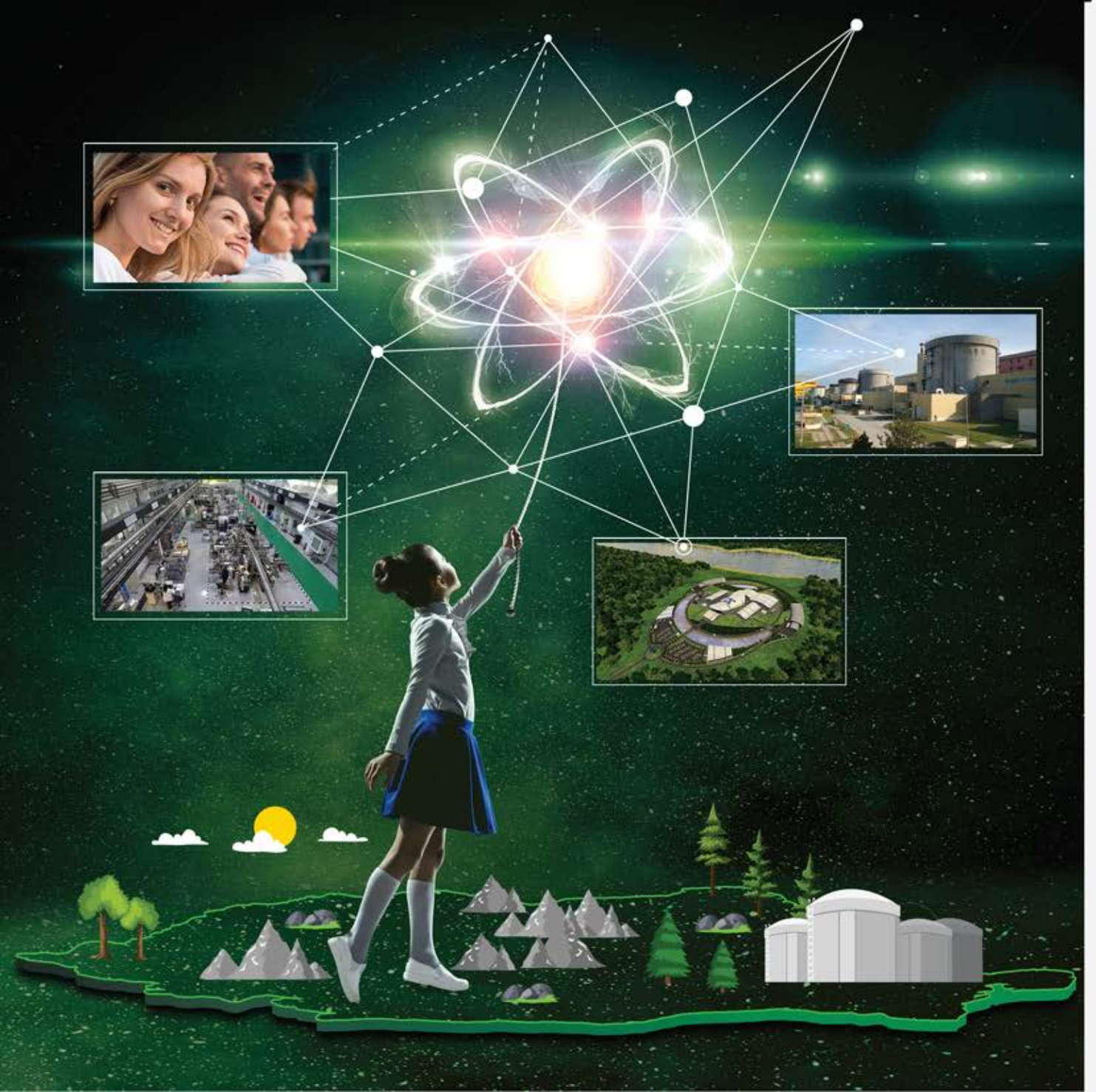


NUCLEARELECTRICA

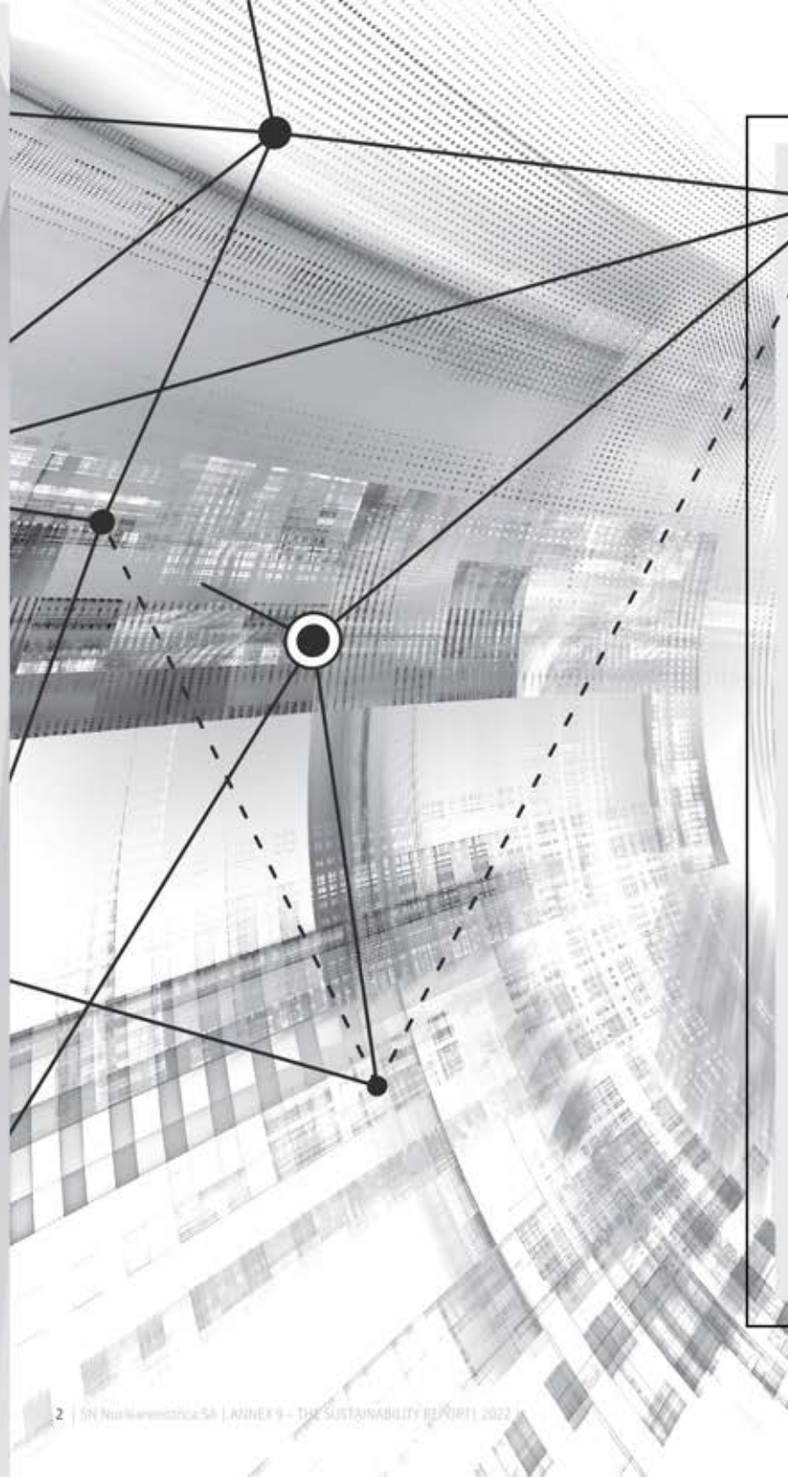
SN Nuclearelectrica SA

ANNEX 9
THE SUSTAINABILITY REPORT

2022

WHO WE ARE

GRI 102-1, 102-2, 102-3, 102-4, 102-5c, 102-8



1. MESSAGE OF THE CEO, COSMIN GHIȚĂ

GRI 102-14

Worldwide, nuclear energy covers 10% of the total electricity demand, and this is expected to increase up to approx. 17% in the IEA Member States. Also, in the European Union, UK included, nuclear energy generates 50% of electricity without greenhouse gas emissions.
The International Energy Agency (IEA) estimates that the GHG-free sources will provide up to 52% of usage by 2040 v 36% today[1].
Also, over the last 50 years, nuclear energy has avoided 74 Gt of GHG being released into the atmosphere, according to the UNECE report[2].

Romania has set the following decarbonization targets: 55% fewer GHG emissions by 2030; reducing dependence on imports from 20.85 % down to 17.8 % by 2030; removal of up to 4.59 GWe of coal-based energy by 2032, and its replacement by clear energy sources.
In this context, SN Nuclearelectrica SA plays a key part attainment of Romania's objectives by increasing the capacity to generate energy from nuclear sources by 2030s. Thus, we have in progress strategic investment projects of an estimated amount of EUR 12 billion in progress, including: Refurbishment of Unit 1; the Project of Units 3 and 4; development of small modular reactors in partnership with the American company NuScale; and implementation of support projects for current operation, such as the Tritium Removal Plant. Nuclearelectrica's investment projects will bring clean energy to Romania's energy stability, social and economic development, development of the nuclear industry, as well as the training of a new generation of engineer.

Currently, Nuclearelectrica plays a strategic part at the national level, with 2 nuclear units operating at the highest safety and productivity standards for 26 years, and covering

- approximately 20% of the total energy demand and 33% of the total CO_2-free clean energy production, at national level
- 205 million tons of CO_2 avoided from commissioning, 10 million tons of CO_2 avoided every year,
- More than 2,500 direct jobs, and more than 11,000 jobs generated by the industry
- EUR 5.7 billion contributed to the industry's GDP, an amount that could keep all Romanian hospitals operating at excellence standards for one full year.

[1] https://www.iea.org/reports/world-energy-outlook-2019/electricity
[2] https://unece.org/sustainable-energy/cleaner-electricity-systems/nuclear-power

After completion of the strategic projects (Refurbishment of Unit 1, Units 3 and 4, development of small modular reactors), this contribution will increase significantly, helping the national energy system attain energy stability and security by clean energy:

- 36% clean energy of the total domestic production, 66% clean energy contribution
- more than 20,000 jobs provided by the industry, at national level.
- 24 million tons of CO_2 avoided every year

Moreover, the project for development of small modular reactors that Romania is implementing can add to the regional energy security, through the example of good development and operation practices we propose. For more than 26 years, Romania has been internationally recognized for operating at high standards of nuclear safety and excellence, with Units 1 and 2 at the top, ranking 1st and 3rd among more than 440 nuclear units worldwide. Romania also enjoys a solid chain of suppliers in the nuclear industry, with more than 50 years of experience, an internationally acclaimed engineering school, as well as a professional and rigorous regulator (NCNAC). All these are assets allow Romania to take a leading position in the regional nuclear industry and become a hub for the development and assembly of components for small modular reactors, a training center for future operators, a regional operator of choice, and a supporter of countries that intend to develop a nuclear programme because they understand the long-term benefits of technology, but still lack the required nuclear experience for the time being.

We have already started this endeavour with the MoU signed with KGHM Poland in September 2022, whereby Nuclearelectrica would share its experience and lessons learned in 26 years of operation at a standard of excellence, and would provide KGHM with support in its first steps to deploy a safe, clean and innovative technology. Also, in the framework of COP27, which took place in November 2022 in Egypt, Romania brought up an example of leadership in living up to the commitment to help attain the decarbonization targets. The SMR special purpose vehicle of Nuclearelecrica (RoPower) and Donalam (part of AFV Beltrame Group) signed a Memorandum of Understanding for SMR implementation Romania and joined the UN Coalition for 24/7 carbon-free energy. The objective of this Memorandum of Understanding is to explore opportunities for cooperation and investment in support of developing the very first SMR project in Romania, which is likely to have a great impact on green steel production in Romania, the first of its kind across Europe. On the same occasion, the two companies joined the United Nations 24/7 Carbon-Free Energy Compact, undertaking to comply with the UN's 24/7 principles in support of the UN's goal of accelerating the electricity system, mitigating climate change and ensuring access to clean energy at affordable prices. By joining the UN 24/7 Carbon-Free Energy Compact, Nuclearelectrica and AFV Beltrame became members of a global community of organizations that work together to develop solutions to foster access to 24/7 carbon-free energy.

Growing a new generation of specialists

Nucleus of Excellence is Nuclearelectrica's platform for growing a new generation of specialists and is also a complex human resources strategy for strengthening the team, attracting and retaining highly skilled workforce.

In Romania, the nuclear industry currently provides approx. 11,000 jobs (of which approx. 2,500 jobs are provided directly in Nuclearelectrica), and this figure could increase up to 20,000 if new nuclear projects are kicked off (both the project for Units 3 and 4 and the SMR project). The investments in the nuclear sector will support economic growth in the horizontal industry, will help retain a highly skilled qualified workforce, boost research, education and engineering, and give Romania a competitive edge in Europe.

In 2021, we recruited approximately 500 people, the same as in 2022.

SNN's human resources strategy does not stop at recruitment. We have in place and further develop traineeship, internship, scholarship and dual education programme with a view to growing a new generation of specialists in nuclear energy.

The Company's strategy focuses on identification of talents and employing efforts to retain them in the organization, identification of the current and future needs, development of partnerships with leading universities, enhancing the training of the existing workforce and building an organizational culture based on meritocracy and performance, where young people are seen as resources for the future.

Also, under sponsorship and CSR programmes, under the platform Nucleus of Care, Nuclearelectrica invests in educations.
Access to education is a right of every child and, in this sense, the company supports educational projects so that Romanian schools have better study conditions and offer as many opportunities as possible for the new generations. Over the last 2 years (2021 and 2022), Nuclearelectrica supported 42 projects in education, with the total invested amount reaching RON 6.4 million.

The projects contribute to creation and development of the

educational environment through actions of renovating and equipping schools, both with specialized laboratories (physics, chemistry, computer science, robotics, etc.), and in terms of online education, which requires the possession of digital equipment (tablets, laptops, video projectors, interactive whiteboards, screens etc.), so that the classrooms are properly and modernly equipped. Also, the company has partnerships with educational units for the renovation, expansion, modernization and rehabilitation of classrooms, laboratories, sports halls, etc. We also support career development and counselling projects for secondary and higher education students, so that they can discover their skills and make the best career choices.
Annually, the investment in CSR projects, via Nucleus of Care platform, is approx. EUR 2 million in educational, medical and environmental projects. In 2022, we supported 60 projects with impacted approximately 6 million people.

Annually, the investment in CSR projects, via Nucleus of Care platform, is approx. EUR 2 million in educational, medical and environmental projects. In 2022, we supported 60 projects with impacted approximately 6 million people.

The Company's financial and production results at the end 2022, the operation and nuclear safety excellence, and the 1st place in the global ranking by capacity factor are the result of a complex management programme and sound corporate governance principles that aimed to maintain power generation at high performance level, implementation of smart financial policies and of a smart sales strategy that gave priority to nuclear safety in all decision-making. Relying on the Company's values and investment projects, our commitment is to reenergize Romania make a contribution to Romania's energy stability and independence, while adding value for the Company's shareholders and investors.

In the paradigm of decarbonization and sustainable investments, the importance that companies pay to the environment, human resources and corporate governance translates into their long-term role and development. As to international organizations, investors, ESG has become the standard term for responsible financing, responsibility for reducing the environmental footprint and care for all categories of company stakeholders. Whether the requirements are legislative (EU Directives, EU Sustainable Finance Action Plan, EU Taxonomy) in nature, or simply document a firm interest in investing or a desire to boost the society, ESG has become a key assessment criterion in any decision-making process. Nuclearelectrica, in its turn, is part of the response to ensuring sustainability with the projects we run, by giving priority to ESG risk management. SNN is included in the utility category, and for us, as to the production activity, ESG is a critical component.

As to the impact on the environment, SNN has developed exhaustive environmental management system, rules, procedures, assessments and reports. For a nuclear producer, the environmental management system is a safeguard for continued operation. As to the environmental footprint, SNN avoids the release of 10 million tons of CO_2 every year; 205 million tons were avoided since commissioning, i.e. 33% of the national clean energy consumption. SNN implements investment projects with a vital role in decarbonization, amounting to approximately EUR 12 billion by 2031. While the production activity of SNN does not release any CO_2 emissions, we still invest in projects that reduce even more the footprint on environment.
From a social perspective, we rely on the value of the Company and our care for employees which also covers other categories of stakeholders, and we continue to constantly improve the working conditions, and our operations, occupational health&safety, and employees' rights and protection.

The human resource is a driving engine of the nuclear industry, and the safeguard for nuclear safety.

SNN makes a priority of corporate governance, a responsible management, independent internal structures to enhance and render governance more efficient, transparency in everything we do, and the anti-bribery system and certification.

Cosmin Ghiță
General Director

2. SNN in figures
GRI 102-7

2022 in figures - GRI 102-7	
Net profit	Lei 2,735,917 thousand
Operating income	Lei 6,499,025 thousand
EBITDA	Lei 3,557,872 thousand
EBIT	Lei 2,952,467 thousand
No. of employees	2,344
Tons of CO2 avoided in operation	10 million/2022, 205 million since commissioning
Amount invested in CSR	6,609,795.27

3. DATA ABOUT THE REPORT
GRI 102-46, 102-50, 102-51, 102-52, 102-53, 102-55

SN Nuclearelectrica SA publishes its fifth sustainability report for the period 1 January 2022 - 31 December 2022, a year in which the Company continued to operate at the higher nuclear safety and productivity standards, continued to deploy investment projects, develop its raw material supply chain, completed the taking over of assets from Compania Nationala a Uraniului S.A., Feldioara Branch and paid increased attention to the environmental, social and corporate governance matters, as well as to their reporting to all stakeholders in order to foster understanding of how a producer of energy from nuclear sources operates.

This Sustainability Report was prepared in accordance with Directive 2014/95/EU of the European Parliament and the Council, in observance of the Guidelines on non-financial reporting (2017/C215/01), and contains non-financial information and data about the diversity of the Company's activities that is relevant, useful and applicable to a nuclear energy producer, such as SN Nuclearelectrica SA. The report also provides examples that allow all interested public categories to compare the relevant results year-by-year, in the form of performance indicators, by reference to the policies, procedures and authorizations applicable and used by SNN; the Global Reporting Initiative (GRI) Standard, the Core Option, the supplement specific to the energy sector and the nuclear generation sector. The 2022 Sustainability Report also includes the Taxonomy Alignment Report, prepared based on the criteria laid down in the European Directive 2014/95/EU and the EU Regulation 2020/852.

The latest report dates from April 2022, with an annual reporting cycle related to each financial year.

The results and indicators shown in the report are consolidated for Nuclearelectrica, and the limit applies to all categories of information disclosed.

For more information about the report, comments, suggestions and clarifications, please contact the Investor Relations team at: *investor.relations@nuclearelectrica.ro*

4. WHO WE ARE

GRI 102-1, 102-2, 102-3, 102-4, 102-5c, 102-8

SNN is a stability factor for the Romanian electricity market, both through base load delivery of electricity, and in terms of the predictable production cost.

The National Company Nuclearelectrica S.A. ("SNN" or "the Company") is a national joint stock company, managed under single-tier system, with headquarters in Bucharest, Sector 1, Strada Polonă, nr. 65, having two Branches without a legal personality. The main object of activity of the company is "Electricity generation" – NACE Code 3511 and is registered with the Trade Register under number J40/7403/1998, Unique Registration Code 10874881, tax attribute RO.

Currently, SNN is the only electric power producer based on nuclear technology from Romania, by Cernavodă NPP branch. By NFP Pitești branch, SNN also produces CANDU-type nuclear fuel bundles that are used to keep its own nuclear reactors in use.

The Branch of Cernavoda NPP (Nuclear Power Plant), with its registered office in Cernavoda, Strada Medgidiei, nr. 2 and registered with the Trade Register under no. J13/3442/11.10.2007, ensures operation of the two functional CANDU Nuclear Units, as well as the management of all SNN assets of Cernavoda (Units 1 and 2 already in operation, Units 3 and 4 are in various stages of construction; for Unit 5, the Company's shareholders approved the change of initial application as early as March 2014, and this would be used to support the activities related to operation of Units 1 and 2, as well as the district heating system). Those two Units in service (Units 1 and 2) have an installed power of approximately 700 MW each (706.5 MWe Unit 1 and 704.8 MWe Unit 2) , and are two of the most productive units worldwide, by capacity factor, of more than 440 units operating across the world (Unit 1 is ranked 3rd, and Unit 2 is ranked 1st).

The NFP (Nuclear Fuel Factory) Pitesti Branch, with the registered office in Mioveni, Strada Câmpului, nr. 1, and registered with the Trade Register under no. J03/457/24.08.1998, produces CANDU fuel bundles for Units 1 and 2 of Cernavoda.

- **Unit 1** was commissioned in 1996
- **Unit 2** in 2007.

The two reactors provide approx. 20% of the power generated in Romania. The nuclear reactors at the two Units are of the CANDU 6 type, a model developed in Canada by Atomic Energy of Canada Ltd. This type of reactors is cooled and moderated with heavy water and use natural uranium as fuel. The initial site provided for the construction of 5 CANDU Nuclear Units.

Units 1 and 2 use approximately 11,000 bundles of nuclear fuel every year, each containing around 19 kg of uranium and generating approximately 10TW of power.

- **The Units 3 and 4 Project** is in the first development staged, and is due to be completed in 2030-2031, when these units are expected to be put into operation.
- **Unit 5** is currently fully depreciated, because there is no plan to continue its construction; in March 2014, the Company's shareholders approved the use of Unit 5 for activities related to the operation of Units 1 and 2.

Nuclearelectrica also holds 3 subsidiaries and is actively involved in Special Purpose Vehicle set up for development of small modular reactors:

- **EnergoNuclear Subsidiary** is the Special Purpose Vehicle in charge of building, commissioning and operating Units 3 and 4 of Cernavodă NPP.
- **The Subsidiary Feldioara Uranium Concentrates Processing Factory** processes the technical uranium concentrates to obtain the sintered UO2 powders needed for production of the nuclear fuel bundles at NFP Pitești Branch.
- **The Subsidiary Nuclearelectrica Serv** provides critical services that support the core business, i.e., production of electricity.

As of 2022, SNN also holds a 50% participating interest in RoPower Nuclear SA, the Special Purpose Vehicle set up to develop small modular reactors (SMRs) in Romania.

The staff was 2,344 in 2021.

5. THE SHAREHOLDING AS
at 31 December 2022

Type pf shareholder	Number of shares held	% share capital holding
Romanian State - Ministry of Economy, Energy and Business Environment	248,850,476	82.4981%
Other shareholders	52,793,418	17.5019%
Total	**301,643,894**	**100%**

6. MISSION, VISION, VALUES
GRI 102-16

7. MARKETS THE COMPANY OPERATES ON

GRI 102-6

SNN operates only on the Romanian market, as the only electricity generator from nuclear sources in Romania.

In Cernavoda, SNN is the only producer that delivers heat in a centralized system, with the heat being delivered prevailingly to the local heat supplier, and, as of 2020, small quantities (approx. 0.5% of the heat sold) have also been sold to end customers/businesses.

Electricity is sold based under the electricity generation license, as follows:

1. On the competitive market, under contracts for the sale and purchase of electricity:
   - on markets managed by the market operator OPCOM SA, with long-term delivery: CM-OTC, CMBC-EA-flex, and CMBC-CN; with short-term delivery: DAM (Day-Ahead Market) and IM (Intraday Market);
   - under bilateral transactions with the Electricity Transmission and Distribution Operators and with an electricity supplier to ensure supply of consumers served in accordance with the provisions of the Government Emergency Ordinance no. 27/2022, as subsequently amended and supplemented;
   - under a bilateral contract concluded with the supplier designated by the Government of the Republic of Moldova in order to ensure electricity supply safety for the neighbouring country, considering the exceptional situation caused by the effects of the war in Ukraine.
2. On the balancing market managed by Transelectrica SA, in case of positive imbalances.
3. Under energy supply contracts concluded with two consumers supplied directly from the facilities of Cernavoda NPP, based on the electricity production license.

8. CLIMATE CHANGE

ROLE OF SNN IN ATTAINING ROMANIA'S ENVIRONMENTAL GOALS

GRI 102-16, EU-10

The targets assumed by Romania are ambitious and aim to reduce the CO2 emissions by 55% by 2030, compared to the baseline year 2005. Romania also aims to reduce its dependence on energy imports from 20.8% today, down to 17.8% by 2030, which means sustained investments in generation capacities free of carbon emissions or transition capacities, with base load delivery to ensure stability for the national power system.

Currently, the two nuclear units contribute to Romania's energy security by supplying approx. 20% of the country's energy demand, but also to attainment of the decarbonization targets with the 205 million tons of CO2 avoided since commissioning and to date (10 million tons of CO2 avoided annually by operation of the two units of Cernavodă), and contribute 33% of the total clean energy of Romania.

By expanding nuclear capacity with two new CANDU units and a 6-module SMR power plant, nuclear energy will reach a 66% clean energy contribution of the total clean energy generated in Romania, with 24 million tons of CO2 avoided annually and more than 20,000 jobs created. Thus, the share of clean energy delivered at national level from nuclear sources will increase significantly, thousands of new jobs are created and/or maintained directly and indirectly, and the communities and the industry develop.

Moreover, by developing SMRs, Romania will use a base load nuclear technology which is safe, financially affordable and completely free of CO2 emissions, located on the sites of former coal-fired power plants, and will contribute to revitalization of those areas. Thus, SMRs will support the National Recovery and Resilience Plan of the Romanian Government to phase 4.59 GWe of coal-fired capacities by 2032.

Looking even further into the future, nuclear technology is already addressing the changes in consumer needs, becoming more flexible and easier to build in different areas, and safer to operate thanks to deployment of the state-of-the-art nuclear safety solutions for the environment and the population. Small modular reactors are the nuclear industry's response to the decarbonization requirements, which makes this technology easier to implement and operate in remove grid areas, industrial sites, etc. With an advanced technology within reach, SMRs enjoy increased passive safety systems that use fewer resources, such as fuel and cooling water, in order to safely operate and stop.
SNN's nuclear projects require investments of up to EUR 12 billion in the coming years. Their impact is quantifiable both in terms of both the increased supply security for Romania and the region, considering the unified European market which is estimated to reach a 15% interconnectivity by 2030 , as well as development of the related industries, the infrastructure, the research and development and the education.

The international studies and reports concluded that nuclear energy is an important pillar attainment of the global environmental targets. Some of these studies:

1. The JRC report[1] (Joint Research Center, the scientific branch of the European Commission), published in March 2021 and later validated by two groups of independent experts (the Committee for Health, Environment and Emerging Risks - SCHEER of DG Sante/COM and the group of experts established under Article 31 of the EURATOM Treaty), concluded that "there are no scientific arguments to indicate that nuclear energy would affect human health and the environment more than other sources of power generation". Grounds for including nuclear power in the Taxonomy:

- Lack of CO2 emissions;
- 24/7 availability, no dependence on weather conditions;
- Ensuring stability and availability of energy systems;
- Ensuring a back-up for renewable sources, which are intermittent.

2. The Technical Expert Group on Sustainable Development (TEG), appointed by the European Commission (COM), produced in March 2020 a Technical Report that assesses and classifies the human activities, including energy, against the principles of sustainable development and access to sustainable financing: On the nuclear energy, the TEG Report highlights its substantial contribution to reducing the effects on climate. TEG states that, while nuclear power remains a contributor, an in-depth analysis of the nuclear lifecycle technologies and existing and potential environmental impacts must be done on all facilities, which JRC later did at the request of COM (see paragraph 1 of the JRC Report).

3. On 6 July 2022, the Complementary Delegated Act (CDA)[2] was adopted by the European Parliament to include nuclear energy and in the scope of the EU's Sustainable Financing Taxonomy. It came into force from on 1 January 2023.
CDA sets out a number of technical criteria for nuclear power and gas for access to private sustainable financing, and establishes a legal framework that provides long-term stability and predictability for the investments made in these strategic fields.

4. Globally, according to the **data published in the McKinsey analysis**[3], in January 2022, USD 275 trillion, or approximately USD 9.2 trillion/year, are the funds needed for physical assets during the transition period by 2050. Without investments in nuclear industry, the cost of transition to a sustainable economy increases by USD 1.6 trillion, according to the **report of the International Energy Agency (IEA)**[4], published in May 2019.

5. According to the **report of the International Energy Agency (IEA)**[5] , **in cooperation with the Nuclear Energy Agency (OECD-NEA)** of 2020 regarding the costs of electricity, the refurbishment of the nuclear units has the lowest electricity cost among all power sources - on average USD 32/MWh (compared to USD 50/MWh for wind power; USD 56/MWh for solar panels; USD 91/MWh for coal-fired power stations). The cost of power generated by new, large nuclear capacities is USD 69/MWh, while the cost of power generated by NuScale Small Modular Reactors (SMRs) is USD 64/MWh, at US labour costs.

6. The conclusions of the **Intergovernmental Panel on Climate Change (IPCC)/UN**[6] , "Global Warming of 1.50 C", October 2018, show that nuclear power is essential to keep global warming below 1.50 C.

7. The **MIT (Massachusetts Institute of Technology) study**[7], of 2018 proves that the decarbonization targets cannot be reached without nuclear energy.

8. The **UNECE (The United Nations Economic Commission for Europe) report**[8], published in August 2021 states that the use of nuclear energy has prevented emission of 74 gigatons of carbon dioxide over the past 50 years, the equivalent of the total global emissions related of the energy sector during a two-year period. The CO2 emission reduction targets cannot be attained unless nuclear energy is included in the energy portfolio intended at putting an end to climate change.

[1] https://ec.europa.eu/info/file/210329-jrc-report-nuclear-energy-assessment_en
[2] https://ec.europa.eu/commission/presscorner/detail/en/ip_22_4349
[3] https://www.mckinsey.com/business-functions/sustainability/our-insights/the-economic-transformation-what-would-change-in-the-net-zero-transition
[4] https://www.iea.org/reports/nuclear-power-in-a-clean-energy-system
[5] https://www.iea.org/reports/projected-costs-of-generating-electricity-2020
[6] https://www.ipcc.ch/site/assets/uploads/sites/2/2019/06/SR15_Full_Report_High_Res.pdf
[7] https://energy.mit.edu/wp-content/uploads/2018/09/The-Future-of-Nuclear-Energy-in-a-Carbon-Constrained-World.pdf
[8] https://unece.org/sustainable-energy/cleaner-electricity-systems/nuclear-power

9. Nuclear energy is an important component also of the **Sustainable Recovery Plan**[9] **reproduced by the International Energy Agency and the International Monetary Fund**, and launched in July 2020, both in terms of lifetime extension programmes and the new constructions particularly in the field of small modular reactors, with nuclear power qualified as irreplaceable for reaching the growth target in the aftermath of the economic crisis of 1.1% in the following years, providing economic support with creation of nine million new jobs and reduction of the CO2 emissions by 4.5 billion tons by 2030 compared to the base year 2019.

10. **NuclearEurope**[10] , **Pathways to 2050 Report, published in November 2021**, shows that if the share of renewable energy increases by 190% and the nuclear capacities installed across the EU remain unchanged by 2050, Europe will end up being 26% dependent on gas and 12% coal, both sources with CO2 emissions.

11. During COP 27, which took place in November 2022, in the official UNFCC Side Bar event, **NuclearEurope launched the joint declaration of the global nuclear industry**[11] emphasizing the essential role of nuclear energy in the current geopolitical context. Thus, NuclearEurope argues:

- Nuclear power is a safe, affordable and clean energy source, available 24/7, with an extensive operating experience which has been contributing to the decarbonization of our economies for more than half a century and currently supplies over 10% of global electricity consumed.
- Nuclear energy has the lowest lifecycle CO2 emissions per kWh of all energy sources (6 g/kWh) and uranium is abundant and well distributed around the world. The cost of fuel represents only a small fraction of the cost of the electricity generated, so nuclear energy can enable a stable cost of electricity for citizens, public administration, industry, agriculture and all other human activities which depend on electricity.
- Under the current energy crisis and during the global pandemic, nuclear has proven its ability to generate electricity reliably and around the clock, ensuring the continuous resilient operation of critical services. Electricity produced from the existing fleet of nuclear power plants is extremely competitive and remains the option with the lowest levelized cost of electricity not only among low carbon sources, but among all energy sources. Nuclear new build projects are also cost competitive and the Small Modular Reactors (SMRs) currently under development will bring the additional benefit of lower upfront costs and shorter construction periods. Furthermore, large reactors, SMRs and Advanced Modular Reactors can provide a wide variety of non-electric applications such as clean hydrogen production, thermal power for district heating, desalination, industrial heat as well as complementing the variable nature of renewable technologies.
- Our global commitment to increase energy production from renewable energy sources will require additional dispatchable low-carbon capacities in order to balance our electricity grids. Global expertise and innovation in the nuclear field should be fully utilized in securing our current and future energy needs. The energy transition is not possible without maintaining and expanding the role of nuclear power.

[9] https://iea.blob.core.windows.net/assets/c3de5e13-26e8-4e52-8a67-b97aba17f0a2/Sustainable_Recovery.pdf'
[10] https://www.nuclearеurope.eu/press-release/role-of-nuclear-in-a-low-carbon-europe-updated-study-published/
[11] https://www.nuclearеurope.eu/press-release/joint-statement-cop27/ 0
[12] https://www.niauk.org/un-finds-nuclear-is-the-lowest-carbon-electricity-source/

9. SUPPLY CHAIN

GRI 102-9, 102-10

Purchase of raw material (technical uranium concentrate/uranium dioxide powder) > raw material processing (Feldioara Branch's processing line) > production of fuel bundles at NFP Pitesti Branch > use of bundles in Cernavoda NPP's reactors 1 and 2 > delivery of power produced by nuclear facilities into SEN.

The Resolution of the Ordinary General Meeting of SNN's Shareholders no. 5/25.04.2018 approved the strategy for diversification of the supply sources of raw materials required for production of nuclear fuel

National Company Nuclearelectrica SA ("SNN") completed the takeover of the uranium concentrate processing line from Compania Nationala a Uraniului SA ("CNU"), Feldioara Branch, on 28 December 2022.

Under the GMS Resolution no. 5/25.04.2018, the "Strategy for diversification of the supply sources of raw materials required for production of nuclear fuel", the measures also including the identification of a solution to ensure the processing/refining capacity of the uranium technical concentrate (U_3O_8), i.e., the raw material from which the uranium octoxide (UO_2), necessary for the manufacture of fuel bundles, is obtained. Through specific studies and optimal conditions for the purchase of uranium octoxide, SNN considered processing it at the Feldioara Factory with the uranium technical concentrate processing line being taken over by SNN from CNU.

Read in connection with the GMS Resolution no. 4/30.03.2020, the shareholders approved commencement of the procedures for the purchase of assets of Feldioara Branch of CNU, by direct negotiation, in accordance with the provisions of the Government Emergency Ordinance no. 88/1997 on the privatization of companies, and Law no. 44/1998, as subsequently amended and supplemented.

Further to the due diligence conducted, SNN identified the necessary assets due to be strategically integrated into its structure; thus, by completing this transaction, SNN integrated the entire manufacturing cycle of CANDU nuclear fuel.

The takeover of assets from Feldioara Branch was a two-stage process: **Contract signing date**, which occurred, according to the current report of SNN, on **18 March 2021**, and Completion Date on **28 December 2022**. Between the two stages, a number of prerequisites were provided, agreed upon and met for transaction closure. Thus, on the signing date, the general terms and conditions of the transaction were agreed and the prerequisites were set, and on the closure date, the sale and purchase contract was signed in authentic form based on the heads of terms set on the signing date.

The strategic decision to acquire part of Feldioara's assets necessary for the processing of the raw material was aimed at ensuring integrated production capabilities in SNN and, to an equal extent, ensuring the production of fuel bundles and the optimal operation of NFP Pitesti and Cernavoda NPP, in the context of expanding the capacity of the nuclear power plant, and maintaining the nuclear fuel cycle at national level, at an advantageous transaction cost. We point out that the valuation of the assets was performed in accordance with the International Valuation Standards and the land related to the processing line were granted to SNN under direct concession based on the Government Decision no. 1487 of 14 December 2022.

On 24 September 2021, the SNN subsidiary Fabrica de Prelucrare a Concentratelor de Uraniu-Feldioara SRL, was established, with the number in the Trade Register J8/2729/2021 and Single Code of Registration (CUI) 44958790.

Also, the Articles of Incorporation of SNN Feldioara Branch were approved under the OGMS Resolution no. 10/11.08.2021.

10. WHAT WE HOLD IMPORTANT

GRI 102-16

Due to the need to speed up the response to climate change, nuclear energy has become an essential solution for decarbonation and a basic source of energy security, energy efficiency, social and economic development, innovation and talent fostering, which all also addresses the ESG challenges. SNN, as a company, develops internally and the national level, and gets actively involved at international level with a view to supporting the energy transition, and develops and deploys cutting-edge technical solutions able to help attainment of the environmental targets.

Given the critical role of nuclear energy both the transition towards a clean economy, and in attaining the decarbonization targets assumed by Romania, for Nuclearelectrica, the outlooks of 2050 lay ahead for SNN the following priorities, which are also the pillars of our current operation, development and contribution to a clean and sustainable economy:

- Safe, environmentally-friendly and employee and population protection-centered operation of Units 1 and 2 of the Nuclear Fuel Plant and of Feldioara Branch;
- Maintaining and developing the management system, including the environmental system, to cope with the future challenges raised by the major investment projects;
- Protection of the environment, staff and population;
- Development of SNN's investment projects in the defined timeline;
- Expanding the nuclear production facilities that do not generate CO2 emissions, which will contribute to reaching Romania's environment targets;
- Development of corporate governance as a coagulation and efficient integration process for all processes in SNN;
- Care for employees, collaborators and the population, by responsibly managing all operating and development activities;
- SNN stakeholder involvement in development of the Company and communicating of the SNN relevant aspects of governance, ethics and integrity to them;
- Development of a new generation of nuclear specialists to continue operation and development of nuclear projects and, implicitly development of multiple staff attraction, retention and training programmes;
- Ensuring supply security for the Romanian energy system, source availability in SEN, and backup provision for renewable sources, by and beyond 2050.

11. STRATEGIC OBJECTIVES

GRI 102-6

VISION:
We are building a sustainable future for future generations

MISSION:
We generate clean energy at standards of excellence

SNN **VALUES**/ STRATEGIC DIRECTIONS:
Safety abs sustainability,
Professional excellence,
Sustainable development,
Care for employees,
Empathy, and responsibility.

no. 109/2011, implies, as it is required also from a Company listed on the Bucharest Stock Exchange, that a set of key objectives is set by the governing authority, which, in our case, is the Ministry of Energy. These objectives set under the Letter of Expectations are public and are the basis for the cascading of both the general objectives and the specific (departmental) and individual objectives in Nuclearelectrica. i.e., our objectives.

The objectives under the Letter of Expectations touch upon all the key areas of Nuclearelectrica's activity, with an emphasis on nuclear safety and production, and have a two-fold purpose: to provide Romania with the necessary energy resources, particularly in the decarbonation context, as well as with highly specialized human resources in the long-run, but also to develop Nuclearelectrica and turn into a strategic company, with a regional role, further to the investment projects it deploys.

The overall goals depict a comprehensive picture of the annual objectives of SNN, which, in turn, are supported and attained under the annual plans and specific programmes. Together with the other major producers on the Romanian electricity market, SNN has the mission to ensure the satisfaction of the internal demand for electricity, under specific conditions of nuclear safety of the installations and protection of the environment, population and its own staff.

MINISTERUL ENERGIEI

THE MINISTRY OF ENERGY SETS, BY THE LETTER OF EXPECTATION, THE GENERAL OBJECTIVES OF S.N. NUCLEARELECTRICA S.A. 2023

- Putting in place the organizational framework for the development of the group structure which should integrate all SNN subunits, branches and subsidiaries
- Operation of nuclear units in nuclear safe and security conditions for the staff, population, environment and production assets
- Ensuring an energy production at the level of the industry related standards being the first 25 % (top quartile - in WANO/INPO terminology) reactors in the world from the point of view of the capacity factor mediated during the commercial operation
- Capitalizing the electricity production, in conditions of economic efficiency and predictability
- Achieving the planned physical production of fuel bundles, in accordance with the approved revenues and expenditures budgets, respectively with the manufacture plans of NFP Pitești Branch
- Ensuring the financial performance of the Company in conditions of economic efficiency and medium-term and long-term sustainability
- Implementation of projects to modernize, integrate and secure the information flow and IT infrastructure (hardware, software and cybersecurity).
- Compliance with the principles of corporate governance and the code of ethics and integrity
- Developing investment projects in compliance with the approved investments goals.
- Consolidating the external communication strategy as the basis for a sustainable development, closely related to the acceptance and public support for energy in Romania
- Continuously optimizing and increasing the efficiency of the organizational structure of the Company, developing and implementing the human resources strategy at the company level by reference to the activity volume, as well as to complexity of the investments projects developed
- Development of the Internal Control System in SN Nuclearelectrica SA

SETTING OBJECTIVES
A consistent objective-setting process, that is the outcome of top management brainstorming/debates which then give relevant targets that appropriate to the current stage the Company is going through.

MAJOR/FRAMEWORK OBJECTIVES

SUB-UNIT OBJECTIVES

SPECIFIC (DEPARTMENTAL) OBJECTIVES

INDIVIDUAL OBJECTIVES

ADMINISTRATION PLAN
CURRENT PLANS AND PROJECTS

THE BOARD OF DIRECTORS OF SNN HAS THE FOLLOWING DUTIES:

Regarding the operation of nuclear units in nuclear safe and security conditions for the staff, population, environment and production assets:

- Maintaining maximum availability of the engineering and security functions.
- Improving/maintaining high professional training of the staff who operate the two nuclear units.
- Maintaining the radioactive releases in water and air below the regulated level.
- Maintaining membership of international nuclear energy organizations and, if necessary, membership of other organizations.
- Ensuring the oversight function.

In order to maintain electricity generation capacity above the industry average:

- Preparation of maintenance and repair plans to increase equipment and system reliability, and safely and securely operate the nuclear units.
- Development of lifecycle management programmes for Cernavoda NPP's components and systems (reactor, steam generator, turbogenerator etc.).
- Continued programmes to replace the used and discontinued components and equipment.
- Performance of the mandatory annual inspection programmes on vital nuclear components (fuel canals, heat exchangers etc.) in due time and at maximum quality.
- Maintaining the installed power usage capacity above the nuclear industry average.
- Deployment of the strategy to diversify the supply sources for the raw material needed to produce nuclear fuel.

Strategic major objectives:

- (1) Unit 1 Refurbishment Project
- (2) Project of Units 3 and 44
- (3) Small modular reactors

Development and implementation of these projects depends on adoption of decisions by the Romanian authorities, including a set of support measures: State guarantees for loans, contracts for difference etc., identification and structuring of financing depending on a set of prior decisions by the Romanian authorities.

As to the compliance with the principles of corporate governance and the code of ethics and integrity:

Compliance with all legal provisions and recommendations of the Romanian capital market institutions as regards the corporate governance principles.

A regular benchmarking against international entities and adoption of the best international practices.
Continued programmes to replace the used and discontinued components and equipment.

Zero tolerance for departures from the SNN's code of ethics.

Regarding the optimization and efficiency of the organizational structure of the Company:

Optimization considers the implementation of an organizational structure that allows maximization of the Company's capabilities as a fundamental element of the competitive edge sustainability.

Development of a system for allocation of internal resources that allows maximization, efficiency and adequacy of uses leading to effective cost structures.

In order to strengthen a Nuclear Safety culture, we aim to put in place an organizational structure based on clearly defined roles, elimination of inadequate role redundancy, objectives cascading, alignment of skills with the ever-changing current requirements, good corporate governance rules, a vertical and horizontal smooth communication system.

Aligning the organizational structure with the other 3 dimensions of the organization: human resource, process system and technology.

As to responsible and active involvement in corporate social responsibility actions:

Involvement in social responsibility actions at the local and national level in the following areas: educational and research, humanitarian and culture, and environmental.

As to maintaining/attracting highly skilled staff, under the conditions of a specialized labour market:

Adoption of a human resources attraction, training and retention strategy.

Implementation of cooperation programmes with the Politehnica University of Bucharest and with technical Faculties across the country, especially in the operating areas of SNN, adapted to the needs of the SNN staff in the medium and long run, for granting of scholarships.

Implementation of information campaigns at national and local level in high-schools to attract young people both to enrol in specialized faculties (energy background) and to attract graduates of vocational schools.

Development of internships for students and individual mentoring programmes for young employees.

Adoption of specific HR measures to increase satisfaction of highly skilled staff and their retention, linked with the current and long-term needs of SNN.

Implementation of a remuneration system based on individual performance further to an analysis of individual performance indicators.

For development/improvement of the reporting, control and risk management capabilities, and an increased attention to the investor relationships, SNN envisages:

Integration/correlation of the corporate risk management processes and mechanisms (other than the operating ones addressed under the regulations, standards and practices of the nuclear industry) with the processes and mechanisms put in place to manage the risks related to the operating activities of the nuclear power plant, with a view to ensuring an adequate treatment of the risks the organization is exposed to, i.e. to ensuring complete treatment thereof.

Revision, improvement and/or development (if appropriate) of corporate risk management processes and instruments, as well as the review and/or recalibration/ periodical adjustment of the risk management instruments (for example, internal procedures, algorithms and models, rating scales, risk profile, risk tolerance limit, operational and informational flows).

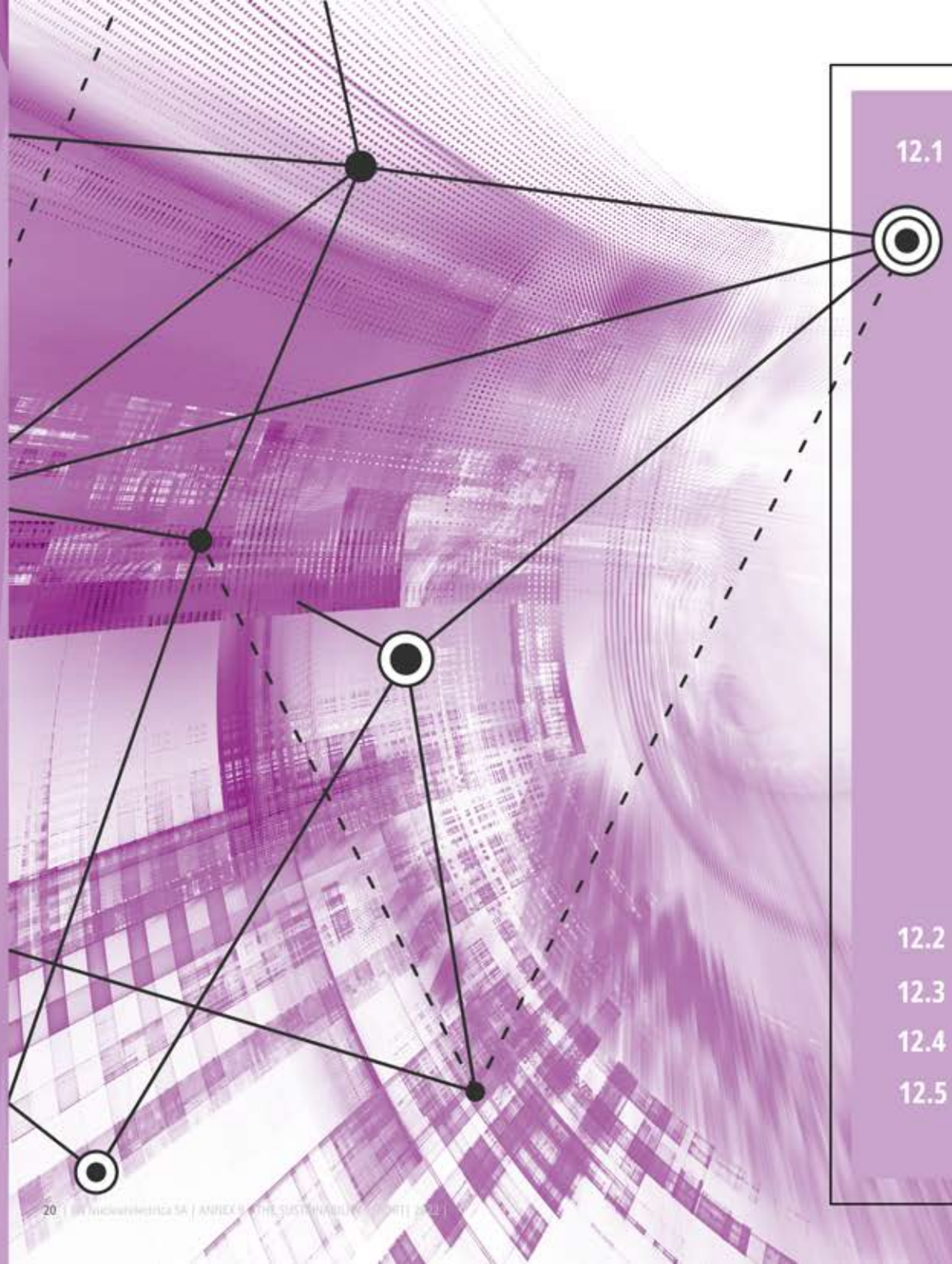
Increase in the knowledge level of the Company's staff as regards the risk management, especially by carrying out of certain training sessions for the staff of SNN Headquarters, Cernavoda NPP and NFP Pitești.

Improvement of the informational flows of information circulation relating to risks within the organization, both for the purpose of their better administration in locations where there is such an exposure, and of a better application of the principle of making informed decisions from the risk perspective (RIDM – Risk-Informed Decision Making).

Development of an internal framework to ensure business continuity (BCM – Business Continuity Management).

DEVELOPMENT AND INVESTMENTS LEADING TO REDUCTION OF THE CARBON FOOTPRINT IN ACCORDANCE WITH THE PROVISIONS OF THE PARIS AGREEMENT ON CLIMATE CHANGE

GRI 102-2, EU-10



12.1 SNN'S MEDIUM AND LONG-TERM INVESTMENT PROJECTS AMOUNT TO APPROXIMATELY EUR 12 BILLION.

Their impact is quantifiable both in terms of both the increased supply security for Romania and the region, considering the unified European market which is estimated to reach a 15% interconnectivity by 2030[15], as well as development of the related industries, the infrastructure, the research and development, the education, and attainment of the decarbonization targets assumed by Romania.

The three major investment projects of SNN are complementary: refurbishment of Unit 1, the project of CANDU units 3 and 4 and SMRs, developed in partnership with the USA. The first two provide clean energy, in-band, implicitly security in the provision and availability of the energetic system, and the SMRs flexibility, the opportunity to protect economically and socially the areas with coal-fired power stations decommissioned, local development, workplaces. An essential balance will be struck between the power reactors and SMRs in terms of production and response to decarbonization and the energy system or local needs.
More at: https://www.nuclearelectrica.ro/ir/investment-projects/?lang=en

[15] https://energy.ec.europa.eu/system/files/2020-04/ro_final_necp_main_ro_0.pdf

12.2 REFURBISHMENT OF UNIT 1

12.3 PROJECT UNITS 3 & 4 (CANDU)

12.4 SMALL MODULAR REACTORS (SMR).

12.5 SOCIAL AND ECONOMIC EFFECTS AND ENVIRONMENTAL FOOTPRINT

12.2 REFURBISHMENT OF UNIT 1

CANDU reactors have an initial lifecycle of 30 years. Following a refurbishment process, this lifecycle may be extended by another 30 years, which Nuclearelectrica is doing at present within Unit 1, which was put into commercial operation in 1996.

Stage1. U1 refurbishment started in 2017, with the first phase completed, during which the activities needed for U1 refurbishment were identified and defined, so that it operates another 30-year life cycle. The final output of this phase was preparation and approval of the feasibility study.

Stage 2 continued in July 2022 by signing the first agreement with Candu Energy, Member of SNC-Lavalin Group and the Unit 1 Design Authority and OEM (Manufacturer of original equipment) for CANDU technology.

As part of the contract, Candu Energy will offer engineering services for the development of the technical documentation for the purchase of the components with a long manufacturing cycle of the reactor, which will be replaced during the Refurbishment of Unit 1, within the process called "reactor retubing" (Replacement of Fuel Channels, Calandria Tubes and Fideri - ICCTCF). Also, Candu Energy will offer engineering services to assess the condition of the set of specialized tools that will be used to replace the reactor components and to prepare the documentation for the acquisition of the components that require replacement/modification.

Stage 3 of the project will start at the end of 2026 upon shutdown of Unit 1 and consists in the effective development of the works within U1 Refurbishment Project in the unit plants, as well as its return to operation, for the purpose of commercial operation for a new operating cycle of 30 years, following year 2029.

Refurbishment of Unit 1 means another 30 years of operation after the year 2029, at less than half the cost of a new nuclear reactor. Concretely, this means another 30 years without CO2 emissions. In terms of costs, and implicitly of the subsequent impact on the market, a NEA-OECD[17] study confirms that the extension of the lifecycle of nuclear units incurs the lower cost out of all sources, including CO2 renewable sources (USD 35) compared to wind power (USD 50) and solar power (USD 94).

[17] https://www.iea.org/reports/projected-costs-of-generating-electricity-2020

12.3 PROJECT UNITS 3 & 4 (CANDU)

The strategy of continuation of CANDU Units (3&4) Project of Cernavoda Nuclear Power Plant, approved by SNN shareholders in 2021, shall be implemented in three phases, in compliance with the international experience in the construction of the nuclear power plant.

Phase 1, namely, the current one, started at the end of the year 2021, represents the preparatory phase, initiated by capitalization and operationalization of the project company, Energonuclear S.A. This phase shall last up to 24 months, during which a set of engineering and safety documentation will be prepared/updated, being needed for the start of the Project (update of the basic licensing documents, of the safety guidelines, of the projects variations related to nuclear safety, reassessment of the existing civil structures etc.), needed for the substantiation of a preliminary investment decision.

Within such phase, on 25 November 2021, Energonuclear S.A., the project company, signed the first agreement with Candu Energy, Member of SNC-Lavalin Group and the Design Authority and OEM Candu (the Original Manufacturer of Candu Technology) for the Project. Under the agreement, CANDU Energy shall provide engineering services for the preparation and update of the documentation needed for the start of the Project of CANDU Units 3 and 4. The completion deadline of such phase is Q2 2023.

Phase 2 of the project (Preliminary Works) consists in the execution of the preliminary works and it is expected to last up to 30 months. This phase shall consist in the preparation of critical engineering ("Limited Notice to Proceed - LNTP") for defining the project, the structuring and contracting the financing and agreeing an adequate contractual architecture for the Project implementation, obtaining the Nuclear Safety License for the construction, the reassessment of the Project feasibility based on certain technical and economic indicators updated and the adoption of the Final Investment Decision (FID), for passing to Phase III (Construction).

Phase 3 of the Project, expected to last 69-78 months, consists in mobilizing the construction site, start of the construction works, putting into service and commercial operation of Unit 3 in 2030 and of Unit 4 in 2031.

The intent of the Romanian State and of SNN, in compliance with the new strategy, is to perform such project in an Euro Atlantic consortium according to the Agreement of the Romanian Government and of the Government of the United States of America regarding cooperation in relation to the nuclear and energetic projects from Cernavoda and in the civil nuclear energy field from Romania. Furthermore, within the new development strategy, according to the data obtained from the analyses related to phase 1 and partially to phase 2, the financing structure shall also be established.

Within COP 27, US Exim Bank announced the issue of two expressions of interest for financing the technical services provided by USA in relation to 3 and 4 Units from Cernavoda, developed by the subsidiary of National Company Nuclearelectrica S.A.

Based on the preliminary information presented, EXIM could take into consideration the financing up to USD 50 million from the USA export contract for technical pre-project services as a part of the Engineering Multiplier Program (EMP) during the second phase of the project. Subsequently, during phase III of the project, it could take into consideration the financing up to USD 3 billion from the USA export contract for engineering and project management services for the agreement of completion of Units 3 and 4 of Cernavoda nuclear power plant.

12.4
SMALL MODULAR REACTORS (SMR).

Nuclearelectrica has commenced development of SMR (small modular reactors) power plants, relying on the American NuScale technology, with 6 modules, 462 Mwe. The NuScale base load technology, which is safe, affordable, and CO2-free, will be developed on the site of former coal-fired power plants and aims to help Romania attain its targets to phase-out the polluting energy sources and have them replaced by clean energy sources. Since execution of the MOU with NuScale back in 2019, Nuclearelectrica has constantly worked to develop this project:

March 2019, Nuclearelectrica and NuScale signed a Memorandum of Understanding (MOU) in order to assess the development, authorization and construction of a small modular reactor (SMR) in Romania.

9 October 2020, Romania signed an Intergovernmental Agreement (IGA) with the United States of America in the field of nuclear energy, which was also ratified by the Romanian Parliament according to Law no. 199/2021, enjoying broad support and being adopted by a majority of votes.

Moreover, in **October 2020**, US Exim Bank expressed, through a Memorandum of Understanding (MoU) with the Ministry of Energy of Romania, its interest in financing major energy investment projects in Romania, including the nuclear field, with a total value of USD 7 billion.

4 November 2021, NuScale and Nuclearelectrica entered into a cooperation agreement during at COP26 (UN Conference on Climate Change) to advance implementation of the first small modular reactor in Europe, in the presence of the Romanian Minister of Energy, Mr. Virgil Popescu. The importance of the strategic partnership between the US and Romania and the role of SMRs were highlighted in their speeches delivered at COP26 by the US Secretary for Energy Jennifer M. Granholm, the US Secretary of the Department of Energy, the Special Envoy of the US President for Climate John Kerry, the President of Romania Klaus Iohannis, and the US President Joe Biden.

At the beginning of 2021, Nuclearelectrica received USD 1.2 million from USTDA to identify and assess potential sites for small modular reactors. In May 2022, following the completion of the study, several potential suitable sites were identified. The site of the former thermal power plant of Doicești, County of Dâmbovița, Romania, was selected as a candidate site for further in-depth surveys and developments.

24 May 2022, Nuclearelectrica, NuScale and Nova Power & Gas (the owner of the site) signed a Memorandum of Understanding (MOU) to analyse the development of the first small modular reactor (SMR) in Romania on the site of the former thermal power plant in Doicești, Dâmbovița county.

June 2022, the US President Joe Biden announced allocation of grant of USD 14 million for the next development stage of the Romanian NuScale small modular reactors - the preliminary Front-End Engineering Design (FEED) for the Romanian SMR project. FEED study consists in a series of engineering and design activities and studies, technical analyses of the site, as well as licensing and authorization activities to be carried out on the site of the former power plant from Doicești, in compliance with all international and national standards. Furthermore, within the FEED study, the IAEA recommendations stemming from the IAEA's Site and External Events Design (SEED) mission, carried out in August 2022 at the request of Nuclearelectrica, will be applied.

September 2022, Nuclearelectrica SA and Nova Power & Gas SRL launched RoPower Nuclear SA, the project company for development of small modular reactors in Romania, on the site of the former coal-fired power plant of Doicești, County of Dâmbovița.

October 2022, the US Trade and Development Agency (USTDA) extended a grant of USD 14 million to RoPower Nuclear SA (RoPower), the project company recently established by Nuclearelectrica and Nova Power & Gas for development of small modular reactors. The grant shall be used for the Front-End Engineering Design (FEED) in order to advance the project for the development of the first SMR nuclear plant in Romania.

December 2022, NuScale and the Romanian company RoPower Nuclear SA (RoPower) signed the contract for the Front-End Engineering Design (FEED) works.

The FEED works that NuScale will start kick off define the main and specific site characteristics for a VOYGR-6 SMR plant that could be developed on the site of Doicești power plant, Romania. The 8-month project covers environmental impact assessment and subsoil geotechnical analyses, site assessment and an assessment of the specific site requirements for the standard design of the NuScale power plant and estimation of the project-specific costs.

12.5 SOCIAL AND ECONOMIC EFFECTS AND ENVIRONMENTAL FOOTPRINT

TARGETS ASSUMED BY ROMANIA:

To reduce the CO2 emissions by 55% by 2030, compared to the baseline year 2005;

To reduce its dependence on energy imports from 20.8% today, down to 17.8% by 2030, which means sustained investments in generation capacities free of carbon emissions or transition capacities, with base load delivery to ensure stability for the national power system;

To reduce the coal-based power generation down to 4.59 GWe by 2032, which means to replace these sources by other clear energy sources.

THE TWO NUCLEAR UNITS THAT WE OPERATE CONTRIBUTE TO ROMANIA'S ENERGY SECURITY, BUT ALSO TO ATTAINMENT OF DECARBONIZATION TARGETS WITH:

1400 MW — 1,400 MW installed

20% — 18-20% of the consumption demand

33% — 33% of the total clean energy in Romania

205 million tons of CO_2 avoided since commissioning and to date (10 million tons of CO_2 avoided annually by operation of the two units of Cernavoda)

11,000 job in the industry

EXPANSION OF THE NUCLEAR CAPACITY WITH 2 NEW CANDU UNITS IN ROMANIA

66% — 66 % clean energy contribution

20 million tons of CO_2 avoided annually

over 19,000 jobs

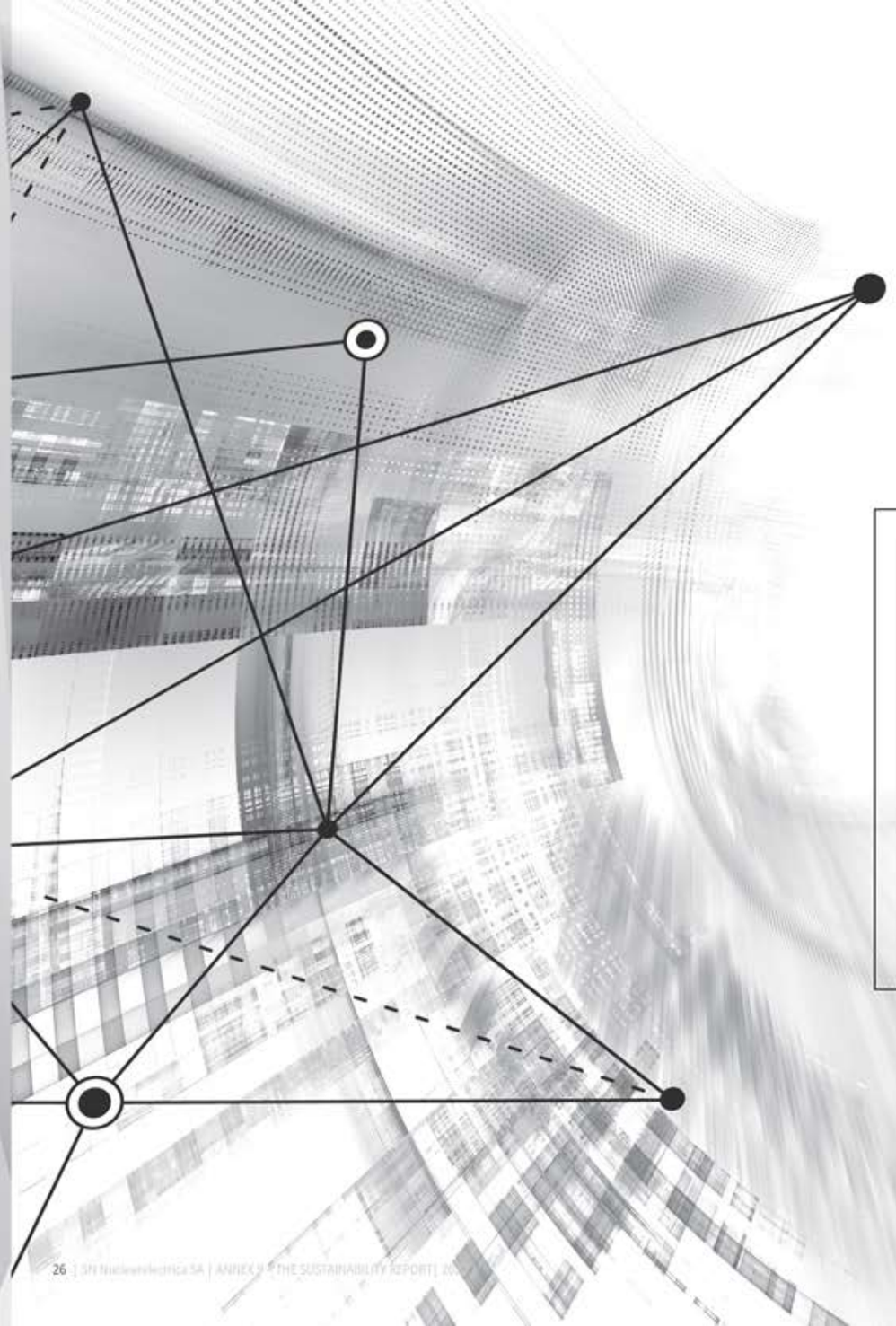
ADDING ALSO SMR IMPLEMENTATION:

462 MW — 462 MW installed

4 million tons of CO_2 avoided annually

Replacement of coal-fired power plants

2,100 jobs



13
MATERIALITY MATRIX - WHAT MATTERS TO US AND OUR STAKEHOLDERS

13.1
OUR ESG PRIORITIES

ENVIRONMENT

Since commissioning of Units 1 and 2 of Cernavoda NPP, we have avoided 205 million tons of CO2,

We supply 33% of Romania's clean energy

We invest in projects to reduce our environmental footprint even more

We constantly act to protect the environment with an exhaustive environmental management system, measurement, external environmental audits, and reporting

OBJECTIVES

To avoid 10 million tons of CO2 every year by current operation

To double the percentage of clean energy, with investment projects with a reduced CO2 footprint after 2031, from 33% now to 66%

To implement out the Tritium Removal Plant Project before the shutdown of Unit 1 for refurbishment in order to minimize the environmental impact

To maintain and constantly develop the environmental management system, including implementation of ISO 9001

To continue and develop new programmes and internal measures to render energy consumption more efficient and digitized, implicitly the CO2 emissions - Scope 3

SOCIAL

We constantly invest in identification, attraction, retention, training and mentoring for the growth of a new generation of specialists (we hired 500 people in 2021, approximately 400 in 2022, and we target a similar figure in 2023), and we thus are one of the most active recruiters in Romania

We constantly develop the HR strategy and policies to ensure full respect for human rights, equality, inclusion, diversity and a motivating work environment; to these add the continuous development of nuclear safety and application of the international principles specific to a nuclear operator to insert Staying on Top Wheel.

SNN adopted the WANO (World Association of Nuclear Operators) & INPO (Institute of Nuclear Power Operations) principles of the continuous improvement culture "Staying on top", and embedded them in the organizational culture and the nuclear safety culture put in place in SNN.

We are concerned about protection of our employees and collaborators, the development of an ethical, principle-based business, with zero tolerance for corruption practices

We are actively involved in community development through a structured CSR programme based on the needs of the Romanian society

OBJECTIVES

To increase the number of employees, and implicitly train of a new generation of specialists and cultivate talents under various training programmes: dual school, internship, scholarships, visits and participating in trainings, mentoring programmes etc.

To maintain and constantly develop the rights, protection and motivational factor of our employees

To develop communities by investing at least RON 10 million every year in social responsibility projects

To keep the diversity rate at minimum 81%

To apply the internal and external code of ethics in order to support cultivation of a principle-based, fair and transparent culture in all work relations

GOVERNANCE

Pursuant to the Government Emergency Ordinance no. 109/2011, we observe and develop the corporate governance principles: responsibility of management in all Company's processes and activities, anti-fraud policy, risk management, and digitization

We rank the operating and production procedure and protection of infrastructure and assets based on priorities

OBJECTIVES

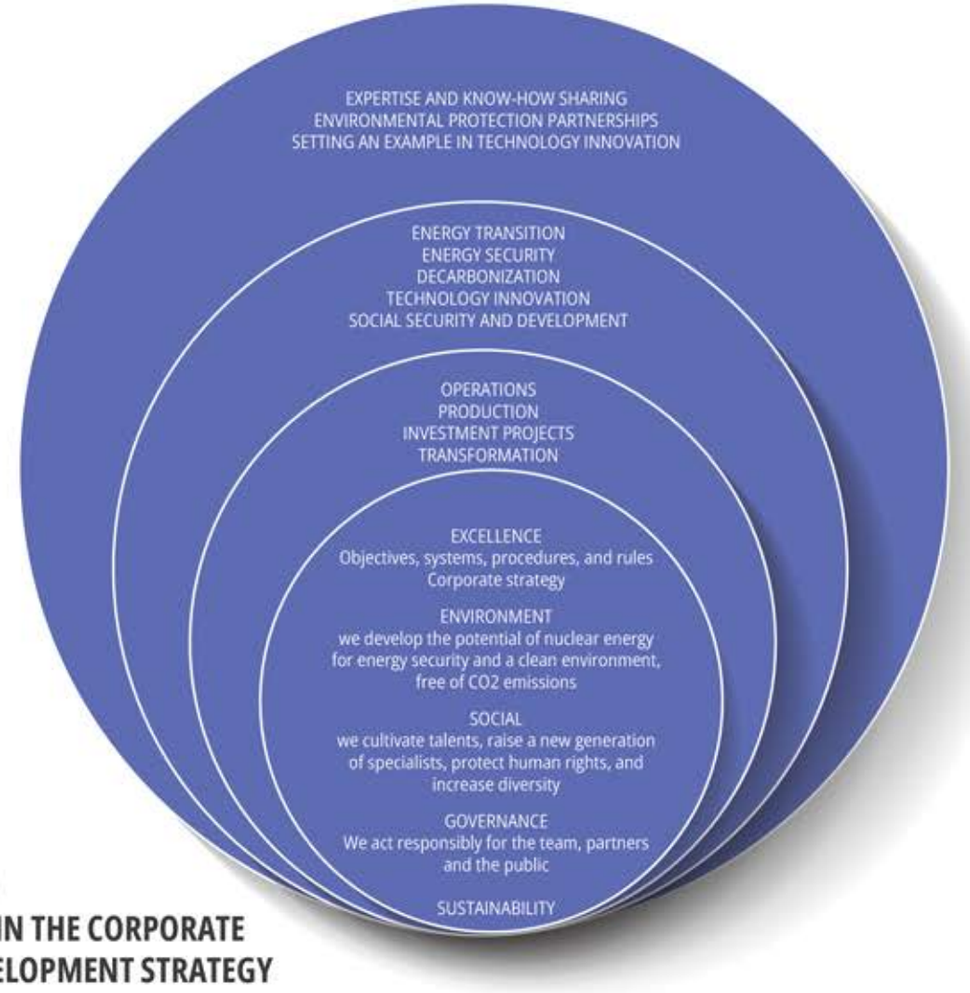
To increase diversity in the administrative and executive management in compliance with the provisions of Government Emergency Ordinance no. 109/2011

To maintain and develop the risk system by reference to the Company's development trend

To maintain and develop anti-corruption policies, based on good international practices

To increase interaction with stakeholder and with local communities

To permanently ensure the nuclear safety of the nuclear assets as a safeguard for all processes and activities in the Company



13.2 ESG IN THE CORPORATE DEVELOPMENT STRATEGY

SNN management have a holistic approach to inclusion of the ESG criteria into the Company's strategy and development plans. This holistic approach is broken down across the entire Company and SNN collaborators into established processes and procedures, and particularly into objectives and targets cascaded from the overall objectives of SNN, down to individual level, through KPIs. SNN has in place an ESG Task Force in charge of assessing and developing the ESG principles and measures.

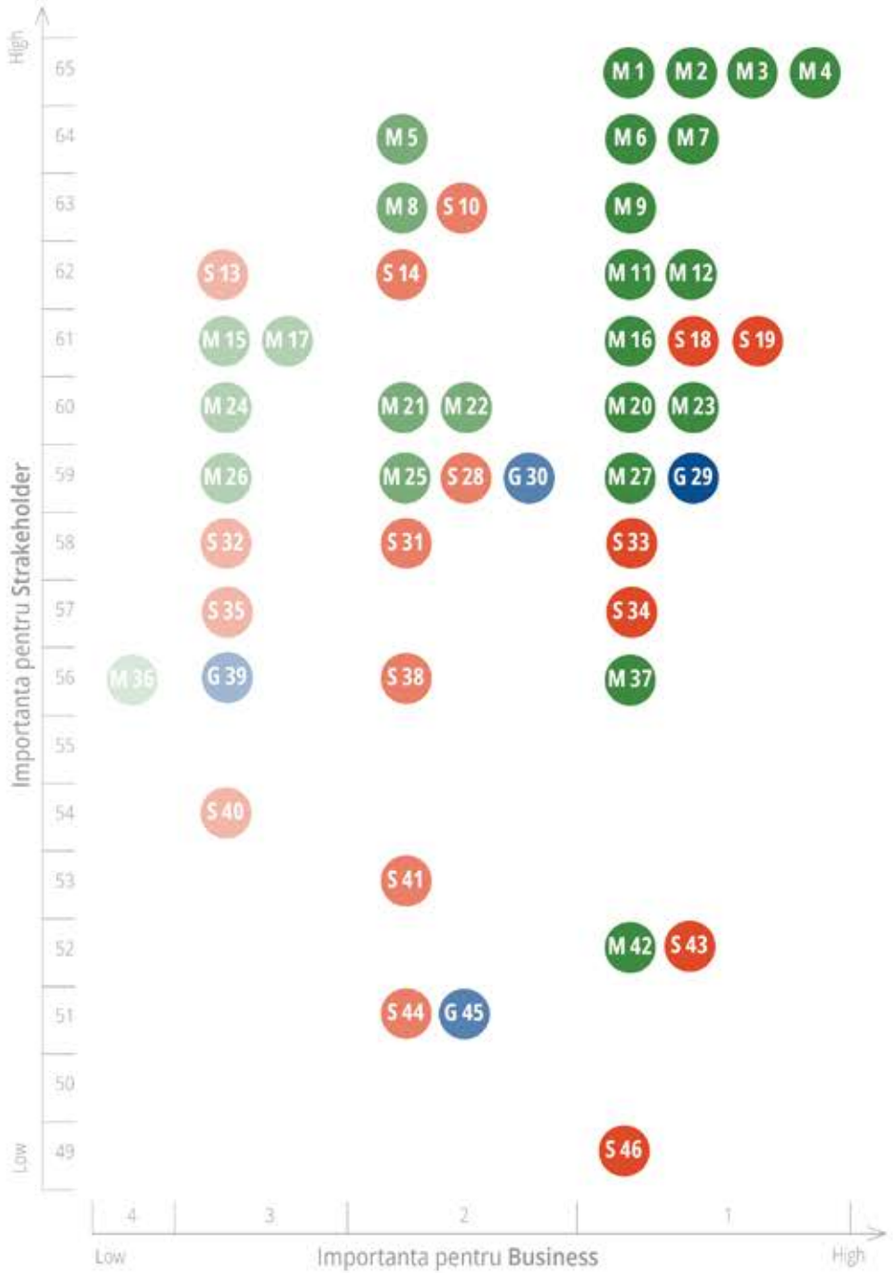
One of our values is sustainability; this is also a strategic action direction. In everything we do, whether it is about operation or production, internal development, investment projects, environmental management programmes, , assets, HR, code of ethics and anti-corruption policy, the aim is to bring added value and development for the Company and its shareholders, in order to be able to provide clean energy and energy security for the Romanian power system.

13.3 MATERIALITY MATRIX: WE TAKE INTO ACCOUNT THE INTERESTS OF OUR STAKEHOLDERS AND LINK THEM WITH OUR INTERESTS

We consider the environmental, social and governance indicators to be material when these, by reference to different categories of stakeholders, have the ability to impact the Company's contribution at internal, external-societal and environmental level.

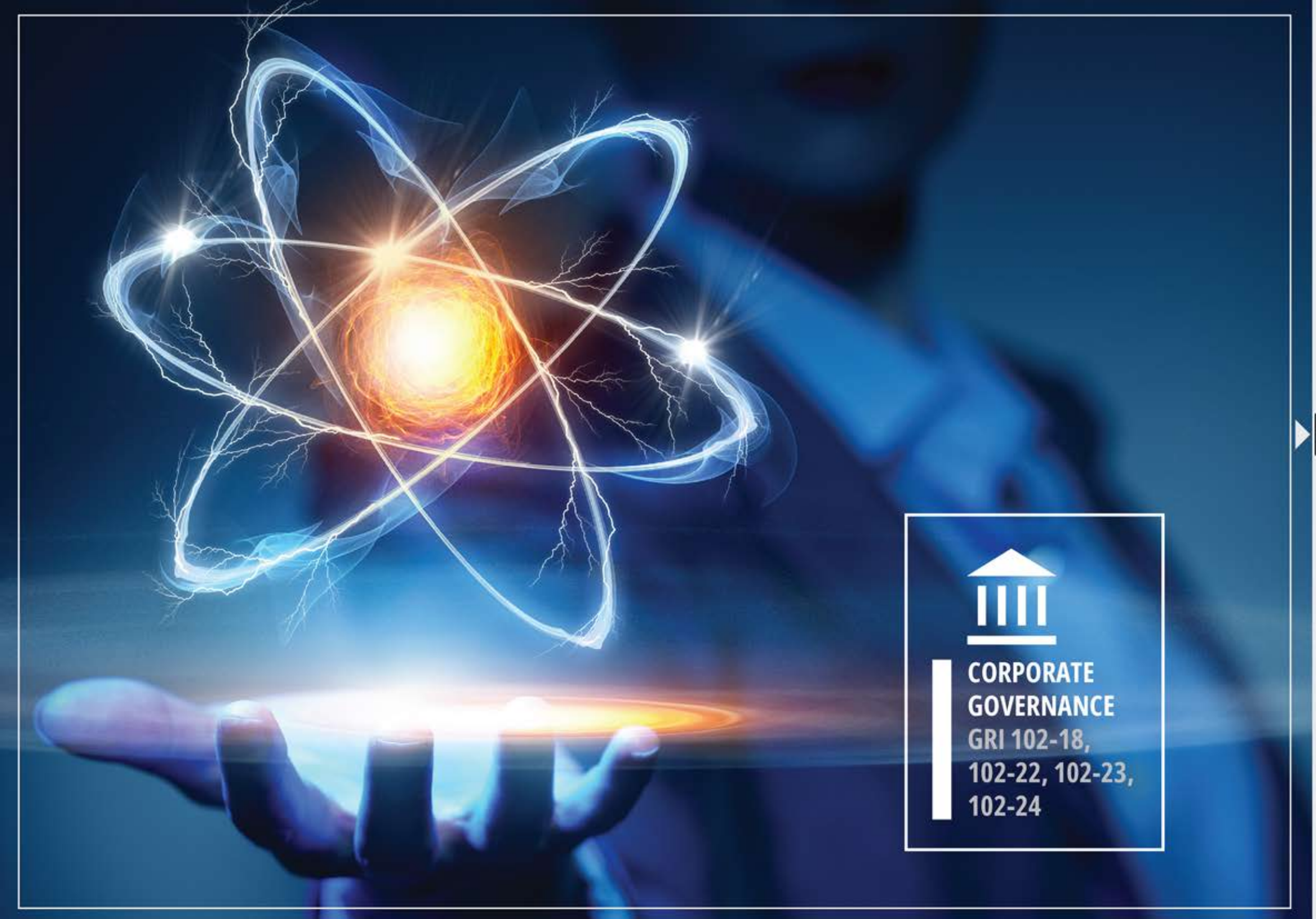
We consult our stakeholders in order to assess, quantify and introduce ESG indicators that give value and reflect the Company's activities and projects, but simultaneously support the stakeholders' interest in short, medium and long-term development.

In order to develop the materiality matrix in 2022, we consulted institutions, non-governmental organizations, media, education institutions and business partners.



INDICATORI

M1	Environmental protection commitment	
M2	Monitoring and control of emissions related to a nuclear producer	
M3	Nuclear safety	
M4	Development of investment projects with environmental impact by reducing CO2 emissions: refurbishment of Unit 1 within Cernavoda NPP, the Project of Units 3 and 4, Small Modular Reactor Project, Tritium Removal Plant	
M5	Reducing CO2 emissions	
M6	Commitment to the efficient use of environmental resources	
M7	Emissions and air pollution	
M8	Risks related to climate changes (severe weather conditions) on operations	
M9	Waste management and storage	
S10	Commitment to reduce and eliminate anti-bribery and corruption practices	
M11	Reduction of non-GHG emissions	
M12	Identification of products, activities and services that have an impact on the environment	
S13	Whistleblower system	
S14	Digital security	
M15	Adaptation and risk control initiatives regarding climate change	
M16	Monitoring and controlling the use of water resources	
M17	Circular economy and innovation	
S18	Health and safety at work through commitment, procedures, training, monitoring, corrective and improvement measures	
S19	Risks related to human rights, labor rights, environmental risks and anti-corruption risks	
M20	Responsible use of water resources	
M21	Establishing objectives, targets and impact control deadlines	
M22	Corrective actions and stimulation of continuous improvement	
M23	Impact on biodiversity	
M24	CSR projects with beneficial impact on the environment	
M25	Environmental programmes	
M26	Staff training for awareness of environmental issues	
M27	Decommissioning	
S28	Continuous training	
G29	Responsibility and transparency of the managerial act	
G30	Risk management related to current operations, investment projects and ESG factors	
S31	Non-discrimination	
S32	Community consultation mechanisms	
S33	The rights of employees and their continuous development	
S34	Human rights	
S35	Diversity, talent recruitment, development of initiatives to increase the degree of diversity	
M36	Internal and external environmental audit	
M37	Raw materials supply chain	
S38	Gender equality	
G39	Increasing the percentage of turnover, Capex and Opex dedicated to sustainable activities	
S40	Minimum wage	
S41	Financial and non-financial community development programs	
M42	Assets maintenance programs	
S43	Freedom of association and collective bargaining	
S44	The rights of the indigenous population and of refugees and immigrants	
G45	Business principles and the code of ethics	
S46	Forced labour	



CORPORATE GOVERNANCE

GRI 102-18, 102-22, 102-23, 102-24

14. CORPORATE GOVERNANCE
GRI 102-18, 102-22, 102-23, 102-24

- 14.1 GENERAL MEETING OF SHAREHOLDERS
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- 15.1 AUDIT ADVISORY COMMITTEE
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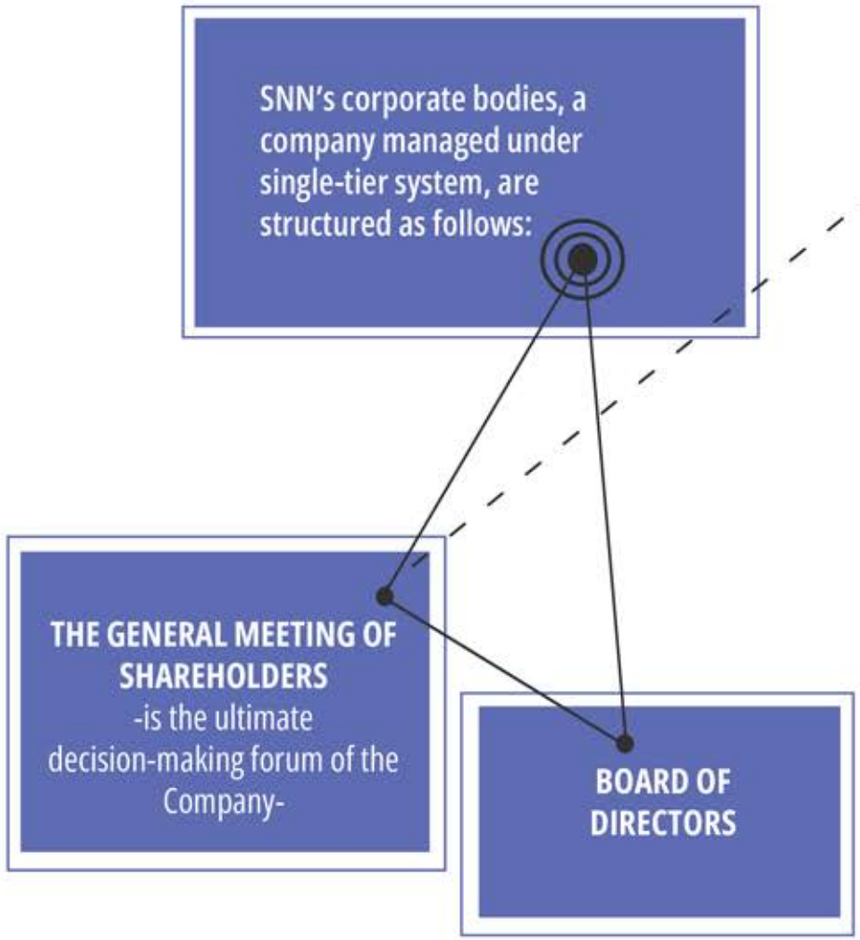
18. OPERATIONAL RESULT - NFP PITESTI

14. CORPORATE GOVERNANCE

GRI 102-18, 102-22, 102-23, 102-24



14.1 GENERAL MEETING OF SHAREHOLDERS

SNN's corporate bodies, a company managed under single-tier system, are structured as follows: The General Meeting of Shareholders is the ultimate decision-making forum of the Company, and the Board of Directors.

Under the Resolution of the SNN's Ordinary General Meeting of Shareholders no. 1 of 27 January 2021, shareholders took note of the Updated Regulation on the organization and performance of the General Meetings of Shareholders, accommodating the legislative amendments.

The updated Regulation on the Organization and Performance of SNN's GMSs documents all amendments and supplements to the legal provisions laid down in the FSA Regulation no. 5/20218, Law no. 24/2017 on the issuers of financial instruments and market operations, republished, as subsequently amended and supplemented, BSE Governance Code, Law 31/1990 of the Companies, and Government Emergency Ordinance no. 109/2011 on corporate governance of public enterprises, as subsequently amended and supplemented.

The updated Regulation on the Organization and Performance of SNN's GMSs is posted on the SNN website under the section dedicated to the General Meetings of Shareholders.

14.1.1
General Meeting of Shareholders (GMS)

The General Meeting of Shareholders is the main corporate governance body of the Company, and decides on the activity and financial and business policy of the Company. SNN has devised and put in place sound internal procedures for organization and performance of the GMSs, as well as rules that govern its legal and statutory activity, in accordance with the Articles of Incorporation and the applicable legislation. As to of its structure, depending on the matters that require approval by shareholders, the General Meeting of Shareholders can be ordinary or extraordinary.

14.1.2
Ordinary General Meeting of Shareholders (OGMS)

The powers and duties of the Ordinary General Meeting of Shareholders (OGMS) include:

To discuss, approve or amend the annual financial statements, based on the reports submitted by the Board of Directors and the financial auditor;

To decide on the distribution of the net profit and to fix the dividend;

To elect and revoke the members of the Board of Directors;

To appoints and dismisses the financial auditor and to set the minimum term of the financial audit agreement;

To set the general limits of the remuneration paid to the CEO and Executives;

To set the remuneration of the members of the Board of Directors, as well as the terms and conditions of the mandate contract concluded with the members of the Board of Directors;

To resolve on the discharge of office for the members of the Board of Directors;

To approve the development strategies and policies of the Company;

To set the annua income and expenditure budget for the next financial year;

To decide on the pledging, renting or setting up security interests in movable property or mortgages on the assets owned by the Company;

To approve the reports of the Board of Directors on the activity carried out;

To decide on any other matters concerning the Company, according to their legal duties and powers; however, provided that these matters fall within the scope of powers of the General Meeting of Shareholders;

To review and address other matters presented by the Board of Directors;

To approve the remuneration policy for the heads of units, as well as in case of any material change and, in any case, at least once every 4 years;

To submit to vote the remuneration report for the latest financial year; the shareholder opinion from the vote is advisory in nature.

14.1.3
Extraordinary General Meeting of Shareholders (EGMS)

The main powers and duties of the Extraordinary General Meeting of Shareholders (EGMS) are:

To change the legal status of the Company;

To relocate the Company's offices;

To amend the Company's scope of business;

To set up or close secondary offices: branches, agencies, representation offices or other similar unincorporated units;

To increase, reduce or reinstate the share capital by issuing new shares;

To merger with other companies, or spin off, the Company;

To early wind up the Company;

To issue bonds;

To convert shares from one category to another;

To convert a category of bonds into another category or into shares;

To stay the shareholders' right of preference to subscription of new shares issued by the Company;

To authorize acquisition by the Company of its own shares and to set the term for this acquisition, in particular the maximum number of shares to be acquired, and, for acquisitions for a consideration, their minimum and maximum consideration and the period of the operation, in observance of the law; also, to set the means of disposing of the own shares acquired by the Company;

To acquire, dispose of, exchange or pledge assets of the Company qualified as plant, property and equipment, the value of which exceeds, individually or cumulatively, during one financial year, 20% of the total fixed assets of the Company less the receivables;

To lease out tangible assets, for a period of more than one year, whose individual or cumulative value related to the same co-contractor or persons involved or acting in a concerted manner exceeds 20% of the total value of the fixed assets, less receivables at the date of conclusion of the legal act, as well as joint ventures for a period of more than one year, exceeding the same value

To approve any other amendment to the Articles of Incorporation or pass any other resolution which requires approval of the Extraordinary General Meeting of Shareholders;

To approve the term of office of the representatives of SNN in the General Meeting of Shareholders of S.C. Energonuclear S.A. for:

- winding up and liquidation of Energonuclear S.A.;
- making any investment by Energonuclear SA that exceeds EUR 50,000,000 (EUR fifty million) in one single transaction, and/or that exceeds EUR 50,000,000 (EUR fifty million) aggregately with other transactions in any financial year;
- conclusion by Energonuclear SA of any contract involving expenses or talking up any important obligation by Energonuclear SA that exceeds EUR 50,000,000 (EUR fifty million), individually or cumulatively, during one single financial year;
- any actual or proposed sale, any other disposal of any assets or rights of Energonuclear SA, any actual or proposed acquisition of any assets or rights by Energonuclear SA that exceeds the aggregate amount of EUR 50,000,000 (EUR fifty million);
- contracting by S.C. Energonuclear S.A. of any type of loans or debts or liabilities of the loan type, with a value exceeding EUR 50,000,000 (EUR fifty million).

In addition to the powers and duties listed above or laid down under law, the Extraordinary General Meeting of Shareholders resolves also on the following matters:

Conclusion by the Company of any contract, taking up of any obligation or commitment that could involve expenses, or taking up any other important obligation by the Company, according to the limits of power provided in Annex no. 1 to the Articles of Incorporation;

Taking up the Company of any type of loans or debts or obligations of the loan type according to the limits of powers provided in Annex no. 1 to the Articles of Incorporation;

Establishment or participation in establishment of companies regulated by the Law of Companies no. 31/1990, or of associations or foundations regulated by the Government Ordinance no. 26/2000 on associations and foundations;

Delegation to the Board of Directors of the power to stay the right of preference, in compliance with the quorum and majority conditions;

Approval of the consolidation of the nominal value of a share;

Approval of the Board of Directors' proposal concerning the value of a consolidated share to be used for calculation of the compensation amount;

Provision of information about the amounts payable to shareholders, approval of payment terms and conditions, as well as approval of calculation instructions to be made available to shareholders;

Authorization of the Board of Directors to amend the Articles of Incorporation further to consolidation of the nominal value of the shares, performance of all the necessary operations for registration and amendment of the Articles of Incorporation in the Trade Register.

14.1.4
Quorum and majority requirements

The quorum will be reviewed by the chairman of the meeting for each individual resolution, prior to casting the vote on that resolution.

(a) OGMS

For the first convening of the Meeting, the quorum requirements are met when shareholders representing at least 1/4 of the total number of voting rights are present or represented in the Meeting. Resolution can be validly passed with the "for" vote of the shareholders representing the majority of the votes cast. For the second convening, the Meeting can decide on the matters included on the agenda of the adjourned Meeting, regardless of the number of shareholders present, by the vote of the shareholders representing the majority of the votes cast.

(b) EGMS

For the first convening of the Meeting, the quorum requirements are met when shareholders representing at least 1/4 of the total number of voting rights are present in the Meeting. Resolutions can only be passed with the majority of the votes held by the present or represented shareholders. For the second convening, the Meeting can decide on the matters included on the agenda of the adjourned Meeting, when at least 1/5 of the total number of voting rights are presented or represented, and resolutions are passed with the majority of the votes held by the present or represented shareholders.

Any resolutions that amend the main scope of business of the Company, reduce or increase its share capital, change its legal status, or merge, spin-off or wind up the Company will be passed with a majority of at least 2/3 of the voting rights held by the present or duly represented shareholders.

14.1.5
GMS convening

The General Meeting of Shareholders is convened to meetby the Board of Directors. The General Meeting of Shareholders, whether ordinary or extraordinary, will be convened whenever necessary, in accordance with the legal provisions and the provisions of the Articles of Incorporation, by publishing the call notice in the Official Gazette of Romania Part IV, and in a national daily newspaper or in a widely circulated newspaper of the locality where the Company's registered office is located, at least 30 days before the set date, as well as on SNN'swebsite. All information will be disseminated in both Romanian and in English.

The General Meeting of Shareholders can be convened in the following instances:

Whenever the case, further to a decision of SNN's Board of Directors, by the Chairman of the Board of Directors or a member thereof, based on the authorization issued by the Chairman;

At the request of the shareholders representing, individually or together, at least 5% of the share capital, and if this request concerns duties or powers of the Meeting.

The Ordinary General Meetings of Shareholders is held at least once a year, in not more than 4 (four) months of the end of the financial year, in order to review the financial statements of the previous year and determine the activity programme and the budget of the current year.

The meeting date cannot be set earlier than thirty days of publication of the convening notice in the Official Monitor of Romania, Part IV.

Pursuant to the applicable provisions (Law no. 31/1990, Government Emergency Ordinance no. 109/2011, Regulation no. 5/2018) and the provisions of the Articles of Incorporation, the GMS Call Notice includes at least the following information:

Name of issuer; ;

Start date and time and venue of the first and adjourned GMS;

Proposed agenda, explicitly listing all the matters to be debated in that Meeting;

A clear and accurate description of the proceedings to be observed by shareholders in order to be able to participate and cast their vote in the General Meeting, plus information about:

- The right of one or more shareholders, representing alone or together with other shareholders at least 5% of the Company's share capital, to introduce matters on the agenda (based on a reasoning), in not more than 15 days of publication of the call notice, and to submit draft resolutions for the matters included or proposed to be included on the agenda of the General Meeting. The agenda supplemented by the matters proposed by shareholders must be published at least 10 days before the date of the General Meeting of Shareholders set out in the initial call notice.

- Express indication of the fact that the right to vote can be exercised directly, through a representative or by post, and the terms for such exercise. When the vote is cast by proxy (by representation), it will be considered that the power of attorney forms (special and general) must be used for this type of vote. Method of obtaining the special/general power of attorney form for representation in the GMS, the time-limit and the place where the powers of attorney will be submitted/received, as well as methods for the Company to accept notification of representative appointment by electronic means and procedures that allow postal vote.

Reference date, as well as indication of the fact that only people who are then shareholders have the right to participate and cast votes in the General Meeting;

A time-limit for making proposals of candidates for the director offices, when the election of directors is included in the agenda. The call notice will also indicate that the list with information about the name, place of residence and professional qualification of the persons proposed for the office of member of the Board of Directors is available to the shareholders for examination and supplementation;

The place where the full text of documents and draft resolutions, plus any other information about the matters out on the agenda of the General Meeting can be obtained from, and the date as of which these will be available, as well as the procedure to be followed in this regard;

When the agenda includes proposals of amendment of the Articles of Association, the notice to attend shall also render the full text of such proposals;

Company's website address;

Proposal of registration date;

Proposal of ex-dates and, if applicable, proposal of date of payment;

Express indication of the fact that the right to vote can be exercised directly, through a representative based on a special or general power of attorney, or by post, and the terms for such exercise;

Manner of distributing the postal ballot and the special power of attorney form for representation in the GMS, as well as the date as of which these are available;

Time-limit for, and the where special powers of attorney and postal ballots must be sent/received;

Indication of the exact address where special powers of attorney and postal votes are to be sent to;

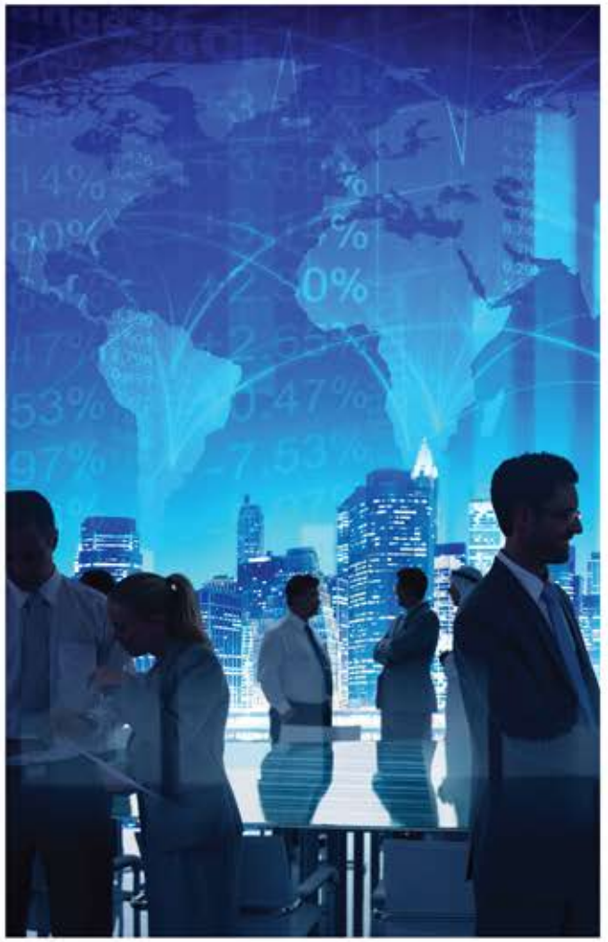
The fact that significant shareholders have the right to opt for the application of poll vote method for the election of the members of the Board of Directors, when this matter is put on the GMS agenda in accordance with the provisions of Article 85 of Law no. 24/2017, republished.

The call notice, any other matter added to the agenda at the request of shareholders, the annual financial statements, the annual report, as well as the proposal of dividend distribution are made available to the shareholders at the Company's registered office as of the date when the General Meeting is convened, and are published on the website, so as to ensure the free access to information for shareholders. At request, copies of these documents can be issued to shareholders.

Shareholders representing individually or together at least 5% of the Company's share capital can request, under an application filed with the Board of Directors, introduction of new matters on the agenda, and/or can submit draft resolutions for the matters thus included on the agenda; however, in not more than 15 days of publication of the call notice. The agenda supplemented by the matters proposed by shareholders must be published at least 10 days before the date of the General Meeting set out in the initial call notice.

Each shareholder can ask the Board of Directors written questions about the matters put on the agenda of the General Meeting of Shareholders, before the date of the General Meeting, and these will be answered during the Meeting. The Company is the obligation to answer the questions asked by shareholders. The Company can word a general answer for questions with the same content. An answer is deemed to have been provided if the requested information is published on the Company's web page www.nuclearelectrica.ro in a question-answer format.

In accordance with the capital market regulations, the draft resolutions subject to approval by the GMS, together with the other supporting materials, are published on the Company's website as of the call notice publication date.



14.1.6
GMS performance procedure

SNN has devised and put in place internal regulations for organization and performance of GMSs, which place specific duties concerning GMS organization on the different structures and departments of the Company. These aim to regulate the entire internal flow of documents and information, procedures and logistics, as well as the external process that consists in provision of accurate information to the Company's shareholders about the matters due to be addressed in the convened Meetings.

Shareholders can participate and cast votes in the General Meeting by proxy, based on a special or general power of attorney issued for that General Meeting or for a period not exceeding 3 years. The proxy may not be replaced by another person. When the proxy is a corporate body, they can exercise this mandate through any person who is part of their governance or management body, or one of their employees.

Corporate bodies may be represented by their legal representatives who, in turn, can issue powers of attorneys for that General Meeting to other persons. As to the State, the relevant ministry can appoint its standing representatives in the General Meeting of Shareholders, in compliance with the aforementioned legal requirements and conditions.

In addition to the regulation for organization and performance of GMSs, SNN abides as such also by the legal provisions that regulate the GMS performance for listed companies.

In not more than 24 hours of the date of the General Meeting, the Company prepares a current report to briefly present how the General Meeting is going to be held, and how resolutions would be passed therein. This report will be disseminated to the capital market institutions, i.e., BSE, and will be published on the Company's website.

14.1.7
Rights and duties of shareholders

The Company's shares are registered, of equal value and issued in dematerialized form, by registration in the account, and entitle their respective holders to equal rights.

Each share subscribed and paid up in full entitles to equal rights and grants them one vote in the General Meeting of Shareholders, the right to elect and be elected in the management bodies, the right to participate in profit distribution according to the provisions of the Articles of Incorporation and the legal provisions, as well as other rights provided by the Articles of Incorporation and the legal provisions.

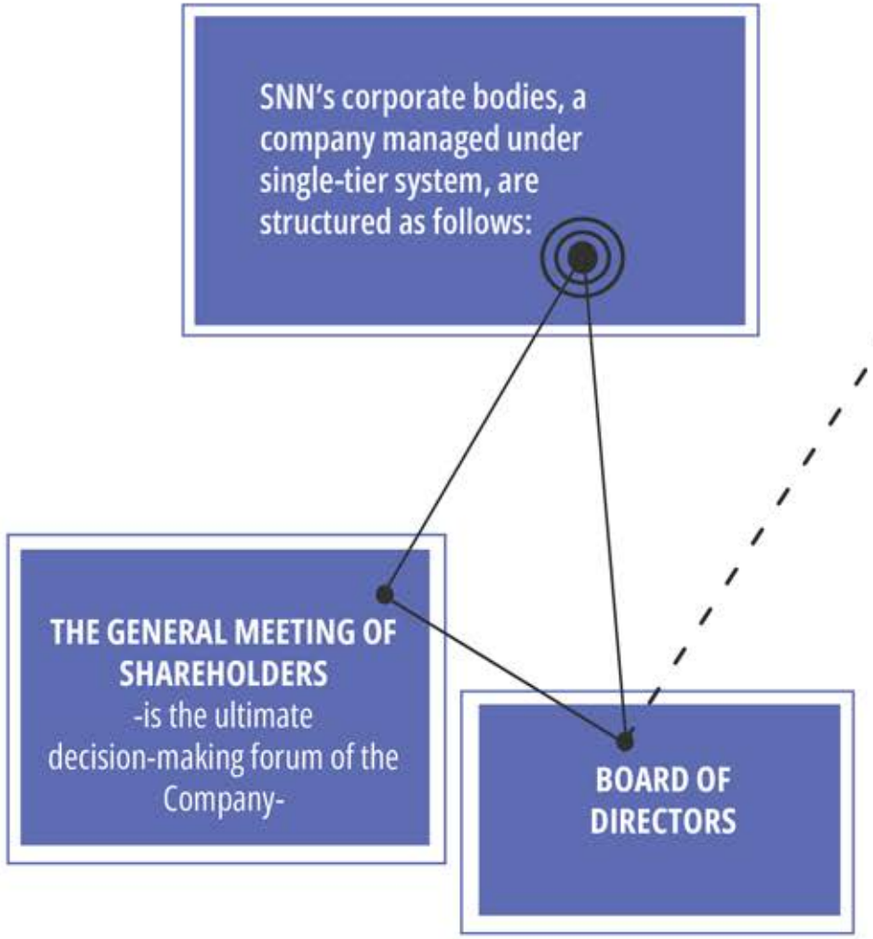
The shares issued in dematerialized form are traded on a regulated market, in accordance with the stock market legislation. The rights and obligations attached to shares-follow the shares, when these are transferred to other persons. Shareholders have the right to receive correct and complete information about the standing of the Company in the General Meeting of Shareholders. When new shares are issued, the existing shareholders have the right of preference to their subscription, under the terms of the law, pro-rata with the percentage of shares held in the Company.

SNN shareholders can exercise their right to vote as follows:

1. Direct vote - in person, in the GMS;
2. Vote by proxy holding a special or general power of attorney;
3. Postal vote.

All holders of financial instruments issued by SNN of the same type and class of securities benefit from equal treatment, and the Company constantly makes sustained efforts to produce an effective, active and transparent communication so as to allow the exercise of rights in a fair manner.

More at:
https://www.nuclearelectrica.ro/ir/?lang=en#guvernanta



14.2 BOARD OF DIRECTORS

The Board of Directors is the executive body of the Company, formed of 7 members, of each one executive and 6 non-executive members.

The Chairman of the Board of Directors was elected by the Board of Directors among its members, and is Mr. Teodor Minodor Chirică. The Chairman of the Board of Directors is appointed for a period that may not exceed the term of office of director and may be revoked at any time by the Board of Directors.

Directors may be revoked at any time by the Ordinary General Meeting of Shareholders. Each director expressly accepted the exercise of their respective office. The company must celebrate a D&O type insurance (liability insurance of managers). During their term of office, directors may not enter into an employment contract with the Company.

The members of the Board of Directors must exercise their mandate with prudence and diligence of a good director, with loyalty, in the interest of the Company and are not allowed to disclose confidential information and business secrets of the Company.

Also, the members of the Board of Directors are under the obligation to ensure avoidance of any direct or indirect conflict of interest with the Company, and should a conflict occur, they will abstain from the debates and casting their vote on the that matters, in accordance with the legal provisions in force.

AS AT 31 DECEMBER 2022, THE COMPANY'S DIRECTORS ARE:

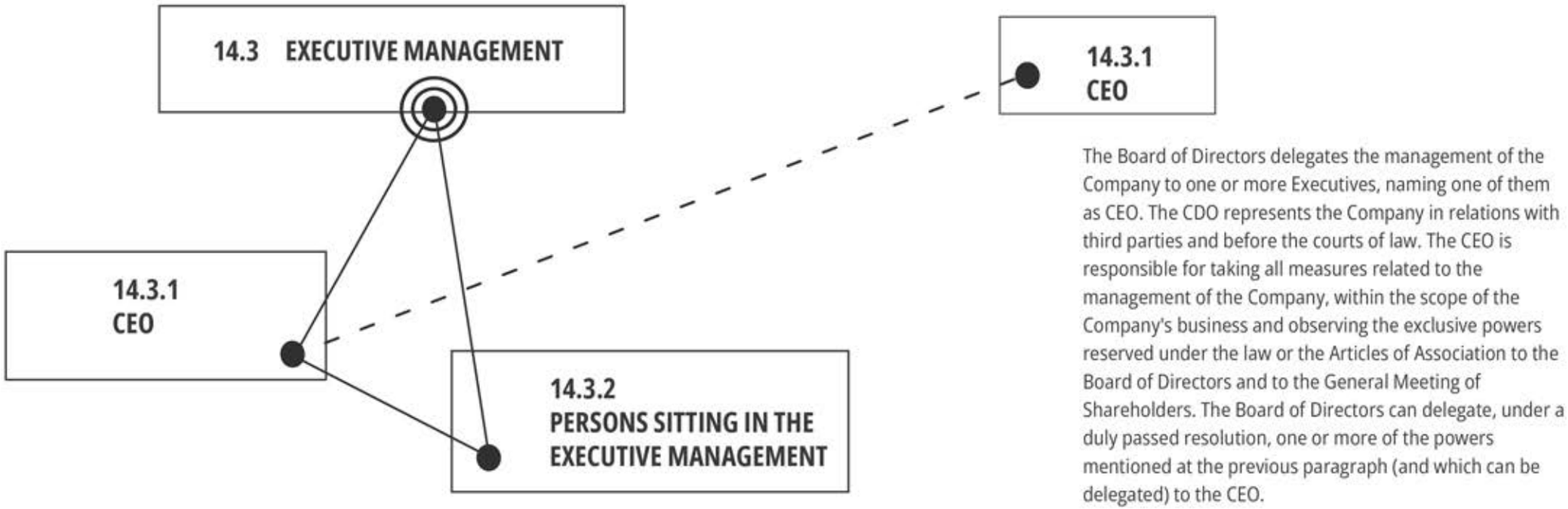
First name and Last name	Age (years)	Qualification	Professional experience (years)	Position	Date appointed	Office expiry date
Elena Popescu	63 years	Nuclear Plant Engineer	36 years	Non-executive member of the Board of Directors	28.09.2018 (4-year final office according to the OGMS Resolution no. 12/28.09.2018)	28.09.2022
					10 August 2022 (4-year final office effective 29 September 2022, according to the OGMS Resolution no. 6/10.08.2022)	29.09.2026
Mihai Daniel Anitei	53 years	Mechanical Engineer	23 years	Independent non-executive member of the Board of Directors	28.09.2018 (4-year final office according to the OGMS Resolution no. 12/28.09.2018)	28.09.2022
					28.09.2018	Office ended on 28 September 2022 (according to the OGMS Resolution no. 6/10.08.2022)
Cosmin Ghiță	33 years	Economist	11 years	Executive member of the Board of Directors	28.09.2018 (4-year final office according to the OGMS Resolution no. 12/28.09.2018)	28.09.2022
					10 August 2022 (4-year final office effective 29 September 2022, according to the OGMS Resolution no. 6/10.08.2022)	29.09.2026

First name and Last name	Age (years)	Qualification	Professional experience (years)	Position	Date appointed	Office expiry date
Remus Vulpescu	51 years	Legal Advisor	26 years	Independent non-executive member of the Board of Directors	28.09.2018 (4-year final office according to the OGMS Resolution no. 12/28.09.2018)	28.09.2022
					28.12.2017 (temporary office according to the OGMS Resolution no. 10/20.12.2017)	28.04.2018
					28.09.2018	Office ended on 28 September 2022 (according to the OGMS Resolution no. 6/10.08.2022)
					27 September 2022 (temporary office until the date when the GMS is held)	19.02.2023
					19.10.2022 (temporary office for a period of 4 months, according to the OGMS Resolution no. 10/19.10.2022)	
Teodor Minodor Chirica	77 years	Engineer	52 years	Non-executive member of the Board of Directors	27 July 2020 (final office according to the OGMS Resolution no. 9/27.07.2020) after completion of the selection procedure under the Government Emergency Ordinance no. 109/2011	28.09.2022
					10 August 2022 (4-year final office effective 29 September 2022, according to the OGMS Resolution no. 6/10.08.2022)	29.09.2026

First name and Last name	Age (years)	Qualification	Professional experience (years)	Position	Date appointed	Office expiry date
Chirlesan Dumitru	60 years	Physical Engineer	36 years	Non-executive provisional member of the Board of Directors	10.08.2022 (temporary mandate for a period of 4 months, according to the OGMS Resolution no. 6/10.08.2023)	10.12.2022
George Sergiu Niculescu	43 years	Economist Legal Advisor	22 years	Non-executive provisional member of the Board of Directors	9 March 2022 (temporary office until the date when the GMS is held)	
					28.04.2022 (temporary mandate for 4 months, according to the OGMS Resolution no. 5/28.04.2022)	28.09.2022
					10.08.2022 (temporary mandate for a period of 2 months, according to the OGMS Resolution no. 6/10.08.2023)	29.10.2022
					19.10.2022 (temporary mandate for a period of 4 months, according to the OGMS Resolution no. 10/19.10.2022)	19.02.2023

First name and Last name	Age (years)	Qualification	Professional experience (years)	Position	Date appointed	Office expiry date
Serban Valeca	66 years (deceased 2022)	Inginer fizician	40 years	Non-executive provisional member of the Board of Directors	9 March 2022 (temporary office until the date when the GMS is held)	
					28.04.2022 (temporary mandate for 4 months, according to the OGMS Resolution no. 5/28.04.2022)	28.09.2022
						10 August 2022 (from the position of member of the Board of Directors further to termination de jure of this office by death, according to the OGMS Resolution no. 6/10.08.2022)
Vasilica Grajdan	49 years	Economist	31 years	Non-executive provisional member of the Board of Directors	27 September 2022 (temporary office until the date when the GMS is held)	
					19.10.2022 (temporary office for a period of 4 months, according to the OGMS Resolution no. 10/19.10.2022)	19.02.2023

The members of the Board of Directors are elected by shareholders in the Ordinary General Meeting of Shareholders. The Company is not aware of any agreement, understanding or family ties between director(s) and another person, because of which the said person was appointed director.



The Board of Directors delegates the management of the Company to one or more Executives, naming one of them as CEO. The CDO represents the Company in relations with third parties and before the courts of law. The CEO is responsible for taking all measures related to the management of the Company, within the scope of the Company's business and observing the exclusive powers reserved under the law or the Articles of Association to the Board of Directors and to the General Meeting of Shareholders. The Board of Directors can delegate, under a duly passed resolution, one or more of the powers mentioned at the previous paragraph (and which can be delegated) to the CEO.

The CEO of SNN has, according to the Articles of Incorporation, the following duties and powers:

- To steer and coordinate the entire business of the Company;
- To carry through the resolutions of the General Meeting of Shareholders and the decisions of the Board of Directors passed and adopted in accordance with the powers reserved thereto;
- To apply the development strategies and policies of the Company;
- To select, hire, promote and fires the Company's employees;
- To appoint, suspend or revoke the persons sitting in the management of subunits, and to set their remuneration;
- To negotiate and conclude, in accordance with the law, individual employment agreements;
- To execute legal instruments, for and on behalf of the Company, whereby to acquire, dispose of, lease/rent, exchange or pledge as security assets of the Company, and the execution of which does not fall under the scope of the approval powers of the General Meeting of Shareholders or, as the case may be, of the Board of Directors;
- To execute any other instruments creating an obligation of the Company towards third parties, and the execution of which does not fall under the scope of the approval powers of the General Meeting of Shareholders or, as the case may be, of the Board of Directors, according to the limits of powers set out in an Annex to the Articles of Incorporation;
- To approve investment projects according to the powers set out in an Annex to the Articles of Incorporation;
- To devise and submit for approval by the Board of Directors the financial statements, as well as the distribution proposal concerning the profit resulting from the balance sheet of the financial year, which they intend to present to the General Meeting of Shareholders;
- To devise and submit for clearance by the Board of Directors the draft budget of the Company, which is to be submitted for approval by the General Meeting of Shareholders;
- To submit for clearance by the Board of Directors the materials due to be submitted for approval by the General Meeting of Shareholders;
- To approve, together with the other Executives, and submit for clearance/approval by the Board of Directors the activity programmes (production, research&development, technological engineering, investments, etc.);
- To determine the duties and responsibilities of the Company's staff, on departments;
- To approve the collection and payment operations according to the legal powers and the provisions of the Articles of Incorporation;
- To authorize the Executives or any other person to exercise any power granted to them;
- To approve the delegations of powers for Executives and the persons sitting in the management of subunits, in order to carry out the Company's operations;
- To approve the powers and duties of the subunits of the Company;
- To approves the organizational structure of the Company and the number of positions, the rules for establishment of the functional and production departments, as well as the Company's Organization and Functioning Regulation and Internal Regulation;
- To set and approve the environmental protection and work safety policies, according to legal provisions;
- To approve the regulatory documents and regulations applicable to the Company's activities;
- To determine on the marketing tactics and strategy;
- To carry out any other duties provided in the regulatory acts, the Company's Articles of Incorporation, the decisions of the Board of Directors and the resolutions of the General Meeting of Shareholders;
- To address any other issue that the Board of Directors assigned to them.

The position of CEO of S.N. Nuclearelectrica S.A. was occupied under a mandate contract further to the Decision of the Board of Directors no. 2 of 4 February 2019 whereby **Mr. Cosmin Ghiță** was appointed to this position for 4 years, effective 11 January 2019. This decision was made based on the Recommendation of the Nomination and Remuneration Committee dated 22 January 2019.

Under the Decision of the Board no. 154 of 10 August 2022, renewal of the SNN CEO office was approved for 4 years, effective 12 February 2023 (the expiry date of the current office was 11 February 2023), based on the Recommendation of the Nomination and Remuneration Committee registered under no. 9220/09.08.2022;

After completion of the internal selection procedure, the position of **Cernavoda NPP Branch Manager** is taken over by **Mr. Valentin Ovidiu Nae** effective 19 October 2020. At the end of 2022, the position of Executive Officer of Cernavoda NPP Branch was held by Mr. Valentin Ovidiu Nae.

Position of NFP Pitesti Branch Manager: Effective 17 October 2019 and to date, the position of NFP Pitesti Branch Manager has been occupied by **Mr. Sorin Popescu**, under the CEO Decision no. 345 of 17 October 2019.

CFO: Mr. Paul Ichim temporarily held the office of Chief Executive Officer, effective 31 March 2020.

Mr. Paul Ichim was appointed CEO for a 4-year term of office, effective 1 August 2020, after completion of the selection procedure performed in accordance with the provisions of Government Emergency Ordinance no. 109/2011. On 3 October 2021, the SNN's Board of Directors took note, under the Decision no. 171/06.10.2021, on resignation of Mr. Paul Ichim from his office as SNN CFO. In accordance with the signed mandate contract, the office of Mr. Paul Ichim was to come to an end further to his surrender of office within 90 business before his effective withdrawal, i.e. on 11 February 2022.

Under the decision of the Board of Directors no. 22/10.02.2022 and based on the recommendation of the Nomination and Remuneration Committee, **Mr. Dan Niculaie Faranga** was appointed as temporary CFO, with a term of office of 4 months, effective 11 February 2022 and until including 10 June 2022, with the possibility of renewal for good reasons by not longer than 6 months, pursuant to Article 64^2 of the Government Emergency Ordinance no. 109/2011, as subsequently amended and supplemented. Under the BoD Decision no. 115/10.06.2022, renewal of the current CFO office in Societatea Nationala Nuclearelectrica SA was approved for a 2-month period, effective 11 June 2022;

Under the decision of the Board of Directors no. 153/10.08.2022 and based on the recommendation of the Nomination and Remuneration Committee no. 9221/09.08.2022, Mr. Dan Niculaie Faranga was appointed as temporary CFO, with a term of office of 4 months, effective 12 August 2022 and until including 12 December 2022, with the possibility of renewal for good reasons by not longer than 6 months, pursuant to Article 64^2 of the Government Emergency Ordinance no. 109/2011, as subsequently amended and supplemented.

Under the Decision of the Board of Directors no. 115/10.06.2022, renewal of the current CFO office in Societatea Nationala Nuclearelectrica SA was approved for a 2-month period, effective 11 June 2022.

Under the Decision of the Board of Directors no. 238/29.11.2022, renewal of the mandate contract no. 86/10.08.2022 of the CFO in office of Societatea Nationala Nuclearelectrica SA was approved for a 2-month period, effective 13 December 2022.

Under the decision of the Board of Directors no. 11/27.01.2022, termination of the Mandate Contract no. 65/11.02.2019 concluded by SNN with **Mr. Tudor Laurentiu Dan**, as Deputy CEO was approved, by agreement of the parties.

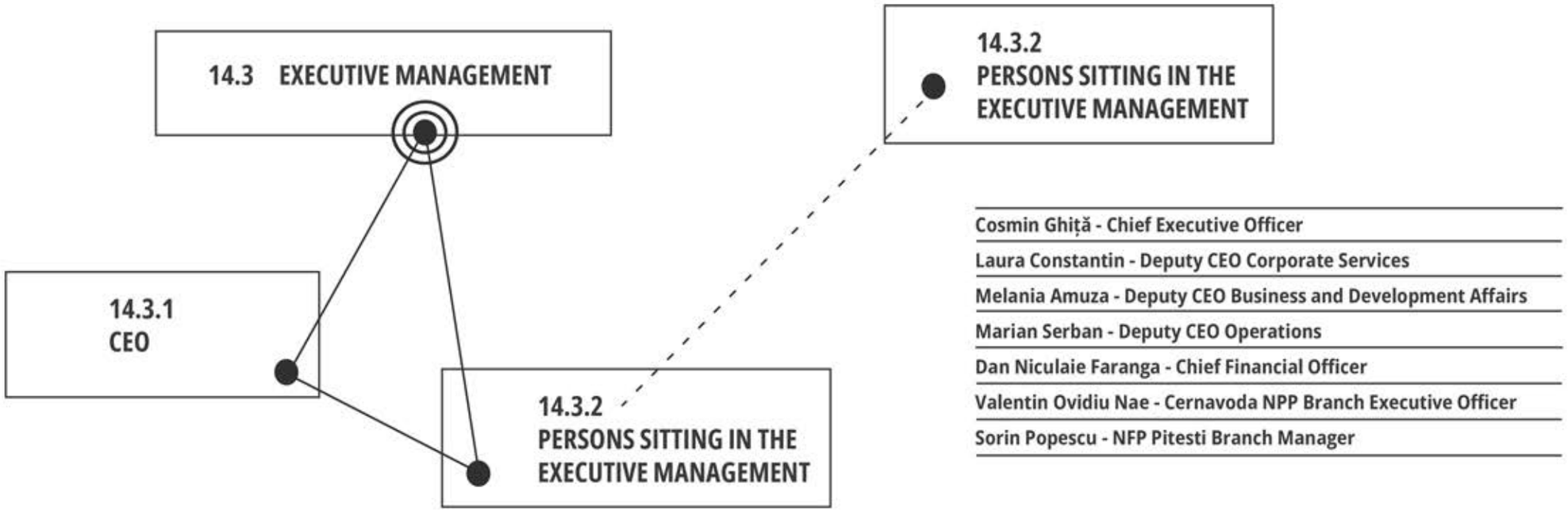
The Chief Financial Officer and the Deputy carry out their activity under the subordination of the Chief Financial Officer and the Board of Directors.

According to the chart flow of SNN, approved by Decision of the Board of Directors, the position of Deputy General Director with Contract of mandate was reorganized into the position of Deputy General Director Corporate Services, based on individual employment agreement and passed from the direct coordination of the Board of Directors to the direct coordination of the General Director of SNN. Also, two positions were created, i.e., Deputy CEO Business and Development Affairs and Deputy CEO Operations, both to be occupied based on an individual employment agreement, directly reporting to the SNN's Chief Executive Officer.

The three positions of Deputy CEO are intended at rendering the SNN activities and processes of SNN more efficient, given the complexity and length in time of the investment projects, diversification of the human resources strategy, the procurement processes and the effective performance the stages of the investment projects.

Effective 1 February 2022, the three positions are occupied in accordance with the legal provisions and the Collective Employment Agreement applicable within the company, by SNN staff. The position of **Chief Corporate Services Officer** will be occupied by **Mrs. Laura Constantin**, previously the Director of the Legal Department of SNN and involves the coordination of procurement, legal, human resources, communication and compliance processes. The position of **Chief Business and Development Officer** will be held by **Mrs. Melania Amuza**, previously the Director of the Investment Directorate of SNN and involves the coordination of investment processes, electricity transactions and mining licenses, and the position of **Chief Operations Officer** will be held by **Mr. Romeo Urjan**, previously the Director of the Operations Directorate and involves the coordination of operation activities, production, independent assessment of nuclear safety, fuel, security, management systems and process analysis.

Effective 1 September 2022, the position of **Deputy Chief Operating Officer** was occupied by **Mr. Marian Serban**, under an Individual Employment Agreement according to the organizational structure of SNN, as approved by Decision of the Board of Directors, and under the direct coordination of the CEO of SNN. Mr. Romeo Urjan held this position until 1 September 2022.



Cosmin Ghiță - Chief Executive Officer

Laura Constantin - Deputy CEO Corporate Services

Melania Amuza - Deputy CEO Business and Development Affairs

Marian Serban - Deputy CEO Operations

Dan Niculaie Faranga - Chief Financial Officer

Valentin Ovidiu Nae - Cernavoda NPP Branch Executive Officer

Sorin Popescu - NFP Pitesti Branch Manager

EXECUTIVE MANAGEMENT

Cosmin Ghiță
Chief Executive Officer

Laura Constantin
Deputy CEO Corporate Services

Melania Amuza
Deputy CEO Business and Development Affairs

Marian Șerban
Deputy CEO Operations

Dan Niculaie Faranga
Chief Financial Officer

Valentin Ovidiu Nae
Cernavoda NPP Branch Executive Officer

Sorin Popescu
NFP Pitesti Branch Manager

First name and last name	Position	Start date	End date
Cosmin Ghita	General Director Mandate of 4 years.	Appointment for a 4-year office, effective 11 February 2019.	11.02.2023
		Appointment for a 4-year office, effective 12 February 2023.	12.02.2027
Dan Laurentiu Tudor	Deputy General Director Mandate of 4 years.	Appointment for a 4-year office, effective 11 February 2019.	11.02.2023
		Termination of mandate contract according to Article 13.1(f) of the contract	01.02.2022
Paul Ichim	Chief Financial Officer	Temporary appointment to office effective 31 March 2020	01.08.2020
		Appointment to a 4-year office, effective 1 August 2020	01.08.2024
		Surrender of mandate contract	Renuntare la contractual de mandat 11.02.2022
Dan Niculaie-Faranga	Provisional Chief Financial Officer	Temporary appointment to a 4-month office, effective 11 February 2022	11.06.2022
		Renewal of mandate contract by 2 months, effective 11 June 2022	11.08.2022
		Provisional mandate appointment for 4 months, effective 12 August 2022	12.12.2022
		Renewal of temporary office by 2 months, effective 13 December 2022	13.02.2023
Valentin Nae	Cernavoda NPP Branch Manager	19.10.2020 (appointment as Cernavoda NPP Branch Manager after competition)	N/A
Sorin Popescu	NFP Pitesti Branch Manager (employment agreement)	17.10.2019 (appointment by delegation of a 6-month period)	17.04.2020
		17.04.2020 (renewal of delegation by 3 months)	17.07.2020
		18.07.2020 (appointment as NFP Pitesti Branch Manager after competition)	N/A
Laura Constantin	Deputy General Director Corporate Services	01.02.2022	N/A
Melania Amuza	Deputy CEO Business and Development Affairs	01.02.2022	N/A
Romeo Urjan	Deputy CEO Operations	01.02.2022	01.09.2022
Marian Serban	Deputy CEO Operations	01.09.2022	N/A

15. ADVISORY COMMITTEES

According to the Articles of Incorporation of the Company and in accordance with Government Emergency Ordinance no. 109/2011, the Board of Directors of SNN established 4 advisory committees, formed by at least 2 members of the Board of Directors.	The chairmen of the Advisory Committees are the following directors:
Nomination and Remuneration Advisory Committee This Committee was established in accordance with Article 34 of the Government Emergency Ordinance no. 109/2011, under Decision no. 7 of the Board of Directors of 26 April 2013.	Teodor Chirica
Audit Advisory Committee This Committee was established in accordance with Article 34 of the Government Emergency Ordinance no. 109/2011, under Decision no. 8 of the Board of Directors of 30 April 2013.	Remus Vulpescu
Nuclear Safety Advisory Committee This Committee was established in accordance with Article 34 of the Government Emergency Ordinance no. 109/2011, under Decision no. 27 of the Board of Directors of 26 August 2013.	Teodor Chirica
Advisory Committee for Strategy, Development and Large Investment Projects This Committee was established in accordance with Article 34 of the Government Emergency Ordinance no. 109/2011, under Decision no. 27 of the Board of Directors of 26 August 2013.	Elena Popescu

The Advisory Committees are tasked with performance of analyses and making recommendations for the Board of Directors, in specific fields, and are under obligation to regularly submit activity reports to the members of the Board of Directors. The key responsibilities of the Advisory Committees are provided in their respective Organization and Functioning Regulations approved by the Board of Directors, and are available on the SNN website.

More at:
https://www.nuclearelectrica.ro/wp-content/uploads/2014/08/traducere-CORPORATE-GOVERNANCE-RULES_February-2015_RO-EN.pdf

15.1 AUDIT ADVISORY COMMITTEE

The role of the Audit Advisory Committee is to provide assistance to the Board of Directors in carrying out its internal audit duties, and performs an advisory function concerning the Company's strategy and policy on internal control system, internal audit and external audit, assessment of conflicts of interests, and risk management system control.

From a functional point of view, the Audit Advisory Committee reports directly to the Board of Directors. In SNN, there is an Internal Audit Department responsible for managing the internal audit activity at corporate level, which functionally reports to the Board of Directors, and administratively reports to the CEO.

The main duties of the Audit Advisory Committee include analysis, monitoring, supervision and facilitation functions, as follows:

- Clearance of the multi-year internal audit plan and of the regulatory documents prepared by the Internal Audit Department;
- Regular examination the effectiveness of the internal control and the risk management system;
- Monitoring application of the legal standards and internal audit standards, and maintaining the authority, independence and impartiality of internal auditors;
- Monitoring the Company's compliance with the provisions of the legal framework, the Articles of Incorporation and applicable internal regulatory documents;
- Review and approval of the activity reports of the Internal Audit Department, and the transactions with related parties;
- Monitoring the accuracy and reliability of the financial information supplied to the Company's management and external users;
- Supervision of the work of internal auditors and financial auditors;
- Approval or proposals for approval made to the supervisory bodies or shareholders regarding appointment, remuneration and revocation of the financial auditor;
- Making sure that the governing bodies take the necessary remedial measures to address the identified deficiencies;
- Preparation and submission of reports at the request to the Board of Directors.

In 2022, the Audit Advisory Committee met in 4 meetings and made recommendations to the Board of Directors of SNN on topics that fall under the scope of their duties, as follows:

- 2021 Report on the Internal Audit Work;
- Annual Financial Management Control Plan;
- Annual Assessment Report on the Management Internal Control System;
- Annual and Multi-Annual Internal Audit Plan;
- Annual Compliance Plan;
- Quarterly Report on Risk Management;
- 2021 Stand-Alone and Consolidated Annual Financial Statements, prepared in accordance with the International Financial Reporting Standards (IFRS - EU), based on the reports of the independent auditor and the annual report of directors for 2021;
- Half-Yearly Governance Report, prepared in accordance with the legal provisions;

As to management of conflicts of interest, each member of the Board of Directors makes sure they avoid of any direct or indirect conflict of interest with the Company, and should such a conflict occur, they will abstain from the debates and casting their vote on the that matters, in accordance with the legal provisions in force.

In order to ensure the propriety of the transactions with the related parties, the members of the Board of Directors apply including the following criteria, but not only these:

- Maintaining the powers of the Board of Directors or GMS, as the case may be, to approve the most important transactions (according to the Annex to the Articles of Incorporation concerning the limits of powers);
- Asking for a prior opinion on the most important transactions from the internal control structures;
- Entrusting the negotiations on these transactions to one or more independent directors, or to directors not related to the parties involved;
- Seeking the opinion of independent experts.

The transactions concluded in 2022 with the affiliated parties and reported to the Romanian stock market authorities and the SNN shareholders, based on the provisions of Law no. 24/2017, did not raise any issues related to conflicts of interest involving the directors and executives of SNN.

The internal audit planning is carried out further to an extensive risk assessment process (e.g.: talks with heads of departments, results of the activities of the other monitoring departments, reports of control bodies external to the Company, results of previous audit reports). The Audit Advisory Committee assessed the internal control system applying a questionnaire intended to assess the implementation progress of the management internal control standards and found that the management internal control activity complied with the standards laid down in Order no. 600/2018.

More information about the internal audit activity can be found in Sub-Chapter *10.6.6. Audit and Risk Management Directorate* of the 2022 Annual Report.

15.2 NUCLEAR SAFETY ADVISORY COMMITTEE

The Nuclear Safety Committee provides the Board of Directors with assistance and/or independent assessment in the field of nuclear safety and environmental protection, and makes written recommendations in this regard.

The main duties of the Nuclear Safety Advisory Committee are provision of advice/assessment, in areas such as:

- The strategic nuclear safety options of the Company, taking into account the current situation and the regulatory framework applicable to the operating activities of Cernavoda NPP;
- The conclusions drawn from the review of design studies and their impact on systems, structures and components with critical nuclear safety functions;
- The fundamental nuclear safety and radiation protection decisions made in the Company and its two branches;
- The framework and main criteria to be adopted for nuclear safety and for the quality management and assurance system;
- The conclusions of the impact studies concerning all types of environmental emissions;
- The nuclear safety, public health and environmental protection criteria applied in relations with sub-contractors and suppliers;
- The development and implementation of nuclear safety culture training programmes for the Company's staff;
- The general policy and regulations concerning the staff and the competence requirements in the operation of the Company's assets;
- Inspection of structures and components with critical safety function;
- Independent control processes on nuclear safety and radiation protection issues, related to the specific activities of the Company;
- The permitting and licensing process;
- Reviews of reports on the operational events/incidents with a potential impact on nuclear safety or staff radiation protection;
- Review of any report on nuclear safety prepared in the Company;
- Any matter on which the Board of Directors deems necessary to consult the Nuclear Safety Advisory Committee.

The Nuclear Safety Advisory Committee met 4 times in 2022, in the months of February, May, August and November.

15.3 ADVISORY COMMITTEE FOR STRATEGY, DEVELOPMENT AND LARGE INVESTMENT PROJECTS

The membership of the Advisory Committee for Strategy, Development and Large Investment Projects (ACSDLIP) is as follows: Mrs. Elena Popescu, as Chairwoman, and Messrs. Teodor Chirică and Cosmin Ghiță, as members.

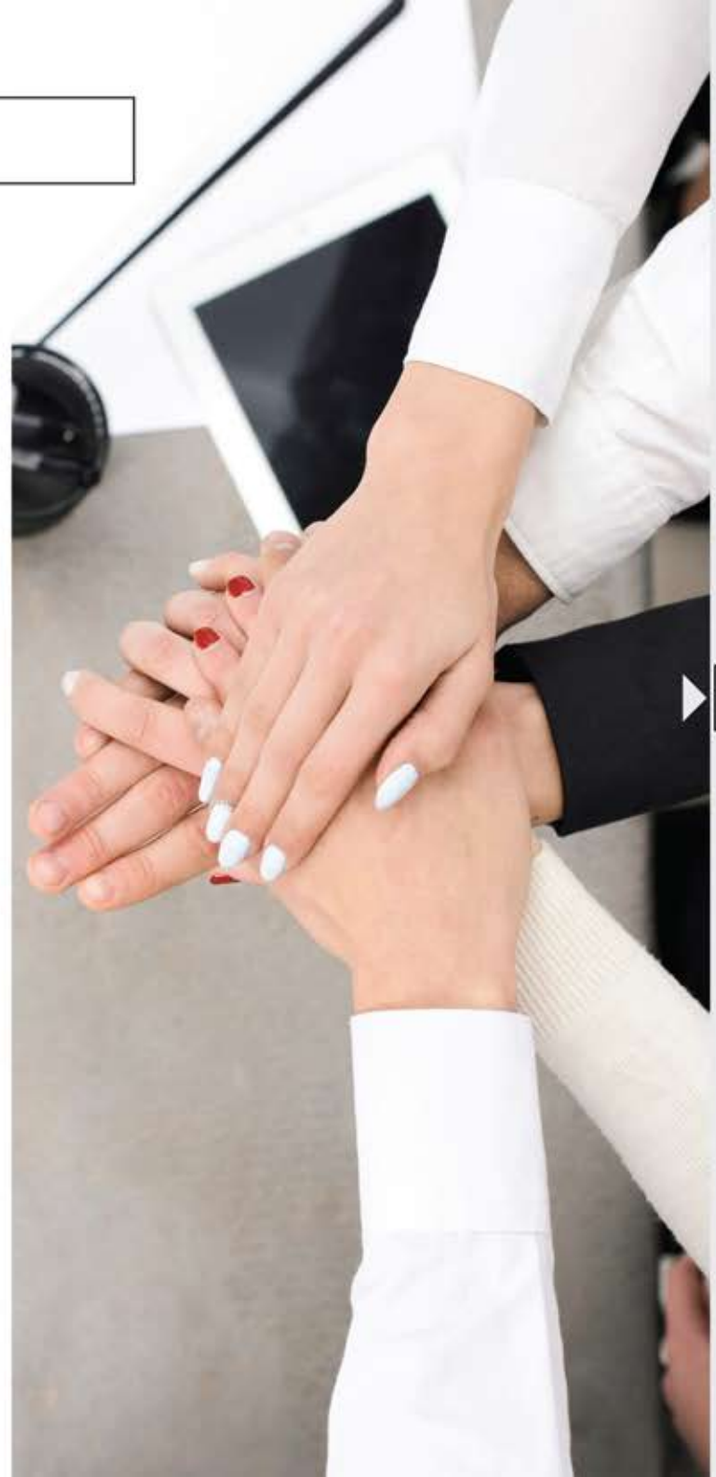
According to its own regulations, the Committee for Strategy, Development and Large Investment Projects conducts analyses and issues recommendations for the Board of Directors of SNN on:

- The global development, retrofitting, upgrading, and economic and financial restructuring strategy of the Company, as well as the main development directions, the strategic objectives of the Company and the ways of attaining them.
- Approval and implementation by the Board of Directors of large investment projects (projects the estimated amount of which exceeds EUR 5 million), further to a review of the specific documentation.

In 2022, the work of the Advisory Committee for Strategy, Development and Large Investment Projects concerned mainly:

- Making a recommendation to the SNN's Board of Directors about continuation of the Project for Units 3 and 4 of Cernavoda NPP, and adoption of the Preliminary Investment Decision and entering Phase 2 – Preliminary Works, conditional upon approval and conclusion of the Support Agreement between the Romanian State and SNN in relation to the Project for Units 3 and 4 of Cernavoda NPP, and initiation of the steps to award and conclude the contract needed to complete the Project, subject to the limits of powers provided in the articles of incorporation of SNN and EN, and without exceeding the amount of EUR 185 million, as approved under the OGMS Resolution no. 6/10.08.2022.
- Making a recommendation to the SNN's Board of Directors on the clearance of SNN financing EnergoNuclear S.A., by SNN increasing the share capital of EN in cash and/or granting related loans by SNN, with a total amount of EUR 185 million, adjusted to the Project development requirements and necessary for the implementation of Phase 2 of the Project of Units 3 and 4 within Cernavoda NPP, depending on the approval and conclusion of the Support Agreement between the Romanian State and SNN in relation to the Project of Units 3 and 4 within Cernavoda NPP, as approved under the EGMS Resolution no. 7/10.08.2022
- Making a recommendation to the Board of Directors of SNN on the clearance of the Implementation Strategy of the NuScale Small Modular Reactors (SMR) Project on Doicești site, and of the Investors' Agreement in connection with establishment of a new legal entity, organized as a joint-stock company for development of the NuScale Small Modular Reactors (SMR) Project on Doicești site, as approved under the EGMS Resolution no. 8/22.09.2022 and the EGMS Resolution no. 9/22/09/2022.

Having reviewed the work of the Committee for Strategy, Development and Large Investment Projects, we believe that it allowed the outlining/crystallization of a consistent and structured approach to the strategic directions of development of SNN.



16. REMUNERATION OF THE MEMBERS OF THE BOARD OF DIRECTORS
GRI 102-35, 102-36

Pursuant to the provisions of the Government's Emergency Ordinance no. 109/2011 on the corporate governance of public enterprises, as subsequently amended and supplemented, the remuneration policy and criteria for directors and executives of the unitary system are made public on the website of SNN, under the section "Investor Relations - Remuneration Policy".

Link:
https://www.nuclearelectrica.ro/ir/wp-content/uploads/sites/9/2021/05/EN-OGMS-ITEM-8-Politica-de-remunerare-CA-si Directori_final_tc_kalimera.pdf

According to the current provisions, i.e. Article 37 of the Government Emergency Ordinance no. 109/2011, as subsequently amended and supplemented, the fixed remuneration of the executive members of the Board of Directors may not exceed two times the average gross salary for the last 12 months for the activity carried out according to the main object of activity registered by the Company, at class level according to the classification of activities in the national economy, communicated by the National Institute of Statistics prior to the appointment. The fixed remuneration of the executive members of the Board of Directors may not exceed 6 times the average gross monthly salary for the last 12 months for the activity carried out according to the main object of activity registered by the Company, at class level according to the classification of activities in the national economy, communicated by the National Institute of Statistics prior to the appointment.

The fixed and variable compensation of the members of the Board of Directors is approved by the General Meeting of SNN Shareholders. The general limits of the executives' remuneration (executive for the purposes of Article 143 of Law no. 31/1990) are approved by the General Meeting of Shareholders; based on these general limits, the Board of Directors sets the amount of the executives' remuneration. The fixed remuneration of the executives with a mandate contract may not exceed 6 times the average gross salary due for the work rendered, according to the main object of activity registered by the Company, at class level according to the classification of activities in the national economy, communicated by the National Institute of Statistics prior to the appointment.

As regards Mr. Teodor Minodor Chirică, on his appointment date, i.e. in the Ordinary General Meeting of 27 July 2020 until 28 September 2022, the monthly gross fixed

allowance of the elected director was approved as equal to twice the last 12-month average of monthly gross average salary due for the work rendered according to the main scope of business registered by the Company, at class level according to the classification of activities in the national economy communicated by the National Institute of Statistics prior to appointment, plus the variable component amounting to 12 monthly fixed allowances determined based on the financial and non-financial performance ratios, as these were negotiated with the directors currently in office of the Company and approved by the Ordinary General Meeting of Shareholders by Resolution no. 3/10.04.2019.

Under the OGMS Resolution no. 6/10.08.2022, appointment of the following persons was approved: Teodor Minodor Chirca, Cosmin Ghiță and Elena Popescu, effective 29 September 2022, for a 4-year term of office, according to the provisions of Article 29(1) of the Government Emergency Ordinance no. 109/2011, as well as the monthly gross fixed allowance of the non-executive members of the Board of Directors, amount to two times the monthly gross average salary earnings due over the last 12 months for the work rendered according to the main scope of business registered by the company, at class level according to the classification of activities in the national economy communicated by the National Institute of Statistics prior to the appointment, and approval of the variable component of non-executive directors amounting to 12 monthly fixed allowances, plus the monthly gross fixed allowances of the executive member of the Board of Directors, amounting to six times the last 12-month average of the monthly gross average salary earnings for the work rendered according to the main scope of business registered by the company, at class level according to the classification of activities in the national economy communicated by the National Institute of Statistics prior to the appointment, and approval of the variable component of the executive director.

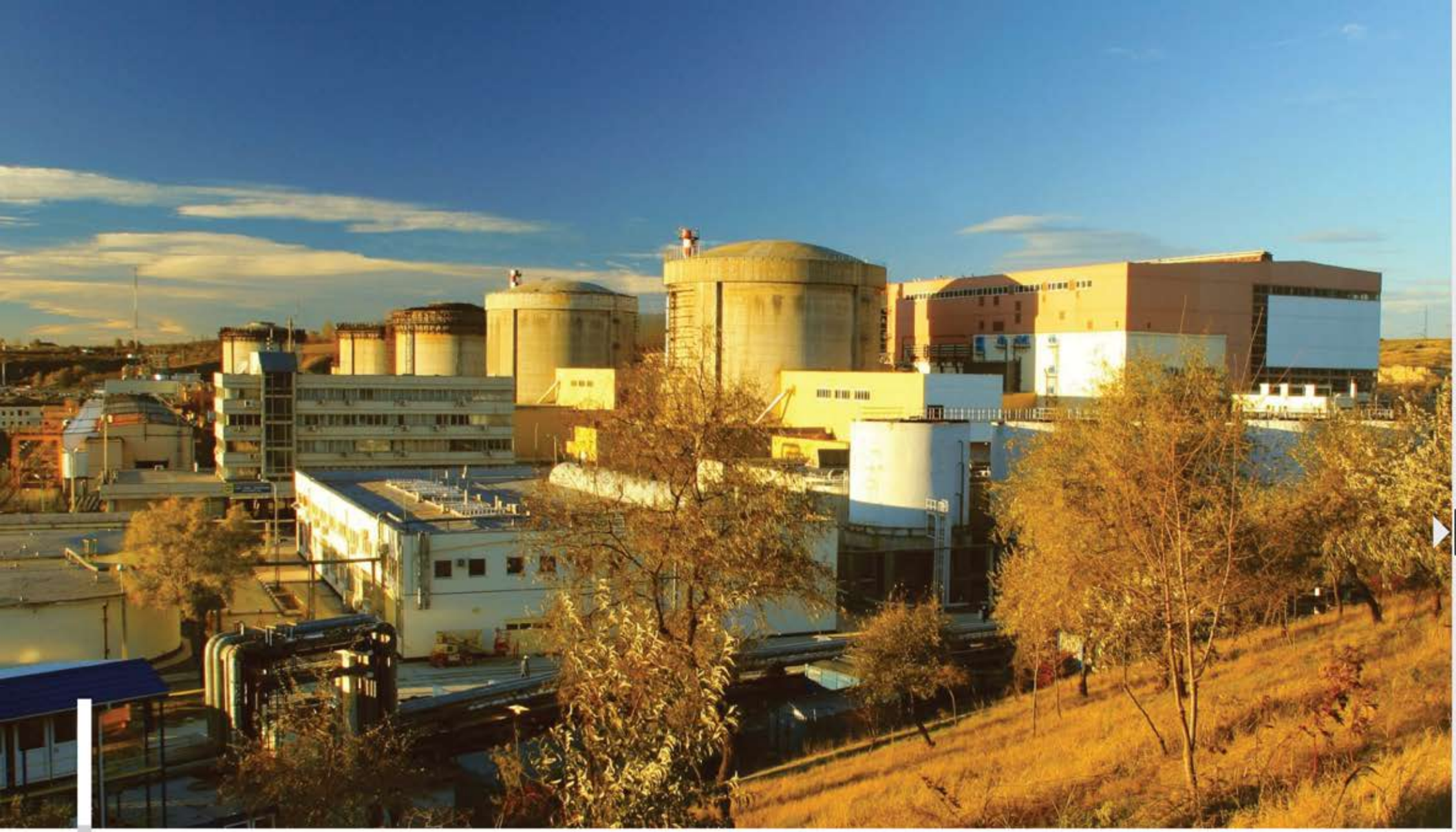
As to renewal of the term of office of Mr. George Sergiu Niculescu, which came to an end on 28 August 2022, by 2 months, effective 29 August 2022, in accordance with the provisions of article 641(3) and (5) of the Government Emergency Ordinance no. 109/2011, as subsequently amended and supplemented, or until the date of acceptance of office by a director appointed in accordance with the provisions of Government Emergency Ordinance no. 109/2011, as subsequently amended and supplemented, if the selection is completed before the indicated term, maintenance of the monthly gross fixed allowance for the provisional member of the Board of Directors and of the variable component, as approved under the OGMS Resolution no. 5/28.04.2022, was approved.

As to Mr. Dumitru Chirlesan, the OGMS Resolution no. ... approved his election as provisional member of the Board of Directors, effective of 10 August 2022, for a 4-month term of office, in accordance with the provisions of article 641(3) and (5) the Government Emergency Ordinance no. 109/2011, as subsequently amended and supplemented, or until completion of the selection procedure of the directors selected in accordance with the provisions of Government Emergency Ordinance no. 109/2011, if selection is completed before the indicated term, and the monthly gross fixed allowance for the provisional member of the Board of Directors, of lei 15,057, i.e. equal to that of the latest director in office selected pursuant to the Government Emergency Ordinance no. 109/2011, as well as of a variable component determined in the very same way as that of the directors in office, at the level of the short-term component, and paid pro-rata with the term of the temporary office.

Under the OGMS Resolution no. 10/19.10.2022, Vasilica Grăjdan, Vulpescu Remus Dumitru and Niculescu George Sergiu were appointed as provisional members, for a term of office of 4 months, pursuant to the provisions of Article 641(3) and (5) of the Government Emergency Ordinance no. 109/2011, and the monthly gross fixed allowances of the provisional members of the Board of Directors, of lei 17,926, i.e. equal to that of the directors the office of whom was renewed according to the OGMS Resolution no. 6/10.08.2022, plus a variable component determined in the very same way as for the directors in office, at the level of the short-term component, and paid pro-rata with the period of the provisional office, were approved.

Detailed information about the remuneration of directors and executives in 2022 can be found in the Report of the Nomination and Remuneration Committee, enclosed to this Report.

- The monthly fixed allowance, amounting to 5-6 times the last-12-months-average of the monthly gross salary earnings paid for the work rendered according to the class-level registered main scope of the Company's business, according to the classification of activities in the national economy, as communicated by the National Institute of Statistics before appointment;
- Annual variable component, ranging between 24 to 36 times the average monthly gross salary earnings paid for the work rendered according to the class-level registered main scope of the Company's business, according to the classification of activities in the national economy, as communicated by the National Institute of Statistics before appointment.

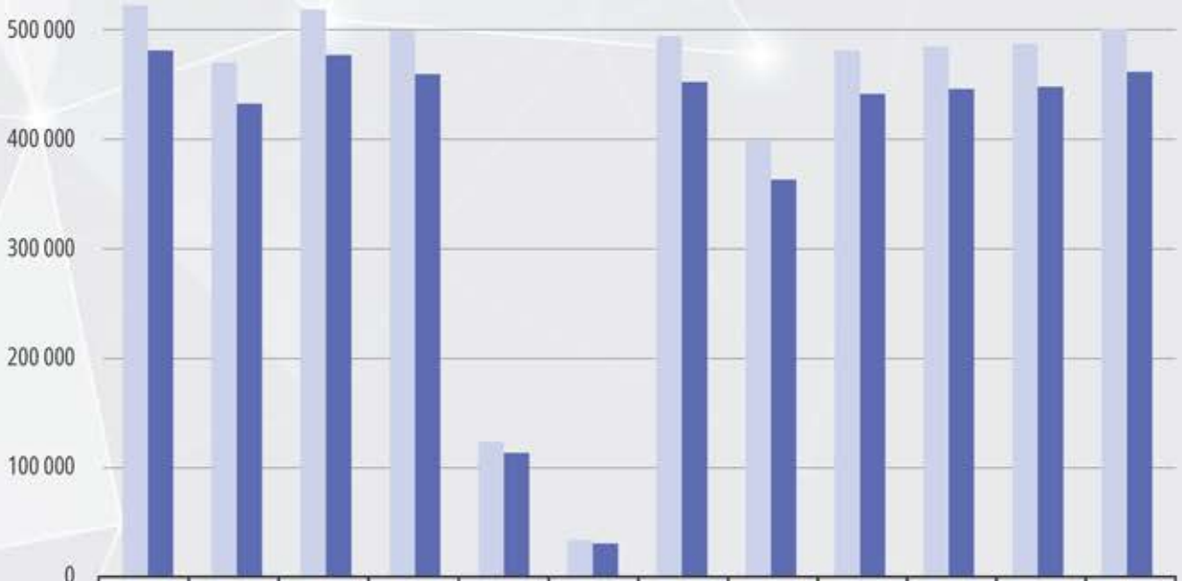


17. OPERATIONAL RESULT - CERNAVODA NPP

GRI 302-1, 302-2, EU-30

17.1 PRODUCED/NET ELECTRICITY (MWH)

U1 - 2022

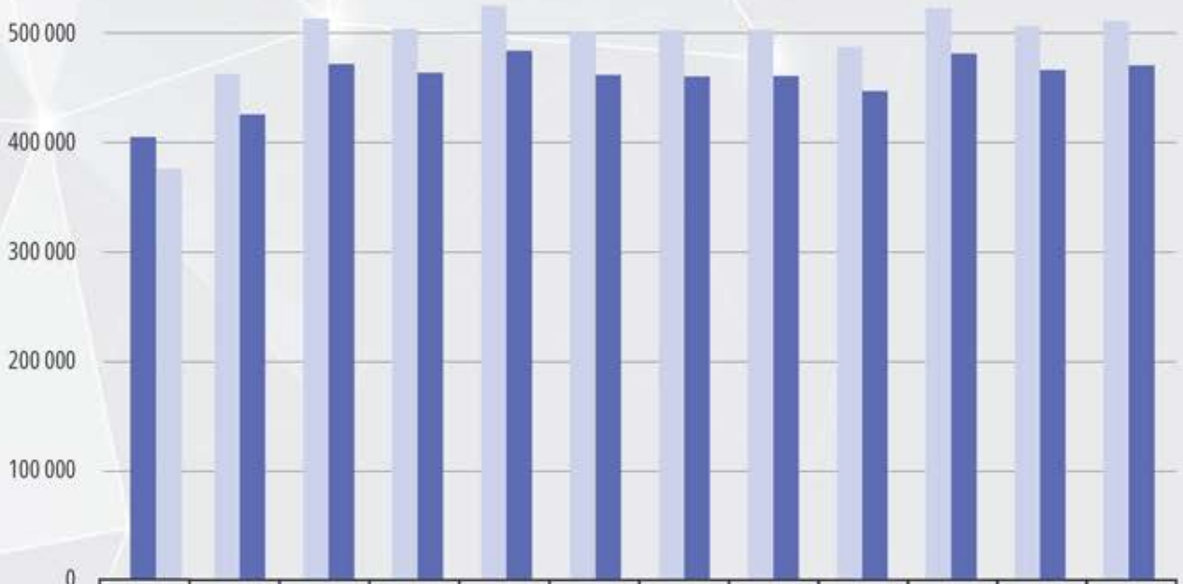


U1 - 2022		Jan.	Feb.	March	April	Maj	June	July	August	Sept.	Oct.	Nov.	Dec.
	Produced electricity	522165	470037	518490	499702	123842	34263	494035	397960	480962	484719	487000	500740
	Net electricity	480956	432610	476962	459583	113606	31057	452407	363025	441283	445841	447848	461400

U1 -TOTAL 2022	
Produced electricity	Net electricity
5 013 915	**4 606 578**
Average own technological consumption: **8.24%**	

PRODUCED/NET ELECTRICITY (MWH)

U1 - 2021

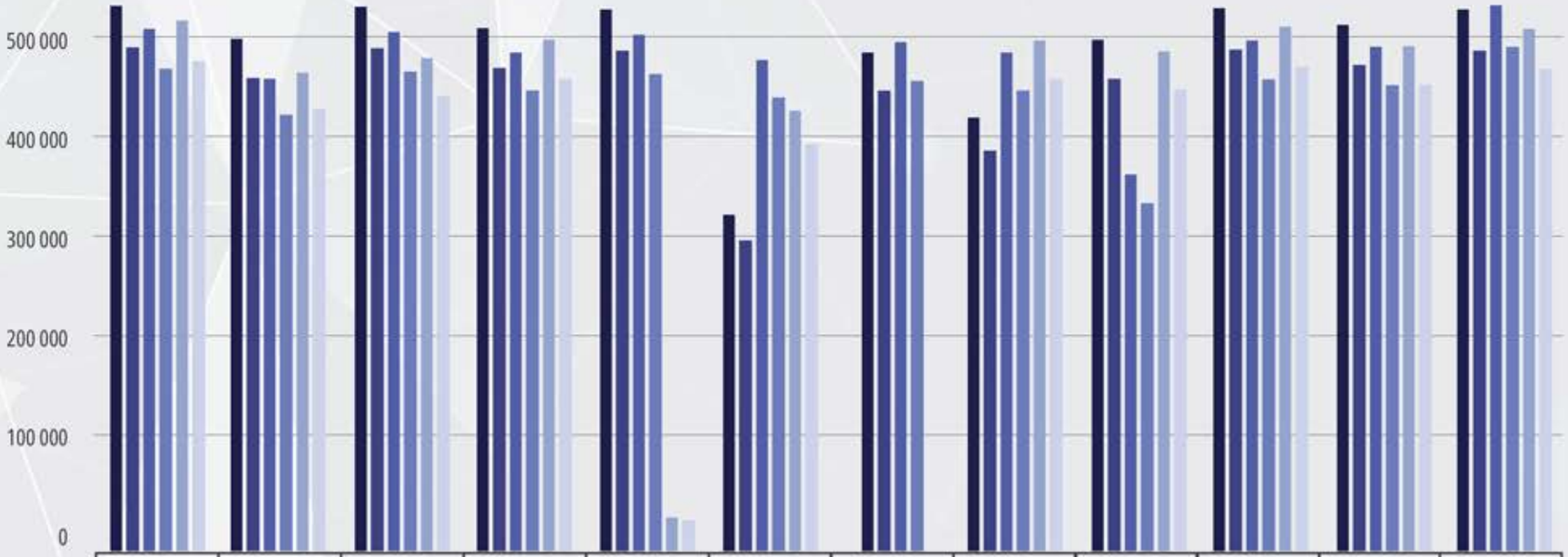


U1 - 2022	Jan.	Feb.	March	April	May	Junie	Julie	August	Sept.	Oct.	Nov.	Dec.
Produced electricity	404478	461290	511607	502535	523570	500281	501375	501724	485866	521433	505050	509840
Net electricity	372171	424380	470492	462552	482515	460098	459041	459349	445821	479919	465001	469173

U1 -TOTAL 2022	
Produced electricity	Net electricity
5 929 019	**5 450 512**
Average own technological consumption: **8.08%**	

PRODUCED/NET ELECTRICITY (MWH)

U1 - 2020 | 2019 | 2018



	Electricity	Jan.	Feb.	March	April	May	June	Julie	August	Sept.	Oct.	Nov.	Dec.
U1 - 2020	Produced	530432	496946	529568	508474	525488	324014	0	418822	495106	526477	512202	528376
	Net	487268	456506	486927	468120	484151	298279	0	383418	454677	485077	472058	486770
U1 - 2019	Produced	505440	456608	504767	488819	502683	478970	485180	485838	362658	495619	490369	530924
	Net	462883	418118	462230	447598	460473	437811	441747	442258	330205	452762	448752	487829
U1 - 2018	Produced	515163	464488	478885	496337	23123	428392	493408	495982	484546	509511	490090	506816
	Net	472329	425724	439002	455147	21133	390620	450230	452090	442594	466789	448666	464173

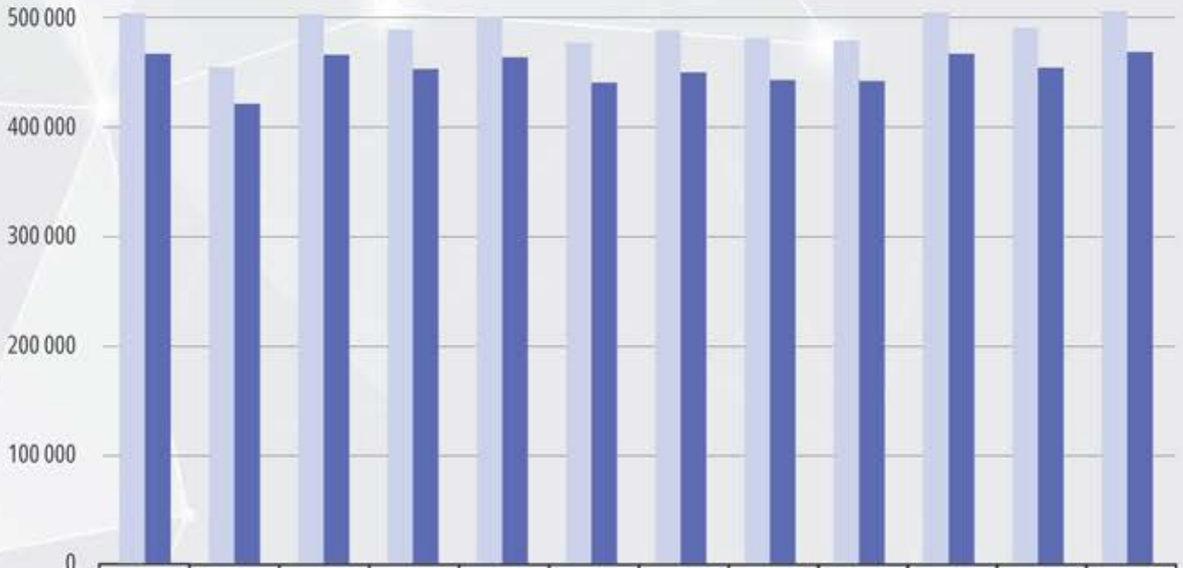
U1 -TOTAL 2020	
Produced electicity	Net electicity
5 395 904	**4 963 253**
Average own technological consumption: **8.02 %**	

U1 -TOTAL 2019	
Produced electicity	Net electicity
5 787 876	**5 292 668**
Average own technological consumption: **8.57 %**	

U1 -TOTAL 2018	
Produced electicity	Net electicity
5 386 742	**4 928 499**
Average own technological consumption: **8.52 %**	

17.2 PRODUCED/NET ELECTRICITY (MWH)

U2 - 2022



U2 - 2022	Jan.	Feb.	March	April	May	June	Julie	August	Sept.	Oct.	Nov.	Dec.
Produced electricity	520716	469695	519949	505416	517607	492924	504540	497391	495046	521578	507136	522796
Net electricity	482381	435008	481414	468064	479078	454772	464869	457574	456579	482361	469404	483955

U2 -TOTAL 2022	
Produced electicity	Net electicity
6 074 794	**5 615 458**
Average own technological consumption: **7.56%**	

PRODUCED/NET ELECTRICITY (MWH)

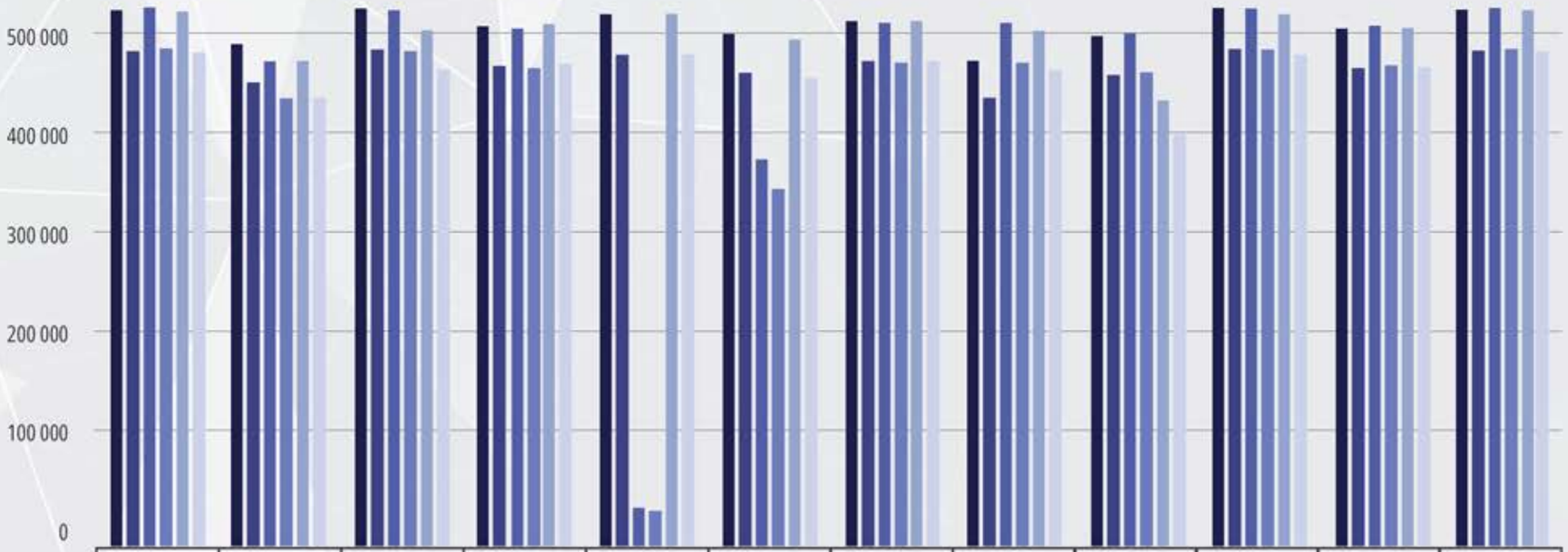
U2 - 2021

U2 - 2021	Jan.	Feb.	March	April	May	June	Julie	August	Sept.	Oct.	Nov.	Dec.
Produced electricity	517194	569876	520688	504193	141501	261234	429047	506362	499095	480016	504268	521798
Net electricity	478600	434978	482167	466676	130921	240443	394307	466695	461483	443895	466969	483514

U2 -TOTAL 2022	
Produced electicity	Net electicity
5 355 301	**4 950 650**
Average own technological consumption: **7.57%**	

PRODUCED/NET ELECTRICITY (MWH)

U2 - 2020 | 2019 | 2018



Electricity		Jan.	Feb.	March	April	May	June	Julie	August	Sept.	Oct.	Nov.	Dec.
U2 - 2020	Produced	520917	487941	521720	504868	516612	497094	509397	470783	495831	520966	503571	520800
	Net	482146	451531	482815	467194	477671	459334	469921	433659	457579	482130	465793	482045
U2 - 2019	Produced	521050	470153	520846	503167	39962	375326	508145	507427	497706	521128	505194	522187
	Net	482036	434694	481563	465236	36911	346130	468261	467640	459431	482155	467905	483579
U2 - 2018	Produced	518704	471717	501670	505611	516767	492255	509888	501498	432506	516363	503577	520137
	Net	479703	436316	463751	467891	477570	453191	469600	461048	398486	476886	465373	481024

U2 -TOTAL 2020	
Produced electicity	Net electicity
6 070 500	**5611815**
Average own technological consumption: **7.56 %**	

U2 -TOTAL 2019	
Produced electicity	Net electicity
5 492 291	**5 075 542**
Average own technological consumption: **7.60 %**	

U2 -TOTAL 2018	
Produced electicity	Net electicity
5 990 693	**5 530 839**
Average own technological consumption: **7.68 %**	

17.3 PRODUCED/NET ELECTRICITY (MWH)

U1 + U2 - 2022

U1 + U2 - 2022		Jan.	Feb.	March	April	May	June	Julie	August	Sept.	Oct.	Nov.	Dec.
	Produced electricity	1042881	939732	1038439	1005118	641449	527187	998575	895351	976008	1006297	994136	1023536
	Net electricity	983337.28	887818.45	958375.45	927848.37	592885.62	485828.42	917278.42	820598.43	897862.30	928202.03	917252.03	945354.30

U1 + U2 -TOTAL 2022	
Produced electricity	Net electricity
11 088 709	**10 222 037**
OWN TECHNOLOGICAL ELECTRICITY CONSUMPTION	
Aggregate achieved 2022: **7.90%**	Planned in the project: **max 10,00%**

PRODUCED/NET ELECTRICITY (MWH)

U1 + U2 - 2021

U1 + U2 - 2021	Jan.	Feb.	March	April	May	June	Julie	August	Sept.	Oct.	Nov.	Dec.
Produced electricity	921642	931166	1032295	1006728	665071	781515	930451	1008086	984961	1001449	1009318	1031638
Net electricity	850771	859359	952659	929228	613436	700542	853349	926045	907303	923814	931971	952686

U1 + U2 -TOTAL 2021	
Produced electicity	Net electicity
11 284 320	**10 222 037**
OWN TECHNOLOGICAL ELECTRICITY CONSUMPTION	
Aggregate achieved 2021: **7.82%**	Planned in the project: **max 10,00%**

PRODUCED/NET ELECTRICITY (MWH)

U2 - 2020 | 2019

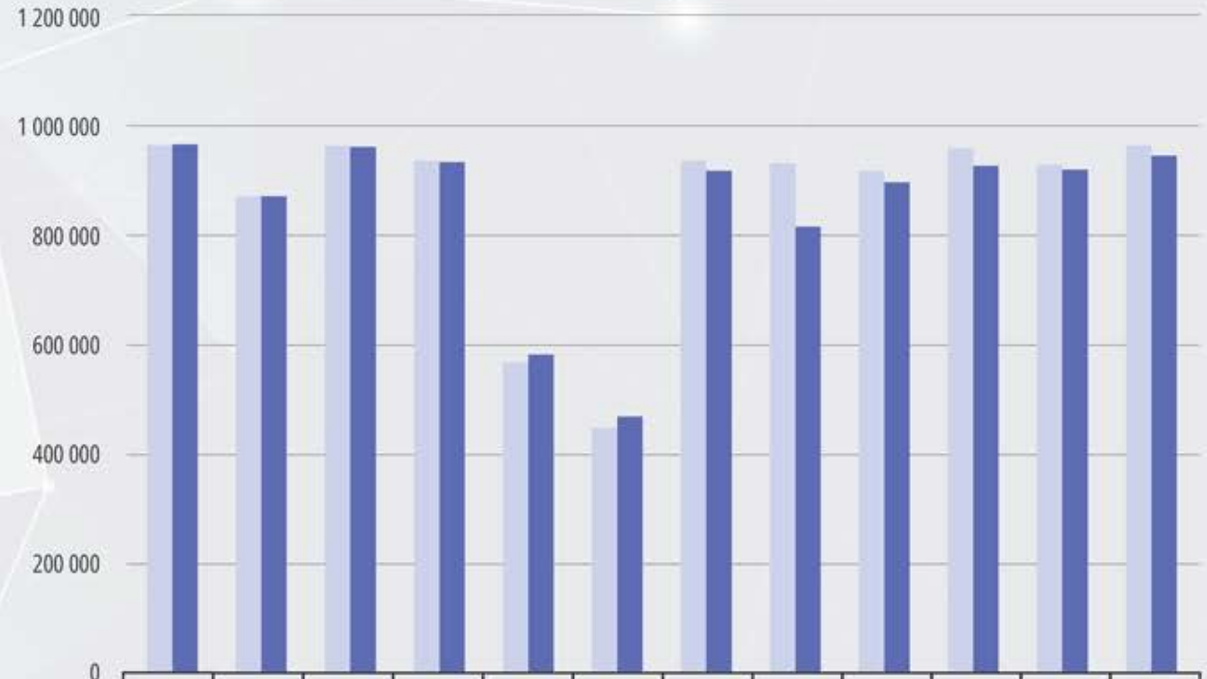
	Electricity	Jan.	Feb.	March	April	May	June	Julie	August	Sept.	Oct.	Nov.	Dec.
U2 - 2020	Produced	1051349	984887	1051288	1013342	1042100	821108	509397	889605	990937	1047443	1015773	1049176
	Net	969414	908037	969742	935315	961823	757613	469921	817076	912256	967207	937851	968815
U2 - 2019	Produced	1026490	926762	1025613	991986	542645	854296	993325	993265	860364	1016747	995563	1053111
	Net	944919	858812	943793	912834	497384	783942	910007	909899	789637	934918	916658	971408

U1 + U2 -TOTAL 2020	
Produced electicity	Net electicity
11 466 405	**10 575 068**
OWN TECHNOLOGICAL ELECTRICITY CONSUMPTION	
Aggregate achieved 2021: **7.79%**	Planned in the project: **max 10,00%**

U1 + U2 -TOTAL 2019	
Produced electicity	Net electicity
11 280 167	**10 368 211**
OWN TECHNOLOGICAL ELECTRICITY CONSUMPTION	
Aggregate achieved 2021: **8.08%**	Planned in the project: **max 10,00%**

17.4 AMOUNT OF ELECTRICITY GENERATED / PLANNED

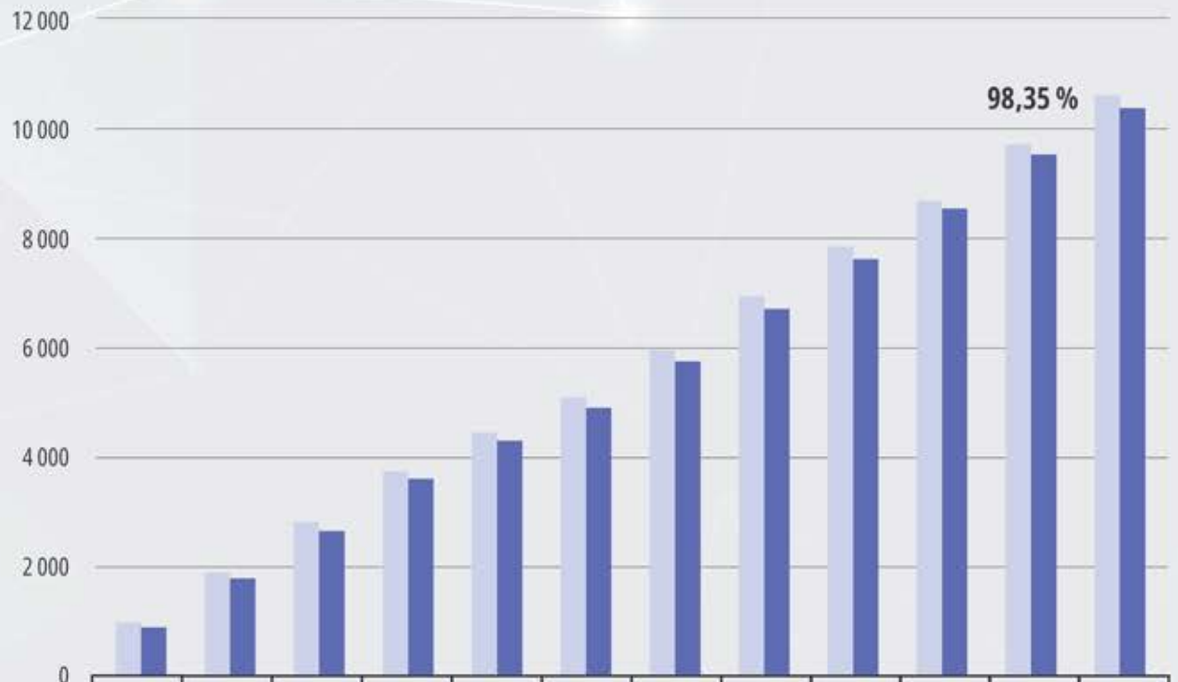
2022



2022		Jan.	Feb.	March	April	May	June	Julie	August	Sept.	Oct.	Nov.	Dec.
	Amount of electricity committed	965.0	870.7	963.5	933.7	573.7	454.4	935.2	931.4	914.4	959.5	928.8	961.9
	Amount of electricity obtained	963.3	867.5	958.4	927.6	586.7	475.4	917.2	816.1	897.8	927.0	917.2	944.7

AMOUNT OF ELECTRICITY GENERATED / PLANNED

2021

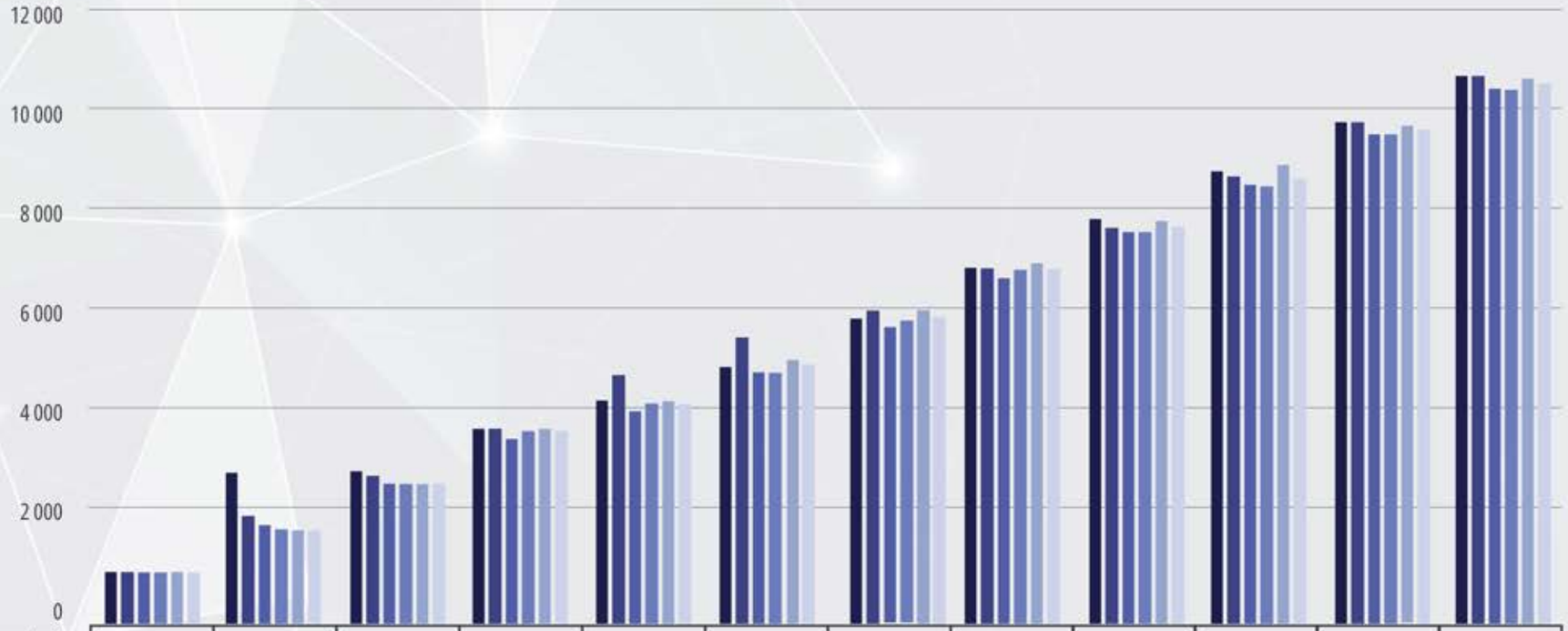


		Jan.	Feb.	Marth	April	May	June	Julie	August	Sept.	Oct.	Nov.	Dec.
2021	Amount of electricity committed	959	1826	2786	3715	4312	4941	5875	6804	7716	8672	9596	10551
	Amount of electricity obtained	847	1706	2659	3588	4195	4890	5739	6665	7572	8493	9425	10377

Percentage achieved 2021: **98.35 %**

AMOUNT OF ELECTRICITY GENERATED / PLANNED

2020 | 2019 | 2018



	Amount of electricity	Jan.	Feb.	March	April	May	June	Julie	August	Sept.	Oct.	Nov.	Dec.
2020	committed	964	2866	2827	3759	4261	4953	5891	6822	7734	8691	9618	10578
	obtained	960	1877	2877	3783	4744	5499	5960	6772	7684	8651	9589	10558
2019	committed	941	1791	2732	3486	3968	4814	5726	6634	7526	8461	9365	10228
	obtained	945	1798	2742	3654	4142	4919	5829	6739	7524	8459	9375	10347
2018	committed	953	1815	2767	3687	4177	5032	5955	6876	7777	8722	9634	10581
	obtained	952	1814	2714	3637	4128	4969	5889	6802	7640	8584	9498	10443

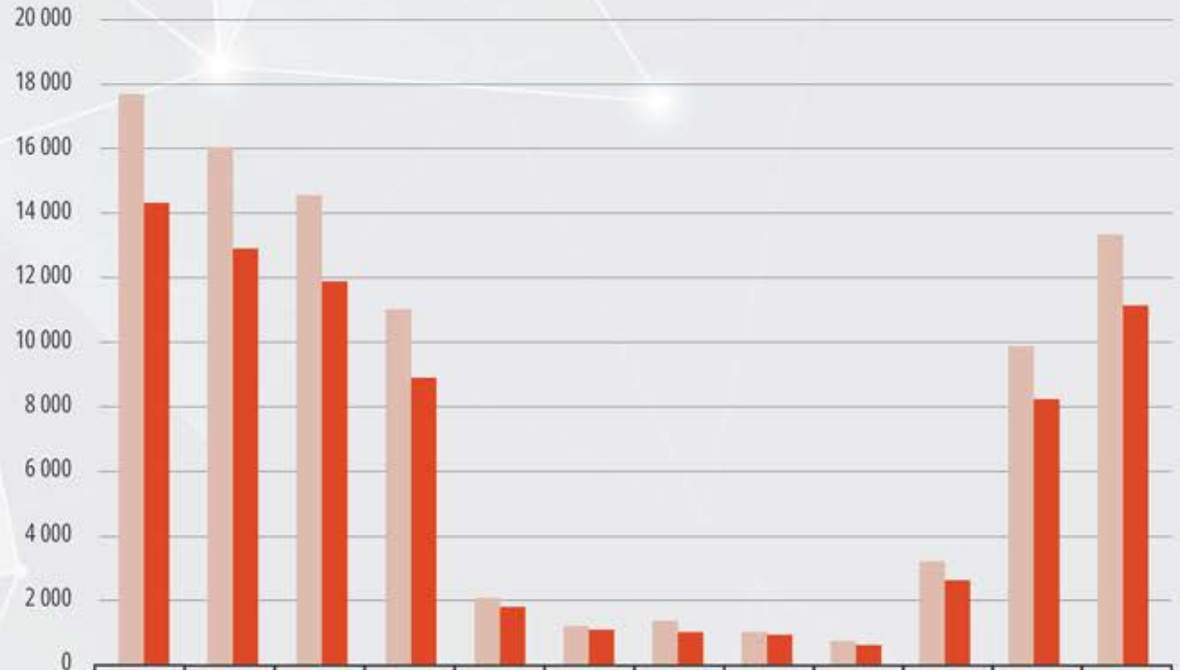
Percentage achieved 2020: **99.81 %**

Percentage achieved 2019: **101.16 %**

Percentage achieved 2018: **98.69 %**

17.5 HEAT DELIVERED FOR DISTRICT HEATING /SOLD (GCAL)

2022



2022	IJn.	Feb.	March	April	May	June	Julie	August	Sept.	Oct.	Nov.	Dec.
Thermal energy delivered	17649.5	15869.1	14467.4	11033.2	2166.36	1230.09	1245.84	1005.16	703.152	3175.39	9842.01	13312.2
Thermal energy sold	14232.2	12817.5	11749.1	8851.02	1771.86	1066.8	936.305	872.4	608.077	2566.57	8110.6	11012.2

TOTAL 2022	
Thermal energy delivered	Thermal energy sold
91 699.36	**74 594.56**

HEAT DELIVERED FOR DISTRICT HEATING /SOLD (GCAL)

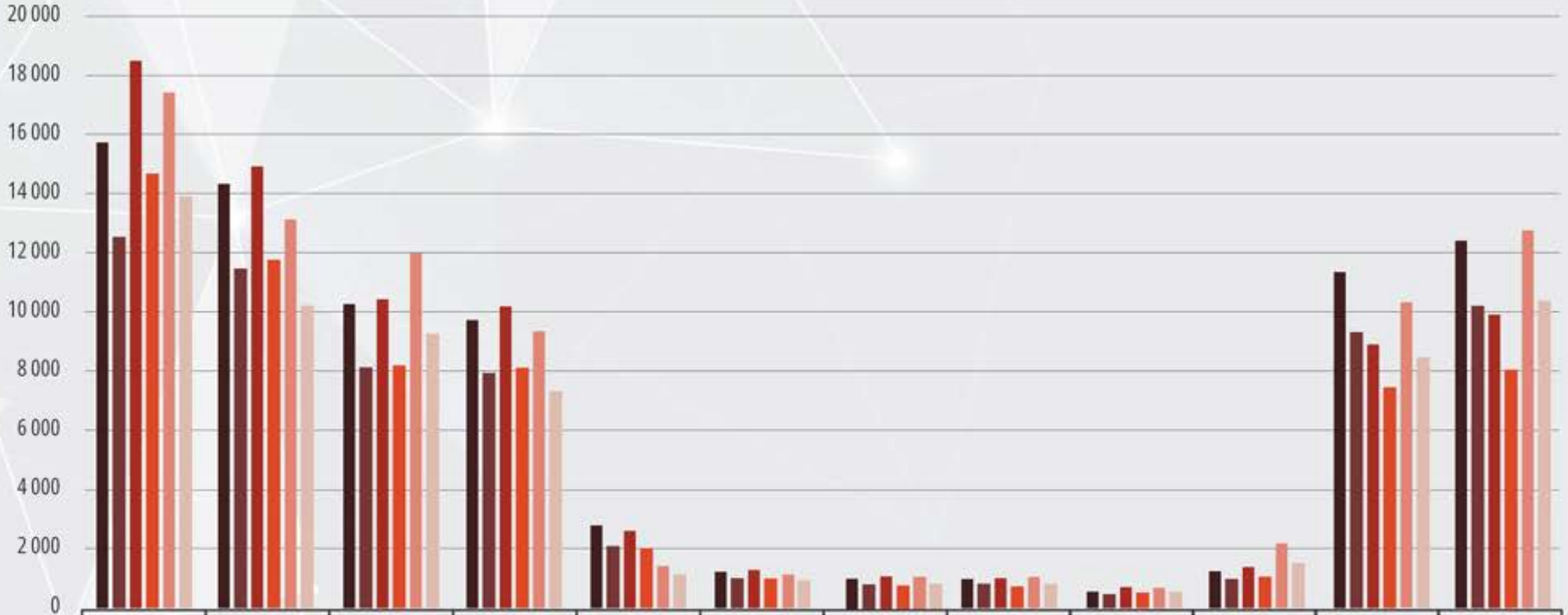
2021

2021	Jan.	Feb.	March	April	May	June	Julie	August	Sept.	Oct.	Nov.	Dec.
Thermal energy delivered	16792	16268	13694	12912	3584	1299	1020	1045	731	6074	11861	13800
Thermal energy sold	13511	13181	11078	10612	2823	1045	876	913	635	4874	9973	11252

TOTAL 2021	
Thermal energy delivered	Thermal energy sold
99 081	**80 771**

HEAT DELIVERED FOR DISTRICT HEATING /SOLD (GCAL)

2020 | 2019 | 2018



	Thermal energy	Jan.	Feb.	March	April	May	June	Julie	August	Sept.	Oct.	Nov.	Dec.
2020	delivered	15809	14400	10352	9824	2929	1398	1158	1166	750,93	1406	11455	12513
	sold	12595	11567	8237	7946	2198	1150	996	1010	633	1148	9428	10283
2019	delivered	18500	14945	10525	10310	2764	1439	1202	1148	890	1598	8983	10011
	sold	14735	11816	8307	8112	2067	1184	937	915	721	1225	7576	8144
2018	delivered	17427	13183	12054	9460	1501	1313	1212	1204	847	2356	10407	12836
	sold	13977	10318	9354	7499	1205	1118	1005	1000	698	1682	8603	10479

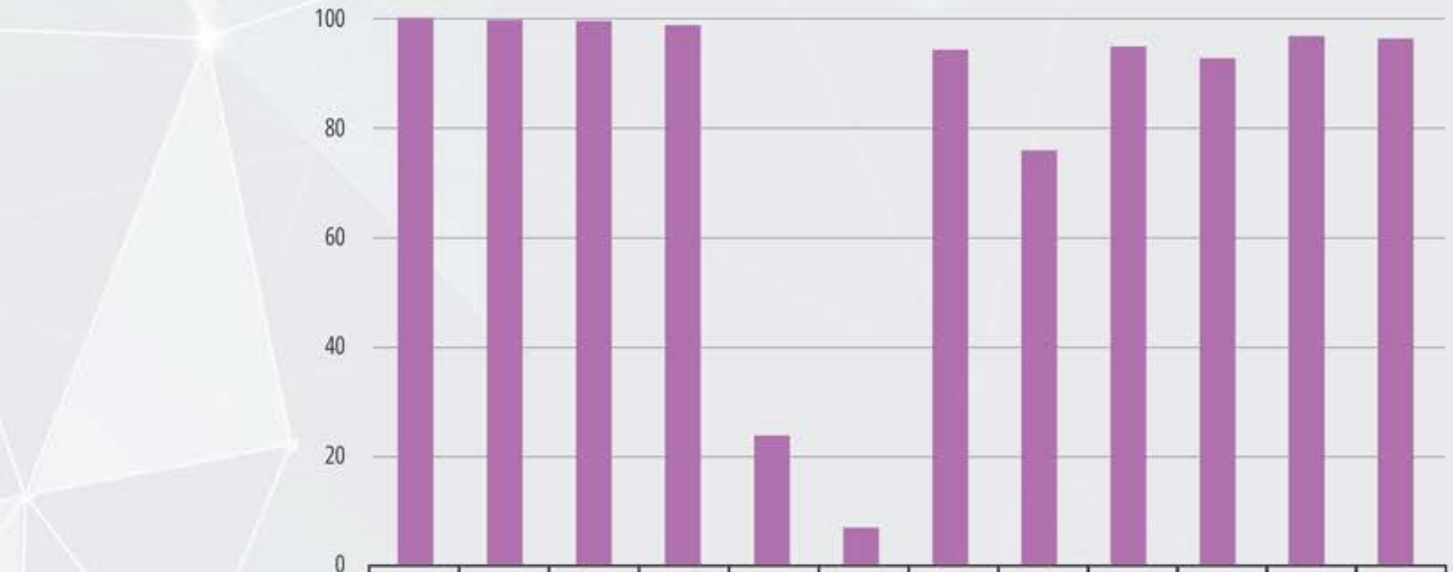
TOTAL 2020	
Thermal energy delivered	Thermal energy sold
83 260	**67 189**

TOTAL 2019	
Thermal energy delivered	Thermal energy sold
82 320	**65 737**

TOTAL 2018	
Thermal energy delivered	Thermal energy sold
83 799	**66 940**

17.6 COEFFICIENT OF USE OF THE INSTALLED POWER (%)

U1 - 2022



		Jan.	Feb.	March	April	May	June	Julie	August	Sept.	Oct.	Nov.	Dec.
U1 - 2022	Coefficient of use **U1**	100.00	98.58	99.37	98.64	23.58	6.75	94.12	76.75	94.75	92.56	96.62	96.16

Aggregate U1 2022: **81.42 %**

COEFFICIENT OF USE OF THE INSTALLED POWER (%)

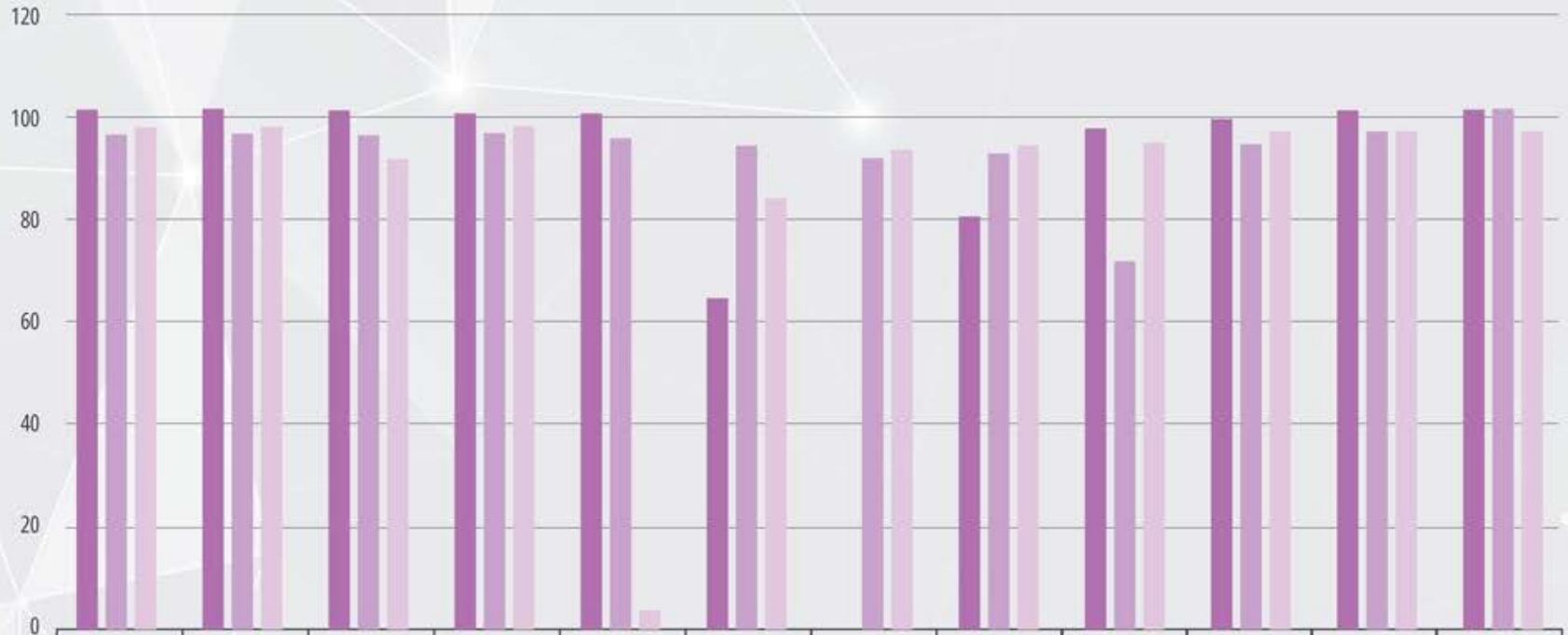
U1 - 2021

U1 - 2021	Jan.	Feb.	March	April	May	June	Julie	August	Sept.	Oct.	Nov.	Dec.
Coefficient of use **U1**	77.19	97.78	98.08	99.21	99.86	98.59	95.66	96.70	95.58	99.58	99.81	97.71

Aggregate U1 2021: **96.19 %**

COEFFICIENT OF USE OF THE INSTALLED POWER (%)

U1 - 2020 | 2019 | 2018

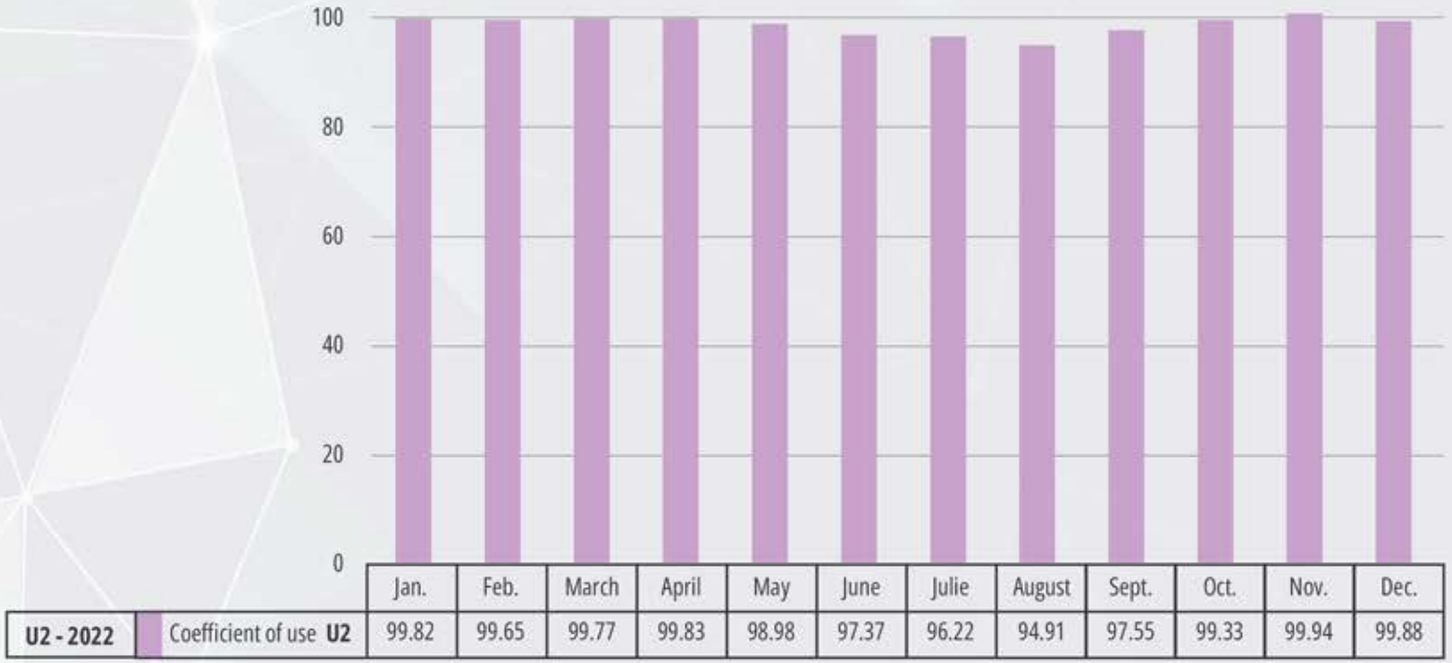


		Jan.	Feb.	March	April	Maj	Junie	Julie	August	Sept.	Oct.	Nov.	Dec.
2020	Coefficient of use **U1**	101.53	101.64	101.37	100.38	100.1	63.75	0.00	79.87	97.64	100.34	101.05	101.11
2019	Coefficient of use **U1**	96.78	96.7	96.6	96.47	95.96	94.46	92.41	92.54	71.43	94.37	96.79	101.6
2018	Coefficient of use **U1**	98.6	98.5	91.7	97.9	4.4	84.2	93.8	94.3	95.2	96.8	96.8	97.00

Planned U1 2020: **87.50 %** (internal target NPP)	Planned U1 2019: **92 %** (internal target NPP)	Planned U1 2018: **87,40 %** (internal target NPP)
Aggregate U1 2020: **87.29 %**	Aggregate U1 2019: **93.86 %**	Aggregate U1 2018: **87.31 %**

17.7 COEFFICIENT OF USE OF THE INSTALLED POWER (%)

U2 - 2022

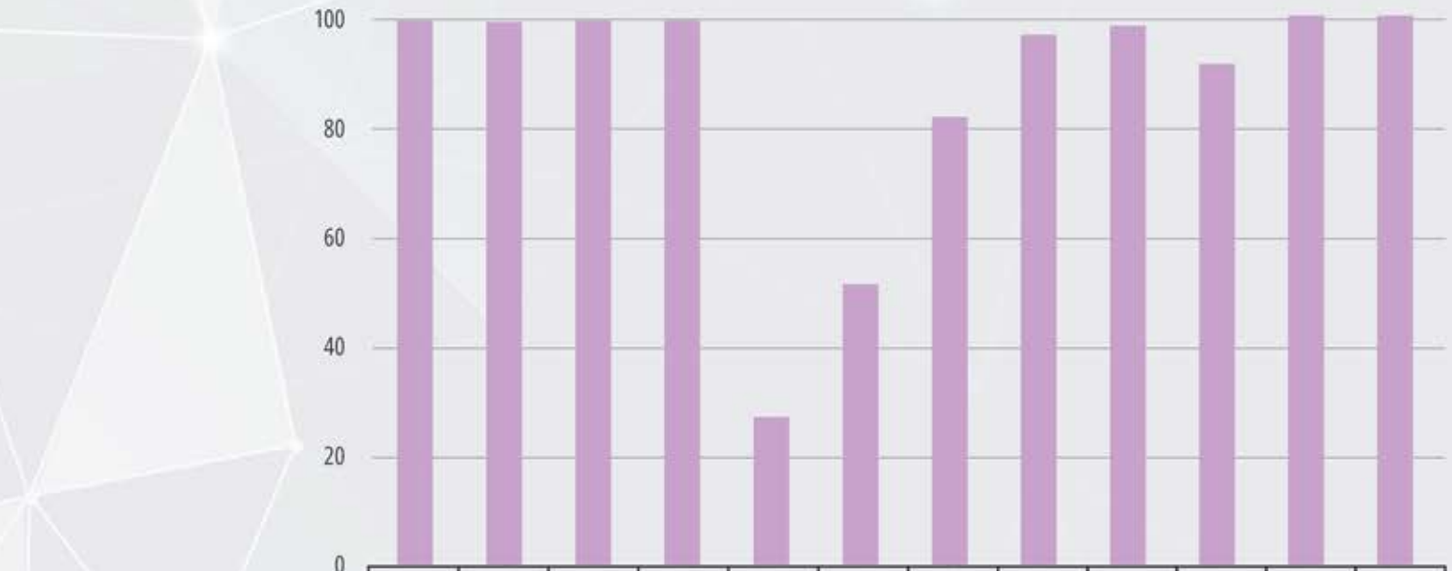


		Jan.	Feb.	March	April	May	June	Julie	August	Sept.	Oct.	Nov.	Dec.
U2 - 2022	Coefficient of use **U2**	99.82	99.65	99.77	99.83	98.98	97.37	96.22	94.91	97.55	99.33	99.94	99.88

AggregateU2 2022: **98.60 %**

COEFFICIENT OF USE OF THE INSTALLED POWER (%)

U2 - 2021



		Jan.	Feb.	March	April	May	June	Julie	August	Sept.	Oct.	Nov.	Dec.
U2 - 2021	Factor de utilizare **U2**	99.55	99.74	99.87	99.67	27.00	51.48	81.83	96.57	98.44	91.70	99.79	99.94

Aggregate U2 2021: **87.02 %**

COEFFICIENT OF USE OF THE INSTALLED POWER (%)

U2 - 2020 | 2019 | 2018

		Jan.	Feb.	March	April	May	June	Julie	August	Sept.	Oct.	Nov.	Dec.
2020	Coefficient of use **U2**	99.87	99.93	100.01	99.77	98.57	98.13	97.39	89.83	97.71	99.28	99.77	99.7
2019	Coefficient of use **U2**	99.93	99.75	99.71	99.53	7.63	73.96	95.93	96.82	98.14	99.3	99.89	100.01
2018	Coefficient of use **U2**	99.45	100.10	96.34	99.81	98.89	97.27	97.44	95.95	85.49	99.01	99.67	99.78

Planned U2 2020: **97 %** (internal target NPP)
Aggregate U2 2020: **98.32%**

Planned U2 2019: **90 %** (internal target NPP)
Aggregate U2 2019: **89.18 %**

Planned U2 2018: **99 %** (internal target NPP)
Aggregate U2 2018: **97.43 %**

17.8 COEFFICIENT OF USE OF THE INSTALLED POWER (%)

U1 + U2 - 2022

		Jan.	Feb.	March	April	May	June	Julie	August	Sept.	Oct.	Nov.	Dec.
2022	Coefficient of use **U1 + U2**	99.91	99.61	99.57	99.24	61.28	52.06	95.17	85.33	96.15	95.95	98.28	98.02
	Cumulated coefficient of use **U1 + U2**	99.91	99.77	99.70	99.59	91.72	85.14	86.61	86.45	87.51	88.37	89.26	90.01

Aggregate U1+U2 2022: **90.01%**

COEFFICIENT OF USE OF THE INSTALLED POWER (%)

U1 + U2 - 2021

		Jan.	Feb.	March	April	May	June	Julie	August	Sept.	Oct.	Nov.	Dec.
2021	Coefficient of use **U1 + U2**	88.37	98.76	98.97	99.44	63.43	75.03	88.75	96.14	97.01	95.64	99.80	98.83
	Cumulated coefficient of use **U1 + U2**	88.37	93.30	95.25	96.30	89.55	87.14	87.38	88.50	89.43	90.07	90.94	91.61

Aggregate U1+U2 2021: **91.61 %**

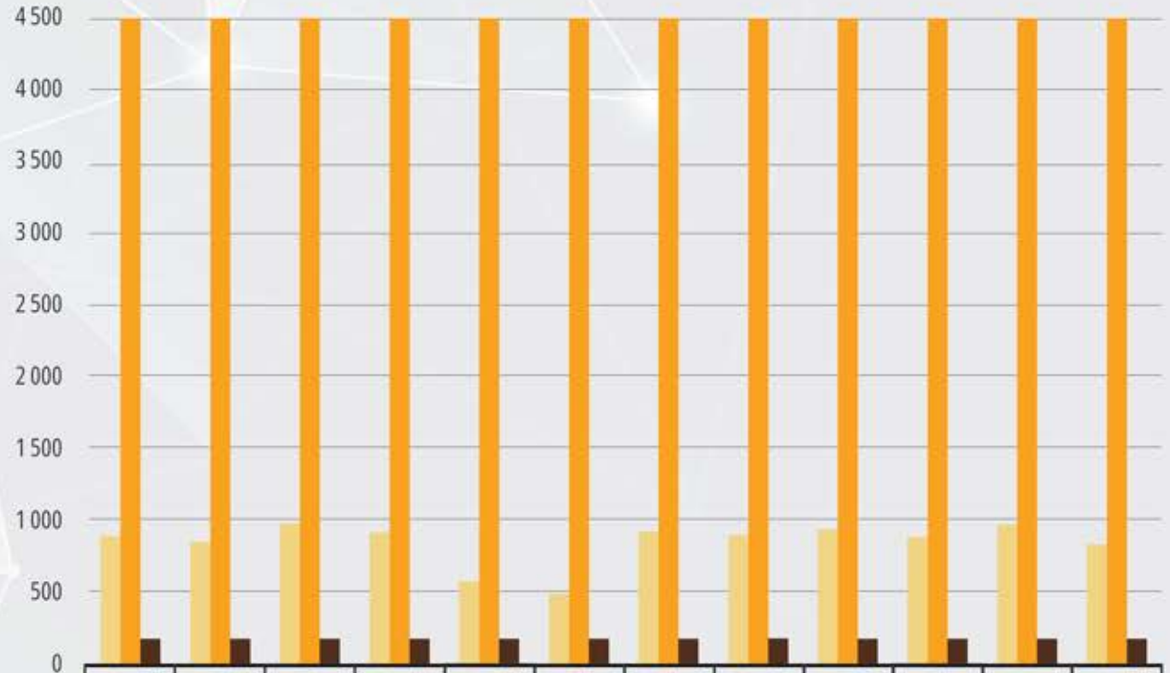
COEFFICIENT OF USE OF THE INSTALLED POWER (%)

U1 + U2 - 2020 | 2019 | 2018

		Jan.	Feb.	March	April	May	June	Julie	August	Sept.	Oct.	Nov.	Dec.
2020	Coefficient of use **U1 + U2**	100.70	100.70	100.69	100.07	99.30	80.94	48.00	84.85	97.67	99.81	100.41	100.41
	Cumulated coefficient of use **U1 + U2**	100.70	100.70	100.73	100.57	100.32	97.12	90.07	89.41	90.31	91.28	92.10	92.80
2019	Coefficient of use **U1 + U2**	98.26	98.28	98.10	98.00	51.10	84.28	84.95	94.71	84.92	98.52	92.24	100.22
	Cumulated coefficient of use **U1 + U2**	98.26	98.28	98.28	98.10	88.88	87.92	87.92	88.91	89.11	88.90	90.55	91.52
2018	Coefficient of use **U1 + U2**	99.05	99.29	94.03	96.86	51.65	90.75	95.65	95.15	90.39	97,55	96.23	96.41
	Cumulated coefficient of use **U1 + U2**	99.05	99.16	97.40	97.77	88.30	88.70	89.72	90.41	90.41	91.18	91.81	92.37

17.9 FUEL CONSUMPTION U1 + U2/FUEL STOCK (BUNDLES)

2022

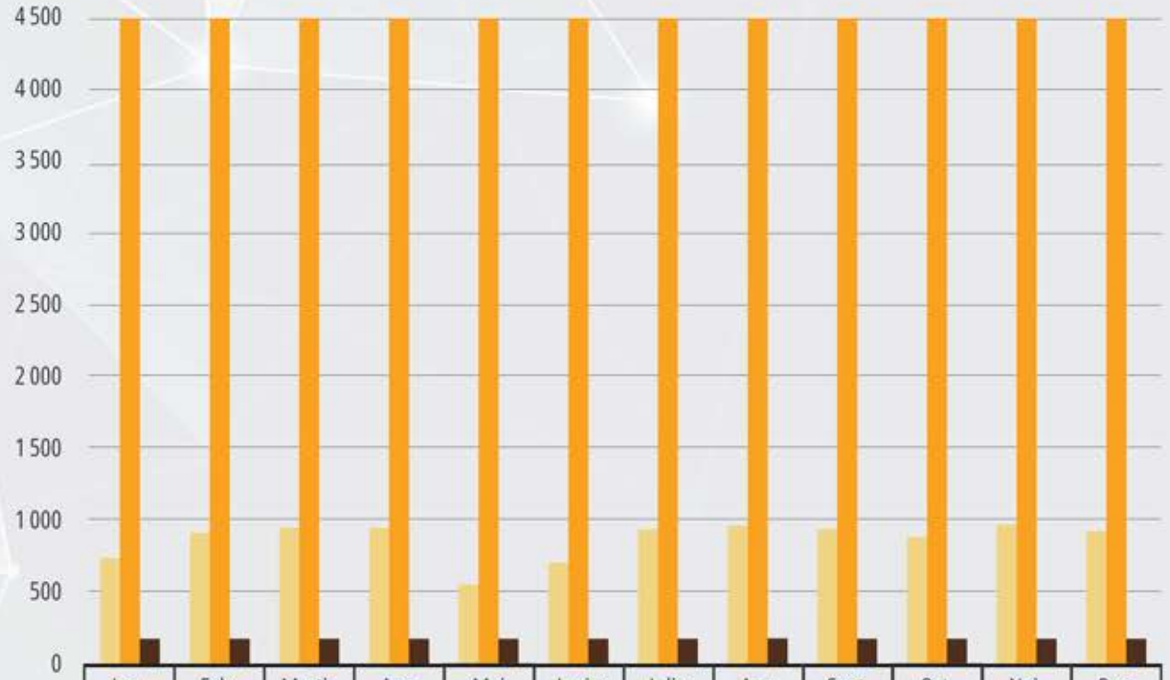


2022	Jan.	Feb.	March	April	May	June	Julie	August	Sept.	Oct.	Nov.	Dec.
Fuel used	896	856	984	920	584	496	928	904	944	888	976	840
Stock of natural fuel	5367	5951	6407	6166	6302	6526	6318	6134	6630	6462	6206	6086
Stock of depleted fuel	182	182	182	182	182	182	182	184	182	182	182	182

Aggregate consumption 2022: **10 216**

FUEL CONSUMPTION U1 + U2/FUEL STOCK (BUNDLES)

2021

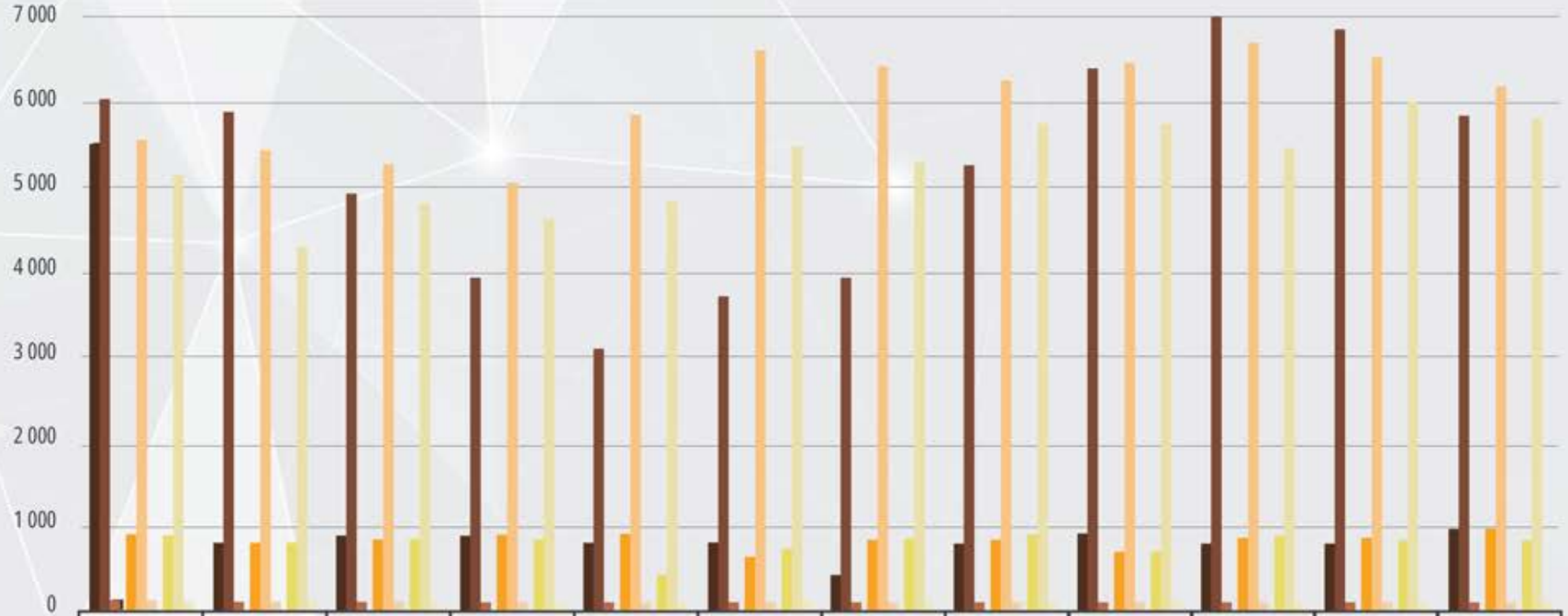


		Ian.	Feb.	Martie	Apr.	Mai	Iunie	Iulie	Aug.	Sept.	Oct.	Noi.	Dec.
2021	Fuel used	728	904	944	952	536	704	936	960	920	864	984	920
	Stock of natural fuel	5879	5695	6191	5959	6143	6159	5943	5703	5503	6079	5815	5615
	Stock of depleted fuel	182	182	182	182	182	182	182	182	182	182	182	182

Aggregate consumption 2021: **10 352**

FUEL CONSUMPTION U1 + U2/FUEL STOCK (BUNDLES)

2020 | 2019 | 2018



		Jan.	Feb.	March	April	May	June	Julie	August	Sept.	Oct.	Nov.	Dec.
2020	Fuel used	896	856	944	976	872	792	512	864	992	848	880	1024
	Stock of natural fuel	6083	5947	5003	4027	3155	3803	4015	5311	6479	7071	6911	5887
	Stock of depleted fuel	186	186	186	186	186	186	182	182	182	182	182	182
2020	Fuel used	944	840	888	952	616	704	916	896	760	952	912	1016
	Stock of natural fuel	5627	5507	5339	5107	5931	6667	6475	6329	6529	6747	6555	6259
	Stock of depleted fuel	190	190	190	190	186	186	186	186	186	186	186	186
2020	Fuel used	944	840	928	928	496	800	928	976	760	852	920	904
	Stock of natural fuel	5203	4363	4875	4667	4891	5531	5323	5787	5747	5515	6035	5851
	Stock of depleted fuel	190	190	190	190	190	190	190	190	190	190	190	190

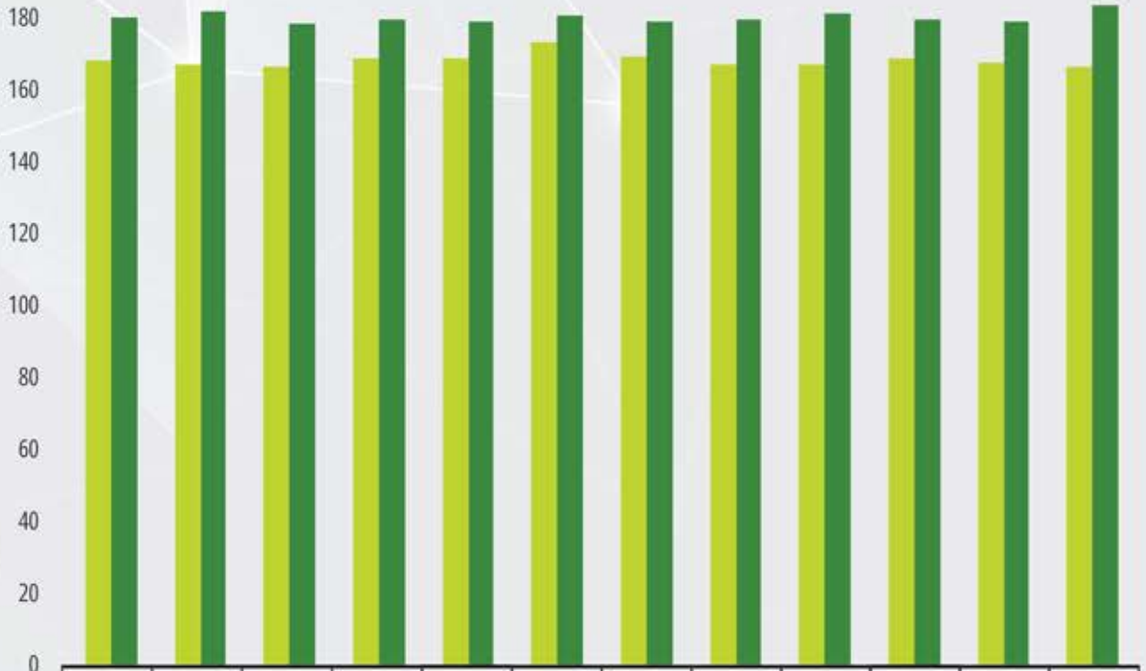
Aggregate consumption 2020: **10 456**

Aggregate consumption 2019: **10 396**

Aggregate consumption 2018: **10 376**

17.10 NUCLEAR FUEL BURN-UP RATE (MWH/ KGU)

2022

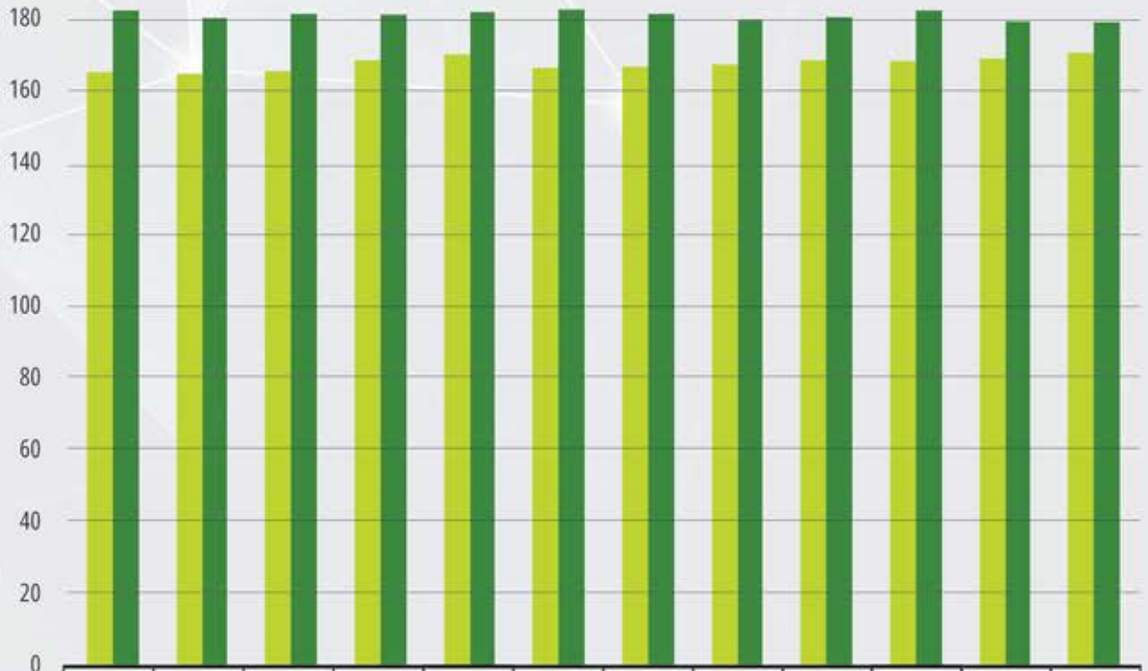


		Jan.	Feb.	March	April	May	June	Julie	August	Sept.	Oct.	Nov.	Dec.
2022	Monthly burn-up rate **U1**	167.90	166.70	166.14	168.59	168.52	173.05	169.17	166.62	166,90	168.21	167.29	166.00
	Monthly burn-up rate **U2**	179.75	181.81	178.18	179.04	178.92	180.17	178.99	179.21	180.99	179.18	178.65	183.53

Aggregate 2022:	Planned in the project:
173.6	**min 156.00**

NUCLEAR FUEL BURN-UP RATE (MWH/ KGU)

2021



		Ian.	Feb.	Martie	Apr.	Mai	Iunie	Iulie	Aug.	Sept.	Oct.	Noi.	Dec.
2021	Monthly burn-up rate **U1**	164.6	164.2	165.0	167.7	169.2	166.0	166.19	167.0	167.7	167.8	168.5	170.2
	Monthly burn-up rate **U2**	181.6	179.6	181.0	180.9	180.6	182.0	180.60	179.0	179.6	181.7	179.4	178.5

Aggregate 2021:	Planned in the project:
173.6	**min 156.00**

NUCLEAR FUEL BURN-UP RATE (MWH/ KGU)

2020 | 2019 | 2018

Monthly burn-up rate		Jan.	Feb.	March	April	May	June	Julie	August	Sept.	Oct.	Nov.	Dec.
2020	U1	169.3	168.9	165.0	172.1	168.9	148.5	0.0	168.7	165.0	168.2	171.1	168.2
	U2	181.6	179.8	179.3	182.4	178.5	180.7	182.6	181.0	179.3	179.1	180.2	180.2
2019	U1	166.5	166.5	172.0	169.7	170.2	168.7	169.3	168.1	169.2	169.8	167.6	167.9
	U2	182.12	178.4	182.8	182.3	131.8	185.1	183.7	186.6	179.6	181.3	181.7	177.7
2018	U1	167.64	167.5	166.4	169.5	167.8	171.6	166.5	168.3	167.5	167.7	167.7	167.7
	U2	182.1	181.6	179	178.6	181.9	182.4	181.2	180.4	181.0	180.2	181.8	181.8

ACHIEVED PRODUCTION/FAILURE RATE

	2019	2020	2021	2022	Cumulat 2019-2022
Production obtained (no. of FCs)	112 000	10 800	11 000	10 800	43 800
No. of failures	1	0	0	0	1
Failure rate	0.009 %	0.000 %	0.000 %	0.000 %	0.002 %

The chart shows the number of bundles made, the number of production failures and the failure rate. The failure rate relates to the manufactured quantity and the year of manufacture of the FC notified as suspect/defective.

NPP

CARE FOR ENVIRONMENT - CERNAVODA NPP

GRI 103-1, 103-2, 305-1, 305-2, 305-3, 305-4, 305-5, 305-7, 303-3, G4-EN8, 306-1, 306-2, 306-4, G4-EN23, 304-2, 413-1

19 CARE FOR ENVIRONMENT - CERNAVODA NPP

GRI 103-1, 103-2, 305-1, 305-2, 305-3, 305-4, 305-5, 305-7, 303-3, G4-EN8, 306-1, 306-2, 306-4, G4-EN23, 304-2, 413-1

19.1 COMMITMENTS AND ORGANIZATIONAL POLICIES

19.1.1 Environment policy

The environmental policy is part of the integrated policy of Cernavoda NPP and is assumed under signature by the management of Cernavoda NPP. The policy document appears both on the Company's intranet page and on the notice boards, in order to be visible to the entire organization. The environmental management process (system) is developed and applied by Cernavoda NPP to ensure protection and control of the environment during activities with a potential direct or indirect environmental impact.

Cernavoda NPP has devised and put in place specific requirements to support minimization/elimination of any potential adverse impact on the environment resulting from the plant's activities. One of the mandatory annual objectives, which the Company commits to, is "0 Environmental Events", i.e. no environmental event leading to environmental pollution.

19.1.2 Important information about pollution prevention and control

Construction of the nuclear units includes also technical, administrative and procedural means and measures to control and monitor of the activities and equipment liable to affect the staff, the environment and the population with a view to eliminating and/or minimizing the risks attached to harming the environmental factors.
The emergency plan of Cernavoda NPP, as approved by the nuclear activity regulatory authority (NCNAC), contains procedures specific to the types of emergencies and means of response to emergencies, including for situations liable to affect the environment and the population (chemical, radiological, etc. emergencies), and defines the membership and operational response responsibilities of the emergency teams.

The technical pollution prevention and control measures concern mainly the following:

- equipment for the continuous control of radioactive liquid and gaseous effluents;
- Defence in Depth - via physical barriers to prevent uncontrolled discharges into the environment (e.g. active/inactive drainage system with controlled discharge, radioactive liquid effluent collection tanks for retention and monitoring of compliance with the approved discharge limits, retention filters, etc.);
- laboratories notified to the NCNAC and appropriate laboratory equipment for performance of physical-chemical and radio-chemical analyses for environmental monitoring purposes;
- materials and equipment for intervention in case of leakages/accidental pollution, including appropriate protection and radiation protection equipment, by risk category;
- containers and other devices used to collect and contain leakages and/or other substances and/or materials liable to affect the environment and staff, as well as suitable containers for waste storage by category, conventional fuel tanks;

- spaces specially fitted-out and authorized for the temporary storage of chemicals, materials of nuclear interest, conventional fuels, nuclear fuel, spent fuel, radioactive waste, non-radioactive waste (by storage categories and classes), gas;
- vessels for leakage collection (at transformer station, diesel tanks).

Procedural measures mean the set of procedures regulating the use of chemicals, radioactive and non-radioactive gaseous and liquid effluent control product and non-radioactive waste management products; radioactive waste management; radioactive material and source control; nuclear fuel management; environmental agreements entered into with contractors who provide services with a potential environmental impact; emergencies, etc. These procedures take over the requirements, limits and conditions of the permits, clearances and protocols executed with the regulatory and control authorities, as well as the general and specific legislative requirements applicable to environmental protection and radiation protection, setting out the means of operation for all operating instances of nuclear power units in Cernavoda NPP: normal operation, abnormal situations, planned/unplanned or urgent shutdowns.

The administrative measures reflect the management inspection, observation and guidance actions for the plant's activities, as well as the ongoing assessment and reporting of all the environmental protection results, as these stem from the Environmental and Operation Permits, as well as from the duly executed Protocols with local authorities and other competent inspection authorities, both in-house and to the inspection authorities.

19.2 WASTE POLICY

Cernavoda NPP Branch, as a legal entity holding waste, classifies each type of waste generated from its own activity according to the legal provisions in force. Such classification is subject to the provisions of the Government Decision no. 856/2002.

Cernavoda NPP Branch, according to the Environmental Permit, does not carry out treatment, recovery, recycling and disposal of the generated non-radioactive waste, as defined by Law no. 92/2021, as amended and supplemented to date.
Domestic transport (on national public roads) of non-radioactive chemical waste is carried out in accordance with the specific legal provisions (ADR rules and Government Decision no. 1061/2008). Cernavoda NPP does not carry out any non-radioactive waste export operations.

Non-radioactive waste management in Cernavoda NPP, applied consistently across the Company, includes waste coding according to the Government Decision no. 856/2002, application of the types of operations and waste management practices according to the Government Emergency Ordinance no. 92/2021 and the Government Decision no. 856/2002, together with the regulatory acts adjacent thereto, with the main stages:

- Selective collection by types of waste;;
- Temporary storage in containers or specially designed, concreted and marked spaces, located in the plant's premises;
- Keeping records for the quantities operated according to the above;
- Reporting on waste management to the competent authorities, according to legal requirements or at the request of the said authorities.

For radioactive waste management, there is an agreement with the Romanian State Authorities to establish the necessary financial sources for the final waste disposal. Pending completion of the final disposal site, radioactive waste is stored on the site of Cernavodă NPP, in keeping with applicable highest safety standards.

Construction of the nuclear units includes also technical, administrative and procedural means and measures to control and monitor of the activities and equipment liable to affect the staff, the environment and the population with a view to eliminating and/or minimizing the risks attached to harming the environmental factors.

19.3
RESOURCE USAGE POLICY AND COMMITMENT

SNN/Cernavoda NPP supports the rational use of energy and natural resources, striking a balance between environment, energy and economy. This is described in the Integrated Management System Manual of Cernavoda NPP.

It is envisaged that the technologies used and the products and equipment purchased meet the acceptability criteria for the minimum reasonable technological impact on the environment, falling, given the limitation stemming from the requirement to maintain the design setup of the nuclear units, in the category of environmentally-friendly products and materials with low energy impact throughout the entire lifecycle.

The impact on the environment is prevented and this refers both to our own operating activities and those of our business partners.

This commitment translates into:

- Integration of the sustainable development concept into projects and investments;
- Compliance with the domestic and Community legislation, permits and environmental protocols and agreements;
- Continuous improvement of environmental performance.

19.4
COMMITMENT TO IMPLEMENTATION OF THE ENVIRONMENTAL MANAGEMENT SYSTEM

Environmental protection in Cernavodă NPP was and continues to be a permanent and responsible concern of the entire staff.
The environmental management process (system) is developed and applied by Cernavoda NPP to ensure protection and control of the environment during activities with a potential direct or indirect environmental impact. Cernavoda NPP has devised and put in place specific requirements to support minimization/elimination of any potential adverse impact on the environment resulting from the plant's activities.

The requirements set out by Cernavoda NPP stem both from application of the specific nuclear regulations and the applicable environmental legislation, as well as from the voluntary compliance with the requirements of the Standard ISO 14001:2015 and Regulation (EC) 1221/2009 on the voluntary participation by organisations in a Community eco-management and audit scheme (EMAS).

The conclusions of the annual audits carried out by the certification body prove that we have in place a functional environmental management, as a component part of the organization's integrated management system, which is continuously improved and aligned to the international environment and population protection requirements.

The risks attached to performance of the activities are identified, assessed and documented, and measures are taken to prevent/minimize their occurrence by implementing a risk management process.

Cernavoda NPP implements and maintains a Defence in Depth concept, which includes technical and procedural barriers aimed at preventing and mitigating of the effects of accidents, and responding to emergencies, taking into account triggers related to equipment and human performance, as well as credible severe external conditions (earthquakes, floods, bad weather, etc.) which can affect the operation of the plant.

Cernavoda NPP has devised clear principles that are the basis of activities likely to have a direct or indirect impact on the environment.

Details about the environmental activities and results/performance are included in the document "Environmental Statement", available to the public on the SNN website.

Currently, Cernavoda NPP Branch holds a number of permits related to environmental protection, as follows:

(i) Environmental Permit for S.N. Nuclearelectrica S.A. - Cernavoda NPP Branch - Unit no. 1 and Unit no. 2 of Cernavoda Nuclear Power Plant issued under the Government Decision no. 84/15.02.2019, published in the Official Gazette no. 152/26.02.2019. This permit covers all assets and activities related to operation of Unit 1 and Unit 2 of Cernavoda NPP, including both the nuclear component and the conventional component of the Plant.

(ii) Greenhouse Gas Emission Permit no. 38/2021, issued by the National Environmental Protection Agency for the application period 2021 - 2030, according to which the start-up thermal plant, the diesel groups and the motor pump of the fire water system fall under the scope of the legislation aimed at reducing the greenhouse gas emissions.

(iii) Water Management Permit no. 72 of 6 September 2021, amending Permit no. 58/01.07.2021, and concerning:

"Water supply and Waste Water Discharge for U1 and U2 of CERNAVODA NPP", (valid until 30 June 2026), issued by "Administratia Nationala Apele Romane".
(iv) Water Management Permit no. 94/28.06.2022, issued by Dobrogea-Litoral Water Basin Administration for the "Cernavoda Spent Fuel Intermediate Storage (DICA)", valid until 30 June 2024. With this permit, Dobrogea-Litoral Water Basin Administration granted the Company the right to use the hydraulic engineering structures and receptors for the discharge of rainwater from the surface of the Spent Fuel Intermediate Storage and to discharge the rainwater into Cismelei Valley, provided that the quality indicators related to the presence of radioactive elements observe the limits set out by NCNAC.

The Company holds certificates for its environmental management system, as follows:

a) Certificate no. 56 concerning the Environmental Management System of SNN - Cernavoda NPP Branch for the Electricity and Heat Generation activity using nuclear sources and support and related activities, according to the conditions of the standard SR EN ISO 14001:2015 (ISO 14001:2015), issued by IQNet and SRAC on 10 June 2022 and valid until 14 December 2025.

b) EMAS Registration Certificate no. RO-000017, re-registration date 16 October 2021, expiry date 16 October 2024.

c) Certificate no. 402 concerning the Occupational Health and Safety System according to ISO 45001:2018, recertification date:, last updated on: 06 July 2021, valid until: 23 April 2025.

The impact of the Power Plant's operation on the environment is continuously monitored and reported according to the requirements of the operating and environmental permits. In 2022, Cernavoda NPP observed the pollutant limits set out in the environmental permits.

19.6 MANAGEMENT COMMITMENTS IN THE ENVIRONMENTAL POLICY

The environmental policy is part of the integrated policy of Cernavodă NPP and is assumed under signature by the management of Cernavodă NPP. The policy document appears both on the Company's intranet page and on the notice boards, in order to be visible to the entire organization. The environmental management process (system) is developed and applied by Cernavodă NPP to ensure protection and control of the environment during activities with a potential direct or indirect environmental impact. The Environmental policy provides:

- The responsibility for implementation of a Management System in accordance with the legal requirements and the NCNAC Rules for Management Systems in the Nuclear Field, voluntarily integrates the requirements of the management standards ISO-9001, ISO-14001, ISO-45001, ISO-17025, ISO-27001, including the requirements of the EMAS Regulation on the Community eco-management and audit scheme.

- Cernavoda NPP has adhered to the standards of excellence in the nuclear field and has embarked in a process of continuous improvement of the organization's performance by benchmarking it against the best performing nuclear power plants worldwide.

- Any activity in Cernavoda NPP is carried out only on the basis of approved documents that integrate the requirements of the applicable laws and standards. Any departure from the management system documents is promptly reported, recorded and assessed for causes, and measures are ordered.

- The risks attached to performance of the activities are identified, assessed and documented, and measures are taken to prevent/minimize their occurrence by implementing a risk management process.

- Cernavoda NPP implements and maintains a Defence in Depth concept, which includes technical and procedural barriers aimed at preventing and mitigating of the effects of accidents, and responding to emergencies, taking into account triggers related to equipment and human performance, as well as severe external conditions (earthquakes, floods, bad weather, etc.) which can affect the operation of the plant.

- Nuclear safety of the population, staff and environment takes priority over production-related matters.

- The units are operated in strict compliance with the requirements of the operating permits, and the limits and conditions imposed by OP&P, as well as the other documents approved by the authorities, and any accidental infringement is reviewed in detail and reported to NCNAC.

- Communication with the regulatory authorities is open and trust-based.

- Only trained, skilled and, as the case may be, authorized staff are used to carry out the activities, according to the requirements of the regulatory documentation.

- Cernavoda NPP makes sure that the necessary funds and resources are available to achieve high performance in all fields and is committed to the efficient management of these funds.

- Cernavoda NPP makes sure that the necessary funds are available to improve or acquire high-eco performance technologies in order to prevent environmental pollution and preserve a clean environment.

- Cernavoda NPP is committed to continuous improvement of its environmental performance and compliance with the obligations stemming from permits and the applicable regulatory acts.

- Cernavoda NPP ensures implementation and maintenance of the employee consultation and participation processes at all levels and for all applicable functions, as well as worker representatives' participation in development, planning, implementation, performance appraisal and improvement actions related to the occupational health and safety management system.

- Cernavoda NPP pays great importance to implementation of all necessary measures to prevent major accidents involving dangerous substances.

19.7
CONSULTATION OF THE CATEGORIES OF STAKEHOLDERS ON ENVIRONMENTAL MATTERS

The management of Cernavodă NPP, as part of National Company Nuclearelectrica SA, pays special attention to of communication with, and transparency towards, all stakeholders: staff, population, local and national authorities, NGOs and media, seeking to depict and maintain a realistic image based on facts and concrete data able to strengthen the positive characteristic of nuclear energy, as well as it major social and economic impact.

The nuclear energy is regulated and controlled and always under careful watch of the control authorities, national and international governmental organizations, non-governmental organizations, mass-media and public. Cernavodă NPP abides by, and puts in place, the highest environment, staff and population protection standards.

The stakeholders' expectations from Cernavoda NPP are:

1. **the Government, the Parliament, the Ministries, the Central Authorities, the Local Authorities, and the Regulatory and Control Authorities** Cernavoda NPP is expected to comply with the legal requirements (i.e. compliance obligations under permits, protocols, clearances, etc. or further to the incidental requirements of the authorities) and operate the nuclear power plant in observance of the limits and conditions imposed under permits or the duly executed protocols. Cernavoda NPP is further expected to safely and securely delivery the amount of energy projected to be delivered, in order help ensure Romania's energy security.

2. **Business partners (energy users, energy transmitters, consumers).** Cernavoda NPP is expected to produce electricity and heat in compliance with all legal requirements applicable to environmental protection and the voluntarily implement, in its own work system, the latest environmental and OHS standards, conveying them the trust that Cernavoda NPP is a reliable business partner. All agreements signed with them concerning environmental protection (e.g. environmental agreements with contractors, protocols, etc.) become mandatory to be observed.

3. **NGOs, the Public, the Local Community, External Organizations (WANO, INPO, etc.).** The organization is expected to carry out its activity showing care for the environment and the population and these stakeholders need to be provided with relevant information about the activity carried out by Cernavoda NPP, in compliance with all legal environmental protection requirements. The expectations listed above are duties compliance duties towards these entities for Cernavoda NPP. These also expect to be regularly informed about the environmental performance, be consulted about future projects, and be consulted in the permitting process, in accordance with the rights acquired under the Aarhus Convention and the legislative framework regulated at national level. They expect to received answers to their requests for information and concerns made known via the communication channels with SNN/NPP through the information centers, public relations departments, and the local advisory committee.

4. **NPP employees and contractors.** They expect that their work is recognized and rewarded according to their expectations of the required performance, and they need a healthy and safe work environment. All agreements signed with contractors of services or products concerning environmental protection (e.g. environmental agreements) become mandatory to be observed.

In order to identify all the aspects of reducing pollution, minimizing the volume of waste on site or resources using, all stakeholders representing parties interested in the activity of Cernavoda NPP are involved:

1. Suppliers of services and products: "Environmental Protection Agreements" are signed as an annex to the contracts signed with them, whereby the requirements concerning environmental protection requirements, compliance with waste management procedures, etc. are made known to them. This is a safeguard by which we make sure that the environmental protection and waste management requirements are known, understood and implemented by the third parties who carry out activities on the NPP site.
For each type of waste, there are contracts signed with third parties for the recovery, removal or temporary or definitive storage disposal of the non-radioactive waste generated. For radioactive waste management, there is an agreement with the Romanian State Authorities to establish the necessary financial sources for the final waste disposal.

2. IInstitutions of the Romanian state: collaboration protocols are signed with institutions of the Romanian state, under which any abnormal situation related to accidental pollution is reported both ways for the measures required to minimize the environmental effects of pollution to be taken;

The information and communication policy of Cernavodă NPP

With a view to a good information and communication with all categories of interested public, the Cernavoda NPP's PR policy, as part of National Company Nuclearelectrica, is based on collaboration, honesty, trust and respect.

The key PR objective of Cernavoda NPP is to increase acceptance of nuclear energy, by gaining the trust of population as to this electricity generation source. Development of relations with international organizations, local and central administration organizations, media and domestic and international civil society representatives are other areas where Cernavoda NPP acts to maintain a positive image of the Company and provide the public with accurate information about the benefits of nuclear energy.

For a comprehensive approach to community consultation, Cernavoda NPP decided to supplement its community communication and consultation programme by setting up the Community Information and Consultation Board (CICB).

The purpose of CICB is to identify the issues, concerns and interests of the community and to provide Cernavoda NPP with consultancy, advice, opinions and suggestions about the community expectations in all areas/fields of interest, with a view to continuously improving the activities on site and making a contribution to the well-being of the community.

Cernavoda NPP is the largest employer in Town of Cernavoda. The community benefits also of district heating that uses the hear carrier supplied by the nuclear power plant, which is the cheapest in the country. Furthermore, under the Nucleus of Care CSR platform, Nuclearelectrica gets involved in, and supports, projects for the benefit of the local community (refurbishment and provision of equipment to hospitals and education units, sports and leisure spaces, etc.)

Implementation of new projects in Cernavoda NPP brings along opportunities for the local residents (jobs, rental of accommodation spaces and related services). According to the public consultations, the local community representatives believe that the operation of the power plant and the new projects, thanks to these economic opportunities brought along, do have positive social impact.

20 RESOURCES USED IN OWN ACTIVITY

20.1 AMOUNT OF WATER USED

For operation of Cernavoda NPP, the Danube water is used to ensure that the heat source is taken over from condensers. The amount of water used is set out under the project and can only be adjusted within very small limits, depending mainly on the outside temperature of the input water. No streamlining to reduce the cooling water use factor can be foreseen.

Year	Drawn Volume (Thousand Cubic m)
2019	2.285.029
2020	2.253.703
2021	2.239.122
2022	2.134.009

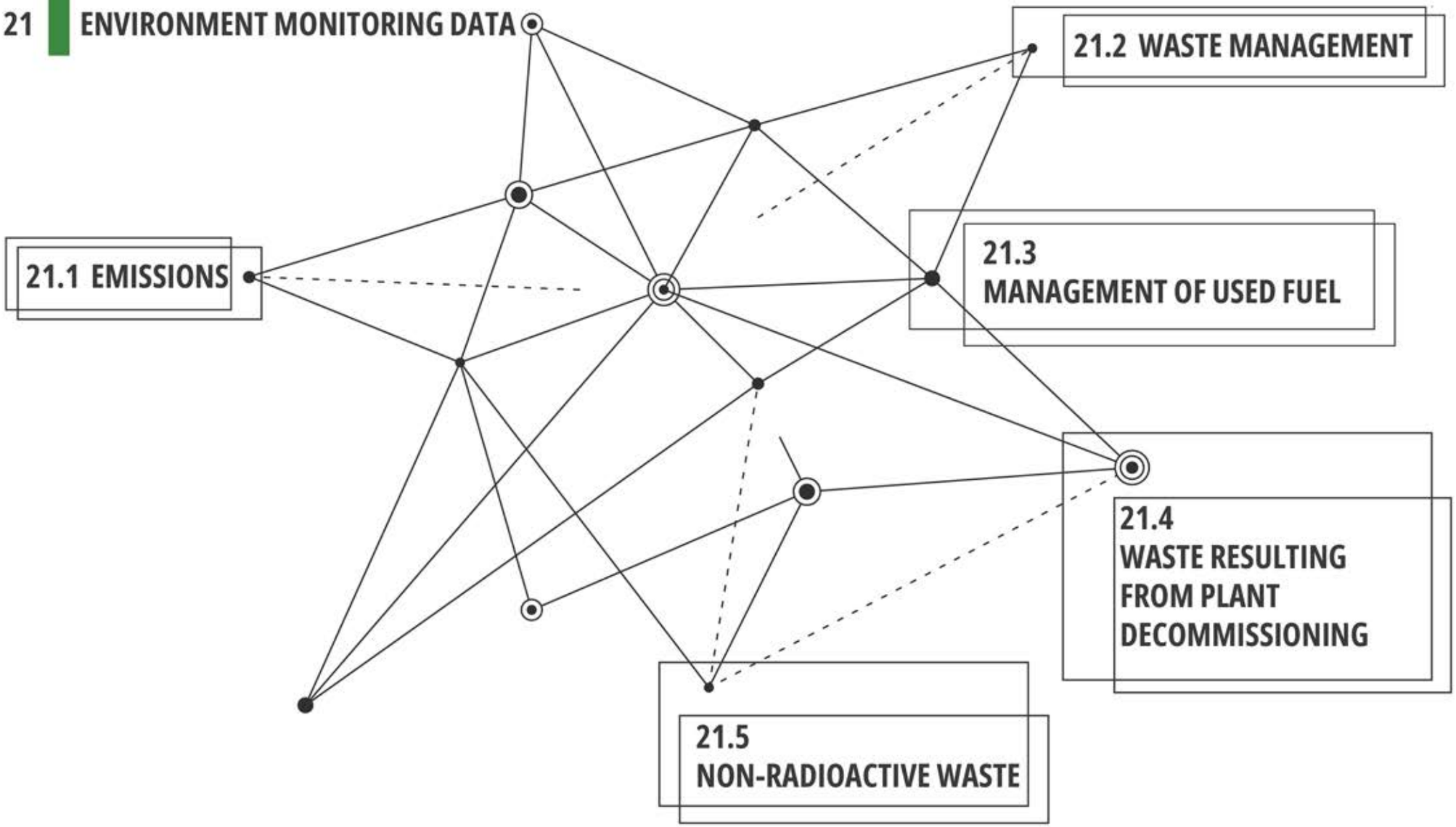
20.2 AMOUNT OF RAW MATERIAL USED

The nuclear power plant of Cernavoda uses fuel bundles as "raw material" for electricity generation. The amount of fuel bundles is provided under the project at approximately 5,000 fuel bundles per unit per year, and remains constant. How intensive these bunders are used depends on a physical and chemical calculation, and the amount varies slightly according to a number of factors.

The number of fuel bundles used to obtain electricity.

	U1	U2
Year	# of U-Nat bundles loaded	
2019	5456	4940
2020	5112	5344
2021	5576	4776
2022	4840	5376

21 ENVIRONMENT MONITORING DATA



21.1 MISSIONS

21.1.1 RADIOACTIVE EMISSIONS

The most important radionuclides analysed and controlled at Cernavoda NPP are the following:

Tritium: An isotope of hydrogen that emits very low-energy beta particles. Its nucleus is made up of one proton and two neutrons.

Carbon-14: radiocarbon or radioactive carbon is a radioactive isotope of carbon with an atomic nucleus that contains 6 protons and 8 neutrons. It emits low-energy beta particles.

Noble gas: Fission or activation products, which have the chemical structure of Noble Gas. They are mainly isotopes of Xenon, Argon, and Krypton.

Aerosols: very small solid or liquid radioactive particles (between 0.01 and 100 microns), suspended in a gas.

Iodine: The radioactive isotopes of iodine are fission products. The main isotope present in emissions is Iodine-131.

This control guarantees a reduced impact on the environment, as well as the safety and health of the population. When calculating the atmosphere emission limits, the food chain and any potential concentration phenomena in some species are considered.
Derived Emission Limits are maximum quantities legally allowed or authorized for radionuclides that are released into the air so that neither the health of the population, nor the environment are affected.
The main pollutants found in the air discharged from the Reactor Building and the Services Building, i.e. tritium, solid particles, iodine and noble gas, are taken over by the power plant's ventilation systems and treated accordingly in the D2O vapor recovery systems and the ventilation and air filtration systems. The air filtration process ensures that releases into the air are kept within the limits approved by the nuclear regulatory authority, NCNAC.
The contaminated or potentially contaminated air is collected by the ventilation systems and is discharged via a common exhaust stack after filtering and monitoring. The radioactive gas emissions are supervised by continuously monitoring the air discharged through the plant's stack with the aid of the Gas Effluents Monitor. For the exhaust of the potentially radioactive air, Derived Exhaust Limits have been established for each radionuclide. These limits have been approved by the regulatory authority, NCNAC.

As an example, the chart below shows the emission values for liquid and gas radioactive effluents. These values are below the documentary limit set by Cernavoda NPP, and the limit is way below the legal limit, i.e. **14 µSv/year.**

Year	Radioactive emissions in the environment U1+U2 [microSv]	Annual target [µSv/year] established by Cernavodă NPP
2019	5.77	≤ 8.5
2020	5.60	≤ 8.5
2021	7.40	≤ 9
2022	7.85	≤ 9

21.1.2 RADIATION PROTECTION PROGRAMME

The main objective of the radiation exposure control process is to keep exposures as low as reasonably achievable (the ALARA principle).

The effectiveness of the ALARA policy in Cernavoda NPP is monitored by performance indicators based on the internal and external operating experience, and their regular reporting and analysis. Performance indicators give a measure of the effectiveness of the radiation protection programmes in optimizing radiation exposure.
Radioactive emissions in the air and water were far below the limits permitted for the Power Plant. The annual effective dose for a representative person, due to radioactive emissions into the environment (Unit 1 and Unit 2) was 0.0078 mSv in 2022, while the average annual dose received by a member of the public from background radiation is 2.4 mSv.

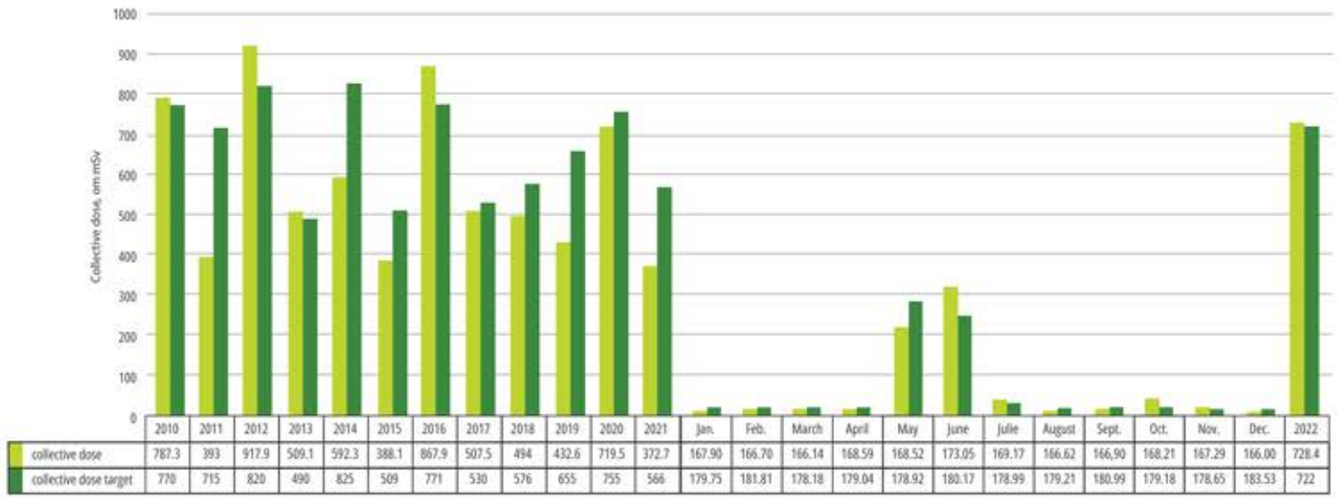
21.1.3
INFORMATION ABOUT THE MONITORING AND CONTROL OF INDIVIDUAL DOSES (FOR OCCUPATIONALLY EXPOSED STAFF)

Year	Collective dose Om mSv	Internal collective dose Om mSv	Contribution of internal dose to total dose (%)	Individual maximum dose mSv	Medium dose (Collective dose / No. of persons exposed)
2019	432.63	113.18	26.16	7.23	0.61
2020	719.81	185.81	25.78	13.93	0.98
2021	372.63	74.56	20	7.77	0.53
2022	728.35	172.38	23.7	7.96	0.96

In 2022, the collective dose achieved was 728.35 om mSv, the average annual dose for workers with recordable doses was 0.96 mSv, and the maximum individual dose was 7.96 mSv. The legal limit for the effective dose, for occupationally exposed workers, is 20 mSv/year, and the administrative limit at the NPP is 14 mSv/year. None of these limits has been exceeded.
At the end of 2022, the collective internal dose reached 172.38 om mSv, i.e. 23.7% of the total dose across the Power Plant.

No.	ALARA indicator	Measurement unit	Value
1	Maximum legal limit for individual dose	mSv/year	20
2	Maximum documentary limit for individual dose	mSv/year	14

The Radiation Protection Department prepares and submits regular reports on the developments observed in collective doses and ALARA performance indicators, thus increasing the engagement of the Power Plant's staff in the control and optimization of the occupational exposure to ionizing radiation. How these objectives are attained is tracked via ALARA process, and the ALARA committees operate with excellent results. With an average dose per unit of 364.2 om mSv, Cernavoda NPP remains, according to the latest information, one of the best performing power plants in the CANDU group.



	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	Jan.	Feb.	March	April	May	June	Julie	August	Sept.	Oct.	Nov.	Dec.	2022
collective dose	787.3	393	917.9	509.1	592.3	388.1	867.9	507.5	494	432.6	719.5	372.7	167.90	166.70	166.14	168.59	168.52	173.05	169.17	166.62	166,90	168.21	167.29	166.00	728.4
collective dose target	770	715	820	490	825	509	771	530	576	655	755	566	179.75	181.81	178.18	179.04	178.92	180.17	178.99	179.21	180.99	179.18	178.65	183.53	722

Collective dose on PP U1 + U2 (Om*mSv)

21.1.4
NON-RADIOACTIVE EMISSIONS

Non-radioactive atmospheric emissions come from:

- fuel burning: resulting into CO2, dust, heavy metals, volatile organic compounds, etc.
- fuel management: resulting into volatile organic compounds (VOCs).

It should be stated that the long-term impact of these non-radioactive emissions is insignificant, according to the environmental balance-sheet surveys carried out by independent third parties for Cernavoda NPP.

21.1.5
SOX AND NOX EMISSIONS

The nuclear-based energy generation technological process is free of any NOx emissions.

The nuclear-based energy generation technological process is free of any emissions type SOx.

Year	NOx	SOx
2019	0	0
2020	0	0
2021	0	0
2022	0	0

21.1.6
CARBON EMISSIONS AND THEIR INTENSITY

Electricity generation using nuclear technologies does not generate any CO2. The small amounts of CO2 generated come from the regular short-term testing (approx. 2 hours/equipment/month) of Diesel generators on site or of the boilers of the start-up thermal plant, as it is described also in the Greenhouse Gas Emission Permit held by Cernavoda NPP.

The gaseous non-radioactive pollutants generated from the activities taking place in the premises of Cernavoda NPP are represented by:

- The CO2 emissions coming from testing the backup and emergency Diesel generators, including other smaller-capacity generators located on site and from testing of the boilers of the Start-up Thermal Plant.

Both the Diesel generators and the Start-Up Thermal Plant are pieces of equipment that are regularly tested, and only operate where the electricity supply is lost so as to ensure the power source needed to maintain the functions of the safety systems. In the normal operation/functioning setup of the nuclear units, these pieces of equipment are in stand-by. For this reason, the amount of CO2 emissions is reduced in the premises of Cernavoda NPP down to approximately 1,000 tons of CO2 per year.

Scope 1:

Direct emissions coming from the company's activities on site and car fleet - property of the company

Year	Total tons of CO_2 emitted per year	Total tons of CO_2 emitted by Diesel generators per year	Total tons of CO_2 emitted by the Start-Up Thermal Plant per year	Tons of CO_2 emitted by the Car Fleet
2019	3127	747	2380	365,97
2020	885	867	18	331,53
2021	1121	1005.6	115.4	296,24
2022	953	916.4	36.5	273,78

Scope 2:

CO2 emissions, resulting from acquisition of electricity and used for own purposes

The CO2 emissions resulting from their testing are calculated according to the legislation on greenhouse gas emissions, applying the calculation methodology validated at the national level and based on the specific characteristics of the fuels (NFP and FE) and the quantities of fuel consumed, and are reported to the National Environmental Protection Agency according to the requirements of the Greenhouse Gas Emissions Permit no. 38/2021, subject to review and validation by the authorized bodies and to annual compliance with the requirements to hand over the EUA certificates for the amount of approved emissions.

o.	year	Electricity for internal consumption from owned production (MWh/year)*	Total CO2 (tonnes CO2)	Electricity for internal consumption purchased from a third party (MWh/year)**	Third party Emission Factor (g CO2/kWh)	**Total CO2 (tonnes CO2)**	
1	2019	934.726,61	0	1.768.415,00	93,65	165.612	ENEL
2	2020	909.701,80	0	1.480.742,00	245,4	363.374	ENEL
3	2021	908.251,00	0	695.766,00	171,6	133.970	ENEL
				765.477,00	216,64	165.833	ELECTRICA
4	2022	908.251,00	0	1.037.775,00	229,67	238.346	ELECTRICA

Scope 3:

For emission calculation under Scope 3, in 2023, Nuclearelectrica will initiate consultations with its suppliers in order to support this determination, but also to emphasize the importance of protecting the environment by reducing the carbon footprint.

Note
* Represents energy from own production that is produced by CNE Cernavoda for the operation of its own equipment (pumps, valves, etc.)
** Represents electricity purchased by CNE Cernavoda through contracts with third parties and used to supply certain own consumers (warehouses, office heating, parking lots, etc.)

VOLATILE ORGANIC COMPOUNDS

The nuclear-based energy generation technological process of Cernavoda NPP does not use volatile organic substances. For this reason, these are not required to be reported by any authority.

In addition, we monitor the amount of Freon used in our own facilities, even if the freons used are eco and do not affect the environment.

year	2019	2020	2021	2022
refrigerants used	1,729.400 kg	1,071.200 kg	426 kg	1,380.880 kg

21.2 WASTE MANAGEMENT

The categories of waste resulting from the activities carried out at Cernavoda NPP:
RADIOACTIVE WASTE and NON-RADIOACTIVE WASTE

21.2.1 RADIOACTIVE WASTE

The management policies and principles comply with domestic and international requirements for radioactive waste. Cernavoda NPP holds the necessary facilities for intermediate storage of radioactive waste, in plants that are safe for both staff, population and environment.

Radioactive waste is the result of daily maintenance and repair activities, planned or unplanned shutdowns of the power plant, and is managed completely separately from conventional waste.

Radioactive waste generated further to these activities are:

- solid (plastics, cellulose, glass, wood, purification filters, ventilation system filters, etc.);
- organic liquid (oil, solvent, scintillating liquid);
- organic solid-liquid mixtures (flammable);
- aqueous solid-liquid mixtures (slurry);
- solid and liquid chemical waste.

These are collected and sorted by skilled staff, according to rules and criteria laid down under procedures. The sorting activity applies to all types of radioactive waste.

For each type of radioactive waste (solids, organic liquids, organic solid-liquid mixtures, aqueous solid-liquid mixtures and solid/liquid chemicals) different criteria are pursued:

- source of origin (services building, reactor building);
- type of material (plastic, cellulose, metal, wood, oil, solvents, etc.);
- radionuclide content (with short, medium or long lifetime);
- contact dose flow-rate (weakly-active, medium-active).

After sorting, radioactive waste is stored in special stainless-steel containers.
Organic liquid radioactive waste and organic solid-liquid mixtures (flammable) are kept in the services building, and are to be then solidified to remove any potential flammability hazards.

The waste radioactive aqueous solid-liquid mixtures (sludge) are stored in stainless-steel barrels in the services building, and are to be then subjected to drying-treatment applying processes to remove the water content.
Solid chemical and radioactive liquid waste are kept in the services building, in containers suitable for their chemical properties, and will be treated by authorized operators.
Radioactive waste management aims at identifying and controlling all radioactive waste produced, and at keeping radioactive waste generation at the least level possible.
The volumes of waste produced can be reduced by compaction (using a hydraulic press), applying treatment methods that use incineration of the combustible radioactive solid waste and melting of radioactive metal waste, at external authorized operators, and by unconditional release of waste under the authorization regime of NCNAC.

Solid or solidified radioactive waste is stored over the entire plant's operation period, under optimal safety and storage conditions. The final storage of this waste is only done after conditioning into solid safe matrices, which guarantee that no adverse impact on the environment occurs for at least 300 years.

The total volume of solid radioactive waste produced in 2022, for the both units of Cernavoda NPP, was 50.91 m3. This is stored inside the physical protection fence of the Power Plant, in the Radioactive Solid Waste Intermediate Storage.

Radioactive waste generated in years 2019-2022			
Year	Solid radioactive waste (m^3)	Radioactive organic solid-liquid mixed waste (m^3)	Radioactive organic liquid waste (m^3)
2019	54.8	2.20	4.18
2020	60.07	1.10	2.86
2021	52.82	2.20	1.1
2022	50.91	2.20	2.2

21.3
MANAGEMENT OF USED FUEL

a. **Wet storage in the unit's Spent Fuel Pool, for a period of at least 6 years;**
b. **Dry storage in the Spent Fuel Intermediate Storage, for a period of at least 50 years.**

The Spent Fuel Intermediate Storage (DICA) is located on the site of Cernavoda NPP, and is carried on an in-premises road that allows maintenance of an integrated physical protection system.

Storage is staged-out in accordance with the DICA long-term development strategy. So far, as many as 14 MACSTOR 200 modules have been made.

21.4
WASTE RESULTING FROM PLANT DECOMMISSIONING

Units 1 and 2 of Cernavoda are in their design lifetime, and for both units, renewals of their respective lifetimes by additional 30 years are envisaged. No waste resulted from the decommissioning of the entire plant or parts thereof in Cernavoda NPP. So far, there are no projections of the amounts of waste expected to result from the decommissioning activities; however, there are plans to tentatively extend the lifetime of Units 1 until 2059, and of Unit 2 until 2067.

21.5
DESEURI NERADIOACTIVE

The waste management requirements are set out under the general regulatory acts (environmental protection law, law on selective collection in public institutions, law on the waste regime, government decision on waste classification), or the regulatory acts specific to certain types of waste (e.g. for WEEE, recoverable waste, used oils, etc.).
Separate collection makes it easier to classify and hand over waste to the authorized companies which Cernavoda NPP has concluded waste recovery and/or disposal contracts with. Another benefit of separate waste collection is the possibility to recover recyclable waste.
The biggest environmental benefit of recycling relates to conservation of energy and natural resources, pollution prevention when it is used in the manufacturing process of materials resulting from recycling, and less, of raw materials.
A separate category of waste is construction and demolition waste not contaminated with dangerous products. This waste is not taken to the local landfill, but is used to renew roads or consolidated the slopes affected by landslides.

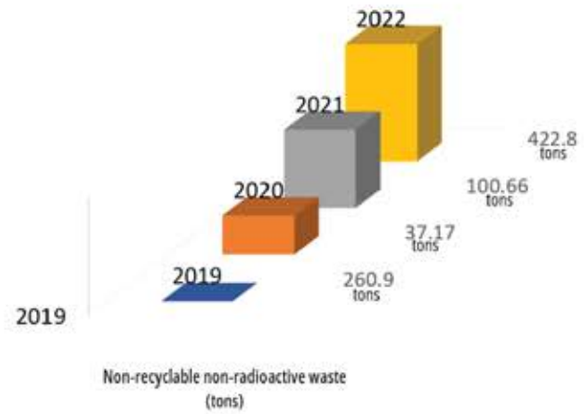
Also, chemicals are purchased in the necessary quantities so as to avoid piling of stocks due to expire and then be qualified as waste.
Selective collection of the following household waste has been made mandatory in Cernavoda NPP: paper, plastic, metal and glass, pursuant to Law no. 132/2010. In this regard, back in 2010, bins were purchased for the separate collection of paper/cardboard, plastic, metal, and glass waste. These were placed in offices, meeting rooms, and hallways.

The non-radioactive waste produced in the power plant is collected by the operational staff at their respective production place, in special containers intended for each type of waste. In this regard, the spaces of the power plant are provided with special containers for each type of waste so as to allow their selective collection.
The transfer of non-radioactive industrial waste to authorized recovery/disposal/storage units is done under a contract concluded with economic agents authorized according to the law for this operation and the respective category of waste.

For hazardous waste, the carrier is required to have an accident intervention plan in order to mitigate the impact of waste on the environment (effects of accidental pollution), according to the legal provisions.
Cernavoda NPP, as a generator of activity-related waste, is under the obligation to provide the information and data by competent authorities according to the environmental protection legislation and the specific waste legislation.
Cernavoda NPP has in place measures to reduce the amounts of waste. An example in this regard is introduction of the mandatory scanning of documents and their electronic transmission, via email, which significantly reduces the amount of paper used. Since 2020, electronic signature has been introduced as a specific measure related to the COVID 19 Pandemic. Another example is replacement of disposable plastic cups with recyclable paper cups.

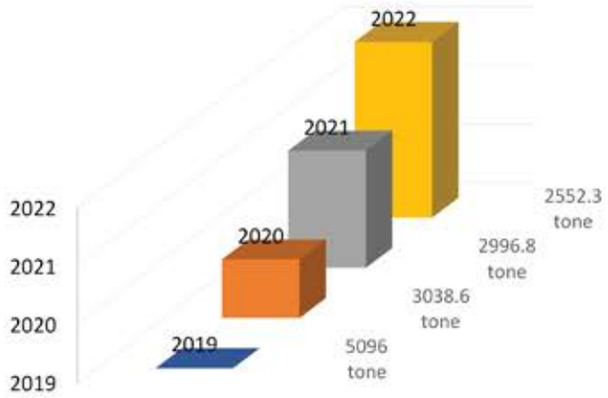
21.5.1
NON-RECYCLABLE NON-RADIOACTIVE WASTE

Measures to reduce the adverse impact of waste on the environment - disposal of unrecoverable waste only through a company authorized for this purpose (acids without other specification; oily water from oil/water settlers; inorganic waste with a content of hazardous substances; absorbents; filtering materials; polishing materials with a content of hazardous substances).



21.5.2
DANGEROUS NON-RADIOACTIVE WASTE GENERATED

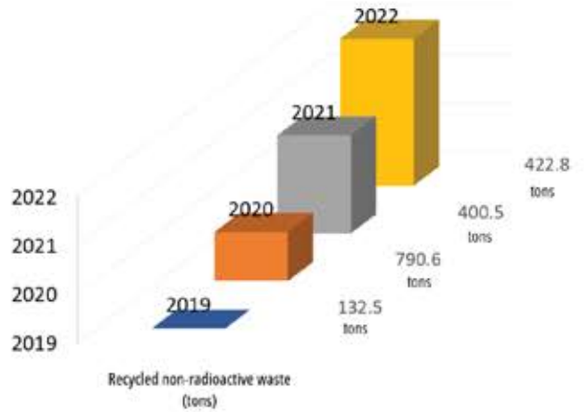
The most common hazardous waste is used oils, glycol, hydrazine/morpholine, emulsion, chemicals, resins, flammable solids, petrolatum, and sludge. This waste is subject to controlled management, stored in metal barrels on pallets on the concrete platform and in closed rooms, preventing any possibility of soil pollution.
As it can be seen, a downward trend of reducing the amount of hazardous non-radioactive waste generated on Cernavoda NPP site has been observed over last three years.



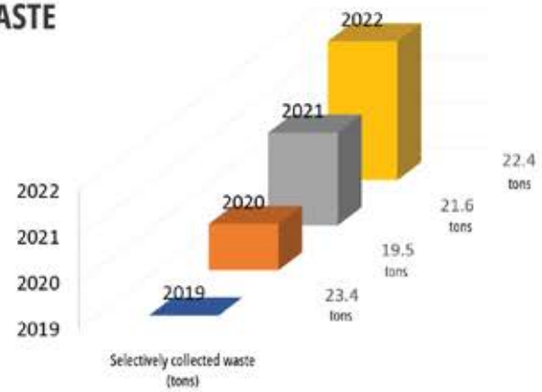
Year	Amount of hazardous waste generated (tons)
2019	5096
2020	3038.6
2021	2996.8
2022	2552.3

21.5.3
RECYCLED NON-RADIOACTIVE WASTE

Recovery using companies authorized for this purpose (e.g. Batteries; used tires; soil and stones; calcium hydroxide).



21.5.4
SELECTIVELY COLLECTED NON-RADIOACTIVE WASTE



Selectively collected waste (plastic, PET, paper, metal packaging, glass) is handed over under contract to authorized companies, according to specific legal requirements. The chart highlights that the amount of waste selectively collected for recycling has increased versus the previous year.

22 USE OF HAZARDOUS CHEMICALS

Cernavoda NPP is a final user, and the hazardous substances and mixtures are purchased for use in the chemical control of the fluids in the power plant's circuits and equipment, for maintenance and repair purposes, for laboratory analyses and in activities/services implementing the changes/projects developed on the site. In accordance with the requirements of the Environmental Permit of Cernavoda NPP, as issued under the Government Decision no. 84/2019 and in compliance with the applicable domestic and Community legislation, Cernavoda NPP has in place established and approved procedures for the management of chemicals, which ensure a thorough quantitative and qualitative control, plus duly monitoring and reporting to the competent authorities.

The administration and management of the chemicals used in Cernavoda NPP is based on:

- The domestic and Community legislation (REACH Regulation, CLP, etc.) in force that regulates the regime of dangerous substances and mixtures and specific regulatory acts by category of chemical substances/products.
- The requirements, limits and conditions approved under the applicable permits and clearance issued by the environmental protection regulatory and control authorities.

The chemical products purchased directly or under services contracts and used in the activities of Cernavoda NPP are classified, packaged and labelled according to the legal requirements in force. Special consideration is also given to the appropriate labelling, i.e. writing of all the information required under the CLP Regulation (EC) and the best international practices (hazard pictograms, warning words, hazard statements (H) and precautionary statements (P), etc. which are taken, as applicable, from the containers in which the hazardous substances and mixtures used are delivered onto the small-sized containers used for the activities in the process plants of Cernavoda NPP.

The biocidal products acquired directly or under services contracts are also accompanied by the Clearances issued by the Ministry of Health in accordance with the legal provisions in force, are quantitatively and qualitatively monitored under the same conditions as those laid down in the procedures of Cernavoda NPP, and are reported on in accordance with the requirements and limits of the environmental permits.

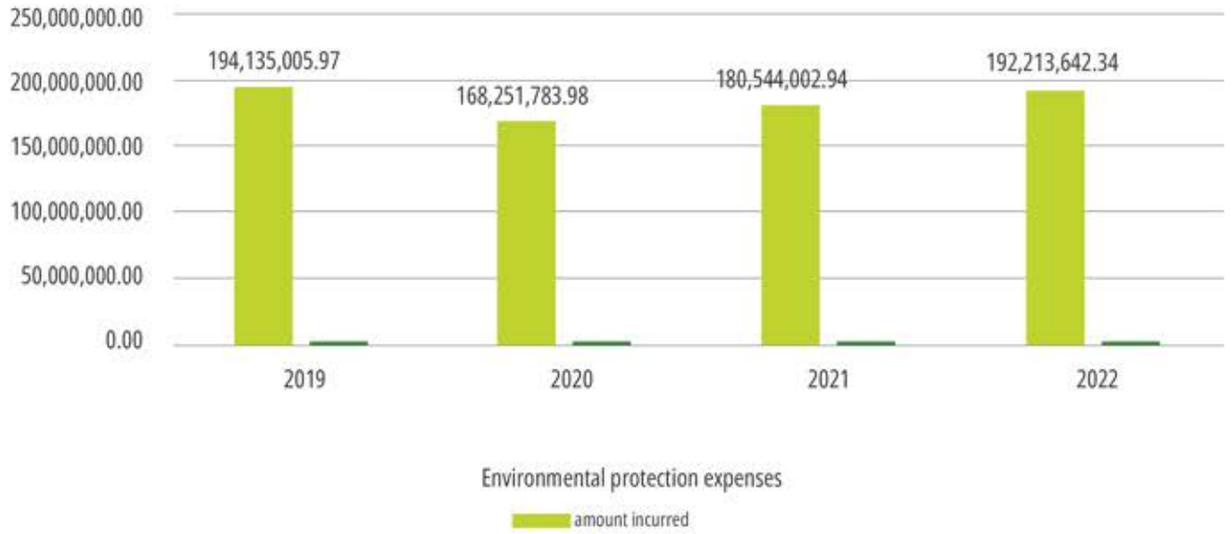
All chemicals used in the activities of Cernavoda NPP, by direct purchase or under services contracts, are assessed/cleated and included in the List of Approved Chemicals ("Chemicals" Intranet app). The activities of Cernavoda NPP use only products that can be found in this app.

The Safety Data Sheet of the products concerned are enclosed to any work package or work plan which use substances or mixtures. Also, for the activities where certain substances or dangerous mixtures are used in large quantities, an initial training is delivered to the staff who are to carry out the activity (IPEL), and who are thus presented the hazards dangers and compensatory measures due to be taken in case of accidental spills.

The emergency procedures under the Site Emergency Plan feature individual action procedures in case of leakages or contamination with dangerous chemicals, as well as procedures that regulate the flow for advising the authorities of reportable events. So far, there have been no reportable events with impact on the environment and the population.

23 FINANCIAL QUANTIFICATION OF THE ENVIRONMENTAL PROTECTION ACTIVITIES

The amounts of money listed below include, but are not limited to, those amounts paid by the Company for environmental protection activities and radioactive and non-radioactive waste management. The amounts of money, in the form of charges and tariffs, paid to the central and local environmental authorities for liquid and gaseous effluents, environmental analyses, contracts paid to third parties for provision of non-radioactive waste collection, recovery and disposal services; the amounts paid for final disposal of radioactive waste, the amounts of water used in the technological processes of the power plant, etc.



24 DEVELOPMENT OF ENVIRONMENTAL PERFORMANCE IN TIME

24.1 INDEPENDENT ENVIRONMENTAL REVIEW

Compliance with the environmental standards is independently reviewed by auditing companies qualified to issue Environmental Certificates, as follows:

- Certificate no. 56 concerning the Environmental Management System of SNN - Cernavoda NPP Branch for the Electricity and Heat Generation activity using nuclear sources and support and related activities, according to the conditions of the standard SR EN ISO 14001:2015 (ISO 14001:2015), issued by IQNet and SRAC on 10 June 2022 and valid until 14 December 2025;
- EMAS Registration Certificate no. RO-000017, re-registration date 16 October 2021, expiry date 16 October 2024.

In 2022, the environmental authorities conduced 6 inspections which did not found any infringement of the legal provisions or the environmental standards.

Recognized environmental management systems

For the activity on site, the environmental performance is acknowledged by the availability of the ISO 14001 Certificate, as well as by the voluntary EMAS registration.

24.2 FINES OR PENALTIES IN 2022

There were no fines or penalties applied by any authorities for non-compliance with the environmental procedures.

24.3
PROGRESS AND TARGETS IN POLLUTION REDUCTION

The main environmental protection objective is **Zero environmental events**. This can be found in the Company's Dashboard. So far, there has been no radiological or non-radiological environmental event.

Pollution at Cernavoda NPP can come from two major sources: radioactive and non-radioactive emissions. For radioactive emissions, these are way below the limit set out by the nuclear regulator, and are part of the nuclear excellence programme. Thus, there is the indicator "Radioactive Emissions in the Environment", which came out green during the four reporting years (2019-2022).

In 2022, there were no environmental events that should have been reported to the competent authorities of the Romanian State. All emissions were within the limits imposed under the operating permits and the relevant environmental protection legislation.

As an example, the chart below shows the emission values for liquid and gas radioactive effluents. These values are below the documentary limit set by Cernavoda NPP, and the limit is way below the legal limit, i.e. 14 µSv/year.

We stayed within the limits set by the regulatory water authority also for non-radioactive emissions. Monthly reports are submitted to the environmental authorities for each pollutant that has been set a limit under the water management permit.

The indicator "POLLUTER COMPLIANCE WITH THE LIMITS UNDER THE WATER MANAGEMENT PERMIT (%)" is calculated on a monthly and annual basis, and this was attained 100% over the four years (2019 - 2022); this proves compliance with the limits set by the regulatory water authority.

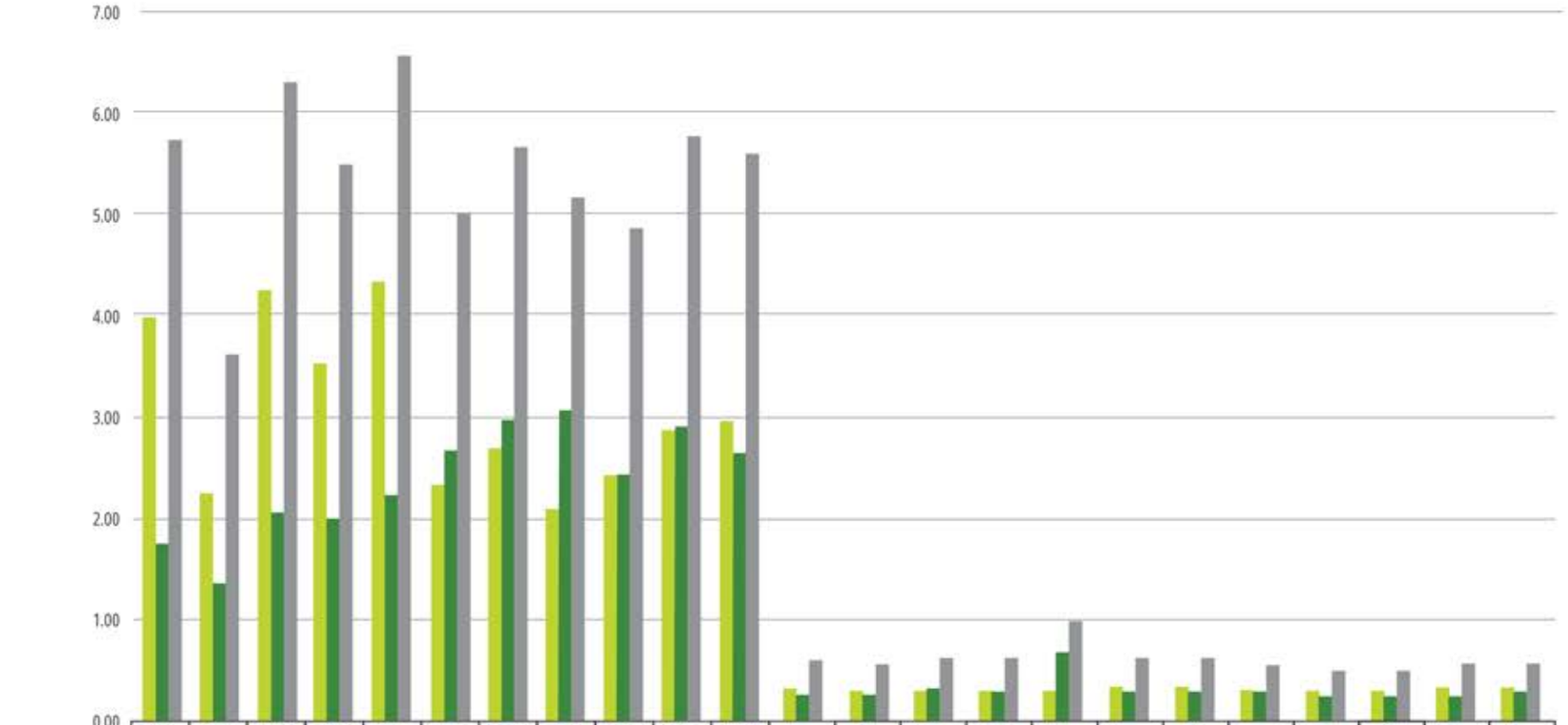
Year	Radioactive emissions in the environment U1+U2 [microSv]	Annual target [µSv/year] at Cernavodă NPP
2019	5.77	≤ 8.5
2020	5.60	≤ 8.5
2021	7.40	≤ 9
2022	7.85	≤ 9

Radioactive emissions in the environment U1

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept	Oct.	Nov.	Dec.	Aggregate 2022
Monthly value (µSv)	0.3	0,277	0,299	0,332	0,311	0,276	0,332	0,318	0,325	0,332	0,333	0.31	3,745

Radioactive Emissions in the Environment at U2:

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Aggregate 2022
Monthly value (µSv)	0,374	0,338	0.37	0.32	0,294	0,292	0,297	0,372	0,375	0,341	0,344	0,394	4,098



	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	Jan.	Feb.	March	April	May	June	Julie	August	Sept.	Oct.	Nov.	Dec.
Emissions U1	3.98	2.24	4.25	3.53	4.33	2.35	2.70	2.10	2.42	2.88	2.962	0.322	0295	0.294	0.309	0.292	0.340	0.331	0.294	0.283	0.276	0.338	0.299
Emissions U2	1.75	1.37	2.05	1.99	2.24	2.66	2.97	3.07	2.42	2.89	2.641	0.259	0.277	0.325	0.304	0.697	0.292	0.280	0.276	0.240	0.218	0.250	0.312
Total	5.73	3.61	6.30	5.52	6.57	5.01	5.67	5.17	4.84	5.77	5.604	0.581	0.572	0.619	0.613	0.989	0.632	0.611	0.570	0.523	0.494	0.588	0.611

Total Radioactive Emissions (U1+U2)

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Aggregate 2022
Monthly value (µSv)	0,674	0,615	0,669	0,652	0,605	0,568	0,629	0,689	0.7	0,673	0,677	0,704	7,855

24.4
TARGETS AND PROGRESS IN WASTE REDUCTION, ADDITIONAL TO THE REGULATORY REQUIREMENTS

The activities carried out must always consider a ranking of the waste management options. The first option is to prevent waste generation by choosing the best possible solutions as early as the procurement phase.

Where it is not possible to avoid waste generation, then the aim is to minimize the amount of waste generated by reuse, recycling and recovery using authorized economic agents. The waste disposal stage is applied only once all other means have been used to the maximum and responsibly so as not to cause any adverse effects on the environment.

Selective waste collection for its recovery/recycling helps reduce the amount of waste finally disposed of.
Cernavoda NPP applies selective collection and, as the next step, waste is handed over for recycling, recovery or, in the absence of another option, disposal.

Cernavoda NPP has devised and put in place specific requirements to minimize the environmental impact resulting from the activities carried out in Cernavoda NPP.
The environmental management process helps control of all activities with an impact on the environment with a view to complying with the requirements and limits imposed under the Operating Permits, the Environmental Permit and the Water Management Permits, as well as by the ISO 14001 standard.

The procedures laying down the processes and work practices in Cernavoda NPP set out the responsibilities for all categories of staff of Cernavoda NPP in terms of identification of the environmental aspects attached to the activities, assessment of the potential environmental impact and definition of the applicable measures to minimize or remove the risk to the environment, reduce the amounts of waste and control them strictly, as well as to reduce pollution caused by operation of Cernavoda NPP.

Having analysed the amounts of waste produced in Cernavoda NPP, the Company devised and put in place a plan to reduce the amounts of waste generated in 2022, mainly by ensuring selective collection of recyclable waste, regular delivery of recyclable waste to the authorized companies, and a through control of the purchased products; all of these particularly help reduce the amount of waste handed over for final disposal in landfills.

The link below takes you to find the Waste Prevention and Reduction Programme devised in keeping with the requirements of the Government Emergency Ordinance no. 92/2021: https://www.nuclearelectrica.ro/cne/protectia-mediului-si-a-personalului/impactul-cne-asupra-mediului/program-de-prevenire-si-reducere-a-deseurilor/

Waste management means temporary storage, reuse, collection, transport, treatment, recycling and disposal of waste, with the main goal of saving raw materials though recyclable waste reusage; this will help reduce the pressure on natural resources.

All categories of non-radioactive waste are collected separately and are handed over to authorized companies. For each waste handover, a confirmation slip and/or waste loading-unloading form will be requested and kept after handing them over to authorized collectors.
Traceability is available at generator, by records of waste management in accordance with Annex 1 to the Government Decision no. 856/2002. Waste management records are prepared for each type of waste, and are submitted annually to the Environmental Protection Agency.

From a radiological point of view, the legal requirement is that the permit holder takes all the necessary measures to keep the waste from their own activity as low as reasonably possible. In order for this to happen, the Company envisaged incineration, compaction, or making a contribution to, construction of final landfills

Year	Solid radioactive waste (m^3)	Radioactive organic solid-liquid mixed waste (m^3)	Radioactive organic liquid waste (m^3)
2019	54.8	2.20	4.18
2020	60.07	1.10	2.86
2021	52.82	2.20	1.1
2022	50.91	2.20	2.2

24.5
TARGETS AND PROGRESS IN REDUCING WASTE USAGE, ADDITIONAL TO THE REGULATORY REQUIREMENTS

One of the programmes currently in progress, with immediate benefits in terms of reducing the use of resources, is the programme to switch the plant's lighting system from incandescent bulbs to eco-lighting. The programme is aimed to reduce the internal electricity usage. This programme is in progress, and its implementation is expected to reduce the internal consumption.

Also, for the newly-purchased equipment, one of the procurement criteria applied is the energy usage during the operation period. Only pieces of equipment that ensure a low consumption are purchased.

24.6
IMPACT ON NATURAL CAPITAL AND BIODIVERSITY

Cernavoda NPP Branch is located at a distance of more than 1.8 km of natural monuments, protected natural areas, species or habitats of Community interest. The location of the nuclear power plant does not overlap any protected natural areas of Community interest.

The impact Cernavoda NPP's operation on local biodiversity was reviewed in the assessments performed in various stages of the projects deployed on site. These assessments concluded that:

- since the commissioning of the two units of Cernavoda NPP, no radiological risk situation has been observed for the habitats and species of conservation interest of the protected natural areas;
- further to implementation of all measures for the correct operation of Cernavoda NPP (U1 and U2) and environmental monitoring, no radiological effects on the biota have been observed so far.

The flora and fauna in the area of influence of the Cernavoda NPP platform are not affected by the power plant's operation. This statement is supported by:

- The environmental radioactivity monitoring programmes implemented in the pre-operational and operational phase of Cernavoda NPP;
- The surveys on the impact of Cernavoda Nuclear Power Plant (U1 and U2) on the aquatic and terrestrial organisms in its area of influence, carried out in 2008-2012 and 2013-2016;
- The environmental impact adequate assessment study on Units 3 and 4 of Cernavoda NPP, conducted in 2010 by INCDDD Tulcea;
- Level I and II environmental balance-sheet and the on level I and II environmental balance-sheet report for SNN - Cernavoda NPP Branch.

The survey "Impact of the operation of the Cernavoda Nuclear Power Plant on the Aquatic and Terrestrial Organisms in its Area of Influence" (BIOTA survey), which was carried out in 2008 - 2012 and was followed up in 2013 - 2016, did not highlighted any impact significant effect of Cernavoda NPP's operation on the local biota. A new BIOTA Survey will be commenced in 2023. This survey will provide continuous monitoring of the biota.

The results and conclusions of the BIOTA Survey are supported by the surveys carried out for renewal of the environmental permit of SNN-Cernavoda NPP Branch, namely the "Report on Level II Environmental Balance-Sheet for Cernavoda NPP", conducted in 2017. The report was prepared on the basis of the investigation plan and the information retrieved from the Level II Environmental Balance-Sheet for the re-permitting of Cernavoda NPP Units 1 and 2, which consisted of investigations on the site of Cernavoda NPP and the area of influence of the power plant in order to determine the pollution intensity via taking of samples and physical, chemical and radiological analyses. The determinations of the interest - sampling indicators, sample preparation, analyses, and preparation of analysis reports were carried out by specialized laboratories.

In 2022, the "Environmental Impact Report" was prepared for the implementation of the CTRF project at the site of Cernavoda NPP. The survey was subjected to national and cross-border public debates, and returned no comments from the public. Additional information can be found at: http://www.mmediu.ro/articol/lucrari-de-construire-a-instalatiei-de-detritiere-apa-grea/3022

25 ENVIRONMENTAL MONITORING PROGRAMME AT CERNAVODA NPP

As early as the commissioning of Unit 1, the nuclear power plant put in place an environmental radioactivity monitoring programme, based on the requirements of the domestic legislation and the internationally-validated nuclear industry practices. In accordance with international practices, the power plant built and equipped its own Environmental Radioactivity Control Laboratory and established a network of sampling points, or places for continuous monitoring stations, in different locations, within a radius of 30 km around the power plant.

The routine environmental monitoring programme deployed at Cernavoda NPP was approved by NCNAC in 1995, having been audited before by the IAEA. Implementation of this programme commenced in March 1996.

Samples of the following are collected and analysed for radioactivity content:
air (deposition on particle filters and iodine cartridges, water vapor in air, carbon-14 in air); wet atmospheric deposition, water (the Danube water, soil infiltration water, deep water, water from the Danube - Black Sea Canal, rainwater, drinking water); soil; spontaneous vegetation; sediment; fish; meat (poultry, beef, pork); milk; vegetables (lettuce, spinach, radish, cucumber, tomato, green onion, pepper, cabbage, potato, green bean, eggplant); cereals (wheat, corn); fruits (strawberry, cherry, apricot, peach, grape); eggs; and TLD (thermoluminescent dosimeters that measure the integrated gamma dose for 3 months).

Approximately 1,200 samples are taken annually from 115 sites, to determine the environment radioactivity in the area of Cernavoda NPP.

A network of 62 monitoring points with thermoluminescent dosimeters (TLD) measuring the gamma dose was set up around the power plant and in an area with a radius of 30 km around it. Gamma spectrometry analyses, global alpha/beta analyses and specific analyses to detect tritium and C-14 carbon are carried out by liquid scintillator counting. Food samples for analysis are sourced from local producers or the agri-food market of Cernavoda, Seimeni, Medgidia, and Satu Nou. The results of radiological environmental monitoring are permanently compared against the results of the pre-operational environmental monitoring programme carried out between 1984 and 1996. So far, no radioactivity-related changes have been detected in the local environment of town of Cernavoda, compared to the period before commissioning of the nuclear unit. The Environmental Control Laboratory of Cernavoda NPP is certified by NCNAC under the Qualification Certificate no. ODN 01_CNE LCM/ 2021, valid until 20 December 2025, as a Dosimetric Body, and under the Qualification Certificate no. LI CNE-LCM 03/ 2022, valid until 31 May 2027, as a Laboratory for Measurement Tests on Environmental Samples.

In order to prove the reliability of the environmental measurements, the Environmental Control Laboratory takes part in international intercomparison exercises and performance tests.

The Environmental Control Laboratory is member of the French PROCORAD Association (Association for Radiotoxicological Measurements) and participates in intercomparison exercises for radioactivity measurements, starting from 2002, with good and very good results.

In 2005, the Environmental Control Laboratory was nominated by NCNAC as member of the IAEA's ALMERA Network (Analytical Laboratories for Environmental Radioactivity Measurements), and starting from 2006, it participates in the performance tests organized across the network every year.

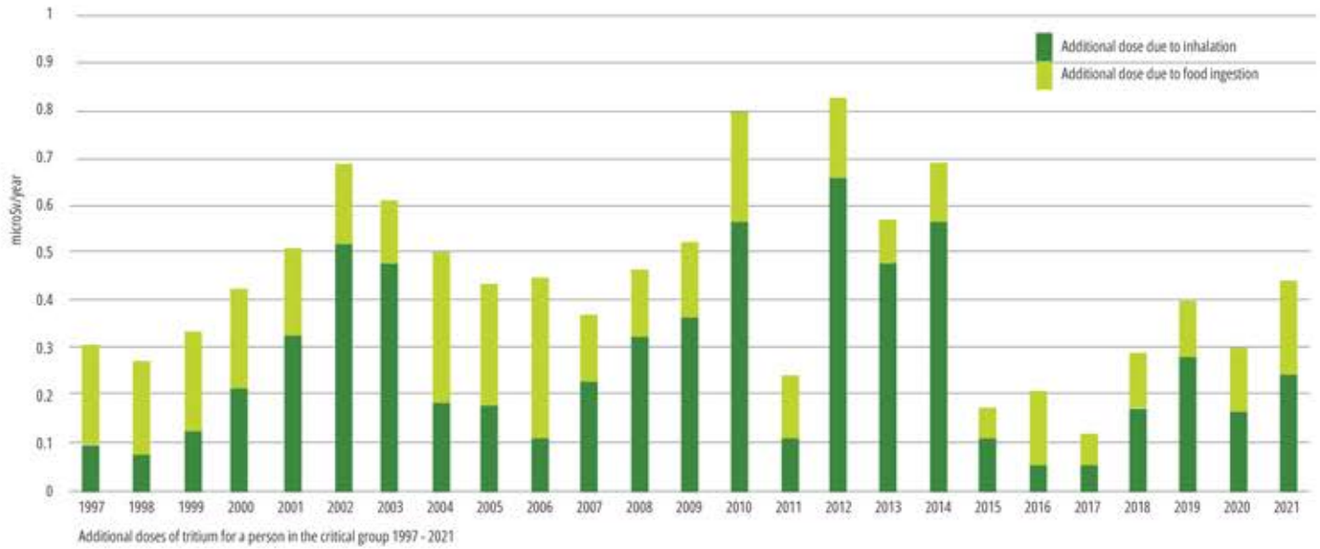
The Environmental Control Laboratory also participates in intercomparison exercises organized regularly by the European Commission through the Joint Research Center laboratories.

Starting from 2020, the Environmental Control Laboratory participates in intercomparison exercises organized by the CANDU Owners Group (COG) for thermoluminescent dosimeters (TLD).
The charts below shows the exposure of a person from the critical group to additional doses of tritium, compared to the natural background.

INCIDENTS ON INES SCALE

At Units 1 and 2 of the Cernavoda NPP, in the period 2019-2022, there were no events in the Incident category, classified INES Level 2 or more. In the mentioned period, a small number of events in the lower category Anomaly, with no impact on personnel, public or environment, were recorded.

SCALA - INES	2019	2020	2021	2022
Level 7 major accident	0	0	0	0
Level 6 Serious accident	0	0	0	0
Level 5 accident with extended consequences	0	0	0	0
Level 4 accident with local consequences	0	0	0	0
Level 3 Serious incident	0	0	0	0
Level 2 incident	0	0	0	0
Level 1 anomaly	0	1	1	4



Additional doses of tritium for a person in the critical group 1997 - 2021

26 MANAGEMENT OF WATER RESOURCES

26.1 WATER MANAGEMENT POLICY

The use of water for the technological processes of Cernavoda NPP is foreseen under the design. This is used to cool down the systems and is discharged back into the Danube, in the same amount. The technological process cannot support a reduction in the amount of water taken from the Danube.

The source of water needed to cover for the power plant's technological requirements is the Danube River, through the Danube - Black Sea Canal. Since the Danube River can ensure the necessary cooling flow, the hydrotechnical circuit has been designed to operate in an open mode (the water is taken from the Danube to cool down the systems, and the hot water is discharged back into the Danube). Thus, the technological requirements cannot support a reduction in the amount of water from the Danube.

26.2 MANAGEMENT OF THE USE OF WATER RESOURCES

The source of cold water for the technological cooling water circuits of Cernavoda NPP is the Danube River - the 1st reach of the Danube - Black Sea Canal, via the bypass.

The water captured via a free-level intake located on the bypass of the Danube - Black Sea Canal - reach I, reaches the NPP's distribution basin, from where, having been mechanically cleaned in the Unit of Sieves U1 and U2 and pumped via the Units of Pumps U1 and U2, it cools down the turbine condenser of Unit 1, respectively of Unit 2, as well as some heat exchangers in the two nuclear units.

The water taken from the Danube never comes into contact with the primary circuit (the nuclear part of the plant). The water volumes and flow rates are authorized for operation of the two units under a 365 days/year and 24/7 regime, according to the Water Management Permit in force.

Since the Danube River can ensure the necessary flow rates for cooling, the technological cooling water systems have been designed to operate in an open circuit. Therefore, the amount drawn is equal to the flow rate discharged, with only negligible water losses along the circuit. The water is returned to the Danube via the hot water canal (Seimeni outlet), under normal operating conditions (98% of the Danube water returns to the river). At high levels of the Danube water, the effect of water drawing is not felt at Cernavoda. The cold water usage in the process water circuits is strictly metered.

In wintertime, a fraction of the hot water flow rate (25%÷70%) is discharged into the NPP's distribution basin to prevent sludge formation, with notice given to the National Administration "Apele Romane"/Dobrogea-Litoral Water Basin Administration, with no thermal influence on the water in the Bypass or reach I of the Danube - Black Sea Canal (DBSC).
According to the Water Management Permit (WMP), the water temperature when leaving the power plant must meet the following conditions:

- in reach II of the Danube - Black Sea Canal, it will be maximum 10°C above the water temperature of reach tributary I of the DBSC, so that the water temperature in reach, downstream of the canal's discharge point, does not exceed 25°C.
- in the Danube, it will be maximum 10°C above the water temperature of the Danube River; however, not higher than 35°C after passing through the mixing zone.

Cernavoda NPP has its own Chemical Water Treatment Station (WTS) that produces the demineralized water needed in the technological process of electricity and heat generation. This WTS is also used to neutralize the process water that returns to the emissary.

26.3
LIQUID EFFLUENT PHYSICAL AND CHEMICAL MONITORING PROGRAMME

Cernavoda NPP is authorized (under the Water Management Permit) to use as the water from the Danube River as cooling water, via the Danube Canal - Black Sea, reach I. The hot water is usually returned to the Danube via Seimeni Canal or, by way of exception, to the Canal Danube - Black Sea, reach II.

For the chemical control of the water in the secondary circuit of the NPP, U1 and U2, specific chemical substances are used: hydrazine, morpholine, cyclohexamine for the chemical conditioning of the systems, hydrochloric acid, sodium hydroxide, ferric chloride, lime, Praestol and Nalco in the technological process to obtain demineralized water in the Chemical Water Treatment Station, and bioacid as an agent to control/remove the macro-biological load in the technical process water.
The liquid effluent physical and chemical monitoring programme was devised and applied to check and control the quality of the water discharged from Cernavoda NPP, and to prove compliance with the requirements of the Environmental Permit and the Water Management Permit. According to this programme, all chemicals used for chemical conditioning of the power plant's systems are monitored in the liquid effluent.
Also, treatments with macro-biological load control agents are carried out locally, only on the technical process water circuit, with the aim of limiting fixation and growth of mussels in pipes and pieces of equipment.
The chemicals used to obtain demineralized water are monitored and neutralized before they are discharged into the effluent.
The concentrations of all these substances in the liquid effluent stay below the permitted discharge limit.
Studies have been carried out on the thermal impact of the discharge of hot water into the Danube and the Danube - Black Sea Canal, and the temperature of the discharged hot water is measured so that it stays within the limits set out under the Water Management Permit.
The non-radioactive gaseous effluent physical and chemical monitoring programme is designed so as to allow determination of pollutant (other than radioactive) concentrations in the environmental factors. This requirement is specific only to periods of continuous operation longer than 5 days for the stacks of the Turn-Off Thermal Power (according to the Protocol executed with Constanta Environmental Protection Agency (EPA)). The following pollutants are determined in the emission impact area: carbon dioxide, sulphur oxides, nitrogen oxides, suspended powders, etc. More information can be found in the previous chapters on greenhouse gas emissions.

Drinking water is supplied on the site of Cernavoda NPP from:

- underground own source, via deep pits. From the deep pits (FJ1 and FJ2), in the NPP's area, water is extracted with submersible pumps and carried to the Drinking Water Treatment Plant (DWTP) on the site.
- from the zonal drinking water supply system of town city of Cernavoda (operator: S.C. RAJA S.A. Constanta).

Cernavoda NPP holds the Sanitary Operating Permit no. 42/20.02.2012, issued by the Public Health Directorate of Constanta, for FJ1, FJ2 and the Treatment and Chlorination Stations; this permit must be applied a visa every year in order to prove that all conditions therein are met.

26.4
RADIOACTIVELY CONTAMINATED WASTE WATER

The radioactively contaminated waste water collection system is intended to collect of all aqueous radioactive waste resulting from the power plant's process systems and from maintenance, overhaul and decontamination operations, followed by discharge of the cooling water from condensers into the discharge canal, but ensuring compliance with the regulated limits for radioactive material concentrations when discharged into the emissary. The discharge is done intermittently into the cooling water from condensers.

In order to ensure proper control and registration of radioactive discharges, the discharge of radioactive liquid effluents is done as follows:

- Before emptying a tank into the cooling water canal of the condenser, the tank content is recirculated to ensure good homogenization and a representative sample is taken to be measured in laboratory and determine the content of gamma and tritium radioactivity.
- Depending on results, the shift leader dispatcher authorizes the discharge, or the water is decontaminated.
- During the discharge, the Liquid Effluent Monitor (LEM) monitors the global gamma activity that is discharged and stops the discharge in the event of an unexpected high activity.

Approximately 1,400 samples of water discharged from the power plant are measured every year in the power plant's Dosimetry Laboratory. Weekly, the radioactivity monitoring results are centralized and compared against the documentary limits of Cernavoda NPP and the committed environmental objectives.

In all years of commercial operation (26 years for U1 and 15 years for U2), the discharges of radioactive liquid effluents have been lower than the Derived Discharge Limit approved by authorities and stayed below the limits set out in the environmental objectives of Cernavoda NPP thanks to implementation of the Environmental Management System.

26.5 WATER USE OPTIMIZATION

Annually, according to the requirement of the Water Management Permit issued for Cernavoda NPP, the water need for the following year is determined. Thus, compared to the maximum volume of water drawn, as set out in the permit, the amount of water per unit/per month and total amount are estimated depending on the power plant's cooling needs (example: in summertime, between July and October, a larger amount of cooling water is needed compared to the rest of the year, or during planned shutdowns when maintenance activities are performed on the cooling circuits, the volume of water at the stopped unit is lower; this is the only measure that reduces the amount of water used from the Danube.
Under normal conditions, when the Danube water level is normal, no measures to reduce water consumption are necessary. In certain instance, for example in case of drought, when the Danube water level is low, the water regulatory authority places restrictions on the use of water for all economic operators. The nuclear power plant is the main and most important beneficiary of the Danube water, as coolant for its aggregates. These restrictions are applied mainly to other economic operators and only then to the nuclear power plant.

26.6 TARGETS TO REDUCE THE WATER USE

Cernavoda NPP has no targets to reduce the cooling water taken from the Danube, because this is not possible.

26.7 INDEPENDENT CHECKS ON THE USE OF WATER

For the amount of the Danube water used for cooling purposes, a check is carried out to make sure that the maximum quantities authorized are not exceeded and the amounts of water used are confirmed by the water regulatory authority when the annual contracts are concluded (the water regulatory authority is the sole operator according to the legislation in force).

26.8 INCIDENTS OF INFRINGEMENT OF THE WATER MANAGEMENT STANDARDS AND REGULATIONS

Cernavoda NPP complies with all the requirements of the water management permits/protocols executed with the water regulatory authority.

As an example, the underlying documentation for renewal of the water management permits that Cernavoda NPP is required to obtain (for U1 and U2 and for DICA) provided for how the requirements/duties laid down in the permits/protocols/Inspection Reports should be met/observed.

26.9 AMOUNTS OF WATER USED

For operation of Cernavoda NPP, the Danube water is used to ensure that the heat source is taken over from condensers. The amount of water used is set out under the project and can only be adjusted within very small limits, depending mainly on the outside temperature of the input water. No streamlining to reduce the cooling water use factor can be foreseen.

Year	Drawn Volume (Thousand Cubic M)
2019	2,285,029
2020	2,253,703
2021	2,239,122
2022	2,134,009

26.10 FINANCIAL QUANTIFICATION OF WATER VOLUMES

The following expenditures were made in 2022:

For the volumes of drawn water: lei 64,611,306 (contract with ANAR - the central water regulatory authority)

For physical and chemical polluters: lei 12,616,275 (contract with ABADL – the local water regulatory authority)

26.11
WATER DRAWING (EXTRACTION) AND DISCHARGE DATA

Water recycling system – It does not apply to Cernavoda NPP because there is no actual water pollution with pollutants that require recycling. At Cernavoda NPP, the targets concerning reduction of water drawn from the Danube are not applicable, because the amount of water used in the technological processes of Cernavoda NPP is provided by the plant's design.

Year	Drawn Volume (Thousand Cubic M)	Discharged Volume (Thousand Cubic M)	Volume Injected Into The Distribution Basin (Thousand Cubic M)
2019	2,285,029	2,285,029	185,270
2020	2,253,703	2,253,703	186,034
2021	2,239,122	2,239,122	209,699
2022	2,134,009	2,134,009	269,816

26.12
HYDRIC STRESS MANAGEMENT

The sites of the nuclear units of Cernavoda have been subject to many hydrological surveys conducted to ensure that the area is not subject to hydric stress and that the necessary water quantities are permanently ensured.

However, the potential periods of prolonged drought that can lead to a lower flow rate of the Danube have been taken into account, and technical and administrative measures are considered to help protect of the plant, the environment and the population. Of these measures, we list:

- permanent monitoring of the water flow-rate on the Danube, under the collaboration protocols duly executed with the National Institute of Meteorology;
- availability of internal action procedures for the case where the minimum flow-rate required to cover for the water demand cannot be ensured.

26.13
COOPERATION WITH STAKEHOLDERS FOR WATER MANAGEMENT UNDER HYDRIC STRESS.

In case of drought, when the Danube water level is low, the water regulatory authority places restrictions on the use of water for all economic operators, including the Nuclear Power Plant of Cernavoda. In critical situations, the power plant must be shut down. Over the last four years, there have been no such instance at Cernavoda NPP.

27 ASSET INTEGRITY MANAGEMENT

The management responsibility for asset management is documented in procedures and concerns three major components: holding of accurate knowledge about the characteristics of the assets in storerooms, including regular verification programmes; characteristics; critical assets; ensuring MIN-MAX stocks; identification of the maintenance (preventive, predictive) requirements.

Asset integrity management takes place in Cernavoda NPP by:

- Taking over of the products, services and works, product storage, product release from warehouse, maintaining their inventory, etc., as described in detail in the procedures related to process RD-01364-S001 - "Process of the management of flow of product, service and work procurement in Cernavoda NPP", and as aligned with the procurement process put in place consistently across SNN.
- Concerning identification of the critical components, there are the procedures SI-01365-T048 "Classification of the Critical Systems and Components" and SI-01365-S015 "Provision of Spare Parts and Consumables Needed for Operation of the Cernavoda NPP Using the MIN-MAX System".
- As to identification of the maintenance (preventive, predictive) requirements, 2YLA and 3YLA programming, there are the procedures SI-01365-P009 "Preventive Maintenance Programme of Cernavoda NPP", and SI-01365-P081 "Activities with the Power Plant in Use".

Also, according to the management policy, audits are undertaken on all these components, including assessments of the obsolescence management activities, assessment of how SSC reliability is maintained, assessment of the establishment, planning, implementation and updating of the requirements for activities related to the critical components, in such a way so as to ensure the basis for assessment and re-assessment of the related risk register, the necessary corrective measures and actions, and a continuous improvement of asset management.

STRATEGY AND BUSINESS PLANNING

Core objectives and principles are set at the S.N.Nuclearelectrica corporate office level. The strategic objectives are derived from the Government's Letter ofExpectations, which in turn is the basis for 12 general objectives. These 12 general objectives are further cascaded down to the level of subunits through both specific and individual objectives. S.N. Nuclearelectrica principles are derived from the mission, vision and values, and are communicated to every company level. Both the headquarter and the station define priorities and promote actions in order to support the objectives through alignment with S.N. Nuclearelectrica's vision and business strategy.

The safe and reliable long term operation of Cernavoda NPP requires the systematic and proactive identification of degradation and ageing mechanisms of plant critical Systems, Structures and Components (SSCs).

Cernavoda NPP has developed many various technical programs following the Equipment Reliability strategy for critical SSCs for timely identification of major problems which might challenge plant operation.

The Main Plant Life Management (PLiM) Program functions are:

- Provide a clear image of the potential threats to plant safe and reliable long term operation to the Station Management and the required Life Cycle Plan necessary to address them.
- Provide the necessary input data for plant Long Term Plan and company Business Plan.

The SI-01365-P093 procedure (Cernavoda NPP) establishes a PLiM Program administration process, defining the Roles and Responsibilities of staff to support the implementation of PLiM program at Cernavoda NPP.

The periodic inspections carried out during the entire operation of the power plant aim to ensure that no unacceptable degradation of the quality of the inspected components has occurred and that the probability of failure remains at an acceptably low level, throughout the life of the Power Plant.
The SI-01365-T057 procedure (Cernavoda NPP) describes the "Periodic inspection program carried out at Cernavoda NPP" in accordance with Canadian standards CSA N285.4 and CSA N285.5 and defines the roles and responsibilities of the personnel involved in the development of this program.

The periodic inspection program has two components:

- The Periodic Inspection Program for the nuclear components of the CANDU type plants, according to the Canadian standard CSA N285.4, which also includes the additional mandatory inspection requirements for Fuel Channels, Feeders and Steam Generator Tubes;
- Periodic Inspection Program for the envelope components of CANDU type plants, according to CSA N285.5.

By reducing to minimum, the frequency of occurrence (reducing the probability) and the severity (reducing the consequences) of the events that have obsolescence problems as their cause, the inherent risk of decreasing the performance of the plant and the reliability of the equipment will be reduced.

The PSP-T010-021 procedure (Cernavoda NPP) describes the "Management of obsolescence problems at Cernavoda NPP" and it establishes the way of managing obsolescence problems: identification, prioritization, analysis, establishment of the strategy/ actions necessary to solve them and the way of tracking the solution of these technical problems.

The critical components are always part of the critical systems and structures. The SI-01365-T048 procedure (Cernavoda NPP) provides a methodology for categorizing such systems, structures and components (SSCs) into criticality rankings based on their importance to ensure reactor safety, production, cost, radiological and environmental aspects. This criticality determination is then used to define suitable maintenance strategies, prioritization of work activities and ensuring appropriate levels of programmatic activities are in place. The methodology described in this procedure is consistent with the approach defined in INPO AP-913 "Equipment Reliability Process Description"

The criteria specified in SI-01365-T048 procedure will be used by plant personnel to identify equipment/components of the critical systems into different categories: Critical, Non-Critical and Run-to-Maintenance, to ensure safe, reliable and productive operation of the plant.

The provision of spare parts and consumables necessary for the operation of the Cernavoda NPP, by using the min-max system (procedure code SI-01365-S015) defines the way of establishing and ensuring the necessary products for the execution of preventive and corrective maintenance activities of the equipment in the Cernavoda NPP, by using the min-max limit system.

The provisions of this document are applied by the personnel involved in establishing min-max limits and in managing the min-max system for products, respectively spare parts and consumables used in the execution of preventive and corrective maintenance activities of equipment/components in Cernavoda NPP.

The maximum limit (Lmax) represents the limit up to which the supply requirement is established, at the time of initiating a purchase request. The quantity ordered represents the difference between the maximum limit and the free quantity in stock.

The minimum limit (Lmin) represents the limit that triggers the initiation of the purchase. The moment of triggering the purchase is the moment when the free quantity in stock, not allocated to works, is less than the minimum limit.

In the planning process within the Cernavoda NPP, activities are carried out to prepare in advance the maintenance works with the Power Plant (2YLA - 2 Years Look Ahead).

The SI-01365-P089 procedure (Cernavoda NPP) establishes this sub-process of identification and programming 2 years in advance ("2 Years Look Ahead" - 2YLA) of maintenance works with the Power Plant in power, thus ensuring sufficient time for obtaining fixed means, objects of inventory, spare parts, materials, services and technical solutions necessary for the execution of activities.

This sub-process, called "2YLA" for short, aims to support the operation of the Power Plant in conditions of nuclear safety and economic efficiency through a proactive approach to programming, evaluation and preparation for the execution of maintenance works with the Power Plant in power, monitoring and strict control of these processes , so as to ensure the preparation of the activities selected for the purpose, before entering the sub-process of planning the activities with the Power Plant (13WLA).

The RD-01364-T010 procedure (Cernavoda NPP) defines the process of maintaining the reliability of systems, structures and critical components according to project

requirements and establishes methods for its documentation, implementation, evaluation and improvement. The reliability maintenance process includes monitoring programs, preventive maintenance programs, testing, periodic inspections and chemical control. Reliability is defined as the probability that a SSCs will perform its functions within a determined time interval, if it is used within the established operating parameters. The procedure is applied by all the plant personnel involved in the activities of maintaining SSCs reliability.

The preventive maintenance program at Cernavoda NPP is processed through procedure SI-01365-P009, which aims to establish how preventive maintenance requirements are defined, as well as how to implement/revise them within Cernavoda NPP. This procedure is used by all the personnel involved in defining, implementing and revising the preventive maintenance program at Cernavoda NPP.

Monitoring the state of the equipment represents activities of tracking the relevant operating parameters of the SSCs in order to determine the evolution of the degradation over time so that revisions are planned before the degradation leads to failures or departure from the designed operating parameters.

The periodic revisions represent the verification/replacement activities of SSCs components with predefined periodicity, which are performed regardless of the state of degradation of the equipment (major revisions with the replacement of wear or sealing elements or even the replacement of the equipment at the end of its life, internal inspections, revisions current with the replacement of lubricant, cleaning/replacement of filters, etc.).

Predictive maintenance is based on monitoring the condition of equipment, measuring performance parameters and analyzing their trends. The predictive maintenance activity is processed through procedure SI-01365-P10 (Cernavoda NPP).

The main objectives of the predictive maintenance program of the Power Plant are to improve the safety and reliability of the Power Plant. Through the implementation of the program, the detection and diagnosis of the degradation of the equipment before failure will be achieved. Predictive maintenance techniques are also used to monitor equipment condition, in order to optimize the equipment overhaul schedule.

Within Pitesti NFP, the maintenance of the machines and installations on the nuclear fuel production line in operation at the designed parameters is ensured by the preventive planned overhaul and repair system.

By planning the revisions and repairs, as well as by the repair regulations/ technical books, etc., the legal framework is created which ensures the necessary conditions for the safe operation of the machines and the security of the personnel.

Thus, in NFP Pitesti, for maintaining in good working order the machines and installations specific to the manufacture of nuclear fuel bundles and related installations, there is a series of internal working procedures (CN-TH-59,60,56,22,32,18,19,21,30,70) for the description, understanding and establishment of the working method and the responsibilities of the personnel involved.

Through the operation activity-permanent supervision, periodic controls, some checks and tests, as well as through the application of the provisions of this regulation, the technical operation regulations, the instructions of the equipment suppliers and the internal technical instructions (procedures) for each machine and workplace, the works that must restore and maintain the installations and equipment in the prescribed technical condition are determined. The works established on these bases are performed either within the exploitation activity (current maintenance) or in the repair activity (scheduled or accidental).

Within NFP Pitesti, according to the legislation in force and internal procedures, the following categories of works are distinguished: current maintenance (IC), technical revisions (RT), current repairs (RC1), general revisions (RC2), capital repairs (RK), reconstructions and modernizations (RM), accidental interventions (IA), accidental repairs (RA), technological shutdowns (OT), activities specific to the Aging Management Program (MI).

Planning of overhauls, repairs, reconstructions and modernizations within NFP Pitesti:

- Technical revisions, repairs, reconstructions and modernizations, for installations and machines are planned annually and monthly based on the provisions of this regulation and the provisions of their technical books.
- For the other machines/installations, the annual and monthly planning is done according to the prescriptions of the specific technical regulations, characteristic of each category of machines, as well as the internal procedures.
- The annual repair program (Rt, Rc1, Rc2 and RK) for all machines/installations is drawn up according to the working procedures in force.
- Capital repairs are extracted from the annual program and registered in a separate plan, the volume of works being broken down by equipment/installation category.
- The monthly plans for technical revisions and repairs, for all machines/installations, are approved by the Chief Engineer of the Technical Department.

28 MANAGEMENT OF RISKS RELATED TO CLIMATE FACTORS

The internal and external OPEX (operating experience)process is carefully monitored and reported on to through the External Nonconformity (NC) Reporting Process - CECA - the NC classification committee reviews the issued NCs and decides on the NC category. Important NCs are subject to root-cause investigations, followed by preventive/corrective/improvement actions. Also, within the plant management committees have available reports on these main NCs.

The investigations and root-causes are debated on in the weekly meetings of the NPP management and, once the reports are approved, either actions are taken, or action plans are devised to properly monitor application of the decisions made.

Daily, hydrological and meteorological data is received from national institutes and represents basic inputs to assessment of business-related risks (via EOOS-Risk Monitor). Participants in the daily management meeting are informed about the risk level results for the previous day and the current day estimates and, if necessary, additional actions are decided based on the risk level and the potentially affected safety issues

At corporate level, there is a risk management process in place, and its deliverable is a 3-month integrated report of the risk register and the actions required to mitigate the risks. The report also contains the "Climate Risks" chapter, which details general information at corporate level.

Integrating physical climate changes into the regular risk assessments and the business strategy

The NPP's procedures in force, which also include instructions for extreme conditions related to climate change, are implemented in all activities of the power plant, and a regular daily risk assessment is carried out and discussed in the operational decision meeting, as presented above.
Every 3 months, is a meeting called Plant Safety Operating Committee (PSOC) is held with the first line management to discuss the Plant Risk Report with the aid of the Risk Monitor (EOOS) for the last 3 months and also for the last 12 months. The aggregate annual risk indicator calculated for the period concerned is compared against the documentary limit set for the EPSN average risk level (2.61E-05); usually, this value is conservatively set below the limit recommended by the IAEA (1E-04).

Responsibility of the management or of Board of Directors level for the climate change risks

In SNN, the climate change risks and any other abnormal situations falls under the responsibility of the management and the Operations Division of the nuclear power plant, and actions are taken depending on the type of hazard and the action level contain in the main document of the OP&P power plant, i.e. the emergency procedures (depending on the specifics of extreme events of natural origin - EEON). The report for the last part of 2022 was submitted to, and approved by, the SNN management in the second half of January 2023.

Initiatives to manage or adapt to climate change physical risks

Under contracts and/or through mutual Protocols, the weather conditions supplied by the Institute of Hydrology, the Institute of Meteorology and the Institute of Seismic Research (if necessary) are daily updated. This information is input data for the daily assessment of activities, plants and their related risks, carried out under the plant risk monitoring procedure (EOOS). The average risk template is presented and discussed daily in the operational meeting of the plant and, if necessary, additional actions are decided based on the estimated risk level.

After the Fukushima event, corrective actions were devised and implemented to accommodate the lessons learned from this event. The emergency plan and procedures,

agreements, protocols and contracts in force have been revisited and revised to better adapt to the emergency response in case of serious accidents that overlap natural disasters. A sound accident management programme, with Abnormal Operating Procedures (APOP), is in place. Particular attention was paid to the communication systems, where measures were taken together with the special national communication services to complete and improve the existing communication systems.

In 2022, an independent assessment of the power plant's design was carried out against the assessment of external events regarding extreme air and water temperatures; for 2023, the project ESR - 035 "Review of Cernavoda Power Plant's Design with an Updated Risk Assessment" is subjected to an independent review in terms of the actual results of the external events, such as extreme wind, tornado, extreme rainfall/snowfall and their potential risk to the power plant's systems and structures performing a nuclear safety function.

The results of the above assessments are included in the updates of the FSAR (Final Safety Report), a document that is part of the basic design document required for approval by the nuclear authority and for the sustainability of the power plant's license.

Recognition of climate change physical risks

The final safety analysis report (FSAR) and the addenda thereto, as well as other permitting-supporting documents, make up the summary of the safety case for Cernavoda NPP.
Under the FSAR, most hazards are addressed in Chapter 2 thereof, Site Characteristics, which includes the geography, demographics, nearby industrial, transport and military facilities, meteorology, hydrology, geology and seismology. FSAR's Chapter 3, Nuclear Power Plant's Buildings and Structures, describes the design characteristics to protect structures against the effects of hazards.

Earthquakes - Earthquakes were tackled by a deterministic risk analysis to determine the parameters for a design earthquake;

Extreme weather conditions - The extreme weather conditions were determined based on data collected in the vicinity of the power plant, subject to a limited use of on-site weather data.

Historical wind data: wind and seismic events have similar effects, but the seismic effects are more limiting; so, the effects of wind were not addressed separately (save for the outer wall panels, etc.).

Tornadoes were deemed to occur at very low frequencies

Snow - the maximum snow-cover was determined based on records from nearby locations to be 136 cm in 1954. The original design standard used in FSAR was compared against modern standards and it was concluded that the original design value is conservative.

Rainfall - The highest value of these absolute maximum amounts of precipitation in 24 h in Cernavoda was 103.5 mm, recorded in July 1993; the longest duration of precipitation was recorded in Fetești, in April 1984 and lasted 90 hours. The value used for the design/flood protection tasks is documented; additionally, the drainage on site and in Valea Cismelei and Valea Vițeilor was identified and rated as adequate to avoid floods.

Drought - The minimum levels of the Danube River (at specified confidence levels) are determined and documented in FSAR and have proven to be adequate to provide sufficient water for the safety systems of the plants. However, the operating procedures for maintenance of the safety case have been re-assessed and revised,

Hydrology - The hazards related to surface and underground water are addressed.

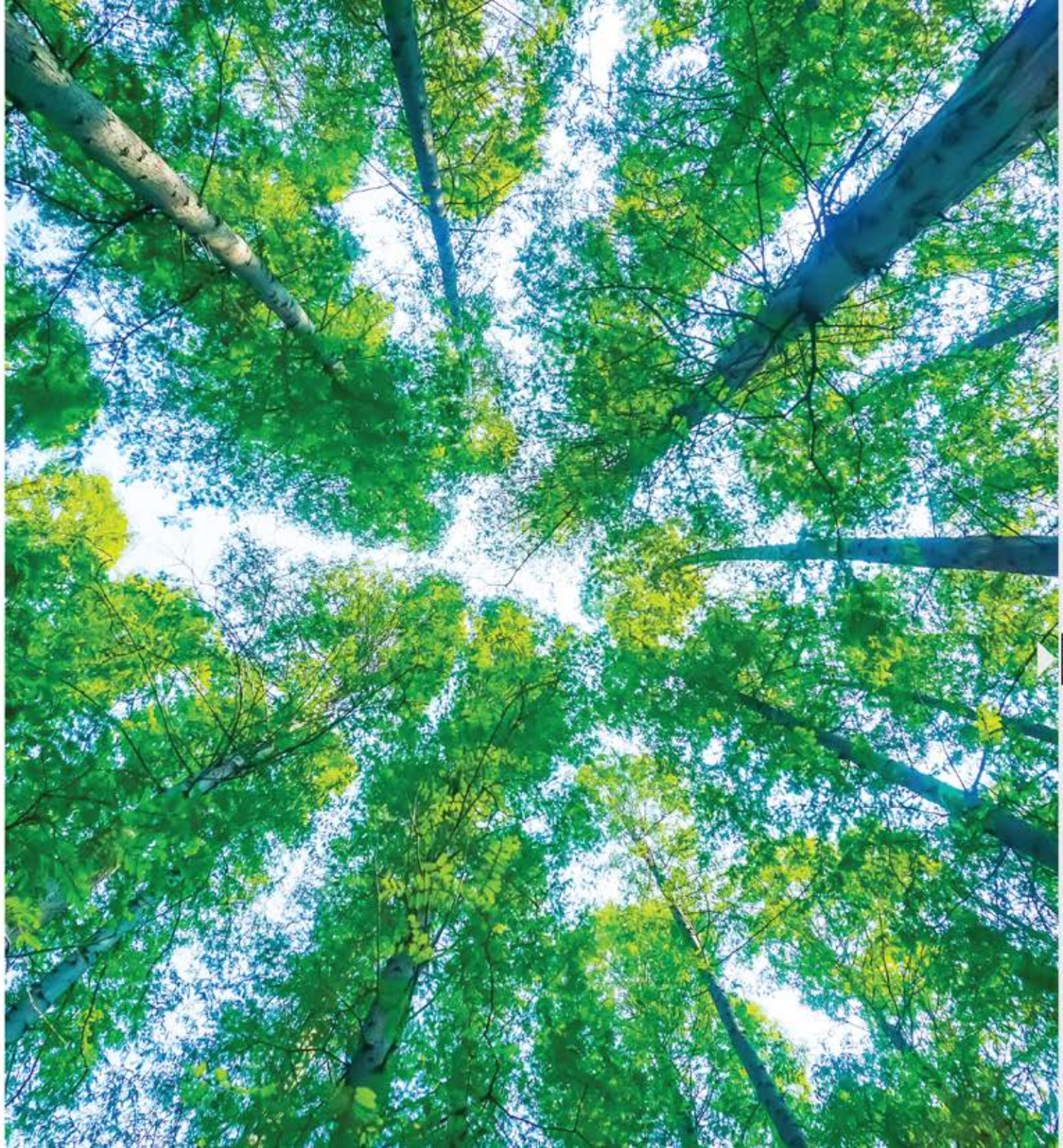
Emergency water supply

Ice - even in icy winters, there is always enough water available for the unit's safety systems

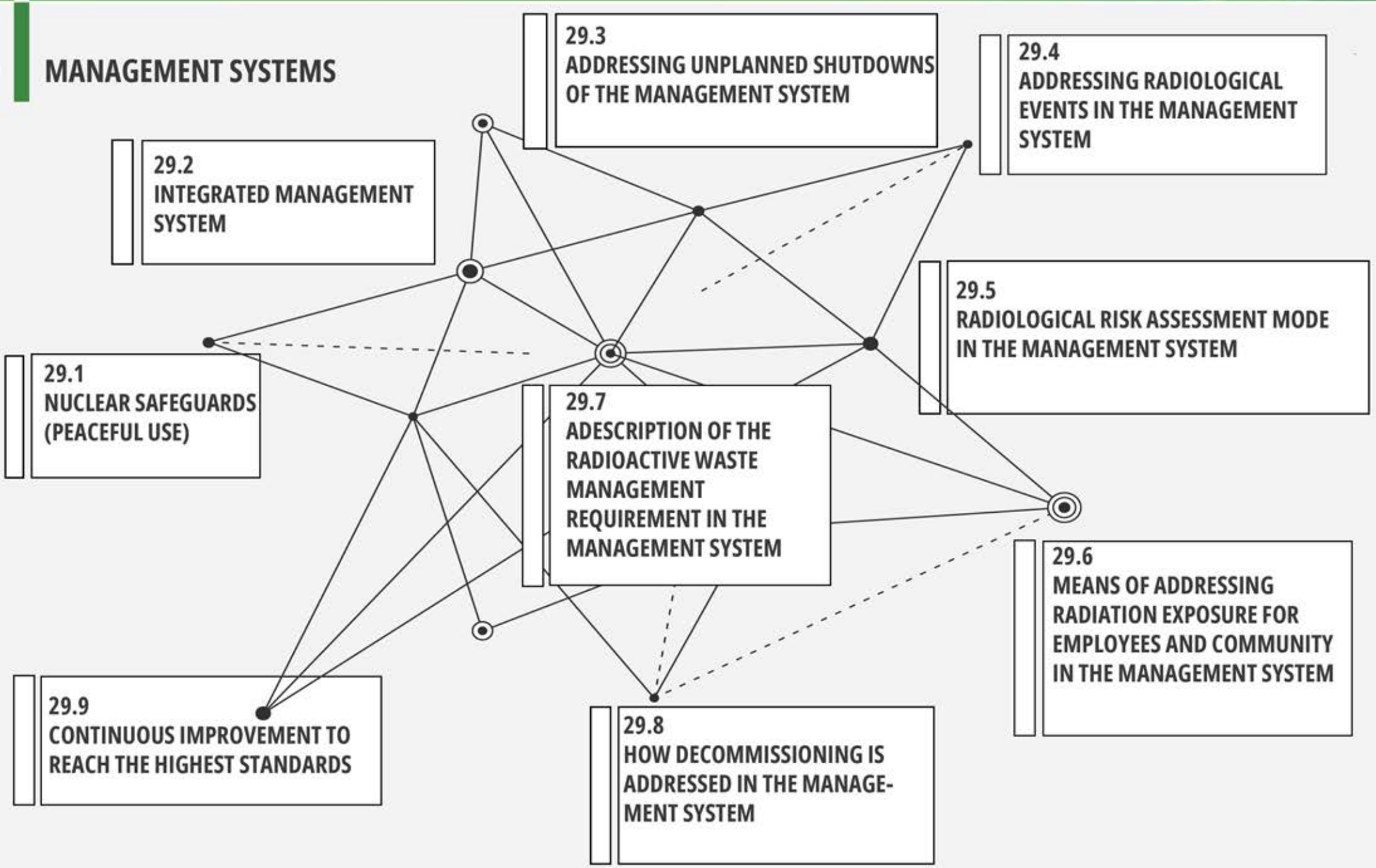
Floods - The levels of the Danube River and the Danube-Black Sea canal were analysed based on historical data and an assumption of failure of the upstream dam on the River. The result showed that the height of the site is sufficient to avoid safety problems in case of floods. The runoff from Cismelei Valley and Vițeilor Valley was also analysed for the level of precipitation and was taken into account in the design of the plant so as to avoid flooding. Unit 1 is protected against flooding caused by the rising groundwater levels by including a perimeter containment wall around the nuclear island, which provides protection against levels higher than the 100-year maximum groundwater level, and there are pumps available to remove any water intrusion.
Additionally, areas, such as probabilistic security analysis (PSA), have been expanded and improved. Much of this development was supported and reviewed by organizations, such as the IAEA.

Biological hazards (addressed under IAEA NS-G-1.5)

A major study has been published and approved by the EU after the 2011 FUKUSHIMA event, known as the Stress Test Report, based on the requirements set by the Western European Nuclear Regulators Association (WENRA) and the European Nuclear Safety Regulators Group (ENSREG), which addresses the aspects required by the EU "stress test" specifications, where the initial design basis of nuclear power plant units is discussed, followed by a detailed assessment of each of the major aspects for the design basis overrun conditions.
This detailed assessment concludes that both units of Cernavoda NPP nuclear power plant, as these were designed, meet the safety requirements laid down in the initial design, while also providing for sufficient safety margins against serious earthquakes, floods, power failures, and loss of final radiator. Ever since, improvements have since been identified and implemented to increase the available safety margins. A stand-alone assessment was conducted using a risk-based process to determine which improvements are recommended for implementation with priority.
There is also a number of NPP internal procedures, forms/checklists and briefings, in addition to the Design Base Documents (DBA) required for the Licensing Design Base Documents (DBA) of the nuclear power plant's units, which describe the methods and actions that must be taken depending on the type of extreme weather hazard and/or any combination of hazards and operational risks.



29 MANAGEMENT SYSTEMS



29.1 NUCLEAR SAFEGUARDS (PEACEFUL USE)

The safeguards that apply to the CANDU 600 reactors at Cernavoda nuclear power plant and its fuel cycle are included in the legal framework of the European and international safeguard agreements.
The Treaty on the Non-Proliferation of Nuclear Weapons was ratified by Romania in 1970. This was followed by the Agreement between Romania and the IAEA for application of safeguards in connection with the Treaty on the Non-Proliferation of Nuclear Weapons, signed in 1973, and, later by the Protocol between Romania and the International Atomic Energy Agency, additional to the Agreement between the Socialist Republic of Romania and the Agency International for Atomic Energy for application of safeguards in connection with the Treaty on the Non-Proliferation of Nuclear Weapons, of 28 July 2000.

As a member of the European Community and a signatory to the Treaty establishing the European Atomic Energy Community (EURATOM) of 1 January 2007, the Parliament of Romanian implemented, on 1 May 2010, the Global Safeguards Agreement with the International Atomic Energy Agency (IAEA), supplemented by the Additional Protocol. Further to the coming into force of this Agreement for Romania, the initial Agreement between Romania and the IAEA, as well as the additional Protocol thereto, were stayed.
Additionally, acquisition of CANDU technology requires establishment of a bilateral treaty with Canada, which sets out the need for the nuclear materials used and produced by CANDU technology to be subject to IAEA safeguards, as a measure to check their use only for peaceful purposes. In this regard, Romania is a party to the Agreement between the Government of Canada and the Government of Romania for cooperation in development and use of atomic energy for peaceful purposes, 1978, as amended in October 1994, and to the additional Protocol to the Agreement between the Government of Canada and the Government of Romania for cooperation in development and use of atomic energy for peaceful purposes, signed on 9 January 2016.
Based on the legal agreements above, the nuclear materials at the Cernavoda nuclear power plant are subject to both the IAEA and EURATOM safeguards.

29.2 INTEGRATED MANAGEMENT SYSTEM

The integrated management system applied by Cernavoda NPP focuses on meeting the nuclear safety requirements that derive from the NCNAC rules and requirements underlying the issue the operating permits for Units 1 and 2 of Cernavoda, the spent fuel storage (DICA) and the intermediate storage of radioactive solid waste (DICA), at the same time with fulfilment of all other requirements related to: quality, environment, occupational health and safety, financial and accounting, physical protection, etc. The nuclear safety requirements take precedence over any other requirements.

The activities authorized for the operating phase of Cernavoda NPP according to the Operating Permits are:

a) actual operation;
b) maintenance, repair, modification, both in terms of activities performed during operation, as well as activities to be performed during scheduled and unscheduled shut-downs.

Societatea Nationala "Nuclearelectrica" - SA, the holder of the nuclear plants, is also the holder of the operating permits, and "Cernavoda NPP" Branch is the organization that operates the nuclear plants. The permit holder can delegate the responsibility for complying with the limits and conditions of the operating permits to the operating organization, but it still retains the responsibility for their compliance.

The integrated management system defined and put in place by Cernavoda NPP is flexible, and allows the implementation of changes to optimize the processes and activities with a view to continuously improving the Cernavoda NPP's performance in terms of the safe and reliable operation of the two units, as well as of the spent fuel storage.

Each Executive, Chief Engineer/Head of Department and Head of Unit must assume the system's requirements and the responsibility for their correct understanding and implementation in the organizational structures they coordinate.

The Executives/Chief Engineers/Heads of Departments provide direct support to process owners, who coordinate the activities falling under the scope of their work, and ensure that for, any problem raised by them, clear measures are determined to help improve the specific performance of that process. They also ensure that each process under their responsibility is regularly assessed against the requirements of the procedure RD-01364-Q006 "Assessment and Continuous Improvement of the Management System", and that the results of these assessments are fed into the continuous improvement of its performance.

Management System Structure

Development of the Integrated Management System of Cernavoda NPP relies on the classical PDCA (Plan-Do-Check-Act for correction or improvement) principle and the process-based approach principle. The PDCA principle is graphically described in Figure 1.

The PDCA principle applies to every process or activity in Cernavoda NPP, and is the basis for the continuous improvement of system's requirements.

Implementation of the integrated management system's requirements requires knowledge, and understanding by all the staff, of the requirements laid down in the system documentation and their application in the day-to-day activity. The implementation results must be assessed for both effectiveness and the identification of ways to continuously improve and increase efficiency, but also the safety culture of the organization.

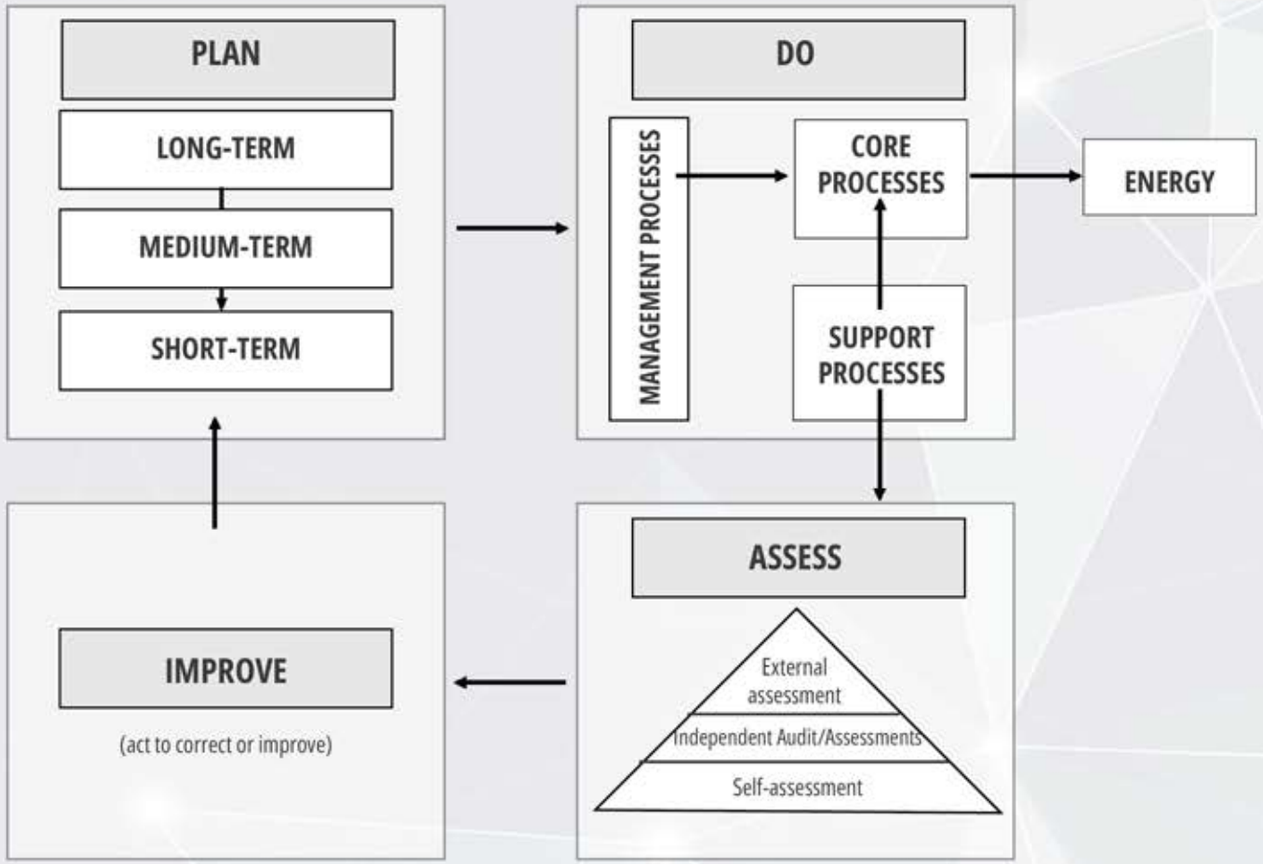


Fig. 1 Model of the Management System implemented at Cernavoda NPP

Safety Culture

The management of Cernavoda NPP ensure that, in all processes and activities of the power plant, the safety aspects (nuclear, staff, environment, etc.) are identified and addressed with priority. All Cernavoda NPP employees contribute, individually and as a team, to the development and maintenance of a sound safety culture.
Any preparation activity (initial, continuous or specific) features elements concerning the importance of the nuclear safety aspects and the attention that must be paid to these aspects in all phases of an activity or of a process. All management and coordination levels act as a model in implementation of the safety security by displaying an attitude of questioning and continuous learning, understanding the way the power plant's systems and components work, reporting deficiencies, and participating in identification and remedy of their root-causes. This ensures that there the necessary safety leadership is available in Cernavoda NPP.

The events that occur and have safety implications are promptly brought to the attention of the power plant's staff and the lessons learned from the event are embedded into the power plant's practices and procedures.

The limits and conditions set out under the Operating Permit, the Integrated Management System Permit, the Environmental Permit, and the ISCIR and OP&P Authorizations Permits are duly considered in preparation of the execution documentation, and any exclusion therefrom is subject to approval by the plant management and NCNAC, as provided by the procedure SI-01365-P046 - "Requests for authorization by the plant's manager or NCNAC". Any infringement of these limits is qualified to be an event, is recorded via the RCA system according to the provisions of the procedure SI-01365-P030 - "Reporting Abnormal Conditions", and is reported to NCNAC according to the requirements of the procedure SI-01365-P013 - "Event Reporting to NCNAC".

Specific processes such as "Nuclear Safety Management Review (PSOC)", "Operational Decision Making (ODM)" or "Technical Operability Evaluation (TOE)" are devised and put in place to ensure that the nuclear safety issues are addressed with priority.

Cernavoda NPP has defined the framework for organization and regular assessment of the safety culture. Assessment of the safety culture is carried out regularly at Cernavoda NPP.

Gradual application of the IMS requirements

The requirements of the integrated management system are applied differentiated (graded) to the activities of Cernavoda NPP, taking into account their impact on nuclear safety and the expected performances. This is reflected in the requirements laid down in the documentation describing these activities (detail level, need for independent review of activities, need to document results, etc.), as well as in the level of control, review and approval of these documents.

The requirements for acquisition of the products and services needed for the safe and reliable operation of the nuclear plants at the Cernavoda NPP are gradually applied according to the gradual application class of the IMS requirements set out by the design/procurement documentation. The method applied to determine the gradual application classes of the IMS requirements is described in the specific procedure SI-01365-T040 - "Determination of the gradual application classes for the requirements of the quality management systems imposed on the manufacture of products and provision of services/works intended to Cernavoda NPP", prepared in accordance with the requirements of the Rule NCNAC NMC-13.

For a consistent approach to implementation of the management system's requirements in Cernavoda NPP, the Management System processes are defined to ensure integration of all management reviews and supervision activities and correct priority setting, and as a systematic approach to decision-making, which meet the needs of Cernavoda NPP's excellence plan, is adopted.
A process-based approach means a logical sequence of activities carried out to effectively attain the desired result.

In accordance with the provisions of the Regulation for Organization and Functioning (ROF), the SNN Organizational Chart and the SNN Management System Manual, the Cernavoda NPP Management System processes and the SNN Management System processes are correlated and aligned, as provided in the SNN Process List included in the SNN Management System Manual. The process owners of the Headquarters ensure operational coordination of the subsequent/correlated processes carried out in Cernavoda NPP for the purpose of a unified and consistent approach to how activities are carried out at interface, avoiding mismatches and providing support to ensure that all legal and regulatory requirements are met, objectives are attained, and expected performance is reached. Operational coordination is provided on matters related to planning, interface activity performance interface and performance monitoring and review.

Cernavoda NPP has classified the management system processes into three stand-alone categories, namely:

(A) Management Processes
(B) Core processes
(C) Support processes

(A) Management Processes

Processes used for management and assessment of the management system. These processes describe matters related to:

- how activities are managed and steered in Cernavoda NPP, including decision-making, setting of responsibilities and assuming them, organizational management and leadership, and management of organizational changes;
- how activities are organized in processes and how activities are managed through processes;
- how activities are supervised, monitored and controlled;
- control of the interfaces with stakeholders, including regulatory bodies;
- management and governance of strategic projects.

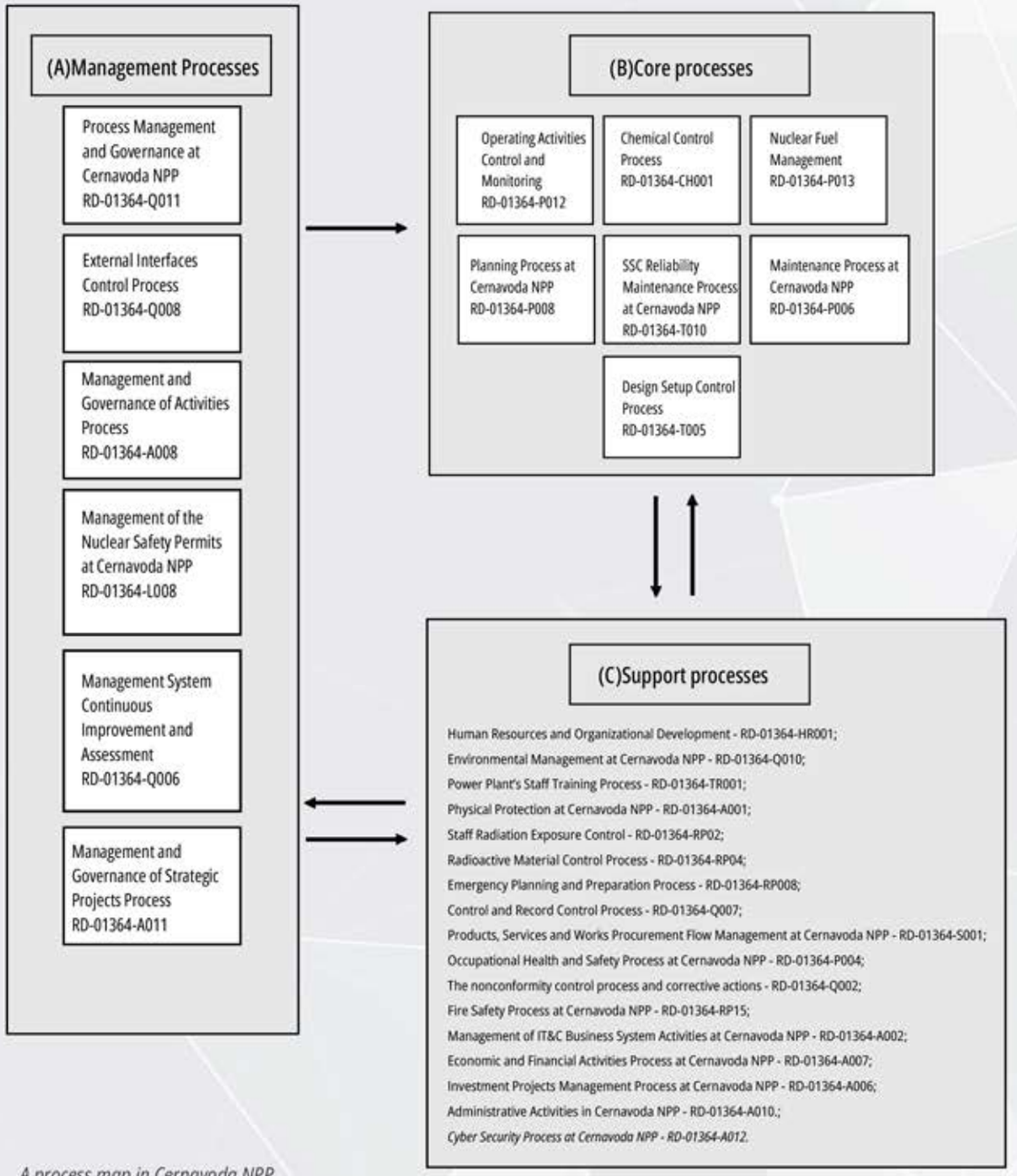
(B) Core Processes

Processes that contribute directly to attainment of the organization's mission. These processes describe matters related to:

- monitoring the operating status of the power plant's systems, including operating manoeuvres and response to transients;
- condition of the fluids in the power plant's systems;
- control of gas and fluid releases/discharges;
- reactivity control and reactor loading;
- identification of the maintenance and repair works in the power plant and their planning;
- definition of maintenance programmes and their implementation, including identification of the resources needed for implementation;
- control of the instrumentation used in operation and maintenance processes;
- NISSC reliability control and replacement of equipment with low reliability;
- how the design bases are kept and how control of design setup, operating documentation and design documentation is maintained.

(C) Support Processes

Support Processes – processes that describe how to ensure the necessary support for operation of the management processes and core processes.



A process map in Cernavoda NPP

In order to ensure process development in Cernavoda NPP, a person is tasked with process development, who and their role is to define the IMS process model used by Cernavoda NPP and ensure consistent process treatment in Cernavoda NPP.

The IMS processes are assigned to the departments/services of Cernavoda NPP, and each process has an owner. Process owners are selected from among the experienced staff of these departments. Process owners are appointed by decision by the Cernavoda NPP management based on the criteria laid down in RD-01364-Q011.

The upper management (Executives/Chief Engs./Heads of Departments) are appointed as sponsors of the processes managed by their subordinated departments, providing the necessary support to process owners for process development.

Each IMS process has attached performance indicators, which are used to assess its state of health and for its continuous improvement.

When activities of an IMS process are outsourced under contract, these contracts set out clear requirements concerning the mode of action at interface in terms of provision of information, and receiving and checking the results of the outsourced IMS processes/activities.

The general requirements for development and governance of processes are described in the procedure RD-01364-Q011 - "Process Management and Governance in Cernavoda NPP". Process development in Cernavoda NPP is managed by the Management System Development and Monitoring Department.

29.3
ADDRESSING UNPLANNED SHUTDOWNS OF THE MANAGEMENT SYSTEM

Unplanned shutdowns are defined as a continuous process of the power plant, as presented above, and forms a multi-stage chain. The process concerning identification and analysis of activities in an Unplanned Shutdown is carried out so that the Approved Purpose of an Unplanned Shutdown is ready to be implemented.

In each planned or unplanned shutdown, an analysis is carried out that highlights the positive aspects to be retained as good practice, as well as the aspects to be improved for implemented in future shutdowns. All these matters are described in the applicable internal procedure.

		2019 (duration B/B)	2020 (duration B/B)	2021 (duration B/B)	2022 (duration B/B)
U1	**Planned shutdowns**	**N/A**	*Start stop:* *20 June 2020, 08:00* *Duration: 46.3 days*	**N/A**	*Start stop:* *08 May 2022, 08:00* *Duration: 50.9 days*
	Unplanned shutdowns	1. 18.09.2019 at 05:30, Duration: *160 hours*	1. 05.08.2020 at 21:34, Duration: *6.5 hours*	1. 23.01.2021 at 02:08, Duration: *163 hours* 2. 29.12.2021 at 20:14, Duration: *9.25 hours*	1. 26.08.2022 at 17:00, Duration: *112 hours* 2. 16.10.2022 at 08:00, Duration: *13 hours* 3. 19.10.2022 at 16:50, Duration: *8.5 hours*
U2	**Planned shutdowns**	*Start stop:* *03 May 2019, 11:00* *Duration: 35.4 days*	N/A	*Start stop:* *09 May 2021, 11:00* *Duration: 36.3 days*	N/A
	Unplanned shutdowns	**No unplanned shutdowns**	1. 29.08.2020 at 08:16, Duration: *47 hours*	1. 10.07.2021 at 18:03, Duration: *51.6 hours* 2. 28.07.2021 at 23:08, Duration: *46.25 hours* 3. 14.10.2021 at 11:21, Duration: *53.68 hours*	**No unplanned shutdowns**

29.4 ADDRESSING RADIOLOGICAL EVENTS IN THE MANAGEMENT SYSTEM

Cernavoda NPP has in place a process for emergency planning and preparation. The process of planning and preparing for emergencies in Cernavoda NPP was devised taking into account the national legal requirements, the recommendations of the relevant international organizations and the standards and experience of the nuclear power plants in the countries of the European Union.
At Cernavoda NPP, there is an appropriate administrative framework for the planning, implementation, coordination and control of planning and preparation for situations

This framework is documented in MMI-01.02 "Cernavoda NPP Integrated Management Manual", which defines the policy and responsibilities needed for organization of the planning and preparation for emergencies.
The emergency plan is devised based on the list of events substantiated in the document "Determination Strategy for the "Technical Bases for the Cernavoda NPP On-Site Emergency Plan".

The key areas underlying the definition and development of the Emergency Planning and Preparation Process in Cernavoda NPP are:

- Process organization;
- Emergency plan and procedures;
- Provision of material base and logistical support;
- Emergency preparation and drills;
- Interface with public authorities and public information.

The following policies are applied as part of the Emergency Preparation and Planning (EPP) process:

- The emergency response activities are carried out in accordance with the applicable standards and procedures and with the necessary human and material resources so as to ensure protection of the public, health and safety of the staff on site and mitigation of the damages to the power plant.
- Within each shift of Unit 1 and 2, there is a sufficient number of qualified people able to conduct the necessary response activities until the organizational emergency unit is increased.
- The staff, the plan and the procedures are prepared and tested for emergency response adequacy, starting with minor events and up to severe accidents.
- The emergency facilities and equipment are permanently available and represent an adequate support to the emergency response activities.

29.5 RADIOLOGICAL RISK ASSESSMENT MODE IN THE MANAGEMENT SYSTEM

An important aspect of Cernavoda NPP's operation is protection of the power plant's staff, population and environment against the ionizing radiation, both under normal operating conditions and under accident conditions.

An efficient and effective radiation protection programme implies adoption of measures as early as the design phase of the power plant and determination of a set of operating procedures and regulations.
Protection of the population and environment against ionizing radiation is done by controlling the sources of radiation (radioactive discharges) and monitoring the environment.

The key objective of radiation protection is to achieve and maintain an appropriate level of protection and safety for the activities that involve exposure of people to radiation.
This objective is attained by applying the following four principles of radiation protection:

Justificarea: constructia si functionarea centralei este justificata prin beneficiul adus societatii, in conditiile asigurarii unui impact general mentinut sub limitele admise;

- Substantiation: construction and operation of the power plant is justified by the benefit it provides the society with, provided that the general impact is kept below the allowed limits;
- Limitation of doses and risks: individual doses must not exceed the limits set out in the Rules concerning the basic radiological safety requirements;
- Protection optimization: radiation exposures are kept at the lowest reasonably possible levels, taking into account the economic and social factors (ALARA principle - As Low As Reasonably Achievable). The ALARA principle is the optimization principle in radiation protection. The optimization methods applied can be qualitative (by pursuing objectives according to international recommendations and the current worldwide practices that cover all aspects

related to protection against radiation in the power plant and that, once attained, ensure that all staff exposures are at the lowest reasonably possible level - ALARA), or quantitative (by differential analysis of the cost of protection and the envisaged result, i.e. dose reduction);

- Source security: all practically reasonable measures are taken to ensure a smooth operation of the power plant and prevent accidents with radiological effects, as well as to mitigate the consequences of these accidents.
- Limitation of the external and internal exposure of the people at the border of the site, as well as the power plant's staff is achieved through a number of facilities embedded into the power plant's design, as well as by adopting a set of operating procedures and regulations.
- Exposure of population is limited by removing all unauthorized persons from the plant's premises and prohibiting permanent residence inside the exclusion zone.
- The release of liquid and gaseous effluents is monitored and controlled, and active solid waste is stored so as to prevent any release.
- Exposure of the power plant's staff to radiation is limited by controlling their access to areas with high activity or potential contamination, as well as by compartmentalizing the plant and putting in place structural protections.
- In addition, protective clothing, air masks and decontamination facilities are available for use when needed. Staff monitoring and dosimetry equipment are also provided.

According to the Romanian rules in force, exposure of the operating staff to radiation must not exceed the annual limit of 20 mSv.

For Cernavoda NPP, the documentary limits for individual and collective doses are set on an annual basis. The documentary limits of collective doses for certain works and teams of workers are set on a case-by-case basis, as an intermediate control measure. A system to control the receive doses was also put in place to identify problematic areas and take corrective measures in due time.

The radiation protection programme of Cernavoda NPP is based on the general principles recommended by the International Commission on Radiological Protection and adopted under the Radiological Safety Fundamentals:

- substantiation of the practices;
- protection optimization;
- limitation of population exposure and environmental impact.

The specific staff radiation exposure control measures are provided under the sub-processes (programmes):

- Staff dosimetry;
- Radiological hazard control (identification, reduction, monitoring, communication);
- Control of works with radiological risk;
- Reduction of occupational exposure (ALARA programme).

29.6 MEANS OF ADDRESSING RADIATION EXPOSURE FOR EMPLOYEES AND COMMUNITY IN THE MANAGEMENT SYSTEM

Exposure of population is limited by removing all unauthorized persons from the plant's premises and prohibiting permanent residence inside the exclusion zone. Cernavoda NPP is under the obligation to ensure radiological monitoring of the work environment and individual exposure monitoring of occupationally exposed persons and visitors following its authorized practices. Individual exposure monitoring, under normal operation conditions, during planned/unplanned shutdowns, and during radiological emergencies and severe accidents is steered by a certified dosimetry body.

The dosimetry programme of Cernavoda NPP is based on the requirements of the applicable domestic legislation and the latest recommendations of the International Commission on Radiological Protection, as implemented in specific standards and regulations.

The dosimetry programme of Cernavoda NPP sets out the specific requirements for individual monitoring and monitoring of the radiologically controlled area, complies with the provisions of the NCNAC Order 180/2002 "Individual Dosimetry Rules", and is designed to support compliance with the dose limits laid down under the "Fundamental Radiological Safety Rules".

The measurements needed to implement the programme are carried out by the Individual Dosimetry Laboratory of Cernavoda NPP as a dosimetry body certified by NCNAC. The main purpose of implementing the Dosimetry Programme is to measure, assess, assign, record and track the developments in all significant doses due to radiation, doses received by an individual during a given period of time, regardless of whether these are the result of the whole body or part of the body exposure, and to retain these records in an appropriate form for comparison against the statutory and documentary limits.

The DOSE RECORDS IT system of Cernavoda NPP ensures recording of all individual doses and the physical support

for tracking individual exposures, so that the established documentary limits are not exceeded, and exposures are kept ALARA.
The results of the radiation exposure monitoring programme are used to assess and improve all activities carried out under the process "Control of Staff Radiation Exposure".
The dose recording system is used to advise staff and supervisors and to plan the works with radiological risk.

29.7 DESCRIPTION OF THE RADIOACTIVE WASTE MANAGEMENT REQUIREMENT IN THE MANAGEMENT SYSTEM.

The management of radioactive waste is carried out in such a way as to keep the amount of waste at a reasonable minimum level and to ensure acceptable levels of protection for employees, population and environment.
The radioactive waste management programme, as described in the specific document SI-01365-RP007 "Radioactive Waste Management in Cernavoda NPP", is part of the radioactive material control process RD-01364-RP04 and details the radioactive waste management programme, providing information on the generation and pre-storage activities (processing, intermediate storage and transfer) concerning the radioactive waste produced at Cernavoda NPP.

The pre-storage activities applied to the radioactive waste and spent nuclear fuel generated by operation of U1 and U2 of Cernavoda NPP are currently ensured with:

- the existing facilities of Cernavoda NPP and, as the case may be, the services provided under contract by external companies authorized by NCNAC,
- the radioactive waste transport and treatment and conditioning services, provided under contract basis by external operators, from the country and abroad, recognized by NCNAC.

Also, under its internal policy, Cernavoda NPP seeks to minimize the amount of radioactive waste by both controlling its generation (with the activities described at 1-2-03400-OM-001 "Radiation Protection Procedures") and treatment, decontamination and conditioning, compaction, and incineration of radioactive waste, for which Cernavoda NPP has concluded contracts.
The exposure to radiation of the staff and the public due to the processing and storage of radioactive waste is optimized according to the ALARA requirements described in the procedure SI-01365-RP016 "ALARA Process in Cernavoda NPP".
The legal responsibilities of SNN in terms of the management of radioactive waste and spent nuclear fuel generated by Cernavoda NPP's U1 and U2, including how financing for these activities is ensured, are in accordance with the applicable fundamental legislation.

The financing of the costs related to the pre-storage of radioactive waste and spent nuclear fuel from Cernavoda NPP is provided from the operating budget of Cernavoda NPP.

In planning the next stages in the lifecycle of the nuclear power unit, the material and financial arrangements are reviewed/updated in order to ensure their availability when needed, according to the law:

- Ensuring pre-storage of radioactive waste generated from refurbishment, estimating the related costs and ensuring financing for these activities are provided in the feasibility study for the refurbishment project of the nuclear power unit.
- The management, cost estimation and financing mechanisms for the management of radioactive waste generated from decommissioning are provided in the preliminary decommissioning plan of the nuclear power units.

The pre-storage of radioactive waste and spent nuclear fuel generated by Cernavoda NPP and implicitly the financing of the activities in the various stages of the lifecycle of the nuclear power units take into account the availability of final storage alternatives, and the national policy and strategy for radioactive waste management, as provided by NRWA.

Under the Government Ordinance no. 11/2003, as subsequently amended and supplemented, and the provisions of the Government Decision no. 1080/2007, during operation of the nuclear units, SNN pays to NRWA financial contributions for provision of the necessary resources for the decommissioning of the nuclear units and for the storage of the waste produced in its own activity, into specific accounts; for Units 1 and 2 of Cernavoda NPP, there are: A tariff of EUR 1.40/MWh, for provision of the financial resources needed for the final storage of the radioactive waste generated by Cernavoda NPP (Note: In accordance with the medium and long-term National Strategy for the safe management of spent nuclear fuel and radioactive waste - Decision no. 102/2022, the spent nuclear fuel is qualified as high-activity radioactive waste).

The costs of decommissioning of the nuclear power units are estimated in the updates to the initial decommissioning plan operated by Cernavoda NPP according to the requirement of the NCNAC specific regulation, and are

covered from the decommissioning fund, according to the legislation regulating the scope of NRWA's duties and powers. The costs related to the safe final storage of the spent nuclear fuel and radioactive waste generated by the activity of Cernavoda NPP must be estimated by NRWA and are covered from the fund intended for the final storage of radioactive waste, according to the legislation regulating the scope of NRWA's duties and powers. Both funds are managed by NRWA, according to the legislation regulating the scope of NRWA's duties and powers.

29.8 HOW DECOMMISSIONING IS ADDRESSED IN THE MANAGEMENT SYSTEM

Waste management during the decommissioning phase of Cernavoda NPP is described in the Preliminary Decommissioning Plan. Since the waste acceptance criteria (WAC) have not yet been defined, the processing (including minimization of the waste amount) and disposal (including recycling) options have been developed relying on the international experience. In Romania, NRWA is the competent national authority that provides national coordination of the management process of the spent nuclear fuel and radioactive waste, including final disposal, as set out in the Government Ordinance no. 11/2003. Under this Government Emergency Ordinance, a tariff of EUR 0.60/MWh was set to ensure the financial resources needed for the decommissioning of each nuclear power unit;

NRWA is responsible for the final disposal of the radioactive waste generated in Romania by making available the national waste disposal facilities. There is a fund managed by NRWA for the management and disposal of radioactive waste, with contributions established on an EUR/MW hour basis by waste generators. This will be used for construction and management of the national waste disposal facilities.

The legislative requirements and regulations applied in preparation of the Preliminary Decommissioning Plan will be updated accordingly in its future revisions.

Waste management in the decommissioning stage of Cernavoda NPP will comply with the fundamentals of the Order no. 56/2004, based on the IAEA Safety Series 111-F. Additionally, the decommissioning activities will have to observe the principles set out in the European Commission Directive on the management of spent fuel and radioactive waste.

The national policy for radioactive waste management is aligned with the international requirements, as provided in Law no. 105/1999. The overall objective of the waste management policy in Romania is to ensure a safe management of radioactive waste.

The key aspects of the radioactive waste management policy are:

- radioactive waste management, including their transport, will be authorized and performed according to the requirements of the existing laws and regulations;
- the permit holder is responsible for the management of radioactive waste generated during operation and decommissioning of the nuclear facilities they are responsible for, until its final disposal;
- the spent fuel produced by the nuclear power plant will not be reprocessed.

29.9 29.9 CONTINUOUS IMPROVEMENT TO REACH THE HIGHEST STANDARDS

In order to measure and monitor the performance of the Integrated Management System implemented by Cernavoda NPP, a set of performance indicators is used, monitored and reported on to the power plant management. The set performance indicators provide information about the operation of the IMS processes in the power plant and allow benchmarking the power plant's performance against other nuclear power plants.

The self-assessment process is a sub-process of the assessment process, and is organized based on the WANO and OSART assessment processes. The reviews of the set performance criteria provide an image of the performance of the IMS processes in Cernavoda NPP, and identify the activity areas where additional efforts are needed to improve performance.

Regularly, the Integrated Management System of Cernavoda NPP is assessed by external organizations to check whether Cernavoda NPP complies with the requirements of the laws applicable to the nuclear field or with the standards that Cernavoda NPP has voluntarily adhered to and for which it applied for certification by independent organizations.

Regularly, the performance of Cernavoda NPP is assessed by international organizations acting in the nuclear field (WANO/ INPO - Peer Review, or IAEA-OSART). These activities are arranged by the Performance Improvement

Service of DSN-AIP, according to the requirements of the assessment process procedures described in RD-01364-Q006.

The unique Report Card of SNN was built on the SNN's values in order to obtain an overview of the SNN's activity, on a monthly basis, for the purpose of monitoring the performance of SNN SA. The Report Card is used to set and monitor the essential performance indicators, which provide an overview of the Company's evolution and attainment of the set objectives. The indicators included in the Report Card were allocated to 5 categories linked with SNN's values, and reflect the different areas of activity (functional areas) at organization level considered important by both the management and the employees. Similarly, the performance of Cernavoda NPP is monitored monthly under the Cernavoda NPP's Report Card. The monitoring of the Report Card indicator status and the monthly reporting of the trends observed are discussed in MRM meetings at the plant, are published on the Intranet page of Cernavoda NPP and are disseminated to the power plant's staff in Newsletters.

30 INNOVATIVE ENVIRONMENTAL PROTECTION PROJECTS

TRITIUM REMOVAL FACILITY PROJECT (CTRF) 194 MILLION EURO

The project is part of SNN's portfolio of initiatives aimed at the consistent implementation of the Company's general policy, i.e. the concern for maintaining nuclear safety at the highest standards, and the reduction of both radiological risks for its own staff and the public, as well as the impact on the environment. The project represents a high level concretization of the continuous concerns to improve the performance of the Cernavodă NPP, having a positive impact on the staff and leading to a reduction of tritium discharges into water and air, with a positive impact on the protection of the population and the environment.
The implementation of the project will allow, by extracting tritium from heavy water and storing it in a safe form in a dedicated facility, the exclusion of tritiated heavy water from the radioactive waste category, thus significantly reducing the amount of radioactive waste remaining to be managed at the end of the operational lifetime of the two reactors.

The project is based on an implementation strategy, updated by SNN in 2018, based on the Feasibility Study, approved by Resolution no. 9/22.08.2018 of the Extraordinary General Meeting of Shareholders.
The project involves the completion of the plant design (detail design), construction of the debottlenecking plant, testing and verification for commissioning, a trial operation period of 6 months, followed by the entry of the plant into commercial operation, planned for 2026.

The realisation of the CTRF will have a positive impact because by removing tritium from the moderator and reactor coolant, it will contribute to reducing tritium discharges to the environment and allow heavy water to be reused indefinitely without becoming radioactive waste. Tritium recovered from the coolant and moderator will be processed and stored under stable conditions for further use. In addition, the CTRF will lead to:

- **reduced risks of generating radioactive effluents and tritium emissions into the environment**
- **minimisation of tritium concentrations in radioactive waste generated in the nuclear systems using heavy water at the Cernavoda NPP.**

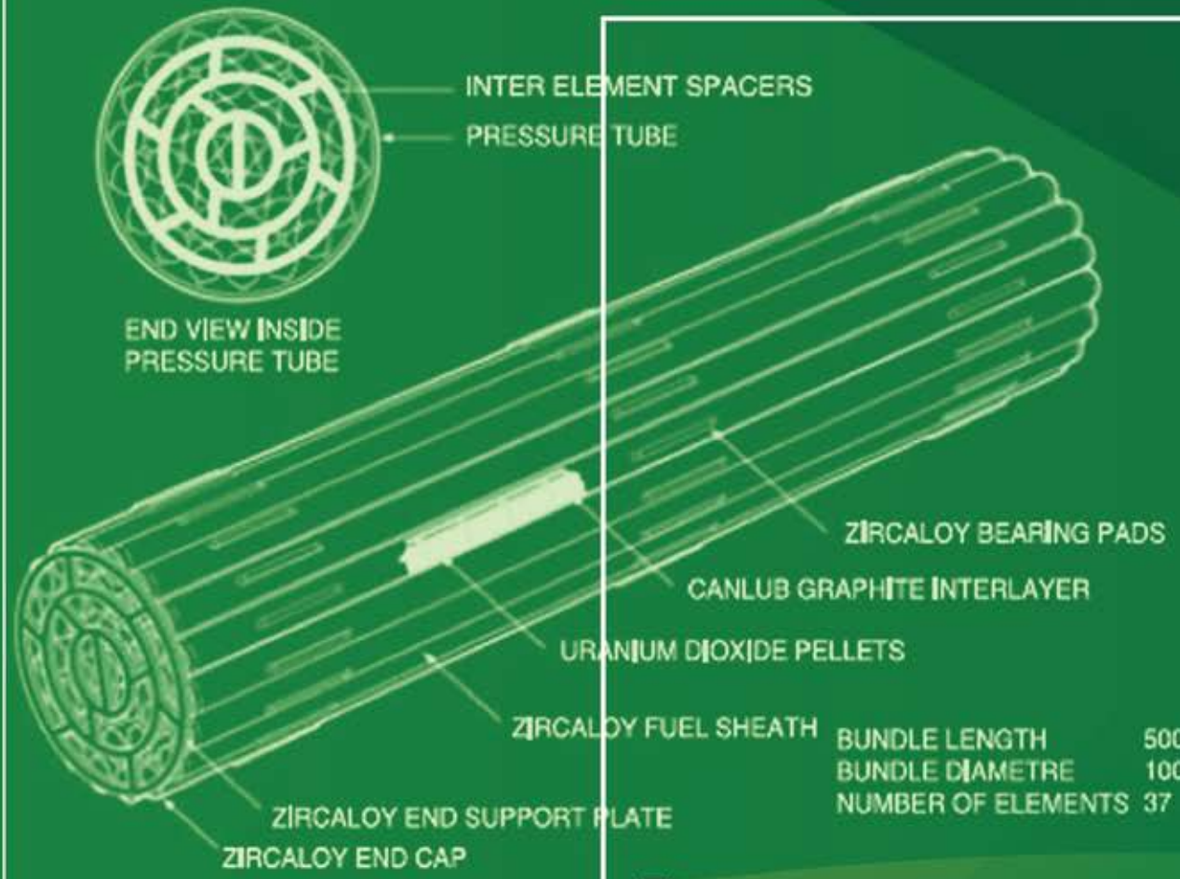
31 PARTNERSHIPS TO REDUCE CARBON FOOTPRINT

SN Nuclearelectrica SA signed the Memorandum of Understanding (MoU) between RoPower Nuclear SA, the newly established project company for the implementation of Small Modular Reactors (SMR), and Donalam SRL, part of AFV Beltrame Group, a leading European steel producer, at the IAEA Atoms for Climate pavilion at COP 27.

The objective of the Memorandum of Understanding is to explore cooperation and investment opportunities to support the development of the first SMR project in Romania, which could also have a great impact in the realisation of green steel production in Romania. On the same occasion, the two companies joined the United Nations 24/7 Carbon Free Energy Compact, committing to the UN 24/7 principles in support of the UN's goal to accelerate the electricity system, mitigate climate change and ensure access to affordable, clean energy.
By joining the UN 24/7 Carbon-free Energy Compact, Nuclearelectrica and AFV Beltrame become members of a global community of organisations working together to develop solutions that enable 24/7 access to carbon-free energy.

Nuclearelectrica is committed to implementing Europe's first small modular reactor project, alongside the Unit 1 refurbishment project and the Cernavoda Units 3&4 project, to the highest standards of nuclear safety and environmental sustainability. The expansion of nuclear capacity aims to support Romania's and the region's energy security, energy independence and decarbonisation objectives. Donalam SRL, part of the AFV Beltrame Group, one of Europe's leading steel producers, shares the same commitment to sustainability and understands the role of nuclear power produced by SMR in achieving international climate change targets while ensuring energy security with a clean, stable, affordable and resilient energy source.
We are confident that our example shows ways to advance the goals of the Paris Agreement, inspire other industry action, encourage global and European environmental policy and both government and private industry financial support for companies with sound economic and environmental strategies derived from a sustainable approach.

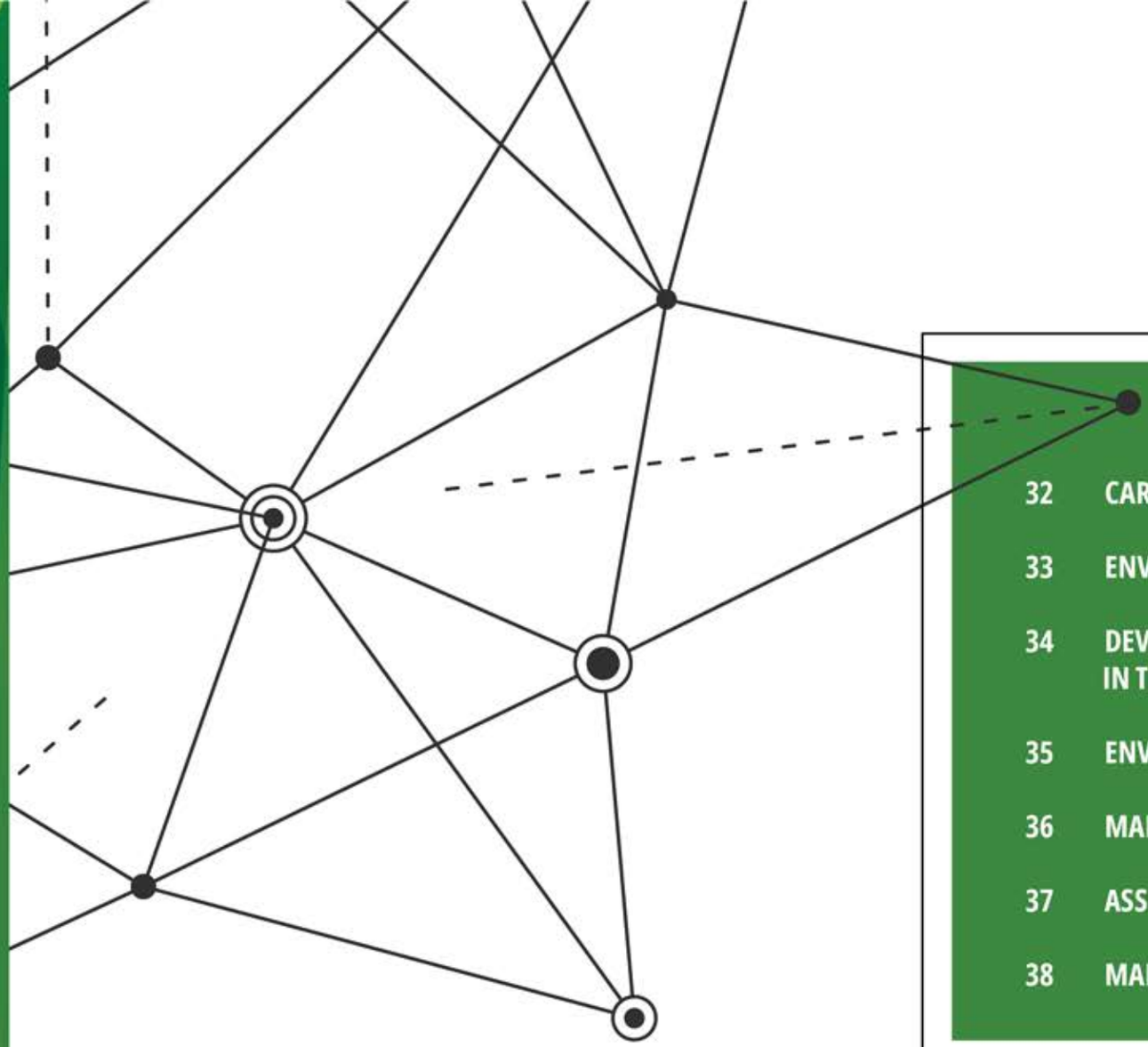
NFP



BUNDLE LENGTH	500 mm
BUNDLE DIAMETRE	100 mm
NUMBER OF ELEMENTS	37

CARE FOR ENVIRONMENT - NFP PITESTI

GRI 103-1, 102-2, 303-3, 304-2, 305-1, 305-2, 305-3, 305-4, 305-5, 305-7, 306-1, 306-2, 306-4, G4-EN23, 307, 413-1



32 CARE FOR ENVIRONMENT - FCN PITESTI

GRI 103-1, 102-2, 303-3, 304-2, 305-1, 305-2, 305-3, 305-4, 305-5, 305-7, 306-1, 306-2, 306-4, G4-EN23, 307, 413-1

32.1 COMMITMENTS AND ORGANIZATIONAL POLICIES

32.1.1 Environmental protection commitment

The mission of NFP is to manufacture CANDU-6 type nuclear fuel bundles under maximum safety, economic efficiency, and care for people and the environment, by complying with the legal and regulatory requirements applicable to nuclear activities, environmental protection, and occupational health and safety.
NFP pays a special attention to identification of the needs and expectations of its clients and other stakeholders, in order to provide high-quality products and services that allow maintenance of the technical and economic competitiveness.
As to environmental protection, NFP Pitesti supports the rational use of energy and natural resources, striking a balance between environment, energy and economy.

This commitment translates into:

- integration of the sustainable development concept into projects and investments;
- observance of the environmental legislation and agreements;
- ontinuous improvement of environmental performance.

Environmental protection in NFP Pitesti was and continues to be a permanent and responsible concern of the entire staff. NFP Pitesti has devised and put in place specific requirements to mitigate the environmental impact resulting from its activities.
The environmental protection activity is carried out in compliance with the provisions of the Environmental Permit issued under the Government Decision no. 24/2019, the requirements for air quality protection, water quality protection, waste management, noise, etc.

32.1.2 Internal and external communications on environmental management matters

In NFP, the NFP management have defined and put in place a communication process that allows:

- submission of the information needed for a correct and effective performance of activities and decisions-making process;
- communication in the NFP between the management and the policy implementation staff of the nuclear safety, quality, radiological safety, environment, health and safety at work, physical protection and classified information, cyber security, etc. objectives and their progress;
- receiving, documenting and transmitting answers to the relevant requests of the external stakeholders;
- staff involvement and consultation in identification of issues and problems related to occupational health and safety, and consultation of contractors when there are changes that affect their health.

The communication process works as follows:

a. controlled dissemination to heads of departments of all the information needed to define the policy, strategies

and objectives;

b. controlled dissemination to heads of departments of the Integrated Management System documents;
c. communication by the head of department, in each workplace, of the specific responsibilities and requirements stemming from the Integrated Management System documents, as well as of the objectives of the NFP subunit and specific to each department;
d. regular operational meetings held on specific topics;
e. displaying the general and specific objectives on the general notice board and/or on the boards placed in each work area;
f. regular transmission of reports on the quality trend on the INTRANET; the report is sent by DMC to the CEO, chief engineers and heads of sections and services;
g. regular delivery of training/awareness raising actions related to nuclear safety, quality, environment, occupational health and safety, physical and information protection, radiological safety and nuclear safeguards, and cyber security.

Across the organization, the internal and external communication process related to environmental management is detailed in the specific procedure CN-MM-04 – Internal and External Communication related to the Environment. Internal communication ensures provision of relevant information about the environmental management system, to environmental matters with significant impact, environmental performance, compliance obligations and recommendations for continuous improvement, in order to effectively implement its requirements.

External communication with the regulatory and inspection bodies, as well as with stakeholders (public, NGOs, media, etc.) on the environmental impact of the NFP's specific activities takes place via SNN - Executive or the NFP Manager, subject to approval by the CEO of SNN - SA.

32.1.3 Identification of the products, activities and services that have a significant impact on the environment

In NFP Pitesti, identification of the products, activities and services that have or may have a significant impact on the environment follows an environmental analysis. This is an initial analysis of the environmental matters which arise from the activities carried out in the NFP, their impact on the environment and the environmental performance.

The Environmental Analysis implies identification of the environmental matters, determination and assessment of the nature of the impact (direct, indirect, secondary, cumulative, short-term, medium-term or long-term, permanent or temporary, positive or negative), and the necessary measures to remove or minimize any potential adverse effect on the environment.

The specific activities carried out in NFP Pitesti include:

- operation of the NFP plants and equipment;
- maintenance and repair activities;
- material storage and transfer/transport;
- procurement of services/products/works;
- support and ancillary activities.

The environmental analysis involves the in-depth analysis of the following elements stemming from the specific activities of NFP Pitesti:

- direct and indirect environmental matters;
- environmental impact;
- environmental performance.

The environmental analysis in NFP goes through the following stages:

- identification of the direct and indirect environmental matters related to all NFP activities, taking into account the lifecycle perspective of the nuclear fuel bundle and its impacts on the environment (actual and potential, beneficial and harmful);
- definition of criteria for assessment of the importance of environmental matters, and identification of those environmental matters with a significant impact on the environment;
- in-depth analysis of the environmental performance stemming from the specific NFP activities, and the setting of the environmental objectives, indicators and targets take place according to the CN-MM-06 procedure;
- determination of the measures needed to eliminate or minimize any adverse effect on the environment;
- annual review of the adequacy of the list of environmental matters by each head of section/department, directly or through their subordinate staff, and its updating when changes are identified;
- identification of input data and output data in all operating modes (normal, abnormal, or emergency), because these can lead to occurrence of additional environmental matters in an activity.

In identification of the direct environmental matters, the activities are analysed taking into account the following environmental factors: air pollutant emissions, water pollutant emissions, soil and subsoil pollution, soil/subsoil emissions, use of chemicals, resource usage, waste generation, noise generation, heat emissions, radiation, and vibrations.

In identification of the indirect environmental matters, consideration is given to: matters related to the product lifecycle, environmental performances of contractors, subcontractors and suppliers, and the range and nature of the services.

32.1.4 Roles and responsibilities assigned

The Organization and Functioning, the Policy on nuclear safety, quality, protection against ionizing radiation, environment, occupational health and safety, physical protection, control of nuclear safeguards, cyber security and protection of classified information, as well as the NFP Objectives, all highlight the commitment of the management to development and implementation of the Integrated Management System and continuous improvement of its effectiveness.
In order to attain its mission and general objectives, the NFP Pitesti Branch is vested with the necessary authority and responsibility and is organized into directions, departments and units (sections, workshops, services, laboratories, offices, and teams).
NFP organization is structured on 3 levels, namely:

a. Level 1 (NFP management) - is represented by the Manager of NFP (subordinated to the CEO of SNN SA), chief engineers of departments (Technical and Quality Management), and chief accountant (Finance Department). This level is tasked with definition of the policy on nuclear safety, quality, protection against ionizing radiation, environment, occupational health and safety, physical protection, control of nuclear safeguards, cyber security, and protection of classified information, and arrange and ensure the resources needed for IMS maintenance;
b. Level 2 is represented by the heads of departments and heads of units (sections, services, offices, laboratories) who are responsible for coordination of the activities in order to attain the objectives;
c. Level 3 (operational) consists of the operational staff of the sections, services, compartments, teams, laboratories, etc.
d. The roles and responsibilities are clearly defined in the staff job descriptions. In order to comply with the legislative requirements and for an efficient organization of the activity, owners are appointed by decision to different fields of activity, such as, for instance: The Management Representative for the Integrated Management System, who is responsible for environmental protection, waste management, work with restricted explosives precursors, management of the substances classified as drug precursors, etc.

Under the NFP Policy on nuclear safety, quality, protection against ionizing radiation, environment, occupational safety and health, physical protection, control of nuclear safeguards, cyber security, and protection of classified information, the NFP management have committed to take all necessary measures for the monitoring, assessment and continuous improvement of the environmental performance, pollution prevention, sustainable use of resources and biodiversity conservation.

NFP monitors, measures, analyses and assesses the environmental performance through an annual process that aims to determine the progress in attainment of the environmental objectives and the evolution of the environmental matters with significant impact, taking into account the requirements laid down under the permits issued by NCNAC and the Ministry of Environment, Water and Forests, and under the environmental agreements issued by the National Environmental Protection Agency (NEPA) and Argeș EPA.

The characteristics of activities that can have a significant impact on the environment are monitored and measured regularly, using documented methods and calibrated and checked measurement and monitoring equipment.
The results of the environmental performance analysis and assessment are reported annually to the NFP management in the Environmental Performance Assessment Report of NFP Pitesti and are an input into the review of the effectiveness and efficiency of the Integrated Management System.

The efficiency and effectiveness of the environmental management system, as an integral part of NFP Pitesti's management system, are reviewed annually and are presented in the Environmental Performance Assessment Report of NFP Pitesti.
The Environmental Management System implemented in NFP-Pitesti, as a component part of the Integrated Management System, is certified by SRAC CERT, meaning that compliance with the standard SR EN ISO 14001 "Environmental Management Systems. Requirements with User Guidelines" is certified.
In order to promote the continuous improvement of the environmental performance and make an Environmental Declaration available to the public, NFP Pitesti has implemented a tested environmental management system and holds an Environmental Declaration validated by an environmental reviewer.
Thus, as of 2020, NFP Pitesti has obtained registration in the EU Eco-Management and Audit Scheme (EMAS), according to the provisions the EMAS Regulation (Regulation no. 1221/2009 and Regulation (EU) 2017/1505

on the voluntary participation by organisations in a Community eco-management and audit scheme (EMAS), as subsequently amended and supplemented.
Certification according to the requirements of SR EN ISO 14001:2015 and EMAS registration were obtained for the entire activity carried out in NFP Pitesti, CAEN Code 2446 - Nuclear Fuel Processing.

32.2 ENVIRONMENT POLICY

32.2.1 Management policy

Under the Policy on nuclear safety, quality, protection against ionizing radiation, environment, occupational safety and health, control of nuclear safeguards, cyber security, and protection of classified information, the NFP management have committed to take all necessary measures to:

- Maintain NFP's ability to supply products and provide services that meet the requirements of customers, applicable regulations and stakeholders;
- Increase customer satisfaction through the effective application of the management system, ensuring the nuclear safety of the power plant and achieving a performance rate in the reactor compatible with the global one;
- Define and put in place nuclear safety standards and requirements, and monitor performance across the entire organization;
- Continuously improve of nuclear safety through regular overall assessments, prompt implementation of the identified corrective/preventive and improvement measures;
- Advance, support and strengthen a healthy and effective nuclear safety culture at all levels of the organization's staff and management;
- Identification and provision of the resources needed to attain the set objectives;
- Monitor, assess and continuously improve the environmental performance, pollution prevention, sustainable use of resources and biodiversity conservation;
- Ensure adequate work conditions for performance of the activities through a permanent control of the occupational health and safety risks, including protection against ionizing radiation and definition of measures to eliminate hazards and prevent occupational injuries and illnesses;
- Ensure the necessary conditions through consultation and participation of workers on matters related to occupational health and safety;
- Ensure physical protection and protection of classified information in accordance with the legal provisions;
- Ensure the nuclear safeguard control in accordance with the legal provisions;
- Protect the systems, components and equipment against cyber threats;
- Ensure an adequate framework for the training and professional development of employees, raise their awareness on the relevance, importance and quality of their own activities and how these contribute to nuclear safety;
- Encourage the staff at all levels to report, without fear of retaliation, any abnormal conditions and non-conformities relevant to nuclear safety and to the quality of the products supplied;
- Ensure the engagement of the entire staff by recognizing their contribution to improvement of the organization's performance;
- Put in place a risk management process, so that the risks related to activities and objectives are identified, assessed and documented, and measures are taken to prevent/minimize their occurrence;
- Comply with the "zero tolerance" principle as to bribery and corruption.

The NFP Manager assumes the responsibility for the development and implementation of an Integrated Management System in accordance with the legal requirements and with the NCNAC Rules for management systems and nuclear safety, that voluntarily integrates the requirements of the management standards SR EN ISO 14001:2015 and SR EN ISO 45001: 2018, including Regulation (EC) no. 1221/2009 of the European Parliament and of the Council of 25 November 2009 on the voluntary participation by organisations in a Community eco-management and audit scheme (EMAS), the Commission Regulation (EU) 2017/1505 of 28 August 2017, and the Commission Regulation no. 2018/2026 of 19 December 2018.

The management of NFP Pitesti, at all levels, are directly responsible for implementation of the requirements of the Management System and its continuous improvement.
Management responsibility

Management proves leadership of, and commitment to, the integrated management system by:

- assuming the responsibility for development, implementation and effectiveness of the management system;
- defining a nuclear safeguard and maintaining the NFP policy and objectives related to nuclear safety, quality, protection against ionizing radiation, environment, occupational health and safety, physical protection, control of nuclear safeguards, cyber security, and protection of classified information, in accordance with the context and strategic direction of SNN SA;

- raising awareness, motivation and engagement of all staff to make a contribution to the effectiveness of the management system;
- advancing a process-based approach and a risk-based thinking;
- ensuring that the necessary resources are available;
- communicating the importance of an effective management and of the compliance with the requirements of the management system;
- regularly reviewing the integrated management system and devising measures to promote continuous improvement.

The Organization and Functioning, the Policy on nuclear safety, quality, protection against ionizing radiation, environment, occupational health and safety, physical protection, control of nuclear safeguards, cyber security and protection of classified information, as well as the NFP Objectives, all highlight the commitment of the management to development and implementation of the IMS, and continuous improvement of its effectiveness.

NFP Pitesti is committed to achieve and prove sustainable performance in environmental protection, through good management of the activities/processes and products that can have a significant impact on the environment.

The management of NFP promote application of the environmental management system's requirements, are actively involved in implementation and continuous improvement of the environmental performance, and ensures the availability of the needed resources.

The policy on nuclear safety, quality, protection against ionizing radiation, environment, occupational health and safety, physical protection, control of nuclear safeguards, cyber security, and protection of classified information assumed by the NFP Manager is compatible with the strategic direction and context of the organization, is communicated to employees and is made available to the interested parties, and provides the framework for the setting of the environmental objectives, and is revisited whenever necessary.

Development and implementation of the Environmental Management in NFP involves:

- Planning implementation of the environmental requirements in development of programmes and processes;
- On-going assessment of the compliance obligations;
- •Regular management reviews of the effectiveness and efficiency of the Integrated Management System.

32.2.2 Pollution prevention policy

The mission of NFP is to manufacture CANDU-6 type nuclear fuel bundles under maximum safety, economic efficiency, and care for people and the environment, by complying with the legal and regulatory requirements applicable to nuclear activities, environmental protection, and occupational health and safety.

In NFP, an integrated policy declaration is defined and documented in the "NFP Policy on nuclear safety, quality, protection against ionizing radiation, environment, occupational health and safety, physical protection, control of nuclear safeguards, cyber security, and protection of classified information", document code DMC 71/02.03.2022, assumed by the NFP Manager and covering all component parts of the management system, including the environmental management components and the commitment to continuous improvement of the environmental performance (EMAS additional requirement). The policy also contains the NFP Manager's commitment to ensure compliance with the legal and regulatory requirements, as well as with the requirements voluntarily adopted: standards ISO 14001:2015 and ISO 45001:2018, and the EMAS Regulation (Regulation no. 1221/2009 and Regulation (EU) 2017/1505).
Under the Policy on nuclear safety, quality, protection against ionizing radiation, environment, occupational safety and health, control of nuclear guarantees, cyber security, and protection of classified information, the NFP Pitesti's management have committed to take all necessary measures to prevent pollution, reduce pollution and ensure continuous improvement.

NFP Pitesti is permanently concerned about pollution reduction, the amount of waste generated and the use of resources.

For example:

- high-efficiency HEPA 13 particle retention filters are used to reduce pollution in the ventilation unit, with a retention rate of 99.95%.
- For a rational use of resources, where this was possible, water recirculation systems were put into service, lighting sensors were fitted, sanitary groups were equipped with automatic taps, all water routes were checked to remedy potential losses, and the staff was delivered regular training of the rational use of resources.
- In 2022, the NPP ran an analysis on the possibility of returning the chemical packaging to suppliers for reuse.

32.3
WASTE POLICY

The Environmental Declaration contains the message the NFP Manager which confirms the management's commitment to a responsible performance of the duties to the environment and society, harmonization of the business objectives with the environmental targets in order to ensure sustainable development, keeping the impact on the environment as low as possible and the efficient use of resources, performance improvement, transparent communication with all stakeholders, etc.

Under the Policy on nuclear safety, quality, protection against ionizing radiation, environment, occupational safety and health, control of nuclear guarantees, cyber security, and protection of classified information, the NFP Pitesti's management have committed to take all necessary measures to monitor, assess and continuously improve the environmental performance and prevent pollution. Considering that NFP Pitesti is an EMAS registered organization, a performance indicator was set also in this regard, i.e. reduction of the amount of incinerable solid radioactive waste generated, compared to the production obtained.

32.4
POLICY ON THE USE OF RESOURCES

Under the Policy on nuclear safety, quality, protection against ionizing radiation, environment, occupational safety and health, control of nuclear guarantees, cyber security, and protection of classified information, the NFP Pitesti's management have committed to monitor, assess and continuously improve the environmental performance, prevent pollution, sustainably use the resources, and preserve biodiversity.

32.5
COMMITMENT TO MONITORING THE ENVIRONMENTAL FOOTPRINT

32.5.1 Commitment to raising awareness on the environmental matters

NFP Pitesti is involved both in raising the awareness of both its own staff and the external staff of the importance of protecting the environment, providing them with training, identifying the environmental matters that could arise as a result of the activity performed the NFP Pitesti platform, and implicitly keeping them under control so that they do not turn into material environmental issues.

The commitment to compliance with the legal requirements and pollution prevention was included in the Policy on nuclear safety, quality, protection against ionizing radiation, environment, occupational health and safety, physical protection, control of nuclear safeguards, cyber security, and protection of classified information.

32.5.2 Commitment to reporting on the environmental matters

In accordance with the Communication Protocol concluded between NFP Pitesti and Argeș EPA, the first is under the obligation to give notice to the environmental authorities of any environmental issues, potential uncontrolled emissions into the air, or accidental pollution. So far, no events/incidents with an impact on the environment have been recorded.

32.5.3 Training and awareness raising programmes for employees

The staff policy of the NFP management is based on the need to provide the staff with the knowledge and skills that, together with the basic (initial) training and the experience gained, help further develop their competence.

NFP delivers job-related and quality/environmental management and nuclear/radiological safety/occupational health and safety/emergency/physical protection and classified information/cyber security trainings.
Training of the NFP staff and assessment of the effectiveness of this training are carried out based on the planning defined under the NFP Staff Awareness and Training Framework Programme, coded AQ-580, for each of the following areas: quality management system, environment, occupational health and safety, emergencies, radiological safety, nuclear safety, physical protection and protection of classified information, nuclear safeguards, and cyber security

.
NFP staff is trained annually on environmental protection according to procedure CN-AC-28 "Staff Training and Qualification". The effectiveness of the awareness-raising and training actions is reviewed according to the requirements of procedure CN-AC-34 "Testing the knowledge acquired by the NFP staff in the awareness-raising and training actions".

Raising the awareness of the staff on environmental protection takes into account the environmental policy, the environmental matters with significant impact, the consequences of non-compliance with the requirements of the environmental management system or the environmental obligations of NFP, as well as the need for an efficient use of energy and resources. The need for external training courses on environmental management is identified under the Annual Professional Training Plan, in accordance with the requirements of the procedure "Training and Improvement of the NFP Staff", coded CN-AD-60.

The NFP management ensure engagement of the staff (through direct participation and by providing them with information) in the continuous improvement of the environmental performance.

32.6 COMMITMENT TO THE EFFICIENT USE OF RESOURCES AND ENERGY

The most efficient use of resources is a priority, and NFP Pitesti devise performance indicators for two categories of raw materials, UO2 powder processing yield and the of Zy-4 sheath processing yield.

At the same time, performance indicators were set to reduce of electricity usage by reference to the number of nuclear fuel bundles produced and to reduce of water use by reference to the average headcount:

- Reducing electricity usage by reference to the number of nuclear fuel bundles produced
- Reduction of the water usage by reference to the average headcount.

32.7 COMMITMENT TO IMPLEMENTATION OF THE ENVIRONMENTAL MANAGEMENT SYSTEM

In NFP, an Integrated Management System (IMS) has been developed, implemented, monitored and continuously improved, in accordance with Law no. 111/1996 on the safe performance, regulation, authorization and control of nuclear activities, republished, as subsequently amended and supplemented.
IMS ensures identification and integration of all legal requirements and specific regulations applicable to the activities carried out, quality and nuclear safety requirements, environmental protection requirements, occupational health and safety requirements, requirements formally agreed with "stakeholders", financial and economic requirements, and the requirements of the voluntarily adopted standards.

The environmental management system is an integral part of the IMS of NFP Pitesti, and is certified/recertified in accordance with the requirements of the standard SR ISO 14001:2015 - Environmental Management Systems - Requirements with User Guidelines.

The environmental policy is included in the NFP Policy on nuclear safety, quality, protection against ionizing radiation, environment, occupational safety and health, control of nuclear safeguards, cyber security, and protection of classified information, and includes the commitment of the management to implementation and maintenance of an environmental management system.

The annual audits carried out at NFP Pitesti aim to maintain the certification of the Environmental Management System

and prove that NFP Pitesti has put in place a functional environmental management system that supports continuous improvement.

NFP Pitesti holds an Environmental Permit issued under the Government Decision no. 24/2019, subject to annual review; the last review took place in 2022 under Decision no. 3/18.01.2022, and is valid for the period 4 February 2022 - 3 February 2023.

Considering the purchase of a zircaloy-4 chipping and briquetting plant, NFP Pitesti has taken the necessary measures to have the Environmental Permit amended so as to cover also for this activity. NFP Pitesti is currently in process of revising the Environmental Permit.

32.8 CONSULTATION OF THE CATEGORIES OF STAKEHOLDERS ON ENVIRONMENTAL MATTERS

Due to the potential effect on NFP's ability to consistently deliver nuclear fuel bundles that meet the customer requirements and the applicable legal and regulatory requirements, NFP determines:

- The stakeholders relevant to the management system;
- The requirements of these relevant stakeholders.

In this regard, the following stakeholders and their expectations from the NFP were identified:

SNN Headquarters

- Alignment with the Management Model of SNN SA;
- Observance of the governance requirements, strategies, management plan and advanced principles;
- Implementation of the organizational policies of SNN-SA;
- Observance of the Code of Business Ethics and Conduct;
- Compliance with requirements of the Collective Bargaining Agreement (CBA), the Internal Regulations (IR), the SNN Organization and Functioning Regulation (ROF), the SNN Management System Manual, coded SNN-MSM-001.
- Compliance with the Income and Expenditure Budget

Cernavoda NPP Branch, as main client

- Observance of the contractual commitments
- Compliance with the manufacturing and control technology of nuclear fuel bundles;
- Safe delivery of nuclear fuel bundles
- Ensuring compliance with agreed quality requirements
- Communication

Shareholders

- Attaining a high level of nuclear safety performance;
- Increasing the turnover and profit
- Observance of the resolutions of the General Meeting of Shareholders
- Long-term business viability

Investors

Honesty and transparency to support a decision to invest in the Company's financial instruments;

RATEN-NRI

- Compliance with the contractual commitments and concluded agreements
- Compliance with the measures set out in the Emergency Plan

Public and local community

- Safe operation of the plants to protect the population and the environment
- Involvement in the community as a responsible "citizen".
- Voluntary environmental commitments
- Compliance with agreements concluded with the community groups
- Communication for visibility and credibility

NFP staff and trade unions

- Compliance with the organizational requirements according to the CBA, Internal Regulation, and SNN ROF
- Trust, recognition, and reward to contribute to, and share, the success of the organization
- Professional development opportunities
- Workplace safety
- Participation and consultation
- Adequate working conditions, and a competitive work environment, in observance of the occupational health and safety requirements;

Regulatory bodies (Ministry of Environment, Water and Forests, National Commission for Nuclear Activities Control, National Environmental Guard, Public Health Directorate, etc.)

- Compliance with the legal requirements, and the international, national and local laws and regulations;
- Attainment of a high level of nuclear safety;
- Communication for visibility and credibility;

External organizations in the nuclear field

- Reliable partner
- Driver in the nuclear industry
- Compliance with the relevant organizational or industrial standards;

Government and customers

- Delivery of nuclear fuel bundles for safe generation and delivery of electricity to the national system;

Non-Governmental Organizations

- Communication for visibility and credibility
- Activity improvement
- Voluntary practice principles
- Compliance with the nuclear safety, environment, OSH and Emergency commitments

Suppliers

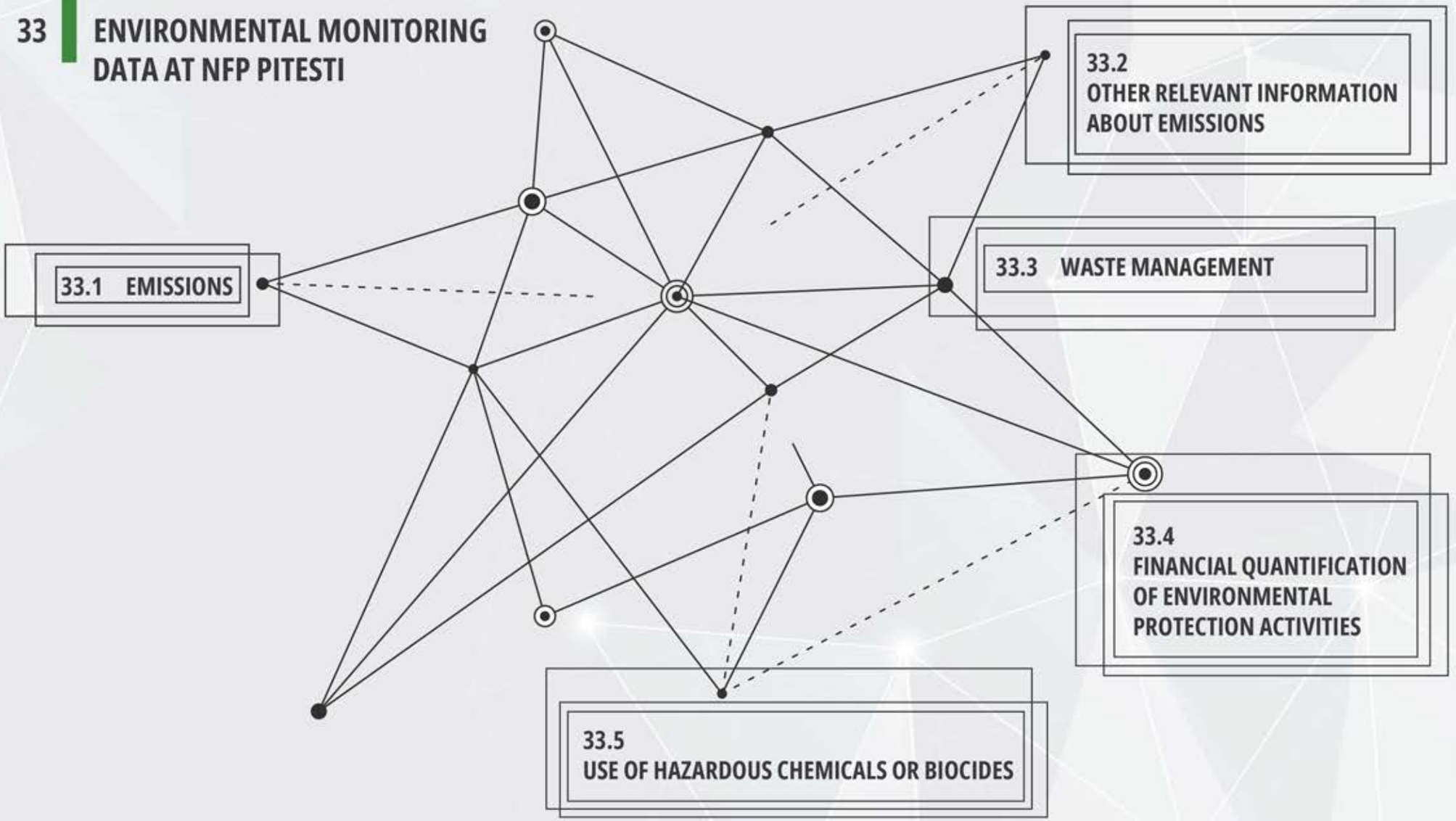
- Mutually beneficial, profitable and safe business relationships
- Compliance with the contractual commitments (order stability, delivery planning)

Media

- Open, immediate and accurate communication

The stakeholder, and applicable legal and regulatory, requirements are integrated into the IMS processes, activities and documentation, and the set of verification, monitoring and control activities aims not only to meet these requirements, but also to increase stakeholder satisfaction.

33 ENVIRONMENTAL MONITORING DATA AT NFP PITESTI



33.1 EMISSIONS

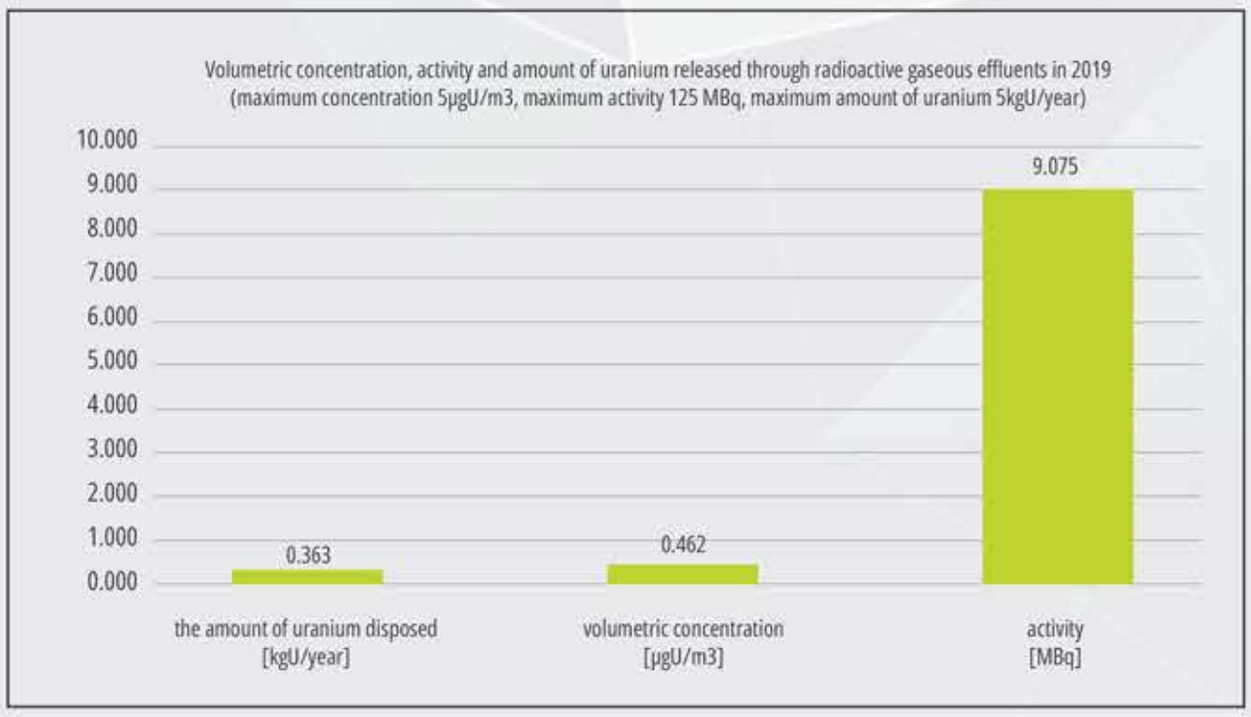
33.1.1 Radioactive emissions

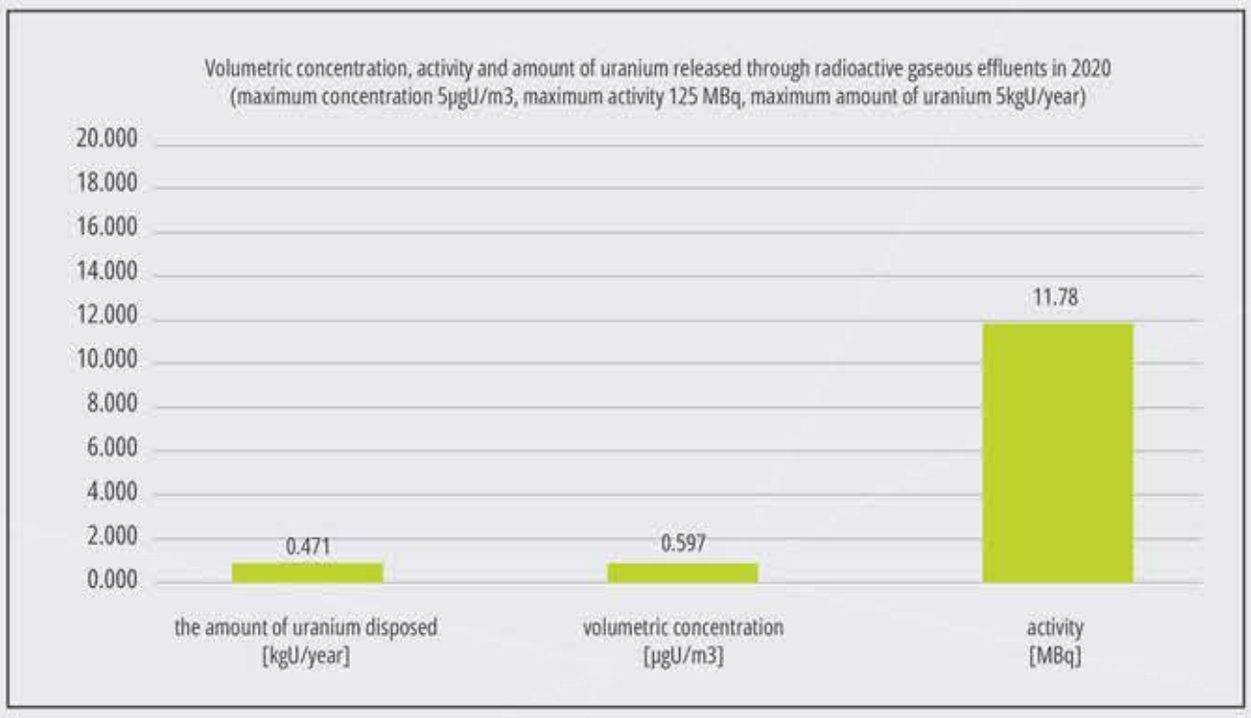
Radioactive pollutants:

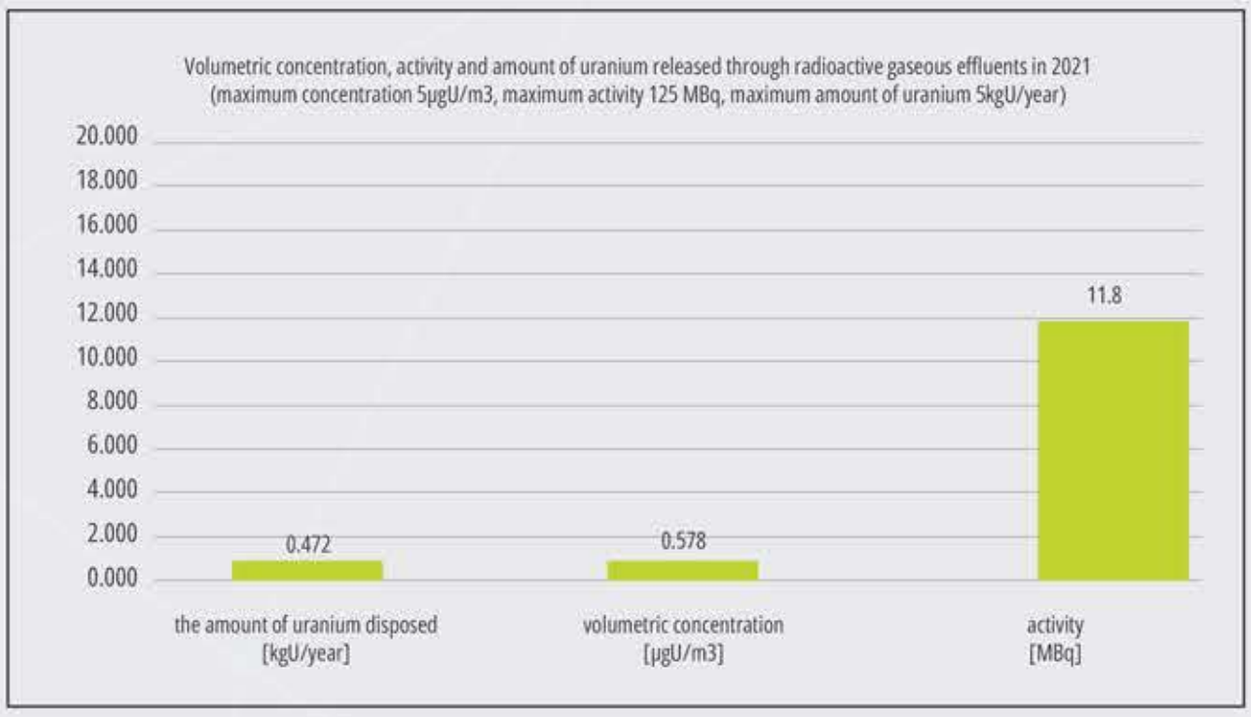
- airborne particulate matters containing uranium/radioactive aerosols – released and monitored via the three dispersion stacks (Stack 1, Stack 2 and Stack 3)

The release of **radioactive gaseous effluents** from the ventilation systems takes place via three dispersion stacks, which are monitored continuously through three Radioactive Gaseous Effluent Monitors.

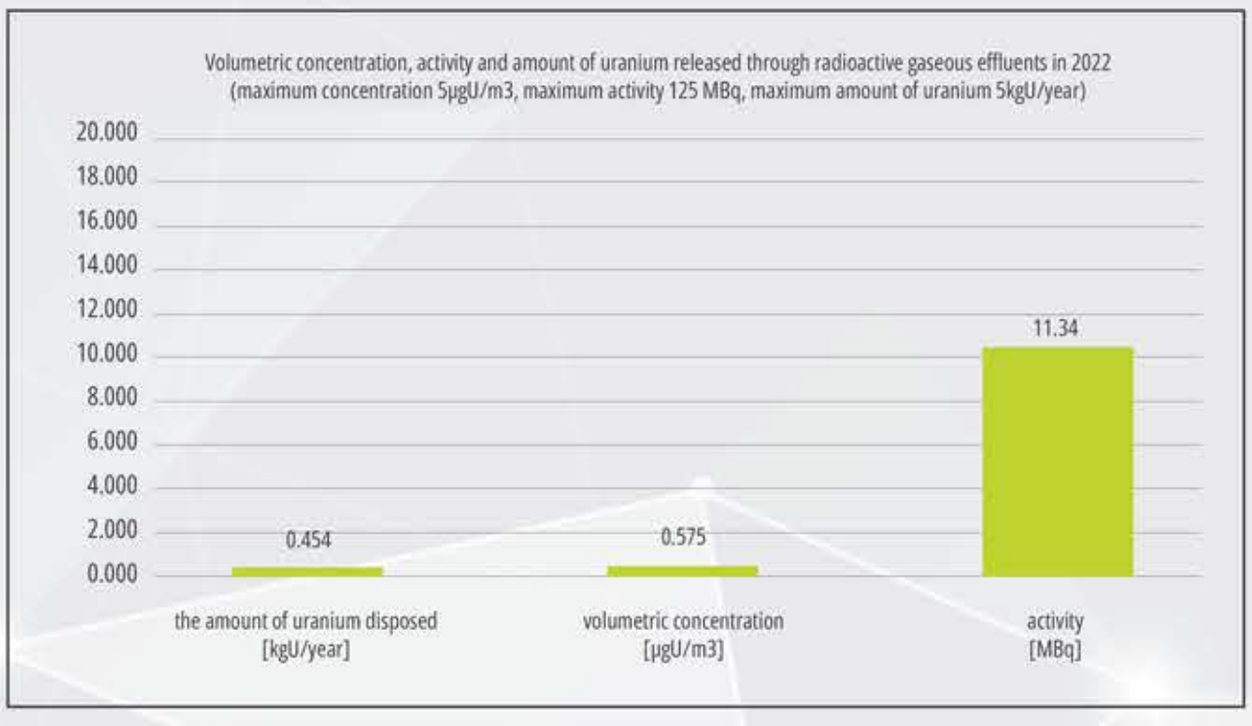
The charts below show the measured values for years 2019-2022. These were below the limits set out under the operating permits issued by NCNAC, and the Environmental Permit of NFP Pitesti.







Having reviewed the values recorded in years 2019-2022 for the amount of uranium disposed through radioactive gaseous effluents at the three dispersion stacks of NFP Pitesti, it can be concluded that these are much lower compared to the maximum authorized limit of 5 kgU/year, according to the permit for nuclear fuel production issued by NCNAC.



The environmental impact transport or use and disposal of products and services.

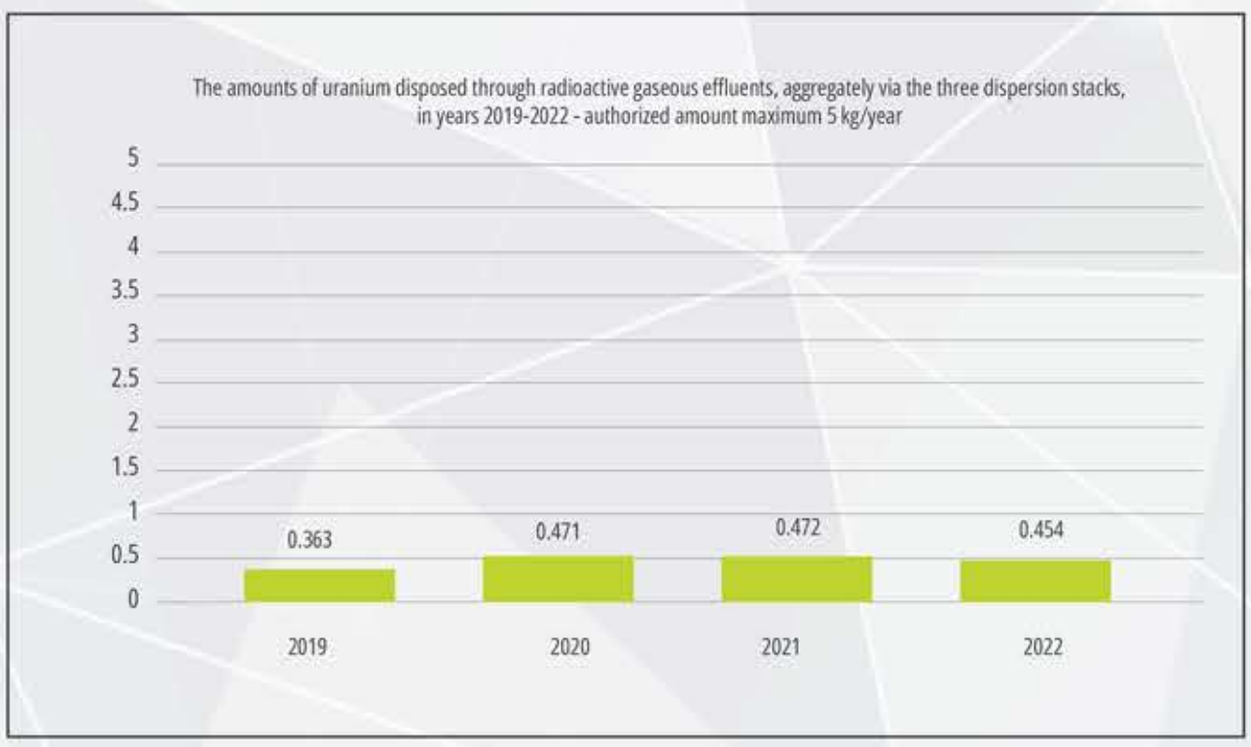
NFP Pitesti carries out the following types of transport:

- Nuclear fuel bundles to/from Cernavoda NPP (Unit 1 and Unit 2)
- Sinterable UO2 powder from CNU Feldioara Branch to NFP Pitesti
- Non-compliant nuclear material from NFP Pitesti to CNU Feldioara
- Solid radioactive waste contaminated with natural uranium from NFP Pitesti to CNU Feldioara Branch
- Other transport authorized by NCNAC

The transport of radioactive materials takes place with authorized means of transport, and drivers certified to carry Class 7 hazardous goods.

For each transport of radioactive material, dosimetry measurements are performed both on the means of transport and on the attending staff, according to the Programme for protection against ionizing radiation in transport of radioactive material.

After each transport and transfer of radioactive materials, a report is prepared on how the transport and transfer took place, which is submitted to NCNAC.



33.1.2 Non-radioactive emissions

33.1.3 Carbon emissions and their intensity

The activity of NFP Pitesti does not generate any carbon emissions.

NFP monitors the non-radioactive NOx with a half-yearly frequency, according to the legal requirements and the programme provided in the Radiation Safety Manual and reports the monitoring results to the environmental authorities.

The values recorded during the monitored period are far below the legal limits, and so far it has not been deemed necessary to implement a programme to reduce these emissions.

Scope 1

Emisii direct, provenite din activitatile companiei de pe amplasament si de la flota auto – proprietatea companiei

Year	Total tons of CO_2 emitted per year	Tons of CO_2 emitted by the Car Fleet
2019	0	247
2020	0	154
2021	0	160
2022	0	153

Non-radioactive pollutants:

- total particulate matters, nitrogen oxides, hydrochloric acid - released and monitored via the Dispersion Stack no. 1 (NOx result from the Chemical Analysis Laboratory)
- total particulate matters, beryllium, acetone, alkyl alcohols - discharged and monitored via the Dispersion Stack no. 2 and the Ventilation System related to Hall IV and Outbuildings
- airborne beryllium powders/beryllium aerosols – released and monitored via the air ventilation plant related to the beryllium work area

Scope 2

No.	Year	Consumed quantity [Kwh]	Utility Supplier	Electricity Supplier	Emmission factor (g CO2/kWh)	Total CO2 (tone CO2)
1	2019	4.846.763,00	ICN Pitesti	Complex Energetic Oltenia	809,19	3.921,95
2	2020	4.746.487,00	ICN Pitesti	CEZ Vanzare	174,96	830,45
3	2021	5.158.779,00	ICN Pitesti	CEZ Vanzare	213,43	1.101,04
4	2022	4.891.371,00	ICN Pitesti	ENEL	174,86	855,31

Scope 3

For emission calculation under Scope 3, in 2023, Nuclearelectrica will initiate consultations with its suppliers in order to support this determination, but also to emphasize the importance of protecting the environment by reducing the carbon footprint.

33.1.3.1 NOx emissions

The activities carried out in NFP generate emissions of gaseous effluents loaded with dust, airborne particulate matters with uranium/radioactive aerosols and non-radioactive NOx, as follows:

Radioactive pollutants:

- airborne particulate matters containing uranium/radioactive aerosols – via the three dispersion stacks (Stack 1, Stack 2 and Stack 3)

Non-radioactive pollutants:

- total particulate matters, nitrogen oxides, hydrochloric acid - via the Dispersion Stack no. 1 (NOx result from the Chemical Analysis Laboratory)
- total particulate matters, beryllium, acetone, alkyl alcohols - via the Dispersion Stack no. 2
- airborne beryllium powders/beryllium aerosols – via the air ventilation plant related to the beryllium work area

Determinations of non-radioactive pollutants are carried out every six months by authorized providers, under services contracts. The values recorded for the nitrogen oxides discharged through the stacks of NFP Pitesti, in years 2019-2022, are shown in the tables below; these are far below the limits set out under the legislation in force.

	2019		2020		2021		2022	
NO_2 [mg /m^3]	Sem. I	Sem. II	Sem. I	Sem. II	Sem. I	Sem. II	Sem. I	Sem. II
	10.25	16.4	22.55	32.8	38.95	55.35	63.55	75.24

	Amount discharged in 2019 [t]	Amount discharged in 2020 [t]	Amount discharged in 2021 [t]	Amount discharged in 2022 [t]
NO2	0.2	0.4	0.7	1.09
Maximum permitted limit – 7.8 t/year				

The values measured for nitrogen oxides are below the limit set out under the legislation in force, i.e. 500 mg/m3, according to the Order of the Ministry of Water, Forests and Environmental Protection no. 462/1993 approving of the technical conditions for atmospheric protection and the implementing rules for determination of the emissions of atmospheric pollutants produced by stationary sources.

33.1. 3.2 SOx emissions

There are no emissions of sulphur oxides resulting from the activities carried out by NFP Pitesti.

33.1.3.3 Volatile Organic Compounds

The values recorded for volatile organic compounds (acetone and isopropyl alcohol) released via the dispersion stacks of NFP Pitesti in years 2019-2022 are shown in the tables below; these are far below the limits set out under the legislation in force.

The values measured for acetone and isopropyl alcohol are below the limit set out under the legislation in force, i.e. 150 mg/m3 (for both pollutants), according to the *Order of the Ministry of Water, Forests and Environmental Protection no. 462/1993 approving of the technical conditions for atmospheric protection and the implementing rules for determination of the emissions of atmospheric pollutants produced by stationary sources.*

VOC [mg/Nm³]	2019		2020		2021		2022	
	Sem. I	Sem. II	Sem. I	Sem. II	Sem. I	Sem. II	Sem. I	Sem. II
Acetone [mg/Nm³]	0.0034	0.0036	0.0022	0.0021	0.0022	0.0022	0.0022	0.0022
Isopropyl alcohol [mg/Nm³]	0.0034	0.0036	0.0022	0.0021	0.0022	0.0022	0.0022	0.0022

	Amount discharged in 2019 [t/year]	Amount discharged in 2020 [t/year]	Amount discharged in 2021 [t/year]	Amount discharged in 2022 [t/year]
Acetone	0.00002	0.000015	0.000015	0.000015
Maximum permitted limit – 1.0488 t/year				

	Amount discharged in 2019 [t/year]	Amount discharged in 2020 [t/year]	Amount discharged in 2021 [t/year]	Amount discharged in 2022 [t/year]
Isopropyl alcohol	0.000024	0.000015	0.000015	0.000015
Maximum permitted limit – 1.0488 t/year				

	2019		2020		2021		2022	
	Sem. I	Sem. II	Sem. I	Sem. II	Sem. I	Sem. II	Sem. I	Sem. II
Beryllium [mg/Nm³]	0.00021	0.00018	0.000168	0.00021	0.00018	0.00018	0.00018	0.00018

	Amount discharged in 2019 [t/year]	Amount discharged in 2020 [t/year]	Amount discharged in 2021 [t/year]	Amount discharged in 2022 [t/year]
Beryllium [mg/Nm³]	0.0000013	0.0000012	0.0000012	0.0000012
Maximum permitted limit – 1.07502 t/year				

Stack no. 1

No.	Pollutant	Measured value sem. I 2019 [mg/Nm^3]	Measured value sem. II 2019 [mg/Nm^3]	MWFEP order no. 462/1993 [VLE, mg/m^3]
1	Particular matters	1.95	2.12	50
2	NO2	10.25	16.4	500
3	HCl	3.21	3.53	30

Stack no. 2

No.	Pollutant	Measured value sem. I 2019 [mg/Nm^3]	Measured value sem. II 2019 [mg/Nm^3]	MWFEP order no. 462/1993 [VLE, mg/m^3]
1	Particular matters	1.28	1.59	50
2	Beryllium and its compounds	< 0.00019	<0.00018	0.1
3	Acetone	<0.0034	<0.0036	150
4	Isopropyl alcohol	<0.0034	<0.0036	150

Ventilation exhaustion in beryllium deposit area

No.	**Pollutant**	**M.U.**	**Measured value** sem. I 2019 [mg/Nm^3]	**Measured value** sem. II 2019 [mg/Nm^3]	**MWFEP order no. 462/1993**
					VLE, mg/m^3
1	Beryllium	mg/Nmc	< 0.00021	<0.00018	**0.1**

Stack no. 1

No.	Pollutant	Measured value sem. I 2020 [mg/Nm³]	Measured value sem. II 2020 [mg/Nm³]	MWFEP order no. 462/1993 [VLE, mg/m³]
1	Particular matters	2.3	3.28	50
2	NO2	22.55	32.8	500
3	HCl	4.67	5.61	30

Stack no. 2

No.	Pollutant	Measured value sem. I 2020 [mg/Nm³]	Measured value sem. II 2020 [mg/Nm³]	MWFEP order no. 462/1993 [VLE, mg/m³]
1	Particular matters	1.82	2.25	50
2	Beryllium and its compounds	< 0.00018	<0.000175	0.1
3	Acetone	<0.0022	<0.0021	150
4	Isopropyl alcohol	<0.0022	<0.0021	150

Ventilation exhaustion in beryllium deposit area

No.	**Pollutant**	**M.U.**	**Measured value** sem. I 2020 [mg/Nm³]	**Measured value** sem. II 2020 [mg/Nm³]	**MWFEP order no. 462/1993**
					VLE, mg/m³
1	Beryllium	mg/Nmc	< 0.00018	<0.000168	**0.1**

Stack no. 1

No.	Pollutant	Measured value sem. I 2021 [mg/Nm³]	Measured value sem. II 2021 [mg/Nm³]	MWFEP order no. 462/1993 [VLE, mg/m³]
1	Particular matters	2.94	3.23	50
2	NO2	38.95	55.35	500
3	HCl	5.33	19.55	30

Stack no. 2

No.	Pollutant	Measured value sem. I 2021 [mg/Nm³]	Measured value sem. II 2021 [mg/Nm³]	MWFEP order no. 462/1993 [VLE, mg/m³]
1	Particular matters	2.21	2.52	50
2	Beryllium and its compounds	< 0.00018	<0.00018	0.1
3	Acetone	<0.0022	<0.0022	150
4	Isopropyl alcohol	<0.0022	<0.0022	150

Ventilation exhaustion in beryllium deposit area

No.	**Pollutant**	**M.U.**	**Measured value** sem. I 2021 [mg/Nm³]	**Measured value** sem. II 2021 [mg/Nm³]	**MWFEP order no. 462/1993**
					VLE, mg/m³
1	Beryllium	mg/Nmc	< 0.00018	<0.00018	**0.1**

Stack no. 1

No.	Pollutant	Measured value sem. I 2022 [mg/Nm^3]	Measured value sem. II 2022 [mg/Nm^3]	MWFEP order no. 462/1993 [VLE, mg/m^3]
1	Particular matters	3.35	3.57	50
2	NO2	63.55	75.24	500
3	HCl	17.76	12.56	30

Stack no. 2

No.	Pollutant	Measured value sem. I 2022 [mg/Nm^3]	Measured value sem. II 2022 [mg/Nm^3]	MWFEP order no. 462/1993 [VLE, mg/m^3]
1	Total particulate matters	2.76	3.11	50
2	Beryllium	< 0.00018	< 0.00018	0.1
3	Acetone	< 0.0022	< 0.0022	150
4	Isopropyl alcohol	< 0.0022	< 0.0022	150

Ventilation exhaustion in beryllium deposit area

No.	Pollutant	Measured value sem. I 2022 [mg/Nm^3]	Measured value sem. II 2022 [mg/Nm^3]	MWFEP order no. 462/1993 [VLE, mg/m^3]
1	Beryllium	< 0.00018	< 0.00018	0.1

The concentrations at release of the non-radioactive pollutants must comply with the alert thresholds (ATs) and limit values (LVs) written in the table below, as it follows from the Order of the Minister of Water, Forests and Environmental Protection no. 756/1997 approving approval the Regulation for of environmental pollution assessment, as subsequently amended and supplemented, and the Order of the Minister of Water, Forests and Environmental Protection no. 462/1993 approving the approval of the Technical Conditions for atmosphere protection and the Implementing Rules for determination of atmospheric particulate emissions produced by stationary sources, as subsequently amended and supplemented.

No.	Pollutant	Weight rate (g/h)	Order of the Minister of Water, Forests and Environmental Protection no. 462/1993 (mg/m^3)	
			PA	PI
1	Particular matters	≥ 500	35	50
2	Beryllium and its compounds	≥ 0.5	0.07	0.1
3	NO2	≥ 5000	350	500
4	HCl	≥ 300	21	30
5	Acetone	≥ 3000	105	150
6	Isopropyl alcohol	≥ 3000	105	150

Having reviewed the measurement results for non-radioactive NOx emissions into the atmosphere against the limit values set out in the MEWF Order no. 462/1993 and the MWFEP Order no. 756/1997, it is found that, at NFP Pitesti, the emissions of specific pollutants are far below the limits set out as alarm thresholds/intervention thresholds (ATs/ITs).

Measurements of non-radioactive pollutants in years 2019-2022

Stack no. 1

No.	Pollutant	Measured value 2019 [mg/Nm³]		Measured value 2020 [mg/Nm³]		Measured value 2021 [mg/Nm³]		Measured value 2022 [mg/Nm³]		MWFEP order no. 462/1993 [VLE, mg/m³]
		Sem. I	Sem. II	Sem. I	Sem. II	Sem. I	Sem. II	Sem. I	Sem. II	
1	Particular matters	1.95	2.12	2.3	3.28	2.84	3.23	3.35	3.57	50
2	NO2	10.25	16.4	22.55	32.8	38.95	55.35	63.55	75.24	500
3	HCl	3.21	3.53	4.67	5.61	5.33	19.55	17.76	12.56	30

Stack no. 2

No.	Pollutant	Measured value 2019 [mg/Nm³]		Measured value 2020 [mg/Nm³]		Measured value 2021 [mg/Nm³]		Measured value 2022 [mg/Nm³]		MWFEP order no. 462/1993 [VLE, mg/m³]
		Sem. I	Sem. II	Sem. I	Sem. II	Sem. I	Sem. II	Sem. I	Sem. II	
1	Total particulate matters	1.28	1.59	1.82	2.25	2.21	2.52	2.76	3.11	50
2	Beryllium	<0.00019	<0.00018	<0.00018	<0.000175	< 0.00018	< 0.00018	< 0.00018	< 0.00018	0.1
3	Acetone	<0.0034	<0.0036	<0.0022	<0.0021	< 0.0022	< 0.0022	< 0.0022	< 0.0022	150
4	Isopropyl alcohol	<0.0034	<0.0036	<0.0022	<0.0021	< 0.0022	< 0.0022	< 0.0022	< 0.0022	150

Ventilation exhaustion in beryllium deposit area

No.	Pollutant	Measured value 2019 [mg/Nm³]		Measured value 2020 [mg/Nm³]		Measured value 2021 [mg/Nm³]		Measured value 2022 [mg/Nm³]		MWFEP order no. 462/1993 [VLE, mg/m³]
		Sem. I	Sem. II	Sem. I	Sem. II	Sem. I	Sem. II	Sem. I	Sem. II	
1	Berylliu m	<0.00021	<0.0001 8	<0.0001 8	<0.00016 8	< 0.00018	< 0.00018	< 0.00018	< 0.00018	32.1

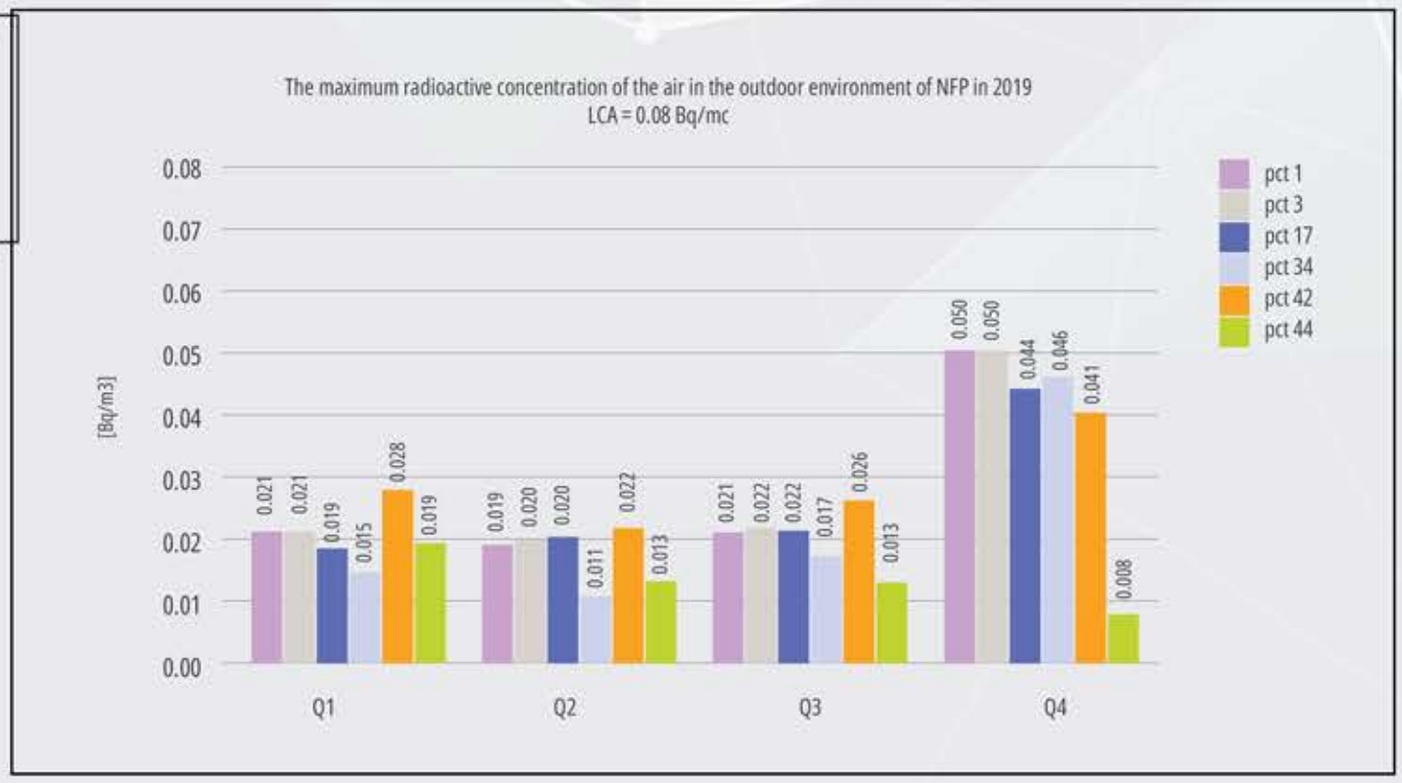
33.2
33.2 OTHER RELEVANT INFORMATION ABOUT EMISSIONS

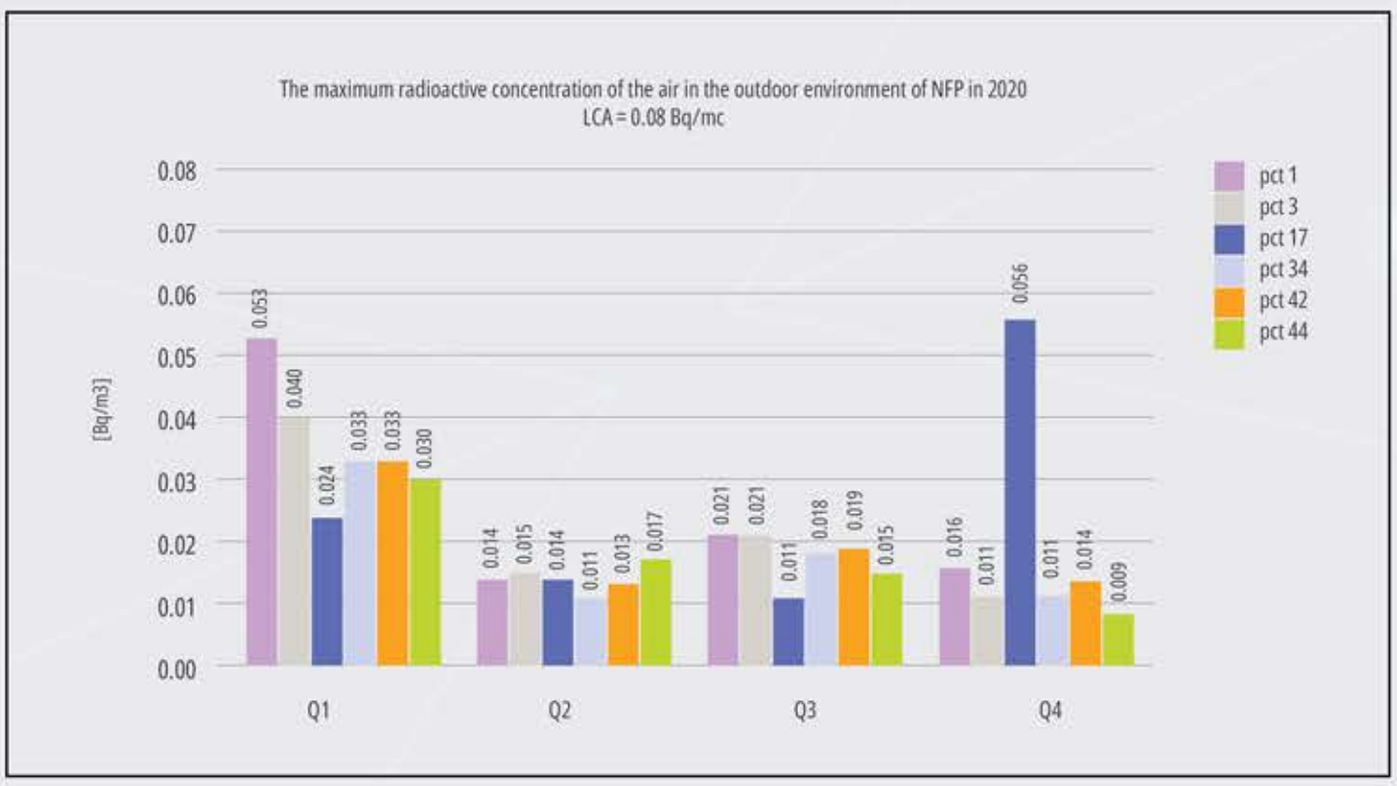
Supervision of outdoor air radioactivity and monitoring concentration of beryllium in the outdoor outside air is done in 7 sampling points connected to the Central Aerosol Sampling System (CASS).

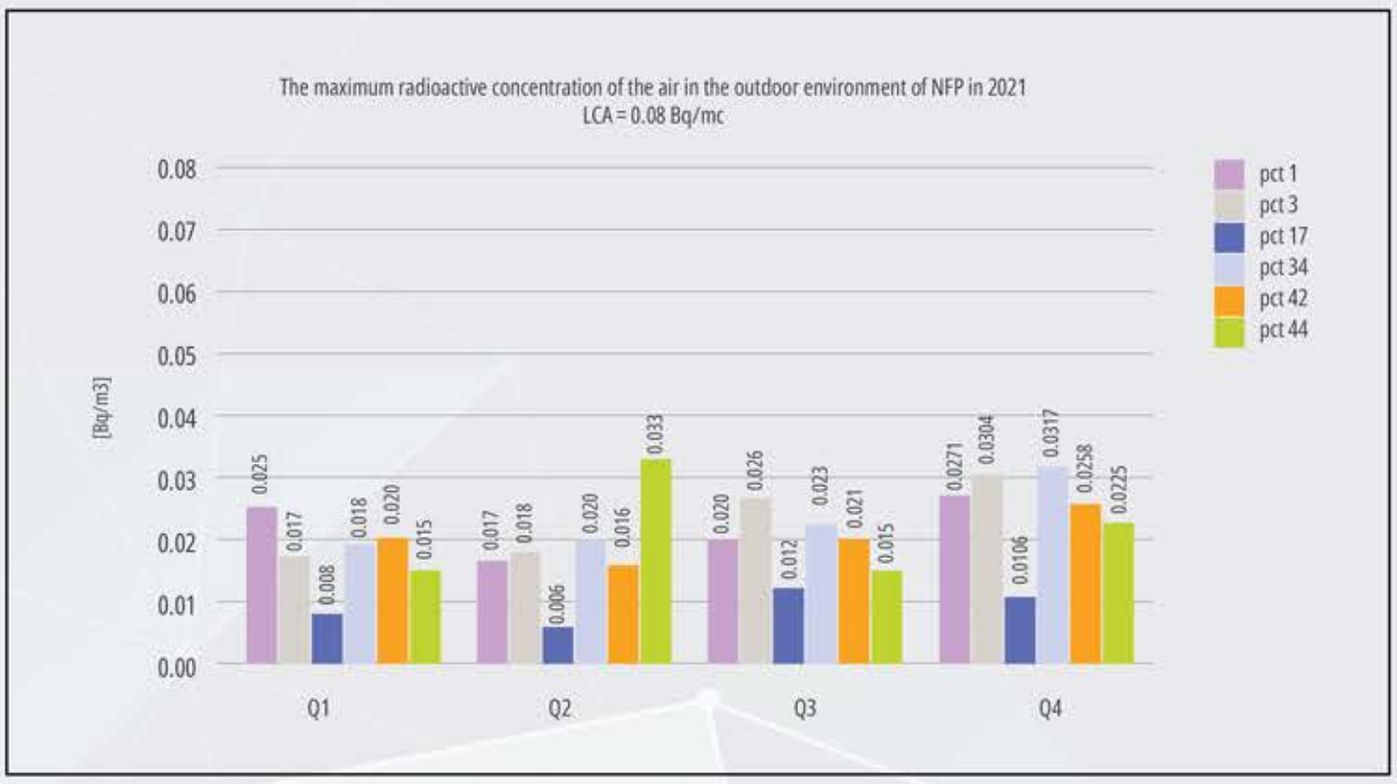
Location of sampling points in the premises of NFP:

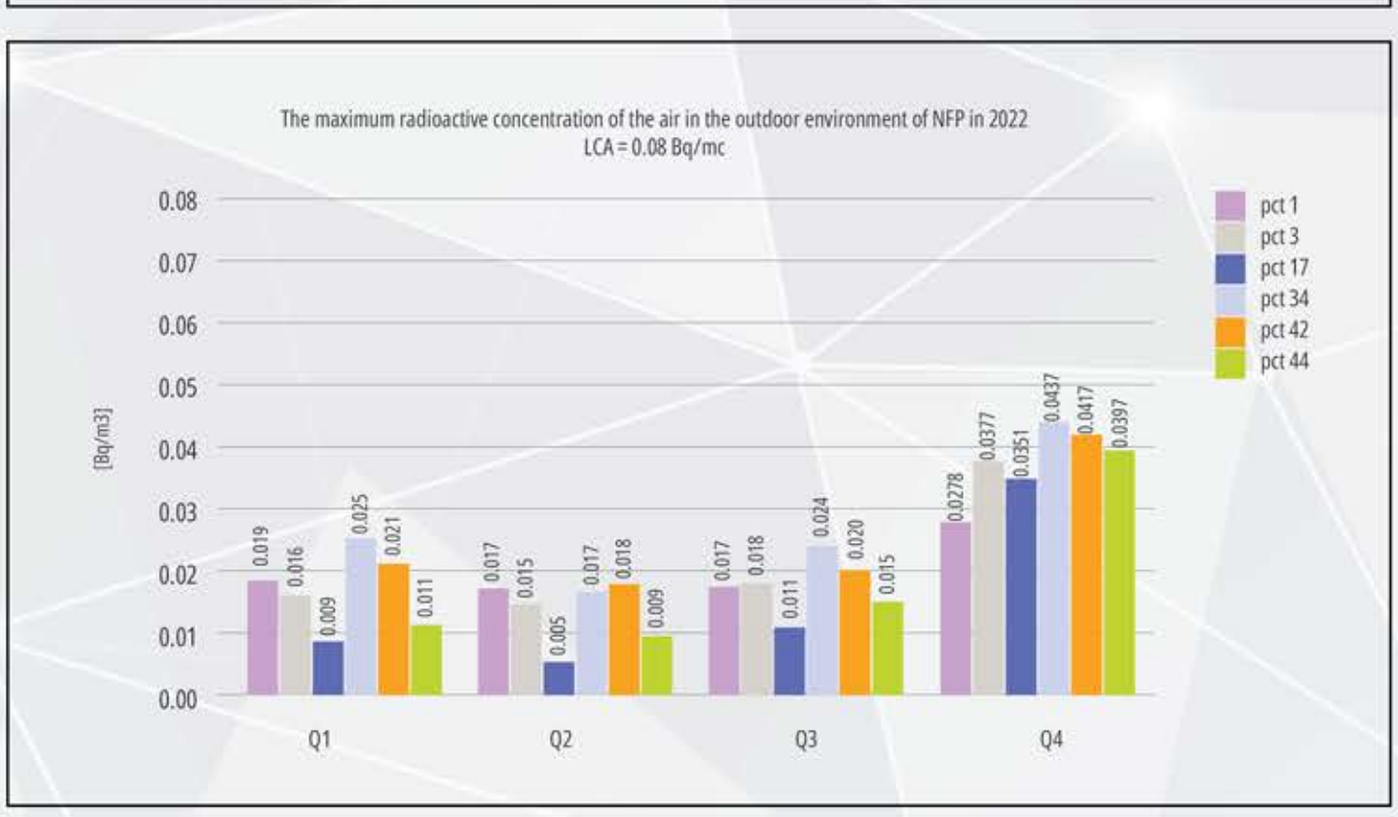
- six points for uranium (1, 3, 17, 34, 42 - located outside Halls I, II and III and point 44 located outside the Extension pf Hall V - pill loading into sheaths), for which radiometric measurements are performed in the Radiation Protection and Staff Dosimetry Laboratory of NFP.
- one sampling point for beryllium (45) located outside the beryllium work area (Beryllium Settlement Area), for which chemical determinations are carried out in the NFP's Chemical Analysis Laboratory.

The charts below show the measured values for years 2019-2022. These were below the documentary control limits set out in the Radiological Safety Manual.









Monitoring of the beryllium concentration in the outdoor air is carried out monthly with the aid of the Central Aerosol Sampling System, point 45, and the documentary control limit is 0.009 μBe/m3.

The following table shows the values recorded in years 2019-2021

**in the period 1 April - 15 May 2020, the activity of NFP Pitesti was planned shutdown due to the COVID-19 pandemic*

No.	Month	Measured value 2019 [μgBe/m^3]	Measured value 2020 [μgBe/m^3]	Measured value 2021 [μgBe/m^3]	Measured value 2022 [μgBe/m^3]
1	January	0.00032	0.00094	0.00060	0.00066
2	February	0.00030	0.00030	0.00089	0.00060
3	March	0.00058	0.00031	0.00052	0.00104
4	April	0.00117	*	0.00142	0.00095
5	May	0.00034	0.00086	0.00144	0.00054
6	June	0.00099	0.00052	0.00074	0.00060
7	July	0.00075	0.00032	0.00101	0.00088
8	August	0.00162	0.00062	0.00076	0.00300
9	September	0.00093	0.00190	0.00081	0.00108
10	October	0.00077	0.00029	0.00114	0.00057
11	November	0.00045	0.00055	0.00089	0.00114
12	December	0.00126	0.00046	0.00051	0.00076

33.3 WASTE MANAGEMENT

In the manufacturing, maintenance, technical quality control, supply and transport, radiation protection, environmental protection, medical emergencies, etc. process, a wide range of materials is used, and the activities carried out result into the following categories of waste:

- Radioactive waste contaminated with natural uranium
- Non-radioactive industrial waste
- Waste contaminated with Beryllium (dual-use material) - non-radioactive

33.3.1 Radioactive waste

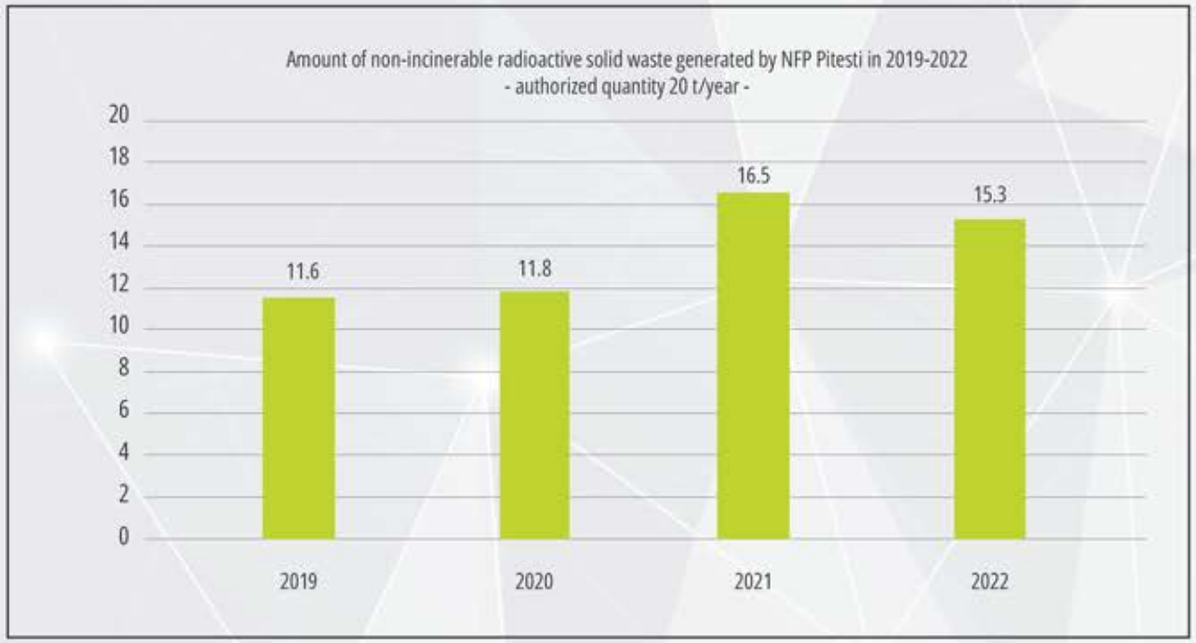
NFP Pitesti pays a special attention to the management of radioactive waste resulting from its the activity, and the way this is processed is described in the Radiological Safety Manual, and in specific procedures. All radioactive waste management activities are authorized in advance by NCNAC.

The radioactive waste contaminated with natural uranium, generated in NFP, are:

Non-incinerable radioactive solid waste with low specific activity - NIRSW

(metal objects, pipes, grinding stones, metal parts, subsets, epoxy powder, bricks, cables, debris, etc. - contaminated with natural uranium) that cannot be decontaminated and are of no interest for recovery, and it is temporarily stored on the Solid Radioactive Waste Temporary Storage Platform (TSP) in metal barrels. The waste is then transferred/transported to the Low Activity Solid Waste Final Disposal Landfill of Feldioara, for final storage.

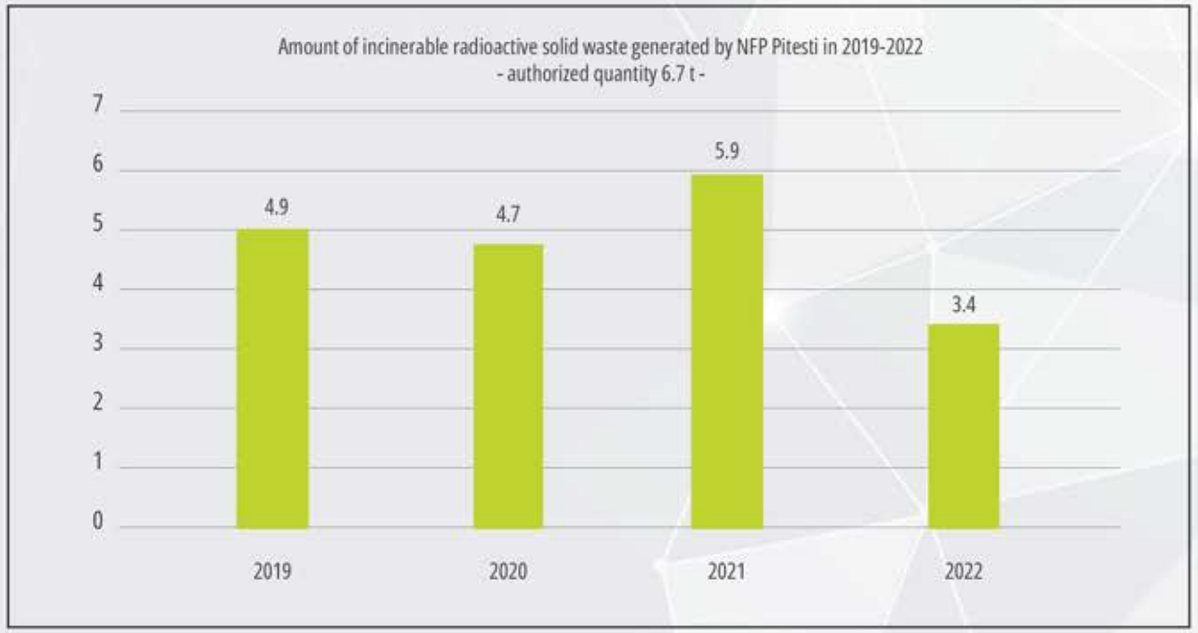
A summary report on the amount of solid radioactive waste with low specific activity that cannot be incinerated, as generated by NFP Pitesti in years 2019-2022, is included in the chart below:

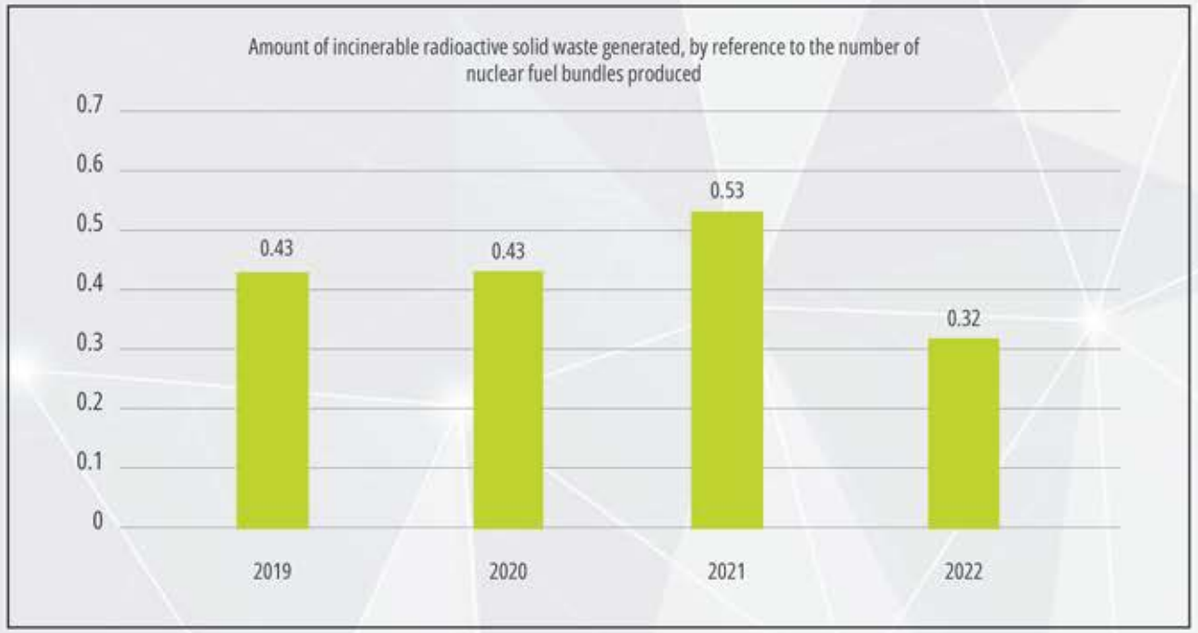


Incinerable radioactive solid waste low specific activity - IRSW

(filters/prefilters resulting from ventilation systems, protective equipment, paper, etc. - contaminated with natural uranium) - are temporarily stored on the for Solid Radioactive Waste Temporary Storage Platform (TSP) in metal barrels and/or raffia bags and later are transferred to RWTS-NRI for disposal by incineration and recovery of uranium contained in uranium ash, that is returned of nuclear control safeguards.

A summary report on the amount of incinerable solid radioactive waste with low specific activity, as generated by NFP Pitesti in years 2019-2022, is included in the chart below:



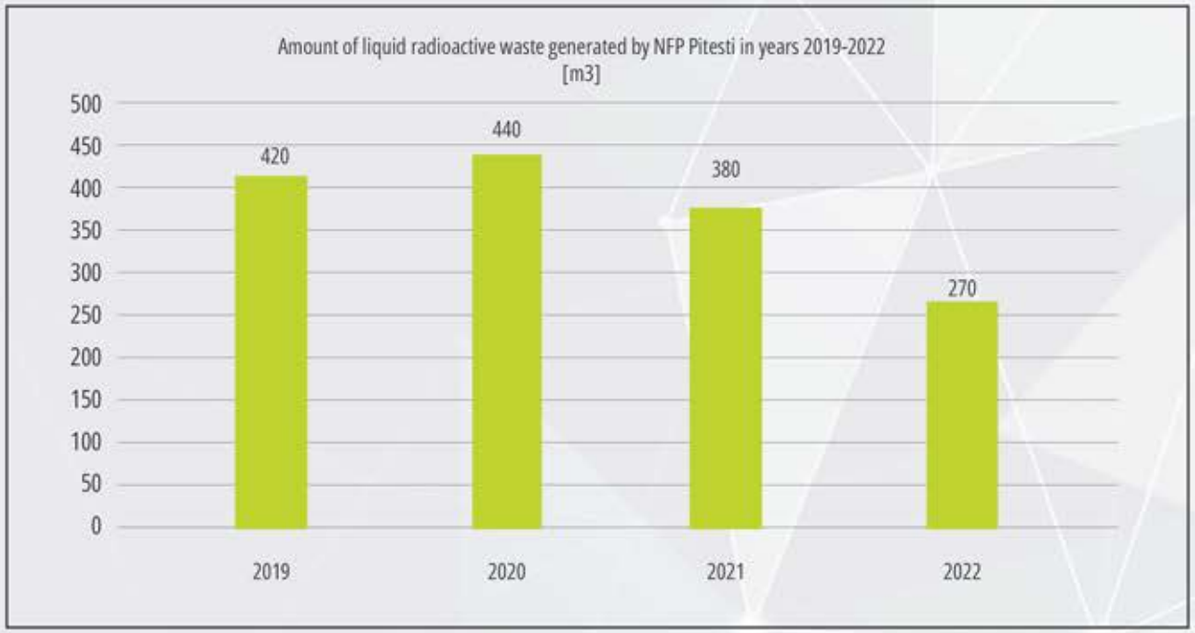


As to the incinerable solid radioactive waste, NFP Pitesti has set the following objective: *minimization of the incinerable solid radioactive waste generation, with a target of "Max 0.56 (the maximum quantity of solid incinerable radioactive waste generated according to the environmental permit is 6.7 tons, compared to the maximum authorized production);* the values recorded in the last three years were below the planned target.

Radioactive liquid waste

with different concentrations of uranium from the production and quality control activity are collected in stainless steel tanks in the Liquid Radioactive Waste Collection Station of NFP (LRWCS-NFP), and are transferred to the Radioactive Waste Treatment Station of NRI (RWTS-NRI) for the recovery of uranium, from where, through precipitation with trisodium phosphate and ammonia followed by settling, filtering and drying, solid and dry uranyl phosphate is obtained, which is returned to NFP under the nuclear safeguards control.

A summary report on the amount of liquid radioactive waste generated by NFP Pitesti in years 2019-2022 is included in the chart below:



33.3.2 Non-radioactive waste

In the manufacturing, maintenance, technical quality control, supply and transport, radiation protection, environmental protection, medical emergencies, etc. process, a wide range of materials is used, and the activities carried out result, among other types of waste, also into the radioactively non-contaminated non-recyclable waste (e.g. waste hazardous substances/mixtures).

The resulting quantities are reported monthly to Argeș EPA according to the provisions of *the Government Decision no. 856/2002 on the records of waste management and approving the list of waste, including hazardous waste, indicating the activity which generated this waste*.

Waste classified as hazardous - waste marked with (*) - is handed over to economic operators authorized in terms of environmental protection, in compliance with the requirements of the Government Decision no. 1061/2008 *on the transport of hazardous and non-hazardous waste in the territory of Romania*. The amounts of transferred waste are entered into the waste management database of NFP Pitesti.

A summary report on the amounts of non-recyclable waste classified as hazardous, generated in years 2019-2022, is included in the table below:

No.	Waste code acc. to GD 856/2002*	Types of non-recyclable hazardous waste	2019	2020	2021	2022
1.	12.01.09*	Used halogen-free emulsions and lubricating solutions [t]	5.63	5.33	6.97	3.9
2.	20.01.35*	Retired electrical and electronic equipment, other than those listed under 20.01.21 and 20.01.23, with a content of hazardous components	0.1	0.15	0.8	0.9
3.	20.01.21*	Fluorescent tubes and other mercury-containing waste	0	0.06	0.07	0
4.	13.02.05*	Non-chlorinated mineral motor, transmission and lubrication oils	0.274	0.015	0.012	0.96
5.	13.02.06*	Synthetic motor, transmission and lubrication oils	0.13	0	0.28	0.33
6.	15.01.10*	Packages containing, or contaminated with, dangerous substances	0.5	0	0.4	0.85
7.	07.01.04*	Other organic solvents, washing liquids and Muma solutions	0.4	0.22	0.63	0.44
8.	20.01.33*	Batteries and accumulators	0	0	0	0
9.	16.05.06*	Laboratory chemicals consisting of, or containing, dangerous substances, including mixtures of laboratory chemicals	0.16		0.1	0.6
10.	17.04.09*	Metal waste contaminated with dangerous substances	0	0	0	0.1
11.	15.02.02*	Absorbent filter materials, polishing materials and protective coating contaminated with dangerous substances	0.1	0	0	0.7
12.	06.02.04*	Sodium and potassium hydroxide	0.14	0	0	0.01
13.	07.01.04*	Other organic solvents, washing liquids and Muma solutions	0.4	0.22	0.63	0.44

(*) - Waste coding - in accordance with the Commission Decision 2014/955/UE of 18 December 2014 amending Decision 2000/532/EC on the list of waste pursuant to Directive 2008/98/EC of the European Parliament and of the Council

Non-recyclable waste

Another category of non-recyclable waste resulting from the activities carried out in NFP Pitesti is domestic (household) waste and waste from halogen-free emulsions and lubricating solutions.

Domestic waste is collected in containers with a volume of 1.1 m^3. After the dosimetry control, this is carried to the ramp for the controlled disposal of domestic waste, with the transport provided by the services provider.

Collection of waste emulsions and used lubricating solutions is done in metal barrels, labelled and marked accordingly. These are stored in specially arranged places and later transferred to authorized operators under services contracts.

The resulting quantities are reported monthly to Argeș EPA according to the provisions *of the Government Decision no. 856/2002 on the records of waste management and approving the list of waste, including hazardous waste.*
Summary report on the amounts of non-recyclable waste generated in the years 2019-2022

No.	Types of non-recyclable waste	Waste code acc. to GD 856/2002*	2019	2020	2021	2022
1.	Mixed domestic waste [t]	20.03.01	13.65	12.59	12.32	15.3
2.	Used halogen-free emulsions and lubricating solutions [t]	12.01.09*	5.63	5.33	6.97	3.9

Recyclable waste

The waste/recyclable-recoverable materials resulting from the activities carried out in NFP are of a number of types:

- metal waste (ferrous and non-ferrous);
- cellulosic waste (paper and cardboard);
- plastic waste (PETs, plastic containers);
- glass waste;
- wood waste;
- waste of neon tubes, lamps and light bulbs.

Collection of waste/recyclable-recoverable materials is done selectively, by type of recyclable waste, according to Law no. 132/30.06.2010 on "Selective collection of waste in public institutions". NFP carries out selective collection of recyclable waste, such as paper, cardboard, glass, plastic and metal in special containers (green, blue and yellow) placed in specially designated points in the premises of NFP.

Waste/recyclable-recoverable materials generated in NFP Pitesti are taken over by authorized operators, under services contracts.
A summary report on the amounts of recyclable-recoverable waste classified as hazardous, generated in years 2019-2022, is included in the table below:

No.	Waste code acc. to GD 856/2002*	Waste name	2019	2020	2021	2022
1	15.01.01	Paper and cardboard packages	2.03	2.23	5.74	4.47
2	20.01.01	Paper and paperboard	1.39	1.8	1.42	0.52
3	17.04.05	Iron and steel	0.48	1.14	5.87	13.1
4	15.01.02	Plastic packages	0.48	0.295	1.13	1.26
5	20.01.39	Plastic waste	2.06	0.85	0.91	0.21
6	15.01.03	Wood packaging waste	0.89	4.78	2.82	2.11
7	20.01.38	Wood, other than under 20.01.37	0	0.09	1.8	1.2
8	20.01.36	Retired electrical and electronic equipment, other than those listed under 20.01.21, 20.01.23, and 20.01.35	0.7	1.1	2	4.25
9	20.01.35*	Retired electrical and electronic equipment, other than those listed under 20.01.21 and 20.01.23, with a content of hazardous components	0.1	0.15	0.8	0.9
10	20.01.21*	Fluorescent tubes and other mercury-containing waste	0	0.06	0.07	0
11	17.04.11	Metal waste - cables	0	0	0.13	0.34
12	17.04.02	Aluminium waste	0	0	0.3	1.32
13	17.04.01	Copper waste	0	0	1.5	0.34
14	15.01.04	Metallic packaging waste	0	0	0.03	0.005
15	15.02.03	Absorbent filter materials, polishing materials and protective coating	0	0	0.3	0.73
16	13.02.05*	Non-chlorinated mineral motor, transmission and lubrication oils	0.274	0.015	0.012	0.96
17	13.02.06*	Synthetic motor, transmission and lubrication oils	0.13	0	0.28	0.33
18	15.01.10*	Packages containing, or contaminated with, dangerous substances	0.5	0	0.4	0.85
19	12.01.17	Sandblasting material waste, other than under 12.01.16	0.234	0.035	0.08	0.08

(*) - Waste coding - in accordance with the Commission Decision 2014/955/UE of 18 December 2014 amending Decision 2000/532/EC on the list of waste pursuant to Directive 2008/98/EC of the European Parliament and of the Council

Selective collection

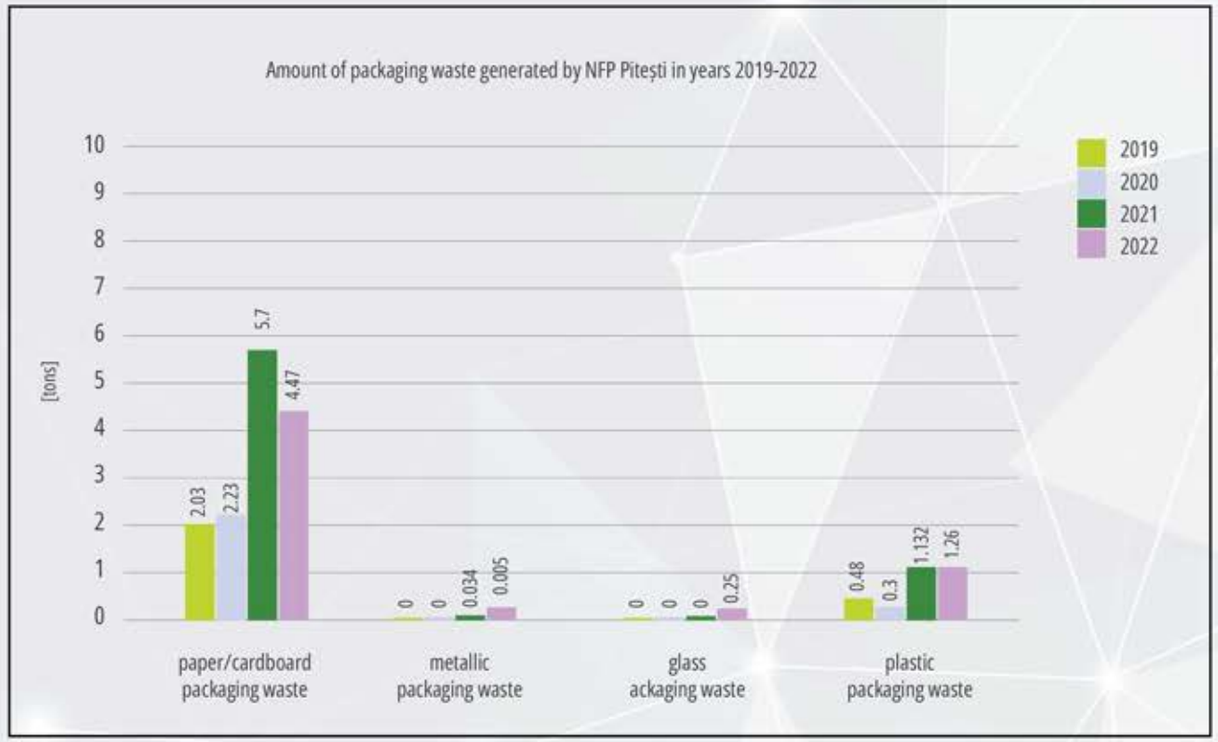
is part of the recycling process, whereby recyclable materials are collected and carried to recycling centers. The recycling process involves composting of waste, and separate collection and treatment of waste for their reintroduction in the economic circuit. Selective collection aims to protect the environment. It also helps increase efficiency in the use of resources.

In NFP Pitesti, waste collection is carried out selectively, by type of waste, thus making it easier to classify and hand it over to authorized companies under services contracts.

In order to comply with the requirements of Law no. 132/2010 in NFP Pitesti, selective collection of waste was made mandatory for the following materials: paper, plastic, metal, glass.

In this regard, bins were purchased for collection of these types of waste, and were placed in as many places as possible.

A summary report on the amount of non-radioactive industrial waste falling under the scope of Law no. 132/2010, generated by NFP Pitesti in years 2019-2022, is included in the chart below.



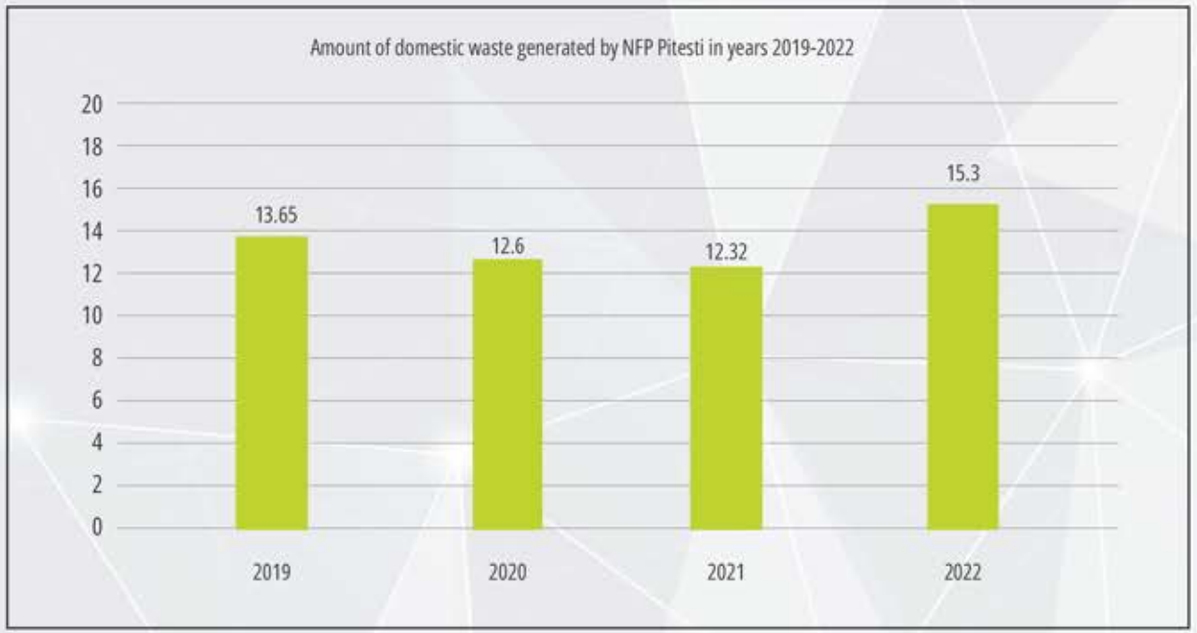
In addition to the above, other types of recyclable waste are also generated in NFP Pitesti, namely paper and cardboard waste, plastic material waste, metal waste, etc.

A summary report on the amount of such waste generated by NFP Pitesti in years 2019-2022, is included in the chart below:

Another category of waste generated within NFP is the domestic waste, which is collected separately from recyclable/recoverable waste, in marked and imprinted containers intended for these types of waste.

A summary report on the amount of domestic waste generated by NFP Pitesti in years 2019-2022 is included in the chart below:

Waste name	Amount generated [t]			
	2019	2020	2021	2022
Paper and paperboard waste	1.39	1.8	1.421	0.52
Metal waste	0.48	1.14	5.87	13.1
Metal waste - cables	0	0	0.13	0.34
Ferrous sawdust	0	0	0	0.05
Aluminium waste	0	0	0.3	1.32
Copper waste	0	0	1.5	0.34
Plastic waste	2.06	0.85	0.912	0.21
Wood waste	0	0.09	1.8	1.2
Electrical and electronic equipment waste	0.7	1.1	2	4.25



33.3.3 Waste contaminated with Beryllium (dual-use material) - non-radioactive

In accordance with the provisions of **NGN-02 - Detailed list of materials, devices**, equipment and other explosive nuclear devices, beryllium, in the form of metal, alloys containing more than 50% beryllium, beryllium compounds, products made from these materials, including waste and scrap containing beryllium, are classified as dual-use materials.

Solid waste contaminated with beryllium resulting from the beryllium settlement activity of the Assembly Section is managed in accordance with the procedure CN-AD-40 "Collection, Packaging and Storage of Solid Waste Contaminated with Beryllium". This is temporarily stored on the Solid Radioactive Waste Temporary Storage Platform (TSP) in metal barrels and is handed over to authorized operators under a services contract, in order to be treated as waste containing hazardous substances.

33.4 FINANCIAL QUANTIFICATION OF ENVIRONMENTAL PROTECTION ACTIVITIES

Annually, NFP Pitesti considers making investments aimed at preventing pollution. For instance, in 2022, NFP Pitesti proposed the following investments:

- Upgrading of the physical and chemical laboratory ventilation plant, the value of the investment was lei 692,000;
- Upgrading of the ventilation and air-conditioning plant, Hall IV; the investment amount was lei 118,000;

33.5 USE OF HAZARDOUS CHEMICALS OR BIOCIDES

NFP is a downstream user, and hazardous substances and mixtures purchased for use in the technological processes or in laboratory analysis are kept in their original packaging, and are stored depending on compatibility (compatibilities are determined by the staff of the chemical analysis laboratory) in warehouses with controlled access.

When preparing the documentation for acquisition of hazardous substances and mixtures, the requirements concerning their classification, packaging and labelling under the Regulation (EC) no. 1907/2006, concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), as subsequently amended and supplemented, and the Regulation (EC) no. 1272/2008 on classification, labelling and packaging of substances and mixtures, as subsequently amended and supplemented.

The hazardous substances and mixtures used in NFP are accompanied by Safety Data-Sheets, are kept in the manufacturer's packaging, and are subject to procedural requirements, that both at ordering and at taking-over, as well as during regular inspections, the integrity and tightness of the packaging, the correct labelling with information on the name of the product, the brand of the factory and the name of the manufacturer, the date of manufacture, and the warranty period are strictly monitored; all of this is data strictly needed for first aid in order to avoid chemical hazards, for removal of residual products and, where applicable, for application of restrictions on the use of the product. In the event of an accidental damage to the packaging, the chemical product is transferred to other containers compatible with its characteristics, ensuring that these are clean so as not to contaminate the product, are properly labelled and meet any other specific requirements.

For the works carried out in NFP Pitesti, which use hazardous substances and mixtures, these are accompanied by Safety Data-Sheets.

34 DEVELOPMENT OF ENVIRONMENTAL PERFORMANCE IN TIME

34.1 INDEPENDENT REVIEW OF THE OPERATIONAL ENVIRONMENTAL DATA

As of 2020, SNN-SA NFP Pitesti Branch is an EMAS registered organization (certificate no. RO 000018). In order to maintain this registration, NFP Pitesti conducts annual registration surveillance audits.

On 28 October 2022, the registration renewal audit for SNN-SA NFP Pitesti Branch was conducted, after which, the Environmental Declaration was validated and subsequently submitted to the National Environmental Protection Agency - EMAS Secretariat.

34.2 TARGETS AND PROGRESS IN REDUCING POLLUTION, ADDITIONAL TO THE REGULATORY REQUIREMENTS

NFP Pitesti is permanently concerned about pollution reduction, the amount of waste generated and the use of resources.

For example:

- high-efficiency HEPA 13 particle retention filters are used to reduce pollution in the ventilation unit, with a retention rate of 99.95%.
- For a rational use of resources, where this was possible, water recirculation systems were put into service, lighting sensors were fitted, sanitary groups were equipped with automatic taps, all water routes were checked to remedy potential losses, and the staff was delivered regular training of the rational use of resources.
- In 2022, the NPP ran an analysis on the possibility of returning the chemical packaging to suppliers for reuse.

SNN-SA NFP Pitesti Branch is an EMAS registered organization, according to registration certificate no. RO-000018. Regulation (EC) No 1221/2009 on the voluntary participation by organisations in a Community eco-management and audit scheme (EMAS), as amended by the Regulation (EU) no. 2017/1505 of the Commission of 28 August 2017 and Regulation (EU) no. 2018/2026 of the Commission of 19 December 2018, provides that registered organizations are required to set key performance indicators for:

- Energy efficiency;
- Material efficiency;
- Water;
- Waste;
- Biodiversity and
- Emissions. The indicators, i.e. the concentration reduction targets for non-radioactive emissions, are set in the situation where the review of the monitoring results finds that these are close to 50% of the alert threshold (AT) set out under the applicable environmental legislation, namely under Order no. 462/1993 of the MWFEP approving of the technical conditions for atmospheric protection and the implementing rules for determination of the emissions of atmospheric pollutants produced by stationary sources.

For 2022, NFP Pitesti defined the following performance indicators:

Reduction by min. 0.01% of the electricity usage in 2022 v 2021 by reference to the number of FCs produced.

Increase of at least 0.01% in the UO2 powder processing yield compared v 2021 (μ=95.10). Thus, the indicator fell within the proposed target.

Increase of at least 0.01% in the processing yield of Zy-4 tubes in 2022 v 2021 (μ=97.47).

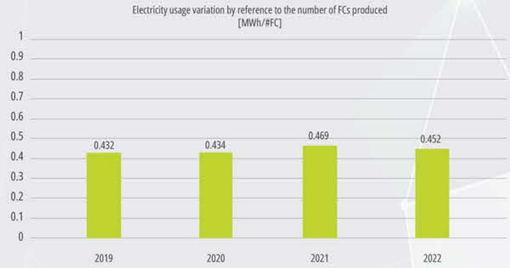
~~Reduction by min. 0.01% of the drinking water consumption~~ in 2022 v 2021 by reference to the average headcount
Reduction of the amount of incinerable solid radioactive waste generated by reference to the number of FCs produced - the maximum amount of incinerable solid radioactive waste authorized to be generated according to the environmental permit, compared to the maximum authorized production, is maximum of 0.56 kg/FC

Reduction of the amount of uranium released into the atmosphere through radioactive gaseous effluents, by reference to the number of fuel bundles produced, i.e. a maximum of 75 mgU/FC (18% of the maximum amount of uranium authorized to be released through radioactive gaseous effluents according to the environmental permit, by reference to maximum production authorized).

The analysis of the data for 2022 concerning the performance indicators highlighted that they were attained 100%, according to the tables and charts below:

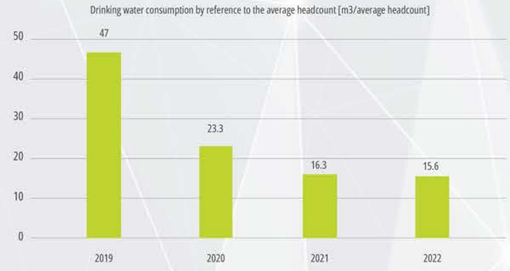
Reduction by min. 0.01% of the electricity usage in 2022 v 2021 by reference to the number of FCs produced

	2019	2020	2021	2022	2022	
					planned	achieved
Amount of electricity used, MWh	4847	4746	5158	4891	0.468	0.452
Number of FC products	11200	10800	11000	10826		
Amount of electricity used/#FCs produced	0.432	0.434	0.469	0.452		



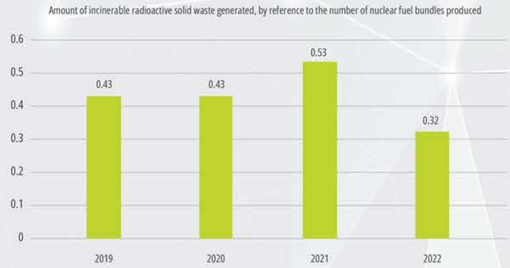
Reduction by min. 0.01% of the drinking water consumption in 2022 v 2021 by reference to the average headcount

	2019	2020	2021	2022	2022	
					planned	achieved
Amount of water used (m³)	16653	7868	5505	5317	16.298	15.6
Average number of employees	352	338	338	341		
Ratio between the amount of water used and the average headcount	47	23.3	16.3	15.6		



Reduction of the amount of incinerable solid radioactive waste generated by reference to the number of FCs produced - the maximum amount of incinerable solid radioactive waste authorized to be generated according to the environmental permit, compared to the maximum authorized production, is maximum of 0.56 kg/FC)

	2019	2020	2021	2022	2022	
					planned	achieved
Amount of incinerable solid waste generated [kg]	4862.7	4653	5865.6	3408.4	0.56	0.32
Number of FCs produced	11200	10800	11000	10826		
Ratio between the amount of incinerable solid waste generated and the number of FCs produced	0.43	0.43	0.53	0.32		

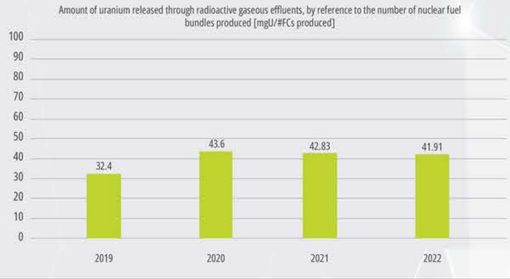


The maximum amount of uranium that can be disposed of through radioactive gaseous effluents at the three dispersion stacks of NFP Pitesti is set under the nuclear operating permit issued by NCNAC, and the Environmental Permit issued under the a Government Decision for SNN-SA NFP Pitesti Branch.

As it can be seen in the chapter on radioactive/non-radioactive emissions assessed at stack, the amount of uranium disposed of annually through radioactive gaseous effluents is far below the limit set out under the permit (for instance, in 2022, the amount of uranium disposed at stack was 0.45 kgU, compared to 5 kgU/year, which is the maximum authorized limit, where U = natural uranium).

Reduction of the amount of uranium released into the atmosphere through radioactive gaseous effluents, by reference to the number of FCs produced, i.e. a maximum of 75 mgU/FC (18% of the amount of uranium authorized to be released through radioactive gaseous effluents according to the environmental permit, by reference to maximum production authorized)

	2019	2020	2021	2022	2022	
					planned	achieved
Amount of uranium released through radioactive gaseous effluents [mgU]	363214	470880	471089	453726	75	41.91
Number of FCs produced	11200	10800	11000	10826		
Ratio between the amount of uranium released through radioactive gaseous effluents and the number of FCs produced	32.4	43.6	42.83	41.91		

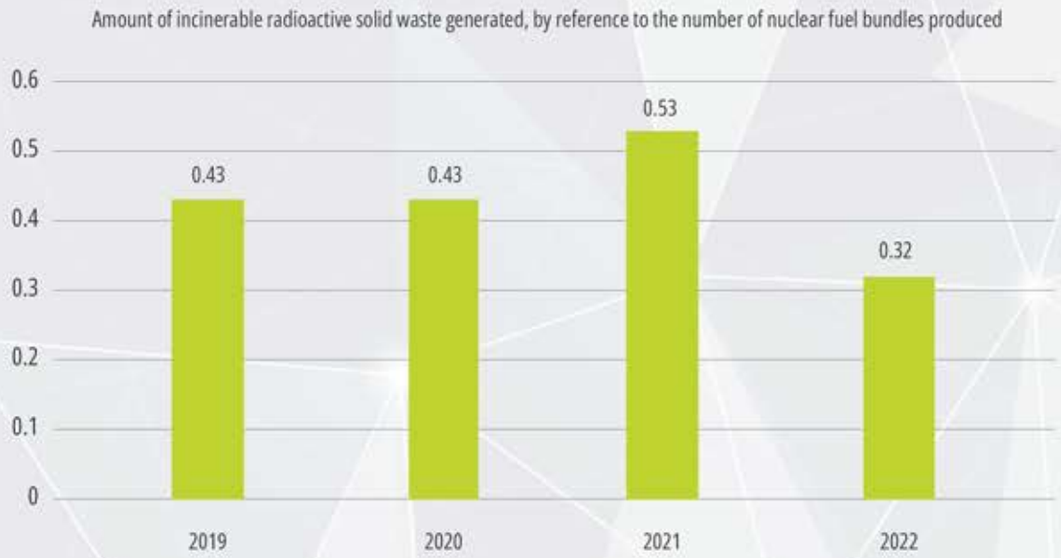


34.3
TARGETS AND PROGRESS IN WASTE REDUCTION, ADDITIONAL TO THE REGULATORY REQUIREMENTS

NFP Pitesti pays a special attention to waste management. In order to support reduction of the amount of waste generated, the following indicator was set:

Reduction of the amount of incinerable solid radioactive waste generated by reference to the number of FCs produced - the maximum amount of incinerable solid radioactive waste authorized to be generated according to the environmental permit, compared to the maximum authorized production, is maximum of 0.56 kg/FC).
The figures of this indicator in years 2019-2022 are presented below:

	2019	2020	2021	2022	2022	
					planned	achieved
Amount of incinerable solid waste generated [kg]	4862.7	4653	5865.6	3408.4		
Number of FCs produced	11200	10800	11000	10826		
Ratio between the amount of incinerable solid waste generated and the number of FCs produced	0.43	0.43	0.53	0.32	0.56	0.32



34.4
TARGETS AND PROGRESS IN REDUCTION OF THE USE OF RESOURCES, ADDITIONAL TO THE REGULATORY REQUIREMENTS

As to the use of resources, NFP Pitesti has set performance indicators for:

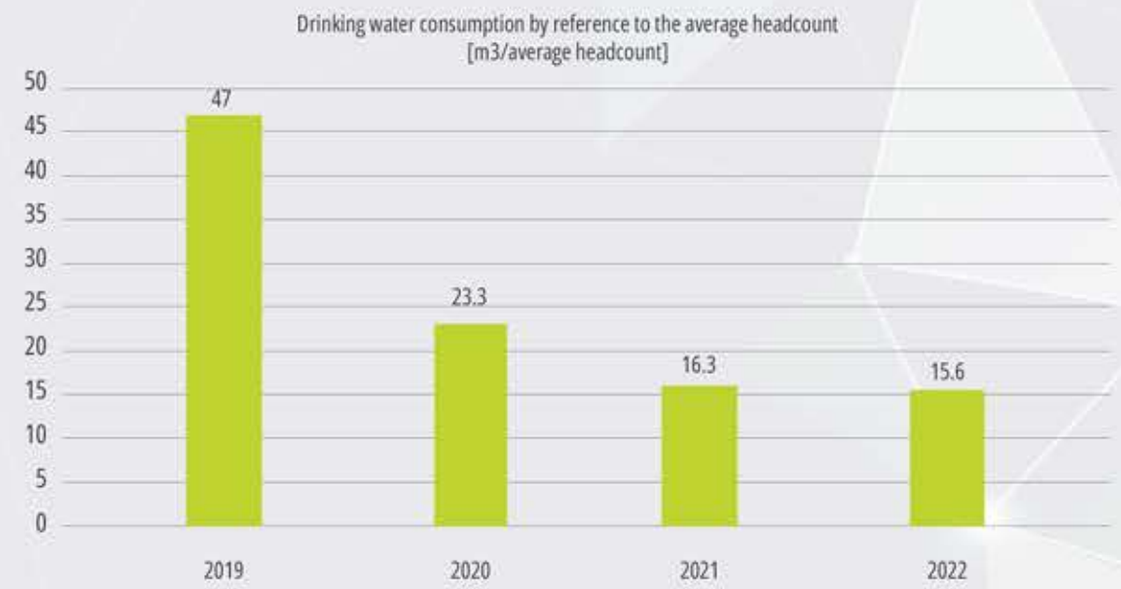
- **energy efficiency:** Reduction by min. 0.01% of the electricity usage in 2022 v 2021 by reference to the number of FCs produced
- **water usage:** Reduction by min. 0.01% of the drinking water consumption in 2022 v 2021 by reference to the average headcount

The variation in electricity usage by reference to the number of nuclear fuel bundles produced, in years 2019-2022, is shown in the table below:

	2019	2020	2021	2022	2022	
					planned	achieved
Amount of electricity used, MWh	4847	4746	5158	4891	0.468	0.452
Number of FC products	11200	10800	11000	10826		
Amount of electricity used/#FCs produced	0.432	0.434	0.469	0.452		

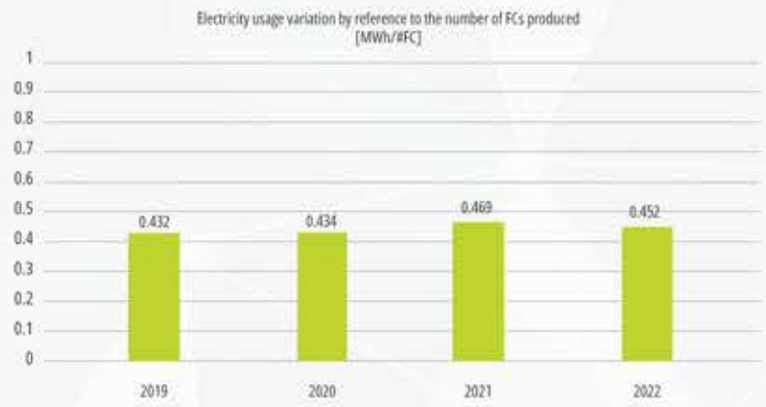
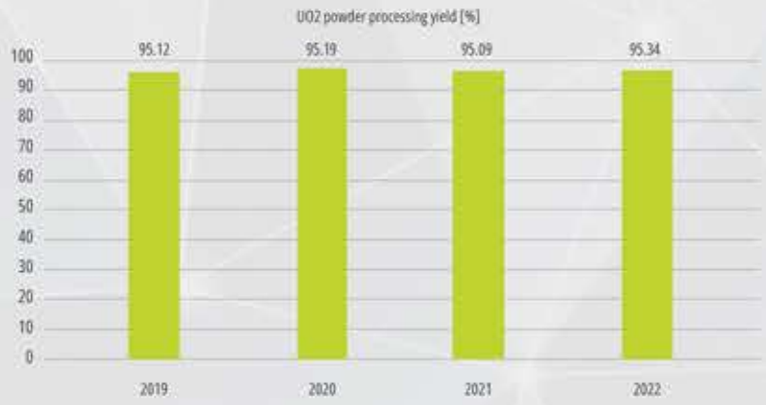
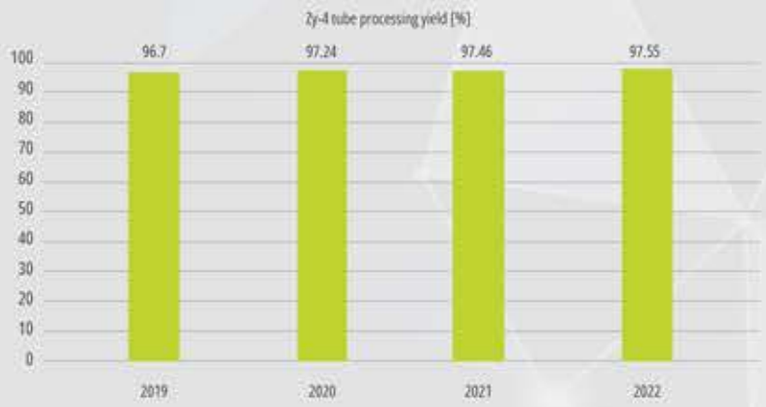
The variation in the water usage by reference to the average headcount, in years 2019-2022, is shown in the table below:

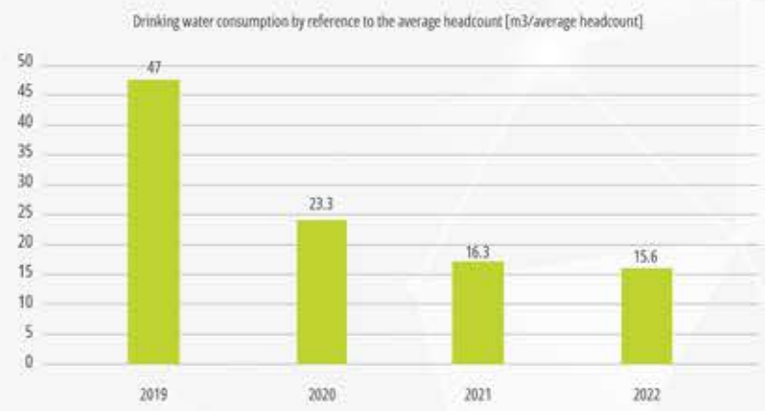
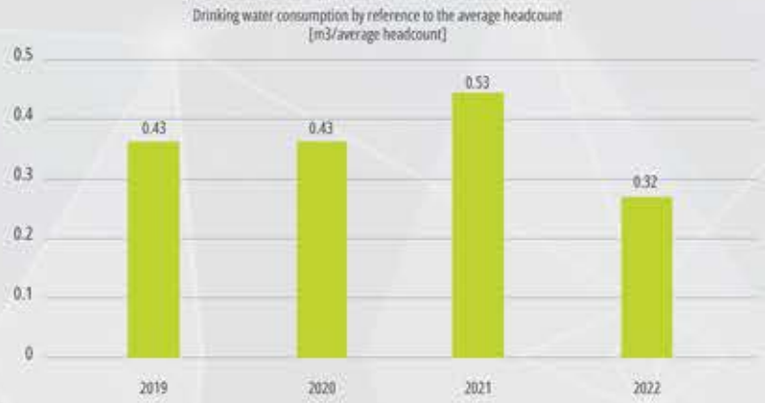
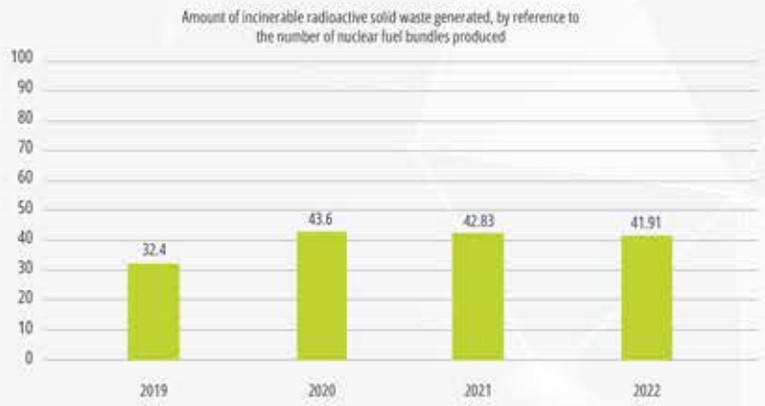
	2019	2020	2021	2022	2022	
					planned	achieved
Amount of water used (m^3)	16653	7868	5505	5317	16.298	15.6
Average number of employees	352	338	338	341		
Ratio between the amount of water used and the average headcount	47	23.3	16.3	15.6		



34.5
COMPARISONS BETWEEN OBJECTIVES AND DEVELOPMENTS IN TIME

NFP Pitesti is an EMAS registered organization in accordance with Regulation (EC) no. 1221/2009 of the European Parliament and of the Council of 25 November 2009 on the voluntary participation by organisations in a Community eco-management and audit scheme (EMAS); in this regard, the Environmental Declaration is issued annually and is validated by an accredited environmental reviewer.
The Environmental Declaration, shows the last 3-year developments in the performance indicators set according to Regulation (EC) no. 1221/2009, as subsequently amended and supplemented.

Environmental target	Name of ratio	UM	Target 2022-2023	2019	2020	2021	2022	
Efficient use of energy	Electricity usage/number of bundles produced	[MWh]/FC	Reduction by min. 0.01% of the electricity usage v 2021	0.432	0.434	0.469	0.452	
Rational usage of materials	UO_2 powder processing yield,	%	min 0.01% increase in processing yield in 2022 v 2021	95.12	95.19	95.09	95.34	
	Zy- 4 tube processing yield	%	Increase of at least 0.01% in the processing yield of Zy-4 tubes in 2022 v 2021	96.7	97.24	97.46	97.55	

Environmental target	Name of ratio	UM	Target 2022-2023	2019	2020	2021	2022	
Rendering water usage more efficient	Drinking water consumption/average headcount	m^3/no. of employees	Reduction by min. 0.01% of the drinking water consumption in 2022 v 2021 by reference to the average headcount 2022	47	23.3	16.3	15.6	
Minimization of incinerable solid waste generation	Amount of incinerable radioactive solid waste generated/by reference to the number of nuclear fuel bundles produced	[kg/no. of FCs produced]	Max. 0.56 the maximum amount of incinerable solid radioactive waste generated according to the environmental permit is 6.7 tons, by reference to maximum authorized production	0.43	0.43	0.53	0.32	
Reducing the emissions of radioactive gaseous effluents into the atmosphere	Amount of uranium disposed through radioactive gaseous effluents, by reference to the number of nuclear fuel bundles produced	[mgU/FC]	maximum 83.33 mgU/FC which accounts for 20% of the amount of uranium authorized to be released through radioactive gaseous effluents according to the environmental permit, by reference to the maximum authorized production	32.4	43.6	42.83	41.91	

34.6
IMPACT AND DEPENDENCIES ON NATURAL CAPITAL AND BIODIVERSIT

The impact on biodiversity of the operation of the analysed facility is assessed as insignificant because the following were taken into account:

- the specific activities of NFP do not cause any damage to the vegetation on site because there are no activities/works that require topsoil stripping off or cutting the woody vegetation;
- the operation of the NFP does not cause any loss of areas, fragmentation or alteration of the habitats of conservation interest and the characteristic habitats of the species of wild flora and fauna in the natural areas protected at national and Community level because of the relatively large distances between NFP and these;
- bearing in mind the particulars of the activities carried out in the analysed facility, the forest vegetation in the vicinity is not affected by the loss of areas occupied by trees or by changes in the floristic composition;
- the NFP operation does not reduce the population numbers of the fauna of hunting interest or of the fish species in the waterways of the neighbouring areas;
- the constructive peculiarities and the positioning of the NFP in a forest area do not cause any impact on bird migration, because deviation of the bird migration routes due to the NFP existence and operation is out of the question, and the maximum height of structures is comparable to that of the trees in the neighbouring forest areas.

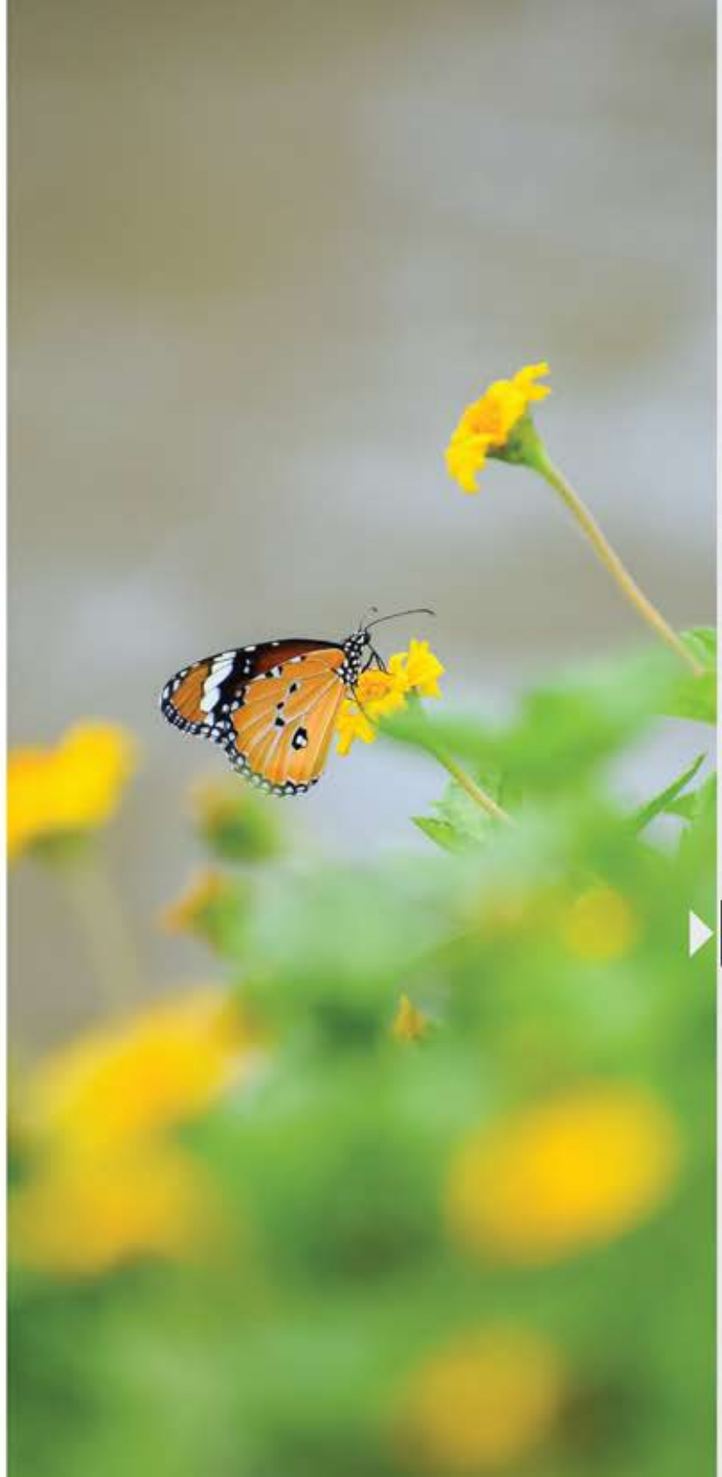
34.7
LIFECYCLE ANALYSIS

NFP Pitesti carries out specific CANDU-6 type nuclear fuel production activities, using as basic raw material the sinterable UO2 powder (with natural uranium and depleted uranium) and as structural material Zircaloy-4 in the form of tubes, sheets, bars and wire. The final product is the CANDU-6 type nuclear fuel bundle and is intended for the CANDU type nuclear reactors of Cernavoda NPP.

In the manufacturing process, NFP Pitesti has implemented a process to recover the resulting non-compliant materials, with the aim of optimizing consumption, recycling the resulting non-compliant materials and, implicitly, reducing the impact on the environment, as follows:

- non-compliant nuclear materials resulting from the pill manufacturing processes are collected by category (powder, pellets, raw pills and sintered/rectified pills, rectification sludge, etc.) and stored until transferred to the powder supplier for recycling and conversion into compliant UO2 powder, which is later returned to NFP Pitesti to be reintroduced in the manufacturing process;
- incinerable solid radioactive waste and radioactive liquid waste (contaminated with uranium) are transferred to the Radioactive Waste Treatment Station of NRI Pitesti for uranium treatment and recovery in the form of uranium ash and uranyl phosphate, which materials are then returned to NFP and subsequently managed as non-compliant nuclear material;

Non-incinerable solid radioactive waste is collected according to a procedure-based programme and regularly transferred, based on the transfer permits issued by NCNAC, to CNU Feldioara Branch for final disposal.



35 ENVIRONMENTAL PROGRAMMES

The NRI-NFP platform was placed on the current site based on a survey conducted by specialized bodies, further which the site permit authorization no. 1392/15.10.1972 was issued, considering the following, depending on the profile of the activities performed on the platform:

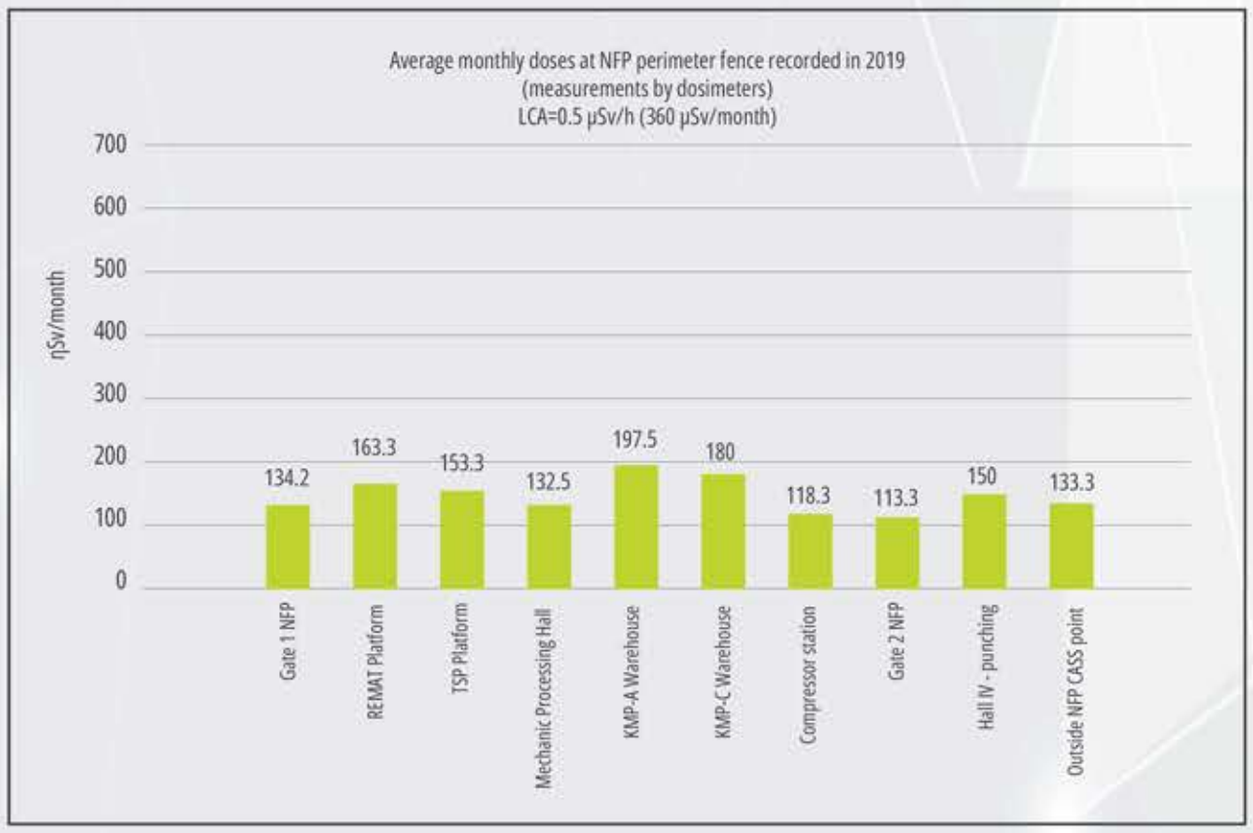
a. The direct effect of nuclear activities on the population and environment, both under normal operation conditions, and in case of a nuclear incident or accident;
b. The amounts and disposal methods for radioactive and non-radioactive waste;
c. The density and age structure of the population in the area and its diet particularities;
d. The relief and the local geographical, weather and hydrological conditions;
e. The social and economic facilities in the area, their importance and any potential implications.

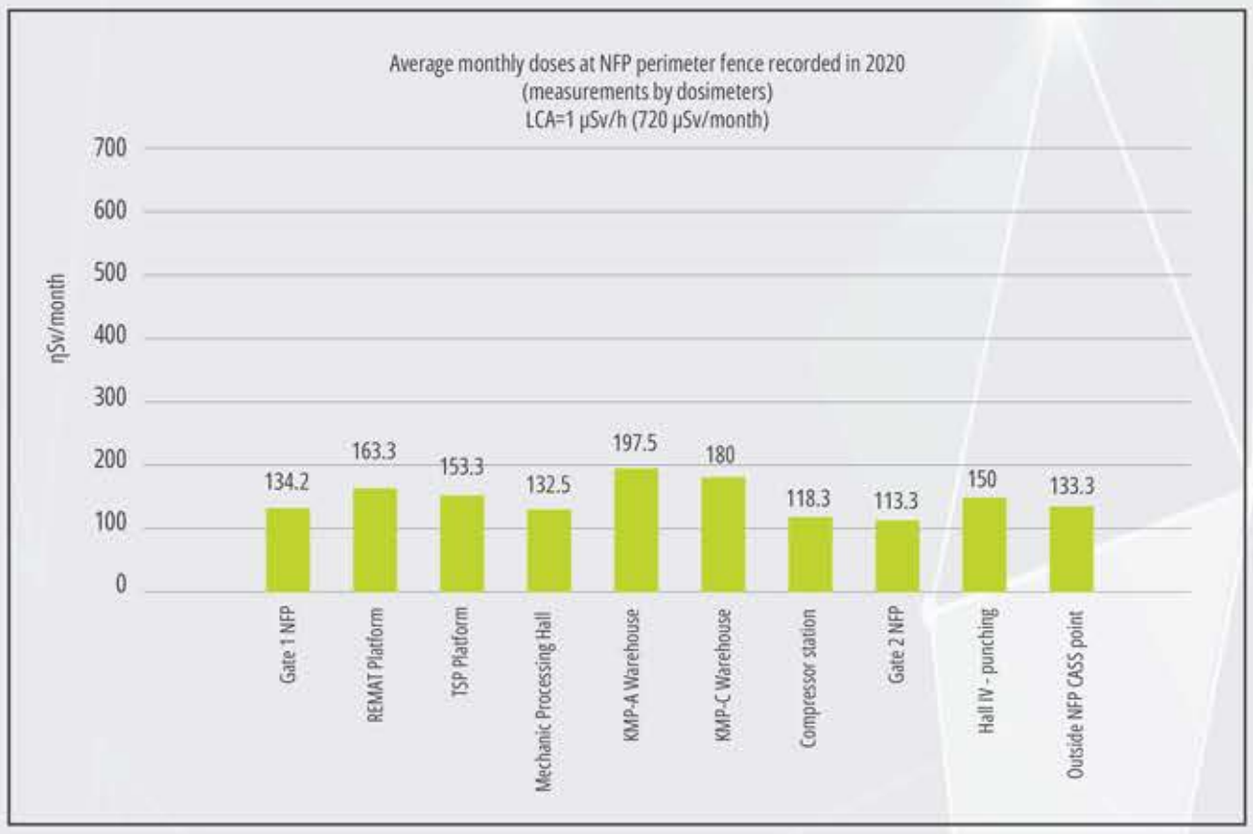
Adjacent to the NRI-NFP platform, there is an exclusion zone and a sparsely populated area. For the area adjacent to the platform, based on the contracts for environmental surveillance, NRI monitors the area and reports, make announcements and gives notices to the competent bodies.

The radiological surveillance of the area adjacent to the NRI-NFP platform (exclusion zone and sparsely populated area) is the responsibility of the NRI. The radiological monitoring of environmental factors (air, soil, vegetation, atmospheric deposits) is carried out within a radius of 12 km around the NRI-NFP platform, by Argeș EPA and Argeș National Environmental Protection Agency (NEPA). The monitoring of the environment in the area of influence of NFP Pitesti is done under the framework of the standard Programme (run according to the Order no. 1978/2010) and the special programme carried out by the Environmental Radioactivity Monitoring Station (ERMS) of Argeș EPA.

NFP Pitesti has implemented an environmental radioactivity monitoring programme, described in the Radiological Safety Manual and the procedure CN-MM-11 - Environmental Radioactivity Monitoring Program for NFP Pitesti, during which samples are taken of the surface water, underground water, soil and sediments, in order to determine the concentration of the natural uranium, the global beta activity and the gamma spectrometry and, as the case may be, dose measurements are performed in the premises of NFP.

The values recorded in years 2019-2022 for the average monthly doses at the NFP perimeter fence were below the documentary control limits set in NFP. The recorded values are shown in the charts below.





In addition to environmental radioactivity monitoring, NFP Pitesti performs determinations of the concentration of beryllium in air and lead in soil, as well as noise determinations at the boundary of the premises.

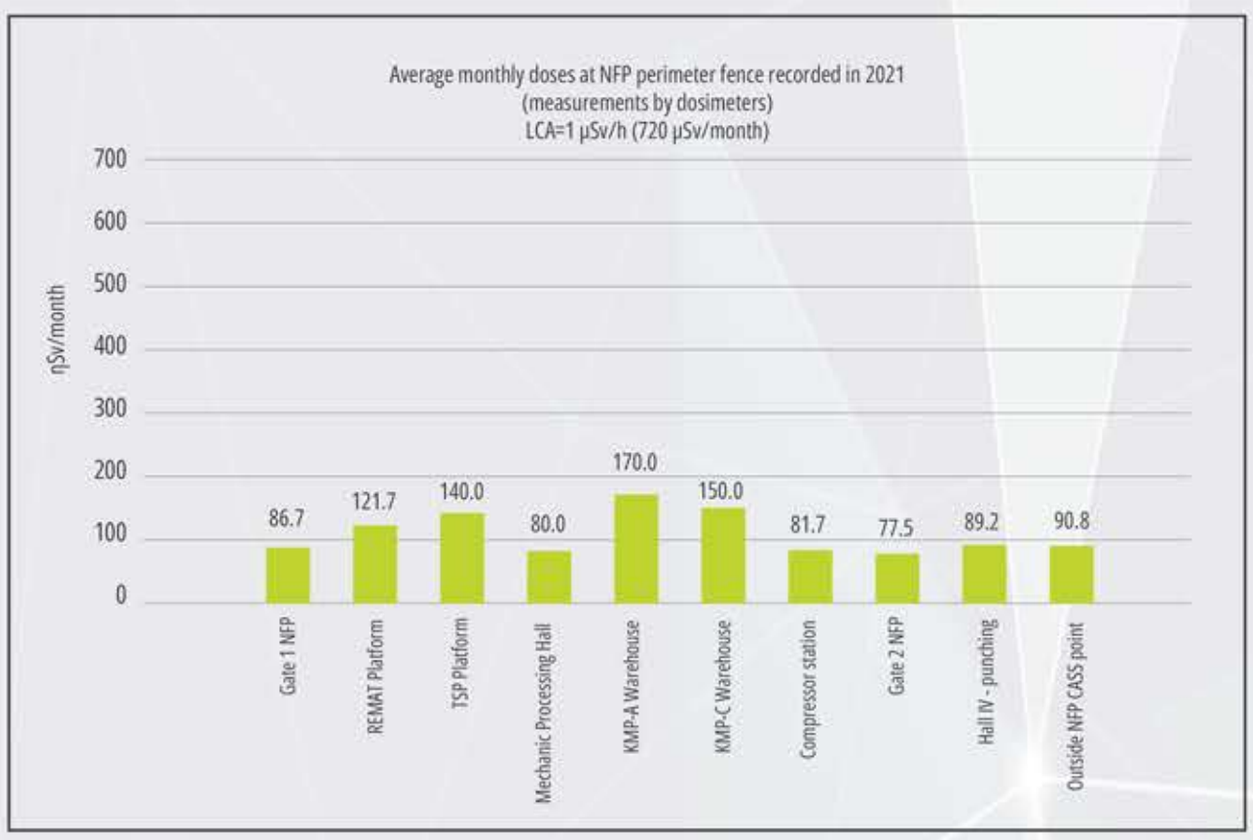
The measured values were below the limits set out under the applicable legislation.

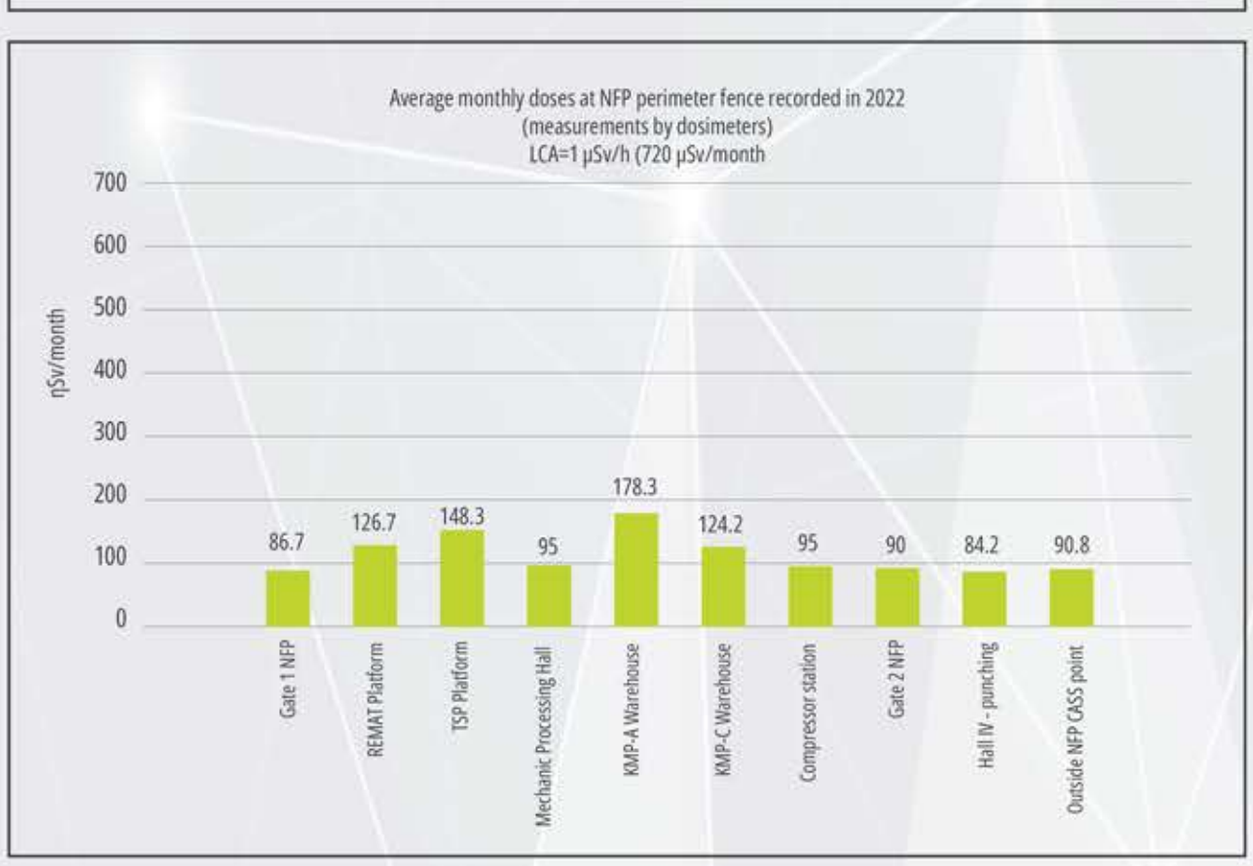
Considering the values recorded in the monitoring carried out for the NRI-NFP platform, we can conclude that the impact of the activity on the population and the environment is minimal.

Environmental performance records
In accordance with Annex IV of Regulation (EC) no. 1221/2009 on the voluntary participation by organisations in a Community eco-management and audit scheme (EMAS), as subsequently amended and supplemented, NFP Pitesti is under the obligation to set a number of key indicators, to the extent that these concern matters of the organization directly related to the environment, as well as by reference to other relevant indicators in place in terms of environmental performance.

These indicators must:
- Provide an accurate assessment of the environmental performance of the organization;
- Be easy to understand and not ambiguous
- Allow an annual comparison aimed at assessing the progress in the organization's environmental performance;
- Allow, as applicable, a comparison against the sectoral, national or regional reference parameters
- Allow comparisons against the regulatory requirements, as applicable.

The key indicators apply to all types of organizations. They concern the performance obtained in the following essential environmental areas:
- Energy efficiency;
- Material efficiency;
- Water;
- Waste;
- Biodiversity and emissions.





Environmental target	Performance indicator	Reporting frequency	Definition	Calculation method
Efficient use of electricity	Electricity usage by reference to the number of bundles produced	annually	The ratio between the electricity usage during a given period of time, compared to the number of nuclear fuel beams produced during the same time period	Annual usage [MWh]/FCs produced
Rational usage of materials	UO_2 powder processing yield	monthly	The amount of uranium contained in the columns of UO_2 pills formed, compared to the amount of uranium contained in the UO_2 powder released from pill manufacture.	The amount of UO_2 pill columns formed/the amount of UO_2 powder released [kg]
	Zy-4 tube processing yield	monthly	Annual average Zy-4 tube processing yields calculated for each batch of Zy-4 tubes used during the entire year.	- For each batch of Zy-4 tubes, the processing yield is calculated (as the ratio between the number of Zy-4 sheaths found in the nuclear fuel bundles and the number of Zy-4 tubes launched in production) - The processing yields of all batches launched in a year are averaged
Rendering water usage more efficient	Drinking water consumption by reference to the average headcount	annually	Drinking water usage during a given time period, by reference to the average headcount during the same time period	According to the utility agreement, this is reported in m^3/employee
Minimization of the amount of incinerable solid waste generated	Amount of incinerable radioactive solid waste generated, by reference to the number of nuclear fuel bundles produced	half-yearly	Amount of incinerable radioactive solid waste generated during a given time period, by reference to the number of nuclear fuel bundles produced during the same time period	According to reports on radioactive waste, this is reported in tones/FCs produced
Reduction of emissions into the atmosphere	Amount of uranium disposed through radioactive gaseous effluents, by reference to the number of nuclear fuel bundles produced	Monthly	The amount of uranium released through radioactive gaseous effluents during a given time period, by reference to the number of fuel beams produced in the same time period	According to environmental monitoring reports, this is reported in mgU/FCs produced

Considering the main indicators listed above, for 2022, NFP Pitesti established defined the following relevant indicators:

FCs - nuclear fuel bundles
NOTE (1): There are 2 main indicators set out in the EU Regulation 1221/2009, but these are not relevant for NFP Pitesti:

- The Biodiversity Conservation indicator is irrelevant because the sealed surface (structures, alleys and concrete platforms) covers more than 90% of the total surface of the NFP
- The greenhouse gas emission indicator is also irrelevant because the NFP's activity does not involve any processes with significant GHG emissions, which would require monitoring.

As to emissions, a specific indicator was set for the amount of uranium disposed through radioactive gaseous effluents

Incidents on INES scale

No incident that fell under the INES scale of IAEA took place in years 2019-2022.

SCALA - INES	2019	2020	2021	2022
Level 7 major accident	0	0	0	0
Level 6 Serious accident	0	0	0	0
Level 5 accident with extended consequences	0	0	0	0
Level 4 accident with local consequences	0	0	0	0
Level 3 Serious incident	0	0	0	0
Level 2 incident	0	0	0	0
Level 1 anomaly	0	0	0	0

The triggering events provided for NFP were reviewed in the document Final Nuclear Safety Report for NFP Pitesti branch (FSR). The report's conclusions confirm the absolutely immaterial nature of the impact on the environment, workers and population of the area concerned, both under normal operating conditions and under considered accident conditions. As to inclusion of the set of defined triggering events under review on the INES scale, in accordance with the specifications and criteria laid down in the AIEA International Nuclear and Radiological Event Scale (INES) documentation, User's Manual, it is concluded that none of the events under review reaches Level 1 (Anomaly).

35.1 INDEPENDENT ENVIRONMENTAL REVIEW

NFP defines and conducts an audit process in order to assess the implementation and effectiveness of the IMS and its compliance with the applicable rules and standards. This process acts as a management tool for the independent assessment of each component process of IMS, and is aimed at two aspects:

- internal, for assessment of the own Management System;
- external, for assessment of the Supplier QualityManagement System.

In order to attain the set goals, the audits comply with the following requirements:

Audits are planned according to the conditions and importance of the processes and areas to be audited and the results of the previous audits;

Each IMS process, i.e. respectively each product making process, is audited at least once every two years;

The annual audit plans are subject to acceptance by the SNN Headquarters and to NCNAC approval;

Each audit is planned, and the planning is submitted to the management of the audited areas;

Preparation and performance of the audit is carried out by a designated audit team;

The audit teams are made up of properly trained and qualified staff, in accordance with the requirements of the procedure CN-AC-53 "Qualification and certification of the audit team members and of the head of the audit team", who meets the following conditions:
has no responsibilities as to performance of the audited activities;

has not exercised any control on the audited activities;

The audit results are documented and these records are distributed to the staff with responsibilities for the audited areas;

Any nonconformities and others deficiencies detected during the audit must be described in sufficient detail, so as to ensure:

- definition of measures to address the nonconformities/deficiencies by the management of the audited area;

- application corrective actions to address the cause and prevent recurrence of nonconformities/deficiencies, by the management of the audited area;

Auditors can suggest corrective actions to be taken into account by those in charge of the audited activities;

Audit (performed in house and at suppliers) reports are submitted for information to SNN Headquarters and NCNAC.

The responsibilities and requirements for planning and performance of audits, documentation and reporting of the results and record keeping are described in the procedure CN-AC-23, "Audit"..

35.1.1 External environmental audits

Every year, NFP Pitesti is subject to two external audits carried out by the SRAC CERT certification body, which are aimed at maintaining the certification of the Environmental Management System implemented in accordance with the requirements of the standard SR EN ISO 14001:2015, and at maintaining the EMAS registration obtained by NFP Pitesti further to implementation of the requirements of the Regulation (EC) no. 1221/2009 of the European Parliament and of the Council of 25 November 2009 on the voluntary participation by organisations in a Community eco-management and audit scheme (EMAS), as subsequently amended and supplemented.

35.1.2 Compliance with the environmental regulations

The nuclear fuel production activity is carried out in NFP Pitesti in observance of the obligations stemming from:

- The environmental regulations;
- The Environmental Permit and other operating permits;
- The nuclear safety, quality management, occupational health and safety, nuclear safeguards, physical protection, cyber security, emergency preparedness and response capacity, and radioactive material transport regulations;
- Radiological safety regulations;
- ISCIR requirements applicable to the existing plants of NFP, together with other requirements of stakeholders as to the developed and implemented management system;

NFP Pitesti permanently identifies its compliance obligations, and where these have not been fully or implemented, actions and measures are determined for compliance with the applicable legal requirements.

For performance of the environmental protection activity, NFP Pitesti holds an Environmental Permit issued under the Government Decision GD no. 24/2019; in accordance with the legislation in force, NFP Pitesti has the obligation to have the visa applied thereon every year. Application of the visa on the environmental permit is only possible if the environmental protection requirements have been observed, and this is checked by the representatives of the environmental authority, having first examined the documents and the site.

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35.1.3 Fines or penalties

In 2022, no penalties were applied by the inspection bodies

36 MANAGEMENT OF WATER RESOURCES

Under the Policy on nuclear safety, quality, protection against ionizing radiation, environment, occupational safety and health, control of nuclear guarantees, cyber security, and protection of classified information, the NFP Pitesti's management have committed to take all necessary measures to rationally used the natural resources.

In order to reduce the use of water in NFP Pitesti, a number of measures was taken, including:

- commissioning of water recirculation systems
- provision of restrooms with automated taps
- checking of all water routes in order to fix any losses
- training and raising awareness of the staff of the rational use of resources at all times.

A report on the use of water in years 2019-2022 is shown in the table below:

	2019	2020	2021	2022
Amount of water used (m3)	16653	7868	5505	5317

In NFP Pitesti, there have been no independent checks on the how water is used.
Cooperation with other entities to reduce the use of water is not pursued by NFP Pitesti.
NFP Pitesti does not hold a Water Management Permit, and the water needed is supplied by NRI Pitesti.

36.1
REGIONS WITH HYDRIC STRESS

NFP Pitesti is located in a hydrographic area with groundwater and deep water that ensures covers for the consumption of both the population and the local businesses. Cooperation with stakeholders for areas with hydric stress does not apply to NFP Pitesti.

36.2
FINANCIAL QUANTIFICATION

Considering that NFP is not located in an area with a high risk of drought/hydric risk, no additional investments for water supply are required.

36.3
NUMBER OF INSTANCES OF NONCOMPLIANCE WITH THE STANDARDS AND REGULATIONS

NFP Pitesti is supplied with drinking water by NRI Pitesti. NFP Pitesti does not hold a water management permit and does not discharge any waste water into any emissary.

36.4
WATER DRAINING OFF

Waste water is collected in the two stations held by NFP:

- the Wastewater Collection and Discharge Station (RWCDS-NFP)
- the Liquid Radioactive Waste Collection Station (LRWCS-NFP)

NFP Pitesti does not discharge any water into any emissary.

Depending on the uranium concentration, these are discharged into Pitesti NRI Treatment Station (TS-NRI) as radioactive waste water or are transferred by road tanker to Pitesti NRI Radioactive Waste Treatment Station (RWTS-NRI), as radioactive solid waste for treatment and uranium recovery:

	2019	2020	2021	2022
Amount of radioactive liquid effluent discharged at the NRI Treatment Plant (m3)	950	1050	1150	850
Amount of liquid radioactive waste transferred to the Radioactive Waste Treatment Station - NRI	420	440	380	270

37.5
SOURCES OF WASTEWATER, ON INTENDED USES

Sources of wastewater:

- **Radioactive liquid waste** is radioactively contaminated waste water of different concentrations, coming from the production and quality control activity, and is collected in the tanks of the **Radioactive Liquid Waste Collection Station of NFP (LRWCS-NFP)** . Radioactively contaminated waste water, with a concentration of more than 2 mg U/L, is transferred for uranium recovery to the **Radioactive Waste Treatment Station of NRI (RWTS-NRI)**, where precipitation with trisodium phosphate and ammonia, followed by settling, filtration and drying results into solid and dry uranyl phosphate that is returned to the NFP.
- **Radioactive waste water** - Waste water with a radioactive content below 1 mg U/L is collected together with the non-radioactive waste water at the Residual Water Collection and Discharge Station (RWCDS-NFP) in tanks. Here, it is checked whether the content of uranium, total nitrogen, total phosphorus, beryllium and pH fall within the limits set out under the *Operating Regulation of NRI-Pitesti Waste Water Treatment Plant* and by NCNAC, after which the radioactively contaminated waste water (radioactive liquid effluents) are discharged into the NRI Treatment Station (TS-NRI).
- **Domestic waste water from the NFP** is discharged via the domestic sewage network system (separated from industrial sewage networks) into the NRI Treatment Station (TS-NRI), based on the relevant procedures.

Tipuri de ape uzate	2019	2020	2021	2022
Deseuri lichide radioactive [m³]	420	440	380	270
Ape uzate radioactive [m³]	950	1050	1150	850
Ape uzate menajere [m³]	15313	7640	5362	4920

36.6
AMOUNTS OF WATER USED

Water supply

NFP Pitesti is supplied drinking, fire and industrial water by NRI Pitesti.
The amounts of water used by NFP Pitesti in years 2019-2022 are shown in the table below:

Types of water	2019	2020	2021	2022
Drinking and fire water [m3]	16653	7868	5505	5317
Industrial water [m3]	360	336	180	184

Water discharge

The waste water from the NFP is discharged via the industrial and domestic sewage network systems into the NRI Treatment Station (TS-NRI).
The amounts of waste water discharged from NFP into TS-NRI in years 2019-2022 are shown in the table below:

Types of waste water	2019	2020	2021	2022
Radioactive waste water [m3]	950	1050	1150	850
Domestic waste water [m]	15313	7430	5362	4920

36.7
TINTE DE REDUCERE A CONSUMULUI DE APA

As to the efficient use of water, NFP Pitesti has defined a performance indicator, i.e. reduction of water usage by reference to the average headcount; this indicator is monitored and reported on annually under the Environmental Declaration of the NFP, which supports maintenance of the EMAS registration for NFP Pitesti.

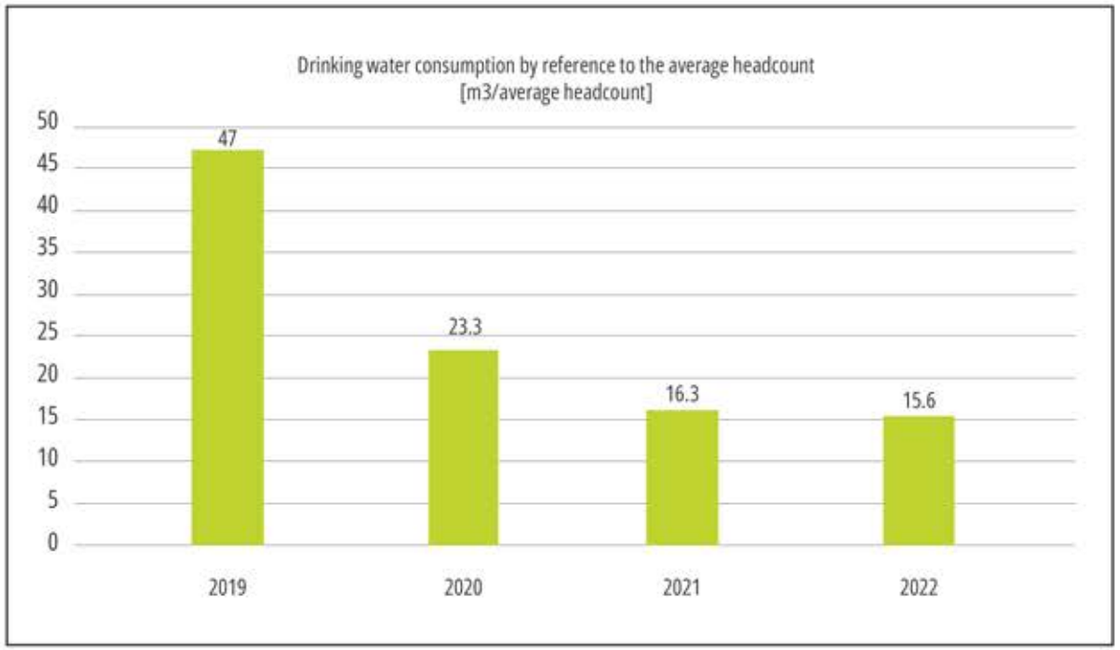
Among the measures taken by NFP Pitesti to reduce the use water, we can list: permanent training of the staff on the efficient use of water, checking the plants for losses, replacement of the classical taps by sensor taps.

As to reduction of the use water, NFP Pitesti has defined the following performance indicator:

Reduction by min. 0.01% of the drinking water consumption in 2022 v 2021 by reference to the average headcount.

The variation in the water usage by reference to the average headcount, in years 2019-2022, is shown in the chart below:

	2019	2020	2021	2022	2022	
					propus	realizat
Amount of water used (m3)	16653	7868	5505	5317	16,298	15,6
Average number of employees	352	338	338	341		
Ratio between the amount of water used and the average headcount	47	23,3	16,3	15,6		



In 2022, the use of water/average headcount was reduced by 4.29% v 2021.

37.8
USE AND PROTECTION OF NATURAL RESOURCES (WATER, SOIL, ETC.) AND BIODIVERSITY PROTECTION

The nuclear fuel manufacturing process uses:

Industrial water - It is used in heat exchangers attached to the different engineering equipment.

Industrial water is prepared by the Pitesti Nuclear Research Institute. In order to save industrial water, NFP has been equipped with 2 industrial water recirculation systems, which supply the equipment of the manufacturing line.

NFP is provided its own industrial water pumping system, ensuring the following:

- top-up water for the two recirculation systems;
- backup supply in case the two recirculation systems break down..

Demineralized water

Electricity

NFP is supplied with electricity from the 110/6 kV station of NRI, which is connected to the National Energy System (SEN) through two 110 kV power lines.

Compressed gas Compressed gas is: nitrogen, hydrogen, argon and helium.
Nitrogen and hydrogen are produced in the factory, whereas argon and helium are purchased from authorized distributors.

In NFP, drinking and fire water, industrial water, domestic water and purified industrial water are provided by RATEN - the Nuclear Research Institute under an agreement concluded between the parties.

Utilities ensured by NFP

- cooling water
- demineralized water
- domestic hot water.

Since 2007, NFP has operated a solar plant for production of domestic hot water, consisting of 30 solar panels with ethylene glycol as the transfer medium. NFP also operates a demineralized water production facility, this being the water needed in the technological process of nuclear fuel bundle production.

Radioactively contaminated waste water with a concentration of more than 1 mg U/l is transferred for uranium recovery to the NRI Radioactive Waste Treatment Station (RWTS-NRI).

In RWTS-NRI, the uranium concentration is assessed out by applying physical cold control processes; by precipitation with trisodium phosphate and ammonia, followed by decantation, filtration and drying, solid uranyl phosphate is obtained, which is returned to NFP under nuclear safeguard control. The uranium recovery rate is 99.9%. The amount of natural uranium recovered is included in the general balance-sheet of the factory and is subject to nuclear safeguards controlled by the International Atomic Energy Agency (IAEA) and the European Atomic Energy Community (EURATOM).

Radioactive waste water with a uranium concentration below 1 mg U/l is discharged from RWCDS-NFP into NRI Pitesti Treatment Station (TS-NRI), which, after treating/purifying it, discharges the resulting liquid effluents into the emissary (Doamnei River), in observance of the requirements laid down in the Water Management Permit held by RATEN-NRI

37 ASSET INTEGRITY MANAGEMENT

Part of implementation by SNN of the requirements of internal management control standards, NFP Pitesti Branch approached risk management, in full alignment with the procedure defined in SNN - Headquarters MR-00-01 "Risk Management in SNN SA".

With the system thus put in place the NFP branch and described in the internal procedure *CN-AD-69 "Risk Management"* , it is ensured that the risks that could have an impact on the capacity of NFP Pitesti Branch to attain the objectives of the subunit and the specific (departmental) objectives, compliance with the legal and regulatory requirements, asset protection, fraud prevention and detection, and nuclear safety are identified, quantified and reported on, in order to initiate and implement appropriate and effective risk mitigation measures.

This procedure sets out the methodology for putting together and managing the "Risk Register" at branch level, as well as ways and means of internal and external communication.

Risk management is an element of the management control system (MICS) with the aid of which the significant risks of the branch are identified, and which aims to:

- keep threats within acceptable limits;
- identify and tap into opportunities;
- globally improve performance.

In accordance with Law no. 703/2001 on third-party liability for nuclear damage, SNN acquired the Third-Party Liability Insurance Policy for nuclear damage, as well as Property Insurance Policy (Units 1 and 2 of Cernavoda NPP and NFP Pitesti) for property damage.

38 MANAGEMENT SYSTEMS

38.1 ENVIRONMENTAL MANAGEMENT SYSTEMS

In accordance with Law no. 111/1996 on the safe performance, regulation, authorization and control of nuclear activities, republished, as subsequently amended and supplemented, additions and changes, NFP has in place an Integrated Management System (IMS) which is developed, implemented, monitored and continuously improved, and ensures identification and integration of all legal requirements and specific regulations applicable to the activities carried out, the nuclear quality and safety requirements, the environmental protection requirements, the occupational health and safety requirements, the requirements for protection against ionizing radiation and cyber threats, physical protection and protection of classified information, as well as the requirements formally agreed with the "stakeholders", the financial and business requirements and the requirements of voluntarily adopted standards.

NFP has developed and put in place an Environmental Management System - a component part of the Integrated Management System - which implements the requirements of the standard SR EN ISO 14001:2015 and the EMAS Regulation in all activities carried out, and ensures:

- support to and observance of the concept of sustainable development, by reflecting its values in all the activities carried out, as well as in the organizational culture;
- compliance with the environmental legislation requirements;
- efficient use of resources and pollution prevention.

All the activities carried out in NFP with an impact on the environment are preventive in nature and are carried out

based on the permits/agreements issued by the environmental authorities and by NCNAC, having at all times in mind application of the ALARA principle.
In NFP, the environmental matters related to all current activities and planned products, either new or modified, are identified and assessed, along the environmental impact related thereto in terms of the lifecycle, and taking into account any normal, abnormal or emergency operating conditions.
The environmental objectives and targets are set and revisited regularly, depending on the evolution of the legislative requirements and the objectives of SNN SA with a view to continuously improving the environmental performance.

Description of the Environmental Management System of NFP can be found in the procedure CN-MM-01 "Environmental Management in NFP".

Implementation, maintenance and continuous improvement of the environmental management is underpinned by a good understanding of the context in which NFP operates, taking into account the internal and external issues that can affect the environmental management performance.

In addition to understanding its own operation context, NFP has also identified the relevant stakeholders for its environmental management system, as well as their needs and expectations, which it undertakes to hold up: NFP staff, SNN-Headquarters, SNN-Cernavoda NPP, RATEN-NRI Pitesti, regulatory and control bodies, the local community of Mioveni, NGOs, EURATOM/IAEA, suppliers. The stakeholder, and applicable legal and regulatory, requirements are integrated into the IMS processes, activities and documentation, and the set of verification, monitoring and control activities aims not only to meet these requirements, but also to increase stakeholder satisfaction. Regularly, stakeholders are consulted by applying them surveys and questionnaires.

38.2 NUCLEAR SAFEGUARDS (USE FOR PEACEFUL PURPOSES)

NFP has its own nuclear safeguard control system that is part of the National Nuclear Safeguard System.

The documents that define the nuclear safeguards activity in NFP are:

- Basic Technical Characteristics (BTC) (prepared by NFP for EURATOM in accordance with the provisions of the EURATOM Regulation no. 302/2005);
- Facility Specific Partnership Approach - prepared by the IAEA and EURATOM for NFP Pitesti and which came into force on 1 January 2012.
- Own CN-GN procedures.

In its manufacturing process, NFP Pitesti uses nuclear material based on natural uranium and depleted uranium, materials of nuclear interest - Zircaloy-4 and beryllium (dual-use material).

The nuclear safeguard system of NFP is described in detail in the NFP documents sent to EURATOM (BTC), the NFP Integrated Management System Manual (MM-CN), the nuclear safeguard procedures, and the technical and administrative procedures.

Details about how NFP meets the needs and expectations of stakeholders, as well as about the responsibilities of the departments involved are provided in the specific procedures.

39.3 ADDRESSING UNSCHEDULED BUSINESS SHUTDOWN IN THE SYSTEM MANAGEMENT

Taking into account that, before 2020, NFP Pitesti did not encounter any situation that required an unscheduled business shutdown, the need for such a programme had not been considered.

With the first case of the Acute Respiratory Syndrome 2019-nCoV reported in Romania, NFP Pitesti prepared the CONTINGENCY PLAN for the Acute Respiratory Syndrome 2019-nCoV, caused by the SARS-CoV-2 coronavirus, with the following objectives:

- Protection of the NFP-Pitesti staff protection against contamination with the SARS-CoV-2 coronavirus
- Safe shutdown of the NFP plants if so demanded by the developments in the Coronavirus epidemic/pandemic.

It was upgraded according to the developments of the SARS CoV-2 syndrome in Romania and the requirements of the regulatory acts issued by the Ministry of Health, the Ministry of Internal Affairs and the National Committee for Special Emergencies.

The Contingency Plan considered the following:

- Determination of measures for the safe operation and shutdown of the plant;
- Identification of the essential functions for the activities that must not be discontinued;
- Ensuring the continuity of the activities involving essential functions;
- Setting the criteria for activation of the contingency plan on site;
- Measures to prevent and control the infection with SARS-CoV-2;
- Identification and determination of the human,

material and financial resources required to implement the contingency plan;
- Ensuring implementation of the measures ordered by public the authorities.

The Contingency Plan can be applied to any other situation that requires the unscheduled business shutdown as it can be updated depending on the situations that could occur in the future..

38.4 ADDRESSING RADIOLOGICAL EVENTS IN THE MANAGEMENT SYSTEM

The triggering events provided for NFP were reviewed in the document Final Nuclear Safety Report for NFP Pitesti branch (FSR). The report's conclusions confirm the absolutely immaterial nature of the impact on the environment, workers and population of the area concerned, both under normal operating conditions and under considered accident conditions. As to inclusion of the set of defined triggering events under review on the INES scale, in accordance with the specifications and criteria laid down in the AIEA International Nuclear and Radiological Event Scale (INES) documentation, User's Manual, it is concluded that none of the events under review reaches Level 1 (Anomaly).

Considering the risks raised by a potential accident at NRI Pitesti for the staff of NFP and NRI, protection and intervention measures in the event of a nuclear accident were provided in the Nuclear or Radiological Emergency Response Plan developed by NFP, in accordance with the Law no. 111/1996, republished, on the safe performance, regulation, authorization and control of nuclear activities, as subsequently amended and supplemented, and the NCNAC Rules concerning emergencies. Also, in accordance with Law no. 111/1996, republished, and with Orders no. 146/2018 on prevention, preparation and response to emergencies, and no. 61/113/2018 approving the Regulation for the management of emergencies specific to nuclear or radiological risk, NFP concluded with NRI – Pitesti, the Collaboration Protocol between RATEN Pitesti Nuclear Research Institute and SNN Pitesti Nuclear Fuel Plant, for on-site or general emergencies.

The plan is revised every 3 years or whenever necessary, and it is subject to review by NFP, ISU-ARGEȘ and NCNAC. Regularly, scheduled drills take place for different types of emergencies, with the participation of NRI-PITESTI and, as applicable, of the public authorities (ISU-ARGEȘ, DSP, Argeș Gendarmerie, the Ambulance Service, NCNAC, etc.) and their effectiveness is assessed.

In NFP, preparedness for emergency and the response capacity are in keeping with the requirements of the following procedures: CN-SU-01 "Identification, assessment, classification and declaration of nuclear or radiological emergencies", CN-SU-02 "Notification of the public authorities, NCNAC, SNN and other institutions in case of nuclear or radiological emergencies", CN-SU-04 "Preparation for response to emergencies", CN-SU-05 "Response to emergencies", CN-MM-07 "Preparation for emergencies with environmental impact and the response capacity", CN-PSI -20 "Fire Safety", and CN-PSI-22 "Training of the NFP staff on emergencies".

Important events, falling in the category of significant events, as well as the results of their review and assessment are reported to NCNAC in accordance with the provisions of the procedure CN-SN-03 "Event reporting to NCNAC"

The requirements and responsibilities for registration, internal reporting, event analysis and use of operational experience, including the relevant external operating experience shared by other nuclear facilities, are dealt with under the procedure CN-AC-72 "Use of operating experience".

38.5 RADIOLOGICAL RISK ASSESSMENT MODE IN THE MANAGEMENT SYSTEM

With a view to keeping the radiological risk as low as possible, NFP Pitesti undertakes the following actions:

- Provision of initial training, and of regular refreshment training of its own staff;
- Provision of training to the external staff before commencing any work in NFP premises
- Putting in place an integrated system of procedures and work instructions aimed at preventing and reducing the potential radiological risks
- Provision of collective and individual protective equipment
- Provision of the radiological monitoring of workers and the work environment
- Provision of health supervision for workers.

38.6
MEANS OF ADDRESSING RADIATION EXPOSURE FOR EMPLOYEES AND COMMUNITY IN THE MANAGEMENT SYSTEM

NFP has devised and put in place documented radiological protection policies and programmes, taking into account the radiological risks specific to the activities carried out and compliance with the legal and regulatory requirements issued by NCNAC, as well as with the principles and requirements set by the relevant international organizations and commissions.
Optimization of radiological protection relies on the optimization principle provided by the radiological safety rules issued by NCNAC (known as ALARA) for minimization of the collective and individual exposure, taking into account economic and social factors.

The practices and programmes related to radiological safety and radioactive waste management are presented in the Radiological Safety Manual (RSM), a document that describes:

- the programmes applied in NFP - the Radiological Protection Program (RPP) and the Waste Management Program (WMP), which prove and ensure compliance with the regulations in force;
- the radiological security and radioactive waste management practices applied in the manufacture of CANDU 6 nuclear fuel;
- The Radiological Protection Control Plans developed prepared to help measure, monitor and control the activities that pose a radiological risk with a potential effect on the occupational health and safety of the staff.

The design, technical and administrative measures implemented in NFP for protection against ionizing radiation include:

1. Radiological zoning
2. General and local ventilation
3. Storage spaces
4. Boxing and protection screens
5. Determination of dose limits
6. Radiological monitoring of work environment and the external environment
7. Monitoring radioactive effluents
8. Radiological monitoring of occupationally exposed staff, etc.

In NFP, radiological monitoring takes place systematically and based on procedures, and includes both the operating staff and the work environment where they render the work, as well as the relevant environmental factors outside buildings.
For the staff, external and internal exposure to ionizing radiation is monitored, and in work areas, external exposure, radionuclide concentration in air and radioactive contamination of surfaces are monitored at certain critical points, in places prone to exposure to radiation.
In the RSM, under the Radiological Protection Programme (RPP) of NFP, Documentary Control Limits (LCA) are set with the aim of achieving good protection against ionizing radiation for the occupationally exposed staff of the plant, external workers, contractors, visitors, population and the environment.

When the results of radiological protection measurements and of the environmental factors are below the LCAs, this means that the activities are safely carried out; their exceeding could mean somewhat unsafe conditions that must be addressed. LCAs are not final and they are continuously changed as the system for protection against ionizing radiation and the management of radioactive and/or hazardous waste are improved.
In NFP Pitesti, radiological monitoring of workers, the population and the environment takes place as described in the Radiological Safety Manual and in the specific radiological safety procedures.

Population exposure

Considering that NFP Pitesti is located on the same platform as RATEN-NRI, monitoring of the population exposure due to the activities taking place on the platform is the responsibility of RATEN-NRI, and these activities are monitored and reported on to NCNAC by them.

	2019	2020	2021	2022
Collective effective dose [man /mSv]	**547,094**	**494,038**	**505,37**	**476,002**
Collective dose from external exposure [man/ mSv]	485,762	444,772	449,331	428,118
Collective dose from internal exposure [man/ mSv]	61,332	49,266	56,039	47,884
No. of monitored persons	**372**	**392**	**392**	**373**
Maximum effective individual dose [mSv/year]	**10,547**	**9,789**	**9,45**	**9,187**
Maximum individual dose from external exposure [mSv/year]	8,430	7,964	7,869	7,873
Maximum individual dose from internal exposure [mSv/year]	3,104	2,801	1,705	1,694

The annual effective dose limit for occupational exposure under current legislation is 20 mSv/year.

The Administrative Control Limit (ACL) for the annual effective dose prescribed by the RSM (FCN Radiation Safety Manual) for occupationally exposed personnel in the FCN is 15 mSv/year

38.7
HOW DECOMMISSIONING IS ADDRESSED IN THE MANAGEMENT SYSTEM

In 2004, NFP prepared the Preliminary Decommissioning Plan. The plan tackles the following issues:

- NFP decommissioning is closely related to the end of operation for the units in service at Cernavoda NPP;
- NFP decommissioning and the release from the authorization regime of the NFP buildings and plots of land must be linked with RATEN-NRI decommissioning, as the area occupied by NFP is included in the NRI premises, and the return of the land for public activities must take place at the same time as the ecological reclamation;
- the rule applicable in NFP for decommissioning is NMR-03 "Radiological safety rules for decommissioning of mining and/or uranium and/or thorium ores preparation facilities - Criteria for the release from the NCNAC authorization regime for the use of buildings, materials, plants, dumps and land contaminated by mining and/or uranium and/or thorium ores preparation activities";

In addition to the above, in 2022, RATEN-CITON issued the Final Nuclear Safety Report where the Decommissioning Plan is briefly described, as follows:

- Decommissioning strategy
- Decommissioning plan
- Requirements for the permit holder's responsibilities related to decommissioning
- Financial securities and decommissioning costs

38.8
DECOMMISSIONING WASTE

In years 2019-2022, no decommissioning activities took place in NFP Pitesti.

NFP Pitești has not planned to decommission any plant, considering that, for Units 1 and 2 of Cernavodă NPP, for which it supplies the fuel bundles, there are plans to extend their lifetime by another 30 years.

38.9
CONTINUOUS IMPROVEMENT TO REACH THE HIGHEST STANDARDS

With a view to attaining the environmental targets, NFP Pitesti prepares, on an annual basis, the Environmental Management Program setting out measures and actions able to lead to attainment of the set targets and implicitly to attainment of the environmental objectives.

The recorded results are monitored on a monthly basis, and whenever a negative trend in reaching the targets is observed, corrective actions are determined.

When new environmental targets are set, the previously recorded values are fed in so that the newly-set targets support the environmental protection performance.

CARE FOR PEOPLE

GRI 103-1, 103-2, 401-1, G4-DMA, 403-1, 403-2, 403-3, 403-5, 403-6, 404-1, 404-2, 405-1, 406-1, 407, 412

39 **CARE FOR PEOPLE**
GRI 103-1, 103-2, 401-1, G4-DMA, 403-1, 403-2, 403-3, 403-5, 403-6, 404-1, 404-2, 405-1, 406-1, 407, 412

40 **QUALITY MANAGEMENT SYSTEM**

41 **FINANCIAL EVOLUTION**
GRI 201, 201-1, 201-4

42 **ETHICS, INTEGRITY AND CONFLICT OF INTERESTS**
GRI 103-1, 103-2, 102-16, 102-17, 102-25

39 CARE FOR PEOPLE

GRI 103-1, 103-2, 401-1, G4-DMA, 403-1, 403-2, 403-3, 403-5, 403-6, 404-1, 404-2, 405-1, 406-1, 407, 412

49.1 MANAGEMENT OF THE HUMAN CAPITAL

As to human capital management, the Company is involved and constantly invests in ensuring the quality of workers through training and continuous training and by promoting meritocracy, as a component of the motivation system documented and implemented in SNN SA.

The nuclear energy industry particularly places on the staff selected for management, coordination and supervision position, in the processes carried out in the Company, requirements at the highest standards of professional competence and ethics in the specific field of activity, giving priority to the nuclear safety considerations before any other considerations.

The significant achievements of 2022 in SNN, in terms of the workforce-related performance processes, are summarized below:

- A comprehensive succession planning process was devised and put in place at corporate level. The overall process includes identification, selection and development of applicants for the future leadership roles;
- Successor development is planned and monitored under the newly devised individual development plans (IDPs). These IDPs include elements, such as: Short and long-term objectives, learning objectives and activities to support them, training needs/activities, as well as experiential roles/activities needed for development. These IDPs were devised further to the industry benchmarking;
- The corporate positions critical to the Company's success have been identified and included in the succession planning process.
- The specific procedures describing the succession planning process have been updated and harmonized between the SNN headquarters and the two branches;

A SNN-wide Report Card was devised and implemented in 2021, and it includes the main HR indicators to ensure good visibility of the performance of the HR processes across the organization.

39.2 HUMAN RIGHTS AND COMMUNITY COMMITMENT TO RESPECTING THE HUMAN RIGHTS

The rights and obligations of the employees, as laid down in the Collective Bargaining Agreement of SNN, abbreviated as "CBA", as well as in the Internal Regulation of SNN, are worded with respect for human rights, the right to work enshrined in the International Charter of Human Rights, and the principles of the fundamental rights set out in the Declaration of the International Labour Organization on the principles and fundamental rights at work, including their transposition into the applicable labour relation legislation, in observance of the principles of consensus and good faith, that are the pillars of labour relations.

The human resources strategies and policies, and the action lines of the administrative and executive management are aimed at respecting the human rights in accordance with international and domestic legislation. For this purpose, Nuclearelectrica, through its policies and

strategies, focuses on: the principle of equal rights and equal opportunities, the right to life, to health protection and the right to a healthy environment, the right to defence and non-discriminatory access to justice, individual freedom and the right to free movement, freedom of expression, freedom of information, the right to elect and be elected, the right to work and the right to strike, the right to association, the protection of people with disabilities, the right to petition, the right to legislative initiatives, the protection of children and young people.

Under the SNN Collective Bargaining Agreement, the Internal Regulation of SNN SA and the specific procedures developed in the Company, the Company manages all aspects related to respect for human rights, including respect for freedom of association, prevention of human trafficking for all forms of exploitation, forced labour or obligations related to child labour, work in precarious and unsafe conditions, with no such situations being reported in years 2019-2022.

Employees are permanently applied an equal and non-discriminatory treatment, as per the international nuclear industry standards, read in connection with the domestic legislation and the incentive packages adapted to the macroeconomic and microeconomic context of Romania.

The SNN Code of Business Conduct, the SNN Management Manual coded SNN-MSN-001 rev. 17 and the SNN Policy Statement on the Management System coded SNN-POL-SM contain the commitment of the Company's management to the Responsibility assumed to avoid causing or taking part in any adverse impact on the human rights in the SNN activities, and to tackling this impact when it occurs, as well as to prevent or mitigate the adverse impact on the human rights that is directly related to the production activities of SNN.

The commitment to respect the human rights is also found in the SNN values:

Safety and sustainability, the safety of the team, the population and the environment, nuclear safety and long-term sustainability are and remain our priority;

Care for employees, every member of the SNN team is valuable, and every position is an important part of the organization's success. Each of us must be proud of our personal contribution and at the same time, responsible for the continuous professional development and future preparation of the team we are part of and of the new members;

Professional excellence, in everything we do, we aim to achieve and sustainably maintain the highest performance targets;

Empathy and responsibility, colleagues, families, communities, partners, suppliers, clients, the Romanian economy as a whole depend on each of us and our work

Sustainable development, everything we do today has an impact in the future and we want that impact to be positive.

39.3 IDENTIFICATION OF THE ACTIVITY-SPECIFIC CHALLENGES RELATED TO THE RESPECT FOR HUMAN RIGHTS

IIn SNN, identification of the important issues related to the respect for human rights are carefully reviewed; thus, the content of the human resources policies, the CBA provisions and the 2019 - 2022 SNN Management Plan are adapted to the specifics of the nuclear industry, thus ensuring that the culture and organizational climate follows the ideal according to which nuclear safety takes precedence, and that nothing is more important or of higher priority than this.

The organizational culture of SNN is based on the general beliefs of the company members: Safety First, awareness of the importance of nuclear safety and security in all conducted activities, as well as focus on continuous improvement in the search for professional, operational, equipment, training, economic.

SNN adopted the WANO (World Association of Nuclear Operators) & INPO (Institute of Nuclear Power Operations) principles of the continuous improvement culture "Staying on top", and embedded them in the organizational culture and the nuclear safety culture put in place in SNN.

39.4 OVERSIGHT AND RESOURCES

In SNN, the joint management - trade union commission was set under Decision of the SNN management (at the date of this report, the commission was updated by the SNN Decision no. 525/21.12.2022), which has the following main duties and powers, as laid down in the CBA applicable to SNN:

- ito give a consistent interpretation of the CBA clauses;
- to review and address the employees' complaints about how the management of the SNN units settle their applications, reports and complaints related to application of the CBA and of the labour relations legislation;
- at the request of employees, to try to settle amicably the potential situations that fall under the jurisdiction

of the courts, before bringing up the matters concerned before them. The amicable settlement will be addressed as a matter of urgency, so as not to affect the statutory time-limit for bringing the matter before the court of jurisdiction. Amicable settlement of disputes prevents court proceedings;

- to follow up on the application of the CBA, the Internal Regulation, the Employee Code of Conduct in the nuclear field, the legal provisions and other agreements concerning labour relations;
- to report to the management of SNN and, as the case may be, to the Board of Directors any infringements of the legal provisions, the CBA and other agreements concerning labour relations;
- to carry out any other duties provided by the law and/or resulting from the own Functioning Regulations, as annex to the CBA;
- to draw up reports at the request of any of the parties regarding compliance with the CBA, the Internal Regulation, the Employee Code of Conduct in the nuclear field, the legal provisions and other the agreements concluded under the terms of the law, which they make known to the management of the Company, as well as to the management of the trade union;

39.5 COMMITMENT TO RESPECT THE HUMAN RIGHTS TRANSPOSED INTO THE CORPORATE PRACTICE

All SNN workers have access to the human resources policies, the CBA, the Internal Regulation and the Employee Code of Conduct in the nuclear field, and the Code of Business Ethics and Conduct, available on the Company's intranet. As part of the works/services provided by contractors, the procurement documents contain requirements related to compliance of the services/works provided with the applicable legal requirements, and they are to conclude agreements regarding the access to the SNN units and agreements on the sharing of the occupational health&safety and emergency responsibilities, which also contain provisions that support to the respect for human rights.

The Internal Regulation of SNN, which sets out the rights and obligations of the employees and of the employer, including rules on non-discrimination and infringement of the human dignity, rules on conflicts of interests, rules on the disciplinary procedure and rules on the processing of the employee applications or complaints, is made known to the employees, who acknowledge under their signature that they are aware of the provisions of this Regulation. A "Welcome" presentation is available for newly hired on the Company's intranet, as part of their induction programme, which contains references to the human resources policies, the CBA, the Internal Regulations and their availability on the Company's intranet.

The Internal Regulation sets out the obligation of the management of SNN and of its units to respect the rights and obligations of the employees under the SNN CBA and this Internal Regulation, in the collaboration or JV agreements concluded with Romanian or foreign partners, throughout their entire collaboration.

39.6 ASSESSMENT AND MITIGATION OF THE IMPACT ON HUMAN RIGHTS

In SNN, the organization and functioning of the Ethics Committee, as well as the statute of the ethics advisors of the Company are regulated under the Procedure RU-00-11; thus, the work of the ethics advisors, which also covers assessment and mitigation of the impact on human rights, ensures the following:

- Management and development of the Company's ethical values, ensuring compliance with the ethical rules of business conduct, in all company structures and at all levels;
- Coordination and supervision of the development, interpretation and implementation of the ethics policies and programmes;
- Analysis of the situations disclosed in referrals/reports concerning infringement of the ethics standards, policies and procedures of the organization and their referral to those having authority to address them;
- Advising employees on how to approach certain situations so that no ethics rules are infringed;
- Participation in the investigations carried out on infringement of the Company's code of conduct and the internal rules, and making recommendations for the lawful settlement of the case;
- Delivery of training on ethics and compliance with the rules of the organization, as well as regular communications about ethics, compliance with the rules and business conduct requirements;
- Integration of the newly hired into the ethical environment, compliance with the rules and the business practices of the Company;
- Measurement and management of the Company's performance in terms of ethics and compliance;
- Preparation of quarterly reports on compliance with the conduct rules by the unit's employees.

Any matter that affects human rights is reviewed and reported by the ethics advisors, and should any form of violation of the human rights be found, disciplinary procedures are initiated in accordance with the legal provisions and the Internal Regulation of SNN.

39.7 STAKEHOLDER ENGAGEMENT IN THE RESPECT FOR HUMAN RIGHTS

The corporate CBA provisions, which set out the rights and obligations of the employees and of the management of the Company, are the outcome of a negotiation process between the Company's management and the representative trade union, namely the Cernavoda NPP Trade Union, legally set up in SNN. The CNN CBA negotiation took place in 2021, following the legal procedure set out in the Social Dialogue Law no. 62/2011 then applicable, the CBA is valid for two years as of 1 October 2021, and is legally registered with the Bucharest Territorial Labour Inspectorate (TLI) under no. 194/27.09.2021.
During the CBA application period, the joint management-trade union committee met 9 times before 31 December 2022 in order to clarify application of certain provisions of the CBA; each meeting of the joint management-trade union committee was documented in Meeting Minutes and concluded with Resolutions on the items submitted for debate on the agenda of the meetings. As of the CBA's effective date and until 31 December 2022, the CBA negotiation committee CCM legally met to supplement certain CBA provisions, i.e. mainly to harmonize its provisions with the legislative amendments passed during this period and bring clarifications as to application of some provisions. After these meetings of the CBA negotiation committee, Collective Bargaining Minutes were signed and two Addenda were duly executed to the CBA, which were legally registered with Bucharest TLI under no. 2/29.09.2022 and no. .3/14.12.2022.
To these add the consultation of stakeholders on the matter of the respect for human rights, specifically on the preparation of the materiality matrix. The categories of stakeholders consulted are: business partners, non-governmental organizations, media, education establishments, and institutions.

39.8 REPORTING MECHANISM

The Company's Organization and Functioning Regulation lists the Company's organizational entities that process the complaints filed by individuals or communities affected by SNN's business activities. These complaints are registered and addressed in accordance with the applicable legal provisions.

39.9 HUMAN RIGHTS VIOLATION INCIDENTS

SNN did not register any cases with a major impact on human rights related to the current business or the decisions adopted in years 2019 - 2022. Receipt and settlement of any complaints, minimization of the instances of violation of human rights and adoption of settlement measures are regulated under the Ethics Committee's Regulation.

Year	2019	2020	2021	2022
Number of incidents	0	2	0	2

39.10 POLICY ADDRESSING THE CHILDREN'S RIGHTS TO EDUCATION

Under the Nucleus of Care platform, Nuclearelectrica invests 40% of its sponsorship budget in education programmes, scholarships and supporting access to education for children and young people.

Also, SNN has a tradition in paying attention to the training of young specialists and provision of support to the university programmes by supporting traineeships and involvement of students in addressing topics of current interest and interest for SNN SA in their school practice papers and bachelor's or master's degree papers.
As of 2021 and further on in 2022, the Company implemented the training programme for young specialists as a "dual school", with 3-year partnership contracts concluded with the vocational education units, in accordance with the applicable legislation; this programme supplemented "Young Nuclear Specialist" Programme initiated and implemented as of 2021, for the training of a new generation of specialists, which is expected to continue in the following years. The "Young Nuclear Specialist" programme aims to attract scholarship holders from both universities and the professional environment, who are to attend the traineeship programmes in SNN units during the entire period when they receive the scholarship, and at completion of the programme, to work in SNN units a given time period.
The management team of SNN SA aimed to develop the collaboration with the academic environment through a greater involvement in training of young people so that they acquire practical skills and become aware of their expectations and needs, and the Company adapt its existing programmes, mainly in the operational activities,

to these with a view to increasing the attractiveness of SNN and gaining recognition for the employer brand.
When Law no. 177 of 19 July 2018 on internships was passed, SNN SA appreciated the significant contribution it brought to enhancing the professional quality, both informal and formal, of young specialists, by attracting, motivating and actively involving them in the Company, an appreciation which is confirmed also by application of this form of attracting and developing young specialists in SNN in 2021 and 2022.

The strategic action lines of SNN in terms of training the young generation of specialists, which is also part of the Nucleus of Excellence internal platform launched in 2022, consist of:

- Involvement the young generation of specialists in the early training by participating in the national programme "Educated Romania";
- Involvement of SNN specialists in adaptation of the university and vocational secondary education curricula in the fields of activity specific to generation of electricity from nuclear sources;
- Attracting partnerships for training and coaching of young specialists, including SNN scholarship beneficiaries, in areas of specialization specific to the activities carried out in SNN and to the development projects run by the Company;
- Equipping the school and university laboratories with equipment to increase the school performance of pupils and students.
- Offering scholarships, traineeships, internships, access to dual and vocational school programmes, mentoring, etc.
- Participation in job fairs and vocational and mentoring programmes to provide advice and guidance to young people in pursuing a career in the nuclear industry.

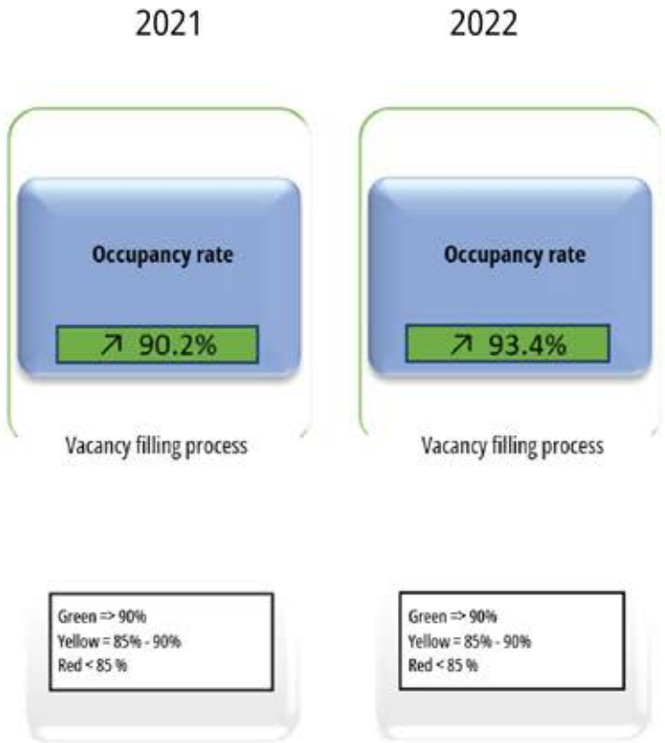
39.11
COMMITMENT TO LOCAL EMPLOYMENT

The annual recruitment programmes put in place in the Company based on strict staff selection policies, in line with the standards of excellence of the global nuclear industry and with the requirements of the Nuclear Safety Rules issued by NCNAC.

In this context, without prejudice to the competence requirements and the principles of transparency and non-discrimination that characterize the SNN staff recruitment process, actions were determined to attract young specialists and ensure the generational changeover, taking into account the particularities of the nuclear industry that is time-intensive when it comes to training specialists, i.e., about 7 years are required on average.
Thus, as of 2021 and further on in 2022, mass employment programmes were run for young graduates of higher technical education, who are to go through a complex programme of practical and theoretical training in order to gain competencies and skills for the safe operation of the electricity generation facilities of the nuclear plants.
For all vocational school and dual school programmes in which SNN acts as a partner and is actively involved in training young trainees under traineeship and educational support programmes, at the end of the years of study, their graduates will be invited to work in the Company.
Likewise, all participants in the scholarship programmes and the internship programme organized by SNN are directly employed by the Company if they successfully complete their education, and the internship programme.

The job openings are made known in the local communities, in order to facilitate access for the local community members to competitive and stable jobs, that come packed with benefits. Most of the employees of the branches Cernavodă NPP and NFP Pitești come from the local communities.

As of 2021 and further on in 2022, the SNN Report Card includes a performance indicator concerning the occupancy rate in the Company's organization chart; the evolution of this indicator in 2021 and 2022 is show below:



39.12
SPECIFIC RESULTS

Performance of the programmes aimed at training and attracting young specialists to the Company had the following results in years 2021-2022:

Number of young people employed to SNN further to the internship programmes	19 persons
Number of young people attracted by programmes intended at young graduates	58 persons
Total number of young people attracted further to the SNN's programmes intended at training young specialists	77 persons

The dual-school and vocational school programmes were initiated in 2021 and last three years, so the results of these programmes can only be quantified as of 2024.
The "Young Nuclear Specialist" scholarship programme was commenced in 2021, and its first graduates are secured a job with SNN as of 2023, the year where the first scholarship beneficiaries are to graduate from higher education. The programme is deployed annually.

39.13
INVOLVEMENT OF EMPLOYEES IN VOLUNTEERING ACTIONS

The Company's management got involved in facilitating participation of SNN employees in volunteering projects; so, between 2019 - 2022, volunteering actions concerning environmental protection (tree planting) and education (different programmes and CSR partnerships with lecturers and career guidance) took place with participation of SNN employees, in the framework of the internal programme "Ambassador for Good".

39.14
WORK STANDARDS

39.14.1
Preventing forced child labour

According to the provisions of the CBA applicable in SNN, the staff must be at least 16 years old to be employed and must have graduated secondary education; for activities and jobs subject to special/particular conditions, the employment age is at least 18 years.

The CBA also contains a provision placing an obligation that any other restrictions regarding the minimum employment age under by law are observed.

39.14.2
Preventing forced labour

The internal regulation applicable in SNN, as approved under the SNN Decision no. 148/30.03.2022, contains, in accordance with the applicable legal requirements, the principles that underpin employment relationships in the SNN:

- protecting/observance of the fundamental rights and freedoms of individuals;
- ensuring the necessary conditions so that all activities performed by SNN employees are carried out effectively and are free of bias, corruption, abuse of power and/or political pressure;
- selection of the staff exclusively according to their competence and compatibility with the work system and the value system of the Company;
- elimination of any form of forced labour, observance of the non-discrimination principal and removing any form of human dignity violation;
- equal opportunities at employment, advancement, promotion and rewarding of employees;
- objective judgment of situations that lead to employees being sanctioned or terminated their employment relationships;
- freedom of expression and social dialogue;
- right to association and trade union freedom;
- prohibition of any political activities in the premises of SNN units.

The Code of Business Ethics and Conduct published by SNN on the Company's website contains a reference to these principles, that are the pillars of the employment relationships in SNN.

39.14.3
Discrimination prevention

In SNN, we always show the respect we pay to all the parties we interact with. In our daily activity, we interact with people of different ethnicities, cultures, religions, political beliefs, ages or gender, as well as with people with disabilities and of different sexual orientations. The diversity of our staff is one of our greatest assets as it allows us to benefit from a variety of professional and educational knowledge and points of view. Integration of these differences helps increase our agility and ability to adequately respond to the changes taking place in our business environment and allows us to work more cooperatively.

The Collective Bargaining Agreement and the Internal Regulation applicable in SNN contain details rules prohibiting direct or indirect discrimination employee, on grounds of gender, sexual orientation, genetic features, age, national affiliation, race, colour, ethnic origin, religion, political options, social origin, disability, family situation or responsibility, trade union membership or activity.
Also, the Code of Business Ethics and Conduct, published by SNN on the Company's website, contains provisions about the non-discrimination policy applied in the Company.

39.14.4
Equal pay for equal work

The salary of the SNN staff is consistently regulated under the Collective Bargaining Agreement, which contains a hierarchy of positions and trades in the SNN, contains salary limits for each hierarchical level depending on the complexity of the work, and the degree of technicality and professional competence specific to the positions of the Company's organization chart.

Salary negotiation is sensitive to the requirements contained in the Job Description (enclosed to the Individual Employment Agreement), and considers a comparative evaluation with the average income earned in similar activities at national and international level; thus, a salary the amount of which is determined in accordance with the limits of the Hierarchy List of Positions, included in the SNN CBA, is obtained.

The Company currently applies a template Individual Employment Agreement for both limited-term employees, and those employed under open-ended contracts. The Individual Employment Agreement implemented under the SNN CBA contains provisions in accordance with the applicable national legislation and observes the clauses laid down in the Order no. 64/2003 approving of template Individual Employment Agreement.

39.14.5
Right to free association

The right of association and trade union freedom is one of the principles of the working conditions in SNN, and is provided the Internal Regulations of SNN and in the Company's CBA. The right to free association of SNN employees is laid down in their Individual Employment Agreement.

39.14.6
Collective bargaining policy

The relationship with trade unions is permanent and consists of meetings/consultations; the provisions of the SNN CBA are negotiated after on-going consultations of the Negotiation Committee appointed both by the management and by the representative trade union operating in the Company, in accordance with the provisions of Law no. 62/2011.

The management plan of SNN for years 2019-2022 contains provisions concerning collective bargaining, which takes place according to the legal provisions applicable to conclusion of the corporate Collective Bargaining Agreement; thus, over the entire period 2019-2022, a Collective Bargaining Agreement, duly concluded and legally registered with Bucharest TLI, was applicable as the outcome of a bargaining process, in accordance with the applicable legal requirements

39.14.7
Policy addressing excessive working hours

The employees' work is rendered according to the work programme set out in Annex I3 to the SNN Collective Bargaining Agreement, respecting the normal length of the working time set out in the Labour Code - Law no. 53/2003, as subsequently amended and supplemented.

The duties of each employee are listed in the job description prepared in accordance with the provisions of the Organization and Functioning Regulation ("ROF"), as updated in 2022 in accordance with the approved organizational structure of the Company, which covers all organizational entities of SNN, including the Company's Branches, and pinpointing the subordination and process coordination relationships, including between the headquarters and branches. The ROF was updated in 2022 and was approved by the SNN Board of Directors under the Decision no. 79/28.04.2022. The ROF details the main activities, duties and tasks of each SNN organizational entity, as well as the interfaces between the processes carried out by the functional departments of the Company's organizational structure.

39.14.8
Right to minimum wage

The SNN Collective Bargaining Agreement contains provisions regarding the minimum wage and the living wage in the Company; the functions and trades in the SNN are ranked in a list enclosed to the CBA, whereby which the minimum wage limits for each trade or position in SNN are set. Under the Individual Employment Agreement, the base salary of each employee is negotiated individually, within the limits of the Hierarchy List of Positions enclosed to the CBA.

According to the Management Plan of SNN for the period 2019 – 2022, the current market context at national, regional and international level demanded for a redesign of the human resources strategy focusing on:

- individual values;
- motivation for individual and team performance;
- flexibility to market changes that alter the balance point between demand and supply;
- a functional and hierarchical structure adapted to the objectives set to attain the projected performance;
- redesigning the individual performance indicators attached to the SNN objectives;
- good practices;
- investment in innovation and organizational know-how.

39.14.9
Company's involvement initiatives related to the labour standards

The company makes it easier for employees to participate in national and international symposia and workshops in order to attract know-how to the Company.
Also, the affiliations to recognized international bodies (WANO, AIEA, COG, and others) are aimed at improving the Company's performance.

OPEX meetings are regularly held in the Company with other companies of the nuclear industry in order to stay up-to-date with the best practices, and avoid unwanted situations in the aftermath of labour system events that took place in the nuclear energy industry, plus consultations on specialty topics.

39.14.10
Policy addressing the community

In 2022, SNN launched the Nucleus of Care platform, which is a one-stop-shop for all the Company's responsibility programmes intended to communities, as well as the Nucleus of Excellence platform, which deals with recruit-

ment programmes, the employer brand and the workforce training. The bulk of these programmes are intended to the local communities, and concern recruitment of local employees, as well as granting of sponsorships to local projects and programmes, such as refurbishment and provision of equipment to schools, high-schools and hospitals, leisure centers and sports halls, etc.

In 2022, SNN invested in the area of Cernavodă-Constanta, under the Nucleus of Care plan, as much as RON 1,220,632.4 as support afforded to 15 projects: 1 healthcare project was supported with RON 12,000; 10 education projects received the amount of RON 504,770; 4 miscellaneous projects were supported with RON 703,862.4; in the Pitești-Mioveni area, SNN supported 10 projects in 2022, with a total amount of RON 2,279,400: 3 healthcare projects were supported with RON 1,247,000, and 7 education projects received a total support of RON 1,032,400.
In the area Târgoviște-Doicești, where SNN envisages developing the project of small modular reactors, in 2022, SNN invested RON 1,300,000 in 5 projects (1 healthcare received RON 388,000; 1 education project received RON 57,000, 2 environmental projects received RON 725,000, and 1 social project was supported with RON 160,000.

Also, SNN is a partner in the National Programme "Educated Romania" and runs programmes intended to disadvantaged groups, including those coming from disadvantaged settings, with precarious social status and without formal education or qualifications, by delivery the dual school and vocational school programme, with a three-year cycle; these programmes are in progress since 2021 and have 46 students who will complete the training in 2024; all graduates of these programmes will be made, upon successful completion of the courses, job offers in SNN.

39.14.11
Policy on labour standards

All human resources policies and the Company's Organization and Functioning Regulation are available to any employee on the Company's intranet.
The Code of Business Ethics and Conduct, applicable to all management members, employees, consultants, staff, and partners who carry out their activity in SNN, contains the fundamental values that must be observed and advance a fair attitude, so that observance of the criteria laid down in this Code can help build a prosperous business, based on healthy, upright and transparent principles.
Regularly, the management of the Company sends out communications to the entire staff concerning the work standards, the achievements and the important labour programmes carried out in the Company, by email newsletter and intranet.

39.14.12
Assessment of work risks

The risks related to the human resources activities carried out in the Company are identified, assessed and controlled by means of the "ARM - Risk Management" computer application, especially developed and consistently implemented across the Company. These risks are attached to both current and future projects. Risks are assessed quarterly.

39.14.13
Actions addressing the workforce

The CBA and the Internal Regulations of SNN contain details about how the issues concerning labour relations are reviewed and treated, including rules aimed to prevent forced labour and child labour, and mechanisms regulating the relationship between the trade union and the employer, the working hours regime (including overtime), as well as competitive waging benchmarked against the national economy and the nuclear energy industry.

39.14.14
Actions to enhance diversity

As of 2021 and further on in 2022, the Company documented and maintained a Report Card across SNN, that also contains the main HR indicators; one of these indicators concerns diversity and is reported on the executive and administrative management, as part of the management's commitment to enhance diversity. The diversity indicator is a composite indicator that includes measurements of the share of young people under the age of 30 employed and retained in the Company, the ration between the male and female employees, and the number of employees with disabilities. This composite indicator is reviewed on a monthly basis and the average of the monthly values consolidated at Company level is usually found in the excellence range; the strategic action line concerning the control of the diversity indicator are:

- Involvement of Company in the early training of the young generation of specialists in the nuclear energy industry, both under the above strategic directions and by providing support for upgrading of laboratories, and to school workshops, internship programmes, scholarships, traineeships, dual school, study facilities, school/university competitions or participation in theme projects.
- Optimizing the management of internal communication by conducting research programmes on the workers' satisfaction with the organizational culture and climate, and organizing theme social actions to adapt behaviours to the mission, vision and values of SNN.

- Diversity tracking and monitoring is part of a broader strategy to improve representation within the organization;
- Collaboration with accredited national universities and other educational institutions has been improved and streamlined, with newly-set objectives for internships in the Company, in order to hire directly from a pool of graduates of university or relevant vocational education.

The composite diversity indicator has constantly evolved between 2021 and 2022, with the following values:

39.14.15
Failure to comply with the labour standards

For the failure of the parties involved to comply with the labour standards, the Company has defined a method to hold the employees concerned accountable or trigger their financial liability, and this is detailed in the Internal Regulation of the Company; this method complies with the provisions of the Labour Code - Law no. 53/2003 on disciplinary liability.

In years 2019 - 2022, there were no incidents of departures from the labour standards or the principles applicable to labour relations in SNN reported in the Company.

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39.14.16
Employee training programme

SNN pays particular attention to the systematic training of its staff so that they can carry out their duties at the excellence standards of the nuclear energy industry; thus, the Company is involved and constantly invests in ensuring the quality of workers through training and continuous training and by advancing meritocracy, as a component of the motivation system documented and implemented in SNN SA.

The nuclear energy industry particularly places on the staff selected for positions important to nuclear safety and management, coordination and supervision positions, in the processes carried out in the Company, requirements at the highest standards of professional competence and ethics in the specific field of activity, giving priority to the nuclear safety considerations before any other considerations.

The significant achievements that started in 2021 and continued also in 2022, in SNN, in terms of the workforce-related performance processes, are summarized below:

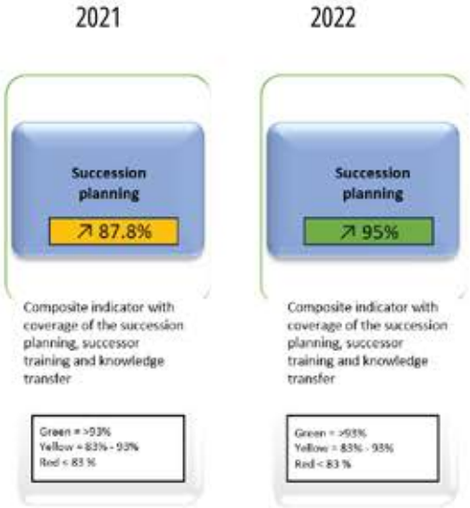
- A comprehensive succession planning process was devised and put in place at corporate level. The overall process includes identification, selection and development of applicants for the future leadership roles;
- Successor development is planned and monitored under the newly devised individual development plans (IDPs). These IDPs include elements, such as: Short and long-term objectives, learning objectives and activities to support them, training needs/activities, as well as experiential roles/activities needed for development. These IDPs were devised further to the industry benchmarking;
- The corporate positions critical to the Company's success have been identified and included in the succession planning process;
- The specific procedures describing the succession planning process have been updated and harmonized between the SNN headquarters and the two branches;
- A SNN-wide Report Card was devised and implemented in 2021 and maintained in 2022, and it includes the main HR indicators to ensure good visibility of the performance of the HR processes across the organization.
- The evolution of the staff training indicator in years 2021 - 2022 is presented below:

The indicator places implementation of staff training plans in the excellence rage, has constantly evolved, and will be improved through the following strategic directions aimed knowledge transfer and career plan development:

- Attracting specialist consultancy in knowledge transfer management and career plan development;
- Updating the professional training programmes available with the Company's training center of Cernavoda NPP, which are used to train the entire staff of SNN;
- Attracting consultancy programmes and specialized training for the trainers of the training center, in order to take up the know-how available at international level, particularly in the nuclear energy industry;
- Development of leaders through dedicated training and coaching programmes.

39.14.17 Management of succession programmes

In the Company's Report Card, the indicator that describes the management of the succession programmes is a composite indicator that includes a number of measurements for the degree of coverage of succession plans, training of successors and development of mentoring programmes. The composite indicator "Succession Plan" has been implemented as of 2021, and its evolution in years 2021 - 2022 is presented below:

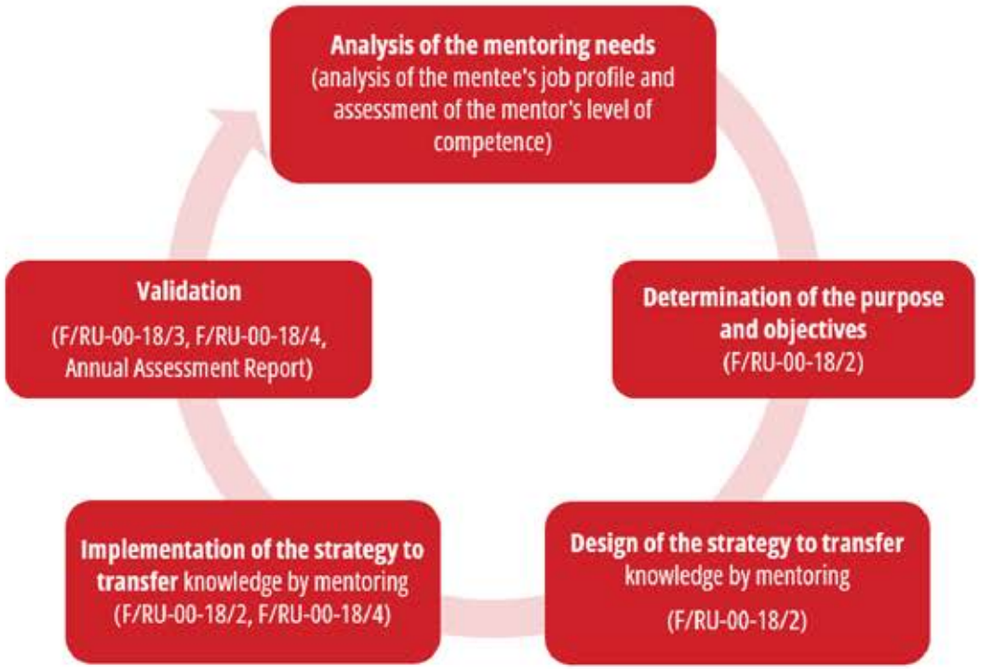


- The "Succession Plan" indicator was in the yellow zone in 2021, mainly due to the transfer of knowledge through mentoring techniques, which take time, mainly for completion of the mentoring programmes which last between six months or one year. The evolution of this indicator improved at the end of 2022, when its value entered the excellence range.
- The purpose of the succession planning activities is to ensure that adequate resources are available to quickly fill a sensitive leadership/coordinating position that has become vacant.
- The evolution of this indicator is monitored on a monthly basis during the MRM meetings, including as regards the attainment status of the preparatory actions included in the Individual Development Plans defined for each successor.
- The review of the progress made by the staff included in the succession plan for the sensitive management/coordinating positions takes place annually, within 10 days of the completion of the annual appraisal of the individual performance of the successor, by each line manager for the sensitive management/coordinating position directly subordinated to them, in collaboration with the line manager of the potential successor.
- The selected successors are included in the list of legal replacements for the holders of sensitive management/coordinating positions in the SNN executive team.
- The collective bargaining agreement and the specific procedure for employee promotion have been updated, so that the succession plans can be effectively applied.

39.14.18 Mentoring

A critical element in the management of the succession programmes is the transfer of knowledge through mentoring; thus, the Company consistently applied the procedure RU-00-18 "Development and implementation of mentoring practices in SNN" across the entire Company to ensure that mentoring supports acquisition of the knowledge and practices needed to carry out the activities under quality and safety conditions, as imposed under the technical requirements, guidelines and specific nuclear safety standards to the younger specialists of the Company.

Mentoring is provided based on an individual mentoring plan consistently devised in the Company level, for each mentee. Performance of the mentoring sessions is in accordance with the SAT (Systematic Approach Training) mode, illustrated in the following chart:



All the mentoring programmes initiated in 2021 were successfully completed by the end of 2022. The mentoring process continues; the mentoring programmes initiated in 2022 have an average implementation time of about 6 to 12 months.

The mentorship process is assessed on an annual basis by an independent team appointed by the CEO's Decision forall units of SNN, and its deliverables are assessment conclusions documented in an assessment report to be considered in preparation/updating of the Mentorship Programme put in place in each unit of SNN.

Training of corporate management (top management) is delivered in the Company based on a training plan approved by NCNAC, the purpose of which is ensure a systematic professional training adapted to the nuclear particularities of the Company's business and to the requirements of the nuclear safety culture.

The training programmes include a general component and a component specific to each function.
The general professional training includes the common training of all functions of the Company and consists of:

- Training for newly-hired (which covers a number of topics, such as: Becoming familiar with the unit's site, Organization and documentation, Basics of first aid, Overview of the Company and its production units, Nuclear safety culture, Access and communication control, Information security, Human resources procedures, Physical protection, Anti-fraud policy of SNN SA);
- Training on OHS and emergencies;
- Training on human performance;
- Training on radiation protection;
- Training on the integrated management system;
- Management and leadership training.

The specific training varies from one position to another, in accordance with the identified training needs, and has the following components:

- Technical Training (Basic Sciences; Nuclear Technology; Power Plant Systems; Technological Manufacturing Processes; Nuclear Safety and Nuclear Safety Culture);
- On-the-job-training (practical training in the workplace through specific training, mentorship training).

SNN places great importance on the nuclear safety culture, which is therefore promoted in all the activities involved.

39.14.19
Rotation for development

As of 2021 and further on in 2022, a rotation programme is implemented in SNN which consists in the temporary holding of a management position directly subordinated to the COO in order to deal mainly with:

- Preparation of the programmes and preliminary

analysis of the documentation involved in the coordination of the management of the technical and production process in the SNN branches;
- Participation, under the coordination of the COO, in monitoring the availability of the resources needed for the subordinated processes, making proposals to improve the contracts for procurement of equipment, services and specific maintenance works in Branches;
- Making proposals for a consistent definition of the production programmes in SNN and monitoring their implementation, subject to the approved IEB;
- Provision of support in coordination of the authorization of branch operation and obtaining the licenses;
- Making proposals to update the rules, instructions, and regulations in their respective field of activity or related to the technical and production process;
- Participation, at the request of SNN management, in the planning, development and monitoring the performance of the SNN development projects;
- Participation in the consistent development of the Company's IT system from an organizational, technological and technical point of view.

The programme was extended in 2022 by rotating the staff of the headquarters to the Company's branches on similar positions to get trained and practice the skills needed to manage the essential and important nuclear safety processes.

39.14.20
Annual appraisal of individual performance

The Company professionally appraises its employees based on an internal procedure, annually or regularly at an interval of 3 - 6 months (for the staff under observation).

The staff performance appraisal procedure was revised at the end of 2020, it applies since 2021 and contains a unique methodology and form applicable across the entire Company, with individual performance indicators (KPI) cascaded from the overall objectives of the Company.

39.14.21
Policy addressing bullying

In SNN, the procedure "Reporting of irregularities and protection of whistle-blowers in Societatea Nationala Nuclearelectrica S.A.", coded AF-00-02 rev.3, has been documented and implemented with the aim of making known the ways of referring, reporting, receiving, treating and investigating irregularities or violations of the law, as well as the rights and duties of the persons who submit referrals or reports.

SNN recognizes the particular importance of a clear, consistent, standardized and updated internal reporting process and of the protection of whistle-blowers (persons who submit referrals concerning identified nonconformities). SNN ensures full confidentiality and protection of whistle-blowers, as part of its general responsibility towards the staff, shareholders, business partners and/or third parties.

The internal procedure for reporting of irregularities and protection of whistle-blowers has the following objectives:

- to encourage employees and third parties to feel confident enough to disclose serious issues/situations, question them and act accordingly;
- to make available to employees and third parties means of discussing and obtaining assessments of any measures taken as a consequence;
- to make sure that employees and third parties receive an answer to their reports and that they know how to proceed when they are not happy with the measures taken;
- to provide additional assurance to employees and third parties as to the fact that, when they report non-compliances that believe are real in good faith, they will be protected against any retaliation or victimization.

39.14.22
Turnover rate

The evolution of the turnover rate in SNN, level between 2019 and 2022, is presented below

Year	2019	2020	2021	2022
Turnover rate	3.8%	12%	9.6%	6%

The Company, under its policy of attracting specialists, managed to offset for the situation created in the second part of 2020, when a number of the staff members chose to retire.

39.14.23
Situation of the staff employed for a limited term

The situation of the staff employed for the limited term in the Company, in years 2019 - 2022, is presented below:

Year	2019	2020	2021	2022
Percentage of employees with limited-term individual employment agreements	1.6%	2.1%	1.9%	2.2%

The evolution of this indicator has been, on average, flat over the last four years; the Company mainly attracts staff on limited term for various stages of the projects carried out in Che company that require specialty expertise, but also to support the mentorship activities in order to transfer tacit knowledge to the young specialists brought into SNN.

39.14.24
Duration of the training period (days/person)

The evolution of the time dedicated to the training and professional development of the Company's employees, in years 2019 - 2022, is presented below:

Year	2019	2020	2021	2022
Total time in man-hours dedicated to the training and professional development of employees [hours]	274194	81291	159127	222532
Annual average number of training and professional development hours per employee [hours/person]	134.5	40.1	79.5	100
Annual average number of equivalent training and professional development days per employee [days/person]	16.8	5.0	9.9	12.5

During the period when the state of emergency and, later, the state of alert was declared due to the SARS CoV 2 coronavirus pandemic, the enforced health protection measures caused a reduction in the number of hours of professional training; however, the Company initiated individual training actions during the normal working hours and shifted its training programmes to the digital world via the e-learning CBT platform and by delivering training sessions by videoconference.

39.14.25
Staff with disabilities

The jobs in SNN, in most of them, have attached specific health requirements for workers, that need to be confirmed according to the applicable legal requirements at employment and regularly after by the specialized occupational medicine service available in the Company, so that, the state of health of the staff is appropriate for the professional risk factors identified for each position in the Company.
The situation of people with disabilities employed in the SNN in years 2019-2020 follows a constant trend, as follows:

Year	2019	2020	2021	2022
Total percentage of employees with disabilities	0.5%	0.4%	0.4%	0.4%

39.14.26
Percentage of women out of the total workforce

The situation of the total percentage of female persons employed in SNN in years 2019-2020 is presented below:

Year	2019	2020	2021	2022
Total percentage of female persons employed in SNN	29.2%	30%	29.6%	30%
Total percentage of female persons in the Board of Directors	17%	20%	20%	29%
Total share of women in the Executive Management	0	0	0	29%

The evolution of the total percentage of female persons employed in the Company in years 2019-2020 follows a constant trend, this is mainly determined by the availability and effort intensity specifics of the jobs in the productive sector which make them more appropriate for men.

39.14.27
Measures during the COVID-19 pandemic

In the context required by the Coronavirus pandemic, professional activities were maintained by adopting going concern plans in each SNN unit, which included also the isolation of the essential staff for ensuring the operation of the production facilities within Cernavoda NPP, during the 2020 stage of emergency. Moreover, in the same context, in addition to the health protection measures, medical filter, Covid-19 testing and physical distance, remote work methods were adopted, initially by delegating the performance of activity from the employees' residence, and subsequently by introducing the work method - telework, and such situation required the adjustment of the Collective Employment Agreement and of the HR policies involved.

39.15
OTHER KEY PERFORMANCE INDICATORS (KPIS) CENTRALIZED BY SNN

39.15.1
Staff structure on age bands

Year	2019	2020	2021	2022
Number of employees under 30 years	144	120	235	279
Number of employees between 31 and 40 years	473	460	536	583
Number of employees between 41 and 50 years	722	700	756	796
Number of employees between 51 and 60 years	705	655	619	623
Number of employees over 61 years	110	76	59	63

39.15.2
Qualification of SNN staff by work conditions

Year	2019	2020	2021	2022
Number of employees hired under special working conditions	817	734	821	774
Number of employees hired under particular working conditions	1166	1098	1198	1321
Number of employees hired under normal working conditions	170	179	185	249

39.16
SECURITY AND HEALTH AT THE WORKPLACE

In SNN, there are specialized internal services, which are highlighted distinctly in the organization chart of the Company, to carry out prevention and protection activities, which also include activities related to emergencies. In the SNN Headquarters, a Prevention and Protection Department has been organized as of 1 February 2022, which carries out the specific activities regulated under the applicable occupational health and safety, emergency and work psychology and organizational psychology legal requirements, and also provides operational coordination of the organizational entities operated as Work Safety and Emergency Units in the Company's branches. These specialized services set up in the Company's entities are provided by staff with relevant competences, according to the applicable legal requirements, and include analysis and monitoring of the indicators concerning occupational health and safety and emergencies, which indicators are analysed in the OHS Committee and integrated across the entire Company, so as to ensure coordination of the strategic decision and tactics of the Company regarding this activity.

In the production units of SNN, i.e. Cernavoda NPP Branch and NFP Pitesti Branch, an Occupational Health and Safety Management System has been documented, implemented and certified by SRAC-Cert (a recognized and accredited certification body), in accordance with the provisions of the standard SR ISO 45001:2018 "Occupational Health and Safety Management Systems" since 2020; before, the Company's branches used to have an Occupational Health and Safety Management System implemented and certified by SRAC-Cert according to the reference standard SR OHSAS 18001:2008

In the Headquarters, documentation of the Occupational Health and Safety Management System is in progress, and this management system will be implemented and certified in 2023 in accordance with the provisions of the standard SR ISO 45001; 2018.

39.16.1
Commitment to occupational health and safety

The SNN Management System Manual, coded SNN-MSM-001, rev.17, includes the organizational policies and general guidelines that are the basis for development of all activities in SNN, and also includes the occupational health and safety activity; in each branch of the Company, a Health and Safety Management Policy is available, and contains the relevant aspects under the management's attention to ensure a clean and safe working environment for all employees, the contractors' staff and visitors.

39.16.2
Commitment to reduce the impact on occupational health and safety

The SNN Policy Statement on the Management System (SNN-POL-SM) contains the commitment of the management at the highest level to compliance with the legal and regulatory requirements applicable to the activities carried out by the Company, as well as the mitigation of occupational health and safety risks and to improving performance in this area. Correlatively, in each branch of SNN, a management commitment statement is available regarding compliance with the relevant OHS legal and regulatory requirements, control of occupational health and safety risks, as well as continuous improvement of the OHS performance.

The management plan of SNN for years 2019-2022 contains, among the Company's strategic objectives, actions concerning Occupational Health and Safety as part of the Corporate Social Responsibility and the main action lines concerning human capital management.

39.16.3
Management control

In accordance with the provisions of Law no. 319/2006 on occupational health and safety, the Occupational Safety and Health Committee (OHSC) is organized across the entire Company, and its membership was updated in 2022 under the SNN CEO Decision no. 219/24.05.2022. Workers' representatives in the OHSC are nominated for a period of 2 years by the representative trade union of SNN; the OHSC is led by a chairman nominated by the GEO of the Company, and it is organized and operates based on its own Regulation, enclosed to the Collective Bargaining Agreement of the Company. In 2022, the following issues were mainly debated in the OHSC:

- The annual report on work safety prepared for the entire Company;
- The report on health supervision at work, prepared up by the medical unit that provides occupational medicine services in REGARDING each SNN unit
- The status of the Programme of OHS measures for 2022;
- Review and provision of clarifications on the definition and delimitation of the durations that form the working

time of the daily work standard;
- Training of staff with OHS responsibilities;
- Intensification and completion of the medical education programmes intended mainly at employees with chronic health conditions, carried out and supported by the contracted medical staff;
- Promoting and encouraging workers to get vaccinated against seasonal flu and Covid-19;
- Sanitary measures in the context of the SARS CoV2 pandemic, including the establishment of dedicated task forces at unit and SNN level, to ensure that actions are taken expeditiously if need be;
- Analysis of the specific OHS procedures and instructions;
- Provision of psychological support for the company's employees;
- 2023 OHS Plan of Measures.

Each OHSC meeting concludes with a Minutes that is submitted to Territorial Labour Inspectorate during the statutory term.
According to the SNN Management System Manual coded SNN-MSM-001 rev.17, the management ensure adequate working conditions for performance of the activities through a permanent control of the regarding occupational health and safety risks in order to mitigate them, and the health status of employees is monitored in order to maintain the working capacity of employees.

39.16.4
Assessment of the occupational health and safety risks

In accordance with the provisions of Law 319/2006 on occupational health and safety, at all workplaces of SNN have hazards identified and risks assessed for each component of the work system, i.e. who performs the job, work load, work tools/equipment and work environment.

In order to assess of occupational injury and illness risks, the Company applies the Method of the National Institute for Research - Development in Work Safety (INCDPM); the global level of risk determined at company level according to this method is:

Year	2019	2020	2021	2022
Global risk level	3.18	3.18	3.18	3.18

The global risk level determined for each SNN unit and for the entire Company falls into the category of accepted risks, the annual trend of which is constant, as weighted average, and it is controlled by prevention and protection measures determined under the annual OHS Programmes.

Assessment of the accidents at work and occupational illness risks is the basis for the of occupational health and safety management strategy and is followed by the control of these risks by defining preventive measures, which are included in the annual prevention and protection plan prepared in accordance with the provisions of the Implementing Rules of Law no. 319/2006 on occupational health and safety, approved by Government Decision no. 1425/2006, as subsequently amended and supplemented; the measures contained therein are reviewed in the Meetings of the Occupational Health Safety

Committee set up in the Company in accordance with the applicable legal provisions. The measures contained in the prevention and protection plan have been allocated resources for implementation.

Assessment of the risks of accidents at work and occupational illness is a carefully review process and is updated when events occur in the work system, new work methods/technologies are adopted, attitudes/behaviours are noticed that require reconsideration of classification of risks identified in the Company's workplaces by impact/likelihood.

39.16.5
Employee involvement in improvement of the occupational health and safety

The specifics of the nuclear safety culture fosters a questioning attitude, where all workers are alert to assumptions, anomalies, values, conditions or activities that could have an unwanted effect on workplace safety; thus, workers are encouraged to express their opinions about the work conditions, as well as any aspect of the professional activity that could affect occupational health and safety.

These opinions are debated in the OHSC meetings; for instance, in 2022, the following were reviewed in the OHSC that were held further to opinions expressed by the Company's workers:

- Review and provision of clarifications on the definition and delimitation of the durations that form the working time of the daily work standard;
- Intensification and completion of the medical education programmes;
- Promoting and encouraging workers to get vaccinated against seasonal flu and Covid-19;
- Sanitary measures in the context of the SARS CoV2 pandemic, including the establishment of dedicated task forces at unit and SNN level, to ensure that actions are taken expeditiously if need be;
- Review of the internal regulations concerning provision and use of individual protective equipment;
- Provision of psychological support for the company's employees;

Workers assume personal responsibility for safety, as part of the extensive nuclear safety culture specific to this industry.

Thus, the responsibility and authority for safety and health in each workplace are well defined and clearly understood. The reporting relationships, positional authority and team responsibilities highlight the major importance of workplace safety.

39.16.6
Performance monitoring

Performance of the Occupational Health and Safety process is quantified through performance indicators attached to the specific objectives, which are correlated to the general objectives set at Company level; thus, for Implementation of the measures/actions provided for in the occupational health and safety management programme (indicator: attainment of OSH objectives and targets) in the SNN units, the annual target for years 2019-2022 was set between 85% and 95%, and was met.

39.16.7
Accidents at work

In application of the provisions of Law no. 319/2006 on occupational health and safety and of the Implementing Rules of this law, as approved by Government Decision no. 1425/2006, as subsequently amended and supplemented, the events produced in the work system are immediately communicated to the interested parties, and are investigated, recorded and reported on in accordance with the applicable legal provisions.

The situation of the events occurred in the work system and recorded by the Company in years 2019-2022 is presented below:

Events	2019	2020	2021	2022
No. of accidents at works with temporary work incapacity	3	1	0	2
No. of accidents at work with invalidity	0	0	0	0
No. of accidents at work with fatalities	0	0	0	0
Total events	**3**	**1**	**0**	**2**

All the events produced in the work system of the Company are carefully reviewed and processed by workers, determining actions to reassess the risks of accidents at work and occupational illnesses for the workplaces involved or potentially involved, and actions aimed at eliminating their causes are taken.

The information about occupational health and safety is duly communicated to the interested parties; thus, the annual report on occupational health and safety is submitted to the Territorial Labour Inspectorate. In the Company's branches, the SRAC-cert certification body conducted certification audit and surveillance audit actions annually to independently check the OSH information against the Occupational Health and Safety Management System, implemented according to SR ISO 45001:2018.

In the Headquarters, the activities related to documentation, implementation and certification of the occupational health and safety management system, according to SR ISO 45001:2018, have been initiated in 2022, through reorganization of the prevention and protection activity of the Company, and the procedural stages of implementation and certification are to commence in 2023.

The health of SNN workers is monitored in accordance with the provisions of the Government Decision no. 355/2007 on the supervision of the health of workers in workplace, through specialized occupational medicine services provided under contract; each worker takes an occupational medicine examination, at least annually, in accordance with the occupational risks identified for the activity carried out in their respective workplace. The occupational medicine doctor issues a skill data-sheet for each employee, that contains the medical opinion.

39.16.8 Certifications

ISO 45001 certification	2019	2020	2021	2022
Degree of certification coverage for the SNN units	67%	67%	67%	67%

For 2023, the plan is to document and implement the standard SR ISO 45001:2018, Occupational Health and Safety management systems also un the workplace of the SNN Headquarters; thus, further to certification by an accredited body, the degree certification coverage of the SNN units will reach 100%.

39.16.9 Number of staff trained on occupational health and safety

The training of SNN employees on occupational health and safety is delivered out in accordance with the provisions of Law no. 319/2006 at employment, in the workplace, regularly and additionally, whenever necessary, based on programmes and themes determined for the different workplaces and trades.
The situation of the number of SNN employees who were trained in years 2019-2022 on Occupational Health and Safety matters is presented in the following table:

Year	2019	2020	2021	2022
OSH specialists and employees with specific OHS responsibilities (pers.)	49	49	57	65
Staff trained of general matters, including OSH topics (pers.)	2143	1991	2181	2319

All Company staff must go through the mandatory Occupational Health and Safety training, at employment, in the workplace, regularly and additionally, whenever necessary.
Specialist staff with specific OHS responsibilities are trained under training programmes dedicated to their responsibilities as members of the Work Safety services organized in each SNN unit.

39.16.10 Number of accidents x 100,000/total number of hours worked per year (LTIR)

Year	2019	2020	2021	2022
Lost-time incident rate (number of accidents x 100,000/total number of hours worked per year	0,083	0,036	0	0,051

The LTIR indicator shows a decreasing trend; this indicator confirms the safe working practices of the Company and the organizational culture of SNN which ensures a safe working environment, as well as safe working practices adopted by workers in the Company.

39.16.11 Number of fatalities

Over the last three years, no work incident involving the death of the injured employee was registered in the Company.

39.16.12
Number of fatalities among the contracted staff

The situation of the number of workers of contractors in SNN units, who died as a result of accidents at work, is presented below:

Year	2019	2020	2021	2022
Number of workers who died in accidents at work	0	1	0	0

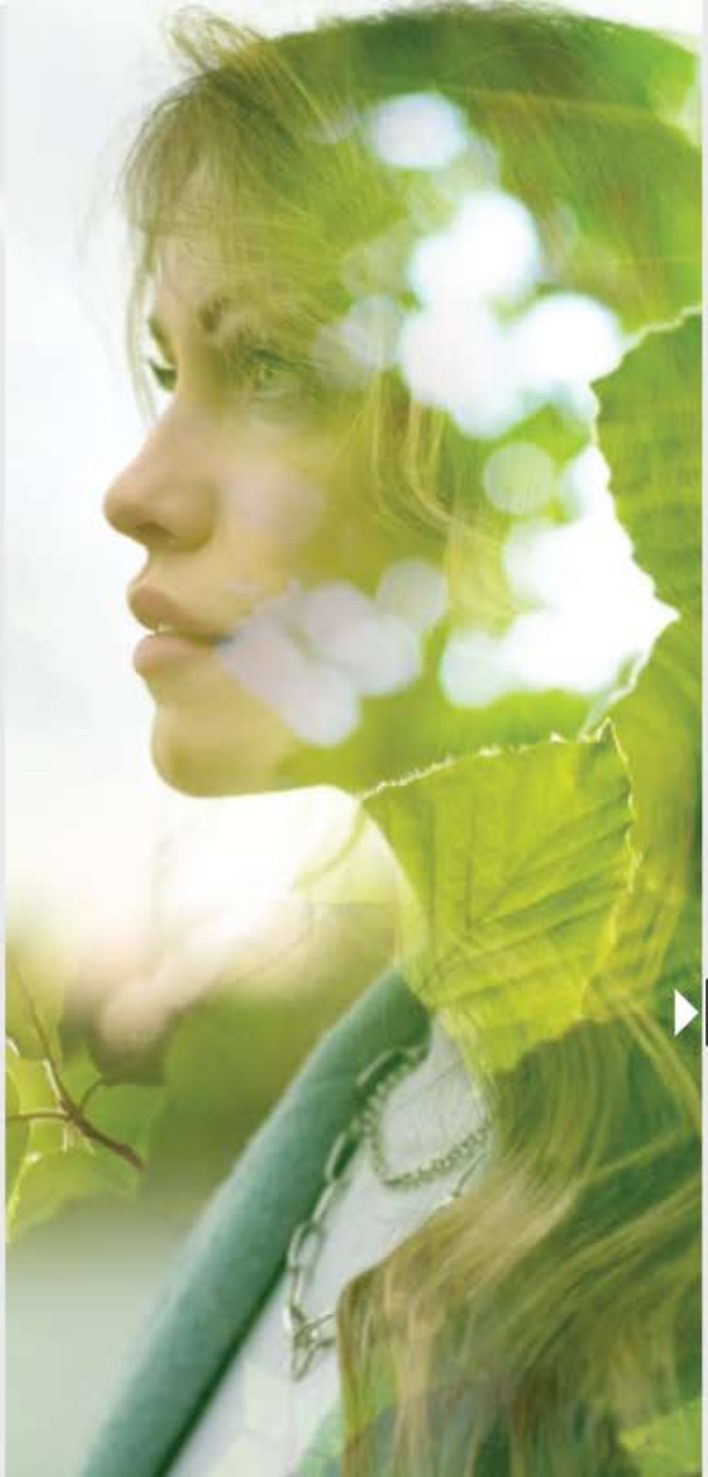
Between 2019 and 2022, there was only one fatal accident in the SNN units, where one worker of one of the Company's contractors was involved; it happened in 2020, at Cernavoda NPP, and further to the event, an employee of the contractor died. The accident was registered, further to the investigation research process carried out by Constanta TLI, by the Contractor the injured person was an employee of.

39.16.13
Impact of business continuity

SNN must ensure the continuity of electricity generation and nuclear fuel production for the smooth functioning of the National Energy System. Also, it is important to point out that SNN manages the national critical infrastructure, carrying out essential activities of national interest in the energy sector and the industry (according to the provisions of Article 2 and paragraphs 1 and 9 of Annex no. 1 to the Government Emergency Ordinance no. 98/2010 on identification, designation and protection of critical infrastructures). Thus, the activities carried out by SNN, i.e. generation of electricity by nuclear methods and the production of nuclear fuel falls under the essential activities/services defined by the provisions of the Government Emergency Ordinance no. 98/2010, i.e. those "services, facilities or activities that are or could be necessary to ensure a minimum standard of living and well-being of the society and whose damaging or interruption due to disruption or destruction of the underlying physical system would significantly affect the safety or security of the population and the functioning of the State's institutions".

In the context of the SARS CoV2 pandemic, SNN implemented out a complex programme of actions, gradually established on alert levels, to maintain the continuity of the Company's business, being one of the first companies that, in 2020, adopted the measure of the preventive on-site isolation of the essential staff, during the state of emergency, in order to ensure the safe operation of nuclear power generation facilities.

Each unit of SNN has documented, applied and currently maintains a plan to ensure the continuity of the Company's business, which contains technical and structural work organization measures, so as to keep the focus on the staff, including through measures of preventive isolation of the essential and back-up staff in case of accidental unavailability thereof, with a clear volume and flow of competences and responsibilities at all levels of the Company, both from an operational point of view and for the support processes, as both are absolutely necessary for the smooth functioning of the production facilities.



40 QUALITY MANAGEMENT SYSTEM

SNN has developed and maintains a General Management System, which complies with the provisions of Law no. 111/1996, and the Quality Management Rules applicable in the nuclear field ("NMC"), issued by NCNAC. The SNN Management System is authorized by NCNAC according to Law no. 111/1996 under the Permit of the quality management system in the nuclear field for management activities; currently, the permit is held has no. SNN EX - 01/2021 and is valid until 30 April 2023.

The Management System developed and implemented in SNN SA addresses, in a coherent, coordinated and unitary fashion, the components related to nuclear safety, protection against ionizing radiation, environmental protection, quality, occupational health and safety, physical protection, protection against cyber threats, nuclear safeguard control, protection of classified information, planning and response to emergencies, sale of the electricity generated, and aspects related to the economic performance, and ensures that their requirements are not addressed separately from nuclear safety, as this takes priority over any other requirements, considerations and interests.

The implementation of the management system ensures identification and integration of all legal and regulatory requirements, good practices and voluntarily adopted standards, such as ISO 37001, ISO 27001, in order to attain

the general objectives of the Company and meet the expectations of all “stakeholders".

The requirements of the SNN Management System apply to all activities and processes carried out in SNN S.A.

The management of SNN SA has delegated to the Branches the responsibility for development and implementation of parts of the Management System of SNN, for the specific activities they carry out, without this leading to reduction of its responsibility for the effectiveness of the system as a whole. Consequently, the Branches have developed their own Management Systems aligned to the requirements of the SNN Management System, as well as to the legal requirements applicable to their specific field of business. The Management Systems of the Branches are reviewed and accepted by the SNN management.

The integrated management system applied by Cernavoda NPP focuses on meeting the nuclear safety requirements that stem from the NCNAC rules and requirements, which underlay the issue of the operating permit for Units 1 and 2 of Cernavoda and for the spent fuel storage (DICA), and is developed in accordance with the requirements of the IAEA GSR Part 2 standard and the NCNAC Rules for Quality Management Systems, voluntarily integrating the requirements of the management standards ISO 14001, ISO 45001, ISO 17025, ISO 27001, ISO 37001, and the requirements of the EMAS Regulation - Eco Management and Audit Scheme. The management system of CNE Cernavoda is authorized according to the requirements of Law no. 111/1996 on “Operation, design, supply, repair and maintenance, use and maintenance of nuclear software products activities" (NCNAC permit no. SNN Cernavoda NPP - 01/2021, valid until 30 April 2023).

The integrated management system applied by NFP Pitesti focuses on meeting the requirements that stem from the NCNAC rules and requirements that underpin the issue the operating permits issued for the nuclear fuel production activity, and is developed in accordance with the requirements of the Canadian standard CSA N299.2-16 and the NCNAC Rules for Quality Management Systems, voluntarily integrating the requirements of the management standards ISO 14001, ISO 45001, ISO 17025, and ISO 37001 and the requirements of the EMAS Regulation - Eco Management and Audit Scheme. The management system of NFP Pitesti is authorized according to the requirements of Law no. 111/1996 on "Manufacturing activities in the nuclear field, class 2 of gradual application, granted to the management system" (NCNAC permit no. 22-038, valid until 17 September 2024).

The branches Cernavoda NPP and NFP Pitesti hold certificates for compliance of the Management System with the requirements of the standards ISO 14001 "Environmental Management Systems" and ISO 45001 “Occupational Health and Safety Management Systems".

Both branches are registered with the Eco-Management and Audit Scheme (EMAS), according to the Regulation (EC) no. 1221/2009 of the European Parliament and of the Council of 25 November 2009 on the voluntary participation by organisations in a Community eco-management and audit scheme (EMAS) and the Regulation (EU) 2017/1505 of the Commission of 28 August 2017 amending Annexes I , II and III.

It should be noted that the provisions of the NCNAC Rules that contain requirements for the quality management systems cover the requirements of the standard ISO 9001:2015 and even exceed them, being intended for organizations acting in the nuclear field. However, for a better recognition of the performance of the management system implemented in SNN (Headquarters and the Branches Cernavoda NPP and NFP Pitesti), a project is underway that aims to obtain certification of the compliance with the requirements of the International Standard ISO 9001:2015. This is due to complete on 31 December 2023.

41 FINANCIAL EVOLUTION

GRI 201, 201-1, 201-4

Thousand lei	The 12-month period ended on 31 December 2022 (audited)	The 12-month period ended on 31 December 2021 (audited)	The 12-month period ended on 31 December 2020 (audited)
Production (GWh)	10,200	10,377	10,558
Operating revenues, of which	6,534,010	3,203,880	2,500,172
Income from the sale of electricity	*6,343,640*	*3,103,150*	*2,432,279*
Operating expenses - less depreciation and impairment and tax on additional income	(1,857,584)	(1,461,544)	(1,184,029)
Additional income tax expenses/ Contribution to the Energy Transition Fund	(1,085,014)	-	-
EBITDA	**3,591,412**	**1,742,336**	**1,316,143**
Depreciation and impairment	(605,405)	(562,856)	(544,752)
EBIT	**2,986,007**	**1,179,480**	**771,391**
Financial income	238,176	61,025	84,530
Financial costs	-31,687	-36,411	-40,513
Net financial result	**206,489**	**24,614**	**44,017**
Expense with corporate tax	(428,073)	(167,832)	(116,086)
Net profit	**2,764,423**	**1,036,262**	**699,322**

Ratio	Formula	m.u.	2022 (audited)	2021 (audited)	2020 (audited)	2019 (audited)
Profitability indicators						
Asset rate of return	Net profit/Total assets	%	23.4%	10.8%	7.9%	6.1%
Liquidity and solvency ratios						
Ratio of current liquidity	Current assets/ Short-term liabilities	x	7.17	5.31	4.73	4.65
Ratio of immediate liquidity	Current assets - Inventories/Short-term liabilities	x	6.36	4.46	4.00	3.90
Asset solvency	Equity/Total liabilities	x	8.38	6.64	5.68	4.97

(thousand RON)

	2022	2021	2020	2019
A. Directly generated economic value	**6,366,543**	**3,116,639**	**2,446,004**	**2,377,772**
Income	6,366,543	3,116,639	2,446,004	2,377,772
B. Distributed economic values	**4,572,101**	**2,664,109**	**2,343,145**	**2,262,559**
Operating expenses	1,715,303	1,389,054	1,099,363	1,144,989
Personnel costs	555,236	444,087	440,281	425,597
Payments to shareholders	596,025	471,877	498,279	378,943
Payments to Government	1,698,628	351,092	295,723	302,118
Community investments	6,909	7,998	9,500	10,911
C. Retain economic value	**1,794,441**	**452,530**	**102,859**	**115,213**

	2022	2021	2020	2019	Explanations
1. Tax exemptions or tax credits	n/a	n/a	8,002,247	n/a	In 2020, the Romanian government issued a number of emergency ordinances concerning tax measures in the context created by the Covid-19 pandemic, which set out procedural and tax measures to support income taxpayers. Thus, under the Government Emergency Ordinance no. 33/2020 and the Government Emergency Ordinance no. 99/2020, the Company collected a bonus calculated on the profit tax due, of RON 8 million.
	6,776,395	7,221,810	9,499,748	10,897,352	Sponsorships
	53,783,224	16,148,244	n/a	n/a	Bonuses under the Government Emergency Ordinance no. 153/2020
	11,009,228	3,221,916	913,611	956,982	Reinvested profit
2. Subsidies	14,354,675	14,354,155	14,344,816	14,368,732	The subsidies for investments (long-term deferred income) were granted in 2007 and consisted of writing off penalties and debts under loan agreements. The subsidies are recognized in the income statement as income for the period 2007 - 2026, over the period remaining to be depreciated for Unit 1.
3. Investment grants, research and development grants, and other relevant types of grants	n/a	1,313,068	n/a	n/a	Grant awarded by the European Commission for "CYNERGY - the first ISAC for the Romanian Energy Sector"
	6,056,590	n/a	n/a	n/a	Grant awarded by the US Trade and Development Agency ("USTDA") to identify and assess potential sites for small modular reactors.
4. Awards	n/a	n/a	n/a	n/a	
5. Copyright exemptions	n/a	n/a	n/a	n/a	
6. Financial assistance received from Export Credit Agencies	n/a	n/a	n/a	n/a	
7. Financial incentives	n/a	n/a	n/a	n/a	
8. Other financial benefits received or to be received from any Government for any operation	n/a	n/a	n/a	n/a	
TOTAL	**92,001,948**	**42,259,194**	**32,760,422**	**26,223,066**	

43 ETHICS, INTEGRITY AND CONFLICT OF INTERESTS

GRI 103-1, 103-2, 102-16, 102-17, 102-25

The members of the Board of Directors carry out their office with the prudence and diligence of a good director and with loyalty, to the best interest of the Company, and without disclosing any confidential information and business secrets of the Company. Under this code of ethics and professional conduct of the Board of Directors, its members adhere to a set of principles concerning good governance, decision-making transparency, integrity, impartiality, honesty, loyalty and efficient management of the organization's resources in order to attain the objectives. The Code of Ethics and Professional Conduct defines the mission, vision, values and rules of professional conduct that the SNN BoD members must respect and apply in their activity in the organization, in accordance with the business model and the objectives of the organization, and set out the organizational framework for transposition of these principles into procedures and policies applicable to all SNN employees. Also, the Code of Ethics and Professional Conduct sets out the guidelines and directs individual and group behaviours in the internal and external relations of the SNN BoD.

https://www.nuclearelectrica.ro/ir/wp-content/uploads/sites/9/2019/08/Cod-de-etica-si-conduita.pdf

The provisions concerning management of the conflict of interests are included in the Organization and Functioning Regulation of the Board of Directors, as well as in the Code of Ethics of the Board of Directors.
The members of the Board of Directors will make decisions to the best interest of the Company and will not take part in debates or decisions that give rise to a conflict between their personal interests and those of the Company.
Each member of the Board of Directors makes sure they avoid of any direct or indirect conflict of interest with the Company, and should such a conflict occur, they will abstain from the debates and casting their vote on the that matters, in accordance with the legal provisions in force.
The members of the Board of Directors disclose to the SNN Board of Directors information about any relationship with a shareholder who directly or indirectly holds shares accounting for more than 5% of all voting rights. This obligation refers to any kind of relationship that could affect the member's position on the matters decided on by the Council.

In order to ensure the propriety of the transactions with the related parties, the members of the Board of Directors apply including the following criteria, but not only these:

- Maintaining the powers of the BoD or GMS, as the case may be, to approve the most important transactions. For intercompany transactions, SNN will observe the provisions of Article 52(5) of the Government Emergency Ordinance no. 109/2011, as subsequently amended and supplemented;
- Any transaction of an amount equal to or greater than 5% of the Company's net assets is approved by the Board of Directors based on a mandatory opinion of the Board's Audit Advisory Committee;
- Asking for a prior opinion on the most important transactions from the internal control structures (Audit Advisory Committee and Internal Audit Department);
- Entrusting the negotiations on these transactions to one or more independent directors, or to directors not related to the parties involved;
- Seeking the opinion of independent experts.

In addition to complying with general legal provisions, SNN has devised and implemented internal policies that further regulate the internal procedure for disclosure of intercompany transactions.

Thus, the Board of Directors informs the shareholders, during the first general meeting of shareholders following the conclusion of the legal act, on any transaction concluded with administrator or directors, with employees, with controlling shareholders or a company controlled by them, by making available to shareholders documents that reflect the essential and significant data and information in relation to such transactions. Also, the Board of Directors informs the shareholders, during the first GMS following conclusion of the legal act, of any transaction concluded by SNN, as a public enterprise, with another public enterprise or with the public supervisory authority, if the transaction has a value, individually or in a series of transactions, of at least the RON equivalent of EUR 100,000.

The Board of Directors approves, on a quarterly basis, an information report on the purchase of goods, services and works the amount of which is greater than EUR 500,000/purchase (for goods and works) and EUR 100,000/purchase (for services); the report is published on the company's website under the Investor Relations/Periodic Reporting section.

The Board of Directors also approves and publishes annually, on the SNN website, a report on the sponsorships granted during the previous year.

https://www.nuclearelectrica.ro/ir/raportari-periodice/

ANTI-CORRUPTION POLICY
GRI 103-1,103-2, 205-2

43 **ANTI-CORRUPTION POLICY**
GRI 103-1,103-2, 205-2

44 **RISKS MANAGEMENT**
GRI 102-11, 102-15, 102-30

45 **COMPLIANCE FUNCTION**

46 **COMMITMENT TO DEVELOPMENT OF COMMUNITY AND STAKEHOLDER RELATIONS**
GRI 102-40, 102-42, 102-43

47 **COMMUNITY DEVELOPMENT PROGRAMMES**

48 **OPERATING PERMITS AND LICENSES**
GRI 307

49 **PROCUREMENT IN SNN**
GRI 204

43 ANTI-CORRUPTION POLICY

GRI 103-1,103-2, 205-2

The anti-bribery management system is certified according to the requirements of the standard ISO 37001/2016. In order to ensure integration of the requirements of the anti-bribery management system into the Company's processes, the internal regulatory anti-corruption framework was consolidated and developed by policies and procedures; of these, we list:

- The Anti-corruption Policy, intended to encourage and facilitate prevention and control of corruption, and setting out the anti-corruption principles for all employees, as a framework for definition, revision and attainment of the anti-corruption objectives;
- The procedure "Compliance with the Anti-Corruption Policy", that regulates the scope and structure of the compliance function set up to ensure compliance with the principles of the Anti-Corruption Policy;
- The procedure on "Implementation of financial and non-financial anti-corruption compliance controls" which describes how the relevant controls are implemented for prevention, detection and investigation of corruption risks;
- The procedure for assessment of the business partners in terms of the risks attached to the anti-corruption compliance system, which describes how business partners are screened in order to minimize the risks generated by the transactions carried out by SNN SA;
- The procedure on "Identification, assessment and prevention of conflict of interests".
- The Anti-Fraud Policy
- Irregularity reporting
- Estimation of the compliance and reputational risks

The main criteria considered to assess the risk:

- Sanctions or withdrawal of permits;
- Involvement of the Company or its employees in disputes;
- Loss of strategic business partners;
- Increasing number of reported irregularities;
- Nature, size and complexity of processes and activities;
- Business partner anti-bribery management system: suppliers, customers and consultants;
- Locations and business lines where the organization operates or envisages operating.

The anti-bribery management system developed by Nuclearelectrica is adapted to the requirements of the standard ISO 37001/2016 and contains internal control procedures for the following processes:

- Disclosure of gifts and other benefits;
- Prevention of conflicts of interest, incompatibilities and pantouflage;
- Mandate of ethics advisor and compliance officer;
- Whistle-blower protection;
- Preventive measures for management of sensitive positions;
- Sponsorships, donations and other charitable activities;
- Employee expense reports.

Corruption prevention and control is the main responsibility of the Compliance Office, which is regularly allocated the necessary resources to attain its objectives.

S.N. Nuclearelectrica S.A. created the Compliance function to manage the anti-bribery management system. The compliance officer has long/important experience in Internal Audit and Compliance. The training programme includes regular participation in workshops and specific trainings on topics related to fraud, corruption, ethics and integrity.

Nuclearelectrica put in place mechanisms for monitoring and warning of the occurrence of any threats or non-compliances with the ethics and integrity rules, such as:

- Regular identification and assessment of the corruption risks;
- Disclosure by the Company's employees of any potential conflicts of interest and use of an application for to disclose and consolidate the said information;
- Anti-corruption contractual clauses included in contracts with business partners;
- Regular employee counselling programme set up by the Ethics Advisors;
- Means of communication provided to the whistle-blowers and analysis of the complaints/reports depending on their nature;
- Screening of business partners in terms of their

anti-corruption management system;
- Internal controls aimed at preventing occurrence of fraud and corruption;
- Analysis of sponsorship applicants in terms of their ethical behaviour.

SNN has not been involved in any pending or settled legal actions concerning anti-competitive behaviour.
The code of ethics and conduct sets out the principles that govern the ethical and professional conduct of Nuclearelectrica employees. The anti-corruption policy defines the terms corruption and bribery.
The term "Facilitation Payments" is not defined in the Romanian legislation, is interpreted in the legislation as bribery.

In the internal procedure AF-00-03 - Granting and accepting benefits it is prohibited to grant any benefits to the authorities, business partners or any other persons in order to facilitate approvals, permits or unlawfully obtaining a business decision. Also, Nuclearelectrica has a procedure dedicated to conflicts of interests. Employees are under the obligation to disclose any personal interests that conflict with the interests of the Company. The declaration is renewed on an annual basis.

The procedure for reporting irregularities aims to determine the ways of reporting and treating irregularities and it is worded so as to address issues concerning aspects of public interest, that could include also infringement of the SNN policies and procedures, or the applicable legislation.

The issues that can be qualified as irregularities (without this listing being limitative) are: non-compliance with the Code of Ethics and Conduct, non-compliance with policies and procedures, improper aspects concerning the financial statements and the relations between employees, abuses, discrimination, corruption, theft, money laundering and any inappropriate behaviour that could damage the reputation of the Company or any attempts to hide any of the above.

The Company, recognizing the essential importance of a clear and up-to-date process for both internal reporting and protection of those who submit make such reports (whistle-blowers), has adopted a procedure to provide guidance to the staff and ensure full confidentiality and protection thereof, as part of its general responsibility towards the staff, shareholders and customers.
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1.Purpose

The Irregularity Reporting procedure aims to:

- Encourage employees and third parties to feel confident enough raise serious issues, question them and act accordingly;
- Make available to employees and third parties means of discussing and obtaining assessments of any measures taken as a consequence;
- Make sure that employees and third parties receive an answer to their reports and that they know how to proceed when they are not happy with the measures taken;
- Reassure the employees and third parties as to the fact that, when they report non-compliances that believe are real in good faith, they will be protected against any retaliation or victimization.

In particular, this procedure aims to put in place the means of communication and define the process to receive referrals onȘ

(a) improper documents and/or accounting and auditing practices that come against the international practices and applicable provisions;

(b) fraud, corruption or conflicts of interest;
as these are defined in the related policies/codes of SNN on the control of fraud and corruption and conflicts of interest.

However, the communication channels described in this procedure can be used also to submit other reports concerning irregularities identified by the reporter.

2.Scope

The procedure on Reporting Irregularities is intended to provide support to individuals (full-time or part-time employees, contractors, suppliers, customers and other members of the public) who believe they have encountered instances of work negligence, fraud or irregularities.

This procedure does not apply to personal grievances, that refer to terms of employment or other aspects of the employment relationship or disciplinary matters.

The procedure does not have the mission to call into question the financial or business decisions made by SNN and by the branches, nor should it be used to reconsider matters that have already been addressed according to disciplinary procedures.

The principles of this procedure are in accordance with the principles that govern whistle-blower protection:

- the principle of lawfulness, according to which authorities, public institutions, other legal entities under public law, as well as legal entities under private law are under the obligation to respect the fundamental rights and freedoms, by ensuring full respect, among other things, for the freedom of expression and information, the right to protection of personal data, the freedom to carry out a business activity, the right to a high level of consumer protection, the right to a high level of protection of human health, the right to a high level of protection of the environment, the right to effective remedy, and the right to defence;
- the principle of responsibility, according to which the whistle-blower is under the obligation to submit data or information in support of the facts reported;
- the principle of impartiality, according to which examination and settlement of reports are free of subjectivity, regardless of the beliefs and interests of the persons tasked to address them;
- the principle of good management, according to which public authorities and institutions, and other legal entities under public law are under the obligation to carry out their activity in the pursuit of the general interest, with a high degree of professionalism, and with an efficient and effective use of the resources;
- the principle of balance, according to which no person can rely on the provisions of this law in order to reduce the administrative or disciplinary sanction for a more serious infringement that is not related to that reported;
- the principle of good faith, according to which the person who had good reasons to believe that the information about the reported infringements was true at the time of reporting and that the said information fell in the scope of this law, is provided protection.

Irregularities refer mainly, but are not limited, to:

- Abuse of trust
- Corruption offences, offences qualified as corruption, offences directly related to corruption offences
- Forgery and use of forged documents
- Fraud and deception concerning investment capital
- Theft and embezzlement
- Blackmail
- Falsification of documents and other manipulative actions concerning documents
- Robbery
- Market price manipulation
- Insolvency offences
- Coercion and threats
- "Inside trading" (illegal) and market manipulation activities
- Falsification of the Company's records
- Cyber crimes
- Falsification, and piracy of products and brands
- Abuse in relation to private or business secrets
- Infringements related to accounting, financial and accounting control or internal audit
- Violation of the legal provisions on public procurement and grants
- Anti-competitive collusion
- Money laundering
- Violation of the rules concerning representation and signing of documents
- Preferential or discriminatory practices or treatments in performance of the duties
- Violation of the provisions concerning incompatibilities and conflicts of interest
- Abusive use of the Company's material or human resources
- Non-competitive practices
- Incompetence or negligence at work
- Non-objective staff appraisal in the recruitment, selection, promotion, demotion and dismissal process
- Violations of the procedures or determination of internal procedures in violation of the law
- Any other serious infringement of the legislation or internal rules of business ethics and conduct of the Company

3.Work method

Given that the reporting process is generally recognized as a key tool for uncovering misconduct, it is important that staff fully understand the type of incidents they are required to report.

Communication channels

The Company has put in place different communication channels that can be used by employees and third parties to voice their complaints in accordance with the purpose of this procedure, as follows:

- A dedicated internet portal available in SNN, www.nuclearelectrica.ro, "report an irregularity" section, where an Irregularity Reporting Form is available, the format of which is included in the annex to this Procedure;
- The email addresses sesizari@nuclearelectrica.ro and conformitate@nuclearelectrica.ro are managed by the Compliance Office of the Audit and Risk Management Directorate;
- The mailing address

The people who make the complaints can remain anonymous, but they are encouraged to identify themselves (name and contact details), particularly if an additional investigation is needed. It is preferable that all reports are made using the Irregularity Reporting Form.

The number of referrals/reports received by Nuclearelectrica from employees or third parties, over the last four years, is presented in the table below

Reporting year	2019	2020	2021	2022
Number of referrals/reports	6	4	17	9

All referrals have been addressed.

Investigation of the referrals to the Compliance Office

All reports received are carefully reviewed by the Compliance Office, subject to full secrecy and confidentiality. The Compliance Office selects the referrals depending to the specific procedure, will review them carefully, but can only act on those that disclose instances of fraud (including improper actions and accounting and auditing practices that come against the international practices and the applicable provisions), corruption and conflicts of interest. The other referrals, which do not concern matters related to the activity of the Compliance Office, are forwarded for processing to the competent structure of the Company.

The information can be provided anonymously; however, this means that the Compliance Office cannot contact the person who file the referral/report for additional information, and this makes it more difficult to address the issue.

The person who files a referral is advised not to communicate to other people the details of the issues they reported, considering that this could have an unfavourable impact on any future investigation.

All referrals sent are treated as strictly confidential by all the units involved of the Company.

4. Protection measures

Confidentiality

All disclosures are treated similarly to the confidential and sensitive information.

When irregularities are reported, any person can assume that only the employees investigating the complaint will know their identity. The identity of the persons who makes an accusation will be confidential as long as it does not prevent or limit the investigations.

However, the identity of the person making the report will have to be disclosed where there is a legal obligation to do so.

Anonymous accusations

Anonymous accusations are less credible, but can still be taken into account. In the exercise of this right, the to be considered are:

- Severity of the reported issues
- Reliability
- Possibility to obtain confirmation from independent and reliable sources

Protection

This Procedure is intended to provide protection to employees who report issues:

- in good faith
- who reasonably believe that there is a case of negligence or wrongdoing, as long as the disclosure was made to an appropriate person

The Company will not allow any retaliation by the management against the persons who report an irregularity in good faith, including when the reported facts are not confirmed or are only partially confirmed by the investigations carried out.

The people who make referrals can remain anonymous, but they are encouraged to identify themselves, particularly when additional useful and timely information is needed for investigation of the reported case.

Referrals and reports are received and reviewed by the Compliance Office, who decides whether these can be addressed by them, or by other competent units, such as: The Anti-Fraud Office, the Human Resources Strategy Department or the Legal Department, etc.

Both the employees and business partners and the third parties have the opportunity and are encouraged to report non-compliances or acts/facts that could lead to violation of the law and procedures or to occurrence of a noncompliance. In this sense, the Company's website has a page dedicated to whistleblowing.

The referrals received are entered in a special register. All referrals are answered in not more than 40 days. Depending on their nature and materiality, these are reported to the CEO, who can decide to initiate an investigation. The annual report of the Compliance Office includes a section on the referrals received and the measures taken thereon.

The employees and business partners can call the Compliance Office during the working hours.

Ethics advisors have regular meetings with employees in order to provide them with advice on ethics and integrity. The employees attend training programmes on integrity topics every year. One of the topics addressed in these dedicated training is that of the whistle-blower.

The whistleblowing procedure includes specific clauses that prohibit retaliation against the employees who report non-conformities, violations of procedures or rules in good faith.

44 RISKS MANAGEMENT

GRI 102-11, 102-15, 102-30

Since 2018, the risk management function has been reorganized at the company level, including and examining on a frequent basis, the risks identified and assessed by the structures within Subsidiaries and Headquarters. Sustained efforts for implementing the risk management culture within the entire company, enhancement of the specialized counselling of the staff in charge with departmental risks, organization of training programmes related to the management risk, have determined the development of competencies of the staff responsible for the correct application of the risk management methodology.

Risk Management Service (SMR) submits and publishes a report on the management system analysis, which also includes risk registers, and an analysis of several categories, such as Nuclear Safety, Security, Compliance, and Environment. The report is distributed to all relevant stakeholders, including to the board members.

The effectiveness of the risk management process is reviewed in the last quarter of the year, by analysing the operation of the risk management system over the last year and by setting specific objectives for the next year.

In 2022, the focus was on two directions: sensitive functions and incorporation of new subsidiaries into the existing risk management framework.

The focus in 2023 is on continuing to integrate new subsidiaries in the risk management system, and to develop of the ESG component of the risk register, as well as the risk culture in the Company.

The risks listed the risk register and the Company's risk universe are reviewed quarterly, with actions to be taken, according to specific situations.

The risk management system and the Company's risks are reviewed quarterly by the SCIM Committee chaired by the Company's CEO.

Risk committees operate locally in branches. The risk management system is compatible with the standard ISO 31000. The risk management system was revised and a gap analysis was carried out against the requirements of the standard ISO 31000:2018 at the end of 2021, but no significant deviations were identified.

Starting with Q3 2022, SNN has increased its focus on the ESG risks. In order to improve and increase efficiency, SMR took a number of actions in Q4, such as: identification of the ESG risks in the risk register, risk analysis taking into account the ESG context, and preparation of a specific ESG training material.

In the Headquarters, there is a Risk Management Service and, in each department, there is an owner of departmental risks; in branches/subunits, the risk management function is provided by a representative coordinated from the Headquarters, and an owner is appointed in each department.

Technically, the risk register is a database hosted on the Company's servers, and accessible to relevant stakeholders.

The risk system developed in the Company is aligned to the standard ISO 31000:2018. The Company does not hold an ISO 31000 certification, because no certification body has been yet identified for this standard in Romania; however, in the annual review of the system, we perform gap analyses to ensure compliance with the standard's requirements.
The risk management system is aligned also with the COSO and BASEL standards.
For risk reporting and review, the Company uses a national system (SCIM)

Development stages of the risk management function at the level of SNN SA

2018 and before	2019-2022	Viitor
Risk management based on risk sheets and record of risks • Department organization / in subsidiaries • Records of risks for each subsidiary • Risk committees in subsidiaries • Hierarchical reporting (down-top) • Aggregation/ summary of information in SMR	**Risk management with a software application** • Centralized organization and management at the organization level • Sole record of risks • Predefined functionalities and reports • Correlation of risks – threats – vulnerabilities	**Integrated risk management**
Assessment of the commercial counterparty risk • Department organization / in subsidiaries	**Determination of risk profile and risk tolerance limit**	**Multi-company perspective (Nuclearelectrica, EnergoNuclear, Feldioara, Nuclearelectrica Serv, RoPower Nuclear)**
	Assessment of the commercial counterparty risk • Reporting and risk limits	**Increased digitalization level of activity**
	Banking/ insurer counterparty risk management	
	Checking and monitoring guarantees issued in favour of SNN	
	Analysis/ involvement in strategic projects	
	Other monitored/ examined risks: • Macro-economic (internal and international) risk • Market risk (including foreign exchange rate) • ESG risk • Sensitive function risk • Demographic risk • Geopolitical risk/ threats • Computer risk (cyber risk) • Covid 19 risk • Project risk	
	Other monitored/ examined risks:	

Risk assessment in SNN is carried out periodically (quarterly), according to MR-00-01 – Risk management procedure in S.N. Nuclearelectrica S.A., and results are described in the Risk Management Report, with a focus on the main risks which the Company faces.

The main categories of risks presented on a quarterly basis in the Risk Management report are:

- risks related to nuclear safety (Nuclear Safety);
- the information safety risks, guarantee control and physical protection risks (protection of nuclear material and of the radioactive materials);
- the compliance risks, divided into 3 subcategories, respectively fraud risks, compliance risks (ethics integrity, conflict of interests) and other compliance risks (risks regarding the conformity with the external regulation framework - for example: laws, ordinances, rules, and internal - e.g. policies, processes, internal procedures).
- risks related to the supply chain, in particular purchases;
- ESG risks;
- risks related to the major investment projects.

Most of the risks in these categories are in the green zone, having been established controls and monitoring tools to prevent their occurrence.

At the end of 2022, the Risk Register listed 425 risks, of which 93.65% in the green area (low risks), plus the risks of EnergoNuclear (16), Nuclearelectrica Serv (8) and FPCU Feldioara (10), and risks related to major projects (CTRF – 8, RT U1 – 9, SMR – 9, U3&4 – 11 and U5 – 7).

The risk tolerance limit of SNN, expressed as risk exposure, is 14, low score risks being considered tolerable, and those above this score being considered intolerable.

The Company's risk profile is presented in the following table:

Risk name	Weight 2022	Weight 2023	Risk level for 2022	Risk level for 2023	Trend 2022	Trend 2023
Operational Risk	40%	35%	Low	Low	→	↗
Market/price risk	5%	8%	High	High	↗	→
Credit risk/ counterparty	5%	7%	High	High	↗	→
Competitive risk	5%	5%	High	Medium	→	↘
Macro-economic risk	5%	5%	High	High	↗	→
Geopolitical risk	-	10%	High	High	-	→
Regulatory/ legislative risk	10%	10%	High	High	↗	→
Risk related to the specialized workforce	10%	5%	High	Medium	→	↘
Risk related to the investment/ maintenance/ refurbishment works (U1 & U2)	5%	5%	Medium	Medium	→	→
Project risk (U3 & U4, SMR, Cobalt)	10%	5%	Medium	Medium	→	→
Development and assimilation of subsidiaries FPCU Feldioara, EnergoNuclear, NuclearelectricaServ	5	5%	Medium	Medium	→	→
Overall risk profile	100%	100%	Medium	Medium	→	→

The main responsibility of SMR is to develop the framework for effective risk management, to facilitate and supervise its implementation and application by the business function.

Risk Management Framework

In order to implement the RM framework, a suitable infrastructure is necessary, as well as trained staff (risk owners), processes and technologies (risk management computer application).

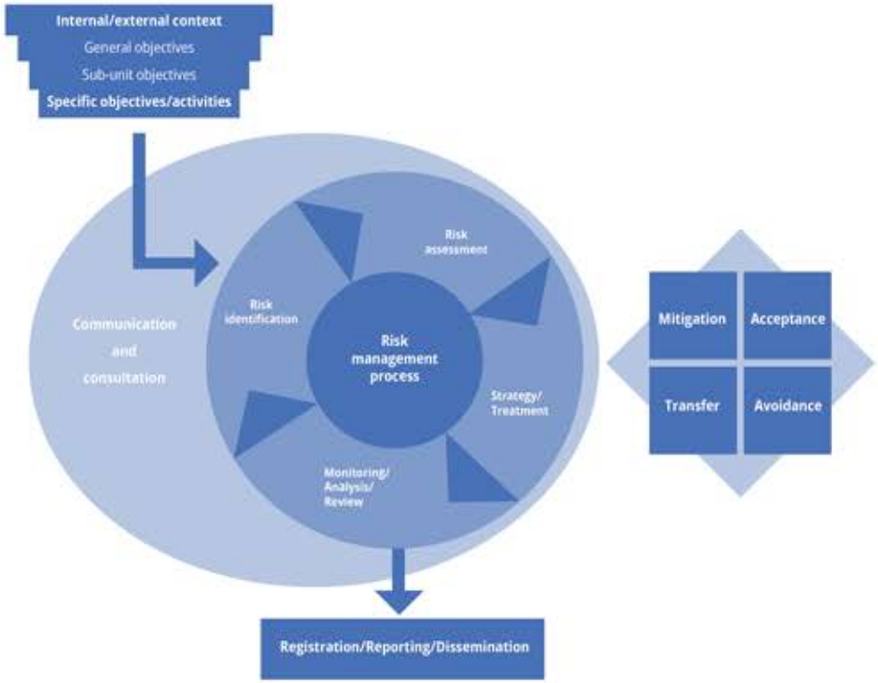
The risk management process is an integral part of the company's processes and activities. It can be applied at strategic, operational, programme or project level.

The risk management principles, practices and policies, as well as the related computer applications, are applied/used uniformly in all the SNN entities.

The risk register is a dynamic work instrument. Any SNN employee can report risks to the Risk Management Service or to the person responsible for risks within the department they are part of, risks that are then analysed, introduced and evaluated by risk owners throughout the year. Reporting to CM-SCIM and the interested parties is done quarterly.

- Corporate risks, mentioned in the diagram above, refer to macroeconomic, business, credit, operational, market, climate, geopolitical risk.
- Technological and operational risks are specific to the electricity production activities and the administration of the operation of the Cernavoda NPP plant and the NFP Pitesti plant.
- Investment risks refer to the risk of project, refurbishment, maintenance works, investment works, at the level of SNN.

The stages/activities of the risk management process, according to SR ISO 31000:2018, applied in SNN, are:



The external and internal context represents the environment in which the Company wants to define and achieve its objectives. The risk management takes place in the context of the Company's objectives and activities.

Risks can occur, change or disappear as the external and internal context of the organization changes.

Communication and consultation with the appropriate external and internal stakeholders should take place throughout all stages of the risk management process.

As a result of the passage of time, changes may occur in the conditions, circumstances, circumstances and/or risk control mechanisms, for which reason all identified risks must be controlled by appropriate measures and monitored over time, in order to identify any change that may generate the occurrence of a risk event and/or a risk reclassification.

The periodic analysis focuses on aspects related to circumstances, the occurrence of new risks, changes in impact or probability, the need to escalate decisions, the stage of implementation and the effectiveness of control measures.

The risk management system is carried out based on procedures, in accordance with a specific risk procedure developed taking into account the requirements of the standard ISO 31000:2018. The results of the risk management system are presented taking into account the requirements of the GRI management standard, in accordance with the Directive no. 2014/95/EU of the European Parliament.

From an operational point of view, the Company has a Risk Management Service (RMS), as well as a person in charge of risk management in each subunit. Technically, the risk register is a Company-wide database accessible to relevant stakeholders.

The risks are entered in this database (by risk owners); risks have four potential strategies: waiver (of risk) - only when the object the risk is attached to disappears; risk acceptance, as is, with no efforts needed to mitigate it; risk transfer – usually the transfer of the effects of the risk occurring by insurance; risk treatment - if there are defined actions to mitigated the risk, or preventive actions.

The risks are reviewed at least quarterly, by risk owners, who submit them for validation to the head of the department/director of the department. Afterwards, they submit the risk to the unit's risk manager, who, after validation, directs the risk to the RMS, which reviews the entire risk universe. Any of the validators along the previously described chain has two options: to validate the risk and allow the continuation of the flow of validations, or to send the risk back to the owner, with a message about the reason why the risk was not validated.

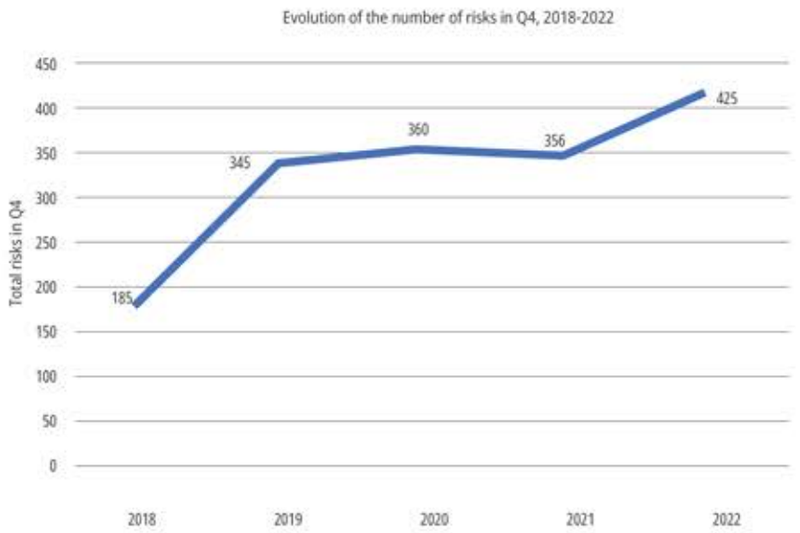
For certain risks, scenarios and response plans are defined to ensure business continuity. These scenarios and response plans devised made depending on the business area in the Company.

The risk owners, based on the risk methodology in force, classify risks into risk categories according to the internal needs for analysis identified within the organization and permanently adapt the classifications and reports regarding risk information according to these internal needs of the organization's departments and the falling into the approaches and classifications made in other compartments or functions within SNN.

SNN has established mitigation methods for several subcategories of risks, as follows:

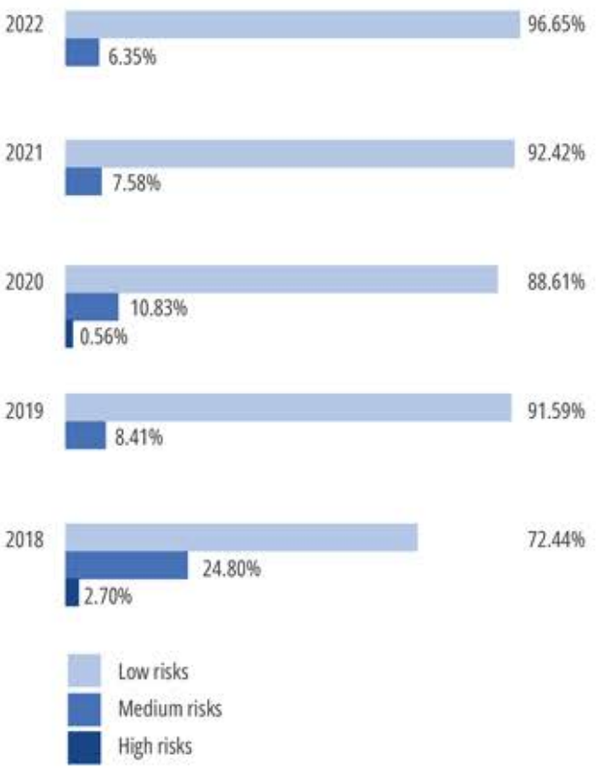
No.	Risk category	Mitigation method
1. Macro-economic environment		
1.1	Market risk	• long-term bilateral contracts, with fixed prices or well-defined price formulas;
1.2	Legislative/regulatory risk	• use of the best technologies that ensure the environment sustainability; • continuous communication with the authorities;
1.3	Currency risk	• negotiation of price conditions that include the currency risk
2. Operational environment		
2.1.	Commercial risk	• negotiation of contracts for a period of more than 1 year, with predefined prices; • policy of evaluation of commercial partners; • capitalization of export opportunities.
2.2	Regarding costs	• conclusion of contracts for the compensation of revenues from the electricity production when the reactors are stopped, thus anticipating the unplanned shutdowns.
2.3	Counterparty risk	• well-designed and detailed long-term contracts; • application of a rating system in the case of parties with which bilateral contracts are concluded; • guarantees (cash in the Company's accounts, letters of guarantee, binding letters of commitment, of the PCG - Parent Company guarantee type).
2.4	Competitive risk	• continuous monitoring of the markets, • applying a cost control policy.

As one can see in the diagram below, the risk register was enriched during 2022, so that at the end of Q4, 425 risks were registered, as compared to 356 risks at the end of Q4 2021. Subsidiary and project risks add to the 425 risks, as follows: EnergoNuclear (16), Nuclearelectrica Serv (8), FPCU Feldioara (10) and risks related to major projects (CTRF – 8, RT U1 – 9, SMR – 9, U3&4 – 11 and U5 – 7).



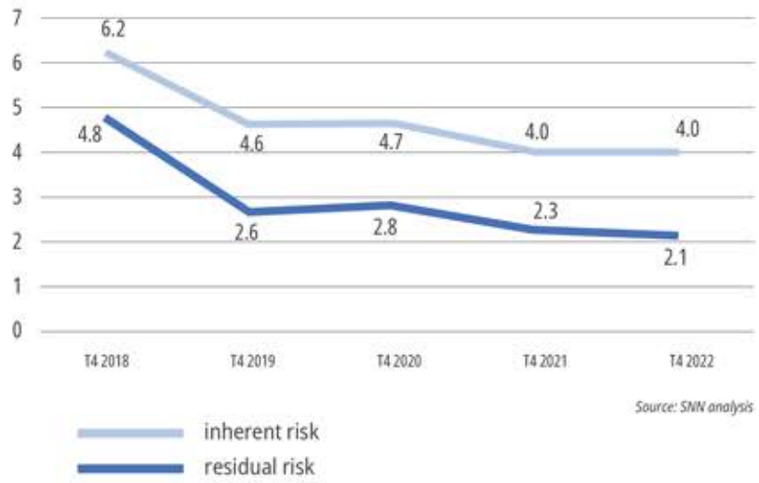
Regarding the evolution of risks, one can see in the presentation below that during the last 2 years, no risks were identified that exceeded the Company's risk tolerance limit, and the percentage of average risks decreased from one year to the next. These results show that the risk management process is efficient, and the permanent monitoring of the control actions and instruments determines the continuous improvement of results and the prevention of occurrence of any significant risks.

Evolution of high/medium/low risk proportions in Q4, 2018-2022



Regarding the average exposure in Q4, it is noted that the inherent average exposure in Q4 2022 is maintained as compared to Q4 2021, as well as a slight decrease in the residual average exposure in the same period of time, which shows that the identified risks were carefully monitored and their mitigation actions were efficient and effective. Thus, SNN managed to achieve the economic and financial objectives and indicators, with unprecedented results in the last years.

Comparison of average exposures
- inherent risk vs residual risk -



Source: SNN analysis

The exceptional results of the risk management function are reflected in the achievement of the company's objectives and in the performance of the management economic and financial indicators, the carrying out and monitoring of the investments.

The risk management strategy adopted at SNN level takes into account the economic and financial objectives assumed by the management through the management Plan, the realities of the social and economic environment, as well as the future technical and scientific developments. A defining element with a view to increasing efficiency of monitoring the risks at the level of a company in full expansion, is represented by the digitalization process. The development and implementation of certain software applications which should support, improve and increase efficiency of the risk management process at SNN level, represents a permanent concern of the current management. Moreover, the investment in the human resource, the specialized courses organized by the risk management function for the employees of the entire company, result in the consolidation and development of a Security culture, based on the risk identification, assessment and monitoring.

45 COMPLIANCE FUNCTION

In order to promote and strengthen integrity in the performance of corporate activities, Nuclearelectrica has developed a compliance programme including policies and principles aimed at encouraging and facilitating the activity of preventing, detecting and combating acts of corruption, in order to achieve the objectives established by joining the National Anti-Corruption Strategy. Nuclearelectrica's management and its staff comply with and maintain the concept of zero tolerance to corruption, taking and giving bribes, being firmly committed to complying with national legislation and the applicable regulatory framework. The company provides access to all necessary information resources and counselling to prevent violations of the law or company regulations.

The CEO and the management of the Company support an organizational culture based on the principles of integrity. By allocating the necessary and sufficient resources for performance of the activity and granting autonomy to the compliance function, the Company recognizes the independence and importance of the function.

The Company promotes, among its employees, collaborators and business partners, the principles of ethics and compliance. For this purpose, in order to make them easier to understand and observe, the principles of ethics and integrity were documented in the Guidelines for

Advisors Counsellors and Guidelines for Recruitment of Human Resources, which are provided to every new-hire.

Openness and transparency build credibility and trust between partners in business negotiations. We protect the interests of the investors and the society through a careful selection of our suppliers and partners. We consider that compliance standards are a special factor in promoting our business relationships and we insist, including through contractual clauses, that partners comply with the rules and regulations in force.

In this regard, SNN providers with a high amount of their contracts and clients with negotiated contracts are assessed for the general risk of corruption. The Compliance Office has made available to our business partners, classified in the medium risk category, excerpts from SNN's compliance policies, with the aim of these being taken into account by the management and employees involved in negotiation/performance of contracts, and as a good practice in development of the internal anti-corruption management system.

Acceptance and granting of benefits is subject to rules designed to protect the Company against ethical infringements and any other non-compliance that could cause reputational, business, or financial damage or give rise to legal sanctions. The gifts or benefits received by the SNN staff, which under the scope of the provisions of the specific procedure, are assessed and recorded.

Management of conflicts of interest is very important for protection and integrity of the business environment, and the transparency of the decision-making process. In this regard, the Internal Regulation provides that all employees must disclose any potential conflicts of interest by filling out declarations annually or whenever changes occur.

The SNN's anti-bribery management system is certified according to the standard ISO 37001
The partnership with the World Economic Forum and the membership of the Platform of the Partnering Against Corruption Initiative allows us to be more visible on the international stage, coordinate collective actions on some strategic themes of SNN, participate in global initiatives, such as zero carbon emissions, use of energy from clean sources, commitment to ethics and integrity, and have extensive access to carefully selected information, reports, briefings, and white-papers.

The activity of the Compliance Office is complex and laborious, and is carried out in the following areas:

Communication
Procedures
Awareness raising and training
Consultancy
Control and investigations
Other corruption risks

The main activities foreseen in the 2022 compliance programme are listed below:

- Implementation of the objectives and measures of institutional transparency and corruption prevention, as provided in the following National Anti-corruption Strategy.
- Participation in government initiatives on anti-fraud/anti-corruption, and in the events organized by AMCHAM Romania to foster integrity in the Romanian business environment.
- Participation to the "Partnering Against Corruption Initiative" platform and the transfer of the expertise gain by improving the internal regulatory framework.
- Continuation of the control and monitoring activities concerning the risk areas and dissemination of the principles of ethics and integrity to our employees and partners.
- Revisiting the anti-corruption and anti-fraud procedures to reflect the amendments of the legislation. The focus is mainly on the recommendations concerning whistleblowing of the EU Directive 1937/2019, under the national legislative framework to be adopted, as well as the regulatory act that ensures transition between the current National Anti-Corruption Strategy for 2016-2020, and the future strategic document.
- Planning training programmes depending on the exposure of the staff to specific risks.

46 COMMITMENT TO DEVELOPMENT OF COMMUNITY AND STAKEHOLDER RELATIONS

GRI 102-40, 102-42, 102-43

In correlation with its field of business, SNN constantly develops, under the responsibility of the SNN executive management, relations with all categories of stakeholders, providing them with relevant information, depending on their interest and trying to constantly respond to their concerns. The most relevant categories of stakeholders are: central and local authorities, shareholders, investors, national and international non-governmental organizations, mass media, local communities and the population.

SNN applies the provisions of the Aarhus and Espoo Convention regarding the organization of public consultations regarding infrastructure projects with radiological impact. For this purpose, SNN makes available to all categories of stakeholders complete information about the project under public debate by creating a dedicated web page, information, organization of public consultations, information notices in the press, in compliance with the legal provisions.

Cernavoda NPP maintains a close cooperation relationship with the local community of Cernavoda by exchanging information and jointly addressing the problems of community, and providing constant information about the doses issued via the Community Information and Consultation Board.

For a comprehensive approach to community consultation, the executive management has decided to supplement its community communication and consultation programme by setting up the Community Information and Consultation Board (CICB). The Board is formed citizens of the town of Cernavoda and the communes of Saligny and Seimeni, representatives of non-governmental organizations and members of different institutions that are interested in matters related to the nuclear power plant.

CICB has approx. 30 members whose concerns interfere with the existence and activity of Cernavoda NPP:

- citizens of the town of Cernavoda and of the communes of Saligny and Seimeni;
- representatives of non-governmental organizations;
- representatives of the local administration;
- representatives of important institutions (schools, police, hospitals, agriculture, churches, etc.)
- representatives of the private business environment.

This document sets out the scope of activity and the administrative procedures of the Community Information and Consultation Board (CICB).

The Community Information and Consultation Board (CICB) supports Cernavoda NPP in identifying and effectively responding to the questions, concerns and interests of the community, in relation to Cernavoda NPP's activity. Also, the Board has the following purpose:

- to identify the problems, concerns and interests of the community;
- to provide Cernavoda NPP with consultancy, advice and opinions on the community expectations in all areas/fields of interest related to the activity of Cernavoda NPP;
- to defines the actions that its members consider necessary in order to be able to continuously improve the activities on site and to contribute to a better communication and collaboration between Cernavoda NPP and the local community;
- to provide consultancy, advice and opinions on the communication activities of Cernavoda NPP with the community on the environmental, business and social effects of the power plant's operation on the community;
- to supply data and information for environmental assessments related to Cernavoda NPP;
- to participate in the visits made to site of Cernavoda NPP, that are relevant for the local community;
- at certain time intervals, to prepare and publish a report on the activities of the Community Information and Consultation Board (CICB); • to work with other

- consultation organizations related to the nuclear industry (ROMATOM, AREN, etc.), in a way that maximizes distribution of information and minimizes its duplication.

The Nuclear Power Plant of Cernavoda ensures:

- to provide information about the items on the agenda in an appropriate and timely fashion, so that the Board can assist and support Cernavoda NPP to carry out a given action in an appropriate manner;
- the expert operating and scientific advice from internal resources in order to support the Board's activity; Cernavoda NPP will strive to provide professional resources to support the Board's activity when such expert advice is needed;
- to taking the necessary measures for the people of NCNAC or other important authorities to participate in meetings/gatherings to answer the CICB's questions, when Cernavoda NPP is not the organization in a position to provide such answers;
- to participate in debates with a view to finding solutions and attaining the objectives of the Company and the community;
- the use of Board as a survey body concerning the objectivity and content of the communications;
- to give feedback to the Board on the decisions made and their progress, as well as on performance of the activities;
- to organize the meetings and provide the necessary logistics.

In Cernavoda, there is one population information center where public events, debates and presentations are organized.

The objectives of the Information Center are:

To raise public awareness and acceptance of the nuclear energy

- to deliver presentations to students of schools and high schools, members of associations, committees, and citizens of the town of Cernavoda;
- to organize meetings on "Nuclear Energy";
- to organize sessions and discussions with the citizens of the town;
- to organize exhibitions and contests of painting, manual work, etc. with the theme "Nuclear Energy";
- to organize visits to the nuclear power plant.

To provide prompt, accurate correct and efficient information of the population

- to provide information on events taking place in the power plant or that could affect the power plant;
- to release regular external newsletters to be distributed to local authorities;
- to have regular work meetings with the representatives of the municipalities, associations, etc. which have the necessary authority to inform the population about the importance and benefits of the nuclear power plant for the community;
- to answer to citizens' questions using the "Request and answer to questions/petitions/comments/suggestions form".

To organize joint actions with the local authorities, so that the town's population is trained in case of a radiological emergency

- to hold sessions for presentation of the response procedures in case of radiological emergency, and specific protection trainings for the population of the town of Cernavoda, the municipality's staff, the representatives of associations, etc.

To build the trust of the population in the Romanian nuclear programme

- To deliver presentations on the plant's performance.
- To hold meetings between the power plant's specialists and citizens.
- To issue monthly Newsletters with the results obtained in the effluent and environment monitoring programme - Cernavoda NPP MONTHLY NEWS.

Because the population is one of the most important stakeholders for a nuclear power plant operator, S.N. Nuclearelectrica S.A. conducts opinion polls at national level, every two years, and adapts its external communication strategy so as to respond to the population's needs for information.

Citizens can approach the Management of Cernavoda NPP using the "Request and response to questions/petitions/observations/suggestions" form, publicly available at:
Formular-de-solicitare-si-raspuns-la-intrebari-petitii-observatii-sugestii.pdf (nuclearelectrica.ro)
The petitions filed by citizens are entered by the staff of the Public Relations Office in a register; the answers will be sent to the address entered in the "Request and response to questions/petitions/observations/suggestions" for or, when no address was provided, the petitioner will be given notice thereof by phone that they can come to the headquarters and pick up a written response.
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47 COMMUNITY DEVELOPMENT PROGRAMMES

The responsibility for development of the communities where it operates is a priority for a nuclear operator. Sustainability and development are values of the Company, strategic action lines and a commitment of the Company.

The actions of S.N. Nuclearelectrica S.A. for development of the local community are an integral part of the corporate plan and have been and are carried out throughout operation of Units 1 and 2.

- From the point of view of infrastructure development and access to education, health, and better living conditions, at the end of 2008, 11 important works were completed

1.1 Food store on the site of the power plant
1.2 Kindergarten
1.3 Drinking water station (pumping and treatment)
1.4 Upgrading of junctions and streets
1.5 District heating networks
1.6 "Sfanta Maria" bridge for car access to the Cernavoda railway station and Fetești-Cernavoda motorway, over the Danube-Black Sea Canal
1.7 Energetic High School of Cernavoda
1.8 Hospital with 100 beds and polyclinic dispensary in Cernavoda
1.9 Sewage and residual water treatment station
1.10 Four drinking water fountains
1.11 Set of housing units

- From the point of view of ensuring jobs: Currently, more than 1,600 jobs are provided;

- From the point of view of talent development and increasing diversity, inclusion, and equality, since 2021: implementation of dual education in the community high schools, traineeships, vocational school, internships, apprenticeships, involvement of the SNN staff in career guidance, meetings, and workshops

- From the point of view of facilities: Ensuring the heating of the town of Cernavoda: for approximately 60% of the inhabitants of the town of Cernavoda, at the lowest rate in the country

- From the point of view of extending the services for community: In 2021, SNN established the NuclearServ subsidiary to provide services to both the Company and at local level.

For a comprehensive approach to community consultation, SNN has implemented the community communication and consultation programme by setting up the Community Information and Consultation Board (CICB). The purpose of CICB is to identify the issues, concerns and interests of the community and to provide Cernavoda NPP with consultancy, advice, opinions and suggestions about the community expectations in all areas/fields of interest, with a view to continuously improving the activities on site and making a contribution to the well-being of the community.

Considering that Unit 1 started to be commercially operated in 1996, and Unit 1 in 2007, to which adds the plan to extend the initial lifetime of both units by another 30 years, it is too early to speak about post-decommissioning development, as its effectiveness depends on the specific needs of the community.

48 OPERATING PERMITS AND LICENSES

GRI 307

The Company pursues its business via its two Branches based on the following main categories of specific permits, special licenses and specific rights:

1. Site Permit no. I/605/30.09.1978, issued by the State Committee for Nuclear Energy;
2. Nuclear permits issued by the National Commission for Nuclear Activities Control (NCNAC);
3. Licenses issued by the Romanian Energy Regulatory Authority (RERA);
4. Other authorizations.

1. Site Permit no. I/605/30.09.1978, issued by the State Committee for Nuclear Energy

The Site Permit was issued for erection of a CANDU-PHWR 4x660MWe nuclear power plant, consisting of four nuclear reactors, on the site of Cernavoda. The permit was issued pursuant to Law no. 61/1974 and of the Nuclear Safety Rules "Nuclear Reactors and Nuclear Power Plants" of 1975, and provides for the main technical characteristics of the nuclear power plant.

2. Nuclear permits issued by NCNAC

According to Article 8(1) of Law no. 111/1996, operators are required to obtain specific permits issued by NCNAC, in observance of the permitting procedure specific to each king of activity or source, in order to carry out their activities and/or use the sources falling under the scope of this regulatory act. At the end of 2022, SNN holds the following valid permits in the nuclear field.

(i)
Nuclear permits issued by NCNAC for the Cernavoda NPP Branch:

- Nuclear safety permit for operation and maintenance of the Cernavoda Nuclear Power Plant, Unit 1, permit no. SNN Cernavoda NPP U1 - 01/2013. The permit was for a period of 10 years, from 1 May 2013 until 30 April 2023;
- Nuclear safety permit for operation and maintenance of the Cernavoda Nuclear Power Plant, Unit 2, permit no. SNN Cernavoda NPP U2 - 01/2020. The permit was for a period of 10 years, from 8 December 2020 until 7 December 2030;
- Building Permit for Modules 12, 13, 14, 15, 16 and 17 of the Spent Fuel Intermediate Storage, permit no. SNN DICA Building 02/2020. The permit is valid until 19 August 2025;
- Permit for operation and maintenance of Modules 1, 2, 3, 4, 5, 6, 7, 8, 9.10, 11, 12, 13 and 14, of the Spent Fuel Intermediate Storage, i.e. permit no. SNN DICA 09/2023. The permit was issued on 9 January 2023 and is valid until 15 July 2053;
- Quality management system permit for nuclear operation, design, supply, repair and maintenance activities, and operation of nuclear software products. Permit no. SNN Cernavoda NPP - 01/2021 is issued for a period of 2 years, from 1 May 2021 until 30 April 2023.

(ii)
Nuclear permits issued by NCNAC for the NFP Pitesti Branch:

(a) Permit for the Quality Management System in the nuclear field no. 22-038 issued under Article 24 of Law no. 111/1996, for the nuclear fuel manufacturing activities, valid for 2 years, from 18 September 2022 and until 17 September 2024;

(b) 8 permits to perform activities in the nuclear field:

i. Permit LD/266/2022 for performance of activities in the nuclear field, issued by NCNAC for NFP Pitesti to HOLD closed sources of ionizing radiation, radiological plants with sources of ionizing radiation, devices generating ionizing radiation, nuclear fuel production facilities, nuclear fuel, nuclear materials, nuclear fuel bundles, radioactive waste, materials of nuclear interest and dual-use materials provided in the Government Decision no. 916/2002, valid from 15 November 2022 and until 30 January 2024;
ii. iPermit LD/268/2022 for performance of activities in the nuclear field, issued by NCNAC for NFP Pitesti to USE closed sources of ionizing radiation, radiological plants with closed sources of ionizing radiation, radiological plants with closes sources of ionizing radiation, and devices generating ionizing radiation, valid from 15 November 2022 and until 30 January 2024;
iii. iAuthorization DN/021/2022 for performance of activities in the nuclear field, issued by CNCAN for NFP Pitesti to HANDLE closed sources of ionizing radiation, nuclear materials, nuclear fuel, radiological plants with closed sources of ionizing radiation, devices generating ionizing radiation and waste radioactive, valid from 31 January 2022 and until 30 January 2024;
iv. Permit LD/2678/2022 for performance of activities in the nuclear field, issued by NCNAC for NFP Pitesti to PRODUCE nuclear fuel, valid from 15 November 2022 and until 30 January 2024;
v. Permit LD/023/2022 for performance of activities in the nuclear field, issued by NCNAC for NFP Pitesti to TEMPORARILY STORE nuclear materials, nuclear fuel type CANDU-6 and radioactive waste valid from 31 January 2022 and until 30 January 2024;
vi. Permit LD/024/2022 for performance of activities in the nuclear field, issued by NCNAC for NFP Pitesti to SUPPLY nuclear materials, and nuclear fuel type CANDU-6 valid from 31 January 2022 and until 30 January 2024;
vii. NFP Transport Permit 20/2018 for transport of radioactive materials valid from 10 January 2019 and until 9 January 2024;
viii. Permit PM/219/2021 for possession of unpublished information valid from 29 November 2021 and until 28 November 2026

(c) Under the Qualification Certificate no. NFP-ODD 12/2020, NCNAC updated the qualification of the staff radiation protection and dosimetry laboratory of NFP Pitesti as a Dosimetry Body, valid from 27 October 2020 until 26 October 2025..

(d) CLEARANCE no. 956/20.03.2017 for the jobs in NFP Pitesti classified in radiological risk categories I-IV and special conditions, valid from 1 September 2021 and until 1 September 2023.

(iii)
Nuclear permits for the Headquarters:

(a) Quality management system permit for operating nuclear management activities. Permit no. SNN EX - 01/2021 is issued for a period of 2 years, from 1 May 2021 until 30 April 2023;

(b) Permit no. PD/229/2021 for possession of heavy water for Units 3 and 4, valid from 17 November 2021 until 25 October 2023.

(iv) NCNAC authorized staff: In the SNN Headquarters, there are 4 operation permits issued according to the NCNAC rules, for management positions, one permit for independent assessment of nuclear safety and a Level 3 operation permit for nuclear raw materials, mining and ore processing specialty.

For Cernavoda NPP Branch, the Company holds 19 NCNAC operation permits for the management staff, 4 NCNAC operation permits for the training staff, and 45 NCNAC operation permits for the operational staff of the control rooms of the two Units, as well as 4 permits for independent assessment of nuclear safety, in GEI.

For NFP Pitesti Branch, the Company holds 4 NCNAC operation permits for the management staff and 30 operation permits in the nuclear field, Level 2, as well as 2 permits for independent assessment of nuclear safety, in CEI.

(c) Licenses issued by RERA

According to the Regulation for the granting of licenses and permits in the electricity sector, as approved under the Government Decision no. 540/2004, the activities of electricity supply, electricity general and heat generation in cogeneration facilities are carried out under licenses issued by ANRE for this purpose.

The Company holds, at the date of the Report, the following licenses issued by ANRE:

- License no. 5/03.12.1999 for generation of electricity, issued under the ANRE Decision no. 80/03.12.1999;
- License no. 2218/27.05.2020 for commercial exploitation of heat generation facilities, issued under the ANRE Decision no. 848/27.05.2020.
- License no. 2236/30.09.2020 for electricity supply, issued under the ANRE Decision 1715/30.09.2020, valid from 21 October 2020.

The Company complied, both during the previous years and in 2022, with the provisions of the conditions attached with the licenses listed above.

License no. 5/03.12.1999 concerns authorization of the Company to carry out the electricity generation activity through commercial operation of the energy facilities related to the electricity generation units. The license came into force on 3 December 1999 and is valid for a period of 25 years. Under the ANRE Decision no. 1683/01.11.2007, the license was amended in the sense that the installed power of the energy facilities of the Company increases from 706.5 MW up to 1,413 MW and other conditions related to the license were approved after the commissioning of Unit 2 of Cernavoda.

License no. 2218/27.05.2020 concerns authorization of the Company to carry out commercial operation of the heat production facilities related to the electricity and heat generation units, consisting of two heat exchangers with a total heat power of 44 Gcal/h and 40 MW. The license came into force on 27 May 2020 and is valid for a period of 25 years.

License no. 2236/30.09.2020 for the supply of electricity is valid as of 21 October 2020 for a period of 10 years, and concerns the authorization of the Company to carry out the supply electricity on the retail electricity market.

(d) Other authorizationsi

- ISCIR regulatory documents;
- Declaration to the National Anti-Drug Agency;
- Licenses issued by the Romanian Communications Regulatory Authority (ANCOM). Cernavoda NPP obtained from ANCOM 5 licenses for the use of radio frequencies, while NFP Pitesti obtained 10 such licenses;
- Fire safety permits;
- Sanitary permits.

In the field of environmental protection, permits and certificates were presented separately in the report.

Nuclear safety

The permanent maintenance of a high level of nuclear safety in all phases of performance and operation of nuclear objectives and facilities is of vital importance and constitutes the first priority for SNN.

SNN has developed and respects a nuclear safety policy that was approved by NCNAC, in order to maintain a high and constant level of nuclear safety in all phases of the commissioning and exploitation process of nuclear installations. The nuclear safety policy provides guarantees of good execution for all important activities regarding nuclear safety, in all phases of implementation and exploitation of nuclear installations. This document confirms that nuclear safety has the highest priority.

Nuclear safety as a field is a set of technical and organizational measures intended to:

- ensure the safe operation of nuclear facilities;
- to prevent and limit their deterioration;
- to ensure the protection of the staff, the population and the environment against radiation or radioactive contamination.

The high level of nuclear safety is ensured by the way in which nuclear facilities are designed, built and operated. The risk generated by the nuclear fuel from the reactors on the population and the external environment is minimal, due to the fact that:

- The power of the reactor is under control;
- The fuel is cooled down;
- The radioactivity is retained, and all are performed continuously.

The nuclear safety philosophy of CANDU-type power plants is based on the concept of "Defence in Depth", which ensures gradual protection in the event of equipment failures, human errors, transient regimes anticipated in operation or accidents, including severe accidents. For the implementation of this concept, the project foresees a number of successive protection barriers against the uncontrolled release of radioactive materials into the environment. In addition to the five major barriers against the release of fission products to the population from a CANDU-type power plant: fuel matrix, fuel sheath, primary circuit enclosure, envelope enclosure and exclusion zone; passive or active characteristics have been included in the system design, intended to prevent or limit the consequences of a process failure or accident sequences, which could otherwise lead to releases of radioactive materials into the environment.

No CANDU-type nuclear power plant has reported events or accidents that threaten the health or safety of the population. To supplement the measures intended for the power plant's operation under full safety conditions, planning and preparation for emergency situations is a mandatory condition for authorizing a nuclear power plant to operate. At Cernavoda nuclear power plant, emergency preparedness is checked and improved in quarterly, annual or general drills (once every 3-4 years).
In the aftermath of the Fukushima accident, the European Commission and the Group of European Regulators of the Nuclear Society have decided that the nuclear safety of nuclear power plants in Europe should be reviewed based on transparent and extensive risk assessments, called "Stress Tests". The technical purpose of these stress tests was defined considering the risks that were highlighted by the events at Fukushima. Emphasis was placed on the following issues: the triggering events, such as earthquakes or floods, the consequences of the loss of the safety functions during these events, as well as the difficulties of managing severe accidents.

Cernavoda NPP, together with AECL Canada and Ansaldo Italy, issued the "Report on Reassessment of the Nuclear Safety Margins". The assessment conducted proves that Units 1 and 2 of Cernavoda NPP meet the nuclear safety requirements set out under the design and can face severe earthquakes and floods, as well as the total loss of electricity supply and cooling water. In addition, methods and procedures were identified for the management of potential severe accidents. Also, methods were identified to prevent and limit the consequences of accidents that can cause melting of the active area.

In order to ensure good coordination with the competent Local Public Authorities on the response to emergency situations, Cernavoda NPP has set up two important facilities for the town of Cernavoda, namely: The Local Center for Emergencies of the Cernavoda Municipality and the Personal Decontamination Area, in the Cernavoda Town Hospital.

49 PROCUREMENT IN SNN

GRI 204

SNN purchases products, services and works under the provisions of Law no. 99/2016 on sectoral procurements and performs the vast majority of the procurement procedures on the SEAP electronic platform.

Also, for more complex projects, SNN initiates Market Consultation announcements, Which are also published in SEAP (https://e-licitatie.ro/pub/mc-notices/list/1). During the market consultation, meetings can be held with interested suppliers; the aspects subject to consultation may concern technical, financial or contractual solutions to meet needs of SNN.

Apart from the "classic" qualification criteria (regulated by Law no. 99/2016), such as similar experience, turnover, implementation of quality systems such as ISO 9001 and/or ISO 14001, permits specific to the fields regulated by authorities such as ANRE, IGSU, ISCIR, etc., the tender procedures often require permits specific to the nuclear field, which are issued by the National Commission for Nuclear Activities Control (NCNAC).

When the products, services or works that are covered by the procurement/contract have an impact on the environment, the qualification criteria must also include specific requirements/criteria according to national and international legislation in the field of environmental protection and/or of the management, transport and disposal of waste (including hazardous waste), such as, but not limited to: certification of the environmental management system according to the standard SR EN ISO 14.001, environmental permit issued by the competent environmental protection authorities for collection, packaging, transport, temporary storage, treatment, recovery and disposal of waste, as the case may be, permit for operations with substances of the category of classified substances issued by the National Anti-Drug Agency, certificate of registration to "National Register of study developers for environmental protection", certificate of qualification as a notified body for the nuclear field, for laboratories that carry out environmental radioactivity analyses.

CSR
GRI 102-43, 413

50 CSR
GRI 102-43,413

Nuclearelectrica is a strategic company, with an important role in the safety of the national energy system, contributing to the national energy security and stability, creation of quality jobs, maintaining the supply chain and the Romanian nuclear industry, developing education programmes to train nuclear engineers and not only, research and innovation programmes, as well as development of the local communities where it operates through investments in social responsibility (CSR) projects. As an important actor in the society, SNN constantly maps the interests and concerns of its stakeholders in order to build a trust-based relationship and support sustainable development that produces value for as many categories of the public as possible.

The SNN's CSR Platform Nucleus of Care contributes improvement of the life quality in the communities targeted by CSR projects and sponsorships granted by the company. SNN's involvement in the society is necessary not only to ensure good business results, but also to gain the respect and trust of the communities in which the Company operates, contributing to the development of a sustainable and performing Romanian society. CSR projects and the sponsorships concern the most urgent needs of the communities and environment, in order to actively take part in the improvement of the living conditions by supporting strategic partnerships with the civil society.

Thus, investing a share of the annual profit of SNN in shares by CSR and sponsorships shall be an integral part of the company development strategy and the initiatives are linked with its important values. 5. The CSR and sponsorship strategy of SNN is in line with the Company's business strategy, and the initiatives are linked with the Company's business purpose and its important values. With its Nucleus of Care platform, SNN supports initiatives of not-for-profit organizations and institutions actives in fields of social impact, such as: educational and research, medical and humanitarian, culture and environment. SNN's CSR and sponsorship strategy sets out principles related to SNN's business culture, such as: economic equity, social equity, fair behaviour, transparent relationships, integrity, moral principles and investments in the community.

With its actions, SNN intends to address the real problems of the community, and make a contribution to a change for the better which the Romanian society needs for equal opportunities, increasing the standard of living and tapping into resources and, last but not least, growing the future generation. SNN strives to build a long-term relationship based on trust with employees, local communities, suppliers and partners and citizens, to serve as a foundation for creating sustainable business models. Greater trust therefore contributes to creation of an environment in which SNN and its stakeholders can innovate and develop. SNN is aware that its business activities require, more and more, an ethical foundation that positions the man, the environment and the social considerations at the center of the business activity.

Objectives

Under the CSR and sponsorship strategy for 2022, SNN aims to attain the following objectives:

- Developing relations with the local community, NGOs, opinion leaders and building local capacity;
- Attracting and training young specialists;
- Positive impact in the communities that need support to address major issues; positive impact in the communities where it operates
- Communication of the benefits of nuclear energy, as a clean source of energy, as well as of the social and economic impact of the Company;
- Increasing acceptance of the use of nuclear energy in Romania and of the Company's investment projects;
- Responding to the genuine problems of the community;

SNN runs annual reviews and planned and targeted CSR actions and sponsorships, focused on a number of identified social problems, meeting the estimated budget needed for implementation of the CSR programmes and in accordance with this strategy. SNN adopts a proactive approach to its communication on the Nucleus of Care platform at national level, where projects are invited to sign up for selection and granting of sponsorship, and applies a transparent decision-making process, based on clear criteria communicated under the sponsorship grating procedure and through the sponsorship application form. Social responsibility, regardless of how it is implemented, is an integral part of the Company's vision and strategy, under the Empathy and Responsibility values, and is one of the Company's 5 strategic directions, and SNN continues to support both the local community, and initiatives that foster innovation and continuous development.

Strategic directions in 2022

The CSR and sponsorship actions in which SNN was involved in 2022 targeted projects and stakeholder groups whose funding needs fell into the areas listed, and selected them according to the beneficial impact that SNN can bring to the areas with increased risk, with a view to addressing some major social problems of the Romanian society.

In 2022, SN Nuclearelectrica SA launched the social responsibility platform the "Nucleus of Care", which follows the strategic directives and the vision of the company to build a sustainable future for the future generation, both by clean power production at excellence standards, and by the social and economic impact which it has in Romania.

The "Nucleus of Care" platform aims at projects and beneficiaries whose needs for financing are classified into **health, educational and environmental areas, and the projects in the areas where the company carries on its activity have priority.** The projects listed according to the forms made available under the company regulation were selected and approved based on the related public regulation, depending on the positive impact which they could bring in high risk areas or within certain risk groups, in order to solve certain major social issues.

1.
For Education, the platform **Nucleus of Care** is intended for project that contribute to the creation and development of the educational environment through specific actions of renovating and equipping schools, both with specialized laboratories (physics, chemistry, computer science, robotics, etc.), and in terms of online education, which requires the possession of tablets, laptops and other equipment for laboratories and properly and modernly equipped classrooms for online education, which the less favoured public categories cannot afford. Also, educational projects of mentorship, career development, access to quality education, scholarships, etc. are supported.

2.
For the medical field, the **Nucleus of Care** platform targets projects that increase access to high-performance and quality medical services through provision of medical equipment and services, actions or other activities related to this field. .

3.
For the environmental protection, considering that Nuclearelectrica is a producer of clean energy, without greenhouse gas emissions, the **Nucleus of Care** platform targets environmental projects that can emphasize the essential role that the Company has in managing climate change through actions of afforestation/reforestation, creation of green spaces in the communities where Nuclearelectrica operates, and provision of support to environmental/mountain organizations, etc..

These domains and subdomains are published by SNN on the website and promoted as such for the purpose of informing potential applicants.

			Education		Health		Environment		Other Domain	
	Total Amount Given (lei)	Impact	Sums Given (lei)	Impact (nr. of people)	Sums Given (lei)	Impact (nr. of people)	Sums Given (lei)	Impact (nr. of people)	Sums Given (lei)	Impact (nr. of people)
2022	10.58 million	15 million Romanians	3 million	219 thousand	2.47 million	417 thousand	1.96 million	1.2 million	3.1 million	13.16 million
2021	9.38 million	3.3 million Romanians	4.24 million	24 thousand	3.48 million	5 thousand	845 thousand	61 thousand	800 thousand	3.16 million
2020	9.83 million	2.4 million Romanians	509 thousands	6 thousand	8.25 million	2.37 million	–	–	1.06 million	15,6 thousand
2019	10.84 million	2.1 million Romanians	3.20 million	2 million	5.76 million	41 thousand	95 thousand	17 thousand	1.77 million	40 thousand

AFFILIATIONS

GRI 102-13

Maintaining SNN's membership status in national and international organizations identified as relevant and useful for SNN's activity, both from the point of view of exchanging information and experience and access to data in the nuclear field, as well as from the point of view of reducing the costs of carrying out a series of works and analyses on our own is a necessity for maintaining and improving the operating results, safety and efficiency of the company.

No.	Organization	Description
1	WANO -World Association of Nuclear Operators (Atlanta and London)	WANO is an international organization of the nuclear power plant operators. WANO's mission is to maximize nuclear safety and operation reliability for nuclear power plants by sharing information and encouraging communication, comparison and emulation among its members. WANO is organized on four regional centers: Atlanta, Paris, Moscow and Tokyo, and a coordination center in London. SNN is affiliated with the Atlanta Regional Center. The main programmes of WANO are: • Peer Review • Operating Experience • Professional and Technical Development • Technical Support and Exchange In 2021, the monitoring activities of the WANO representative for Cernavoda (Performance Monitoring Leader) took place continuously, according to the timeline.
2	INPO-Institute of Nuclear Power Operators	INPO is an American institute set up in 1979 to carry out activities in support of the operation of nuclear power plants under safety and reliability conditions. INPO members are the American nuclear power plants under commercial operation, as well as other international organizations in the nuclear field. INPO's areas of activity include: • performance assessment of the member power plants; • training and accreditation of operators, in collaboration with the National Academy of Nuclear Training; • analysis of events and sharing of operating information and experience; • provision of assistance to members in various fields.
3	COG -CANDU Owners Group	COG is a not-for-profit organization of CANDU nuclear power plant operators that provides a framework for cooperation, mutual assistance and information exchange in order to support and develop the CANDU technology. COG members are CANDU operators from Argentina, Canada, Korea, China, India, Pakistan and Romania, as well as the designer of the CANDU system, AECL-Canada.

4	COG R&D Research and Development Programme	The COG R&D programme addresses the current operational problems and interests of the affiliated nuclear power plants, in order to ensure support for a safe, reliable and economic operation of the CANDU power plants. The programme includes 5 sub-programmes: Fuel Channels (FCs), Nuclear Safety and Licensing (S&L), Chemistry, Materials and Components (CM&C), Radiation Protection and Environment (HS&E), Thermohydraulic and Accident Calculation Codes (IST).
5	COG R&D Research and Development Programme	The COG R&D programme addresses the current operational problems and interests of the affiliated nuclear power plants, in order to ensure support for a safe, reliable and economic operation of the CANDU power plants. The programme includes 5 sub-programmes: Fuel Channels (FCs), Nuclear Safety and Licensing (S&L), Chemistry, Materials and Components (CM&C), Radiation Protection and Environment (HS&E), Thermohydraulic and Accident Calculation Codes (IST).
6	COG NSEA Nuclear Safety and Environmental Programme	The NSEA programme addresses issues related to the fundamentals of the nuclear safety design. It mainly focuses on addressing the generic actions of the regulatory bodies, security assessments of new power plant projects and ensuring the necessary support for the long-term safe operation of CANDU power plants.
7	Electric Utility Cost Group (EUCG)	EUCG is an international cooperation group of the energy industry, having a special section for the nuclear energy sector in which US nuclear power plants take part (22 companies), plus 11 other companies from Canada/France/China/Japan/Romania/Brazil/Mexico.
8	PROCORAD	Cernavoda NPP has been participating, through the Environmental Control Laboratory and the Individual Dosimetry Laboratory, in PROCORAD's intercomparison exercises for radioactivity measurements on biological, effluent and environmental samples since 2001. • Free tritium in urine • Organically bound tritium in urine • Carbon-14 in urine • y and X emitters in urine • Uranium in urine

9	EPRI Electric Power Research Institute & Administration Fee	EPRI is a not-for-profit organization, financed by utility suppliers of the international energy industry, as well as by other governmental or public organizations, in order to ensure an organized framework for performance of specific research activities in the field of electricity generation, delivery and usage
10	SNUG Snubber User Group	Affiliation to the SNUG group (set up 2003) offered the possibility of accessing SNUG property documents (Snubber Users Group) needed for implementation, running and optimization of the Snubber Programme in Cernavoda NPP.
11	Nuclear Procurement Issues Corporation (NUPIC)	NUPIC is an organization that monitors the significant challenges and issues in the nuclear industry liable to influence the procurement, planning and management of activities
12	RAPIDPARTSMART	RAPIDPARTSMART integrates the "OIRD" database through which, if one of the members (another nuclear power plant) identifies a replacement solution for an obsolete product, this is added to the database, along complete information about the manufacturer and model of the replacement product and a technical equivalence assessment.
13	POMS	Through POMS, nuclear power plants identify the "obsolete" products they installed and replacement solutions for these, identify manufacturers of replacement products, identify multiple suppliers to restock spare parts, and can locate suppliers of the products needed in case of an emergency.
14	LICENSES FOR ACCESS TO THE IEEE STANDARDS	The IEEE standards provide technical information and verification/testing criteria, as well as operating limits for electrical and electronic equipment, which are not to be found in other documents. Also, these standards are referenced in the EPRI documents, as well as in the WANO, INPO, COG databases.
	Romanian Atomic Forum (ROMATOM)	The Romanian Atomic Forum - ROMATOM is a Romanian legal entity under the private law, an independent representative union at national level, without assets or profit-making purpose, non-governmental, non-for-profit, apolitical, and formed the associate members or supporters. Its members are Romanian and/or foreign legal entities whose scope of business covers generation of electrical and heat through nuclear processes or suppliers of goods and or providers of services in the Romanian nuclear industry, as well as other legal entities that carry out activities in the field of energy, in general, or of nuclear energy, in particular, or activities related to the field of nuclear energy, research in the field of atomic and nuclear physics, as well as professional, technical or scientific associations, organized according to the Romanian legislation in force.

16	Romanian National Committee of the World Energy Council	The Romanian National Committee of the World Energy Council, one of the founding members of the world organization the World Energy Council, has made in time substantial contributions to the development of the energy policy of our country and to promotion of Romania's interests abroad. The mission of CNR - CME is a sustainable energy development in Romania, through the efficient use of energy resources of all forms. CNR - CME, which currently brings together more than 350 collective and individual members, aims to actively integrate Romania's energy policies into the major options and trends that are displayed at global level.
17	Romanian Energy Suppliers Association (AFEER)	The status of SNN as a member of an independent professional organization, with the main business purpose of establishing and supporting a position for its members in the specific field not, only of the supply, but also of the sale of electricity.
18	Romanian Investor Relations Association (ARIR)	The Romanian Investor Relations Association is a non-governmental and not-for-profit organization that was founded with the aim of offering current and potential issuers a platform for the development of professionals in the field of investor relations (IR) and of contributing to implementation of the best practices in communication with investors and in corporate governance. SNN is a founding member of ARIR.
19	World Economic Forum	SNN is the first Romanian company to become partner of the World Economic Forum. Joining the Partnering Against Corruption Initiative creates the possibility of accessing good practices in the field of ethics and integrity, and developing the dialogue with the forum's members on these topics.
20	UN Global Compact	S.N. Nuclearelectrica S.A. is affiliated to the UN Global Compact since 14 March 2022.
21	24/7 CARBON-FREE ENERGY COMPACT	In November 2022, SNN became an affiliate to the United Nations 24/7 Carbon Free Energy Compact, committing to observe the UN 24/7 principles in support of the UN objective to accelerate the electricity system, mitigate climate change and ensure access to clean and affordable energy.
22	Nuclear Energy Institute (NEI)	NEI's mission is to promote the use and development of nuclear energy through effective operations and policies.
23	International Energy Forum (IEF/IAC)	Supporting the role of nuclear energy in the decarbonization context

Nuclearelectrica S.A.

32 Report under Article 8 of the Regulation (EU) No 2020/852 of the European Parliament and of the Council ("Taxonomy Regulation")

Financial Year 2022

Limitations

This report can be considered by Nuclearelectrica S.A. to define eligible and taxonomy-aligned activities (in order to meet the reporting requirements), including its related assessment (DNSH analysis, climate survey and review of whether the minimum social safeguards have been observed). Nuclearelecrica SA is fully liable for the final content published in the sustainability report and for all decisions made based in reliance of our report and the enclosed documents.

The recommendations contained in our deliverables are provided to you for the purpose described above and we shall not accept any liability towards any other party.

No reference to our recommendations or to PwC may be shown or otherwise communicated, nor may be these made known to any other party otherwise than with our prior written consent, which consent which we can chose to give or not on a case-by-case basis (including in instanced related to the reliability of third parties or the exclusion or limitation of our responsibility and liability). Moreover, no verbal reference shall be made to our opinion or recommendation save than in the form agreed with PwC.

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33 Introduction

This report has been prepared to describe the information required under Article 8 of the Taxonomy Regulation (Regulation (EU) 2020/852) to be included in the Non-financial Statement of the **National Company Nuclearelectrica S.A. (hereinafter referred to as "SNN" or the "Company")**, for the financial year 2022. The information complies with the simplified reporting requirements under Article 8 of the Taxonomy Regulation and under Article 10(2) of Article 8 of the Delegated Act (Commission Delegated Regulation (EU) 2021/2178) and the subsequent acts amending Delegated Regulation (EU) 2021/2139 and Delegated Regulation (EU) 2022/1214.

34 Article 8 Taxonomy Regulation

The Taxonomy Regulation is a key component of the European Commission's action plan to redirect capital flows towards a more sustainable economy. It is an important step taken forward towards carbon neutrality by 2050, in accordance with EU objectives, because the Taxonomy is a classification system for sustainable economic activities.

In the following section, we, as a non-financial company, present the share of turnover, capital expenditure (CAPEX) and operating expenditure (OPEX) for the reporting period 2022, which relate to **the economic activities that are taxonomy-eligible and -aligned**, for the first two environmental targets (climate change mitigation and climate change adaptation) in accordance with Article 8 of the Taxonomy Regulation and Article 10(2) of Article 8 of the Delegated Act.

35 Overview

Article 8 (2) of the Taxonomy Regulation, read in connection with Article 10(2) of Article 8 the Delegated Act

Proportion of taxonomy-eligible and non-eligible activities in total turnover, CAPEX and OPEX - Financial Year 2022

	Total (RON)	Proportion of taxonomy-eligible economic activities (in %)	Proportion of taxonomy non-eligible economic activities (in %)
Turnover	6,369,417,343	100%	0%
capital expenditure (CAPEX)	492,784,628	100%	0%
operating expenditure (OPEX)	1,169,728,845	100%	0%

36 Description of the activities

Under the law, the reporting entity is National Company Nuclearelectrica S.A. (SNN), a national joint-stock company, managed under single-tier system, with its Headquarters in Bucharest. Currently, SNN is the only electric power producer based on nuclear technology from Romania. SNN also produces CANDU-type nuclear fuel bundles that are used to keep its own nuclear reactors in use.

The Branch of Cernavodă NPP (Nuclear Power Plant), with its registered office in Cernavodă, ensures operation of the two functional CANDU Nuclear Units, as well as the management of all SNN assets of Cernavodă (apart from Units 1 and 2 already in operation, Units 3 and 4 are in various stages of construction; for Unit 5, the Company's shareholders approved the change of initial application as early as March 2014, and this would be used to support the activities related to operation of Units 1 and 2, as well as the district heating system). The second SNN site is the NFP Branch (Nuclear Fuel Plant) Pitesti, with the registered office in Mioveni, where CANDU fuel bundles are produced for Units 1 and 2 of Cernavodă.

The **core business** of the Company is “Production of electricity” - CAEN Code 3511.
This activity was identified as eligible for Taxonomy purposes, according to the NACE code D35.11 under activity 4.28. - Production of electricity from nuclear energy in existing installations, as well as under activity 4.25. - Production of heat for heating/cooling using residual heat; this is a secondary activity carried out, also eligible and contributing to the turnover. The secondary activity takes place in same in the same site as the core one (Cernavodă). **These activities are eligible for taxonomy.**

36.1 Economic activities eligible for taxonomy and their assessment

Section. 1.2.2.1(a) of Appendix I to Article 8 of the Delegated Act

We have examined the relevant taxonomy-eligible economic activities based on our activities and we have assigned them to the following economic activities in accordance with Annexes I and II to the Climate Delegated Act. The table below shows under which environmental objective the activities qualify as eligible.

Our activities identified as eligible and aligned, including the results of their assessment, are listed below.

Taxonomy-eligible economic activities				
Eligible economic activity	**Description for eligibility**	**Contribution to Climate change mitigation**	**Contribution to Climate change adaptation**	**Aligned with DNSH and social criteria?***
Production of electricity from nuclear energy in existing installations	The production of electricity from nuclear energy in the existing installations requires changes in the nuclear installations in order to extend the activity authorized by the competent authorities of the Member States until 2040, in accordance with the applicable national legislation, and the safe operation time of the nuclear installations that produce electricity or heat from nuclear energy ("nuclear power plants"). The activity in this category is classified under the NACE codes D35.11 and F42.22, in accordance with the statistical classification of economic	**NO**	**YES**	**YES**

	activities under the Regulation (EC) no. 1893/2006.			
Heat production for heating/cooling using residual heat	Construction and operation of installations that produce heat for heating/cooling using residual heat. The economic activities in this category could be associated with the NACE code D35.30, in accordance with the statistical classification of economic activities under the Regulation (EC) no. 1893/2006.	**NO**	**YES**	**YES**

**See below the tables with the DNSH assessment results and meeting of the social criteria*

According to the analysis carried out during the reporting period 1 January 2022 - 31 December 2022, the activity of SN "Nuclearelectrica" S.A. (SNN S.A.) has a significant contribution to climate change adaptation and does not significantly prejudice any of the other 5 environmental objectives set out under Article 17 of the Regulation (EU) 2020/852, namely:

- Climate change mitigation
- Sustainable use and protection of water and marine resources
- Transition to a circular economy
- Pollution prevention and control
- Protection and restoration of biodiversity and ecosystems

The activity makes a substantial contribution to the Climate Change Adaptation objective, but no calculations for the entire lifecycle have not been made and, therefore, a substantial contribution to the Climate Change Mitigation objective cannot be determined.

DNSH internal assessment were carried out in this regard and on minimum social criteria, and the results are summarized below.

DNSH analysis results

Environmental objectives assessed against technical criteria **Substantial contribution**	**Result**
Climate change adaptation	**Yes** Meets the criteria
Climate change mitigation	**No**

Environmental objectives assessed against the DNSH principle	Result
Climate change mitigation	**Yes**, without damages
Sustainable use and protection of water and marine resources	**Yes**, without damages
Circular economy, including waste prevention and recycling	**Yes**, without damages
Prevention and control of air, water or soil pollution	**Yes**, without damages
Protection and restoration of biodiversity and ecosystems	**Yes**, without damages

Result of reviewing whether the minimum social criteria are met

National Company Nuclearelectrica S.A. carries out an economic activity aligned with the OECD Guidelines for multinational organizations and **the UN Guiding Principles on business and human rights** (including gender equality and use of child labour, as well as the principles and rights set out under the eight fundamental conventions identified in the International Labour Organization Declaration on Fundamental Principles and Rights at Work and the International Charter of Human Rights).

Summary - Meeting of the minimum social criteria		Result
Commitment to respect for human rights		Yes
Human rights reflected in the operating policies and procedures and incorporated across the organization		Yes
Background check process for human rights violations to identify, prevent and mitigate the impact on human rights in operations and along the supply chain		Yes
Complaint mechanism (including legal rights to bring up actions before courts)		Yes
External communication about how the impact on human rights is approached		Yes
Identification of, and addressing, the adverse impact on human rights through legitimate processes		Yes
Health and Safety Policy		Yes
Policy on work practices (Labour Code + Collective Bargaining Agreement)		Yes
Policies laying down establish for a responsible business conduct:	GDPR - Personal data processing	Yes
	Anti-corruption policy	
	Whistleblowing mechanism/procedure	
	ESG procurement policy/procedure	
	Policy on trade unions (collective bargaining) - employment agreement	

36.2 Decisions in identification of the eligibility and alignment of our activities

The main activity is eligible and aligned. Other income-generating activities carried out include sale heat resulting from cooling processes.

For alignment, the following were undertaken: The DNSH assessment for the SNN activity, a review of whether the minimum social criteria are met. The survey assessing the climate risk and vulnerability related to the activity of SNN in 2022 was also carried out for the DNSH analysis.

37 Turnover, CAPEX and OPEX for taxonomy

The key performance indicators ("KPIs") include the turnover KPI, the CAPEX KPI and the OPEX KPI. For the 2022 reporting period, the KPIs must be disclosed for taxonomy-aligned and -eligible activities and taxonomy non-eligible activities (Article 10(2) of Article 8 of the Delegated Act).

Section 1.2.1(a) and (b) of Appendix I to Article 8 of the Delegated Act

KPIs are set in accordance with Appendix I to Article 8 of the Delegated Act. We set the KPIs eligible for taxonomy in accordance with legal requirements and we describe our accounting policy in this regard, as follows:

Turnover KPI

Definition - The proportion of economic activities eligible/aligned for taxonomy in our total turnover was calculated as part of the net turnover derived from products and services associated with the economic activities eligible for the taxonomy (numerator) divided by the net turnover (denominator), in each case for the financial year 1 January 2022 - 31 December 2022.

The turnover KPI denominator is based on the net turnover

The turnover KPI numerator is defined as the net turnover obtained from the products and services associated with *the economic activities eligible for the taxonomy*.

KPI CAPEX

Definition - The CAPEX KPI is defined as taxonomy-eligible/aligned CAPEX (numerator) divided by total CAPEX (denominator).

KPI OPEX

Definition - The OPEX KPI is defined as taxonomy-eligible/aligned OPEX (numerator) divided by total OPEX (denominator).

The total OPEX consists of the non-capitalized direct costs related to research and development, building renovation measures, short-term rental, maintenance and repairs and any other direct expenses related to the daily servicing of the assets, properties, plants and equipment.

37.1 SNN's KPI indicators

				Substantial contribution criteria						DNSH criteria ("To not cause significant harm")										
Economic activities (1)	**NACE codes? (2)**	**Absolute turnover (3)**	**Proportion of turnover (4)**	**Climate change mitigation (5)**	**Climate change adaptation (6)**	**Water and marine resources (7)**	**Circular economy (8)**	**Pollution (9)**	**Biodiversity and ecosystems (10)**	**Climate change mitigation (11)**	**Climate change adaptation (12)**	**Water and marine resources (13)**	**Circular economy (14)**	**Pollution (15)**	**Biodiversity and ecosystems (16)**	**Minimum (social) safeguards (17)**	**Proportion of turnover aligned to taxonomy, year 2022 (18)**	**Proportion of turnover aligned to taxonomy, year 2021 (19)**	**Category (facilitating activity) (20)**	**Category (transitiona activity) (21)**
		RON	%	%	%	%	%	%	%	Yes/No	Yes/No	Yes/No	Yes/No	Yes/No	Yes/No	Yes/No	Percentage	Percentage	E	
B. TAXONOMY ELIGIBLE ACTIVITIES																				
A.1. Environmentally-sustainable activities (activities aligned to taxonomy)																				
Production of electricity from nuclear energy in existing installations	3511	6,363,688,321	99.9%	0%	99.9%	0%	0%	0%	0%		Yes	Yes	Yes	Yes	Yes	Yes	99.9%	0%		
Heat production for heating/cooling using residual heat	3530	5,729,022	0.1%	0%	0.1%	0%	0%	0%	0%		NA	NA	Yes	Yes	Yes	Yes	0.1%	0%		
Turnover of environmentally-sustainable activities (aligned with taxonomy) (A.1)	3511 3530	6,369,417,343	**100%**	0%	100%	0%	0%	0%	0%								**100%**	0%		
A.2 Taxonomy-eligible, but not environmentally-sustainable activities (activities not aligned to the taxonomy)																				
Turnover of activities eligible for taxonomy, but not environmentally-sustainable (activities not aligned to taxonomy) (A.2)		0	**0%**																	
Total (A.1 + A.2)	3511 3530	6,369,417,343	**100%**																	
B. TAXONOMY NON-ELIGIBLE ACTIVITIES																				
Taxonomy turnover - non-eligible activities (A)	[number]	0]	**0%**																	
Total (A + B)	[number]	6,369,417,343	**100%**																	

				Substantial contribution criteria						DNSH criteria ("To not cause significant harm")										
Economic activities (1)	**NACE codes? (2)**	**Absolute CAPEX (3)**	**Proportion of turnover (4)**	**Climate change mitigation (5)**	**Climate change adaptation (6)**	**Water and marine resources (7)**	**Circular economy (8)**	**Pollution (9)**	**Biodiversity and ecosystems (10)**	**Climate change mitigation (11)**	**Climate change adaptation (12)**	**Water and marine resources (13)**	**Circular economy (14)**	**Pollution (15)**	**Biodiversity and ecosystems (16)**	**Minimum (social) safeguards (17)**	**Proportion of CAPEX aligned to taxonomy, year 2022 (18)**	**Proportion of CAPEX aligned to taxonomy, year 2021 (19)**	**Category (facilitating activity) (20)**	**Category (transitional activity) (21)**
		RON	%	%	%	%	%	%	%	Yes/No	Yes/No	Yes/No	Yes/No	Yes/No	Yes/No	Yes/No	Percentage	Percentage	E	T
B. TAXONOMY ELIGIBLE ACTIVITIES																				
A.1. Environmentally-sustainable activities (activities aligned to taxonomy)																				
Production of electricity from nuclear energy in existing installations	3511	492,784,628	**100%**	0%	100%	0%	0%	0%	0%		Yes	Yes	Yes	Yes	Yes	Yes	100%	0%		
CAPEX of environmentally-sustainable activities (activities aligned to taxonomy) (A.1)	3511	492,784,628	0%	0%	100%	0%	0%	0%	0%								**100%**	0%		
A.2 Taxonomy-eligible, but not environmentally-sustainable activities (activities not aligned to the taxonomy)																				
CAPEX of activities eligible for taxonomy, but not environmentally-sustainable (activities not aligned to taxonomy) (A.2)		0	**0%**																	
Total (A.1 + A.2)	3511	492,784,628	**100%**																	
B. TAXONOMY NON-ELIGIBLE ACTIVITIES																				
Taxonomy CAPEX - non-eligible activities (B)	[number]	0	**0%**																	
Total (A + B)	[number]	492,784,628	**100%**																	

				Substantial contribution criteria						DNSH criteria ("To not cause significant harm")										
Economic activities (1)	**NACE codes? (2)**	**Absolute OPEX (3)**	**Proportion of turnover (4)**	**Climate change mitigation (5)**	**Climate change adaptation (6)**	**Water and marine resources (7)**	**Circular economy (8)**	**Pollution (9)**	**Biodiversity and ecosystems (10)**	**Climate change mitigation (11)**	**Climate change adaptation (12)**	**Water and marine resources (13)**	**Circular economy (14)**	**Pollution (15)**	**Biodiversity and ecosystems (16)**	**Minimum (social) safeguards (17)**	**Proportion of OPEX aligned to taxonomy, year 2022 (18)**	**Proportion of OPEX aligned to taxonomy, year 2021 (19)**	**Category (facilitating activity) (20)**	**Category (transitional activity) (21)**
		RON	%	%	%	%	%	%	%	Yes/No	Yes/No	Yes/No	Yes/No	Yes/No	Yes/No	Yes/No	Percentage	Percentage	E	T
B. TAXONOMY ELIGIBLE ACTIVITIES																				
A.1. Environmentally-sustainable activities (activities aligned to taxonomy)																				
Production of electricity from nuclear energy in existing installations	3511	1,169,728,845	**100%**	0%	100%	0%	0%	0%	0%		Yes	Yes	Yes	Yes	Yes	Yes	100%	0%		
OPEX of environmentally-sustainable activities (activities aligned to taxonomy) (A.1)	3511	1,169,728,845	**100%**	0%	100%	0%	0%	0%	0%								**100%**	0%		
A.2 Taxonomy-eligible, but not environmentally-sustainable activities (activities not aligned to the taxonomy)																				
OPEX of activities eligible for taxonomy, but not environmentally-sustainable (activities not aligned to taxonomy) (A.2)		0	**0%**																	
Total (A.1 + A.2)	3511	1,169,728,845	**100%**																	
B. TAXONOMY NON-ELIGIBLE ACTIVITIES																				
Taxonomy OPEX - non-eligible activities (B)	[number]	0	**0%**																	
Total (A + B)	[number]	1,169,728,845	**100%**																	

37.2 INFORMATION ABOUT THE ACTIVITIES OF NUCLEARELECTRICA S.A.

In accordance with the Commission Delegated Regulation (EU) 2022/1214 of 9 March 2022 amending Delegated Regulation (EU) 2021/2139 as regards economic activities in certain energy sectors and Delegated Regulation (EU) 2021/2178 as regards specific public disclosures for those economic activities. The information about the activities in the nuclear and gas sectors is presented in a table, **using the templates included in Appendix XII of the Regulation.**

Contents

37.2.2 ACTIVITIES CARRIED OUT

For the reporting entity Nuclearelectrica S.A., the following activities carried out in the financial year 2022 and the KPIs associated with these activities were identified according to the requirements of the Delegated Regulation (EU) 2022/1214 - **Appendix XII**

Template 1 Nuclear and fossil gas-related activities

1	**2**	**Nuclear and fossil gas related activities**		
3.	4	The undertaking carries out, funds or has exposures to research, development, demonstration and deployment of innovative electricity generation facilities that produce energy from nuclear processes with minimal waste from the fuel cycle.*	5	NO
6.	7	The undertaking carries out, funds or has exposures to construction and safe operation of new nuclear installations to produce electricity or process heat, including for the purposes of district heating or industrial processes such as hydrogen production, as well as their safety upgrades, using best available technologies.**	8	NO
9.	**10**	**The undertaking carries out, funds or has exposures to safe operation of existing nuclear installations that produce electricity or process heat, including for the purposes of district heating or industrial processes such as hydrogen production from nuclear energy, as well as their safety upgrades.**	**11**	**YES**
12	13	**Fossil gas related activities**		
14.	15	The undertaking carries out, funds or has exposures to construction or operation of electricity generation facilities that produce electricity using fossil gaseous fuels.	16	NO
17.	18	The undertaking carries out, funds or has exposures to construction, refurbishment, and operation of combined heat/cool and power generation facilities using fossil gaseous fuels.	19	NO
20.	21	The undertaking carries out, funds or has exposures to construction, refurbishment and operation of heat generation facilities that produce heat/cool using fossil gaseous fuels.	22	NO

*SMR and other activities are not carried out or accounted for by Nuclearelectrica S.A., as the reporting entity
** Investment projects for other new production units are not carried out or accounted for by Nuclearelectrica S.A., as the reporting entity

37.2.3 ACTIVITIES CARRIED OUT – Turnover, CAPEX and OPEX

Template 2 Taxonomy-aligned economic activities (denominator)

KPI - total turnover*							
Row	**Economic activities**	Amount and proportion (the information is to be presented in monetary amounts and in percentages)					
		CCM + CCA		Climate Change Mitigation – CCM		Climate Change Adaptation – CCA	
		Value (RON)	%	Value (RON)	%	Value (RON)	%
3.	**Amount and proportion of taxonomy-aligned economic activity referred to in Section 4.28 of Annexes I and II to Delegated Regulation 2021/2139, in the denominator of the applicable key performance indicator** **Turnover** related to the sale of electricity	RON 6,363,688,321	99.9%	RON 0	0%	6,363,688,321	99.9%
7.	**Amount and proportion of other taxonomy-aligned economic activities**, not referred to in rows 1-6 above, in the denominator of the applicable key performance indicator** **Turnover** related to the sale of heat	RON 5,729,022	0.1%	RON 0	0%	RON 5,729,022	0.1%
8.	**Total applicable KPI – total turnover of Nuclearelectrica S.A. - for alignment (denominator)***	**RON 6,369,417,343**	**100%**	**RON 0**	**0%**	**6,369,417,343**	**100%**

**All turnover come from the sale by Nuclearelectrica S.A. of the electricity and heat produced.*

Stand-Alone Financial Statements prepared for the financial year ended as at 31 December 2022.

Stand-Alone Statement of Profit and Loss for the financial year ended on 31 December 2022

***4.25. Marketing of heat for heating (steam from cooling).*

KPI - CAPEX							
Row	**Economic activities**	Amount and proportion (the information is to be presented in monetary amounts and in percentages)					
		CCM + CCA		Climate Change Mitigation – CCM		Climate Change Adaptation – CCA	
		Value (RON)	%	Value (RON)	%	Value (RON)	%
3.	**Amount and proportion of taxonomy-aligned economic activity referred to in Section 4.28 of Annexes I and II to Delegated Regulation 2021/2139, in the denominator of the applicable key performance indicator** *CAPEX - electricity*	492,784,628 100%		RON 0 0%		492,784,628 100%	
7.	**Amount and proportion of other taxonomy-aligned economic activities*, not referred to in rows 1-6 above, in the denominator of the applicable key performance indicator** *–CAPEX –heat*	RON 0 0%		RON 0 0%		RON 0 0%	
8.	**Total applicable KPI** *CAPEX of Nuclearelectrica S.A. (denominator)*	**492,784,628 100%**		**RON 0 0%**		**492,784,628 100%**	

23 *No CAPEX was not allocated separately for heat (there are no stand-alone cost centers set-up).
24
Source:

Notes to the Stand-Alone Financial Statements for the financial year ended as at 31 December 2022.

Note 5. Tangible non-current assets, Note 6 Assets representing right to use underlying assets within a leasing contract and 7. Note Intangible non-current assets.

The capital expenditure indicator is defined as taxonomy-eligible capital expenditure (numerator) divided by total SNN capital expenditure (denominator). The denominator, i.e. the total capital expenditure, consists of the additions related to intangible non-current assets, tangible non-current assets and assets related to the right of use, and are adjusted to exclude any additions related to the groups intended for disposal under IFRS 5, during the reporting period. For more details about our accounting policies for the relevant assets, see the Stand-Alone Financial Statements of SNN for 2022, Note 3.(c), (d), (e) and (f).

KPI - OPEX							
Row	**Economic activities**	Amount and proportion (the information is to be presented in monetary amounts and in percentages)					
		CCM + CCA		Climate Change Mitigation – CCM		Climate Change Adaptation – CCA	
		Value (RON)	%	Value (RON)	%	Value (RON)	%
3.	**Amount and proportion of taxonomy-aligned economic activity referred to in Section 4.28 of Annexes I and II to Delegated Regulation 2021/2139, in the denominator of the applicable key performance indicator** *OPEX related to expenditure for production of electricity*	1,169,728,845 100%		RON 0 0%		1,169,728,845 100%	
7.	**Amount and proportion of other taxonomy-aligned economic activities*, not referred to in rows 1-6 above, in the denominator of the applicable key performance indicator** – *OPEX related to heat generation expenditure*	RON 0 0%		RON 0 0%		RON 0 0%	
8.	**Total applicable KPI** *Total OPEX of Nuclearelectrica S.A. - for alignment (denominator)**	1,169,728,845	**100%**	RON 0 0%		1,169,728,845 100%	

***No OPEX was not allocated separately for heat (there are no stand-alone cost centers set-up).**

Source:

Stand-Alone Financial Statements for the financial year ended as at 31 December 2022.

Stand-Alone Statement of Profit and Loss for the financial year ended on 31 December 2022

The indicator related to the operating expenditure indicator is defined as taxonomy-eligible expenditure (numerator) divided by total SNN operating expenditure (denominator). Total operating expenditure according to the EU Taxonomy consist of research and development expenditure, maintenance and repair expenditure, other direct expenditure related to current maintenance of assets and short-term lease expenditure.

The research and development expenditure include research and development costs recognized under IAS 38 "Intangible non-current assets" and included in the line "Other operating expenditure" line of the Stand-Alone Statement of Profit and Loss.

Maintenance and repair expenditure and other direct expenditure related to current maintenance of assets mainly include cost of external services, payroll cost, cost of materials related for regular and unscheduled maintenance and repairs. The related cost elements can be found at rows Payroll Costs, Repairs and Maintenance, Cost of Spare Parts and Other Operating Expenditure in the Stand-Alone Statement of Profit and Loss.

The short-term lease expenditure were determined and included in accordance with IFRS 16 “Leases”.

37.2.4 ACTIVITIES CARRIED OUT - TAXONOMY-ALIGNED

The activities carried out by Nuclearelectrica SA are aligned.

29 Template 3 Taxonomy-aligned economic activities (numerator)

KPI - turnover							
Row	**Economic activities**	Amount and proportion (the information is to be presented in monetary amounts and in percentages)					
		CCM + CCA		Climate Change Mitigation – CCM		Climate Change Adaptation – CCA	
		Value (RON)	%	Value (RON)	%	Value (RON)	%
3.	**Amount and proportion of taxonomy-aligned economic activity referred to in Section 4.28 of Annexes I and II to Delegated Regulation 2021/2139, in the numerator of the applicable key performance indicator** *(electricity)*	RON 6,363,688,321	99.9%	RON 0	0%	RON 6,363,688,321	99.9%
7.	**Amount and proportion of other taxonomy-aligned* economic activities, not referred to in rows 1-6 above, in the numerator of the applicable key performance indicator** *(heat - 4.25)*	RON 5,729,022	0.1%	RON 0	0%	RON 5,729,022	0.1%
8.	**Total applicable KPI – total turnover of aligned activities**	RON 6,369,417,343	100 %	RON 0	0%	RON 6,369,417,343	100%

30

KPI - CAPEX							
Row	**Economic activities**	Amount and proportion (the information is to be presented in monetary amounts and in percentages)					
		CCM + CCA		Climate Change Mitigation – CCM		Climate Change Adaptation – CCA	
		Value (RON)	%	Value (RON)	%	Value (RON)	%
3.	**Amount and proportion of taxonomy-aligned economic activity referred to in Section 4.28 of Annexes I and II to Delegated Regulation 2021/2139, in the numerator of the applicable key performance indicator** *CAPEX - electricity*	492,784,628 100%		RON 0 0%		492,784,628 100%	
7.	**Amount and proportion of other taxonomy-aligned economic activities, not referred to in rows 1-6 above, in the numerator of the applicable key performance indicator** *CAPEX - heat*	RON 0 0%		RON 0 0%		RON 0 0%	
8.	**Total applicable KPI – total CAPEX of aligned activities**	492,784,628	100%	RON 0 0%		RON 492,784,628 100%	

31

KPI - OPEX							
Row	**Economic activities**	Amount and proportion (the information is to be presented in monetary amounts and in percentages)					
		CCM + CCA		Climate Change Mitigation – CCM		Climate Change Adaptation – CCA	
		Value (RON)	%	Value (RON)	%	Value (RON)	%
3.	**Amount and proportion of taxonomy-aligned economic activity referred to in Section 4.28 of Annexes I and II to Delegated Regulation 2021/2139, in the numerator of the applicable key performance indicator** *OPEX - electricity*	RON 1,169,728,845 100%		RON 0 0%		RON 1,169,728,845 100%	
7.	**Amount and proportion of other taxonomy-aligned economic activities, not referred to in rows 1-6 above, in the numerator of the applicable key performance indicator** *OPEX - heat*	RON 0 0%		RON 0 0%		RON 0 0%	
8.	**Total applicable KPI – total OPEX of aligned activities**	1,169,728,845	100%	RON 0 0%		RON 1,169,728,845 100%	

37.2.5 ECONOMIC ACTIVITIES (CARRIED OUT) ELIGIBLE, BUT NOT ALIGNED

32

33 The entire activity of Nuclearelectrica SA is aligned.

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Eligible (main) activity: 4.28 Production of electricity from nuclear energy in existing installations

Description: Modification of the existing nuclear installations for the purpose of extending the activity authorized by the competent authorities of the Member States until 2040, in accordance with the applicable national legislation, and the safe operation time of the nuclear installations that produce electricity or heat from nuclear energy ("nuclear power plants").

The main activity is classified under the NACE codes D35.11 and F42.2, in accordance with the statistical classification of economic activities under the Regulation (EC) no. 1893/2006.

35 Template 4 - Taxonomy-eligible but not taxonomy-aligned economic activities

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37	**KPI - turnover**						
Row	**Economic activities**	Amount and proportion (the information is to be presented in monetary amounts and in percentages)					
		CCM + CCA		Climate Change Mitigation – CCM		Climate Change Adaptation – CCA	
		Value (RON)	%	Value (RON)	%	Value (RON)	%
3.	**Amount and proportion of taxonomy-eligible but not taxonomy-aligned economic activity referred to in Section 4.28 of Annexes I and II to Delegated Regulation 2021/2139 in the denominator of the applicable key performance indicator** *(electricity)*	RON 0 0%		RON 0 0%		RON 0 0%	
7.	**Amount and proportion of other taxonomy-eligible but not taxonomy-aligned economic activities not referred to in rows 1 to 6 above in the denominator of the applicable key performance indicator** *(heat)*	RON 0 0%		RON 0 0%		RON 0 0%	
8.	**Total amount and proportion of taxonomy eligible but not taxonomy-aligned economic activities in the denominator of the applicable key performance indicator**	**RON 0**	**0%**	**RON 0 0%**		**RON 0 0%**	

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42	**KPI – CAPEX**						
Row	**Economic activities**	Amount and proportion (the information is to be presented in monetary amounts and in percentages)					
		CCM + CCA		Climate Change Mitigation – CCM		Climate Change Adaptation – CCA	
		Value (RON)	%	Value (RON)	%	Value (RON)	%
3.	**Amount and proportion of taxonomy-eligible but not taxonomy-aligned economic activity referred to in Section 4.28 of Annexes I and II to Delegated Regulation 2021/2139 in the denominator of the applicable key performance indicator** *CAPEX related to expenditure for production of electricity*	RON 0 0%		RON 0 0%		RON 0 0%	
7.	**Amount and proportion of other taxonomy-eligible but not taxonomy-aligned economic activities not referred to in rows 1 to 6 above in the denominator of the applicable key performance indicator** *CAPEX expenditure - heat*	RON 0 0%		RON 0 0%		RON 0 0%	
8.	**Total amount and proportion of taxonomy eligible but not taxonomy-aligned economic activities in the numerator of the applicable key performance indicator**	**RON 0**	**0%**	**RON 0 0%**		**RON 0 0%**	

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45

46	KPI - OPEX						
Row	**Economic activities**	Amount and proportion (the information is to be presented in monetary amounts and in percentages)					
		CCM + CCA		Climate Change Mitigation – CCM		Climate Change Adaptation – CCA	
		Value (RON)	%	Value (RON)	%	Value (RON)	%
3.	**Amount and proportion of taxonomy-eligible but not taxonomy-aligned economic activity referred to in Section 4.28 of Annexes I and II to Delegated Regulation 2021/2139 in the denominator of the applicable key performance indicator** *OPEX related to expenditure for production of heat*	RON 0 0%		RON 0 0%		RON 0 0%	
7.	**Amount and proportion of other taxonomy-eligible, but not taxonomy-aligned economic activities, not referred to in rows 1-6 above, in the denominator of the applicable key performance indicator** *OPEX expenditure - heat*	RON 0 0%		RON 0 0%		RON 0 0%	
8.	**Total amount and proportion of taxonomy eligible but not taxonomy-aligned economic activities in the numerator of the applicable key performance indicator**	**RON 0**	**0%**	**RON 0 0%**		**RON 0 0%**	

47

37.2.6 NON-ELIGIBLE OPERATING ACTIVITIES

48

49 No non-eligible economic activities were carried out.

50

51 **Template 5 - Taxonomy non-eligible economic activities**

52 **KPI - turnover**			
Row	**Economic activities**	**Value**	**Percentage**
1.	Amount and proportion of economic activity referred to in row 1 of Template 1 that is taxonomy-non-eligible in accordance with Section 4.26 of Annexes I and II to Delegated Regulation 2021/2139 in the denominator of the applicable key performance indicator	RON 0	0%
2.	Amount and proportion of economic activity referred to in row 2 of Template 1 that is taxonomy-non-eligible in accordance with Section 4.27 of Annexes I and II to Delegated Regulation 2021/2139 in the denominator of the applicable key performance indicator	RON 0	0%
3.	Amount and proportion of economic activity referred to in row 3 of Template 1 that is taxonomy-non-eligible in accordance with Section 4.28 of Annexes I and II to Delegated Regulation 2021/2139 in the denominator of the applicable key performance indicator	RON 0	0%
4.	Amount and proportion of economic activity referred to in row 4 of Template 1 that is taxonomy-non-eligible in accordance with Section 4.29 of Annexes I and II to Delegated Regulation 2021/2139 in the denominator of the applicable key performance indicator	RON 0	0%
5.	Amount and proportion of economic activity referred to in row 5 of Template 1 that is taxonomy-non-eligible in accordance with Section 4.30 of Annexes I and II to Delegated Regulation 2021/2139 in the denominator of the applicable key performance indicator	RON 0	0%
6.	Amount and proportion of economic activity referred to in row 6 of Template 1 that is taxonomy-non-eligible in accordance with Section 4.31 of Annexes I and II to Delegated Regulation 2021/2139 in the denominator of the applicable key performance indicator	RON 0	0%
7.	**Amount and proportion of other taxonomy-non-eligible economic activities not referred to in rows 1 to 6 above in the denominator of the applicable key performance indicator**	RON 0	0%
8.	**Total amount and proportion of taxonomy-non-eligible economic activities in the denominator of the applicable key performance indicator"**	RON 0	0%

KPI - CAPEX			
Row	**Economic activities**	**Value**	**Percentage**
1.	Amount and proportion of economic activity referred to in row 1 of Template 1 that is taxonomy-non-eligible in accordance with Section 4.26 of Annexes I and II to Delegated Regulation 2021/2139 in the denominator of the applicable key performance indicator	RON 0	0%
2.	Amount and proportion of economic activity referred to in row 2 of Template 1 that is taxonomy-non-eligible in accordance with Section 4.27 of Annexes I and II to Delegated Regulation 2021/2139 in the denominator of the applicable key performance indicator	RON 0	0%
3.	Amount and proportion of economic activity referred to in row 3 of Template 1 that is taxonomy-non-eligible in accordance with Section 4.28 of Annexes I and II to Delegated Regulation 2021/2139 in the denominator of the applicable key performance indicator	RON 0	0%
4.	Amount and proportion of economic activity referred to in row 4 of Template 1 that is taxonomy-non-eligible in accordance with Section 4.29 of Annexes I and II to Delegated Regulation 2021/2139 in the denominator of the applicable key performance indicator	RON 0	0%
5.	Amount and proportion of economic activity referred to in row 5 of Template 1 that is taxonomy-non-eligible in accordance with Section 4.30 of Annexes I and II to Delegated Regulation 2021/2139 in the denominator of the applicable key performance indicator	RON 0	0%
6.	Amount and proportion of economic activity referred to in row 6 of Template 1 that is taxonomy-non-eligible in accordance with Section 4.31 of Annexes I and II to Delegated Regulation 2021/2139 in the denominator of the applicable key performance indicator	RON 0	0%
7.	**Amount and proportion of other taxonomy-non-eligible economic activities not referred to in rows 1 to 6 above in the denominator of the applicable key performance indicator**	RON 0	0%
8.	**Total amount and proportion of taxonomy-non-eligible economic activities in the denominator of the applicable key performance indicator"**	RON 0	0%

KPI - OPEX			
Row	**Economic activities**	**Value**	**Percentage**
1.	Amount and proportion of economic activity referred to in row 1 of Template 1 that is taxonomy-non-eligible in accordance with Section 4.26 of Annexes I and II to Delegated Regulation 2021/2139 in the denominator of the applicable key performance indicator	RON 0	0%
2.	Amount and proportion of economic activity referred to in row 2 of Template 1 that is taxonomy-non-eligible in accordance with Section 4.27 of Annexes I and II to Delegated Regulation 2021/2139 in the denominator of the applicable key performance indicator	RON 0	0%
3.	Amount and proportion of economic activity referred to in row 3 of Template 1 that is taxonomy-non-eligible in accordance with Section 4.28 of Annexes I and II to Delegated Regulation 2021/2139 in the denominator of the applicable key performance indicator	RON 0	0%
4.	Amount and proportion of economic activity referred to in row 4 of Template 1 that is taxonomy-non-eligible in accordance with Section 4.29 of Annexes I and II to Delegated Regulation 2021/2139 in the denominator of the applicable key performance indicator	RON 0	0%
5.	Amount and proportion of economic activity referred to in row 5 of Template 1 that is taxonomy-non-eligible in accordance with Section 4.30 of Annexes I and II to Delegated Regulation 2021/2139 in the denominator of the applicable key performance indicator	RON 0	0%
6.	Amount and proportion of economic activity referred to in row 6 of Template 1 that is taxonomy-non-eligible in accordance with Section 4.31 of Annexes I and II to Delegated Regulation 2021/2139 in the denominator of the applicable key performance indicator	RON 0	0%
7.	**Amount and proportion of other taxonomy-non-eligible economic activities not referred to in rows 1 to 6 above in the denominator of the applicable key performance indicator**	RON 0	0%
8.	**Total amount and proportion of taxonomy-non-eligible economic activities in the denominator of the applicable key performance indicator"**	RON 0	0%

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