Annual Report 2020

KRŠKO
NUCLEAR
POWER
PLANT

Contents

Address by the Management Board

Dear business partners, owners, and colleagues,

Before you is the Annual Report, showing results of creating sustainable energy, implementing high standards, ethical behaviour, and transparent and legal work. Year 2020 was especially challenging for NPP; it was challenging yet nevertheless successful. It was marked by coronavirus pandemic and earthquakes in Zagreb and Petrinja in Croatia which affected our operations due to their proximity. Despite all, by having clearly defined goals, identified priorities and maintaining safe and stable production of electrical energy, we realised all planned objectives and for the second time during the plant's operation, we distributed more than six terawatt hours of electrical energy. Above average reliable and successful operation of the plant during such a difficult time is especially an achievement of enviable team work and cooperation as well as exceptionally high safety culture of employees and subcontractors.

We generated 6040 billion of kilowatt hours of electrical energy with exceptionally high 99.5% availability which had a decisive role in stable supply of electrical energy during pandemic, earthquakes as well as full and partial country's lockdown.

Despite the pandemic, projects necessary for long term operation took place in 2020. All delays caused by pandemic in the first half of the year were successfully remedied and we created preconditions for completing safety upgrade in 2021. We coordinated stable operation without deviations and intensive works on plant's safety upgrade were a great challenge in pandemic conditions. We again showed we can manage both by clearly defining priority areas, communicating about them, and through the dedication of employees and subcontractors.

50 years passed since the contract between Slovenia and Croatia on building the nuclear plant was signed. The long-term cooperation project of the two countries is proving to be exceptionally successful and beneficial for both partners even after 50 years. The plant's board strives for this successful facility and joint project to obtain positive assessments and continue its operations after 2023 while safely and reliably distributing to its founders and co-owners carbon neutral electrical energy.

Projects commenced for plant's periodic safety reviews, assessment of environmental effects and obtaining environmental consent for the plant's long-term operation. We plan to complete them, together with the project for Spent Fuel Dry Storage by the end of 2023 and ensure satisfaction of preconditions for safe, reliable, and extended operation of the Krško Nuclear Power Plant that is acceptable to the public.

In 2020, the 14th Inter-State committee session took place where the decommissioning revision program was assessed as suitable. On that occasion it was established that there were no suitable conditions for joint construction of the low- and intermediate level radioactive waste disposal facility. The nuclear power plant adopted measures which will ensure preconditions for distribution and acceptance of low- and intermediate level radioactive waste at the NEK boarder in accordance with the adopted review program for storing such waste.

Everything achieved expresses our dedication to operating the nuclear facility which has become an indispensable part of the electrical energy system in both States. Each day confirms that plant's operation is key for high level of energy self-supply, clean energy in the future as well as for the welfare of both Slovenia and Croatia. It is not negligible that the path to low carbon society is paved through a reasonable price of electrical energy, which is of exceptional importance to household and industrial users.

We would like to thank everyone who contributes with their understanding and decisions to exceptional results that place us among the top quarter of best nuclear plants around the world. We can continue building and keeping our reputable place in the world map on well performed work, broad professional experience and knowledge we have accumulated in our decades-long operation. This is the best possible starting point on which Slovenia and Croatia can build and strengthen their energy independency in the long-term, and therefore also for future generations. This is a great motive. This is also a great responsibility. We believe we are able to achieve.

Stanislav Rožman
President of the Management Board

Saša Medaković
Member of the Management Board

Summary Report and Challenges for 2021

Year 2020, marked by the new coronavirus pandemic was successful for the Krško Nuclear Power Plant (NPP) as high reliability and planned production were confirmed again. It produced more than six billion of kilowatt hours of electrical energy and successfully continued the work according to the Safety Upgrade Program. In 2021 the main challenges will be maintaining high safety level and operating efficiency, a successful outage, completing the projects for Safety Upgrade Program during pandemic conditions and administrative procedures as well as assessing the extension of the plant's operating period.

There was no outage during 2020 and NPP produced 6.04 terawatt hours (TWh) of electrical energy which is more than the planned 5.95. We are especially proud of exceeding the goals because of the pandemic which significantly paralysed the economy and logistical infrastructure globally.

Even before the epidemic was declared in Slovenia, NPP identified a series of risks concerning the spread of SARS-CoV-2 coronavirus, causing Covid-19 illness, and appointed a team for preparing an actual action plan, adopted first internal measures and instructions for safe, reliable, and undisturbed plant's operation. We drew up the *Epidemic & Pandemic Contingency Plan* (*NUPEP*) which gives directions for measures at the plant, organisation, information competent institutions and communication with the environment, etc. This proved to be very successful.

Procedures for obtaining permits in accordance with spatial, environmental, construction, and nuclear laws were intensively underway. A number of permits for completing the vast Safety Upgrade Program (SUP) were successfully obtained. Among most important are the permits of the Slovenian Nuclear Safety Administration (URSJV) for constructing additional reinforced bunkered building (BB2) within the technological area of NPP where systems for preventing and mitigating unlikely accidents are to be installed. A very important element for upgrading safety at NPP is constructing the Spent Fuel Dry Storage facility at the NPP's location. In this regard, already in March a project for amending and supplementing the NPP's Urban Design Plan was successfully completed and it included a comprehensive review of effects on the environment and cross-border consultation with the Republic of Croatia and the Republic of Austria. By publishing the Ordinance amending the Ordinance on the Urban Design Plan of NPP in the Official Gazette of the Republic of Slovenia the conditions were created for initiating the procedure for obtaining the building permit for constructing the Spent Fuel Dry Storage facility. The Ministry of the Environment and Spatial Planning issued the building permit for constructing the Spent Fuel Dry Storage facility within the existing nuclear NPP complex at the end of 2020, after completing complex administrative cross-border assessment process with the Republic of Croatia and the Republic of Austria. This satisfied an important precondition as dry storage facility introduces a new, technologically safer temporary storage of spent fuel, gradually reducing the number of spent fuel elements in the pool and increasing nuclear safety.

6.04 TWh
in 2020

Implementation works for SUP's second and third phase projects will continue. After realising the Program, safety criteria of NPP will be comparable to plants built today.

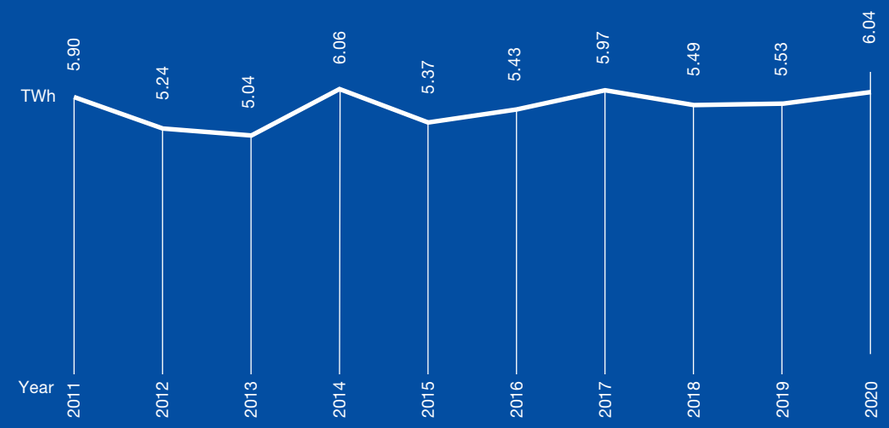
In October, the external certification organisation checked and confirmed compliance of the environment treatment system with the standard ISO 14001:2015 and health and safety at work with the standards ISO 45001:2018. NEK obtained new compliance certificate for the next three-year period.

Due to measures on preventing the spread of coronavirus SARS-CoV-2 NPP did not implement two planned regular annual theoretical-practical exercises for emergency situation. Most of other training in this field was successfully completed.

To satisfy administrative requirements and for continued successful operation of the plant after 2023, activities on projects for extending the operating period of NPP commenced. At the end of the year the Slovenian Nuclear Safety Administration confirmed the program for third periodic safety review of NPP by its decision (PSR3) - its content, scope, and timeframe. NPP immediately started to prepare documentation for assessing environmental effects with cross-border procedures and to obtain environmental consent on the basis of the Slovenian Environmental Agency's Decision from October 2020. NPP is also preparing for a mission IAEA SALTO (Safety Aspects of Long-Term Operation) which will be in October 2021. At the end of the year the IAEA representative carried out training and preparatory meeting in this field.

Diagram of output by years

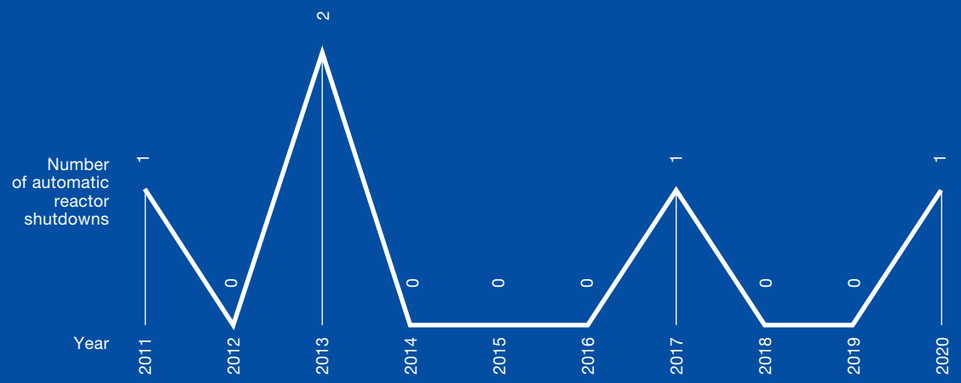
Total: 186.63 TWh
(output since the start of commercial operation)
NEK target for 2020: ≥ 5.96 TWh



In 2020, NPP had stable operation with one unplanned shutdown at the end of the year due to an earthquake. It reconnected to the electricity grid after approximately 35 hours. Despite the shutdown its production was for around 0.09-terawatt hour higher than planned. We applied all operating limitations and conditions as well as environmental restrictions as specified in the water and environmental permit.

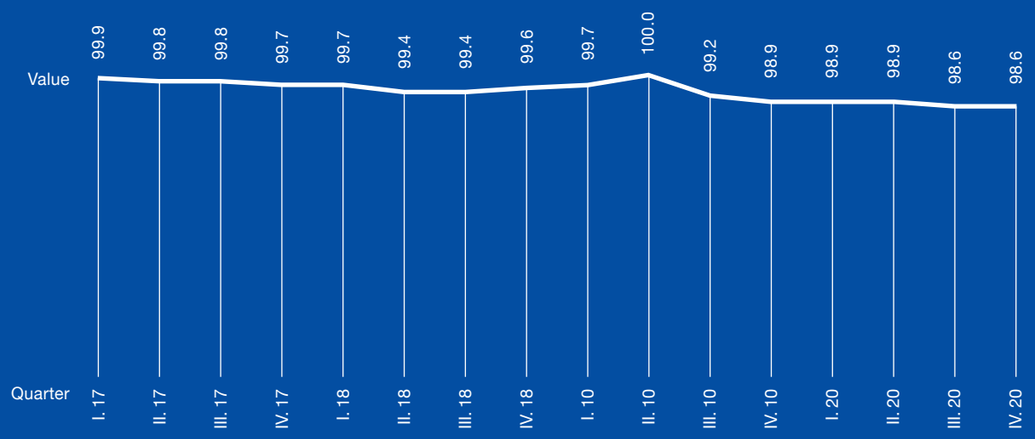
Total of
186.63 TWh

Unplanned automatic shutdowns



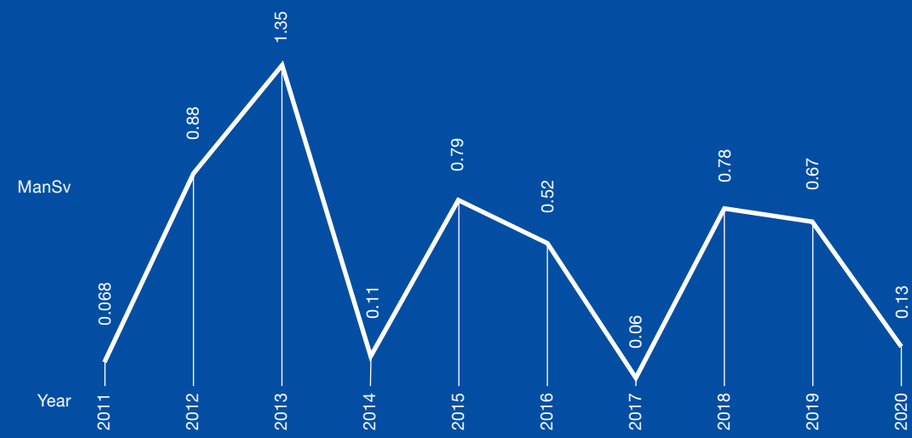
Performance indicator index

NEK target for 2020: ≥ 96



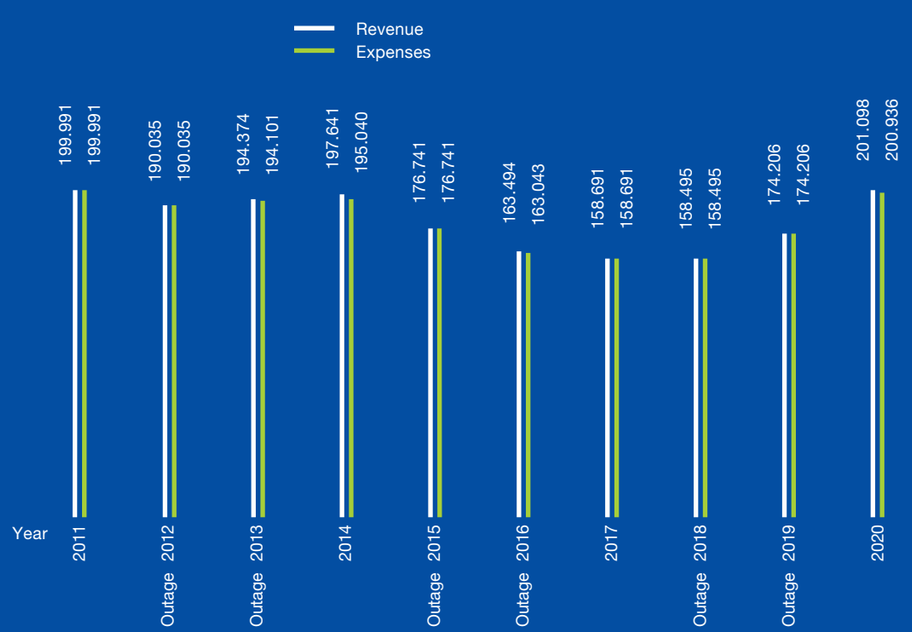
The operational efficiency is supported by the high value of the performance indicator index which was instituted by WANO to facilitate efficiency monitoring and data comparison between power plants. It is calculated by weighted values of individual indicators, with the scale from 0 to 100. In 2020, the performance indicator value was between 98.6 and 98.9.

Total collective radiation dose

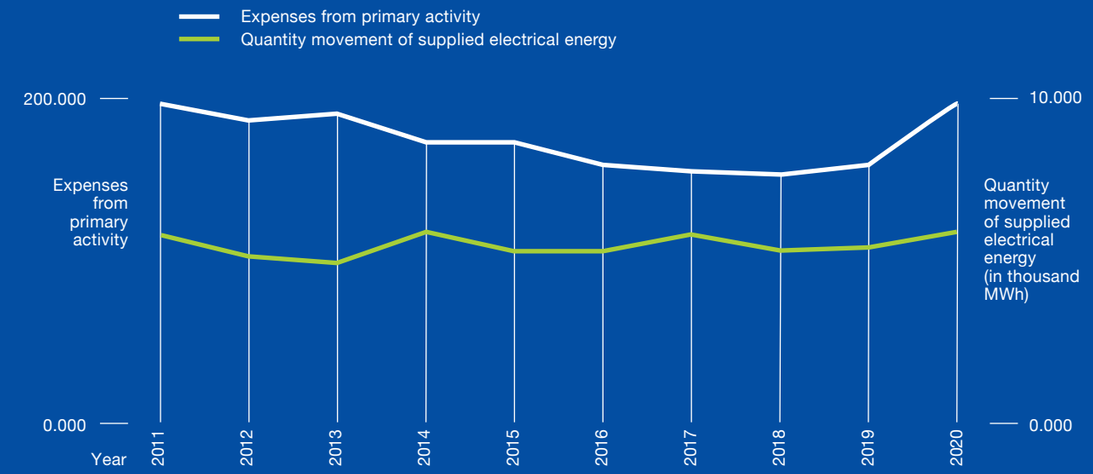


Revenue and expenses in 2020 were higher than in 2019 due to higher production and somewhat higher price of electrical energy.

Total revenue and expenses (In thousand EUR)



Expenses from primary activity (in thousand EUR) and quantity movement of supplied electrical energy



In 2020, expenditure was higher due to higher depreciation that was intended for investments in accordance with the long-term investment plan for technological upgrade of NPP, with emphasis on technological upgrades under SUP.

Challenges for 2021

In NPP we build for the long-term on firm bases of our achievements. Our result for 2020, when five decades had passed since the agreement between Slovenia and Croatia, likely exceeded the best expectations of pioneers of nuclear energy. Sound management, more than 6 terawatt hours of distributed electrical energy, and successful upgrade projects despite uncertainties and restrictions resulting from the new coronavirus pandemic are exemplary results; it will be a challenge to repeat them in the following year. With the support from shareholders and other stakeholders these results can be attained only by a professional team that sets itself ambitious goals and realises them by a great measure of enthusiasm, cooperation, and openness in an international space. A team that is aware that stable and reliable operation and constant equipment and process upgrades are conditions for long-term operation. This is in the interest of the wider community as well as it will allow for a move to environmental neutrality that will be sustainable for the environment as well as for people and for the economy.

5.3 TWh production target

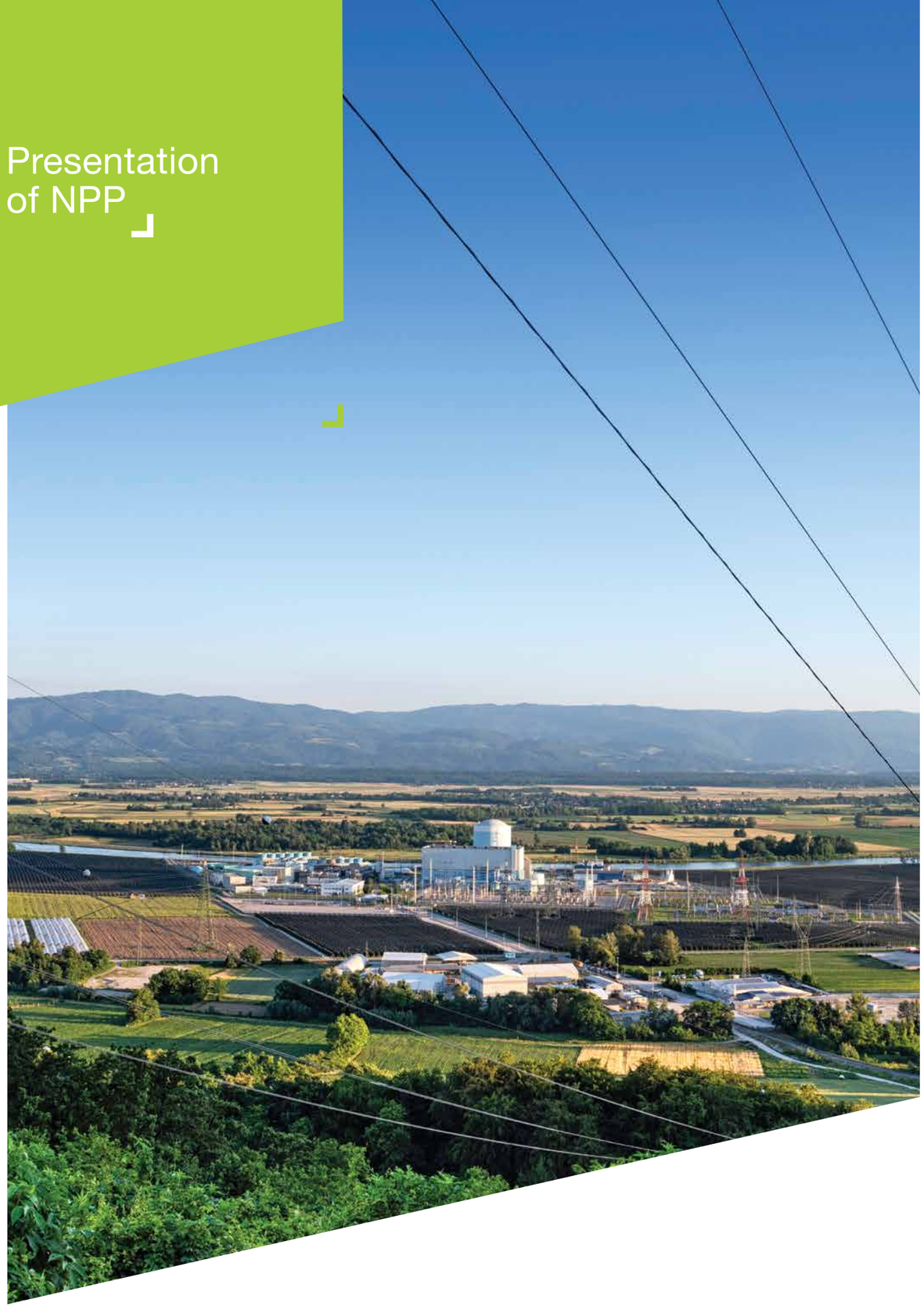
The electrical energy from NPP reached around 40 percent of all electrical energy generated in Slovenia and importantly contributed to lowering carbon footprint. Carbon dioxide output from nuclear plants for their whole operating cycle are even lower than from solar and hydro plants and at the level of output from wind power plants as shown by the results from the study of the inter-governmental panel for climate change. Each shareholder takes half of electrical energy generated. The half taken by the Slovenian shareholder covers a fifth of electrical energy use in the country and the half taken by the Croatian shareholder covers a good sixth of their use. NPP is also a supporting point for power system within the European Network of Transmission System Operators for Electricity (ENTSO-E) and a significant factor in stabilising disturbances in the European grid. The production goal remains high – 5.3 terawatt hours – as the plant will be shutdown for a good month due to planned refuelling and equipment overhaul.

The outage is a very labour-intensive period, logistically demanding due to many activities and works. During this year's outage we will again implement the extensive standard program on maintenance and testing of mechanical, electrical, measuring-control equipment and with surveillance tests we will check and ensure that systems, structures, and components are able to perform their tasks. The quality of works performed is very important for stable operation in the next fuel cycle. The scope of works and their quality will be that much greater this year as we are completing one of the most modern concepts of the safety technological upgrade – during the outage, we will complete the SUP by connecting new equipment and system and check their functioning, with the exception of the Spent Fuel Dry Storage project which will be completed by the end of 2023.

With good maintenance and prudent equipment upgrade during existing plant's operation and with the Safety Upgrade Program we comply with the conditions for long-term plant's operation. Ahead of us we have administrative procedures and inspections whose positive results will confirm the possibility to extend the plant's operating period for 20 years. In accordance with the rules, periodic safety review commenced in 2020 which is a supplementary tool to the permanent administrative safety supervision conducted through regular and exceptional reviews by the Slovenian Nuclear Safety Administration. After extensive and demanding periodic safety review (the first one was completed in 2003, the second in 2013), the Slovenian Nuclear Safety Administration issued a decision which confirms NPP satisfied conditions set out in the operating permit in terms of ensuring radiation and nuclear safety and can operate for the next 10 years. The third review will check for meeting these conditions until 2033 when the fourth review will fall due. Long-term plant's operating safety will be upon Slovenian government's invitation also examined by the International Atomic Energy Agency within the pre-SALTO mission (Safety Aspects of Long-Term Operations). In accordance with the Decision of the Slovenian Environmental Agency we will also carry out the assessment of environmental effects for the purpose of extending plant's operation and obtain the environmental consent.

We are positive we will successfully complete all processes as we have managed the plant in past years professionally, carefully maintained it and regularly upgraded it. Our vision for long-term operation of the plant provides energy safety, availability of electrical energy for the economy and households and its development. Its orientation towards transformation and carbon-free operation is making the plant increasingly more important in the wider sense of providing electrical energy.

Presentation of NPP



The decision to build the nuclear plant in Slovenia was made from the perspective of the need for electrical energy. The plant operates safely and reliably and has an important role in the Slovenian and Croatian grid. In accordance with high professional-technical nuclear technology standards we satisfy fundamental expectations and orientations regarding operating safety and stability, production competitiveness when compared to other resources and public acceptance. Available net energy production in optimal conditions is around 700 megawatts. In an 18-month fuel cycle in years without outage we generate around 6,000,000 megawatt hours of electrical energy and in years with outage around 5,400,000. We are commercially operating since 1983; we have distributed around 186,000,000 megawatt hours of electrical energy into both grids.

The status of the company is governed by the Agreement concluded between the Government of the Republic of Slovenia and the Government of the Republic of Croatia on regulating the status and other legal issues related to investments in the Krško Nuclear Power Plant, its utilisation and decommissioning – Intergovernmental Agreement (Official Gazette of the RS No 23/2003, MP 5; hereinafter: IT and the Articles of Association (consolidated text NEK d.o.o. of 24.09.2019; hereinafter: AA), concluded between the shareholders *GEN energija d.o.o.* (GEN) and *Hrvatska elektroprivreda, d. d.* (HEP). In accordance with these regulatory documents, we do not sell electrical energy since 2003 but supply it exclusively to the two shareholders who must accept it.

The year 2020 was marked by the new coronavirus. Despite it we had exceptionally successfully achieved business and economic goals set. Through safe and stable plant's operation we supplied the shareholders with 6,040,821 megawatt hours of electrical energy. For the second time during the plant's operation, we passed 6,000,000 megawatt hours and produced 85,821 megawatt hours more electrical energy. We generated EUR 201,097,970 of turnover and EUR 200,963,253 of expenditure which means turnover was for EUR 134,717 higher than expenditure for the purposes of tax on profit.

Taking into account nuclear safety criteria, operating stability and business efficiency, we are an example among nuclear plants around the world.

Ever since IT came into effect we have operated successfully and in accordance with shareholders' expectations.

700 MW
available
plant power

Identification Card

Company name	Krško Nuclear Power Plant, d. o. o.
Short name	NEK, d. o. o.
Company seat	Vrbina 12, 8270 Krško
Date of establishment	29.04.1974
Registration	Krško District Court, entry number 10012000 SRG 200300116
Share capital	EUR 353,544,826.00
Ownership structure	50% GEN energija, d. o. o., Krško, Slovenia 50% Hrvatska elektroprivreda, d. d., Zagreb, Croatia
Standard classification of activities	D 35.112 – Production of electrical energy in thermal power stations, nuclear power stations
Registration number	5034345
Tax number	61082597
VAT identification number	SI61082597
Bank accounts	SI56 0292 4001 8793 453 NLB, d. d., Ljubljana SI56 0315 5100 1607 765 SKB banka, d. d., Ljubljana SI56 2900 0005 5284 134 UniCredit Banka Slovenija, d. d. SI56 0510 0801 2190 564 A banka, d. d., Ljubljana (from 31.12.2020) SI56 1010 0005 7820 337 Banka Intesa Sanpaolo, d. d. SI56 0400 1004 8892 548 Nova KBM, d. d., Maribor (from 01.01.2021)
Representatives	Stanislav Rožman, President of the Management Board Saša Medaković, Member of the Management Board
Website	www.nek.si
Email	nek@nek.si

Mission, Vision, and Values

We realise our mission and responsibility:

- by providing safe and stable operations which are in accordance with leading standards that ensure individual and collective safety,
- by competitive production of electrical energy:
- by critical self-assessment of results achieved and introducing constant improvements;
- by ensuring socially acceptable operations which is transparent, ethical and environmentally positively directed;
- by accepting principles set out in the IT on regulating the status and other legal issues related to investments in the NPP, its utilisation and decommissioning.

Our vision is to be an example of nuclear safety and excellence at a global level. According to criteria on nuclear safety, operating stability, and business efficiency NPP is among best operating nuclear plants worldwide.

The fundamental values are the reference line of our actions, the basis and condition for realising our vision and mission. They are part of our work processes and relationships. We live these fundamental values; we are recognised by them by the professional public and the environment. They define essential characteristics of employees and their attitude towards the world and (business) environment.

Management Bodies

Management and supervisory bodies of NPP are the general assembly, the supervisory board and the management board, constituted in accordance with the IT and AA. Their composition on the date of drawing up this Annual Report:

The general assembly constitutes the two shareholders, each with 50% shareholding, namely:

- GEN, represented by the general director Martin Novšak, and
- HEP, represented by the board president Frane Barbarić.

The supervisory board members' mandate is until 7 April 2023. The supervisory board performs its supervisory function in the composition of:

- Kažimir Vrankić, Msc – president;
- Martin Novšak – deputy president;
- Robert Krklec, Msc – member;
- Josip Lebegner, Msc – member;
- Rajko Pirnat, PhD – member; and
- Primož Stropnik – member.

The company's management board composition is:

- Stanislav Rožman – president of the board; and
- Saša Medaković – board member.

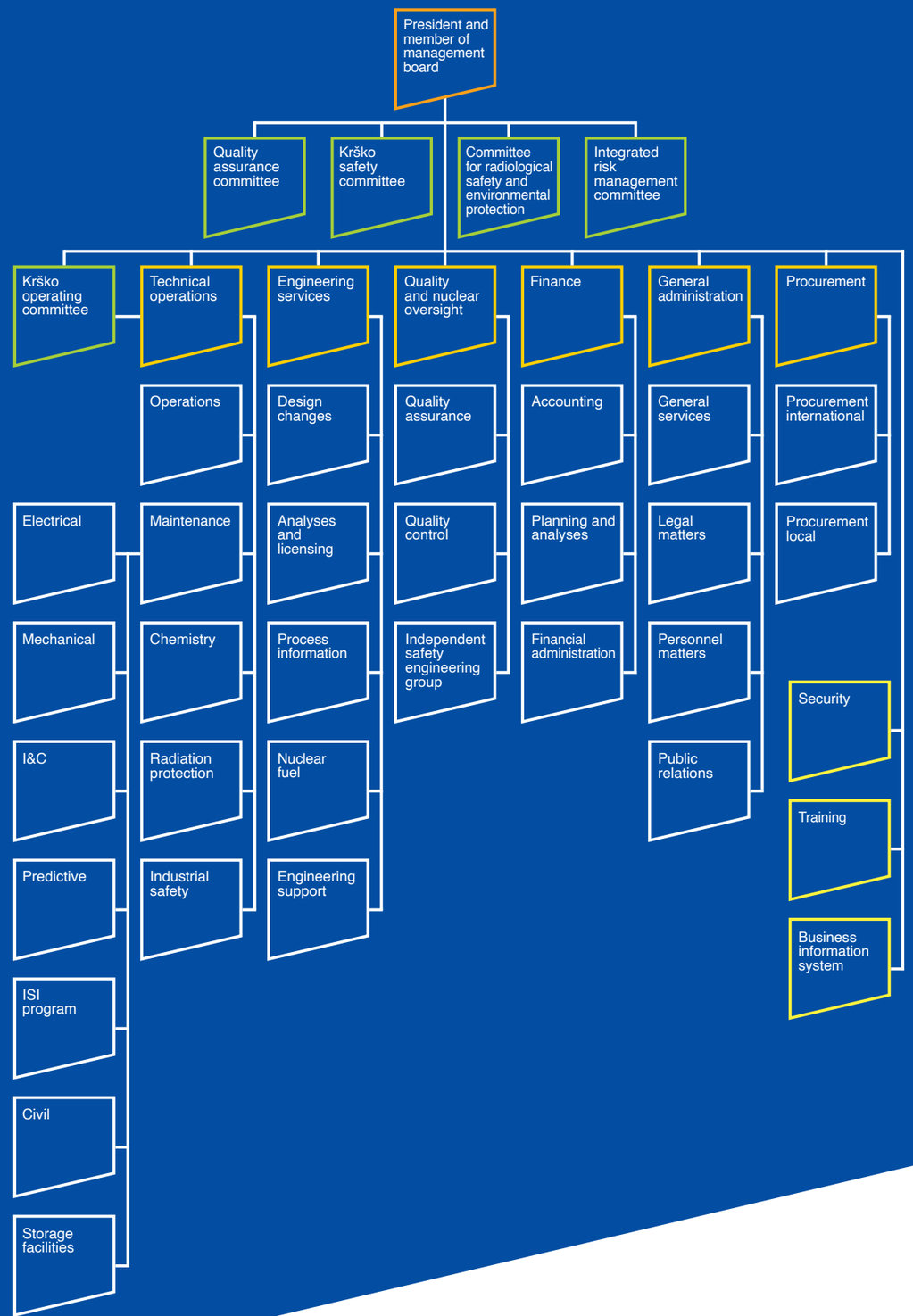
The board president Stanislav Rožman's mandate is until 10 April 2023 and the board member Saša Medaković's mandate is until 2 November 2024.

Company Organisation

The company is designed to cover all functions which are in accordance with nuclear industry standards and regulations necessary for quality professional work processes. Due to the company's specific position, its internal organisation covers engineering and corporate functions, including independent nuclear safety inspection. The management system, as one of the key documents, systematically shows the primary organisational properties and defines the responsibility for management, key, and support processes.

The advantage of our organisation lies in stable human resources with the competent and responsible employees, whose virtue lies in their high enthusiasm and motivation. Knowledge and expertise are very important values and we ensure continuous staff development.

Organisation chart



Supervisory Board Report

Supervisory Board Report

Pursuant to Article 282 of Companies Act, Official Gazette of RS No. 42/06, and the NEK Articles of Association, as amended and consolidated on 24 September 2019, the NEK Supervisory Board prepared the following report on their functions.

In 2020, the NEK Supervisory Board was composed of the following members:

- Kažimir Vrankić, MSc – chairman,
- Martin Novšak – deputy chairman,
- Robert Krklec, MSc – member,
- Josip Lebegner, MSc – member,
- Rajko Pirnat, PhD – member, and
- Primož Stropnik – member.

In 2020, the NEK Supervisory Board had five regular meetings, two correspondent ones and one extraordinary meeting. It monitored the company operations and supervised its management. The basis for the board's work were written materials prepared by the company Management Board. The tasks of NEK Supervisory Board included reviewing, giving approvals, making checks, getting informed and/or accepted:

- NEK annual report for 2019 and gave their opinion about the auditor's report;
- Business plan for 2021, rev. 1 and gave their approval to the electric power budget price for 2021;
- NEK long-term investment plan for technological upgrading for the following five-year period (2021 – 2025), rev. 1;
- Semi-annual reports on the status of modification II-2019 (July-December), rev. 1 and I-2020 (January-July), rev. 1;
- Approval to uranium procurement contract for fuel elements fabrication for the period 2022-2028 (5 regions);
- Approval to new components procurement contract for the replacement on emergency diesel generators DG-1 and DG-2;
- Investment for safety upgrade program – reconstruction of operational support centre (1056-NA-L), rev. 1;
- Investment program 'NEK Safety Upgrade' – phase 3, BB2, rev. 1;
- Investment program 'Sustainable Restoration of the connecting pipeline between HP-turbine and MSR'. rev. 1;
- Investment program 'Replacement of CC heat exchangers CC101HEX-001&002';
- Investment program 'Replacement of AMSAC', rev. 0,
- Quarterly information on operations;
- Monthly reports of the Independent safety engineering group (ISEG), and
- Other matters within the board's responsibilities.

In line with the accepted methodology, the members of the NEK Supervisory Board received certain monthly information on operations pertaining to NEK financial statements.

As provided for under the Articles of Association, in March 2021 the NEK Supervisory Board reviewed the draft Annual Report for 2020 and found that it reflects a credible position of the company and complete information on 2020 operations, thus complementing information received by the board during the business year.

The NEK Supervisory Board established that the auditing company *BDO Revizija, d.o.o.,* in their report assessed that the financial statements for 2020 were in all important segments prepared in accordance with the Intergovernmental Agreement, Official Gazette of RS No. 23/2003, the Articles of Association and Slovenian Accounting Standards in those areas not regulated by the Intergovernmental Agreement and the Articles of Association.

Pursuant to Article 546 of the Companies Act, the NEK Supervisory Board also reviewed the Report on the relationships with related companies for 2020 together with the report of independent auditor on the limited assurance. The NEK Supervisory Board established that the auditor concluded that:

- information contained in the report is correct in all significant aspects;
- the value of NEK at the time of concluding legal acts with related companies was not in significant aspects unproportional; and
- there were no circumstances which would demonstrate essentially different assessment from the one given by the management.

The NEK Supervisory Board has no comments to the Independent Auditor's Report concerning the limited assurances.

Krško, 22 March 2021

NEK Supervisory Board Chairman
Kažimir Vrankić, MSc

Statement about Business Operations

Statement about Business Operations

Pursuant to article 70 paragraph 5 of the Companies Act, the Management of the company hereby declares that in 2020 it respected all the principles concerning the operation of the company striving to ensure their implementation.

The Management Board declares that:

- it operates the company in accordance with the Intergovernmental Agreement (Official Gazette of RS, No. 23/2003) and the Article of Association (last consolidated amended version of 24 September 2019) as well as the current legislation and nuclear industry standards;
- it complies with the Code of Safety and Business Ethics published at www.nek.si, the Five-Year Development Plan, and the Management System.

The company status is regulated with the Intergovernmental Agreement and the Articles of Association entered into by *GEN energija, d.o.o.* (GEN) and *Hrvatska elektroprivreda, d.d.* (HEP). According to the Intergovernmental Agreement the owners of the company are GEN and HEP, each with a 50% share of the company's capital.

To ensure effective operations of all business processes, management systems have been implemented with effective systems of internal control.

The purpose of internal controls is to ensure accuracy, reliability, transparency, and clarity of all processes coupled with effective management of risk related to financial reporting. The key factors of effective internal control are a clear organisational structure with a detailed listing of tasks and responsibilities and internal procedures per each working process. The internal control system is implemented in business processes at all organisational levels. Internal controls are systemised and laid down in writing in internal instructions which include the entire production process and the plant key supportive functions. The effective system of internal controls of the work process establish mechanisms which ensure safe and stable plant operation and its cost effectiveness.

The accounting systems incorporate controls which ensure that:

- the umbrella regulations related to the NEK association and operations, i.e. the Intergovernmental Agreement and the Articles of Association are fully respected, and
- business events are properly recorded as defined by umbrella regulations and Slovenian Accounting Standards.

Appropriate and effective internal control systems and reliable risk management ensure the plant operation is in line with its mission and long-term strategic goals.

The General Meeting and its key responsibilities are governed by the Intergovernmental Agreement and the Articles of Association. As a company body, it is set up on a parity basis. All responsibilities of the General Meeting are undertaken by the owners. There was one General Meeting in 2020 passing the following resolutions:

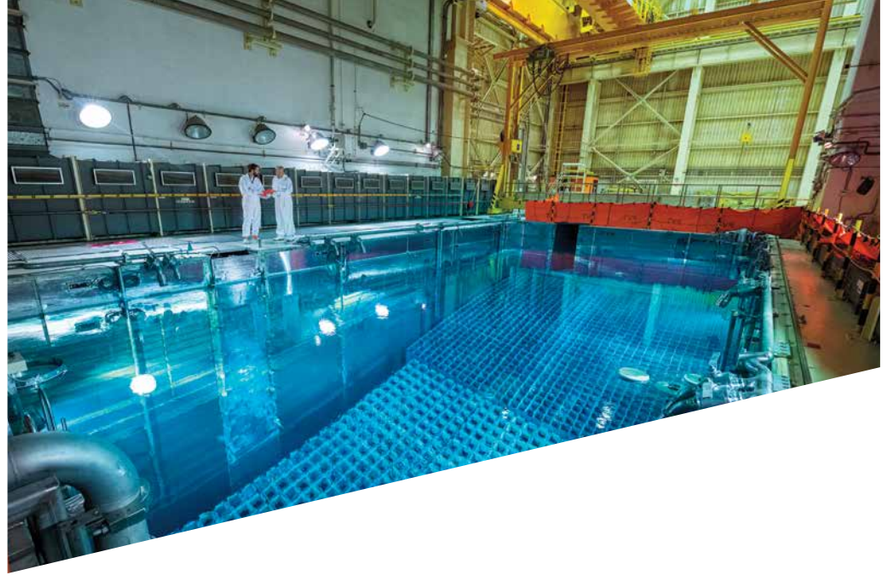
- Annual Report 2019 was accepted;
- Discharge for 2019 was given to the Management Board and Supervisory Board, and
- BD Revizija, d.o.o. was accepted as a company to prepare audits of semi-annual and annual financial statement for 2020, 2021 and 2022.

The supervisory and management bodies are the Supervisory Board and the Management Board, both composed on the parity basis. Their composition, responsibilities, and functions are defined in the Intergovernmental Agreement and the Articles of Association. The functions of the Supervisory Board are detailed in the Supervisory Board report for 2020.

Krško, 16 March 2021

Stanislav Rožman, President of the Management Board

Saša Medaković, Member of the Management Board



Company's Business Policy

The business policy is defined by NPP's management board, taking into account the Intergovernmental Agreement and the Articles of Association. The management board manages the company's operations, determines its business policy for assuring safe and reliable operation, competitive production and social acceptability.

Legislation, the Intergovernmental Agreement, nuclear industry standards and the standards of effective company management represent a framework of NPP's business. Strategic documents: *Code of Safety and Business Ethics, Five-Year Development Plan, and Management System* guide us towards accomplishing our mission and vision.

Code of Safety and Business Ethics gives the basic principles for our ethical and moral conducts. It defines fundamental and personal values, vision and mission, principles of conduct and action in our interrelationships. The Code directs our actions and tells us who we are, what we believe in and what we can expect from our co-workers and everyone we work with.

In our operations, NPP has constantly been facing diversity as its founders are electrical energy generating companies from Slovenia and Croatia. Important diversity extends to including American technology in the European infrastructure, legislative and cultural space and cooperation with suppliers of different cultures from Europe, America, and Asia.

The general assembly, the supervisory board and the management board of the company are aware of these diversities and therefore they subject their management to four goals: nuclear safety, competitiveness, social acceptability and critical self-assessment. NPP takes into consideration the Intergovernmental Agreement which governs its operations by the parity principle when constituting the general assembly, the management and the supervisory boards, as well as employment laws prohibiting discrimination and maltreatment. The *Code of Safety and Business Ethics* and the human resources management policy are also observed.

Company Research and Development

NPP invests important resources and human resources into research and development:

- research work which is financed by NPP due to specific needs, for example development of new safety solutions and analysis, in cooperation with Slovenian and Croatian universities and institutes;
- research which is conducted together with research institutes from Slovenia and Croatia; these are research projects which are more fundamental, generic and from which NPP has indirect benefit.

Risk Exposure

The comprehensive risk management program provides systematic methods for timely detection and management of different types of risks. The comprehensive management risk means a sum of processes and activities by which risks are identified and assessed, examined, systematically reduced, and managed.

Risks are divided into groups:

- nuclear safety risks;
- radiological risks;
- personal risks;
- environmental risks;
- operating risks;
- facility management risk;
- other risks; and
- dependant risks.

Risks are categorised into one of two categories. First category risks are those whose consequences could significantly affect nuclear safety, electrical energy production or personal safety. Any major risks are discussed by the Integrated Risk Management Committee, an advisory committee of the NPP's board.

Second category risks carry lower risks in a particular risk group which cannot be addressed within an individual organisational unit. Risks are examined by the expert Krško operating committee for technical questions or by board committee for non-technical questions.

The highest risks refer to ensuring facility's nuclear safety and always take priority. Nuclear safety risks and operating risks are also managed through regular investments into safety and other systems (with emphasis on SUP), taking into consideration administrative decisions in the field of nuclear safety, good practices from best plants around the world and WANO and OSART mission recommendations. We maintain high level of safety culture and awareness by all employees. Property is insured against nuclear, fire and other risks and against machinery breakdown. We also maintain insurance contracts for third party damages.

Radiological risks are risks that affect radiological safety of an individual or a group of people due to unplanned radiological exposure, external or internal communication or spread of radioactive hot particles.

Personal risks are workers' exposure in terms of classical industrial safety and injury at work.

Environmental risks affect the environment, living organisms or nature due to waste and emissions from the plant.

Operating risks affect reliability and availability of the plant, undesired transients and shutdowns, length of outage as parameters of plant's availability. Operating risks are risks related to unplanned shutdowns, causing loss of revenue. These are protected by the Intergovernmental Agreement and Articles of Association. The daily supply value according to cost price is around EUR 530,141, the market price is around EUR 602,928 (the average HUPX price).

Facility operating risks refer to inability to adopt key decisions on investment, maintenance, and operation of the facility and its financing which includes financial investments.

Other risks include mostly the supply process in accordance with the *Public Procurement Act (*ZJN-3). The complexity and additional demands under the Act increase administration, it affects the realisation of plans and obligations, extends supply deadlines which can affect nuclear safety and plant's availability. Operative risks include risks of non-performance by other parties arising from contracts concluded with suppliers. These risks are managed by careful credit assessment of future suppliers before concluding a contract. All important work is insured by performance bonds.

Dependent risks are a combination of these risks, as part of a total risk model, and arise from the fact that risks do not (necessarily) exclude one another.

In 2020, ten risks were identified. Of these, seven fell within the first risk category – greater risks. Two risks could have had hypothetical consequences on nuclear safety, three risks on the electrical energy generation and two would affect staff personal safety. Three risks were lower, falling into the second risk category. All risks were adequately dealt with, all required preventive measures or mitigating possible consequences.

Goals

Goals are set in the Business Plan (BP). We list pointers and indicators which demonstrate success in managing some objectives set for 2020 and objectives planned for 2021.

	Plan 2020	Realisation 2020	Plan 2021
PLANT PERFORMANCE			
Performance indicator index	≥ 96	98.63	≥ 97
Unit capability factor	≥ 98%	99.51%	≥ 90%
Electrical energy generated (in GWh)	≥ 5,955	6,041	≥ 5,330
Outage duration	/	/	≤ 34 days
OPERATING EVENTS			
Unplanned automatic reactor trips	≤ 1 per 2 years	1 per 2 years	≤ 1 per 2 years
Operating events, level 1 and 2	≤ 3	2	≤ 4
UNPLANNED AND PLANNED SHUTDOWNS			
Number of unplanned shutdowns/scrams	≤ 2 per 3 years	2 per 3 years	≤ 2 per 3 years
Forced capability loss factor	≥ 0.7%	0.49%	≥ 0.7%
OPERATING RISKS ASSESSMENT			
Reactor core safety / Core damage probability			
CDP/12 weeks - online	≤ 7 E-7	2.00 E-7	≤ 7 E-7
CDP/outage - during outage	/	/	≤ 3 E-5
Reactor fuel reliability (Ci/m^3)	≤ 1 E-4	1,00 E-6	≤ 8 E-5
OCCUPATIONAL SAFETY AND HEALTH			
Collective radiation exposure (manSv)	≤ 0.1	0.13	≤ 0.70
Maximum individual dose exposure (mSV)	≤ 10	6.31	≤ 10
Industrial safety accident rate	≤ 0.17	0.37	≤ 0.17
ECONOMIC AND PROJECT GOALS			
Estimated price /realised power cost price	≤ 32.98	32.61	≤ 33.05
Total operating costs (without depreciation in EUR million)	≤ 137.4	134,3	≤ 139.7
Investments into safety upgrade (in EUR million)	79.0	57.0	44.5

	Plan 2020	Realisation 2020	Plan 2021
MAJOR PROJECTS			
SUP - Phase 2			
Upgrading the operational support centre	100%	90%	
Reinforced bunkered building 1 (BB1)	100%	95%	
Alternative cooling of reactor coolant system (RCS) and reactor building (RB)	95%	95%	100%
SUP - Phase 3			
Spent fuel dry storage (SFDS)	50%	50%	70%
Reinforced bunkered building 2 (BB2)	80%	80%	100%
Replacement of temperature resilient seals at RC pumps	20%	20%	100%
NPP OPERATIONAL LIFE EXTENSION			
Periodic safety review (PSR3)			40%
Environmental impact assessment and obtaining environmental consent			50%
Safety aspects of long-term operation (mission IAEA pre-SALTO)			100%
OTHER PROJECTS			
T3 transformer replacement	100%	100%	
High pressure turbine replacement	20%	20%	60%
Welding overlay on cross-under piping	100%	65%	
Cooling towers system renovation	100%	90%	
AMSAC system replacement	60%	5%	20%
Replacement of component cooling heat exchangers			20%
ATTITUDE TOWARDS THE ENVIRONMENT AND PUBLIC			
All emissions into environment	Under regulatory restrictions	Under regulatory restrictions	Under regulatory restrictions

As shown by above information, NPP was operating successfully in 2020. Due to two accidents at work in 2020, the goals under the indicator *Industrial safety accident rate* were not achieved. The indicator *Collective radiation exposure* exceeded its targeted value by a little due to radioactive waste management, entry into the containment and plant's shutdown.

Business Report

Responsible Attitude Towards the Environment

1.0

Environmental protection is included in all work processes of the plant. The measurement results demonstrate that all effects on the environment are far below the administrative limits. Authorised organisations prepare a special annual report on radiation surveillance in the surroundings of the plant. Suitability of environment management was again confirmed by the fifth recertification review on complying with the requirements under the environmental standards ISO 14001:2015.

The objective of radiation monitoring is to monitor the plant's operations and assess the effects on the environment and on the population. This ensures that prescribed limits are respected.

NPP carries out radioactive measurements of the wastewater releases into the Sava River and emissions from the ventilation system into the air. Independently, external authorised organisations measure samples in the surroundings, in particular in the area around NPP, within a distance of 12 kilometres. In addition, there are 13 automatic radiation measuring stations located in the vicinity of the plant which can detect changes in the natural level of radiation due to precipitations as well as potential changes due to the nuclear facility. The Sava River is monitored downstream for 30 kilometres from the plant by independent authorised organisations.

The effects of the NPP onto the environment are so low that they are practically immeasurable. By using models, it is possible to calculate the effects for most exposed population group and compare the calculated dose with natural and other radiation sources. The assessment of a dose received by an individual in a critical reference group (an adult receiving the highest doses and whose food originates exclusively from locally grown food and fish) shows that the annual dose of such an individual is approximately 0.5 microsievert. The annual dose for NPP is limited to 50 microsieverts per individual (at a distance of 500 m from the reactor or more) from emissions into the environment. Natural radiation and lower effects of general radioactive environment pollution gives a dose of 2300 microsieverts in one year. In 2019, radiation effects of NPP on the population in the vicinity was assessed at less than 0.11 microsievert which is 0.22 % of the said restriction (50 μSv). The results of measurements taken are dealt with in detail in the special report, to be prepared by the Jožef Stefan Institute for 2020, together with the Institute for Occupational Safety, MEIS and the Ruđer Bošković Institute.

1.1
Liquid Radioactive Discharges

Wastewater may contain fission and activation products. The activity of fission and activation products (excluding tritium H-3, carbon C-14 and alpha particle emitters) amounted to 0.011 percent of the additional annual limit of activity for liquid discharges. The activity of discharged tritium was approximately 6.6 percent of the prescribed annual limit. Tritium is a hydrogen isotope found in water; because of low radiotoxicity it is less important despite higher activities when compared to other contaminants.

The plant observed administrative and technical regulations which require the concentration of radioactivity in the discharge channel wastewater not to exceed the prescribed limits.

Data on liquid radioactive discharges in 2020

radioactive substances	annual limit	emission activity	percentage of the limit
fission and activation products	100 GBq	0.0112 GBq 2.95 TBq	0.011
Tritium (H-3)	45 TBq	2.95 TBq	6.6

1.2
Radioactive Releases into the Air

The annual dose limit of 50 microsieverts for releases into the air and water are checked monthly. The dose calculated for the air at a 500-metre distance from the reactor is calculated as the dose that could have been received by an individual at such distance in one year from external and internal radiation. The least favourable monthly average atmosphere dispersion values and the ground releases for the particular wind directions are presumed in the calculation. The result for 2020 was 0.49 microsieverts (0.98 percent of the annual limit). Detailed information is presented in the table below.

Data on radioactive releases into the air in 2020

radioactive substances	total annual limit	dose	percentage of the limit
fission and activation gases (total)		3.78E-02 µSv	
Iodines (I-131 and others)		0 µSv	
dust particles (Cobalt, Caesium, etc.)		2.38E-07 µSv	
Tritium (H-3)		4.07E-01 µSv	
Carbon (C-14)		4.70E-02 µSv	
	50 µSv	Total 0.49 µSv	0.98

Technical regulations were taken into account to limit the radioactive concentrations in the air, e.g. the dose rate within a 500-metre distance from the reactor, to the prescribed value.

1.3
Measurements of Radioactive Release and Environmental Samples

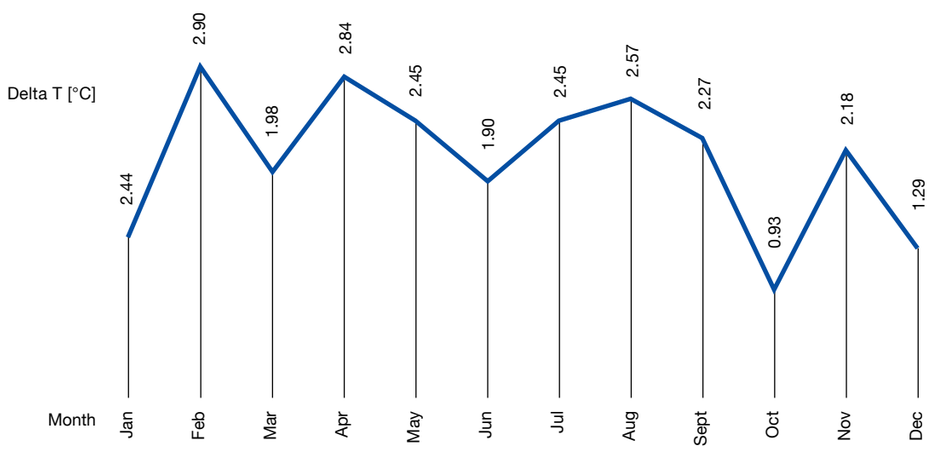
The NPP laboratory for radioactive protection regularly checks air and environmental samples by an accredited method, thus having fulfilled conditions set by the standard SIST EN ISO/IEC 17025, the adherence to the standard is controlled by a Slovenian accreditation body. The accredited measurements of radioactivity of periodically inspected samples of liquid releases are carried out by the NPP laboratory for radio-chemistry.

1.4
Measurements of the Sava River and Groundwater Parameters

In accordance with the environmental permit concerning emissions to water and the water permit, we measured temperature and the Sava River flow rate, monitored the river level and the underground water levels, and took monthly measurements of biological and chemical oxygen consumption.

The highest permitted temperature of the Sava River (3°C) was reached a few times; in general, hydrological situation through the year was favourable.

Average increase of water temperature in the Sava River in 2020



Groundwater is regularly inspected by the plant and authorised organisations. The ground water level and temperature in three boreholes and at two locations on the Sava River are measured constantly and weekly in ten boreholes in the Krško-Brežice fields. The level of groundwater in the boreholes observed in the vicinity of the watercourse increased for about 2 m when compared to the past year due to the accumulation of the Brežice hydro power plant and is similar to the levels of 2019.

1.5
Data on Radioactive Waste and Spent Nuclear Fuel

In 2020, 186 new packages of low- and intermediate-level radioactive waste (LILRW) were stored in NPP, with a total volume of 61 cubic meters. The total volume of inventory stored in the NPP on 31 December 2020 was 4,311 LILRW packages, with a total volume of 2413.7 cubic meters and a total activity of 14.9 TBq.

1320 spent fuel elements

The spent fuel storage pool contains 1,320 spent fuel elements from 30 fuel cycles. The overall mass of spent fuel material is 512.9 tonnes.

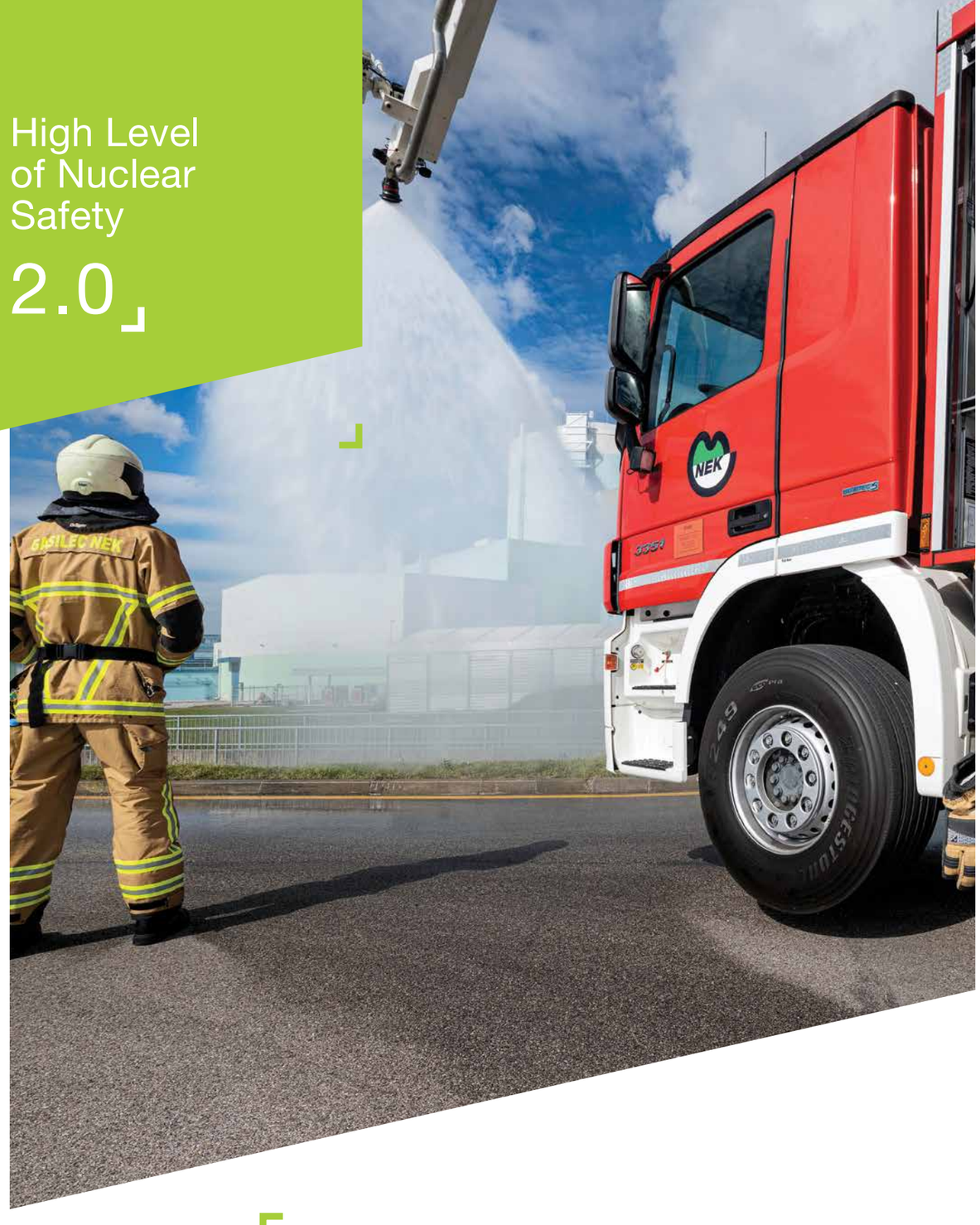
1.6
Environmental Management and Municipal Waste

Since the end of 2008, the standard ISO 14001 on the environmental management has been in place at the NPP. Since the certificate was granted, the system has been checked regularly, on an annual basis, by an external certification organisation. Recertification assessment was conducted according to the standard ISO 14001:2015. It was established that NPP adequately respects the environmental management system requirements.

A special waste water treatment plant is used for communal waste water. Measurements of pH, temperature, non-soluble substances, chemical and biological use of oxygen, and efficiency of treatment at the outlet are taken by an external organisation, which is in line with the Environmental Permit (EP) requirements. Monitoring results show adequate operation of the treatment plant since all values were in accordance with regulations.

High Level of Nuclear Safety

2.0



Nuclear safety always has a priority at NPP. A high level of nuclear safety of our plant is achieved by independent verifications and critical self-assessments of the results, the on-going improvement of human performance and the safety culture, equipment and processes upgrading, learning from own operating experience and international practices, and by comparing with the best facilities in the world.

NPP has paid special consideration to ensuring and verifying the implementation of legal regulations and standards related to nuclear technology as well as other modern technologies in the project designs (equipment modernisation), operational and maintenance activities, procurement and other activities which all contribute to safe plant operations and the safety of the wider population. We are committed to ongoing progress, professional work and personal growth. Our mission is achieved through independent verification, continual improvements of human performance and safety culture, critical self-assessment of results achieved, permanent comparison with best comparable facilities in the world, operating experience at home and abroad, and continual assessment of safety and stability of plant's operations.

Due to its specific nature, NPP had its attitude towards the environment implanted in its very initial project (extensive research prior to site selection, strict respect of standards during building). During the start-up and later operations, independent supervision of the effects on the environment was established (radioactive substance release into water and air, measuring of radioactivity in the environment, management of spent nuclear fuel, radioactive and hazardous waste). The Radiological Emergency Response Plan of NPP (RERP) has been prepared, defining organisation, measures, and means to be followed in the case of emergency events with potential radioactive effects on the environment. The attitude towards the environment is part of the business policy within which we give priority to safe and stable operations. The environment treatment practice in NPP is in accordance with ISO 14001-2005, internationally the most widely recognised standard concerning environmental issues.

One of the vital elements to be considered in maintaining nuclear safety and its improvements lies in the operating experience. On the basis of the past experience of the industry and in line with regulatory requirements, we developed the Safety Upgrade Program (SUP) as requested by the Regulatory Body which set out plant's long-term upgrade plan and a preparation for the plant's life extension.

The Program includes a list of projects for upgrading certain safety systems, safety power supply systems, radioactive release monitoring, flood safety, and spent nuclear fuel storage.

In 2020, we continued with activities on projects of the third phase of SUP, which includes the construction of Bunkered Building BB2, the installation of alternative auxiliary feedwater system and the system for alternative safety injection, and the construction of Spent Fuel Dry Storage. The projects of this phase are planned to be completed by the end of 2021. The exception is only the Spent Fuel Dry Storage for which, due to the process for amending and supplementing the NPP Urban Design Plan, which became effective in March 2020, we acquired the integral building permit only in December. This means that the first phase of Spent Fuel Dry Storage, involving moving the first 592 spent fuel elements into dry storage, is planned to take place in 2023.

In February 2020, a periodic review for extending NPP's insurance took place. A group of four engineers from an association of insurance companies for the nuclear industry, examined the plant thoroughly in the name of Croatian and Slovenian insurance companies, in accordance with recommended guidelines on standards for assessing risks in nuclear industry to identify the risk exposure associated with the property insurance policy of NEK and with the nuclear liability insurance policy of NEK. In June 2020, the results of the review were issued in a report that, among others, stated that the plant is well organised in accordance with high standards and rules set by the plant's management. The report gave recommendations arising from the risk assessment and seriousness of consequences if recommendations are not implemented, and from a cost assessment to be incurred to apply the recommendations.

NPP did not carry out two planned regular annual theoretical-practical exercises for emergency situation due to measures implemented for the prevention of coronavirus SARS-CoV-2 spread in NPP.

Laws and international standards require that plants carry out a periodic safety review every ten years and report the results to a relevant regulatory body. A periodic safety review, as a supplementary tool to a regular safety review, checks comprehensively the level of plant's nuclear safety and confirms that the plant is able to operate safely in the next 10-year period. NPP carried out the second periodic safety review which the Slovenian Nuclear Safety Administration confirmed in the implementation plan at the end of May 2014. By the end of 2020, 222 out of 225 actions for improving the status of the plant were successfully conducted as recommended in the Report on the second periodic safety review. The remaining actions must be completed by the end of 2021.

The beginning of the 3rd periodic safety review in 2021

In 2021, the third periodic safety review commences; it has been confirmed by the Slovenian Nuclear Safety Administration and will be completed by the end of 2023. This is one of the key reviews through which we ensure NPP's long-term operation.

Our developmental tasks and work priorities are part of the document entitled Commitments and Goals. They are set according to the management board's expectations and established polices as well as our focus areas. In 2020, we directed our attention to avoiding operating risks, to cooperation in implementing and finalising the SUP and to performing works carefully and safely.

At the start of October, we completed the reviews of the environmental management system and of the occupational health and safety management system. At the end of October, the external certification organisation conducted a control assessment of the environmental management system in accordance with ISO 14001:2015 as well as of the occupational health and safety management system in accordance with ISO 45001:2018.

2.1
Audits

A part of the NPP operation are specific risks due to enormous stored energy in the reactor, residual heat, and radioactive material in the reactor core. The NPP's formally defined management system lays down fundamental premises and processes for ensuring adequate control of radioactivity and consequential nuclear safety, and ensures adequate operation, maintenance, project changes, and control of radioactive releases, etc. We consider safety in all areas of our work as our priority. By encouraging and respecting the principle of safety culture at all levels, each NPP's employee, within their individual expertise, responsibility and competence, takes part in ensuring nuclear safety, and the safety of employees, population and environment. The principles of our operations are manifested in the efficiency of inter-dependant processes within NPP and which support the overall facility's operations.

Adequacy of NPP's programs and efficiency of processes are assessed by periodic internal audits. We assess the efficiency of activities with a direct impact on structures, systems and components by assessing their effects on safe and reliable plant operation. Audits are regularly planned in accordance with the NPP's Quality Assurance Plan. These are carried out by qualified staff without direct responsibilities for areas being assessed. A written report is drawn up for every audit and its results which is sent to the responsible individual of the process. The report is sent to individuals responsible for the relevant process together with harmonised corrective measures and deadlines for their completion. NPP's management is informed of the audit conclusions at the management review meeting.

In 2020, the quality assurance engineers, in cooperation with other organisational units in NPP, conducted ten internal audits in the following areas:

- organisation and administration: assessing compliance of the environmental management system with the ISO 14001 standard and the occupational health and safety management system with the ISO 45001 standard;
- radiological protection, which includes checks of the compliance of accredited laboratories with the ISO 17025 standard;
- chemistry department and radioactive waste management, which includes checks of the compliance of the accredited laboratory with ISO 17025 standard;
- fire protection;
- production;
- maintenance;
- engineering – procurement support;
- procurement;
- training;
- Radiological emergency response plan (RERP).

The conclusions of internal audits confirm that the plant systems function in accordance with the requirements of the legislation and standards and comply with the policies and objectives defined. Discrepancies found are recorded in the Corrective Action Program, and organisers and deadlines are set for implementing corrective measures. Implementation of corrective measures are regularly monitored and their efficiency checked.

2.2
Observations and Coaching

Coaching while observing is one of the most important tools for preventing human error at work, enabling high quality of work processes and the strengthening of safety culture. Coaching while observing includes observing an individual's behaviour at work and emphasising the desired behaviour, followed by an immediate correction of the behaviour which is not in line with expectations. The main objective of observing is to give assistance at work.

At the start of 2020, a group for monitoring the effectiveness of observation programs started to operate. Its objective is to analyse trends and to assess the quality of observers' records and recommendations.

The group presented its work results in records for three-month periods (the group met once due to very contagious illness caused by the Coronavirus SARS-CoV-2) and in the annual report, highlighting the areas of good practices and discrepancies and gave recommendations for improvements.

The results in the reports were drawn up on the basis of 427 observations that took place in 2020. Around 100 days of observations were not conducted because of preventive measures to prevent infections by the Coronavirus SARS-CoV-2. The observations included all disciplines and work groups in different departments.

Technological Modernisation and Safety Upgrade Program

3.0

In 2020, we continued with technological modernisation and upgrades in NPP which were temporarily terminated between March and May due to pandemic conditions. In addition to the Safety Upgrade Program (SUP), we carried out certain modifications that did not require outage conditions.

Works of the second and third phase of the Safety Upgrade Program were intensive. Building of reinforced Bunkered Building (BB2) continued throughout the year in which the systems for mitigating the consequences of unlikely accidents are to be installed. Pipelines with accompanying valves and supporting elements to connect these systems with the NPP's system were also installed.

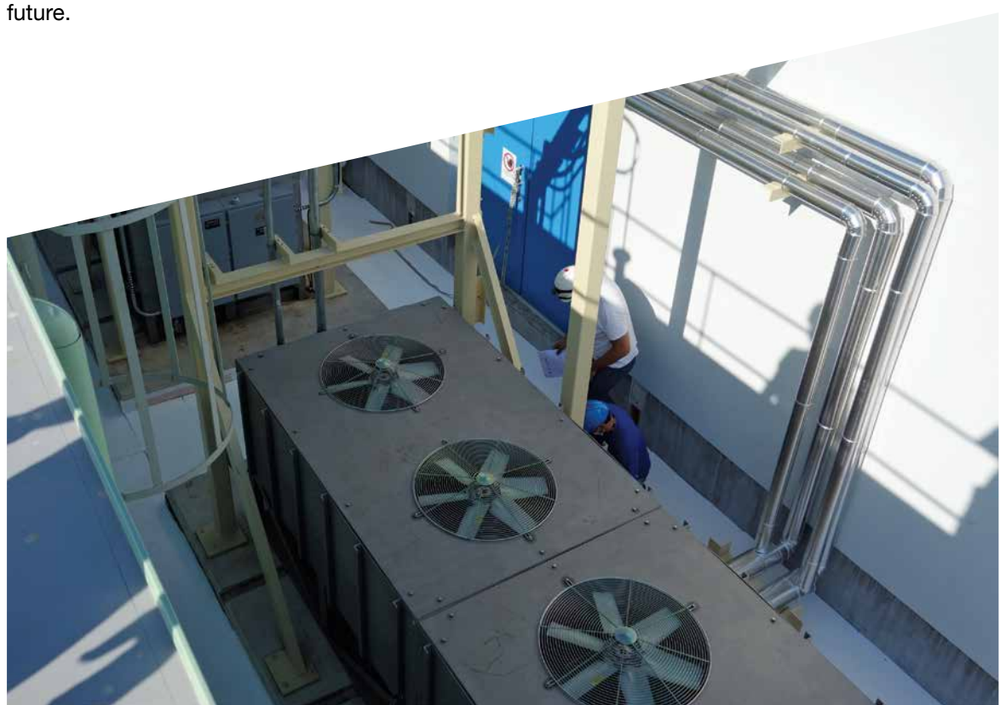
Investments into technological upgrades in 2020 were related to the execution of projects of the SUP second phase, in particular the alternative cooling of the spent fuel pool, the alternative cooling of the reactor coolant system and the reactor building, completing the infrastructure of building BB1, completing the ventilation system for living quarters in the Emergency Control Room and technical support system, restructuring Operational Support Centre (OSC) and for the SUP third phase which included the BB2 construction and the installation of the pipeline for the future alternative auxiliary feedwater system – from the building BB2 to the reactor building, and the construction of the spent fuel dry storage facility.

In the integral process to obtain the building permission for constructing the Spent Fuel Dry Storage facility, the Ministry for the Environment and Spatial Planning obtained opinions from all institutions included in the process. In accordance with the schedule, NPP obtained the integral building permission in December 2020.

Among the projects completed or commenced in 2020, we present some of the most important ones:

3.1 Ensuring Operational Safety and Reliability

Among most important upgrades are the projects which ensure our compliance with environmental legislation requirements, the projects which assure stable operations of the plant, and the upgrades which will continue to ensure safe and reliable operations of NPP in the future.



3.1.1
REVITALISATION OF T3 TRANSFORMER AND T3 VOLTAGE REGULATOR

Transformer T3 provides the plant's load power supply from 110 kV network when the external 400 kV is not available. Transformer T3, with the accompanying voltage regulator, was the last of the large energy transformers that had been in function from the time the plant was first put into operation; it was replaced during the 2019 outage. The old transformer was refurbished in 2020 and will be used as a reserve of a vital plant component.

By replacing the transformer and the voltage regulator and by refurbishing the old transformer, the reliability of plant's operations has increased and vulnerability in the event of a component failure, due to unavailability of the external supply sources for plant's load power supply (400 kV network), has been reduced.

3.1.2
REPLACING CONTROL CABINETS OF THE FIRE PROTECTION SYSTEM

The upgrade was completed in the first half of 2020, while the whole project included replacing 11 control cabinets of the plant's fire protection system which were installed at various locations around the plant. The old cabinets, which operated in relay logic, were replaced with 14 new cabinets, equipped with micro-processor units.

A number of cabinets are connected to the new T3 transformer fire protection system from the system of other transformers and to the separation unit of the fire protection system per individual A and B safety trains for the charcoal filters of the reactor building, annulus, and the spent fuel pool building.

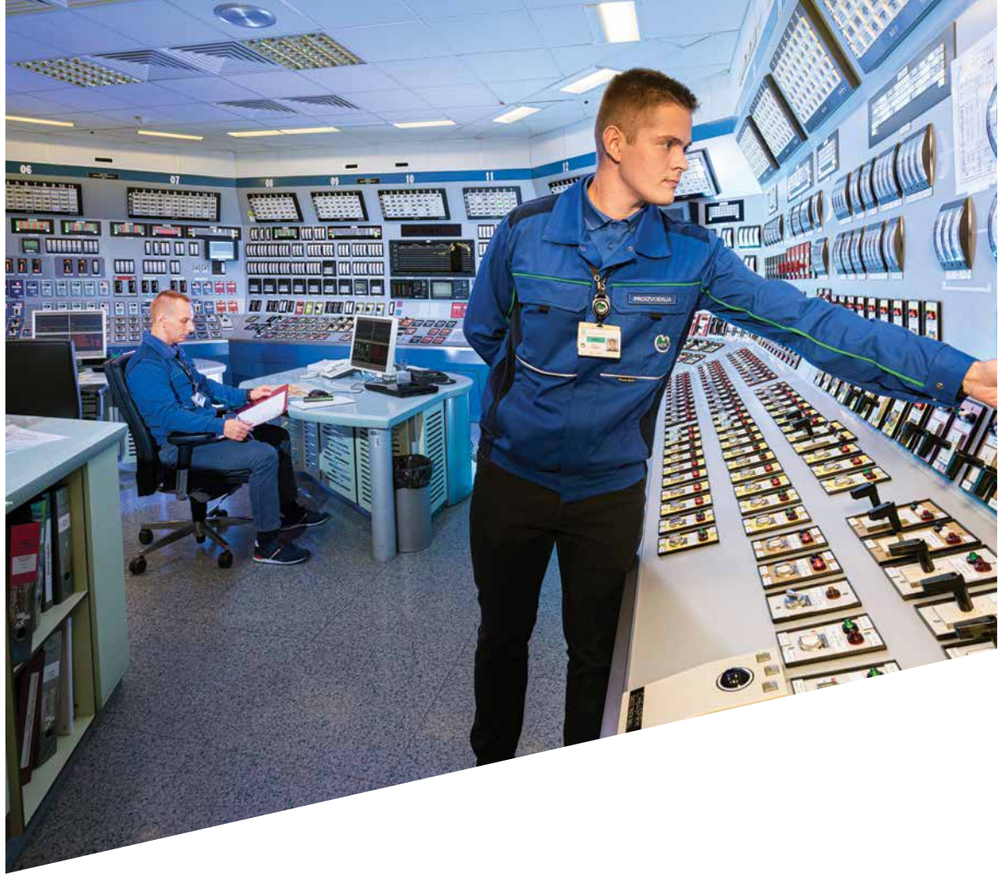
The upgrade improves the controlling features and the functioning of the fire protection system.

3.2
Safety Upgrade Program 2013–2021

The Safety Upgrade Program (SUP) is based on the decision for the plant's long-term operation and has been supplemented with experience gained following the nuclear accident in Japan. It was confirmed by the Slovenian Nuclear Safety Administration. It comprises the construction of additional safety systems to provide the residual heat removal and it represents an even higher level of resistance of the plant in the event of emergency natural and other unlikely events such as extreme earthquake, flood, and aircraft crash. Additional safety systems enable the integrity of the containment and assure a minimum release into the environment in the event of unlikely extreme events.

In 2020, we continued with certain second-phase safety upgrade projects, including:

- completing the project for providing adequate habitability in the emergency control room and in the technical support centre;
- completing the project for the alternative cooling of the spent fuel pool; and
- continuing the project for the alternative residual heat removal.



We continued with certain third-phase safety upgrade projects, including:

- building the reinforced bunkered building (BB2);
- installing the alternative auxiliary feedwater system (AAF);
- installing the alternative safety injection,
- upgrading the operational support centre, and
- activities for building a spent fuel dry storage.

3.2.1
BUILDING THE EMERGENCY CONTROL ROOM

The emergency control room was completed and it provides the plant operation and control – shutdown and cooling from the emergency location. During the outage in 2019, it was possible to operate additional equipment from the emergency control room, which represents a better and more central control as well as the reduced number of steps previously required for local equipment operation.

The project is to be completed after the fifth phase which includes, prior to the outage in 2021, the replacement of instruments for the control of radiological discharges from the containment through the passive containment filtered vent system (PCFVS).

3.2.2
PROVIDING ADEQUATE HABITABILITY IN THE EMERGENCY CONTROL ROOM AND IN THE TECHNICAL SUPPORT CENTRE

In 2020, the project for installing new heating, cooling, ventilation, and protection systems was completed as well as for the protection of the emergency control room and the technical support centre in the bunkered building BB1, in order to provide habitability conditions for staff in these premises during normal operations. In the event of radioactive release, the equipment will provide adequate protection and safe habitability for operators and staff of the technical support centre for at least 30 days, to ensure dose limits are not exceeded.

The upgrade will provide safe habitability which will enable operators and technical support system staff to control and operate the plant even in the event of severe accidents.

3.2.3
ALTERNATIVE COOLING OF THE SPENT FUEL POOL

In 2020, works were continued and finished on the upgrading of the spent fuel pool cooling system which is a part of the second phase of NPP safety upgrades. The aim of this upgrading is to prevent or mitigate consequences of a severe accident in the fuel handling building and involves three independent project changes, namely:

- installing the spray system for filling up the spent fuel pool in the event of water loss;
- installing the mobile heat exchanger to be used in the event of a failure of all existing systems for spent fuel pool cooling; and
- installing the pressure relief flap in the fuel handling building (FHB) for the building depressurization in the event of pressure increase due to the spent fuel pool water evaporation.

3.2.4
ALTERNATIVE RESIDUAL HEAT REMOVAL SYSTEM

The main objective of this project is to install an independent alternative system for the residual heat removal from the primary system and the containment in the event of design extension condition (DEC).

The newly installed equipment, which can be controlled from the main control room (MCR) and from the emergency control room (ECR), will allow the removal of residual heat from the primary system with the existing exchangers or with the newly installed alternative heat exchanges. Residual heat removal from the reactor coolant will also be possible in the event of the reactor coolant system pipe break and, consequently, a loss-of-coolant accident or unavailability of existing residual heat removal equipment.

The upgrade which is to be taken in a number of phases, was started during the 2018 outage. The year after, the pipeline and equipment were installed without connection to the existing systems. In 2020, we installed a pipeline into the auxiliary building (AB), intermediate building (IB) and the cooling component building (CCB), successfully completed pumps factory tests and installed a heat exchanger into the auxiliary building. The upgrade will be completed during the 2021 outage, when the new alternative system will be connected to the existing NPP systems.

After project completion, the plant's safety will be higher, even in the most extreme beyond-design basis events (extreme earthquake, floods, other extreme natural calamities).

3.2.5
CONSTRUCTION OF REINFORCED BUNKERED BUILDING (BB2)

The upgrade involves the construction of a new reinforced building 2 (bunkered building 2 – BB2), with auxiliary systems and connections of different new systems inside the new building to the existing systems, buildings, and components of NPP.

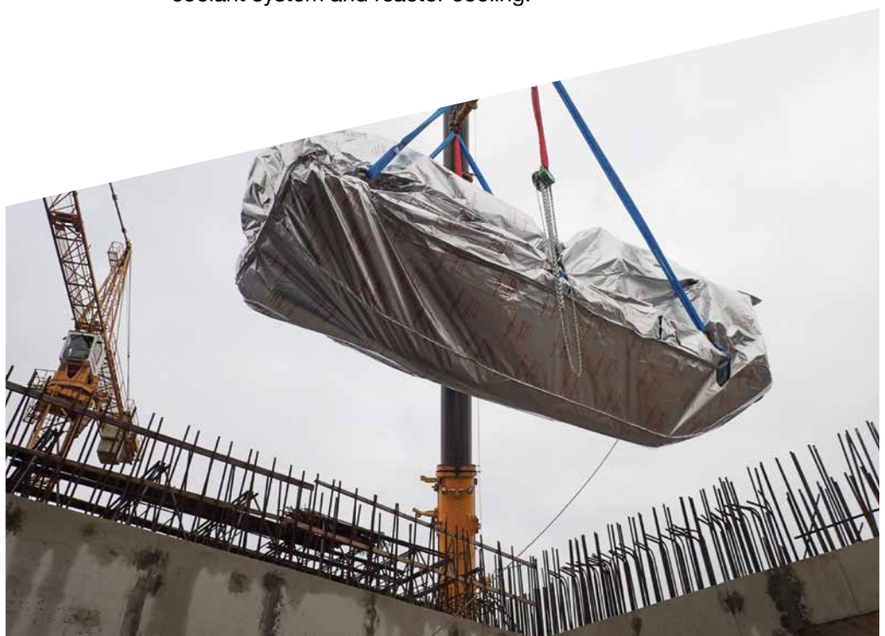
The BB2 building was designed to contain the alternative safety injection system (ASI), the alternative auxiliary feedwater system (AAF) and the BB2 safety power supply. In addition to the BB2, the project includes a well for pumping groundwater for additional supply to the alternative systems for safety injection and power supply for the cooling water system, for the beyond-design basis events.

The upgrade is planned in three phases:

- during the first phase in 2019, an excavation pit was made and a supporting wall with anchors was completed to reinforce the ground and protect the neighbouring facility;
- the second phase, which started in 2019 and continued until the end of 2020, included the construction of the building BB2, including completing the main construction works and the roof, pipeline paths for modifying the pump installation for the reactor coolant system and for modifying the additional pump for the auxiliary feedwater system.
- In the third phase which will take place in 2021 and is to completed by the end of the outage, the systems will be finally installed into the building BB2 and connected to the plant's systems.

3.2.6
ALTERNATIVE AUXILIARY FEEDWATER SYSTEM (AAF)

This upgrade is included in the third phase of the Safety Upgrade Program and includes installation of an additional pump for the auxiliary feedwater system including all pipelines and valves which will enable the connection of the new system to the existing steam generator feedwater system. The new alternative auxiliary feedwater system will ensure the alternative source of coolant water for one or both steam generators, in the event that, under the design extension conditions (DEC), the existing auxiliary feedwater system is not available, therefore, it will enable the heat removal from the reactor coolant system and reactor cooling.



The modification comprises three phases:

- in the first phase which took place in 2019, all new piping systems with supporting valves were installed in the reactor building;
- in the second phase, piping outside the containment to the new bunkered building BB2 will be installed and connected to a new alternative auxiliary feedwater pump;
- in the third, final phase, during the 2021 outage, the alternative auxiliary feedwater system will be connected to the existing auxiliary feedwater system.

3.2.7
ALTERNATIVE SAFETY INJECTION (ASI)

The upgrade which also falls within safety upgrade projects, phase 3, includes upgrading the alternative system for safety borated water injection into primary reactor coolant cycle. The system includes the reservoir for 1600 m^3 of borated water, a high-pressure pump and the main motor operated valve, which is to be installed in the new reinforced bunkered building BB2, auxiliary pipeline connected to the existing NPP system and the equipment supporting the operation and control of the system.

In 2019, a system of connecting pipeline, support and supporting pipeline for isolation valves was installed in the containment. The installation work continued in 2020 and is to be completed in 2021, when the new alternative safety injection system is to be installed – after the BB2 building has been completed and all equipment installed – and connected to the existing safety injection system.

3.2.8
RESTRUCTURING THE OPERATIONAL SUPPORT CENTRE (OSC)

In 2020, we continued with the building work on the new operational support centre. We completed subterrain installation and finished most of the building's facade and its immediate surroundings. The building contains a significant part of support; we intensively continued with electrical and machinery works – pipeline installation, distribution cabinets and canal segments of ventilation. In parallel, pipeline systems were produced and installed. All works, including equipment installation, are to be completed around the end of 2021.

3.3
Technological Upgrades due to Brežice Hydropower Plant

3.3.1
DRILLING WELLS AND MONITORING GROUNDWATER

Drilling wells and monitoring groundwater are the last two modifications due to the construction of Brežice hydropower plant. Drilling permanent wells for lowering groundwater in the area of the NPP technological buildings is required due to a higher level of groundwater, resulting from the rise of the Sava River level and the erection of sealing curtains along the river bed, which restricts the groundwater drainage.

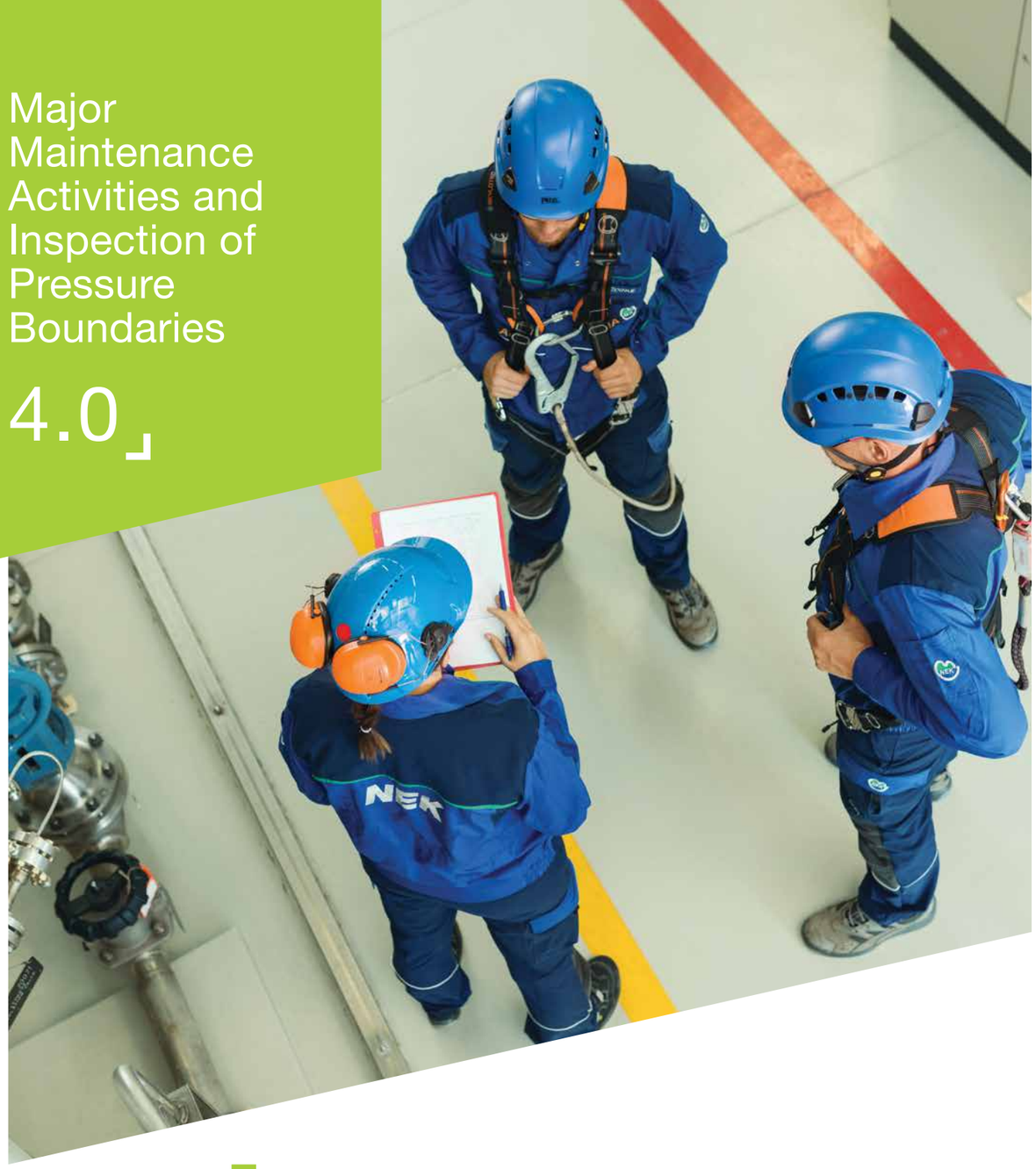
In 2019, we started to drill three groundwater pumping stations – wells. Well pumps and pumped water regulation equipment are to be connected to the existing control system and the raw water pool in the water pre-treatment building (PB). Pumped water is to be used for technological water preparation in the water PB.

In 2019, boreholes were drilled at three well locations and the well pipes were installed. At each location, pump test for the capacity of the well was conducted and the functionality of each well confirmed. Two of the three well shafts were constructed, as well as the majority of shafts for electrical installations, which will enable the connection of the pumps to the process water system and to the control system. In 2020, the last of the three well shafts were constructed, with accompanying shafts for electrical installations.

All works are planned to be completed in 2021.

Major Maintenance Activities and Inspection of Pressure Boundaries

4.0



Appropriate inspection, maintenance, and upgrading ensure the operational readiness of the components and equipment, which in turn directly supports the highest level of safety systems readiness and plant's availability as the energy source. We maintain the plant preventively, predictively, and correctively. Preventive maintenance is carried out in certain time intervals, based on the basis of recommendations, analysis, and experience. Predictive maintenance is based on determining the status of the plant or section with measurement parameters which are analytically processed to forecast further activity. Corrective maintenance rectifies errors and deficiencies in order to bring degraded section or equipment back to its faultless condition.

All maintenance activities are carried out according to planned procedures and instructions. We first assess the condition of the equipment and sections, then implement planned measures and any corrective actions. Actions are generally completed with a post maintenance test, demonstrating that the equipment is faultless and the action successful. This is followed by documenting the process which includes assessing the work carried out and the equipment condition concerning its aging. During the corrective activities on the equipment which are included in the preventive maintenance program, we conduct a detailed analysis of reasons for errors; the preventive maintenance program is revised as needed, changing periods and types of interventions.

5888
maintenance work orders

In 2020, there was no outage or shutdown for maintenance. All maintenance interventions were carried out on-line. Such maintenance is a great challenge in terms of planning interventions because equipment and sections must be separated from the technological process before starting maintenance work and all energy sources must be isolated. An intervention must be as short as possible as well as non-operation of sections and equipment due to maintenance. Each such activity requires exact time schedule and coordinated actions from different departments.

While the plant was operating, maintenance works were conducted based on 5,888 work orders of which 85% were preventive or predictive; all were planned. Eleven percent of work orders were corrective without causing complete failure of equipment despite its degraded condition. Four percent of work orders were corrective. They removed errors caused by the loss of functionality of a section or equipment. None of the failures caused any breach of time schedules for operating restrictions set out in technical specifications and no failure caused operating interruption.

The condition of sections and equipment does not show degradation that would affect continued operation. It is expected that the on-going maintenance in accordance with the maintenance program will ensure the plant's excellent condition.

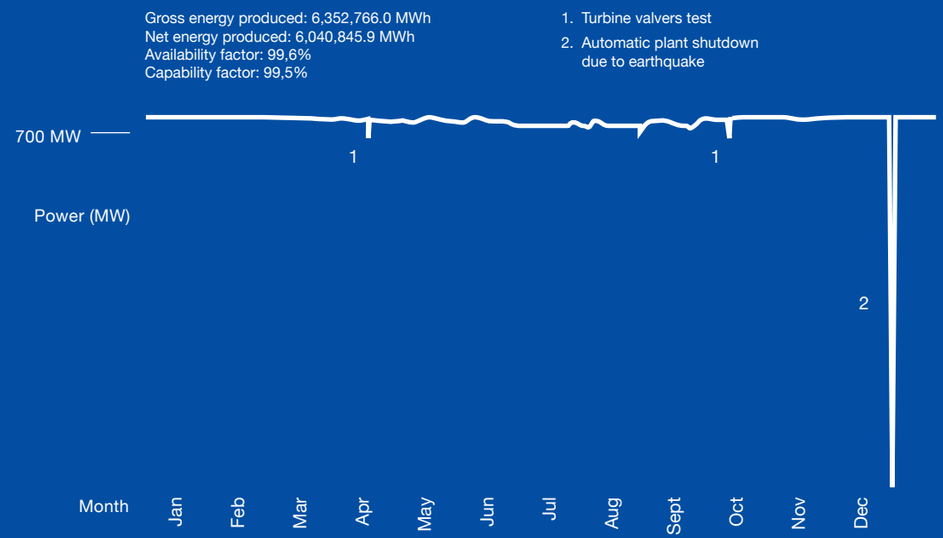
Plant Performance

5.0

In 2020, the NPP produced 6,353 MWh gigawatt hours of gross electrical energy at the generator outlet, representing 6,041 gigawatt hours of net electrical energy. The annual output was higher than planned for 1.44%, amounting to 5,955 gigawatt hours. The time availability factor was 99.60 percent while the unit capability factor was 99.51 percent.

99.6% availability factor

Output diagram for 2020

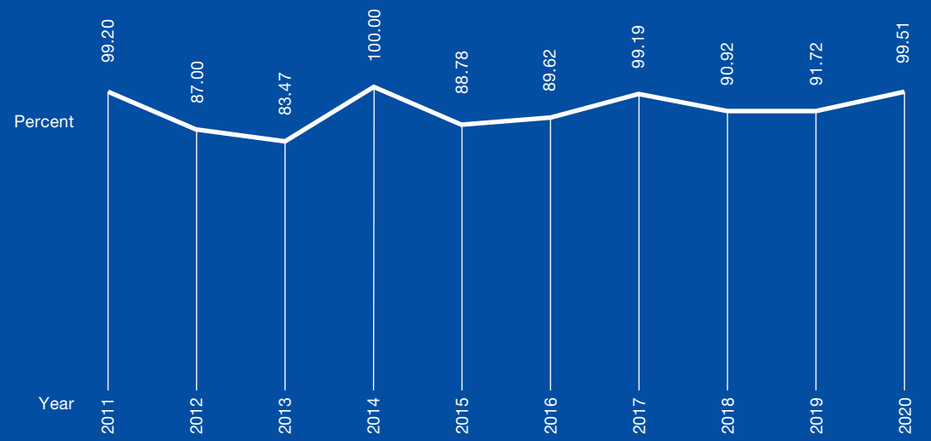


Performance indicators, used to monitor the achievement of targets, efficiency and improvements in a certain area of the plant operations, facilitate the setting of new goals after relevant improvements have been made, the adjustment of priorities, and the provision of means to ensure successful operation of the plant. These indicators allow for a comparison with other nuclear power plants as well.

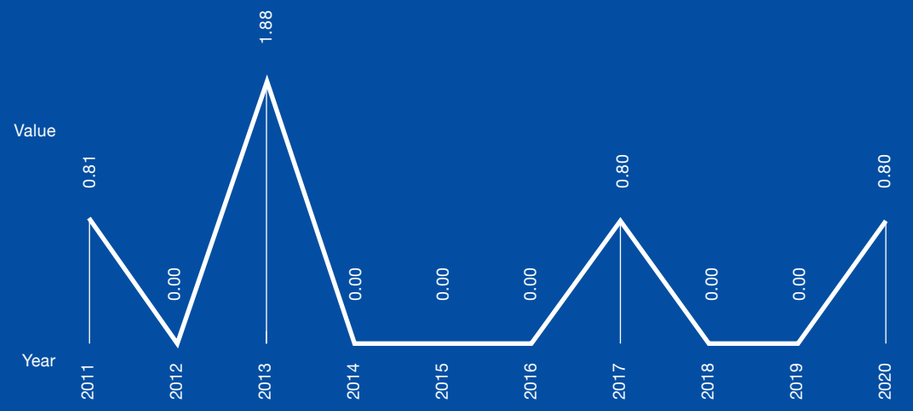
5.1
Operations

Unit capability factor

NEK target for 2020: ≥ 98%



Unplanned automatic reactor shutdowns, normalised at 7000 hours critical

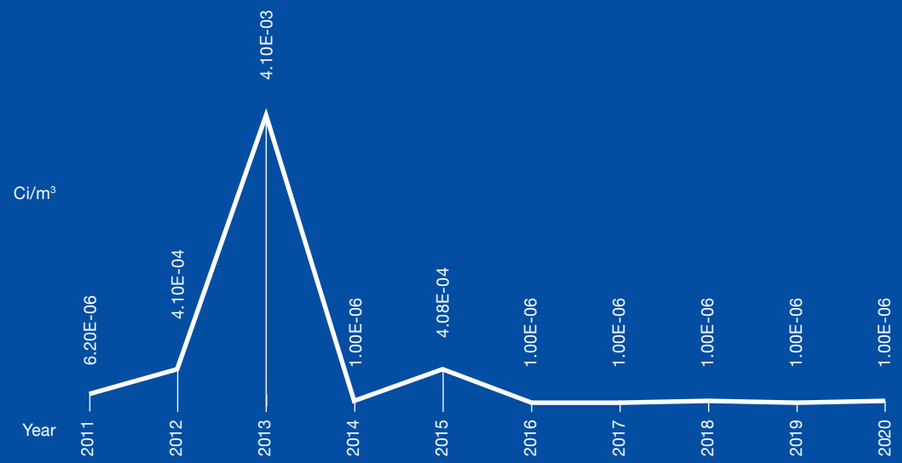


5.2
Nuclear Fuel and Secondary Chemistry

Specific activities of the primary coolant and its contamination were far below the limits prescribed by law in 2020 (during fuel cycle 31). By the end of 2020, there were no damages to the nuclear fuel or deterioration of its integrity in the fuel cycle 31. The nuclear fuel reliability indicator in 2020 met targets set by NPP and INPO (Institute for Nuclear Power Operations), which proves the reactor core operational reliability without nuclear fuel leakage.

Fuel reliability indicator

NEK target for 2020: ≤ 1E-4 Ci/m³



Chemical and radiochemical parameters in the cooling water media systems were maintained in accordance with the technical and chemical specifications. The ingress of aggressive chemical contaminants into the primary cycle remains low. This applies also to the radiation source inventory, resulting from corrosion products in the reactor coolant.

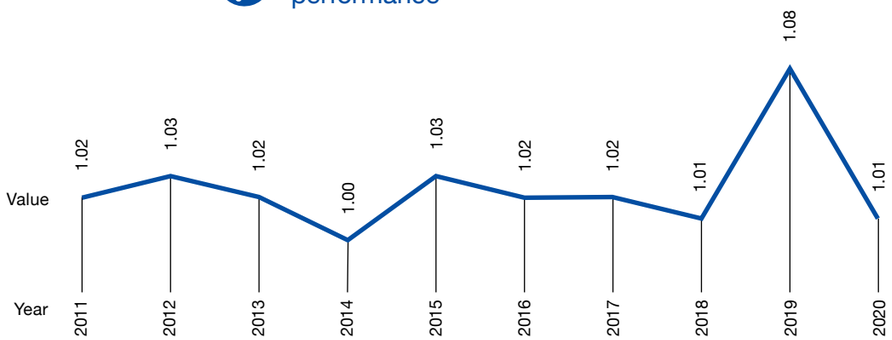
In the secondary cycle, small ingress and discharge of chemical contaminants were occasionally detected. Due to automatic shutdown in December, the WANO performance indicators for the secondary cycle chemistry did not reach optimal values but it did reach its target values. There were no significant effects of degradation mechanisms of installed material.

The chemistry of other water media in the closed cooling cycles was also adequately maintained.

The monitoring of key chemical parameters was effective as well as the cleaning systems which contributed to the effective chemistry program. For a number of years now, NPP has been monitoring biological activities in certain systems, especially those where conditions exist for occurrence and growth of microorganisms that could have an effect on degradation processes and heat exchange. Values measured in this area were within the expected parameters and do not require any special measures.

By chemical processes of water media systems, NPP continues to ensure long-term plant system availability and importantly contributes to the integrity of both nuclear fuel and reactor coolant as well as to keeping doses within limits.

Secondary chemistry performance



5.3 Service and Equipment Procuring

We concluded contracts for purchasing services and goods for the 2021 outage and started purchasing for outage 2022, while giving priority support to SUP, and started procurements for projects to extend the operating lifespan of NPP.

We published 225 public tenders on the Public Procurement Portal of which 74 were also published on the Official Journal of the EU; on the basis of these publications, we received 138 offers from various tenderers. Cooperation with suppliers on the local market was mostly successful. Offer prices reflect the raise in the minimum salary in the Republic of Slovenia as well as the price of work force in the market. On the external market, difficulties with American suppliers are becoming greater as they are abandoning support for the nuclear industry or are involved in larger projects and therefore not interested in a relatively small supply to European business partners. An additional obstacle for them is public procurement and e-commerce.

The epidemic declared in the Republic of Slovenia and restrictions due to the Coronavirus outbreak affected the presence of contracted workers at NPP's workplace and caused delays in performing certain works under the restrictions. Delivery times for equipment and goods from abroad were extended due to workers' infections in manufacturing facilities and transport restrictions.

International Cooperation

6.0

NPP has joined numerous international professional organisations, which enables our employees to remain up-to-date with and to co-create the best practices, exchange knowledge and experience and transfer them into the domestic work environment. Our active role in these organisations and international reviews of the plant significantly contribute to improving work processes and achieving good safety and operational results.

6.1 Our Participation in 2020

One NPP employee worked at WANO on temporary basis. The worker in the Paris centre worked as a reviewer of operating experience. In December 2020, a second worker succeeded in obtaining temporary work at the WANO Paris centre.

NPP has been active in WANO and INPO for years. Our experts have taken part in 58 of their missions worldwide. In 2020, four of our representatives took an active part in the following international expert reviews of plants operations (WANO Peer Review): At Dungeness in United Kingdom of Great Britain and Northern Ireland, at Surry in the United States of America, at Olkiluoto in Finland and at Borselle in the Netherlands.

Representatives from our plant participated at WANO Corporate Peer Review of Alpiq which, among others, manages the plants Goesgen and Leibstadt in Switzerland.

Through the Technical Assistance Program our plant has received over 37 such missions in the past years, with topics which cover various areas of the plant's activities. The topics in 2020 were health and safety at work, upgrading plant's secondary protection against lightning, resolving problems with the leaks in control valves for residual heat removal (RHR) system.

The NPP's representatives take part in professional training organised by various expert organisations. Good results of our plant are becoming a model practice to other nuclear plant operators and an example of good practices in various fields of work. There were 42 expert benchmarking visits in NPP. In 2020, we hosted experts from the Finish plant Olkiluoto.

Our representative attended a number of WANO Medical Officers Forum web events. At these events, representatives from certain plants and WANO exchanged experience and information on measures due to Covid-19 and help other members managing the pandemic through their joint recommendations.

Through WANO, NPP informed the industry of 15 operating experience in our plant.

Together with NUPIC, representatives of NPP should have taken part in seven audits of safety equipment suppliers in the USA and Europe; however, four of them were cancelled, three were postponed to 2021 due to countries' measures aimed at fighting the pandemic and prohibitions to travel into other countries.

NPP takes an active part in some of the important areas of the EPRI activities, including:

- equipment maintenance of nuclear facilities (NMAC);
- equipment upgrading, purchasing, and qualification (PSE);
- non-destructive testing and research (NDE);
- exchange of experience in applying accident analysis programs (MAAP);
- exchange of experience concerning erosion/corrosion issues (CHUG).

Our plant has participated in the PWROG annual conferences, organised separately for nuclear facilities from Europe.

We actively participated at the conference of the Nuclear Society of Slovenia.

6.2
Memberships and Participations in International Organisations

At NPP, we are aware of the importance to participate in international organisations and in the international monitoring of our operation. Only this way can we attain international comparable operation and safety results. For this purpose, NPP is a member of many organisations listed below:

WANO

All nuclear power plants in the world are members of World Association of Nuclear Operators (WANO). NPP has been a member of this organisation since its establishment in 1989. Its aim is to promote the highest standards of operational safety, availability, and excellence of nuclear power plants. WANO runs programs for sharing operational experience, reviews plants' operations, assists member plants in their operational improvement programs, encourages communication, and promotes benchmarking and copying best practices.

EPRI

EPRI (Electrical Power Research Institute) is a non-profit and independent organisation for research in the area of electrical energy production and environment protection. It was established in 1973 in support of the development of the electrical industry. The Institute currently covers all aspects of production, transmission, and use of electrical energy.

PWROG

PWROG (Pressurized Water Reactor Owners Group) is an association of all the pressurized water reactor (PWR) operators and Westinghouse. The organisation offers various programs related to improved equipment, optimisation of technical specifications, reduced number of unplanned shutdowns, increased power of the plant, simplification of the plant systems, the manufacture and use of nuclear fuel, analyses by contemporary programs and analytical methods, etc._

FORATOM

FORATOM – European Atomic Forum is a trading association for nuclear energy in Brussels. NPP cooperates with the expert team for optimising and improving support change of nuclear suppliers. The group develops methodology and prepares a report on the use of high-quality industrial equipment and spare parts in nuclear plants.

EC – JRC

EC – JRC (European Commission Joint Research Centre) is a joint research centre, providing scientific and technical support to EU policy in a number of areas. NPP participates in drawing up reports on challenges and possible solutions on issues with nuclear suppliers.

ENISS

As a member of ENISS group (European Nuclear Industry Safety Standards), Krško NPP took part in the preparation of the EU nuclear industry position in drafting amendments to legislation in this industry. The work group acts within FORATOM, an EU nuclear industry organisation.

NUPIC

NUPIC (Nuclear Procurement Issues Committee) is a committee of American and other nuclear facilities for joint evaluation of safety class equipment suppliers. The aim of this organisation is to improve the process of locating the suppliers of high quality standards.

IAEA

The International Atomic Energy Agency (IAEA) is an independent intergovernmental organisation which operates within the United Nations Organisation. Its primary objective is to help members in planning and using nuclear technology for various peaceful purposes. This includes production of electrical energy and transfer of technology and knowledge in this area. IAEA develops safety standards that support the realisation of high level of safety in using nuclear energy and on protecting the public against ionising radiation. The organisation operates on the basis of various programs such as control over nuclear material, nuclear technology application, nuclear energy, nuclear safety, and technical cooperation. It organises OSART (Operational Safety Review Team) missions which involve visiting power plants in order to inspect and assess their operational safety.

NRC

NRC (Nuclear Regulatory Commission) is an USA independent nuclear regulatory commission to ensure safety and protection of people from radioactive nuclear material, reactors, and nuclear waste reprocessing plants. Through SNSA and IJS, NPP has become a member in several programs which gives access to information and literature in various areas.

Professionalism and Enthusiasm of Staff as the Basis of Success

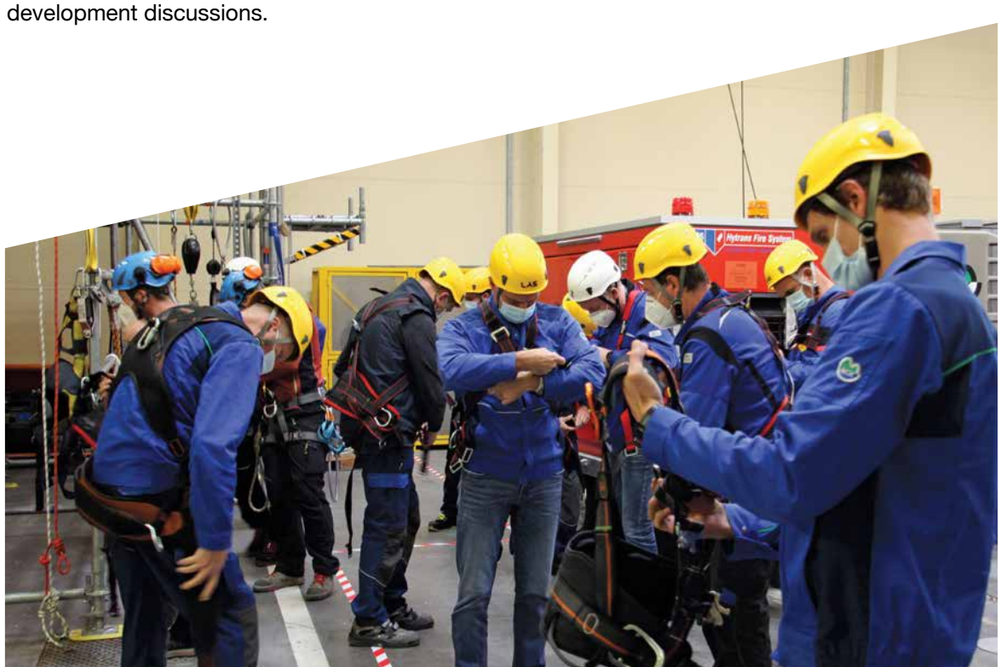
7.0

Through systematic staff training and the system for managing staff knowledge we ensure high level of professionalism and enthusiasm. The comprehensive development of staff is one of the fundamental values which are the basis for our activities which in return assist us in permanently achieving our vision and mission.

The fundamental values which are part of our work processes and relationships include safety culture, excellence in relationships, and integral personal development. At the same time, these values are the reference line of our actions and the basis of our vision and mission.

7.1 Comprehensive Development of Staff

In NPP, we provide preconditions for long-term safe and stable operations through long-term planning of human resources, timely staff recruitment, and systematic development of all employees. We are aware that only professional, well qualified, and competent individuals are prerequisites for work processes to be performed safely, efficiently, and at a high quality level as well as for constant improvements in all work areas. The established professional training programs are intended to acquire and reinforce professional knowledge and skills which ensure successful completion of all work tasks at a high professional level and in accordance with international standards. Reinforcement of knowledge and transfer of skills from highly experienced staff onto younger generations are provided through on-the-job training programs and mentorship. There was less training in 2020 than in 2019 due to the conditions in the country. In the second half of 2020, most training took place on-line through various tools (Teams, Zoom, Skype, etc.). In-house training took place in various formats – in lecture rooms, on-line, and in the combination of both. Whenever there were more people present, we observed the standards of the National Institute for Public Health to prevent spreading infections. At the same time, we take steps to bring up and develop the next generation for key positions in the plant. In the area of human resources, special attention has been paid to monitoring staff enthusiasm and management processes, such as annual development discussions.

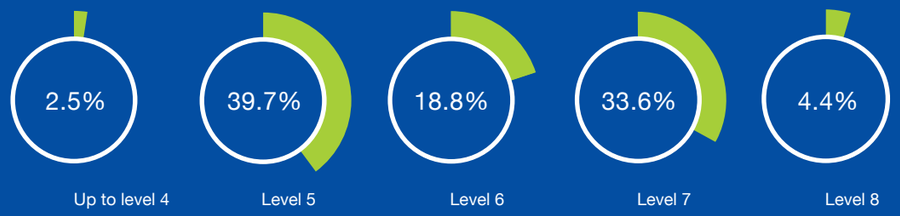


Staff with expertise and skill, while possessing essential virtues, are of strategic importance and one of the key factors of nuclear safety, long-term stability, competitiveness, and success.

In the area of human resources, 2020 was a year when the gradual replacement of generations - an on-going process in the past decade, took a stronger course since 14 employees were replaced by new staff to compensate existing and future needs. In accordance with expectations, employee retirement process continued for those who had met the conditions for old-age retirement. The annual staff turnover was 1.9 percent, expressing a stable human resources culture.

At the end of the year, there were 630 employees at NPP of which 46.7 percent hold high professional and university education. The employee structure included 12 doctors of science and 16 masters of science. The share of female staff was 14.3 percent. At the end of the year, 18 students were receiving our scholarship for the Bologna first or second degree university study program.

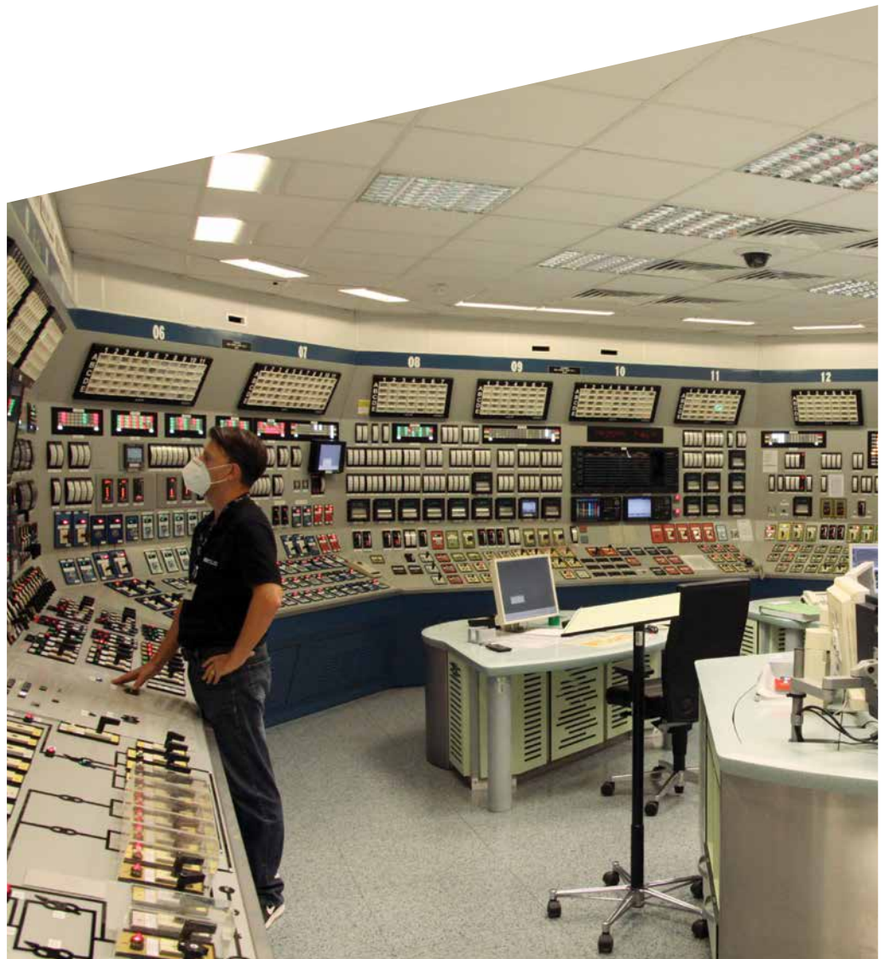
Distribution of employees according to the level of education



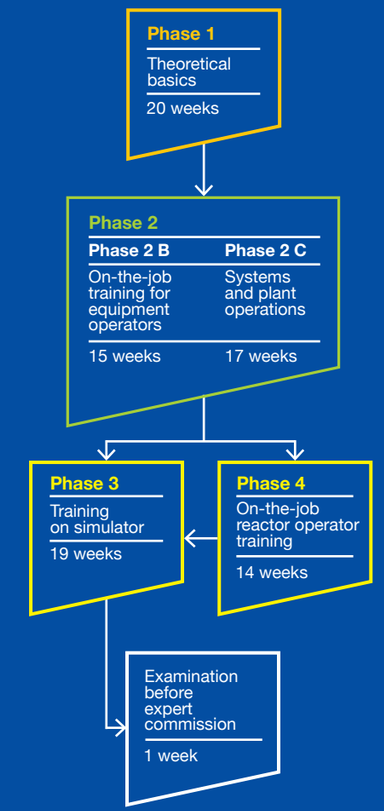
7.2
Training of Operating Staff

In NPP, we organise initial licensed staff training and provide continuous licensed staff training and professional training of equipment operators.

Initial licensed staff training for reactor operators was conducted in accordance with national legislative requirements and practices in the nuclear industry. The 85-week training course is structured in four phases of different forms of training, aimed at preparing the candidates for independent work in the Main Control Room. In August, a group of 15 participants successfully completed phase 1 training – theoretical basis, and in September, the group continued with phase 2 training – plant systems and operations. Not more than ten will continue training to obtain their first licence as a reactor operator.



The initial licensed staff training



Continuous professional training of staff with a licence did not take place in accordance with the approved program and internal procedures due to declared pandemic since all training contents were carried out in lectures and simulator scenarios for all operating teams and other staff with a licence in three and not four weekly segments. The scope of training provided was still larger than set by law. A revised annual training plan for the operating staff was sent to the Slovenian Nuclear Safety Administration.

Final exams before an expert commission appointed by SNSA were successfully passed by all seven candidates: one candidate was awarded the first Senior Reactor Operator licence, five successfully renewed their Senior Reactor Operator licences and one renewed his Reactor Operator licence. There were no candidates for a shift engineer licence.

Continuous professional training for equipment operators was conducted in parallel with the training for licensed staff, in three weekly training segments. The program focused on technical expertise and hands-on training by using System Operating Procedures in the technological building or with the full-scope simulator. Other training was aimed at refreshing and upgrading existing knowledge and skills which equipment operators need in their day-to-day work.

Due to pandemic conditions, four-day hands-on training which included handling of refuelling equipment at Westinghouse in the United States of America did not take place. This training is aimed at preparing the participants for safe and good performance of this important refuelling activity. Training is planned to take place at NPP using internal experts in this field.

The operational staff underwent training on the full-scope simulator prior to performing important activities in the facility.

7.3
Staff Training for Maintenance and Other Support Functions

The professional training of technical personnel included courses whose aim was for candidates to acquire the legally required general and specialist knowledge needed for performing maintenance, engineering, and other supporting functions.

Courses aimed at acquiring legally required knowledge and refresher courses for general and professional knowledge and skills of technical staff were conducted for maintenance and other support functions. Within the framework of initial training for technical personnel, a course in the fundamentals of nuclear power plant technology is usually carried out. This course was not carried out in 2020 as there were no candidates or new employees.

Training of maintenance personnel programs continued in the field of specialist and legally required knowledge. The training required was prepared on the basis of matrices of required qualifications. Courses were partially conducted in the Maintenance Personnel Training Centre and in NPP technological units, and partly in cooperation with external institutions - in person or on-line. In addition to our own training staff, training was conducted by engaging mentors of practical training from individual maintenance departments.

According to continuous training of maintenance staff program, we completed the training program on the subject of general and legally required areas. The maintenance staff was updated with new aspects of plant processes and in-house and industry operating experience.

7.4
Other Legally Prescribed and General Training

Legally required training includes: occupational health and safety, fire protection, hazardous substances, etc. General training includes: the General Employee Training program, first-line supervisor training, etc.

We continued with the implementation of established programs of initial and refresher courses related to occupational health and safety, fire protection, hazardous substances, protection and rescue plan, movement within the power generating facilities, etc.

Radiation protection initial and refresher training was conducted according to legal requirements.

Extensive exercises of the organisation according to the Radiological Emergency Response Plan (RERP) did not take place due to declared pandemic and measures implemented to prevent socialising and gathering of people.

In addition, many courses were carried out for other departments within the power plant. They were intended to update the staff on new legislation and introduce innovations in the area of production processes; general courses on computer literacy and foreign languages took place as well.

Financial Report

Independent Auditor's Report

1.0

Tel: +386 1 53 00 920
info@bdo.si
www.bdo.si

Cesta v Mestni log 1
SI-1000 Ljubljana
Slovenija

INDEPENDENT AUDITOR'S REPORT

to the owners of NUKLEARNA ELEKTRARNA KRŠKO D.O.O.

(Translation from the original in Slovene language)

Opinion

We have audited the financial statements of NUKLEARNA ELEKTRARNA KRŠKO D.O.O. (hereinafter "the Company"), which comprise the balance sheet as at December 31, 2020 and the income statement, statement of other comprehensive income, statement of changes in equity and cash flow statements for the year then ended, and summary of significant accounting policies and notes to the financial statements.

In our opinion, the accompanying financial statements are prepared, in all material respects, in accordance with provisions of the Treaty between Government of Republic of Slovenia and the Government of the Republic of Croatia on the Regulation of the Status and Other Legal Relations Regarding Investment, Exploitation and Decommissioning of the Krško Nuclear Plant (hereinafter "the Intergovernmental Treaty"), the NEK d.o.o. Contract of Members (hereinafter "the Contract of Members"), and Slovenian Accounting Standards in those parts that are not governed by the Intergovernmental Treaty or the Contract of Members.

Basis for Opinion

We conducted our audit in accordance with International Standards on Auditing (ISAs). Our responsibilities under those standards are further described in the *Auditor's Responsibilities for the Audit of Financial Statements* section of our report. We are independent of the Company in accordance with the International Ethics Standards Board for Accountants' *Code of Ethics for Professional Accountants* (IESBA Code) and other ethical requirements that are relevant to our audit of the financial statements in Slovenia, and we have fulfilled our other ethical responsibilities in accordance with these requirements and the IESBA Code.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Other information

Management is responsible for the other information. The other information comprises the business report which is integral part of Annual report, but they do not include financial statements and our auditor's report thereon.

Our opinion on the financial statements does not cover the other information and we express no assurance thereon.

In connection with our audit of the financial statements, our responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the financial statements, regulatory requirements or our knowledge obtained in the audit or otherwise appears to be materially misstated. If, based on the work we have performed, we conclude that there is a material misstatement of this other information, we are required to report that fact. With regards to these procedures, we report on the following:

- Other information is consistent with audited financial statements in all respect
- Other information is prepared in line with regulatory requirements and
- Based on our knowledge and understanding of the Company and its environment, obtained during the audit, no material inconsistencies were found in relation to other information.

Responsibilities of Management and Supervisory Board for the Financial Statements

Management is responsible for the preparation and fair presentation of the financial statements in accordance with Intergovernmental Treaty, the Contract of Members and Slovenian Accounting Standards in those parts that are not governed by the Intergovernmental Treaty or the Contract of Members, and

for such internal control as management determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements of the Company, management is responsible for assessing the Company's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless management either intends to liquidate the Company or to cease operations, or has no realistic alternative but to do so.

Supervisory Board is responsible for overseeing the Company's financial reporting process and for confirmation of audited annual report.

Auditor's Responsibilities for the Audit of Financial Statements

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with ISAs will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

As part of an audit in accordance with ISAs, we exercise professional judgment and maintain professional skepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.
- Conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Company's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the organization to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the financial statements, including the disclosures, and whether financial statements represent the underlying transactions and events in a manner that achieves fair presentation.

We communicate with the Supervisory Board regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

Ljubljana, March 19, 2021

BDO Revizija d.o.o.
Cesta v Mestni log 1, Ljubljana

Uroš Kavčnik
Certified auditor

(Signature on original Slovene independent auditor's report)

Statement of Management Responsibility

2.0

Statement of Management Responsibility

The company Management is responsible for the preparation of the NEK Annual Report and Financial Statements in a manner which provide for the interested public a true and fair presentation of the financial position and operating results of NEK in 2020.

The management declares that:

- the financial statements have been prepared under the assumption that NEK will continue operations until the expiry of the plant's operational life;
- the company has applied selected accounting policies and discloses potential changes of accounting policies;
- the financial assessments are fair and well-thought-out as well as in accordance with the principles of due care and due diligence;
- the financial statements with explanatory notes have been prepared in accordance with the Intergovernmental Agreement (Official Gazette of RS No. 23/2003, MP 5) and the Articles of Association (last consolidated amended version of 24 September 2019) as well as with current legislation and Slovenian Accounting Standards.

The management is responsible for implementing measures to ensure the value of NEK property is maintained and fraud and other misdeeds are prevented and detected.

The Management affirms and accepts the financial statements and the annual report for 2020.

Krško, 16 March 2021

Stanislav Rožman, President of the Management Board

Saša Medaković, Member of the Management Board

Preliminary Explanation on Preparing Financial Statements

3.0

Financial statements of NPP and their notes have been prepared in accordance with the Intergovernmental Agreement and the Articles of Association, The Companies Act (ZGD-1) and Slovenian Accounting Standards (SRS) for areas not otherwise regulated by the Intergovernmental Agreement or the Articles of Association.

The financial statements were audited by the auditing company *BDO REVIZIJA d.o.o.*

Financial Statements

4.0

4.1 Balance Sheet

ASSETS in EUR	31.12.2020	31.12.2019
A. Long-term assets	**411,777,389**	**417,281,989**
Tangible fixed assets	411,763,177	417,254,390
Land and buildings	66,525,915	73,627,909
Land	1,927,370	1,927,370
Buildings	64,598,545	71,700,539
Plant assets and machinery	250,253,544	300,133,511
Other equipment	6,098,885	6,280,609
Tangible fixed assets in acquisition	88,884,833	37,212,361
Tangible fixed assets in construction and production	88,757,616	37,181,118
Advances for tangible fixed assets	127,217	31,243
Long-term financial investments	14,212	27,599
Long-term loans given	14,212	27,599
Long-term loans given to others	14,212	27,599
B. Current assets	**153,474,756**	**100,492,169**
Inventories	85,225,634	70,484,393
Raw materials	85,225,345	70,482,917
Advances for inventories	289	1,476
Short-term financial investments	25,011,921	10,973,590
Short-term loans given	25,011,921	10,973,590
Short-term loans given to others	25,011,921	10,973,590
Short-term operating receivables	19,055,785	18,989,650
Short-term trade receivables	18,137,780	15,478,434
Short-term operating receivables from others	918,005	3,511,216
Cash and cash equivalents	24,181,416	44,536
C. Short-term deferred expenses and accrued revenue	**641,245**	**619,292**
TOTAL ASSETS	**565,893,390**	**518,393,450**

LIABILITIES in EUR	31.12.2020	31.12.2019
A. Capital	**475,858,719**	**439,901,743**
Called-up capital	353,544,826	353,544,826
Nominal capital	353,544,826	353,544,826
Capital reserves	36,350,000	0
Revenue reserves	89,294,326	89,294,326
Legal reserves	35,354,483	35,354,483
Statutory reserves	53,321,477	53,321,477
Other revenue reserves	618,366	618,366
Reserves from fair value re-evaluation	474,039	867,063
Net profit or loss carried over	–3,804,472	–3,804,472
Retained net profit or loss	0	0
B. Provisions and long-term accrued costs and deferred revenue	**16,417,417**	**12,024,005**
Provisions for jubilee benefits and severance pay	12,211,965	11,662,745
Long-term accrued costs and deferred revenue	4,205,452	361,260
C. Long-term liabilities	**42,023,320**	**42,028,982**
Long-term financial liabilities	41,850,000	41,850,000
Long-term financial liabilities towards banks	41,850,000	41,850,000
Long-term operating liabilities	173,320	178,982
Other long-term operating liabilities	173,320	178,982
D. Short-term liabilities	**22,898,168**	**23,551,179**
Short-term operating liabilities	22,898,168	23,551,179
Short-term operating liabilities to suppliers	16,722,858	17,693,309
Other short-term operating liabilities	6,175,310	5,857,870
E. Short-term accrued costs and deferred revenue	**8,695,766**	**887,541**
TOTAL LIABILITIES	**565,893,390**	**518,393,450**

Note: Notes to Financial Statements are part of the Financial Statements and should be read together.

4.2 Income Statement

in EUR	2020	2019
Operating revenue	**200,772,351**	**174,526,869**
Net revenue from sales	196,969,582	160,800,460
Other operating revenue	3,802,769	13,726,409
Operating expenses	**200,354,270**	**174,185,164**
Costs of material and services	80,523,829	74,777,550
Costs of used material	41,450,683	38,716,369
Costs of services	39,073,146	36,061,181
Costs of labour	41,331,719	39,544,919
Costs of salaries	28,703,394	27,294,619
Social security costs, of which:	6,537,541	6,269,680
Cost of pension disability insurance	4,247,360	4,050,987
Supplementary pension insurance	1,276,358	1,213,213
Other costs of labour	4,814,426	4,767,407
Value adjustments	66,070,220	48,289,845
Depreciation	63,476,411	35,255,885
Revalued operating expenses for operating fixed assets	1,284,837	11,779,319
Revalued operating expenses for operating current assets	1,308,972	1,254,641
Other operating expenses	12,428,502	11,572,850
OPERATING PROFIT OR LOSS	**418,081**	**341,705**
Financial revenue	**325,619**	**27,347**
Financial revenue from loans given	3,585	2,697
Financial revenue from loans given to others	3,585	2,697
Financial revenue from operating receivables	322,034	24,650
Financial revenue from operating receivables from others	322,034	24,650
Financial expenses	**608,983**	**369,052**
Financial expenses for financial liabilities	437,797	83,611
Financial expenses for loans from banks	417,353	83,611
Financial expenses for other financial liabilities	20,444	0
Financial expenses for operating liabilities	171,186	285,441
Financial expenses for liabilities to suppliers and commercial instruments	109,909	152,937
Financial expenses for other operating liabilities	61,277	132,504
FINANCIAL PROFIT OR LOSS	**–283,364**	**–341,705**
NET OPERATING PROFIT OR LOSS FOR THE PERIOD	**134,717**	**0**
Corporate income tax	134,717	0
NET OPERATING PROFIT OR LOSS FOR THE PERIOD	**0**	**0**

Note: Notes to Financial Statements are part of the Financial Statements and should be read together.

4.3 Statement for Other Comprehensive Income

in EUR	2020	2019
NET OPERATING PROFIT OR LOSS FOR THE PERIOD	**0**	**0**
Other components of the total comprehensive return	–393,024	–749,916
TOTAL COMPREHENSIVE RETURN FOR THE PERIOD	**–393,024**	**–749,916**

Note: Notes to Financial Statements are part of the Financial Statements and should be read together.

4.4 Cash Flow Statement

in EUR	2020	2019
A. Cash flows from operating activities		
Cash receipts from operating activities	**217,372,667**	**180,620,751**
Cash receipts from sales of products and services	215,793,205	178,067,638
Other cash receipts from operating activities	1,579,462	2,553,113
Cash disbursements from operating activities	**151,214,299**	**153,401,119**
Cash disbursements from purchases of raw materials and services	87,501,417	94,322,681
Cash disbursements from salaries and employees shares in net profit	32,098,426	29,974,870
Cash disbursements from tributes	30,336,682	27,793,134
Other cash disbursements from operating activities	1,277,774	1,310,434
POSITIVE OR NEGATIVE CASH FLOW RESULT FROM OPERATING ACTIVITIES	**66,158,368**	**27,219,632**
B. Cash flows from investing activities		
Cash receipts from investing activities	**27,751,785**	**156,178,019**
Cash receipts from interest received and shares in net profit of others, referring to investments	1,785	15,935
Cash receipts from financial investments disposal	27,750,000	156,162,084
Cash disbursements from investing activities	**105,752,643**	**225,210,658**
Cash disbursements from obtainment of tangible fixed assets	63,945,643	88,128,815
Cash disbursements from obtainment of financial investments	41,807,000	137,081,843
POSITIVE OR NEGATIVE CASH FLOW RESULT FROM INVESTING ACTIVITIES	**–78,000,858**	**–69,032,639**
C. Cash flows from financing activities		
Cash receipts from financing activities	**36,350,000**	**142,280,000**
Cash receipts from paid-in capital	36,350,000	
Cash receipts from increase of financial liabilities		142,280,000
Cash disbursements from financing activities	**370,630**	**100,455,135**
Cash disbursements for interest paid, referring to financing	370,630	25,135
Cash disbursements for financial liabilities redemption		100,430,000
POSITIVE OR NEGATIVE CASH FLOW RESULT FROM FINANCING ACTIVITIES	**35,979,370**	**41,824,865**
CLOSING BALANCE OF CASH AND CASH EQUIVALENTS	**24,181,416**	**44,536**
Cash flow result for the period	24,136,880	11,858
Opening balance of cash and cash equivalents	44,536	32,678

Note: Notes to Financial Statements are part of the Financial Statements and should be read together.

4.5
Equity Changes Statement

in EUR	Nominal Capital	Capital surplus	Legal reserves	Statutory reserves	Other reserves	Reserves from fair value re-evaluation	Net profit or loss carried over	Net operating profit or loss for the period	TOTAL
Closing balance on 31.12.2019	**353,544,826**	**0**	**35,354,483**	**53,321,477**	**618,366**	**867,063**	**–3,804,472**	**0**	**439,901,743**
Opening balance on 01.01.2020	**353,544,826**	**0**	**35,354,483**	**53,321,477**	**618,366**	**867,063**	**–3,804,472**	**0**	**439,901,743**
Changes to equity – transactions with owners	**-**	**36,350,000**	**-**	**-**	**-**	**-**	**-**	**-**	**36,350,000**
Entry of additional payments of equity	-	36,350,000	-	-	-	-	-	-	36,350,000
Total comprehensive return for the period	**-**	**-**	**-**	**-**	**-**	**–393,024**	**-**	**-**	**–393,024**
Other components of the total comprehensive income	-	-	-	-	-	–393,024	-	-	–393,024
Closing balance on 31.12.2020	**353,544,826**	**36,350,000**	**35,354,483**	**53,321,477**	**618,366**	**474,039**	**–3,804,472**	**0**	**475,858,719**
Closing balance on 31.12.2018	**353,544,826**	**0**	**35,354,483**	**53,321,477**	**618,366**	**1,616,979**	**–3,804,472**	**0**	**440,651,659**
Opening balance on 01.01.2019	**353,544,826**	**0**	**35,354,483**	**53,321,477**	**618,366**	**1,616,979**	**–3,804,472**	**0**	**440,651,659**
Total comprehensive return for the period	**-**	**-**	**-**	**-**	**-**	**–749,916**		**-**	**–749,916**
Other components of the total comprehensive income	-	-	-	-	-	–749,916		-	–749,916
Closing balance on 31.12.2019	**353,544,826**	**0**	**35,354,483**	**53,321,477**	**618,366**	**867,063**	**–3,804,472**	**0**	**439,901,743**

Note: Notes to Financial Statements are part of the Financial Statements and should be read together.

General Accounting Policies

5.0

5.1 Legal Basis

The Intergovernmental Agreement (IA) came into effect on 11 March 2003 and the Articles of Association (AA) are based thereon as the fundamental company's act. It is stipulated that mutual relationships between the two shareholders and the company, as well as the legal status of the company in its legal transactions, shall be regulated in accordance with IA. The ZGD-1 and the SRS apply unless IA provides otherwise for mutual relationships and criteria. In certain areas the SRS allows for options and these areas are governed by the internal rules *Accounting in NPP (*hereinafter: Rules). The Financial Statements for 2020 were drawn up on the basis of these Rules.

NPP engages only in one energy activity which is base-load power generation as a commercial activity. In accordance with the IA, we have an obligation to supply electrical energy exclusively to the two shareholders, half each. The shareholders then sell it in the market.

The key activity is electrical energy generation and it amounts to more than 99% of all revenue. We engage in supplementary activities to a small extent, including food operations, letting out our own holiday and business apartments, mostly to employees. This supplementary activity is to cover our own needs and amounts to less than one percent of all revenue or expenses in the total structure of revenue and expenses.

> 99%
revenue from electrical energy generation

5.2 Presentation of Financial Statements

When drawing up the Financial Statements, we took into consideration that NPP is a large company according to the ZGD-1; in accordance with SRS, large companies disclose all important items set out in the Rules. For better information, we disclose also certain less important items.

Balance sheet items in the Financial Statements are presented and explained in EUR (excluding cents) for the business year which is the same as a calendar year. Items not applicable to NPP are not shown in the Financial Statements. For comparison purposes, the information is presented in two columns in the Balance Sheet, the first contains information on the last day of the current business year and the second column contains information for the previous business year.

Obligations for unbilled goods and services were re-categorised in the Balance Sheet from other short-term operating liabilities to short-term operating liabilities to suppliers. The same comparable information is shown in the table for 2019.

Table:
Explanation of corrections in the Balance Sheet

Item	2019 correction	Effect of the change	2019
Short-term accounts payable	17,693,309	798,291	16,895,018
Other operating expenses	5,857,870	–798,291	6,656,161

The Income Statement which also contains elements of comprehensive income is presented in version I. For comparison purposes, we present data in two columns – the first column contains data for the current year and the second column for the previous year. The basis for drawing up these two statements is the gross Balance Sheet on the last business day of the year.

On the basis of Explanation 1 to SRS 15 (2019), labour costs include refunds for salary compensations (sick leave) in the same amount as presented under other operating expenses. Introducing the principle to present figures in gross amounts does not affect the operating results. The same is shown for comparable data in the table for 2019. In addition to introducing the principle to present figures in gross amounts, we re-classified contributions for promoting the disabled into other cash disbursements from operating activities as presented in the table.

Table:
Explanation of corrections
in the Income Statement

Item	2019 corrected	Effect of change – 1	Effect of change – 2	2019
Costs of labour	39,544,919	348,390	–225,582	39,422,111
Other operating revenue	13,726,409	348,390	0	13,378,019
Other operating expenses	11,572,850	0	225,582	11,347,268

The Cash Flow Statement is drawn up applying the direct method, the form of such presentation is successive-tiered. The basis for drawing up the Cash Flow Statement are the recorded transactions on bank accounts. For comparison purposes we present data information in two columns – the first column contains data for the current year and the second column for the past year.

The Equity Changes Statement is drawn up in a table including changes to all elements of capital; the columns illustrate elements of capital, the rows changes to these elements. For comparison purposes, we present this Statement in two columns – the first column contains data for the current year and the second column for the previous year.

5.3
Assets and Liabilities in Foreign Currency

Assets and liabilities in foreign currency are converted into domestic currency according to the reference exchange rate of the European Central Bank, valid on the day the business event occurred and on the date of the balance sheet. Currency differences arising until the payment date and conversion effects due to currency exchange rate changes until the date of the Balance Sheet are included in the Income Statement as financial revenue or financial expenses.

5.4
Business and Geographical Segments

NPP does not have any business and geographical segments defined.

Electrical energy is supplied to shareholders, to GEN with its seat in Slovenia and to HEP with its seat in Croatia.

5.5
Revaluation of Assets

Revaluation of assets is a change to the initially presented value of assets. The revaluation model is not used for any group of assets and therefore we do not carry out asset reinforcement. The impairment of assets can arise with respect to all assets, regardless of the selected model of showing assets, that is if bookkeeping value of assets exceeds their replacement value.

In accordance with company's directions, we carry out impairment for spare parts inventory if they were not used in the last six years.

5.6
Changes to Accounting Policies

In 2020, we corrected accounting policy for showing the cost of labour due to refunds for sick leaves, which are included in the cost of salaries. On the basis of Explanation 1 to SRS 15 (2019), we apply the principle of gross figures. Refunded sick leaves are shown as costs and at the same time this amount is shown as revenue.

5.7
Risk Management

This chapter is related to the chapter on risk exposure. Facility management risk includes financial risks which are: investment, credit, currency, interest, and liquidity risks.

Investment risks refer mostly to risks of non-recovery of deposits. The risk is minimised by dispersing deposits between best banks, taking into account optimal financial structure and the criteria that a cumulative deposit amount cannot exceed 0.8% of the bank's total balance sheet and the deposit at a particular bank cannot exceed 5% of NPP's assets. In the last period, due to the excess of liquidity in the financial market, we were faced with interest risks related to negative interests for deposits at banks and with fees for cash balances on bank accounts. This risk is minimised by dispersing excess cash between all bank accounts, and through deposit placement under most favourable conditions and early payment of liabilities.

Credit risk refers to unsettled receivables for electrical energy supplied. In accordance with the AA, shareholders must settle their obligations in 15 days from invoice issue date. The supply of electrical energy to a shareholder can be terminated if their obligations are not paid in further 8 days or if adequate insurances for paying obligations are not given. In such a case, we sell electrical energy in the market ourselves.

We are exposed to *currency exchange risk*, mostly for obligations in US dollars due to currency volatility but the majority of obligations are in euros.

Interest risk is connected to borrowing to which we are currently not exposed because long-term borrowing is subject to fixed interest rate.

Liquidity risk is the risk that the company will face difficulties in obtaining financial resources for fulfilling its financial liabilities. With the existing borrowing, when searching for additional sources for covering shortfall, we are limited to the net leverage and capital quotient, both of which are fundamental indicators for credit assessment.

Accounting Policies by Individual Economic Categories

6.0

6.1 Balance Sheet

6.1.1 TANGIBLE FIXED ASSETS

Tangible fixed assets are initially recognised by their purchase value consisting of: purchase price, import and non-refundable purchase duties and costs which can be directly attributed to using a particular tangible fixed asset (for example transport costs, installation, etc.). In accordance with the IA and AA, the purchase value of a tangible fixed asset does not include borrowing costs for acquiring the tangible fixed assets, until the asset is ready for use. In accordance with the AA, depreciation costs are calculated only in the amount of authorised investments and repayments of long-term loans and are not increased for interest costs for these loans.

Costs incurred later, which allow for extending the operating period, increased safety or operating reliability or for reducing operating costs compared to their initial assessment, increase the purchasing value. Replacement parts are treated as spare parts for maintenance and are recognised as costs of spent material.

Valuation of tangible fixed assets is carried out according to the purchase value model.

6.1.2 DEPRECIATION

Residual value of a tangible fixed asset is reduced by depreciation.

Depreciation for all tangible fixed assets, except for nuclear reactor with the cooling and auxiliary systems (hereinafter: nuclear reactor), is calculated by the straight-line depreciation method, taking into account the useful life of assets. Land is not depreciated.

Depreciation of tangible fixed assets starts on the first day of the month after they have become available for use.

Annual depreciation cost is set out in the AA at the amount required for new investments and the repayment of loan principles for the assets, as defined in the long-term investment plan. The purpose of depreciation in accordance with the AA is not the replacement of tangible fixed assets at the end of their useful life as this arises from the SRS since the operating period of the plant is limited. The purpose of depreciation is technological upgrade of the plant during its operating period in accordance with the highest world standards and industry practice recommendations. Depreciation is methodologically calculated by taking into account valid depreciation rate for all tangible fixed assets except for nuclear reactor. The depreciation value of the nuclear reactor is determined as a difference between the annually planned depreciation cost and calculated depreciation cost of other tangible fixed assets. Consequently, the rate and amount of depreciation of the nuclear reactor change in individual years. For other tangible fixed assets, the rates remain unchanged when compared to the previous year. Annual depreciation cost is a sum of assets required for investments; it may not be higher than the amount of approved investments.

Depreciation rates are shown for different groups of tangible fixed assets. Depreciation rate for the nuclear reactor changes in different years due to special provision in the AA.

Table:
Depreciation rates for different groups of tangible fixed assets

		Depreciation rate in %
Buildings	Constructed production buildings	6.0
	Simulator building	4.4
	Other constructed buildings	from 3.0 to 4.75
	Holiday property buildings	3
	Other buildings	from 12.5 to 15.0
Equipment	Nuclear reactor	8.4
	Equipment for radioactive waste	3.1
	Equipment for radiological protection	3.1
	Technical protection system	5.0
	Other technological equipment	from 3.1 to 4.5
	Simulator equipment	10.0
	Software and hardware	25.0
	Economic vehicles	from 14.3 to 30.0
	Personal vehicles	15.5
	Other equipment	from 5.0 to 20.0

6.1.3 IMPAIRMENT OF TANGIBLE FIXED ASSETS

The company checks the bookkeeping value of tangible fixed assets once per year if signs of impairment are detected. If such signs are detected, the replacement value of a tangible fixed asset is assessed and impairment shown in the Income Statement.

6.1.4 LONG-TERM FINANCIAL INVESTMENTS

Long-term financial investments are initially recognised by their purchase value which is equal to the amount paid, expressed in cash or cash equivalent.

Long-term financial investments in a form of long-term housing loans are recognised according to the repayment value and they change to retain their value; however, they are reduced by the unpaid amount and the amount arising from short-term financial investments which are due for payment within one year or sooner.

Long-term financial investments are minimum portions of long-term assets and refer to long-term financial receivables from employees for housing loans given in the past.

If there is direct evidence that a financial investment was impaired for a long period, the impairment is recognised in the Income Statement as a financial expense.

6.1.5 INVENTORIES AND COST FOR SPENT MATERIAL

Due to the nature of production, we do not hold unfinished production or half-finished or finished stock among inventories. Inventories consists only of material, including only nuclear fuel, spare parts, and material.

Inventory of material is initially evaluated at their purchase price, consisting of purchase price, import duties, and direct procurement costs. Nuclear fuel inventory is initially evaluated at its purchase price of a particular fuel region.

Due to importance and different method of evaluation, the nuclear fuel inventory is shown separately from spare parts and other material. Materials intended for investments are shown under tangible fixed assets.

The use of nuclear fuel is valued according to the actual price method, the use of other type of material, including spare parts and other material (technological fuel, chemicals, overhead material, cleaning material, office material, small inventory, and other) are valued by the moving average price method.

For spare parts inventory which were not used in the past six years (non-current spare parts), value correction is made at 100% value.

The accounting principle for creating value correction for non-current spare parts allows bookkeeping value to express real stock value as close as possible.

All stock is shown as short-term assets in accordance with regulations. Inventory of spare parts and nuclear fuel have a long tying period – 779 days.

Inventory of material is not encumbered by guarantees.

6.1.6 OPERATING RECEIVABLES

Receivables of all types are initially recognised in the amount shown in documents, based on assumption that they will be settled. Receivables from buyers or recipients of sold and supplied electrical energy are secured by their own bills of exchange.

If our receivables are not settled within the regular or even additional period, bills of exchange are submitted for redemption. NPP may also terminate the supply of electrical energy to the shareholder if their obligations are not paid or does not provide adequate insurance for paying their obligations. In such a case we sell electrical energy in the market ourselves. If the proceeds of electrical energy so sold do not cover all costs or expenses, the shareholder remains obligated to pay the difference.

6.1.7 SHORT-TERM FINANCIAL INVESTMENTS

Short-term financial investments are short-term company assets which give return and increase financial revenue in the period shorter than one year. These include mostly deposits at business banks. When these are first recognised, they are valued at the original value, on the date of payment (settlement). After initial recognition, they are valued at the repayment value according to the valid interest rate method. If there is direct evidence that loss would arise from loans or financial investments until their maturity for payment due to impairment, the difference between the book and current value of expected future cash flow, discounted at effective interest rate for the asset, is recognised as financial expense.

6.1.8 CASH AND CASH EQUIVALENTS

Cash and cash equivalents include cash at hand and money on bank accounts.

Cash is recognised in the amount shown in documents.

6.1.9 SHORT-TERM DEFERRED EXPENSES AND ACCRUED REVENUE

Items for deferred expenses and accrued revenue are recognised if it is likely that economic benefit is to increase from them in the future and their value can be reliably measured.

Deferred expenses and accrued revenue mostly refer to short-term deferred costs which, at the time of their recognition, are not yet due as the cost attributed to the activity of the company.

6.1.10 CAPITAL

The value of total company capital is obtained by deducting all debts and company's provisions from the value of all the assets. It is defined as the sum invested by the shareholders and as sums arising from operations and which belong to the shareholders.

Capital consists of called-up capital, capital reserves, revenue reserves and reserves from fair value re-evaluation, net profit or loss carried over, and retained net profit or loss.

6.1.11 PROVISIONS AND LONG-TERM ACCRUED COSTS AND DEFERRED REVENUE

Provisions are long-term liabilities which are likely in terms of time and future expenses to be paid.

Provisions for severance and jubilee payments are recognised as liability at the current value for future claims. Costs of the period are shown in the Income Statement while changes to financial forecasts of severance payments upon retirement, shown as a shortfall or an excess, affect the equity.

Long-term accrued costs and deferred revenue include costs calculated in advance or expenses calculated in advance and deferred revenue which are anticipated to occur in a period longer than one year as expenses or revenue. These include long-term costs or expenses calculated in advance and deferred revenue from the state aid received for purchasing tangible fixed assets which are reduced in accordance with their depreciation.

6.1.12
LONG-TERM FINANCIAL AND OPERATING LIABILITIES

Long-term liabilities show financial and operating liabilities which are initially recognised in the sum shown in related documents.

Long-term liabilities, expressed in foreign currency, are revalued due to changes in the domestic currency purchase power. Their consequential increase or reduction increase current financial expenses or revenue.

6.1.13
SHORT-TERM FINANCIAL AND OPERATING LIABILITIES

Short-term liabilities show financial and operating liabilities which are initially recognised in the sum shown in related documents showing debt.

Short-term liabilities, expressed in foreign currency, are revalued to retain their real value. Their consequential increase or reduction are current financial expenses or revenue.

Short-term liabilities show also those elements of long-term liabilities which are due for payment within the year after the balance sheet date.

6.1.14
SHORT-TERM ACCRUED COSTS AND DEFERRED REVENUE

Accrued costs and deferred revenue are liabilities which are anticipated to occur within a year, they are likely to occur and their amounts can be reliably assessed.

Accrued costs and deferred revenue include mostly short-term costs calculated in advance.

6.1.15
CONDITIONAL ASSETS AND LIABILITIES

A conditional asset is a possible asset arising from past events and whose existence is confirmed by the occurrence or non-occurrence of one or more uncertain future events. A conditional liability is a possible liability or a current undertaking arising from past events but is not recognised as it is unlikely the settlement of the undertaking will require the outflow of factors enabling economic growth. Items for conditional assets do not have direct effect on the size or structure of assets and liabilities to their sources (balance sheet) and revenue and expenses (income statement) but they are source of information for operation and possible future company's liabilities.

Items for conditional liabilities are recognised on the basis of framework contracts and refer to securing possible liabilities from open letters of credit without coverage.

6.2
Income Statement

6.2.1
REVENUE

Revenue includes operating revenue and financial revenue.

Operating revenue consists of the value of sold business effects in the accounting period when it is realistically to expect that they will be paid for goods and services. Sales price per one unit (available power and active energy) of produced electrical energy is composed of permanent and variable part. It is defined in accordance with the annual Business Plan, consisting of the plan of costs and production, and the annual investment plan, to the effect that the price covers all company's costs and expenses. Before drawing up final annual accounting statements, a budget is generally prepared so that revenue covers all company's expenses. On the basis of a shareholders' general assembly resolution, positive difference is distributed to reserves or for covering loss carried forward. Other operating revenue includes revenue from the supplemental activities, any revenue from sale of unused property and revenue from using provisions.

Explanation 1 to SRS 15.5. provides that other operating revenue is to show revenue associated with business effects such as subsidies, grants, benefits, compensations, premia, and other similar revenue. These include state aid obtained from the State or a local community. These sometimes occur in a form of donation or subsidy. State aid is recognised as a revenue if there is an acceptable assurance that the company will fulfil the conditions for it and then also receive it.

Financial revenue is incurred in relation to financial investments and receivables. It consists of calculated interests and positive currency rate differences. Revalued financial revenue occur upon divestment of financial investments if the sold value exceeds the bookkeeping value.

6.2.2
EXPENSES

Expenses include operating and financial expenses.

Operating expenses include costs of sold quantities and revalued operating expenses for tangible fixed assets and working capital which arise mostly as a result of lower sale price of these assets than their book value and as a result of impairment of tangible fixed assets, stock, operating receivables, and differed costs and accrued revenue.

Financial expenses are expenses from financing and investing. The first refer to costs of calculated interests, negative currency exchange rate difference, and revalued financial expenses. Financial expenses from investments arise from their impairment. This includes any shortfall from sold value when compared to the book value.

NPP does not have stock of finished or unfinished production. For this reason, all expenses arising in the accounting period are treated as operating expenses and affect the result in the period in which they arise.

Such costs are categorised by their type and functional groups. Based on their purpose or function, they are categorised into purchase value of sold quantities and to costs of general activities. Costs of general activities consist of costs for material and services for the following organisational units: Management Board, Finance, and General Administration.

6.2.3
CORPORATE INCOME TAX

NPP must pay corporate income tax. In accordance with the Corporate Income Tax Act (ZDDPO-2), NPP is affiliated with the company GEN, a resident in the Republic of Slovenia, and HEP, a non-resident in the Republic of Slovenia, and in accordance with the Act we should increase revenue in the calculation of the corporate income tax for the differences between the comparable market prices and the transfer prices. The price of electrical energy supplied exclusively to the shareholders is administered and defined by the IA and the AA and, therefore, we do not determine comparable market prices and do not increase revenue when calculating corporate income tax.

6.3
Notes to Financial Statements

6.3.1
NOTES TO THE BALANCE SHEET

TANGIBLE FIXED ASSETS AND DEPRECIATION

Tangible fixed assets are fully owned by the company. They are situated mostly at the seat of the company, those outside it are mostly buildings and equipment in holiday facilities and business apartments.

The book value of manufacturing equipment and devices and other equipment and devices decreased in 2020 since the value of depreciation was higher than the value of activated investments. The book value of buildings decreased because the value of activated investments was lower than the value correction made. In 2020, we activated modifications or made improvements, such as: smaller technological improvements, alternative cooling of spent fuel pool, technological protection system upgrade, and others. Ongoing investments are tangible fixed assets under construction and production and mostly refer to systems upgrading to ensure safe and stable operation of the plant. Their construction and production generally last more than a year. In comparison with 2019, investments in 2020 were higher because investments into SUP were more intensive. There were a number of modifications: additional water source and injection pumps, Spent Fuel Dry Storage, operational support centre, and others.

Tangible fixed assets are not encumbered by guarantees. Financial obligations for obtaining tangible fixed assets on the basis of concluded purchase agreements were in the sum of EUR 124,824,935.

Value changes of tangible fixed assets are shown in the table illustrating value changes of fixed assets.

Table:
Changes in value
of tangible fixed assets

			Plant assets and machinery		Plant assets and machinery						
in EUR	Land	Buildings	Nuclear reactor	Equipment for radioactive waste	Equipment for radiological protection	Technical protection system	Other equipment	Ongoing investments	Short-term advances	Ongoing investments including short-term advances	TOTAL
PROCUREMENT VALUE											
Balance on 31.12.2019	**1,927,370**	**319,998,201**	**1,268,614,141**	**46,066,952**	**96,271,515**	**15,573,261**	**50,195,957**	**37,181,118**	**31,243**	**37,212,361**	**1,835,859,758**
Procurement	-	-	-	-	-	-	-	57,889,225	95,974	57,985,199	57,985,199
Mobilizations	-	110,122	3,902,064		-	1,227,780	1,072,761	–6,312,727	-	–6,312,727	0
Reductions	-			-	-	-	–153,034	-	-	-	–153,034
Differences from recording in different periods	-	-	-	-	-	-	-		-	0	0
Balance on 31.12.2020	**1,927,370**	**320,108,323**	**1,272,516,205**	**46,066,952**	**96,271,515**	**16,801,041**	**51,115,684**	**88,757,616**	**127,217**	**88,884,833**	**1,893,691,923**
TANGIBLE FIXED ASSETS ALLOWANCE											
Balance on 31.12.2019	**-**	**248,297,663**	**971,729,285**	**45,977,682**	**96,271,515**	**12,413,876**	**43,915,348**	**-**	**-**	**-**	**1,418,605,369**
Reductions	-		-	-	-	-	–153,035	-	-	-	–153,035
Depreciation	-	7,212,115	54,136,762	89,270	-	783,778	1,254,486	-	-	-	63,476,411
Balance on 31.12.2020	**-**	**255,509,778**	**1,025,866,047**	**46,066,952**	**96,271,515**	**13,197,654**	**45,016,799**	**-**	**-**	**-**	**1,481,928,745**
CARRYING AMOUNT											
Balance on 31.12.2019	**1,927,370**	**71,700,538**	**296,884,856**	**89,270**	**0**	**3,159,385**	**6,280,609**	**37,181,118**	**31,243**	**37,212,361**	**417,254,390**
Balance on 31.12.2020	**1,927,370**	**64,598,545**	**246,650,158**	**0**	**0**	**3,603,387**	**6,098,885**	**88,757,616**	**127,217**	**88,884,833**	**411,763,177**

LONG-TERM FINANCIAL INVESTMENTS

Long-term financial investments are a minimum portion in long-term assets. They refer to long-term financial receivables from employees for housing loans given for individual constructions and purchase of apartments under the Croatian housing law and amount to EUR 14,212 (2019: EUR 27,599).

Table:
Long-term financial investments

in EUR	Housing loans to employees	Total 2020	Total 2019
Balance on 01.01.	**27,599**	**27,599**	**38,678**
Transfer from short-term financial investments	13,590	13,590	13,590
Redemptions	–15,056	–15,056	–11,079
Sell-off	-	0	0
Impairment of financial investment	-	0	0
Transfer to short-term financial investments	–11,921	–11,921	–13,590
Balance on 31.12.	**14,212**	**14,212**	**27,599**

The investment book values are the same as their purchase values. Long-term financial investments are not encumbered.

INVENTORIES AND COST FOR SPENT MATERIAL

Table:
Changes in value of raw material inventories

in EUR	Nuclear fuel	Spare parts	Other raw material	Total 2020	Total 2019
Balance on 01.01.	42,548,193	24,482,230	3,452,494	70,482,917	89,055,632
New procurements	44,827,186	8,663,849	4,092,711	57,583,746	20,837,097
Consumption	–34,775,153	–3,836,282	–2,922,897	–41,534,332	–38,155,171
Write-offs	-		–16,120	–16,120	–51,666
Raw material inventories	-	–1,290,866		–1,290,866	–1,202,975
Balance on 31.12. without advances	**52,600,226**	**28,018,931**	**4,606,188**	**85,225,345**	**70,482,917**
Advances for inventories	-	289	-	289	1,476
Balance on 31.12. with advances	**52,600,226**	**28,019,220**	**4,606,188**	**85,225,634**	**70,484,393**

The value of inventory, together with advance payments was in the amount of EUR 85,225,634 on 31.12.2020. Inventory of material refers to the nuclear fuel inventory, spare parts, and other raw material. There was no excess or shortfall during inventory taking.

Net market value of inventory for spare parts and other material is difficult to assess due to their specific nature. There are only two similar plants operating around the world which are installing similar components and spare parts required for maintenance. Therefore, there is practically no demand in the market for such inventory and the costs for their sale would be greater than the profit. Usable value of spare parts inventory, in particular those categorised as a safety class, have great value for ensuring plant's safe operation.

Stock value at
€ 85,225,634

OPERATING RECEIVABLES

Operating receivables include receivables from shareholders who are also recipients of electrical energy and other short-term accounts receivables. Operating receivables are not encumbered as securities for liabilities.

Table:
Operating receivables

in EUR	31.12.2020	31.12.2019
Short-term operating receivables from related companies	**18,102,564**	**15,259,532**
GEN	9,948,256	8,385,869
HEP	8,154,308	6,873,663
Short-term accounts receivables	**35,216**	**218,902**
Short-term operating receivables from others	**918,005**	**3,511,216**
Total	**19,055,785**	**18,989,650**

Short-term operating receivables from related companies in the amount of EUR 18,102,564 refer to receivables for supplied electrical energy to GEN (receivables from GEN include value added tax in the sum of EUR 1,793,948) and to HEP as of December 2020. Payments fall due for payment in 15 days after invoice issue date.

Short-term accounts receivables from buyers in the amount of EUR 35,216 refer to receivables from supplementary activities.

Short-term operating receivables from others in the amount of EUR 918,005 refer mostly to claims for value added tax in the sum of EUR 699,409; the difference in the sum of EUR 218,596 refers to receivables from employees, government institutions for refund for gross salary compensation and contributions (disability and similar), and other receivables. Receivables were not yet due for payment on 31.12.2020.

Receivables are not encumbered. They are secured for the amount of EUR 18,102,564. Receivables in the amount of EUR 953,221 are receivables from other buyers, VAT and other receivables are not secured and are not subject to great risk for their recovery.

SHORT-TERM
FINANCIAL INVESTMENTS

Short-term financial investments show deposits in banks and long-term loans given which are not due for payment in the next business year.

Table:
Balance of short-term financial investments

in EUR	31.12.2020	31.12.2019
Bank deposits	25,000,000	10,960,000
Part of long-term loans, maturing in 2021	11,921	13,590
Total short-term financial investments	**25,011,921**	**10,973,590**

Short-term financial investments amount to EUR 25,011,921 (2019: EUR 10,973,590). Most refer to deposits in business banks. Higher deposits when compared to figures in the end of the previous year are mostly a result of unrealised planned investments. These assets will be used for covering expenses for investments in 2021. Short-term financial investments are not encumbered.

CASH AND CASH
EQUIVALENTS

Cash shows balance on current and foreign currency accounts in the amount of EUR 24,181,416 (2019: EUR 44,536). Significantly higher balance on current bank accounts is a result of revenue being higher than expenses. We were faced with unfavourable financial market conditions and consequently banks were not willing to receive excess cash as deposits. Excess cash is only available for a short time since these assets are to be mostly used for covering expenses for current operations as well as for investments. No cash at hand was kept on 31.12.2020.

SHORT-TERM DEFERRED
EXPENSES AND ACCRUED REVENUE

Short-term deferred costs and accrued revenue in the amount of EUR 641,245 (2019: EUR 619,292) refer to short-term deferred costs for insurance premium (EUR 472,849) and for membership costs for 2021 (EUR 168,396).

CAPITAL

Capital amounts to EUR 475,858,719 and is fully divided between the two shareholders in equal sum.

Called-up capital amounts to EUR 353,544,826 and it originates from the IA and is registered with the court.

Capital reserves amount to EUR 36,350,000 and were created due to subsequent contributions by shareholders, intended for investments.

Capital of
€ 475,858,719

Revenue reserves amount to EUR 89,294,326. Legal and statutory reserves were created in accordance with the IA and legal reserves in accordance with the ZGD-1 in the amount prescribed which is 10% of called-up capital. Statutory reserves are created in accordance with the AA which stipulates that all possible profits arising from discrepancy between actual and planned revenue and expenses or from later tax or accounting changes be included. Other reserves from profit amount to EUR 618,366 and were created by distributing part of the profit from 2014 and 2016. Net profit of the business year can be used for covering loss brought forward if so decided by the general assembly. These reserves are intended for covering any loss arising from the same reasons.

Reserves from fair value re-evaluation, which can be positive or negative, are shown in the actuarial calculation due to changes to financial items and experience in calculating reserves for severance pay to employees upon their retirement. These reserves are positive and they amount to EUR 474,039.

Net profit or loss carried over is in the amount of EUR 3,804,472 of which EUR 3,155,782 is for 2017 and refers to creating additional reserves for jubilee awards and severance pay, the difference of EUR 648,690 is for recording the unused annual leave for 2017.

PROVISIONS AND LONG-TERM
ACCRUED COSTS AND DEFERRED REVENUE

Provisions and long-term accrued costs and deferred revenue amount to EUR 16,417,417 as at 31.12.2020 (2019: EUR 12,024,005). The majority of the amount is for reserves for jubilee awards and severance pay, amounting to EUR 12,211,965 (2019: EUR 11,662,745). The amount is determined by the actuarial calculation of an authorised actuary (3sigma d.o.o.). The calculation took into account the following assumed parameters: discount rate (0.11% annually, corresponding to the discount rate which is the same as the rate of return for 10-year bonds with AA credit rate in Eurozone), determined operating period of the plant (until 30.06.2043), long-term salary growth at 2.5% annually, employee fluctuation at 3%, and employee mortality based on last available mortality rate for population in Slovenia. The table shows sensitivity analysis for important actuarial assumed parameters.

Table:
Sensitivity analysis
for important actuary assumed
parameters (in EUR)

Presumption	Variance	Description	Total	Severances	Jubilee benefits	Severance pay under Article 108
Central script	**0.00%**	**balance**	**12,211,965**	**6,997,795**	**2,633,226**	**2,580,943**
Discount interest rate	–0.50%	balance	12,992,123	7,339,298	2,765,404	2,887,420
		(difference)	(780,158)	(341,503)	(132,178)	(254,194)
	0.50%	balance	11,500,015	6,681,299	2,510,435	2,308,281
		(difference)	(–711,949)	(–316,496)	(–122,791)	(–324,945)
Growth in salaries	–0.50%	balance	11,511,619	6,686,949	2,512,630	2,312,040
		(difference)	(–700,346)	(–310,846)	(–120,597)	(–321,186)
	0.50%	balance	12,970,494	7,329,355	2,761,560	2,879,579
		(difference)	(758,529)	(331,559)	(128,334)	(246,353)
Duration (DBO)			**12.20**	**9.40**	**9.70**	**22.60**

Long-term provisions for jubilee and severance pay upon retirement were created at the current value of future payments required for paying the obligations arising from employee service in the current and past period. We do not expect significant discrepancies from the assumed parameters applied and we assess that the risk is low.

Long-term accrued costs and deferred revenue in the amount of EUR 4,205,452 refer to long-term deferred costs for the three-year outage services which started in 2020, in the amount of EUR 3,897,485, and to long-term deferred revenue in the amount of EUR 307,967 (2019: EUR 361,260). These refer to assets received (in 2000 and 2001) from the Republic of Slovenia budget for upgrading the plant and are reduced according to the calculated depreciation of these assets.

Table:
Change in value of provisions
and long-term accrued costs

in EUR	Provisions for jubilee benefits	Provisions for severance pay	Long-term accrued costs	Total 2020	Total 2019
Balance on 01.01.	**2,457,899**	**9,204,846**	**361,260**	**12,024,005**	**10,828,224**
Provisions utilisation	–226,617	–489,248	–53,293	–769,158	–382,882
Formation of provisions in debit for expenses	401,945	470,116	-	872,061	828,747
Formation of long-term accrued costs in debit of outage costs	-	-	3,897,485	3,897,485	0
Formation of provisions in debit for reserves from fair-value re-evaluation	-	393,024	-	393,024	749,916
Balance on 31.12.	**2,633,227**	**9,578,738**	**4,205,452**	**16,417,417**	**12,024,005**

LONG-TERM
LIABILITIES

Long-term liabilities include financial and business long-term liabilities.

Table:
Changes in value
of long-term financial liabilities

in EUR	Long-term financial liabilities 2020	Long-term financial liabilities 2019
Balance on 01.01.	**41,850,000**	**0**
Increase	0	41,850,000
Balance on 31.12.	**41,850,000**	**41,850,000**

Long-term financial liabilities amount to EUR 41,850,000. They refer to the long-term loan taken for financing investments into SUP. The loan was taken out in 2019. The liabilities will be gradually reduced over 10 years after 2022, when the repayment of principal at the annual rate of EUR 4,185,000 starts and will be paid off in 2031. The principal carries fixed interest rate; the interest rate is not disclosed as it is a business secret.

Long-term financial liabilities with maturity longer than 5 years amount to EUR 25,110,000.

Table:
Changes in value of
long-term operating liabilities

v EUR	Long-term operating liabilities 2020	Long-term operating liabilities 2019
Balance on 01.01.	**178,982**	**187,298**
Transfer of short-term liabilities	8,833	8,833
Redemptions	–6,746	–8,316
Transfer to short-term investments	–7,749	–8,833
Balance on 31.12.	**173,320**	**178,982**

Long-term operating liabilities amount to EUR 173,320. They refer to liabilities towards the Croatian housing fund for apartments sold in accordance with legal regulations. There is no maturity date longer than five years.

Long-term operating liabilities with maturity date longer than five years are in the amount of EUR 0.00.

SHORT-TERM
LIABILITIES

Short-term liabilities include financial and business short-term liabilities.

Table:
Short-term
liabilities balance

in EUR	31.12.2020	31.12.2019
Short-term operating liabilities to suppliers	**16,722,858**	**17,693,309**
Local suppliers	8,827,893	7,763,983
Foreign suppliers	7,388,130	9,131,035
For uncharged goods and services	506,835	798,291
Other short-term operating liabilities	**6,175,310**	**5,857,870**
Employees	3,690,283	3,368,383
Public and other institutions	2,279,695	2,325,338
Other short-term liabilities	205,332	164,149
Total	**22,898,168**	**23,551,179**

Short-term operating liabilities to suppliers amount to EUR 16,722,858 for services and material, for operating purposes and investments into fixed assets. In 2020 these are lower, mostly due to settling liabilities to suppliers and also because there were less new liabilities due to investment delays.

Short-term operating liabilities to others refer to liabilities to employees for salary and other labour costs for December 2020 (EUR 3,690,283), liabilities to the state and other institutions (EUR 2,279,695), liabilities for interests from loans and negative interests (EUR 108,641) and other smaller liabilities in the amount of EUR 96,691.

SHORT-TERM ACCRUED
COSTS AND DEFERRED REVENUE

Accrued costs and deferred revenue as at 31.12.2020 amount to EUR 8,695,766 (2019: EUR 887,541). The amount of EUR 7,546,397 refers to short-term deferred expenses for outage services in a three-year period. The amount of EUR 800,375 (2019: EUR 610,607) refers to deferred expenses for unused annual leave in 2020, and the amount of EUR 348,994 (2019: EUR 276,934) refers to other deferred labour costs for rewards to the board and executive directors, together with contributions.

CONDITIONAL ASSETS
AND LIABILITIES

Items for conditional liabilities refer to securing potential liabilities to open letters of credit without coverage for which NPP has a framework short-term loan in the amount of USD 1,900,000 which is not being used. Drawing down from this loan occurs only when there is no coverage when a letter of credit is due for payment. The balance of open but undrawn letters of credit as at 31.12.2020 is not shown.

6.3.2
NOTES TO THE INCOME STATEMENT

REVENUE

Revenue is divided into operating and financial revenue.

Net revenue from sales, in the amount of EUR 196,969,582 (2019: EUR 160,800,460) refers to revenue from electrical energy supplied; half was realised in Slovenia and half in Croatia. Other operating revenue, in the amount of EUR 3,802,769 (2019: EUR 13,726,409) shows revenue from supplemental activities and other operating revenue. Operating revenue from supplemental activities was in the total amount of EUR 1,200,089 (2019: EUR 1,553,192) and refers to the revenue generated by providing food to workers – EUR 1,028,120 (2019: EUR 1,304,192) and to the revenue generated from renting holiday and business apartments – EUR 171,969 (2019: EUR 249,515). Other operating revenue, in the amount of EUR 2,602,680 (2019: EUR 12,172,702) refers to free acquisition of fixed assets and amounts to EUR 1,281,654 (2019: EUR 11,766,805) from HESS in accordance with the Conditions of the Concession for Exploitation of the Energy Potential of the Lower Sava River Act (ZPKEPS-1) and to the revenue from the state aid under ZIUZEOP, amounting to EUR 799,999. On this basis, we were exempt from the payment of contributions for pension and disability insurance and mandatory contributions for occupational insurance for employees who worked from 13.03 to 31.05.2020. Revenue in the amount of EUR 450,473 (2019: EUR 348,390) refers to refunded sick leave. Other revenue mostly refers to revenue from removing provisions for assets received from the Republic of Slovenia budget and to revenue from the sale of waste material – EUR 70,284 (2019: EUR 57,507).

Financial revenue from operating receivables and liabilities arose from currency differences on the basis of revaluation and amount to EUR 322,034 (2019: EUR 24,650).

EXPENSES

NPP does not have stocks of finished or unfinished production. All expenses are treated as operating expenses and affect the result for the accounting period.

Operating expenses amount to EUR 200,354,270 and include all costs for operations which are categorised by their type and functional groups.

Table:
Costs by their type and functional groups

in EUR	2020	2019
COSTS BY NATURE	**200,354,270**	**174,185,164**
Costs of raw materials and services	**80,523,829**	**74,777,550**
Costs of consumed raw materials	**41,450,683**	**38,716,369**
Costs of energy	34,883,885	30,244,655
Costs of spare parts	3,902,529	4,920,468
Costs of other material	2,664,269	3,551,246
Costs of services	**39,073,146**	**36,061,181**
Costs of tangible fixed assets maintenance	19,479,552	16,489,878
Costs of payment transfers and insurance premium	2,448,162	2,497,029
Costs of services tied to manufacturing of products	12,359,842	11,731,732
Costs of other services	4,785,590	5,342,542
Labor costs	**41,331,719**	**39,544,919**
Costs of salaries	28,703,394	27,294,619
Costs of social insurance	6,475,486	6,221,423
Costs of additional pension insurance	1,276,358	1,213,213
Other costs of labor	4,876,481	4,815,664
Value adjustments	**66,070,220**	**48,289,845**
Depreciation	63,476,411	35,255,885
Revalued operating expenses	2,593,809	13,033,960
Other operating expenses	**12,428,502**	**11,572,850**
COSTS BY FUNCTION GROUPS	**200,354,270**	**174,185,164**
Production costs of sold quantities	**194,163,607**	**167,655,939**
Costs of general activities	**6,190,663**	**6,529,225**

Costs for spent material, in the amount of EUR 41,450,683, are mostly costs for nuclear fuel, in the sum of EUR 34,775,153. Costs for services, in the amount of EUR 39,073,146, are mostly maintenance costs (EUR 19,479,552). Costs for labour, in the amount of EUR 41,331,719, are costs for salaries, and for contributions in the amount of EUR 36,517,293. Other costs for labour, in the amount of EUR 4,814,426, refer to transport costs to and from work, food during work, holiday bonus, additionally created long-term reserves for jubilee awards and severance pay, and other costs of labour.

The structure and number of employees by education is shown in the business report. On 31.12.2020, there were 630 employees in NPP (at the end of 2019, there were 628). The average number of employees in 2020 was 619.

The majority of write-offs are for depreciation, calculated in accordance with the AA and amounts to EUR 63,476,411. Revalued operating expenses refer to the correction of value for non-current spare parts amounting to EUR 1,290,866 which was created according to the accounting directions. In the business year we showed revalued operating expenses in the amount of EUR 1,281,654 for write-off of fixed assets received from HESS, and other write-offs according to the inventory count amounting to EUR 21,289.

Other operating expenses refer to compensations for limited use of area within the nuclear facility and for the use of building land (EUR 6,078,963), for water refund for use of technological water (EUR 5,691,189), and others (EUR 658,350).

Financial expenses, in the amount of EUR 608,983, refer to financial expenses for interest revaluation for receivables and debt, and for interests on provisions for jubilee awards and severance pay.

CORPORATE
INCOME TAX

The company is a taxable entity under the ZDDPO-2 and the Rules on corporate income tax returns.

Table:
NPP income
tax account

in EUR	2020	2019
Revenues	201,097,977	174,205,826
Increase of revenues to the tax-recognized level	0	0
Decrease of revenues to the tax-recognized level	0	0
Tax-recognized revenues	**201,097,977**	**174,205,826**
Expenses	200,963,260	174,205,826
Increase of expenses to the tax-recognized level	357,933	174,685
Decrease of expenses to the tax-recognized level	–2,139,530	–1,935,897
Tax-recognized expenses	**199,181,663**	**172,444,614**
Taxable amount 1	1,916,314	1,761,212
Tax relief	1,207,278	1,761,212
Taxable amount 2	709,036	0
Tax rate	19%	19%
Income tax	134,717	0

On the basis of the ZDDPO-2R, from 01.01.2020, when determining tax base, it is no longer possible to recognise the reduced base on the total investment value. Tax amount 1 – as a difference between tax recognised expenses and revenue – amounts to EUR 709,036, for which 19% corporate income tax applies and amounts to EUR 134,717. We could seek tax relief (including for past years) in the amount of EUR 109,899,613, but it can be claimed only at 63% of the tax base. Unused tax relief can be claimed in the next five years.

NET
PROFIT

According to the ZGD-1, net profit is a legally defined category and is a sum of net profit or loss, profit or loss brought forward and any increase due to reduced reserves from profit or reductions for creating reserves from profits. Shareholders' general meeting decides on the use of net profit, upon the recommendation of the management administrative and supervisory boards of NPP. In 2020, NPP does not show net profit; however, it does show net loss for 2017.

NET OPERATING PROFIT OR LOSS
FOR THE ACCOUNTING PERIOD

Operating profit or loss for 2020 amounts to EUR 134,717; after taxation, net operating profit or loss for the period is zero. The item 'other elements of comprehensive income' for 2020 shows actuary shortfall in the amount of EUR 393,024.

6.3.3
NOTES TO CASH FLOW STATEMENT

The Cash Flow Statement shows events concerning solvency. This Statement is drawn up according to the direct method. Individual types of cash flow are compared to realized cash flow in the Cash Flow Statement for 2020, with those realized in 2019. Revenue for 2020 was in the amount of EUR 281,474,452 and expenses in the amount of EUR 257,337,572. Revenue was higher than expenses by EUR 24,136,880.

Table:
Recapitulation of cash receipts and cash disbursements by types of cash flows in 2020

in EUR	Cash receipts	Cash disbursements	Net receipts/ disbursements
Cash flows from operating activities	**217,372,667**	**151,214,299**	**66,158,368**
Cash flows from investing activities	**27,751,785**	**105,752,643**	**–78,000,858**
for and from deposits	27,750,000	41,807,000	–14,057,000
for obtainment of tangible fixed assets	0	63,945,643	–63,945,643
for disposal of tangible fixed assets	0	0	0
from interest received	1,785	0	1,785
from disposal of long-term financial investments	0	0	0
Cash flows from financing activities	**36,350,000**	**370,630**	**35,979,370**
from paid-in capital	36,350,000	0	36,350,000
for long-term financial liabilities	0	0	0
for short-term financial liabilities	0	0	0
for interest paid	0	370,630	–370,630
Total	**281,474,452**	**257,337,572**	**24,136,880**

6.3.4
NOTES TO THE EQUITY CHANGES STATEMENT

Value changes of different capital items are shown in the Equity Changes Statement, point 4.5. The amount of called-up capital as set in the IA is EUR 353,544,826, which is also the sum registered in the court register. Capital increased in 2020 for capital reserves by the sum of EUR 36,350,000 which arose from subsequent contributions by shareholders for investments, and was reduced by EUR 393,024 due to the shortfall of reserves arising from valuation at fair value. These are shown on the basis of actuary calculation and are related to the changes of financial assumed values for provisions for severance pay upon retirement.

6.4
Additional Explanations

6.4.1
INFORMATION ON GROUPS OF PEOPLE

Information on groups of people shows receipts, separately for the following groups: NPP management board, employees under individual contracts, NPP supervisory board.

Table:
Cash receipts by groups of people in 2020

in EUR	Number of receipts	Earnings	Other cash receipts	Total
Board members	2	352,322	-	352,322
Employees under individual contracts	24	2,866,391	-	2,866,391
Members of NPP Supervisory Board	6	-	89,327	89,327
Total	**32**	**3,218,713**	**89,327**	**3,308,040**

Receipts include salaries, holiday bonus, and other receipts from the employment relationship. Other receipts include payments for performing a function in the supervisory board and payments for attending meetings.

No receivables from the management board members, employees under individual contracts or the supervisory board members for loans, advances or sureties are shown.

6.4.2
INFORMATION ON AFFILIATED COMPANIES

All transactions with affiliated companies are shown in the *Report on relationships with affiliated companies for 2020.*

Table:
Information on affiliated companies in 2020

in EUR	Revenue	Costs	Receivables	Liabilities
GEN energija, d. o. o.	98,484,791	13,245	9,948,256	16,159
HEP, d. d.	98,484,791	11,378	8,154,308	11,378
GEN-I, d. o. o.	-	31,759	-	10,026
HEP ELEKTRA, d. o. o.	-	3,851	-	223
Total	**196,969,582**	**60,233**	**18,102,564**	**37,786**

In addition to information in the table, we also show transactions with HESS for liabilities in the sum of EUR 281,964 for VAT and in the sum of EUR 40,250 for current investments. In the business year 2020, there were no legal transactions or omission of transactions or other acts which we committed or omitted on the basis of interests or initiatives of the companies GEN or HEP and which would constitute a depreciation within the meaning of Article 545 of the ZGD-1.

6.4.3
OTHER DISCLOSURES

Other disclosures refer to costs for auditing services which are shown separately by types of services. In 2020, the costs for auditing the Annual Report were EUR 23,530; other costs were in the sum of EUR 1,040. We did not engage any tax advisers or other non-auditing service providers.

Events after Balance Sheet Date

7.0

We assess there were no business events after the balance sheet date until the Annual Report was drawn up which would significantly affect the company's financial statements for 2020.

In February 2021 building permission for spent fuel dry storage became final.

List of Acronyms

AA	Articles of Association
AAF	Alternative Auxiliary Feedwater
AB	Auxiliary Building
ACDR	Accrued Costs and Deferred Revenue
AMSAC	Anticipated Transient Without Scram Mitigation Signal Actuation Circuitry
ASI	Alternative Safety Injection
BB	Bunkered Building
BP	Business Plan
CC	Component Cooling
CCB	Component Cooling Building
CDP	Core Damage Probability
CHUG	Checworks Users Group
DBO	Defined Benefit Obligation
DEC	Design Extension Condition
DG	Diesel Generator
ECR	Emergency Control Room
ENISS	European Nuclear Industry Safety Standards
EPRI	Electrical Power Research Institute
EU	European Union
FHB	Fuel Handling Building
FORATOM	European Atomic Forum
GEN	GEN energija, d. o. o.
HEP	Hrvatska elektroprivreda, d. d., Zagreb
HESS	Hidroelektrarne na spodnji Savi, d. o. o.
HUPX	Hungarian Power Exchange
I&C	Instrumentation and Control
IA	Intergovernmental Agreement
IAEA	International Atomic Energy Agency
IB	Intermediate Building
IJS	Jožef Stefan Institute
INPO	Institute for Nuclear Power Operations
ISI	In-Service Inspection
ISO	International Organisation for Standardization
LILRW	Low- and Intermediate-Level Radioactive Waste
MAAP	Modular Accident Analysis Program User Group
MCR	Main Control Room
NDE	Non-Destructive Examination
NMAC	Nuclear Maintenance Application Centre
NP	Net profit
NPP	Krško Nuclear Power Plant
NRC	Nuclear Regulatory Commission
NUPIC	Nuclear Procurement Issues Committee
OSART	Operational Safety and Review Team
OSC	Operational Support Centre
PB	Pre-treatment Building
PSE	Plant Support Engineering
PSR	Periodic Safety Review
PWR	Pressurized Water Reactor
PWROG	Pressurized Water Reactor Owners Group
QA	Quality Assurance
RB	Reactor Building
RC	Reactor Coolant
RCS	Reactor Coolant System
RERP	Radiological Emergency Response Plan
RHR	Residual Heat Removal
RP	Radiological Protection
RS	Republic of Slovenia
SB	Supervisory Board
SRS	Slovenian Accounting Standards
SUP	Safety Upgrade Program
TSC	Technical Support Centre
URSJV	Slovenian Nuclear Safety Administration
VAT	Value Added Tax
WANO	World Association of Nuclear Operators
ZDDPO-2	Corporate Income Tax Act
ZGD-1	Companies Act
ZIUZEOP	Act Determining the Intervention Measures to Contain the COVID-19 Epidemic and Mitigate Its Consequences for Citizens and the Economy
ZJN-3	Public Procurement Act

KRŠKO
NUCLEAR
POWER
PLANT

Vrbina 12
SI-8270 Krško
telephone: +386 7 480 20 00
telefax: +386 7 492 10 06
e-mail: nek@nek.si
www.nek.si