ukrainian assistance request in October 2022. The participants discussed the experiences related to the offering, and suggestions for improvement were formulated for the future. At the end of January 2023, the HAEA organized a domestic RANET meeting in order to familiarize new colleagues with the operation of the RANET assistance network and to update the Hungarian offers made in 2021.

Nuclear safety challenges of the Russian-Ukrainian conflict

The armed conflict between Russia and Ukraine remains a major challenge for the continuous safe operation of nuclear facilities in Ukraine. During the winter months of the conflict, the strong military activity near the areas of the Ukrainian nuclear power plants and the multiple total power outages caused by them were the main cause for concern. This is why the Director General of the IAEA, Rafael Mariano Grossi, insisted that independent international expert missions visit all the sites in person. The visits and results of talks are intended to prevent a possible nuclear emergency at all Ukrainian nuclear power plants by ensuring the continued presence of the Agency on the site and by urging the establishment of a safety zone around the plant. Thus, the Agency has at least 11 nuclear safety and security experts in Ukraine at the same time, which is an unprecedented undertaking on the part of the organization. In

Europe's largest nuclear power plant, the Zaporizhzhya Nuclear Power Plant, the two reactor units used for heating, which were commissioned in the fall, were shut down by April 2023, and there is only one of them requires constant cooling.

The international community also continues to keep the issue on the agenda of a number of specialized forum and to assist Ukraine by sending aid deliveries matching the needs of the Ukrainian side for nuclear emergency preparedness. At the end of 2022 and the beginning of 2023, three more aid shipment reached Ukraine with the coordination of the IAEA.

The HAEA continuously monitors and evaluates information related to the Russian-Ukrainian conflict, with special regard to the nuclear safety situation in Ukraine, follows statements made by international organisations, in particular the International Atomic Energy Agency, and informs the public if necessary.

Paks NPP

Protective actuation at Unit 4 of the Paks NPP

Built-in automatic protection actuations play an important role in the active protection of the units of the Paks NPP, during which the power levels can be controlled and the nuclear chain reaction can be stopped in a controlled manner with the help of the Control and Safety System (CSS).

On December 2, 2022, after the planned maintenance of unit 4, start-up tests were carried out. These measurements and tests can demonstrate to the operating personnel that the nuclear chain reaction can be carried out safely and in a controlled manner during start-up and operation.

During the measurements, one of the reactor physics values (neutron flux) was higher than the permissible limit value. As a result, SCRAM-III protection actuation occurred.

The event occurred directly because the reactor operator (despite the warning signal) did not increase the value limit at the same time as the power was increased, so the limit value was exceeded. The root cause was determined to be that the operating instructions do not contain sufficiently detailed instructions regarding the assessment of the situation if a deviation (signal) occurs during an operation.

The necessary corrective actions (review of instructions for use, report on operational experiences) have been taken.

The impact of the event on nuclear safety was not significant, however, the HAEA assessed the event as part of an investigation and agreed with the corrective measures taken.



Control Room

Paks II Project

Evaluation of the Updated Preliminary Safety Report submitted by Paks II. Ltd.

On June 30th, 2020, Paks II. Ltd. submitted the application to the HAEA for the construction license of the 5th and 6th nuclear power plant units at the Paks site. On August 25th, 2022, the HAEA granted Paks II. Ltd. a licence for the construction of the planned nuclear power plant units. Additionally, the HAEA made a decision regarding the safety zone designation for these units, as well as their Preliminary Emergency Response Plan (PERP).

In the construction license the HAEA defined a hold point for the Paks II. Ltd. This means that construction of any structures deemed important from a nuclear safety perspective cannot commence until Paks II. Ltd. submits the updated Preliminary Safety Analysis Report (UPSAR) to the HAEA. The HAEA must provide a written statement confirming the report's adequacy before construction can proceed.

On November 10, 2022, Paks II. Ltd. submitted the UPSAR and its accompanying documents, as well as the amended documents of the PERP. To ensure that the submission was thoroughly detailed, representatives of Paks II. Ltd. held a briefing for the HAEA inspectors on November 17, 2022. Following the briefing, the working groups, which were formed during the evaluation of the construction licensing., began processing and evaluating the UPSAR and the related documents. External experts, such as the BUTE Institute of Nuclear Techniques, were also involved in the evaluation process.

The evaluation of the UPSAR documents is currently in progress.

Radioactive Waste Storages

Modification of the construction license of the National Radioactive Waste Repository (NRWR)

On June 4, 2021, PURAM submitted a request to HAEA to modify the construction licence of the National Radioactive Waste Repository (NRWR).

The scope of the submitted application included in one hand, the development of additional parts of the chamber field I. In this regard, they presented the construction of the reinforced concrete pool planned in the I-K4 chamber and the design of the bridge crane for the future disposal of the waste packages, as well as the excavation of the I-N1 and I-N2 chambers with an increased section size, and the construction of reinforced concrete pools in these chambers.

The construction license also contained a conceptual change in the design of the chamber field II. The establishment of this chamber field was originally planned south from chamber field I, however, according to the new conceptual plan, chamber field II is planned to be developed north from chamber field I. The request for modification of the construction license described this conceptual change, but not covered the specific arrangement and excavation of the chamber field II.

Finally, the construction license request covered the transfer of institutional waste from the Radioactive Waste Treatment and Disposal Facility (RWTDF) to the NRWR and their disposal in the chambers of chamber field I.

The HAEA issued the construction license on December 9th 2022.



The structure of the facility projected onto the surface

Review of the first Periodic Safety Report of National Radioactive Waste Repository (NRWR)

On December 15, 2021, PURAM submitted for the first time to the HAEA the Periodic Safety Report according to Section 104 (3) of the then in force Govt. Decree 155/2014. (VI. 30.) on the safety requirements for facilities ensuring interim storage or final disposal of radioactive wastes and the corresponding authority activities regarding the National Radioactive Waste Repository.

During the Periodic Safety Review, PURAM defined subject-specific evaluation tasks and developed 12 examination topics that are important for the safety of the facility, and a detailed evaluation of the fulfillment of the related requirements was also carried out. The possible consequences of the revealed non-conformities were determined by PURAM, and then, further tasks were identified as necessary based on their safety significance.

During the implementation of the Periodic Safety Review, PURAM identified groups of safety and non-safety non-conformities. On this basis, a summary of the Periodic Safety Report has been produced by PURAM, presenting the results and main findings of the Periodic Safety Review.

In the Periodic Safety Report and in the supporting documents, PURAM presented the results of its review, the deviations identified, and identified measures to improve safety deviations. In the course of the administrative procedure, HAEA identified further deviations, which were addressed as conditions in the decision issued in 15th December 2022.



National Radioactive Waste Repository's (NRWR) office building

Research Reactors

Periodic Safety Review of the Budapest Research Reactor

In 2022, the Centre for Energy Research, as the licensee of the Budapest Research Reactor (BRR), has performed the Periodic Safety Review of the BRR, which, in accordance with the legislation, the nuclear installation must be performed every 10 years to assess that it is operating in accordance with the licensing basis.. In December 2022, the licensee submitted the Periodic Safety Analysis Report (PSAR), which serves as the base document of the authority's procedure. Based on the PSAR, the HAEA started its procedure in the topic of the Periodic Safety Review, which will conclude by the end of 2023.

The current operating license of the BRR is valid until the middle of December 2023. The HAEA will make a decision whether to issue a new operating licence on the basis of the regulatory review results of the PSAR.

International Cooperation

HAEA delegation visit to the Turkish Nuclear Regulatory Authority

From 17 to 20 October 2022, the Turkish Nuclear Regulatory Authority hosted a delegation of the HAEA, led by Andrea Beatrix Kádár, President of the HAEA. As part of the programme, the delegation visited the construction site of the Akkuyu Nuclear Power Plant and the heads of the Turkish and Hungarian authorities signed a renewed cooperation agreement (Memorandum of Understanding).

During the visit, a number of issues were discussed, including the organisational changes and operation of the two authorities, the implementation of regulatory inspections as well as the training of engineers; furthermore the two sides exchanged information on the relevant legal environment as well.



Akkuyu Power Plant

Radiation Protection Experts from Bosnia and Herzegovina at the HAEA

Between 27 February and 8 March, 2023 a group of four experts arrived at the HAEA as part of a training course within the framework of an European Union project.

During the eight-day training program, the experts became familiar with the Hungarian regulatory environment for the supervision of radioactive waste management facilities, the regulation of the safe transport of radioactive materials, the regulatory framework for inspections and the conditions for the onsite inspection of radiation protection.

As part of the program, the delegation visited the radioactive waste management facilities at Paks, Püspökszilág and Bataapati. The experts will be able to use the practices, methodologies and experiences of the EU member states provided by the training of the project in their home country.



Participants of the meeting

Finnish delegation visits the HAEA

Petteri Tiippana, Director General of the Finnish Radiation and Nuclear Safety Authority (STUK) and Project Manager Janne Nevalainen visited Hungary between 30-31 January 2023 at the invitation of the HAEA. The delegation was received by Andrea Beatrix Kádár, President and László Juhász, Vice-President of the HAEA. During the meeting, the two sides discussed among others the issues of the lifetime extension of the operating Russian-type pressurised water reactor nuclear power plants as well as shared regulatory experiences concerning the establishment of new nuclear power plant blocks and the small modular reactors. As part of the programme, the delegation visited the Paks Nuclear Power Plant and the site of the planned new nuclear power plant units.



Participants of the meeting

The Joint Eighth and Ninth Review Meeting of the Convention on Nuclear Safety

The Joint Eighth and Ninth Review Meeting of the contracting parties to the Convention on Nuclear Safety (CNS) was held in Vienna from 20 to 31 March 2023. Hungary was represented at the two-week meeting by delegates from the HAEA, the Ministry of Foreign Affairs and Trade, the Ministry of Energy, Paks NPP and Paks II. Ltd.

The eighth review meeting of the contracting parties to the CNS, did not take place in 2020 due to the pandemic situation, so it was held together with the ninth review meeting.

The meeting was attended by 900 delegates representing 82 states. During the first week, contracting parties discussed each other's national reports and presentations in country groups and further peer-reviewed each other's nuclear safety issues. Hungary was represented by a delegation led by the President of the HAEA, Andrea Beatrix Kádár. In the framework of the Hungarian national presentation, the representatives of the HAEA presented, among other things, the safety issues and the experiences of the peaceful application of nuclear energy in Hungary. Following the presentation, representatives of the HAEA, the Ministry of Energy, Paks NPP and Paks II Ltd. answered questions raised by other contracting parties.

On the basis of the national report, the Hungarian presentation and the answers to the questions, the review meeting concluded that the Hungarian practice complies with the requirements of the CNS. The reviewers found Hungary's performance to be commendable in

several respects. For example, the regular "Nuclear Energy for All" conferences organised by the HAEA to involve and inform young people about the peaceful application of nuclear energy were rated positively (area of good performance).

The strengthening of nuclear safety regulations in each country (with particular emphasis on safety aspects of new and innovative technologies), the promotion of international cooperation and peer review missions, and the enhancement of emergency preparedness were highlighted as common priorities. The Review Meeting also identified the development of plans for the ageing management and long-term operation of nuclear facilities, the development of strategies to address climate change and its impact on the safe operation of nuclear facilities, and the assurance of reliable nuclear supply chains as very important tasks to accomplish for most contracting parties.

The tenth review meeting will take place in 2026.

Hungarian-Austrian bilateral meeting

The two-day Hungarian-Austrian bilateral expert meeting, hosted this year by Hungary, started on 30 November 2022. On the first day, the Austrian delegation visited the site of the new Paks units, while on the second day expert presentations were held and topics of mutual interest were discussed.

Ms Andrea Beatrix Kádár, president of the HAEA welcomed the fact that following the pandemic period, the meeting could again take place in person this year. In her opening remarks, the president highlighted the fact that as of 1 January 2022 the HAEA operates as an organization with special legal status, with enhanced organisational and financial independence.

During the meeting, the parties overviewed the most important changes and achievements accomplished since the last meeting. As in previous meetings, the parties exchanged information on the main legislative changes, progress in the areas of emergency management, radiation protection, radioactive waste management and licensing procedures.

At the end of the meeting, the head of the Austrian delegation, expressed her appreciation for the open and constructive dialogue and for the opportunity to visit the Paks site.

IAEA Director General visits the Hungarian Atomic Energy Authority

Rafael Mariano Grossi, Director General of the IAEA visited the HAEA on 22 February 2023, where President Andrea Beatrix Kádár received the distinguished guest.

At the meeting the President informed her guest about the changes in the status of the HAEA, the progress of the Paks II project and the future tasks of the authority related to the lifetime extension of the operating Paks NPP. The Director General highlighted that the IAEA will

continue to support Hungary on regulatory issues related to the nuclear field, sharing international best practices that the HAEA can benefit from.

Furthermore the nuclear security aspects of the situation in Ukraine were also discussed during the meeting. The President commended the Director General for his personal efforts in this regard, in particular for ensuring continued IAEA presence at Ukrainian nuclear facilities.

Rwandan experts visit the Hungarian Atomic Energy Authority

On 21 February 2023 two experts from Rwanda arrived to the HAEA in the framework of an EU project aimed to strengthen the national capacity building in nuclear safety in third countries. Within the framework of the project implementation the experts were informed about the functioning as well as the organisational structure and main tasks of the Hungarian authority. During the one-day training the foreign partners also had the opportunity to get familiar with the principles and regulations of the HAEA licensing procedures.

The activities of the project are designed to enable the participating experts to contribute to the effective functioning of the nuclear authorities and their supporting institutions of their respective home countries.

HAEA President visits Argentina

A high-level HAEA delegation led by President Andrea Beatrix Kádár visited Argentina from 19-24 November 2022.

During the meetings with representatives of the Argentinean partner authority and the National Atomic Energy Commission, the parties mutually informed each other about their main fields of activity, the ongoing procedures and discussed possible areas for the development of bilateral relations.

As part of the official programme, the delegation visited the site of a small modular reactor currently under construction in the northern part of Buenos Aires province and the CONUAR nuclear fuel plant.

Nuclear Safeguards

Anniversary commemorative session with the annual Safeguards Forum at the HAEA

The HAEA has held Safeguard Forum every year since 2014 with the participation of the stakeholders responsible for safeguards at domestic nuclear installations and organisations.

The objective of the event is to summarize the most important events and experiences related to nuclear safeguards and to provide a professional forum for experts involved in the oversight

of the peaceful uses of nuclear energy. The meeting this year took place on 30 March 2023 at the HAEA headquarters.

In 1972 Hungary ratified the Comprehensive Safeguards Agreement between Hungary and the IAEA which guarantees the implementation of our obligations under the Treaty on the Non-Proliferation of Nuclear Weapons. To mark this occasion, the HAEA held a commemorative event in the framework of the Safeguards Forum.

The opening speech pointed out that the commitment set out in the Safeguards Agreement, promulgated by Decree-Law in 1972, has evolved enormously. Over the past 50 years, Hungary has been meeting the requirements of a continuously strengthening safeguards system, both the facility and the domestic level.

HAEA experts presented the background of the development of the international safeguards system, the evolution of the IAEA safeguards system, and the key milestones and challenges of the last 50 years of the domestic safeguards system.

In addition to the presentations of the HAEA experts, there were a number of interesting presentations related to the topic. The head of the Nuclear Security Department of the Centre for Energy Research (CER) presented the role of the CER in supporting the domestic safeguards system, the main future directions of energy research and their international involvement. The head of the Uranium Mining Department of the Mining Property Utilisation Ltd. gave a presentation on the environmental and safeguards activities of the uranium ore mining business. The nuclear safeguards and physical security expert of the Paks II. Ltd. presented the safeguards related tasks of the new nuclear power plant units during the design phase and also discussed the future tasks.

The Safeguards Forum was concluded by a presentation given by the head of Department of Radiation Sources, Safeguards and Security of the HAEA in which he outlined the major domestic and international events related to nuclear safeguards in 2022 and the HAEA's related plans for this year.



Participants of the Safeguards Forum