ROSATOM

2021

Sustainability Report

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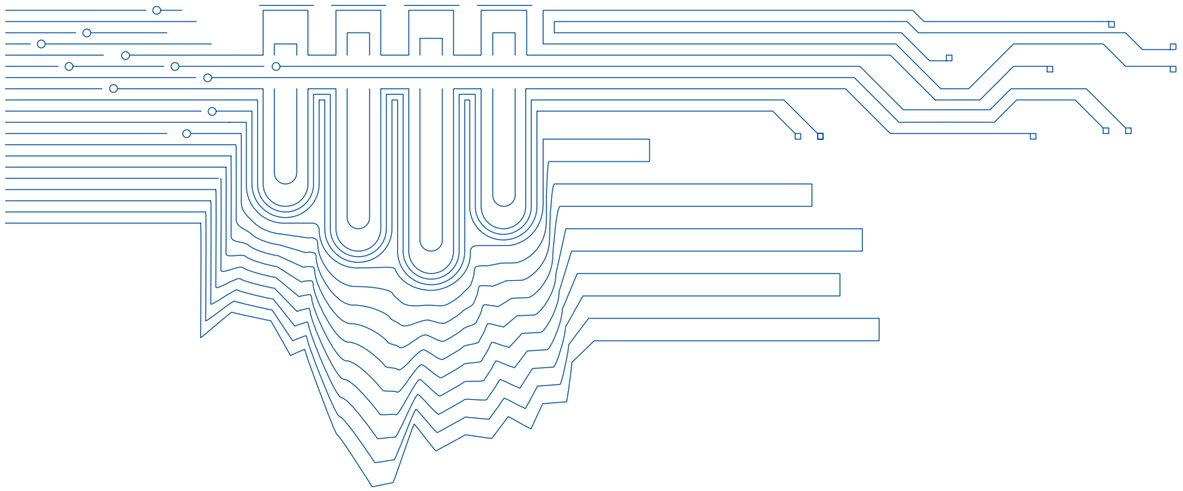
TABLE OF CONTENTS



STATEMENT OF THE DIRECTOR GENERAL

Dear colleagues,

Sustainable development forms a natural part of ROSATOM's day-to-day operations. Almost 290,000 people are employed in the industry; more than 2 million people live in our 27 nuclear towns and cities in Russia, and we are responsible for their lives literally on a daily basis. Environmental and social responsibility is an integral part of all our operations.

Our core product, nuclear power, meets the demand for stable and affordable sources of clean energy to support an effective global energy transition. We realise that nuclear power plays a vital role in the achievement of the climate goals set in the Paris Agreement, and we are making every effort to improve nuclear technology in line with sustainable development priorities. The operation of our nuclear power plants meets the highest safety standards. ROSATOM is actively developing technological solutions for a closed nuclear fuel cycle and safe management of radioactive waste (RAW) and spent nuclear fuel (SNF). The start of construction of the world's first Generation IV BREST reactor in Seversk (Tomsk Region) was an important milestone in 2021. This reactor does not use natural uranium and enables the disposal of long-lived radioactive waste. We are willing to discuss the climate efficiency, safety and reliability of nuclear energy. Last year, the COP26 climate conference in Glasgow was a major event both for ROSATOM and for the global nuclear community as a whole.

ROSATOM has extensive technological capabilities; we have expertise and solutions that can improve people's lives, and it is our duty to put these solutions into practice. In Russia, we are responsible for a number of national projects that are relevant to sustainable development goals in one way or another. As part of the Ecology National Project, we are developing a system for managing hazard class 1 and 2 waste; we are participating in the Healthcare National Project and are responsible for developing the Northern Sea Route.

As a member of the UN Global Compact since 2020, ROSATOM confirms its commitment to the 10 principles of the UN Global Compact in the sphere of human rights, labour, environment and anti-corruption. At the same time, we are aware that sustainable development requires us to continuously fine-tune and improve our business processes; among other things, this involves incorporating sustainability requirements into our supplier management practices, giving priority to biodiversity conservation in our regions of operation, focusing on adherence to gender equality principles and supporting 'green' innovations. We seek to integrate the principles of the UN Global Compact into ROSATOM's strategy, culture and operations and to increase the level of maturity in the sphere of sustainable development in the industry year by year.

Alexey Likhachev
Director General of ROSATOM

19.7%

Share of nuclear power as the largest source of low-carbon electricity in Russia's electricity generation mix in 2021

~208

million tonnes of CO_2e of greenhouse gas emissions are prevented annually by all Russian-design NPPs currently in operation worldwide

30.3

GW of installed low-carbon capacity in Russia (NPPs + WPPs)

32%

Share of women among employees in the industry in 2021

288,500

employees

73%

of employees in the industry underwent training in 2021

10

national projects in which ROSATOM is participating, including Ecology, Healthcare and Education

Vision Zero[1]

Principle governing ROSATOM's operations

282

RUB billion – spending on procurement from small and medium-sized businesses in 2021

[1] Vision Zero is based on the belief that all accidents, diseases and harm at work are preventable and on the commitment of Vision Zero Companies and Partners to promote the three core values of this campaign: Safety, Health and Well-Being (http://visionzero.global).

In the course of its operations, State Atomic Energy Corporation Rosatom (hereinafter referred to as ROSATOM or the Corporation) is committed to global sustainable development priorities and adheres to the 10 principles of the UN Global Compact. ROSATOM contributes to the achievement of the UN Sustainable Development Goals (SDGs) through its product line, its financial and economic performance and its efforts to ensure the sustainability of internal environmental, social and governance processes.

Organisations in the industry adhere to the Unified Industry Policy on Sustainable Development, which sets out the position of ROSATOM and its organisations on sustainable development matters, including the goals, objectives and key principles of their efforts in the sphere of health, safety and the environment, in the social sphere and in the sphere of corporate governance. The Policy is available on the website at https://www.rosatom.ru in the Sustainability section.

Overall, ROSATOM's operations contribute to the achievement of all 17 of the UN SDGs. Given the scale of the Corporation's business and individual NPP construction projects, the following Goals are of key importance:

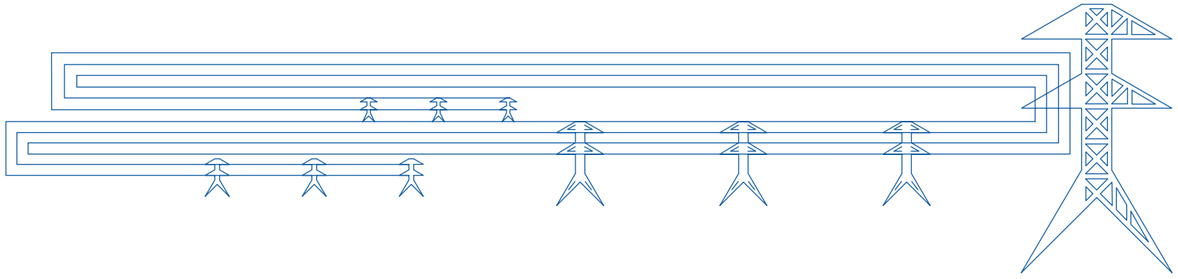
Given the nature of its operations, the nuclear industry also directly contributes to the achievement of the following SDGs:

This involves developing the regions of operation (27 towns and cities where nuclear facilities are located); special focus is given to the training of students in nuclear disciplines (18 universities specialising in disciplines relevant to the nuclear industry); key strategic areas of ROSATOM's business development include nuclear medicine.

ROSATOM attaches special importance to preventing the risk of any aspect of its operations having a negative impact on the following SDGs:

ROSATOM's progress in the sphere of sustainable development in accordance with the 10 principles of the UN Global Compact is presented in the following sections:

Environment	**Environment and Safety** Environmental policy Air pollutant and greenhouse gas emissions Radiation safety Energy efficiency Water use and wastewater discharge Industrial and consumer waste management Biodiversity and land rehabilitation
Human Rights Labour	**Social Aspect** Labour relations Talent development Occupational health and safety Human rights Fighting COVID-19 and promoting employee health Developing the regions of operation Corporate volunteering
Anti-Corruption	**Corporate Governance** Public reporting Supply chain and procurement procedures Code of Ethics Anti-corruption policy Audit and internal control Data protection



CONTRIBUTION TO THE ACHIEVEMENT OF THE UN SUSTAINABLE DEVELOPMENT GOALS

ROSATOM's product portfolio comprises more than 80 existing and future-oriented high-technology products and services. All of these products are aimed at improving the quality of people's lives and contribute to the achievement of the UN Sustainable Development Goals, each in their own way. When developing new businesses, ROSATOM focuses particularly on environmental impacts, value creation for end users and assessment of product solutions in terms of their alignment with the UN SDG priorities.

One of the strategic priorities of ROSATOM's business is to develop low-carbon energy solutions that contribute to climate action. Along with conventional nuclear power, ROSATOM's portfolio also includes wind power. In addition, the Corporation is developing hydrogen-based solutions.

Examples of ROSATOM's products and their contribution to the achievement of the UN SDGs

Nuclear power	7, 8, 9, 12, 13, 17
Wind power	7, 13
Hydrogen	7, 13
Energy storage systems	7, 9, 13
Environmental solutions	3, 9, 12, 14, 15
Arctic; development of the NSR	9, 13, 14, 15
Nuclear medicine; isotopes	3
Composite materials	9, 12

Nuclear power

The climate agenda is a major priority for ROSATOM both because it is an important aspect of sustainable development and given the scale of the contribution of the nuclear power industry to implementing the Paris Agreement and reducing the carbon footprint in Russia and globally. The nuclear power industry plays a vital role in the achievement of global climate targets by ensuring steady 24/7 power generation for 60 years, with a potential for service life extension.

NPPs are the second lungs of the planet.

All NPPs in the world help to prevent GHG emissions totalling 2 billion tonnes per year, which is equivalent to amount that all forests on the planet absorb annually.

In 2021, ROSATOM actively assisted in preparing and hosting the 26th Conference of the Parties to the United Nations Framework Convention on Climate Change (COP26) in Glasgow (UK). The conference was attended by more than 40,000 participants, including national leaders and global companies. The programme of the Russian pavilion included a special one-day event focused on nuclear power, the Clean Nuclear Energy Day. The COP26 conference included a number of events focused on the role of the nuclear industry in climate action. For the first time in the history of the conference, nuclear power was high on its agenda.

In 2021, Russia developed and approved a new 2050 Strategy of Social and Economic Development with Low Greenhouse Gas Emissions, which views nuclear power as a tool for achieving carbon neutrality. A major highlight of 2021 was the inclusion of the nuclear power industry in the national Taxonomy of Green Projects (approved by Decree No. 1587 of the Government of the Russian Federation dated 21 September 2021 on Approving Criteria for Sustainable (Green) Development Projects in the Russian Federation and Requirements for the Verification System for Sustainable (Green) Development Projects in the Russian Federation).

Nuclear power is the largest source of low-carbon 'green' energy in Russia: in 2021, ROSATOM's NPPs produced 222.4 billion kWh of electricity, accounting for 19.7% of the total electricity output in the country. At year-end 2021, 35 nuclear power units at NPPs and a floating thermal nuclear power plant (FTNPP) with total installed capacity of 29.577 GW were in operation in Russia.

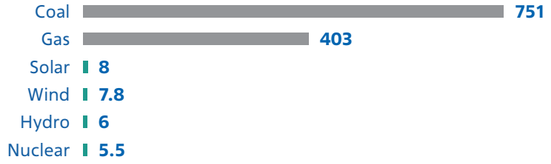
To provide power supply in remote regions, ROSATOM is developing small nuclear power plants. Russia's first onshore small NPP equipped with RITM-200 reactors is expected to be put into operation in the Sakha Republic (Yakutia).

In February 2022, the European Union published additional criteria for classifying nuclear power as a transitional energy source. These criteria are set out in the Complementary Delegated Act (CDA) to the EU Sustainable Finance Taxonomy and are expected to come into force in 2023. The document concerns projects focused on the construction and safe operation of new NPPs, upgrades and modifications of existing NPPs for life extension purposes, and innovative technologies for power generation in nuclear reactors that minimise waste generation throughout the nuclear fuel cycle (so-called Generation IV reactors). There is no doubt that nuclear power is a low-carbon energy source; at the same time, the EU Taxonomy contains additional requirements for NPP projects in terms of safe operation, the safety of fuel solutions and RAW and SNF management in order to make sure that they cause no harm to the environment or to human life and health.

Minimum greenhouse gas emissions

Nuclear power generation is a source of low-carbon energy that meets base load power demand. Nuclear power generation does not produce direct CO_2 emissions, which puts it on a par with renewable energy sources, such as wind power. The operation of all NPPs in Russia currently helps to prevent emissions exceeding 100 million tonnes of CO_2 equivalent per year (109 million tonnes of CO_2 equivalent in 2021).

Greenhouse gas emissions*



** Minimum values over the life cycle (gCO_2e/kWh); the average value is shown for nuclear power.*
Source: UNECE.

In October 2021, the United Nations Economic Commission for Europe (UNECE) published a study showing that nuclear power plants produce the smallest amount of emissions over their life cycle compared to other power generation options (averaging 5.5 g CO_2e/kWh, while minimum emissions from hydropower and wind power plants total 6 g and 7.8 g CO_2e/kWh respectively)[2].

Previous studies published by the IPCC (a UN body) in 2014 had confirmed the average figures at 12 g CO_2e/kWh for nuclear power as against 11 g for wind power and 24 g for hydropower.

[2] https://unece.org/sites/default/files/2021-10/LCA-2.pdf.

Safe operation

The safety of people and the environment is ROSATOM's top priority. Both national and international regulations on the use of nuclear energy set the strictest and most comprehensive safety requirements.

ROSATOM continuously improves its technological solutions and the safety of nuclear power plants at all stages of their life cycle. Russian-design reactors feature a combination of active and passive safety systems that minimise the likelihood of accidents and prevent the risk of damage from a hurricane, a flood, an earthquake and other disasters. ROSATOM's technological solution based on the VVER-1200 technology (in commercial operation since 2017) is the world's most advanced reactor technology currently in commercial operation (Generation IV reactors with a closed fuel cycle); it complies with all post-Fukushima safety requirements.

Safety of fuel solutions

ROSATOM is working to improve materials and technologies used in the nuclear fuel cycle; these efforts are focused primarily on improving the safety of nuclear technologies. The development of accident tolerant fuel (ATF) is high on the agenda of the global nuclear community. TVEL Fuel Company is actively developing accident tolerant fuel for light-water reactors. It is exploring options that have a high readiness level, including new approaches to both fuel cladding materials and fuel matrices.

As part of its efforts to enhance the safety and reliability of existing technologies, the nuclear industry is actively developing technological solutions for a closed nuclear fuel cycle. In 2021, ROSATOM started the construction of a BREST reactor, which does not use natural uranium and enables the disposal of long-lived radioactive waste. The BREST reactor will form part of the Pilot and Demonstration Energy Facility (PDEF), which will be of crucial importance for the entire global nuclear industry. This nuclear technology hub of the future comprises three interconnected facilities that are unique in the world: a fuel fabrication/refabrication module that will produce uranium/plutonium fuel; the BREST-OD-300 power unit and an irradiated fuel reprocessing module.

The PDEF is being built as part of ROSATOM's strategic project code-named Proryv ('Breakthrough'), which is focused on creating a new technological platform for the nuclear power industry. It involves the widespread adoption of technologies for the recycling of nuclear materials. This will considerably increase the availability of feedstock for the nuclear power industry and will help to address the issue of spent nuclear fuel and radioactive waste accumulation by reusing SNF reprocessing products instead of storing them and by drastically reducing the volume and radioactivity of waste.

Safe RAW and SNF management and technological solutions for nuclear decommissioning

ROSATOM's operations are underpinned by the principles of responsible use of natural resources in order to preserve them for future generations. State-of-the-art technological solutions enable by-products of reprocessing and spent materials to be reused in the production cycle to manufacture new materials and products.

The key principles underlying the management of radioactive materials include safe and responsible RAW management and waste minimisation. ROSATOM's organisations perform the full range of RAW management tasks, from processing to disposal, including removal, transportation and characterisation, RAW stabilisation for disposal (conditioning) and burial, as well as construction of RAW storage and disposal facilities.

Estimated contribution of an NPP project to the achievement of the UN SDGs:

An NPP produces 2,400 MW of low-carbon energy for 60 years, which is sufficient to provide power supply to an average of 1.8 million households*. Nuclear power generation has one of the lowest LCOEs among conventional power plants, with NPPs producing electricity at a stable price that does not depend on the cost of fuel.

The operation of an NPP creates about 3,000 new jobs at the power plant itself and 10,000 jobs in adjacent industries*.

During the construction of an NPP, local industrial enterprises secure orders worth a total of USD 3 to 4 billion*.

In NPP construction and operation projects, special focus is given to the management of spent nuclear fuel (SNF), SNF processing products and operational radioactive waste, as well as to the decommissioning of facilities posing nuclear and radiation hazards. Enterprises in the nuclear industry are making concerted efforts to develop closed nuclear fuel cycle technologies and ensure safe storage of radioactive waste.

NPPs produce no direct CO_2 emissions. The nuclear power industry produces the second lowest amount of greenhouse gas emissions over the life cycle, outperformed only by wind power generation, with emissions totalling 12 g and 11 g CO_2e/kWh respectively, according to the IPCC.

The nuclear power industry offers solutions for different stakeholders: the government, local communities, industrial enterprises, etc. The sustainable development agenda is actively discussed on international platforms: at conferences held by the IAEA and the World Nuclear Association (WNA), the World Association of Nuclear Operators (WANO), the World Energy Council, etc.

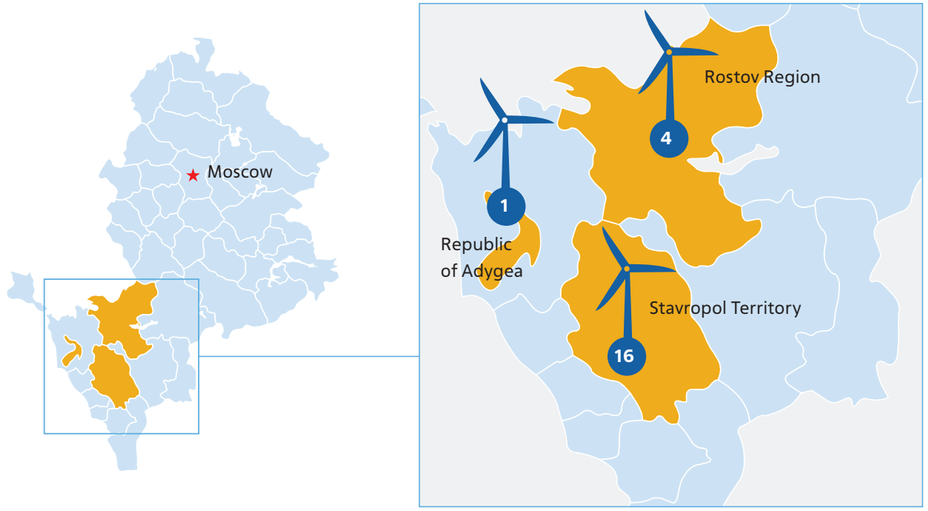
** An NPP with two 1,200 MW power units.*

Wind power

In order to diversify its product solutions in the sphere of low-carbon power, ROSATOM has been developing the wind power business jointly with Lagerwey since 2017.

Five new wind power plants (WPPs) with a total capacity of 570 MW were built and commissioned in the Rostov Region and the Stavropol Territory in 2021: the Kochubeyevskaya WPP (210 MW), the Marchenkovskaya WPP (120 MW), the Karmalinovskaya WPP (60 MW), the Bondarevskaya WPP (120 MW) and the Medvezhenskaya WPP (60 MW). A total of six wind farms with a total capacity of 720 MW are currently in operation.

In 2022, ROSATOM plans to commission three more WPPs: the Kuzminskaya WPP (160 MW), the Trunovskaya WPP (60 MW) and the Berestovskaya WPP (60 MW). The portfolio of wind power plants to be built by ROSATOM by 2027 totals 1.7 GW.



2021 saw the placement of the first ‘green’ bond issue in the industry as part of the Wind Power programme. The bond issue with a par value of RUB 10 billion is compliant with international standards developed by ICMA. The bonds have been listed on the Moscow Exchange. They were more than eight times oversubscribed. This is the first placement of exchange-traded bonds by a Russian issuer to finance renewable energy sources.

Hydrogen

In 2018, hydrogen energy production was included in the list of prioritised areas of scientific and technological development of the nuclear industry. ROSATOM has technological and research capabilities required for developing key hydrogen production techniques: electrolysis, which is one of the most environmentally friendly hydrogen production techniques, and steam methane reforming, which involves the use of CO_2 capture technology.

The Letter of Intent on Cooperation on the Project to Create and Develop a Hydrogen Cluster signed in April 2021 by the Ministry for the Development of the Russian Far East and Arctic, the Government of the Sakhalin Region and ROSATOM envisages cooperation in a number of areas, including building a hydrogen production facility, establishing a hydrogen supply chain for both foreign markets and local consumers, and creating a hydrogen park in cooperation with companies implementing projects in this area. A centre of competence in the sphere of clean energy (including hydrogen energy) will be established under the agreement in order to enable personnel training, technology transfer and the sharing of experience.

In August 2021, the Government of the Russian Federation approved the Hydrogen Energy Development Concept, which highlights the importance of unlocking the national potential in the field of hydrogen production, use and export, as well as enabling Russia to become one of the leading countries in this industry. As part of its hydrogen energy development efforts, ROSATOM has plans for all prioritised aspects covered in the national Concept, including both domestically developed technologies and the establishment of international hydrogen supply chains.

Energy storage systems

A separate business area controlled by ROSATOM, Energy Storage Systems, was established in 2020. It is focused on lithium-ion batteries for electric vehicles, as well as stationary energy storage systems for uninterruptible and emergency power supply and energy storage systems for renewable energy. A cooperation agreement was signed with the government of the Kaliningrad Region in 2021 to build a plant for the production of lithium-ion battery cells and energy storage systems in the region.

In 2021, the Corporation, together with JSC Atom Power Industry Trade, put into operation 18 energy storage units at power distribution grid facilities of PJSC Rosseti Centre and PJSC Rosseti Centre and Volga Region. This is Russia’s first commercial dispatch system based on lithium-ion batteries for industrial consumers.

Environmental solutions

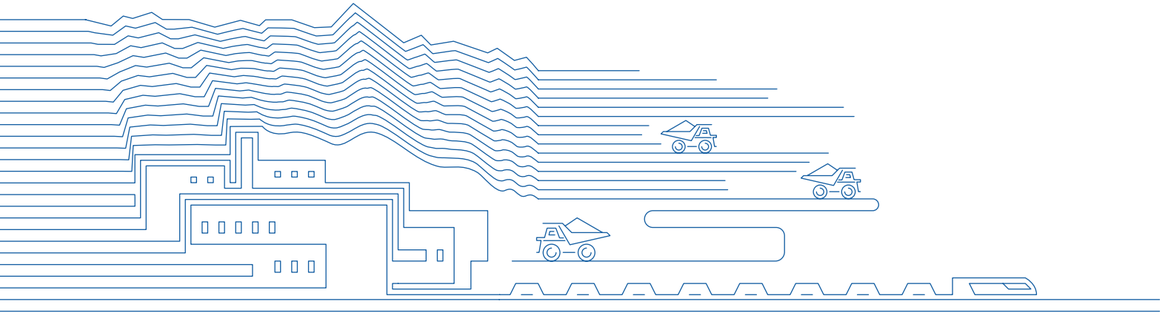
ROSATOM is responsible for developing an integrated system for hazard class 1 and 2 waste management in Russia, which involves building a secure integrated system for managing the entire process chain, from waste generation to waste processing into recycled products, as well as building the relevant infrastructure for hazard class 1 and 2 waste processing. ROSATOM is creating seven environmental technology parks, which will be equipped with world-class state-of-the-art technological solutions. The first four environmental technology parks will be created in the Saratov, Kirov and Kurgan Regions and in the Udmurt Republic.

In 2021, the project to reclaim the Chelyabinsk municipal landfill, which is the country's largest household waste landfill, was completed ahead of schedule. The project helped to improve the quality of life for more than 1 million people. Harmful emissions into the atmosphere in the city were reduced by 30%, and discharges of harmful leachate into the Miass River ceased completely. The 74-hectare area is now completely safe.

ROSATOM is implementing a project to enhance environmental safety in the town of Usolye-Sibirskoye in the Irkutsk Region, where a 610-hectare industrial site is located. In 2021, a number of key project activities were completed as planned, including the decommissioning of 12 brine wells; containment of an oil lens; the dismantling of a mercury cell electrolysis workshop; and preparation of the bulk of soil and building structures remaining after the dismantling of the mercury cell electrolysis workshop for further mercury remediation at the Vostok Environmental Technology Park. By 2024, the site will be made safe and suitable for setting up new manufacturing operations.

ROSATOM is also working to mitigate environmental risks posed by legacy sites in the Irkutsk, Chelyabinsk and Leningrad Regions.

ROSATOM is working to repair historical environmental damage as part of a related federal project titled 'Preservation of Lake Baikal'. A waste disposal project has been developed for the Baykalsk Pulp and Paper Mill (BPPM). In 2021, a set of top-priority measures was implemented to prevent emergency situations at the BPPM (lowering the water level above the sludge layer, the clearing of river beds and riverbank stabilisation).



Environmental techology parks

Legacy sites causing environmental damage

Completed environmental projects

Arctic: development of the Northern Sea Route

ROSATOM has been assigned the functions of the infrastructure operator of the Northern Sea Route (NSR). It is responsible for managing maritime traffic along the NSR, building infrastructure facilities, providing navigational and hydrographic support and ensuring safe navigation in a harsh Arctic environment. Cargo transportation along the NSR provides a number of advantages compared to traditional routes via the Suez and Panama Canals (the distance between Northern Europe and East Asia is reduced by up to 39%, while the distance between the western coast of North America and Northern Europe is reduced by up to 28%).

ROSATOM operates the world's only nuclear-powered icebreaker fleet, which is a low-carbon type of marine transport, as it uses nuclear energy.

Between July 2021 and March 2022, ROSATOM conducted pilot studies focused on environmental monitoring of the NSR with assistance from leading Russian and foreign experts in this area led by the Marine Research Centre of Lomonosov Moscow State University. The findings of the pilot studies indicate that currently, Arctic shipping does not make a significant negative impact on the environment along the NSR. The scale of man-made impacts on the environment in the region does not exceed the long-term average level.

In 2021, cargo traffic along the NSR totalled 34.9 million tonnes (against a target of 31 million tonnes), including 25.9 million tonnes transported by vessels escorted by nuclear icebreakers. Cargo traffic along the NSR is projected to reach 80 million tonnes per year by 2024 and might increase to 110 million tonnes by 2030.

To handle the growing cargo traffic along the Northern Sea Route, ROSATOM is upgrading its icebreaker fleet on a large scale. In 2021, the first follow-on Project 22220 multipurpose nuclear icebreaker, *Sibir*, was accepted into service; it is equipped with a RITM-200 integral reactor unit whose power exceeds 80,000 h.p. By year-end 2021, three more Project 22220 multipurpose nuclear icebreakers, *Ural, Chukotka* and *Yakutia*, were under construction; they are scheduled to be commissioned in 2022, 2024 and 2026 respectively.

Nuclear medicine and isotope products

Business areas prioritised by ROSATOM include the development of nuclear medicine. ROSATOM's solutions for nuclear medicine involve developing new high-technology equipment for medical applications and supplying radiopharmaceuticals based on isotopes produced in-house, as well as solutions for nuclear medicine centres comprising diagnostic and radiotherapy modules.

30% of the world's reactor units producing medical radioisotopes are located in Russia. The Russian nuclear industry accounts for 25% to 50% of global radioisotope production (for some types of radioisotope products, its share totals 100%). ROSATOM supplies isotope products to more than 55 countries worldwide, enabling millions of patients to undergo diagnostic procedures and therapy: for example, almost 2 million people per year undergo procedures that involve the use of molybdenum-99 and technetium-99.

A prototype of the ONYX radiation therapy facility was produced in 2021. This work forms part of a project to create a radiation therapy facility based on a 6 MeV linear electron accelerator that will replace imported solutions and to develop the core of a competitive high-technology nuclear medicine industry based on radiation technology in the Russian Federation.

The Brachium gamma radiation therapy facility for brachytherapy was registered. Brachium is designed for cancer treatment using the contact radiation method. The device uses advanced high-dose brachytherapy technology, which enables treatment involving high-precision insertion of radiation sources. Mass production of Brachium facilities has been launched. A contract was concluded for the supply of eight pieces of equipment, and four sets of equipment were manufactured.

In 2022, ROSATOM plans to complete phase 1 construction and installation work at the radiopharmaceuticals plant in Obninsk, and to complete the construction of the building frames of the Radionuclide Therapy Centres in Lipetsk and Ufa, as well as the Nuclear Medicine Centre in Irkutsk.

Composites and new materials

ROSATOM (JSC UMATEX) is the key Russian manufacturer of carbon fibre with a production capacity of ~1,200 tonnes.

A new PAN fibre plant with a capacity of up to 5,000 tonnes per year was commissioned on 22 November 2021 in the Alabuga Special Economic Zone (Republic of Tatarstan). As a result, a unique integrated modern carbon-fibre-reinforced plastics production chain has been established in Russia; it comprises all stages, from crude oil, through PAN, carbon fibre, fabrics and pre-pregs to finished products.

Composite materials are widely used in aircraft engineering and the automotive industry. Carbon composites are lighter and stronger than metals; a reduced weight of a vehicle/aircraft helps to achieve fuel savings while maintaining the required level of safety.

ENVIRONMENT AND RADIATION SAFETY

Environment

Principle 7. Businesses should support a precautionary approach to environmental challenges.
Principle 8. Businesses should undertake initiatives to promote greater environmental responsibility.
Principle 9. Businesses should encourage the development and diffusion of environmentally friendly technologies.

1. Environmental policy

ROSATOM seeks to align its operations with the 'Do No Significant Harm' principle, which involves minimising environmental pollution, the negative impact on ecosystems and risks to human health.

The **Uniform Industry-Wide Environmental Policy of ROSATOM and Its Organisations (2008[3])** (hereinafter referred to as the Environmental Policy) is the main regulatory document in the sphere of environmental safety and environmental protection in the nuclear industry. It sets out the goals and key focus areas in the sphere of environmental safety and environmental protection in the regions where nuclear facilities are located.

ROSATOM pursues a responsible environmental policy underpinned by the precautionary principle. The policy prioritises the preservation of natural ecosystems and stipulates that the latest scientific achievements must be used to ensure environmental safety and that environmental aspects of operations of organisations in the industry must be transparent and the relevant information must be made publicly available. ROSATOM's organisations, including JSC Rosenergoatom, JSC TENEX, JSC TVEL, JSC Atomenergomash, JSC Atomredmetzoloto, etc. have obtained certification confirming compliance of their environmental management systems with the ISO 14001 international standard and regularly undergo recertification audits to confirm their compliance with this standard.

As part of implementation of its Environmental Policy, ROSATOM holds a number of events focused on improving environmental safety and preserving the environment. These include Nuclear Power and Industry Safety Day dialogue forums, industry-wide safety culture competitions and industry-wide safety days.

ROSATOM's organisations publish environmental safety reports on an annual basis. These reports provide information on the organisations' environmental performance, including emissions and discharges, industrial and consumer waste and radioactive waste, progress in the implementation of the environmental policy, the development and implementation of management systems and industrial environmental control systems, as well as engagement with government agencies (including local governments), environmental non-governmental organisations, research and social institutions and local communities. The reports are publicly available.

Environmental safety reports:
https://www.rosatom.ru/sustainability/environmental-management/

2. Pollutant and greenhouse gas emissions

In 2021, pollutant emissions into the atmosphere from ROSATOM's organisations totalled 37,000 tonnes, accounting for 0.2% of total emissions in Russia in 2021; the pollutant capture rate stood at 91.4%.

Pollutant emissions into the atmosphere[4], '000 tonnes

	2019	2020	2021
Total, including:	38.6	38.0	37.0
Particulate emissions	13.4	14.2	13.5
NO_x emissions	10.2	6.1	7.4
SO_2 emissions	9.7	11.6	9.8
CO emissions	3.5	3.3	3.8
Hydrocarbon emissions, including:	1.4	2.2	2.1
Methane emissions	0.2	0.8	0.7
Volatile organic compounds	1.1	1.2	1.3
Other gaseous and liquid compounds	0.4	0.6	0.4

[3] The years of approval of the first versions of the documents are indicated.

[4] Pollutant emissions are reported by ROSATOM's organisations using chemical analysis methods or automatic gas analysers.

Emissions decreased by 1,000 tonnes compared to 2020 due to the modernisation and upgrades of equipment for pollutant capture and treatment. Significant changes in the volume of sulphur dioxide and nitrogen oxide emissions were caused by changes in the types or quality of fuel used at ROSATOM's thermal power plants (CHPPs), which produce electricity and heat both for ROSATOM's organisations and for the towns and cities in which they are located. Enterprises in the industry are implementing a number of projects to upgrade CHPP equipment, which will help to reduce the share of coal in the fuel mix, with coal to be used only as backup fuel. Overall, ROSATOM does not plan to increase the use of coal in its operations.

In order to reduce pollutant emissions into the atmosphere by ROSATOM's organisations, an Action Plan to Minimise the Negative Impact of ROSATOM's Organisations on the Environment until 2025 was developed in 2021. Measures implemented as part of the plan included the following:

- The Krasnokamensk branch of JSC RIR (JSC Rusatom Infrastructure Solutions) upgraded the ash collector, which improved ash collection efficiency by 99.4% and reduced specific ash emissions into the atmosphere from 67 g/s to 8 g/s;
- The Pilot and Demonstration Engineering Centre (PDEC) (JSC Rosenergoatom) upgraded the auxiliary power supply system; this involved replacing diesel generators, which reduced the number of stationary sources of harmful (pollutant) emissions into the atmosphere and annual gross pollutant emissions by 60% and 20% respectively.

Greenhouse gas emissions

Nuclear organisations accounted for 0.04% of total greenhouse gas emissions in Russia (in CO_2 equivalent).

Gross greenhouse gas emissions by ROSATOM's organisations, tonnes[5]

Substance	2019	2020	2021
Carbon dioxide[6]	5,451.820	5,216.911	5,976.5
Methane	193.734	766.619	689.1
Nitrous oxide	0	0	0
Trifluoromethane	0	0	0
Perfluoromethane	124.806	124.806	124.8
Perfluoroethane	0	0	0
Sulphur hexafluoride	0	0	0
Total	**5,770.360**	**6,108.334**	**6,790.4**

In 2021, gross greenhouse gas emissions totalled 6,790.4 tonnes, up by 11.2% year on year. This was due to an increase in fuel combustion at CHPPs/TPPs in the Novouralsk and Glazov branches of JSC RIR caused by the wider use of small steam boilers with higher specific emission levels, which was necessitated by a significant drop in outdoor temperatures in winter.

3. Radiation safety

Safety is one of ROSATOM's values. ROSATOM seeks to ensure that its operations are completely safe for people and the environment as a matter of priority; the Corporation is responsible for process safety across the production chain, from uranium mining to decommissioning and RAW and SNF management.

The safety status of nuclear facilities is assessed based on the number and scale of recorded deviations in their operation, which are benchmarked against the IAEA International Nuclear and Radiological Event Scale (INES).

In recent years, no events rated at level 1 or higher on the international INES scale have been detected at Russian NPPs (deviations rated at level 1 and 0 do not pose a risk to employees operating the facilities, local residents or the environment). In 2021, there were 34 deviations rated at level 0.

Radiation safety management systems have been implemented at all facilities posing nuclear and radiation hazards; the use of these systems is a mandatory requirement. In 2021, there were no events classified as an 'accident' or 'incident' at ROSATOM's industrial facilities. In 2021, nuclear and radiation safety inspections were conducted at 142 nuclear facilities; following 87 routine inspections, at 90% of the facilities no violations were detected that could affect their safe operation. In 2021, there were no violations of safe operating limits or conditions at any nuclear facilities, including in terms of the safety of operating personnel and local residents.

[5] Quantitative estimates of greenhouse gas emissions are based on data obtained from 2-TP (Air) statistical observation forms.

[6] The data are presented using a coefficient of 1.57 calculated by converting CO to CO_2 based on molar mass.

4. Energy efficiency

An energy conservation and energy efficiency improvement programme for the period from 2018 through 2022 was adopted in the industry in 2018. To monitor progress on energy efficiency improvement measures and their outcomes, an Automated Energy Efficiency Management System has been introduced in the industry; it covers 80 nuclear organisations.

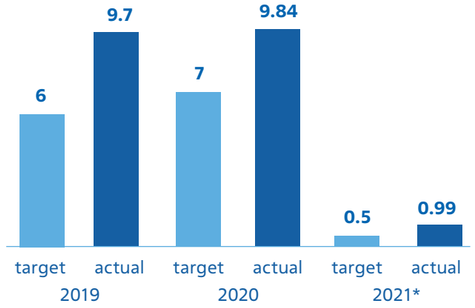
In 2021, JSC Khiagda (Mining Division) continued to implement a project focused on the production of high-performance lighting solutions. The aim of the project is to replace low-efficiency light sources with high-performance LED light sources in order to reduce energy consumption and cut expenditure on the procurement of light sources. The payback period of the project totals one year. The cost of lighting products manufactured in-house is 2.5 times lower than that of similar lamps available on the market.

In accordance with the government programme of the Russian Federation titled 'Development of the Nuclear Power and Industry Complex', between 2015 and 2020 and in 2021, ROSATOM set and achieved targets for the reduction in energy consumption compared to 2015 and 2020 respectively.

In 2021, the actual reduction in energy consumption compared to 2020 totalled 0.99%, exceeding the target. Actual savings totalled RUB 0.35 billion (excluding VAT) in monetary terms and 636,442.05 GJ in physical terms.

Organisations in the industry use the AEEMS information system for reporting on energy conservation and improvement of energy efficiency. The number of ROSATOM's organisations covered by the AEEMS grows year by year (78 organisations in 2019; 80 in 2020; 124 in 2021).

Savings compared to 2015 and 2020, %



** Savings compared to 2020, %*

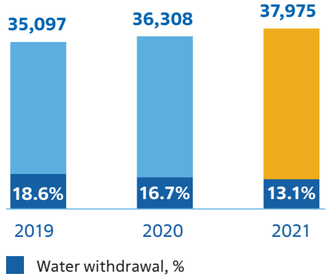
5. Water use and wastewater discharge

The basic principle behind NPP operation is that a nuclear reaction produces a large amount of heat, which is used to heat water and transform it into steam. Modern NPPs use a system comprising two circuits: there is no contact whatsoever between water in the primary circuit and water in the secondary circuit. This helps to improve NPP safety and prevents radioactive contamination of water discharged to the eventual destination (a sea or another water body or a cooling tower).

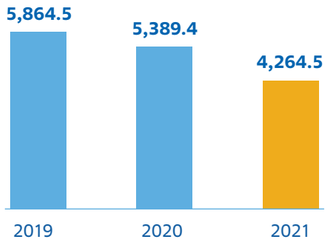
In 2021, the volume of water recycled and reused by ROSATOM's organisations totalled 37,974.6 million m³. In the reporting year, water withdrawal by nuclear organisations totalled 4,979.2 million m³, which is 1,080 million m³ less than in 2020.

In 2021, wastewater discharge by the ROSATOM's organisations totalled 4,264.5 million m³, with clean water compliant with regulatory requirements accounting for 95.6% of the total volume, while the share of treated wastewater compliant with regulatory requirements and contaminated wastewater stood at 0.9% and 3.5% respectively. Clean water compliant with regulatory requirements accounts for more than 95% of the total wastewater discharge; therefore, wastewater discharge by ROSATOM's organisations does not have any significant impact on water bodies and related habitats of local flora and fauna.

Total volume of recycled and reused water, million m³



Wastewater discharge, million m³



An Action Plan to Minimise the Negative Impact of ROSATOM on the Environment until 2025 is being implemented in the industry. Measures implemented in 2021 as part of the plan to reduce the discharge of pollutants into water bodies included the following:

- At Novovoronezh NPP, the circulation pump (TsN-5) was upgraded, which enabled a reduction in annual water consumption and a reduction in the consumption of water withdrawn from the Don River from 32,000 m^3/hour to 19,000 m^3/hour;
- At Kalinin NPP, a project was implemented to introduce automatic monitoring of petroleum product content in wastewater, which helped to prevent the risk of petroleum product content in wastewater exceeding the statutory limit (0.05 mg/l).

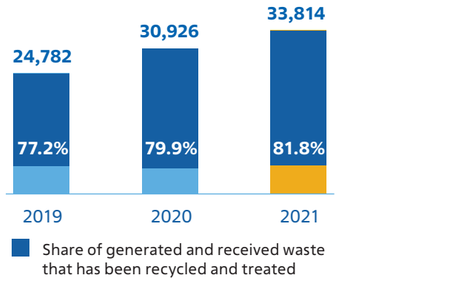
6. Industrial and consumer waste management and disposal

In the course of its operations, ROSATOM seeks to reduce specific pollutant emissions and discharges into the environment, to reduce industrial and consumer waste generation (including radioactive waste) and expand the application of closed-cycle production technology.

In 2021, nuclear organisations produced 33.8 million tonnes of industrial and consumer waste, which is 2.9 million tonnes (9.4%) more than in 2020. Most of the waste was generated by PJSC PIMCU (a uranium mining company forming part of ROSATOM's Mining Division) and consisted of rock and loose overburden produced during mining. Most of this waste is class 5 waste, which is the least hazardous.

81.9% of the total amount of waste generated and received by ROSATOM's organisations was recycled; 0.003% was treated.

Waste generated and received by ROSATOM, `000 tonnes



7. Biodiversity and land rehabilitation

All of ROSATOM's organisations take steps to prevent the degradation of natural ecosystems in their vicinity as a result of their operation.

The Lapland State Nature Reserve is located within a 30-kilometre radius of Kola NPP, and 16 nature monuments and 33 wildlife sanctuaries are located within a 30-kilometre radius of Kalinin NPP.

Measures aimed at preserving the diversity of flora and fauna include the following:

- Equipping water intake facilities with fish screens in order to prevent young fish from swimming or getting drawn into them;
- Equipping transformer substations with special devices to prevent animals from entering the premises;
- Installing bird diverters on power lines;
- Ensuring that motor vehicles and special machinery travel on paved roads and providing special parking lots for them;
- Arranging waste accumulation sites compliant with technical and sanitary standards; removing waste and transporting it to designated locations in a timely manner;
- Taking measures to reduce noise impact, etc.

Given an increase in the prioritisation of biodiversity conservation, ROSATOM has drafted amendments to its Environmental Policy regarding monitoring and minimising the impact of operations of nuclear organisations on biodiversity. A number of organisations in the industry implement targeted measures to protect biodiversity.

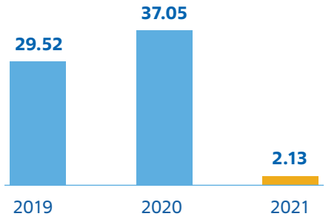
Stocking cooling ponds at NPPs with fish is a widespread practice. Fish help to maintain a proper balance of aquatic wildlife, the diversity of species and environmental well-being. Regular surveys are conducted to assess the status of fish population in water bodies in the vicinity of NPPs.

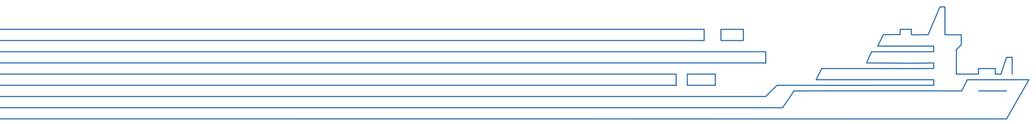
In 2021, ROSATOM's organisations took steps to replenish aquatic wildlife:

- JSC Siberian Chemical Plant (Fuel Division) stocked the Tom River with peled (0.37 tonnes of fry);
- At Beloyarsk NPP, the Beloyarsk Reservoir was stocked with bighead carp, grass carp and black carp (428,000 fry);
- At Kalinin NPP, the Udomlya Reservoir was stocked with black carp (82,700 fry);
- At Smolensk NPP, the cooling pond was stocked with silver carp, black carp and grass carp (91,300 fry);
- At Rostov NPP, the cooling pond was stocked with silver carp, black carp and European carp (3 tonnes of fry);
- At Kursk NPP, the cooling pond was stocked with silver carp (4.5 tonnes of fry).

At the end of the reporting year, the area of disturbed land[7] totalled 7,200 hectares; this included land disturbed during mining, construction, disposal of industrial waste, survey work and other operations. In the reporting period, organisations in the industry implemented a set of measures to restore the productivity and economic value of disturbed land. The area of restored land totalled 2.13 hectares. Land rehabilitation measures are implemented as planned as part of decommissioning programmes in ROSATOM's organisations. Reforestation activities in ROSATOM's organisations covered an area of 59.7 hectares.

Area of restored land, ha





[7] Land whose degradation has made it impossible to use it for its intended purpose, as permitted.

SOCIAL ASPECT

Principle 1. Businesses should support and respect the protection of internationally proclaimed human rights.
Principle 2. Businesses should make sure that they are not complicit in human rights abuses.

Human Rights

Principle 3. Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining.
Principle 4. Businesses should uphold the elimination of all forms of forced and compulsory labour.
Principle 5. Businesses should uphold the effective abolition of child labour.
Principle 6. Businesses should uphold the elimination of discrimination in respect of employment and occupation.

Labour

The *Social aspect (S)* includes ensuring occupational and process safety, protecting the life and health of employees in the industry and developing human potential. ROSATOM implements social projects aimed at supporting employees in the industry and the residents of 'nuclear' towns and cities and driving systematic improvements in the standard of living and health improvement for employees and their families, local communities and consumers of the Corporation's products in its regions of operation.

The top priority for the Corporation is to ensure occupational and process safety and to protect the life and health of employees in the industry; this is one of the key principles that ROSATOM is guided by in the course of its operations. ROSATOM has adopted the **Uniform Industry-Wide Social Policy (2013), the Uniform Industry-Wide Policy on Occupational Safety and Health (2013)** and the **Occupational Health and Safety Management System (2009)**, which is an important element of mutual obligations undertaken by ROSATOM, the Russian Union of Employers in the Nuclear Industry, Power and Science and the Russian Trade Union of Nuclear Power and Industry Workers.

ROSATOM provides optimal working conditions for its employees, with occupational hazards totally eliminated or exposure to such hazards not exceeding regulatory limits deemed safe for people. Organisations in the industry work systematically to improve safety performance; this includes reducing the occupational injury rate (which is more than five times lower than the national average), minimising employees' exposure to occupational hazards and ensuring contractor safety. Individual organisations in the industry, including JSC TENEX, JSC TVEL, JSC Afrikantov OKBM, JSC ZIO-Podolsk, etc., have undergone certification to confirm compliance of their occupational health and safety management systems with the ISO 45001 international standard.

Social and HR policy focused on recruiting and retaining young professionals and highly skilled specialists, providing social assistance to employees, their families and veterans of the nuclear industry is an important part of ROSATOM's human capital management system.

Labour relations

In 2021, ROSATOM and its organisations employed 288,500 people (including 24,700 people in overseas organisations, branches and representative offices), with men and women accounting for 68% and 32% of the total headcount respectively (according to the OECD Nuclear Energy Agency, the average share of women in the global nuclear industry totals 24.7%). 29.7% of employees were aged under 35.

ROSATOM participates in the OECD NEA Task Group on Improving the Gender Balance in the Nuclear Sector. As part of the project, the first international study on gender balance in the nuclear industry was conducted in 2021.

In 2021, personnel costs totalled RUB 443.78 billion, up by 11.7% year on year. In 2021, the average monthly salary in ROSATOM increased by 6.9% compared to 2020 and totalled RUB 96,200 per month.

ROSATOM adheres to the Industry-Wide Agreement on Nuclear Power, Industry and Science for 2018–2020, which has been renewed until the end of 2022. The Agreement is based on the established practice of social partnership in the nuclear industry and is aimed at implementing the Integrated Standardised Remuneration System, the Uniform Industry-Wide Social Policy and the Occupational Health and Safety Management System.

The Agreement has been drafted and is being implemented jointly with the Russian Trade Union of Nuclear Power and Industry Workers (RTUNPIW). 125,856 employees of ROSATOM's organisations covered by the activities of the RTUNPIW, or 43.6% of the total headcount, are trade union members. The Agreement provides a basis for collective agreements concluded in nuclear organisations (collective agreements cover 79% of ROSATOM's employees). The Agreement stipulates the employer's obligations related to salary indexation, social benefits and safe working conditions; it also reflects the role of the industry-wide trade union, local trade union cells and trade union committees in maintaining social stability among the workforce of ROSATOM's organisations.

In December 2021, ROSATOM took part in the second international Global Impact Conference (GIC), where Russian and foreign experts discussed the current challenges and the contribution of the younger generation to global transformation. The event resulted in the establishment of the Impact Team 2050, an international youth advisory board that will be tasked with promoting ideas and supporting projects in the sphere of sustainable development worldwide.

In order to encourage promising young specialists to work in the industry and to generate interest in STEM disciplines and engineering professions among school students, ROSATOM actively participated in federal events and projects. ROSATOM assisted in organising a student competition, Your Move; the Big Break Competition for Schoolchildren; events hosted by the Sirius Educational Centre and the Russian Znanie Society. The total number of participants of these projects exceeded 14.8 million people.

6,732 university students completed internships in nuclear organisations.

A total of more than 1,690 university graduates were hired, with more than 70% of them graduating from core universities (18 universities specialising in disciplines that are relevant to the nuclear industry).

Talent development

The development of competences and employee training is one of the major priorities of ROSATOM's HR policy.

Training for specialists and executives in the industry is provided primarily by the Corporate and Technical Academies of ROSATOM. Currently, both Academies are full partners of ROSATOM in the implementation of strategic objectives; they implement projects directly relevant to prioritised areas of business development. 73% of employees across the industry underwent training in 2021. The number of training hours per employee averaged 42.27 hours.

ROSATOM won in the Leader of Change category of the contest focused on the development of women's leadership programmes as part of the Third Eurasian Women's Forum.

ROSATOM topped the annual ranking compiled by FutureToday, a company specialising in the recruitment of young professionals (in the Best According to Their Target Audience category), and ranked first among engineering companies in the Best Company Award ranking compiled by Changellenge.

Employee engagement rate

In 2021, ROSATOM continued to develop distance learning and e-learning formats. The share of distance learning in the industry reached 39%. 97% of training programmes run by the Corporate Academy and 67% of training programmes run by the Technical Academy were delivered online. By converting some compulsory training programmes to a distance learning format, ROSATOM avoided the risk of missing the deadlines for obtaining licences and work permits and ensured the continuity of its production processes.

Training remains accessible on any device anywhere 24/7 through the RECORD Mobile training platform. The RECORD Mobile platform is available as both a mobile app and a web app. In 2021, users of the platform completed 1,051,116 training courses totalling 1,310,374 man-hours. The number of completed courses more than doubled compared to 2020.

In 2021, the employee engagement rate in the industry remained at 84%, on a par with the world's best employers.

Occupational health and safety

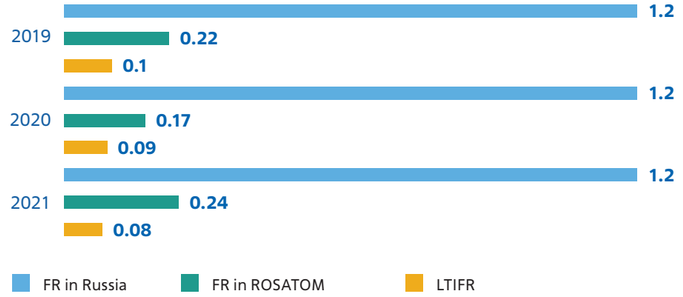
In 2019, ROSATOM joined the Vision Zero international campaign and is working to achieve a zero injury rate in its organisations.

More specifically, ROSATOM has adopted a Uniform Industry-Wide Policy on Occupational Safety and Health, whose principles underpin local occupational health and safety management systems in nuclear organisations.

In 2021, the amount of training provided under programmes aimed at developing a culture of safe behaviour (measured as the number of participants multiplied by the number of completed courses) totalled about 100,000 person-courses; 12 new training units were developed; 37 new in-house coaches were trained under safety culture programmes.

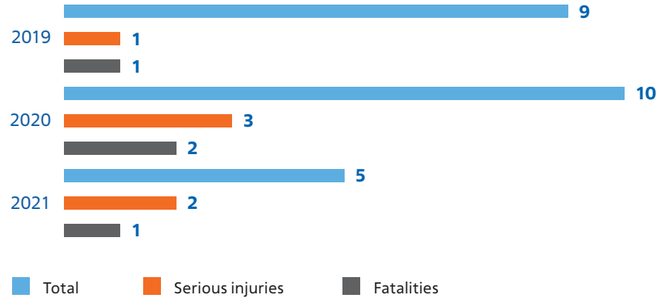
Despite continuous preventive efforts focused on improving the workplace safety culture, in 2021, the total number of accidents in ROSATOM's organisations increased by 28%; this included an increase in the number of serious injuries and fatalities. The increase in the number of injured persons, including serious injuries and fatalities, was caused by two group road accidents.

Injury frequency rate (FR)[8] and LTIFR[9]



In addition to the injury frequency rate (FR), ROSATOM also uses the lost time injury frequency rate (LTIFR). The LTIFR has been included in the KPI maps of all Division executives.

Number of injured persons in contractor organisations



[8] The injury frequency rate (FR) for Russia has been calculated based on the data from the Federal State Statistics Service provided in the Statistics section of the Trud-Expert Management online service.

[9] Lost Time Injury Frequency Rate (LTIFR) = number of lost time injuries / total work hours × 1 million man-hours.

In 2021, the total number of injuries in contractor organisations decreased, while the number of fatalities remained largely unchanged.

The injury rate in contractor organisations is relatively low due to cooperation between the occupational safety functions of customer organisations and contractors, as well as stricter safety requirements for contractors performing work at the production sites in the industry.

Human rights

ROSATOM actively supports and complies with employment standards pursuant to the legislation of the Russian Federation, industry-wide and internal regulations, and the Industry-Wide Agreement on Nuclear Power, Industry and Science.

None of ROSATOM's internal regulations contain any provisions barring people from being employed in the industry on the grounds of gender, ethnicity, background, the level of personal wealth, marital or social status, position, age, place of residence, attitude towards religion, political opinions or membership of public associations.

The Corporation confirms its commitment to the principles of respect for human rights stipulated in the Universal Declaration of Human Rights and other UN documents, the Guiding Principles on Business and Human Rights, the OECD Guidelines for Multinational Enterprises and the Voluntary Principles on Security and Human Rights.

ROSATOM and its organisations have adopted a responsible approach to respecting the rights and promoting the well-being of local communities in their regions of operation, cooperate with government bodies and treat local residents in their regions of operation with respect.

Employees are informed about a hotline operated by ROSATOM which can be used for submitting reports, including complaints and enquiries from individuals and organisations, to safeguard their right to apply in person and to submit individual and group enquiries to protect the rights and legitimate interests of the company, its organisations and their employees.

Fighting COVID-19 and promoting employee health

As part of the Uniform Industry-Wide Social Policy, ROSATOM implements corporate social programmes focused on voluntary health insurance, voluntary insurance against accidents and illness, and health resort treatment for employees. Their main goal is to maintain and protect employees' occupational health, including rehabilitation and health improvement after occupational diseases and accidents.

In 2021, about 80% of employees in the industry (230,000 people) had quick access to medical care covered by voluntary health insurance. In 2021, 66% of employees who needed health resort treatment based on the findings of a regular health check-up were given vouchers for health resort and rehabilitation treatment.

The biggest sporting event of 2021 was the Running Race of Nuclear Towns and Cities; its participants included over 9,000 employees and members of their families from 50 towns and cities in six countries (Russia, Belarus, Turkey, Hungary, Bangladesh and Egypt). They ran a total of 45,000 kilometres. The project won in the Sports and Healthy Lifestyle Support category of the 2020/2021 Best Social Projects in Russia National Competition.

In August 2021, ROSATOM announced the results of its new sports project, ROSATOM's Healthy Lifestyle Ambassador: 181 healthy lifestyle ambassadors from 43 towns and cities in three countries (Russia, Turkey and Kazakhstan) encouraged 3,839 employees in the industry to exercise on a regular basis; these employees did 530,293 hours of physical exercise and walked a total of 1,712,341,513 steps.

Due to the challenging epidemiological situation and the spread of the coronavirus disease (COVID-19), in 2021, ROSATOM continued to implement measures aimed at curbing the spread of COVID-19 in its organisations and regions of operation. The Corporation implemented an action plan and a set of restrictions to slow down the spread of COVID-19; it also provided additional social benefits for employees who were vaccinated and received booster shots, including additional paid leave, additional sick pay to employees diagnosed with COVID-19, reimbursement for the cost of antibody testing, health resort treatment and recreation.

ROSATOM improved the organisation of the COVID-19 vaccination process: it worked with the Federal Biomedical Agency (FMBA) of Russia and representatives of regional governments to make vaccines available in the regions of operation of all of ROSATOM's organisations, including overseas branches and representative offices. These measures helped to curb the spread of COVID-19. As a result of these efforts, as at 31 December 2021, 82% of ROSATOM's employees in Russia had been vaccinated.

Developing the regions where nuclear facilities are located

ROSATOM contributes to the social and economic development of the towns and cities where nuclear facilities are located in a number of ways. The Corporation makes a significant contribution to the energy security of a number of regions and is also a major taxpayer making tax payments to budgets of all levels. The Corporation makes a substantial economic impact on its regions of operation by creating a significant number of skilled jobs in the nuclear and related industries, providing not only employment, but also decent working conditions and remuneration.

In 2021, ROSATOM continued to implement 22 projects and initiatives in nuclear towns and cities, ranging from initiatives to create a comfortable environment and national projects to communications and educational projects. More than 200,000 people in nuclear towns and cities are involved in projects being implemented in the industry. 17 out of 27 nuclear towns and cities (i.e. more than 60%) have been assigned an urban environment quality rating indicating a favourable urban environment.

ROSATOM contributes to the development of both nuclear towns and cities and other municipalities by improving the efficiency of urban management through the application of the Lean Smart City technological solution. The Smart City is a comfortable urban environment created through a partnership between governments, local residents and businesses and facilitating economic and human-centric development of towns and cities, the unlocking of creative potential of all local residents and improvement of living standards.

In 2021, services provided via the Smart City digital platform, which is designed to improve the efficiency of urban management, were rolled out in 34 towns and cities, including **18 of ROSATOM's host towns and cities**. Overall, more than 600,000 people across the country used the Smart City services in 2021.

2021 saw the 15th anniversary of the launch of a programme titled ROSATOM's Territory of Culture.

Since the launch of the programme, more than 1,500 events of various types have been held in 25 nuclear towns and cities. In 2021, more than 100 events were held as part of the programme.

The main objectives of the programme are to shape a culture of excellence in nuclear towns and cities, enable professionals to participate in landmark events at the national level, reach out to local communities and involve all social groups in the current cultural life.

More details are available on the website of the project: https://tercult.com/

Corporate volunteering

In 2018, ROSATOM decided to launch a corporate volunteering programme and develop an integrated system for planning and implementing volunteering initiatives.

ROSATOM, jointly with volunteers from its key Divisions, has identified the following five main areas of volunteer activity: environmental conservation (awareness campaigns, clean-ups, planting of seedlings, waste management); supporting socially disadvantaged groups (low-income families, orphans, the elderly); promoting a healthy lifestyle (blood donations, sporting events); career guidance and mentoring (lessons in schools, guided tours for the general public, intellectual games, competitions); intellectual volunteering (leveraging employees' professional skills in the regions of operation).

As part of the Pulsation blood donation campaign launched in partnership with the Medical Volunteers civil society group, in 2021, the Blood Centre of the FMBA of Russia and ROSATOM collected more than 3,000 litres of blood in Russia and conducted awareness campaigns for employees in the nuclear industry, school and university students.

About 350 volunteer campaigns were conducted in ROSATOM in 2021. The total number of volunteers across ROSATOM exceeds 5,500 people.

In 2021, ROSATOM's volunteering programme won major Russian awards: Champions of Good Deeds and the Crystal Pyramid. The Social Design Centre and the Grant Competition in Krasnokamensk won the Best Social Project in Russia Award. The Volunteering Development Centre in Snezhinsk was recognised as the best project at the Russian Energy Week; in addition, two projects implemented by ROSATOM's volunteers reached the final of the WeAreTogether International Award.

CORPORATE GOVERNANCE

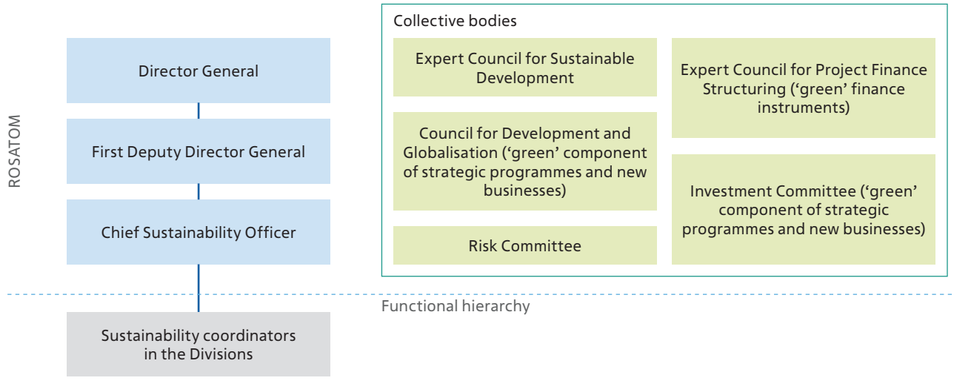
Anti-Corruption

Principle 10. Businesses should work against corruption in all its forms, including extortion and bribery.

As part of the *Governance aspect* (G), ROSATOM is building an integrated system of industry regulation and sustainable development standards and ensures the transparency of its business by disclosing as much information as possible.

In its production processes, ROSATOM focuses on making the procurement system transparent for suppliers and building a sustainable supply chain, including a requirement for compliance with environmental and social standards. ROSATOM implements anti-corruption measures and introduces the principles of ethical business conduct on an ongoing basis.

ESG management system



ROSATOM has adopted the Uniform Industry-Wide Public Reporting Policy (2009), the Uniform Industrial Procurement Standard (2009), the Uniform Industry-Wide Anti-Corruption Policy (2015) and the Code of Ethics and Professional Conduct (2016). The **ROSATOM Production System** has been developed and adopted in the industry; it is designed to promote a lean manufacturing culture. A quality management system has been introduced, and international standards such as ISO 14001, ISO 9001 and other standards are applied.

Public sustainability reports are an integral part of ROSATOM's practices to ensure the transparency of its business; they also serve as a stakeholder engagement tool. Starting from 2010, ROSATOM and its organisations annually publish non-financial reports in accordance with the international GRI Standards.

ROSATOM has adopted a Code of Ethics and Professional Conduct for Employees. The Code of Ethics communicates the key values of the nuclear industry and defines the relevant ethical principles of employee conduct when interacting with a wide range of external and internal stakeholders. The rules of conduct set out in the Code concern combating corruption, protecting the Corporation's resources, property and information, occupational health and safety, industrial and environmental safety, conflict prevention and resolving conflicts of interest, as well as maintaining the corporate image.

Anti-corruption policy

ROSATOM implemented all measures required to support the government anti-corruption policy, including compliance with prohibitions, restrictions and requirements for preventing or resolving conflicts of interest. The Anti-Corruption section of ROSATOM's official website is updated on a regular basis.

ROSATOM continued to support the professional development of executives responsible for preventing corruption and other offences, as well as managers and employees in the sector. In 2021, more than 7,000 employees of ROSATOM and its organisations took part in anti-corruption training events. ROSATOM also runs a training programme titled 'Introduction to the Company', which is designed to provide all newly hired employees with information on ROSATOM's anti-corruption efforts.

An anti-corruption hotline is run successfully in the industry. All reports are reviewed under the established procedure, and appropriate corrective measures are implemented. All reports of corruption and other offences received through the hotline and other channels are investigated.

Supply chain and procurement procedures

The Uniform Industrial Procurement Standard (UIPS) has been adopted in the industry. It is the main document that regulates the procurement activities of all nuclear organisations across all business areas and geographical regions. The UIPS stipulates that suppliers of goods, work and services must be selected impartially and efficiently through competitive tendering. ROSATOM and its organisations made 35,407 competitive purchases using their own funds (37,123 in 2020; 36,458 in 2019; 35,741 in 2018); as part of the annual procurement programme, in 2021, contracts were concluded with 23,173 counterparties.

In 2021, nuclear organisations concluded 65,441 contracts with small and medium-sized enterprises (40,036 in 2020).

ROSATOM's Supplier Code of Conduct: http://zakupki.rosatom.ru/en/?mode=CMSArticle&action=siteview&oid=655&returnurl=&node=RosatomSupplierC

As part of its supply chain sustainability management practices, in order to improve maturity in the sphere of sustainable development of operational projects, in 2021, ROSATOM approved a Supplier Code of Conduct (Order No. 1/1538-P of ROSATOM dated 26 November 2021 on Approving ROSATOM's Supplier Code of Conduct). The document sets out ROSATOM's priorities in the sphere of sustainable development which suppliers are required to adhere to, including priorities in the sphere of environmental safety, occupational safety and health, social policy, labour rights and business transparency. The decision on commitment to the Code is made by each supplier on a voluntary basis; this involves sending the relevant notification and conducting a self-assessment of the level of maturity of the supplier with a focus on environmental and social aspects of sustainable development.

Internal control and audit

In 2021, ROSATOM continued to improve the procedure for conducting data reliability audits, which is a tool for confirming that a supplier is able to carry out a contract in good faith. To do so, manufacturers are audited by a commission set up by the customer and having the required competences and expertise regarding the contract being tendered. In 2021, 252 audits were conducted among manufacturers, contractors and service companies.

In 2021, ROSATOM's specialised internal control bodies (SICBs) conducted 722 inspections in Russian nuclear organisations. Following the inspections conducted in 2021, the Internal Control and Audit Function developed 575 corrective measures and approved them for implementation.

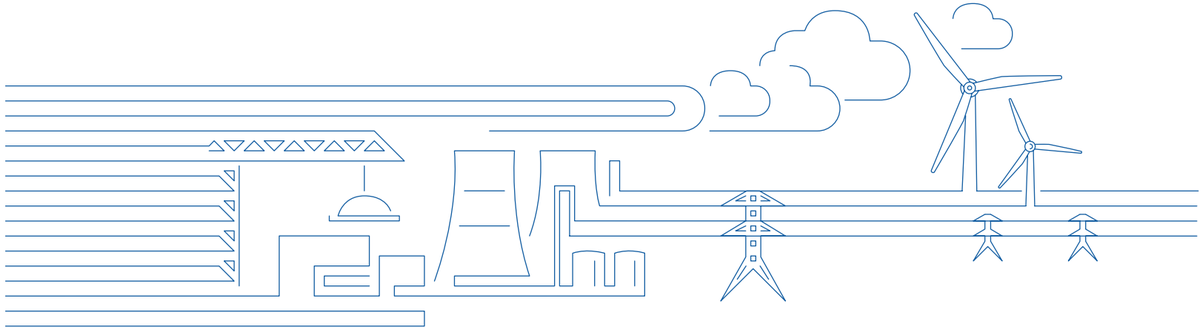
In 2021, ROSATOM conducted the first internal audit of the sustainability risk management system and compliance of nuclear enterprises with sustainability criteria; in the future, the audit will be conducted on an annual basis.

Data protection

ROSATOM is a data processor and is on the register of data processors compiled by the relevant department of the Federal Service for Supervision of Communications, Information Technology and Mass Media; it complies with the provisions of Russian legislation. The Personal Data Processing Policy has been approved by Order No. 1/700-P of ROSATOM dated 3 July 2018.

To raise awareness among ROSATOM's employees with regard to matters related to personal data handling, the Corporation issues local regulations and has developed an introductory training course on personal data handling, as well as guidance handouts. ROSATOM also regularly sends out newsletters on matters related to personal data use and protection. Public enquiries and complaints are handled on an ongoing basis.

In January 2022, ROSATOM held a strategic session titled 'Sustainability Principles in Industry Practices', which resulted in the adoption of an action plan and a memorandum of commitment of executives in the nuclear industry to the principles of sustainable development. https://www.rosatom.ru/upload/iblock/ec3/ec3a8022747e7ed12ec2b10159a6a046.pdf



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