



Hungarian Atomic Energy Authority

## HUNGARIAN ATOMIC ENERGY AUTHORITY Nuclear Safety Bulletin – for internal use

H-1539 Budapest, P.O. Box 676,  
Phone: +36 1 4364-800, Fax: +36 1 4364-804, e-mail: [haea@haea.gov.hu](mailto:haea@haea.gov.hu) website:  
[www.haea.gov.hu](http://www.haea.gov.hu)

# RECENT DEVELOPMENTS IN NUCLEAR SAFETY IN HUNGARY

May 2021

## Organizational change

### *Gyula Fichtinger, Director General of the HAEA, resigns*

Gyula Fichtinger, Director General of the Hungarian Atomic Energy Authority, has resigned with effect from April 29, 2021. His resignation was accepted by the Prime Minister. His duties are performed by Szabolcs Hullán, Deputy Director General. The operation of the HAEA is continuous and uninterrupted.

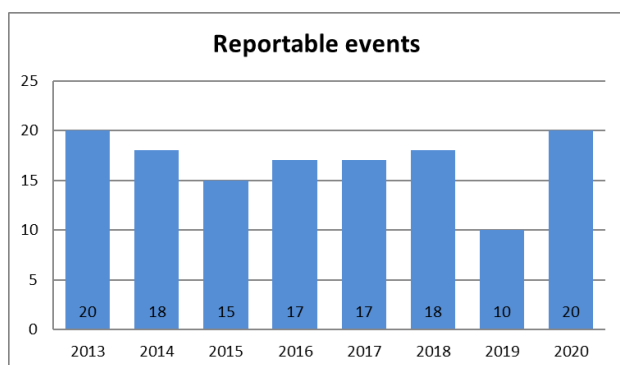
## General

### *Annual safety performance assessment of nuclear facilities*

The 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.

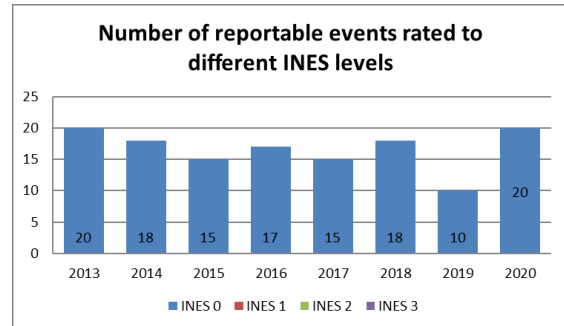
A brief extract is provided below from the annual safety performance assessment.

### *Paks Nuclear Power Plant*

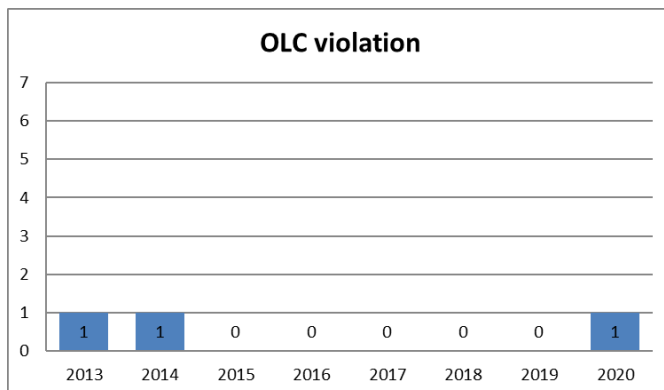


Twenty reportable events occurred in 2020.

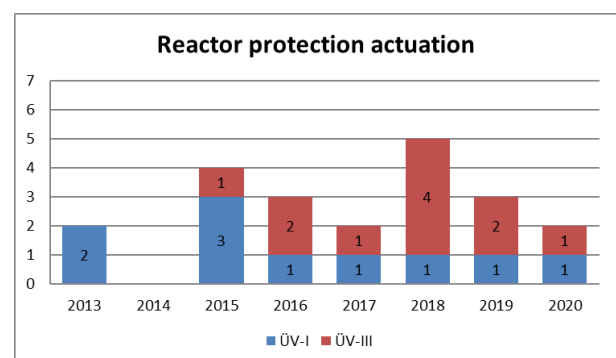
Twenty events have been reported by the NPP altogether, all of them were of category „below scale” corresponding to Level-0 on the seven-level International Nuclear Event Scale (INES).

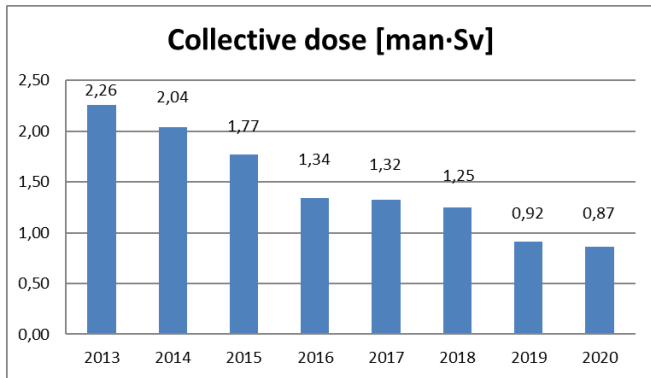


There was one event which caused violation of the operational limits and conditions (OLC). On 26.02.2020, during the start-up of Unit 1, the main circulation pump was shut down due to an issue related to the steam generator level control. The staff committed an OLC violation by starting the main circulation pump below 10% reactor power. Indeed, if the reactor power is less than 10% in power mode, the commission of a non-operating loop may cause a power increase, and therefore a limitation is necessary. The fundamental reason was the shortcomings of a relevant chapter in the operating instructions, which did not include a warning of this limitation. The necessary corrective action has been taken to address the deviation. The impact of the event on nuclear safety was not significant because the analysis showed that the reactor power was close to 10% and therefore the power increase was minimal.



Two automatic reactor protection actuation occurred in 2020. The SCRAM-I was caused by a circuit breaker trip, and the SCRAM-III was caused by an excitation failure.

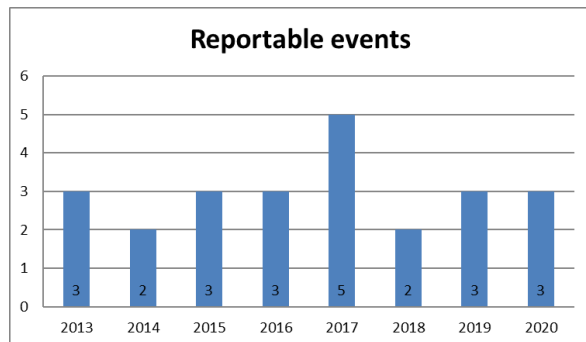




The collective radiation dose of employees has been declining since 2011.

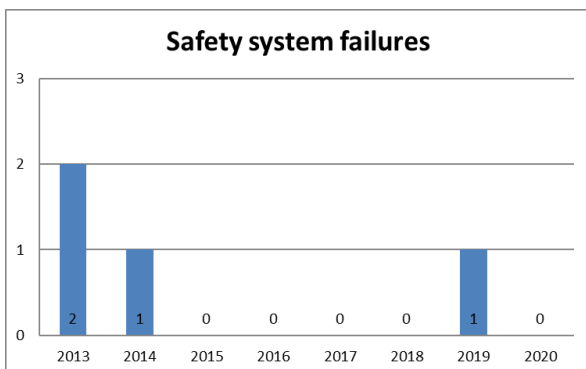
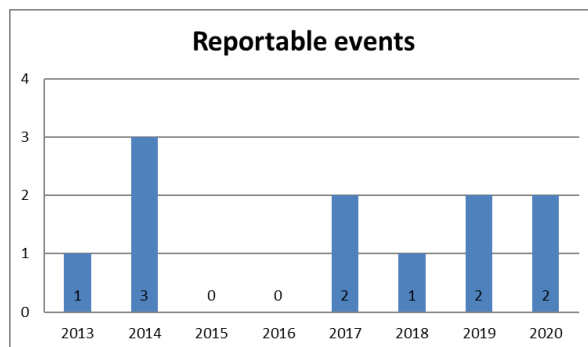
**Budapest Research Reactor**

Three reportable events occurred in 2020. Two events were caused by a shut down due to a voltage drop, and the other because of a shut down due to unavailability of two compressors.



**Budapest University of Technology and Economics Training Reactor**

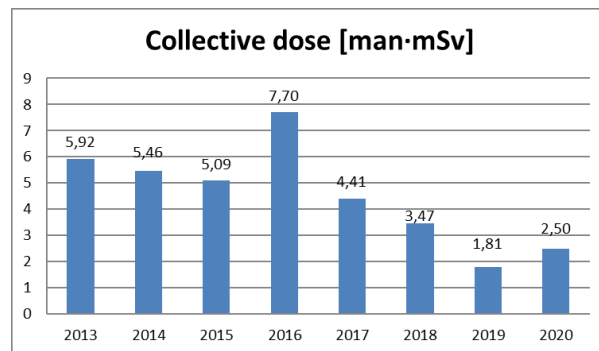
Two reportable events occurred in 2020. One event was related to an alarm of a personal dosimeter, and the other was caused by an incorrect phase connection.



No safety system failure occurred in 2020.

### ***Interim Spent Fuel Storage Facility***

The collective dose in 2020 is slightly higher than in last year, but still lower than in the previous years.



No reportable event occurred in 2020 in this facility.

Based on the comprehensive safety performance assessment it can be stated that during 2020 the nuclear safety of facilities inspected by the HAEA were at appropriate level, as in previous years. The facilities operated safely, did not endanger neither the environment, nor the population, nor the employees.

### ***Legal changes of the second half of 2020***

The amendment of the Act CXVI of 1996 on Atomic Energy (Act on Atomic Energy) was necessary in order to clarify a concept and to create consistency with other laws. In order to ensure the transfer and management of customs secrets to the Hungarian Atomic Energy Authority (HAEA) as a nuclear energy supervisory body, the Act on Atomic Energy and the Act CLII of 2017 on the implementation of EU customs law was necessary to be supplemented. The new content of Section 16. in the Act on Atomic Energy:

“Atomic Act 16. § (7a) At the request of the nuclear energy supervisory body, the National Tax and Customs Board shall send the customs secret if it is necessary for the performance of the licensing, inspection, supervision and registration tasks of the nuclear energy supervisory body.”

The purpose of the amendment of the Section 15. § (1a) of the Act on Atomic Energy was to comply with the Act CXXV of 2017 on Sanctions for Administrative Violations.

Govt. Decree 356/2020. on amendment certain govt. decrees relating to the use of nuclear energy:

The amendment of Govt. Decree 112/2011. (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, on the scale of fines and on the scientific council assisting the work of the Hungarian Atomic Energy Authority)

Regarding to the transposition of Article 94 (2) of Directive 2013/59/Euratom, the Commission drew attention to the fact that it did not find any reference to the organization of campaigns to control orphan sources remaining after previous activities. In view of this, it was necessary to amend Section 5/A. of Govt. Decree 112/2011.

The amendment of Govt. Decree 155/2014. (on the safety requirements for facilities ensuring interim storage or final disposal of radioactive wastes and the corresponding authority activities)

In point 44 of Section 2 of Govt. Decree 155/2014. the word "storage" is replaced by "disposal". This clarifies that closure is only possible in the case of a final disposal facility. (translation problems)

The amendment of Govt. Decree 487/2015 (on the protection against ionizing radiation and the corresponding licensing, reporting (notification) and inspection system)

Purpose of the amendment:

to supplement the requirement for the release of substances containing naturally occurring radionuclides

clarification of the rules on non-medical irradiation imaging

The amendment of Govt. Decree 490/2015 (on the reports and interventions regarding missing, found or seized nuclear and other radioactive materials and other actions pertaining to radioactive materials following their report)

Purpose of the amendment:

- the clarification of the rules of official notification system
- facilitate the identification of basic safety measures for persons who become aware of or suspect the presence of an orphan source.

### ***Since September, telework, online events and travel restrictions again***

According to the external relations' point of view of the last six months, it is important that the employees of the Hungarian Atomic Energy Authority have been performing their duties remotely again from the beginning of September 2020. Until September 2021, HAEA are not allowed to travel abroad officially or hold events or receive foreign guests and delegations. The meetings of the various international working groups and bodies such as experts of the HAEA have taken place only on online platforms. The planned missions of the International Atomic Energy Agency to Hungary (EPREV and ARTEMIS) - in consultation and agreement with the IAEA, have been postponed. Last year we would have held the VVER Forum in Hungary, but due to the pandemic situation, this event also had to be rescheduled: it is planned to take place in November this year.

On January 19, 2021, the HAEA held its usual annual press conference, although, due to the pandemic situation, it was held electronically. The press release was available on the HAEA website

from 8 am, journalists could ask their questions in writing or have a telephone interview if required. The HAEA responded to all inquiries within a short time and met all interview requests. One of the most important issues was the current state of the licensing procedure for the construction of new nuclear power plant units.

In two regulatory procedures public hearings had to be held, which could only be organized electronically due to restrictions and legislation related to the pandemic situation. In the procedure concerning the application for an operating license for the Bábaapáti National Radioactive Waste Repository (NRHT), from 20 January 2021 to midnight on 26 January 2021, the public could ask questions or express their views in writing. There was little interest in this public hearing. In the procedure of assessment of the construction license application of the new nuclear power plant units, the comment and questioning period lasted from 4 March 2021 to midnight on 18 March 2021. During this period (on the last day), the Hungarian Atomic Energy Authority received more than one hundred questions and opinions. In addition to the individual citizens' inquiries, non-governmental organizations and political actors also sent questions and expressed their views.

### ***Impact of the epidemic situation on the operation of Hungarian nuclear facilities***

In order to deal with the pandemic situation in Hungary in 2020, epidemiological measures have been introduced in nuclear facilities and in the radioactive waste repositories in accordance with the decisions of the Hungarian Government. The aim of the actions are to decrease the spread of the infection, to minimize the health related risk of people working in the nuclear sector beside keeping the high level of the nuclear safety. We described the measures in details in the HAEA bulletin published in October 2020. In this article, we summarized the novelties and experiences of the period since then.

On the territory of MVM Paks NPP, a pandemic operative leadership group was established on 9 March 2020, which assessed the situation on a daily basis and informed the employees and the authority about the existing situation and the necessary measures. From March 2020, the number of operators required for the operation of the nuclear power plant was continuously ensured, no pandemic emergency measures were required, neither on the part of the operator nor the authority. In the context of the epidemic, the training and examination system was also reorganized, reducing the number of personal contacts. The authority, at the request of the licensee, after individual consideration, issued official license renewal permits. As vaccines became available, the vaccination of critical workers at the nuclear power plant was centrally organized and carried out.

The Budapest University of Technology and Economics continued to maintain the increased epidemiological control measures taken at the beginning of the epidemic. The Training Reactor was

able to continuously oversight the reactor in accordance with internal regulations and provide the appropriate personnel for the planned maintenance works.

The Budapest Research Reactor belonging to the Eötvös Loránd Research Network also had measures in place to reduce the spread of the epidemic, which were aimed to limit physical contacts and to increase hygienic protection. However, it was necessary to change the reactor schedule and postpone operating cycles several times during the second and the third wave in the spring of 2021 due to temporary staff shortages caused by illness. The oversighting of the stationary reactor was in accordance with the regulations, no pandemic emergency measures were required. However, maintenance work was rescheduled with the application of a safety assessment.

PURAM Ltd., which operates the Hungarian Radioactive Waste Repositories and the Interim Spent Fuel Storage Facility, also prepared a pandemic action plan. List of jobs created essential to the safe operations at all three facilities (SFISF, NRWR, RWTDF). they introduces teleworking for other employees to minimize contacts. The Pandemic Management Group continuously assessed the situation and informed the authorities and employees PURAM Ltd. has been monitoring the rising number of cases and has taken new measures in response. There has been no need to order introduce a state of emergency in the recent past.

The HAEA classified the planned inspections, carried out the absolutely necessary presence inspections using increased protection measures, reduced number of inspectors and protective equipment, the inspections that could be carried out as an online interview also organized and other inspections have been postponed. In summary, it can be stated that the level of nuclear safety at Hungarian nuclear facilities did not decrease during the epidemic situation.

### ***Information on nuclear emergency preparedness***

The development of the Emergency Response Organisation of the Hungarian Atomic Energy Authority (HAEA ERO) has been continued since last year. In the first half of this year the training of the Radiation Experts / Analysers and the new Radiological Managers has finished and their preparation for the exam is in progress.

The exercises will be held either in CERTA or online, depending on the current situation. In the first half of the year, the HAEA ERO plans to join the CONVEX-2a exercise organized by the IAEA and the nuclear emergency response exercise organized by the Spent Fuel Interim Storage Facility in May 2021.

The EPREV follow-up Mission of the International Atomic Energy Agency was originally planned for October 2020 to review the progress based on the recommendations and suggestions of the previous Emergency Preparedness Review Mission in 2016.

To prepare for the mission, the organisations involved in the mission, with the coordination of the HAEA, reviewed the national self-assessment originally created in 2016 and prepared the so-called Advance Reference Material which purpose is to assist the preparation of the international experts with presenting the relevant

legislations and regulatory documents supplemented by the information about the implementation of the suggestions and recommendations of the original EPREV mission.

Due to the pandemic the follow-up mission had to be postponed until the second half of 2021.

## **Paks Nuclear Power Plant**

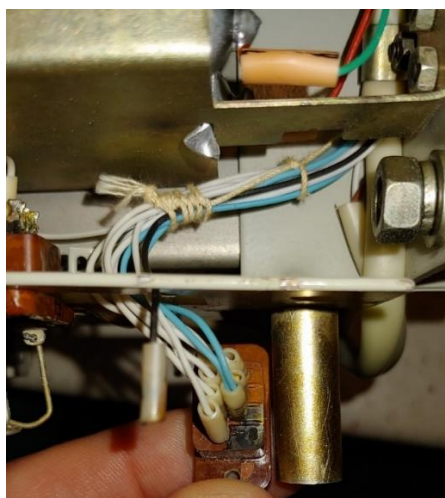
### ***Emergency Protection actuation (EP-1) (reactor scram) due to short circuit in the turbine oil temperature measurement device***

During the nominal power operation of Unit 4, the level measurements of the high-pressure preheaters (HPPH) of the 7th turbine and the control signals of the control circuit were left without power supply due to an electrical failure. Due to the loss of supply, the controllers were shut down and the preheaters began to fill up on the condensate side, which the operators could not detect due to the lack of level measurements.

During the inspection, one of the measuring circuit supply circuit breakers was found to be tripped and without establishing the actual level values it was reconnected. Due to the increased levels, as designed, the protection system shut down both turbines and the reactor protection (EP-1) shut down the reactor. During the incident, the designed protection functions operated properly.

The direct cause was that due to a short circuit at the turbine oil temperature measurement device, the circuit breaker tripped and the control measurements of the control circuit became deenergized, furthermore the staff was not aware of the consequences of circuit breaker reconnection.

The root cause of the event was that during the investigation of the incident of small circuit breakers, the determined corrective measures focused on solving the specific technical problem. There was no corrective action to assess and manage the interaction of the secondary circuit measurements.



*Failed temperature measurement instrument*

The authority evaluated the investigation report. The licensee took appropriate corrective actions for the detected deviations.



## ***Operating experiences with the test SLIM fuel assemblies at Paks Nuclear Power Plant***

In December, 2020 Paks Nuclear Power Plant introduced 18 Lead Test Assemblies of a new water-uranium ratio optimized so-called SLIM fuel at Unit 3, 35<sup>th</sup> cycle. This new fuel type has thinner cladding and solid pellets (except for rods containing burnable absorber, which still have a central hole), and the spacer grids are equipped with mixing vanes in order to enhance the mixing of the coolant. This new concept allows for more economical fuel usage as the lack of the central hole increases the weight of uranium in the fuel rod and the thinner cladding results in bigger utilization of fissile material, therefore less fresh fuel will be necessary per fuel cycle and the number of spent fuel assemblies will be reduced.

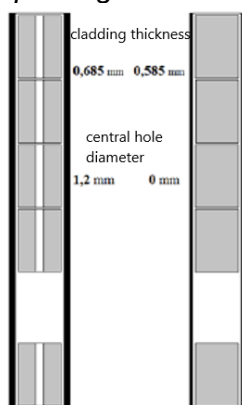
The HAEA has issued a license for the introduction of 18 Lead Test Assemblies in its resolution number HA7191.

Paks Nuclear Power Plant has prepared an evaluation report on the recent experiences of the test program, which showed positive operating experiences. Start-up measurements of Unit 3 (which contains 18 SLIM fuel assemblies) are in good agreement with the calculated values. The margins between the measured and criterion values are high, so Unit 3 may be operated at nominal power. Furthermore, based on the current measurements of the fuel assemblies outlet temperature distributions, the coolant rate through SLIM fuel assemblies is in line with the expectations.

In case of a successful test program, further application of SLIM fuel may take place.



*Spacer grids with mixing vanes*



*changes in fuel rod*

## **Spent Fuel Interim Storage Facility**

### ***Issuance of a new operating licence for the SFISF for the storage of new types of spent fuel assemblies***

On the 8<sup>th</sup> of November, 2019 the Public Limited Company for Radioactive Waste Management (PURAM), as the licensee of the Spent Fuel Interim Storage Facility (SFISF) – the facility designated for the storage of the Paks Nuclear Power Plant's (unit no. 1-4) spent fuel – submitted its licence application to the Hungarian Atomic Energy Authority (HAEA) regarding the modification of the operating licence of the facility, upon which a regulatory procedure started for its evaluation. PURAM presented two reasons for submitting the application. (1) To improve its fuel management, Paks NPP is planning to introduce two new types of spent fuel assemblies with optimized water-uranium ratio. Following the utilization of these new assemblies at the NPP their interim storage would take place at the SFISF, which required the modification of the SFISF's previous operating licence. (2) Regarding one of the spent fuel assembly types that could already be stored at the SFISF the modification of certain operational limits and conditions – which were supporting the previous operating licence – were necessary.

As appendices to the application, PURAM submitted the followings: the supporting document, the modified chapters of the Final Safety Report and the Emergency Response Plan, the modified Operating Limits and Conditions and other documents. With this documentation the licensee intended to verify that the new types of fuel assemblies can be safely stored in the SFISF and that it is safe to implement the said modifications of the operational limits and conditions. The HAEA requested the submission of further documents during the procedure in order to clarify the facts.

In order to inform the public of the important details of the case, and to provide them the opportunity to express their opinion and ask questions from the licensee and the authorities involved, a public hearing was held via electronic channels – with respect to the pandemic – as part of the regulatory procedure. The members of the public were able to send their questions and remarks to the HAEA between the 8<sup>th</sup> and 12<sup>th</sup> of June, 2020. No questions and no remarks were received from the public or the other clients of the process during the public hearing and the process.

The SFISF was and is continuously supervised (inspected, assessed and – as necessary – licenced) by the HAEA in all phases of its life cycle, during which activity no circumstances were revealed that would have made it impossible to issue the new operating licence. The co-authorities involved in the process – the Government Office of Baranya County acting as the authority competent in environmental and nature protection and the National Directorate General for Disaster Management – consented to the issuance of the licence. Based on all of these the HAEA was able to evaluate the licence application, and issued the new operating licence on the 11<sup>th</sup> of November, in which it permits

the receipt and storage of the above mentioned new fuel assemblies as well as the “old” ones. The current operating licence is valid till the 2<sup>nd</sup> of July, 2030.

The announcement of the licensing process and with the decision of the on it – the operating licence – were made available for the public in the mayor’s office of Paks, on the [HAEA's website](#) and bulletin board (4 Fényes Adolf Street, Budapest, Hungary, H-1036) and on the website for public administration announcements (<http://hirdetmeny.magyarorszag.hu>).

## **Paks II project**

### ***Regulatory licensing and supervision activity of HAEA related to the new unit construction project***

Paks II Nuclear Power Plant Ltd. has submitted the construction license application to the Authority on the 30<sup>th</sup> of June 2020; and official licensing procedure started on the 1<sup>st</sup> of July 2020. The Hungarian Atomic Energy Authority (HAEA) has 12 months with the possibility for additional 3 months extension for the evaluation of the application.

The evaluation of the submitted more than 75 000 pages of documentation - includes the construction license application as well as further additional documentation - is still in progress by fifteen evaluation groups standing up by half of HAEA employees.

HAEA has involved co–authorities, as well as national and international experts in the assessment of the complete documentation. Besides this, the Authority has also contracted International Atomic Energy Agency (IAEA) for a “Technical Safety Review: Design Safety” mission with; the mission is still active.

In addition to all of above, the HAEA constantly performs occasional inspections at the Paks II Nuclear Power Plant Ltd. in order to comply the protection against COVID-19 pandemic, the HAEA established a new kind of inspection method so-called hybrid inspections. That means an inspector conducts inspection alone at the Licensee and in a same time streaming online to other inspectors in the HAEA, so whom are able to interact in real time in case of needs.

Currently 5 construction erection base structure implementations are running by Paks II Nuclear Power Plant Ltd. on the site.

## **International Cooperation**

### ***Rescheduling the review processes of the Joint Convention and the Convention on Nuclear Safety***

The Contracting Parties of the Joint Convention and the Convention on Nuclear Safety hold a review meeting every three years to report on changes since the last meeting. Before the review meeting, member states prepare a national report submitted to the Joint Convention Secretariat and the Convention on Nuclear Safety Secretariat of the IAEA. After submission of national reports, contracting parties can ask questions and make written comments, while latest developments are presented during the review meeting.

In the framework of the seventh review process of the Joint Convention, national reports must have been submitted by 27 October 2020. The preparation of the report was coordinated by the HAEA. Several external partners provided data for the finalisation of the report.

An Extraordinary Meeting was convened to be held in May 2020 to discuss possible ways to improve procedural mechanisms of the Joint Convention, which would have been immediately followed by the Organizational Meeting of the Contracting Parties in preparation for the Seventh Review Meeting. Due to the evolving COVID-19 situation, both events have been postponed to a later date. Finally, the Organizational Meeting was held online between 28 September and 2 October 2020.

Regarding further processes, the Contracting Parties agreed to hold the Seventh Review Meeting between 27 June and 8 July 2022. The deadline for submission of questions and comments to other members' national reports is 30 October 2021, while the deadline to answer the questions is 31 March 2022. The fourth Extraordinary Meeting is planned to be held between 14-16 February 2022 in Vienna.

In the case of the Convention on Nuclear Safety, the national report and the questions and answers to the reports of other Contracting Parties were submitted by the deadline originally scheduled for the Eighth Review Meeting (March 2020). Due to the COVID-19 pandemic, the cancelled Eighth Review Meeting, based on a consensus among Member States, was merged with the Ninth Review Meeting and is planned to be held in person from 20 to 31 March 2023.

### ***State of play of IAEA Mission to Hungary***

The Hungarian Atomic Energy Authority submitted the Preliminary Safety Analysis Report and its supporting reports related to the regulatory licensing procedure of the new nuclear units to the International Atomic Energy Agency. The document was sent to the IAEA in preparation for the Technical Safety Review (TSR) Mission. The purpose of the TSR Mission is to examine the Preliminary Safety Report, which serves as a base for the construction license application, and to assess whether the units planned for Paks meet IAEA safety standards. An international team of

experts, coordinated by the IAEA, are implementing the Mission. The Mission started with a kick-off meeting in December 2020, the final report is foreseen for September 2021.

Complementing the TSR Mission the HAEA also requested the IAEA for a PSA Mission (Probabilistic Safety Assessment Review) in order that another international expert group could examine the Preliminary Safety Report documentation on probabilistic safety assessments. The Mission started with a kick-off meeting in March 2021, the final report is foreseen for September 2021. Taking into account that the missions' work method is analysing documents, the original schedules can be implemented, the meetings to be needed can be held also in online format.

The EPREV Follow-up Mission of the International Atomic Energy Agency was originally planned for October 2020 to review the progress based on the recommendations and suggestions of the previous Emergency Preparedness Review Mission in 2016. Due to the pandemic situation the Follow-up Mission had to be postponed to the first half of 2021. Upon the evolution of the pandemic the re-schedule of the mission with the IAEA is ongoing.

Article 14 of Council Directive 2011/70/Euratom of 19 July 2011 establishing a Community framework for the responsible and safe management of spent fuel and radioactive waste provides that Member States shall periodically, and at least every 10 years, arrange for self-assessments of their national framework, competent regulatory authority, national programme and its implementation, and invite international peer review of their national framework, competent regulatory authority and/or national programme with the aim of ensuring that high safety standards are achieved in the safe management of spent fuel and radioactive waste. The ARTEMIS Mission was originally planned for June 2021, but due to the pandemic situation the Mission had to be postponed to the first quarter of 2022.

### ***The ENSREG has started the second Topical Peer Review (TPR-II) process***

The amended Nuclear Safety Directive introduced a European system of Topical Peer Reviews (TPR) beginning in 2017 and every six years thereafter. The 1st TPR covered the ageing management of nuclear power plants and nuclear research reactors with a power equal to 1 MWth or more. The 1st TPR will be closed in December 2023 with the submission of updated National Action Plans and preparation of a EU level final report. The European Nuclear Safety Regulators Group (ENSREG) on its forty-first meeting decided that the fire safety will be the topic of the 2nd TPR. On the forty-second meeting of the ENSREG the proposals of the Western European Nuclear Regulators Association (WENRA) regarding the scope of the facilities to be covered by the TPR have been discussed and accepted. In addition, the Board of the 2nd TPR has been appointed to conduct the implementation of the second TPR. The Terms of Reference of the 2nd TPR will be developed by the Board based on the lessons learned from the first TPR. In parallel, the WENRA began the development of the Technical Specification to guide the drawn up the national reports. In the framework of the preparation for the second TPR, the HAEA continuously monitors the development of the process guidance

document and the technical specification. At the invitation of the EU, Hungary also proposed experts for Expert and Team Leader positions to conduct the review.

### ***Participation in WENRA, ENSREG, MDEP, NEA working groups***

Below is a brief report of the HAEA's participation in international working groups. Due to the pandemic, most meetings have been rescheduled or held online.

#### **ENSREG (European Nuclear Safety Regulators Group)**

The priority task of the recent period in Working Group 1 on Nuclear Safety and International Cooperation was related to the launch of the 2nd EU Topical Peer Review (TPR) process.

The main tasks of Working Group 2 is to summarize the Member States' experiences and approaches on the initial and final state of decommissioning and exploring synergies between IRRS and ARTEMIS missions.

#### **OECD NEA (Nuclear Energy Agency)**

The topic of the 2020 fall meeting of the NEA CNRA Working Group for Operational Experiences (WGOE) was to oversee the process of utilizing operational experiences of nuclear power plants. Due to the pandemic, the HAEA is planning the next meeting in April 2022, to which the IAEA will also be invited, and the preparation will be supported by a questionnaire assessing the practices of member countries.

During the October meeting of the CNRA Working Group on Inspection Practices (WGIP), the place, time and topics of the next meetings were fixed, the location of the observed inspection (host country volunteers) was on the agenda, and a guide and procedure were discussed, which will be issued by the NEA.

As in previous years, in 2020 the HAEA again participated in the OECD NEA Radioactive Waste Management Committee (RWMC) and in the Regulatory Forum of regulatory experts from RWMC and the newly established committee (CDLM).

Working Group on Codes and Standards (WGCS) started its work on four chosen topics, which are In-Service Inspections; Ageing Management; Safety and Seismic Classification Criteria – Deterministic and Risk Analysis; Existing and New Material Manufacturing Technics.

The meeting of the OECD NEA Working Group on Human and Organisational Factors (WGHOE) focused on presentations and open discussion on COVID-19 related issues, industry and regulatory response to questions regarding human capabilities of the first wave of the pandemic.

Hungary is represented by the Director General of the HAEA in the governing body of the OECD NEA MDEP, while the Deputy Director General of the HAEA is in the board, which is responsible for coordinating the activities of each main working group. During 2020, the HAEA experts continued to

work in expert groups under the VVER working groups, which aim was to share experience at the expert level.

### **WENRA (Western European Nuclear Regulators Association)**

During the fall panel meeting of the WENRA discussions on the frequency and process of reviewing safety reference levels (SRLs) continued, which decided to set up an SRL coordination working group.

Because of the suggestion of the WENRA Reactor Harmonisation Working Group (RHWG), the ENSREG chose fire protection as the theme of the second review process. The RHWG started to elaborate the technical specifications of that.

The WENRA Working Group on Waste and Decommissioning (WGWD) was mandated to harmonize the regulatory requirements on European level. National regulations must comply with the requirements (reference levels) published by WENRA. The delegate of the HAEA fully confirmed the compliance at the plenary session at the end of March. After a rigorous review, the WGWD Committee accepted that the current Hungarian regulations were in line with all WENRA requirements for interim storage of radioactive waste.

The WENRA Research Reactor specific Working Group (WGRR) was transformed into a permanent working group at the autumn meeting of the WENRA. Accordingly, the most important task of the recent period was to prepare a long-term plan of the tasks to be performed. In addition, the working group started a self-assessment of Member States' compliance with the reference levels issued in December. In connection with the TPR process 2, the working group will be involved in the development of research reactor specific parts of the technical specification.