ROSATOM

# 2021 PERFORMANCE

OF THE MECHANICAL ENGINEERING DIVISION

## TABLE OF CONTENTS

# MESSAGE FROM THE HEAD OF THE DIVISION

**Andrey Nikipelov**
Chief Executive Officer of JSC Atomenergomash,
Head of the Mechanical Engineering Division

Dear colleagues,

I would like to present the reporting materials of the Mechanical Engineering Division of State Atomic Energy Corporation ROSATOM (JSC Atomenergomash) for 2021.

This report covers production, financial, social and environmental issues related to activities of the Mechanical Engineering Division.

In the reporting year, JSC Atomenergomash continued to work on its strategic goals – to ensure the supply of key equipment under ROSATOM's roadmaps, improve performance, and increase the share of new products and foreign operations in the revenue.

In 2021, we expanded our ten-year portfolio of orders: as at December 31, 2021, it amounted to RUB 987.7 billion compared to RUB 850.5 billion in 2020. This is a record-setting amount for the Division. The significant growth of the Company's portfolio of orders was driven mainly by the development of the shipbuilding business.

The Company signed a contract with FSUE Atomflot for the supply of four modernised floating power units (MFPUs) to provide power to the Baimskaya ore zone in Chukotka. This is the world's first project aimed to electrify an industrial cluster using floating power units and an unprecedented event for ROSATOM and the global energy sector, including in the field of 'green generation.' In addition, this project, where Atomenergomash has been acting for the first time as a supplier of the final product, i.e. the entire floating power unit, opens up opportunities for us to enter new markets. Currently, Atomenergomash continues to work on the project of an optimised floating power unit (OFPU) based on RITM units, which will become ROSATOM's follow-on SNPP product. These solutions have significant potential for carbon-free energy supply to remote areas of Russia and abroad.

The Division continues to supply equipment for icebreakers to implement the programme aimed at developing the Northern Sea Route. Last year, the Company signed contracts for the supply of additional, previously unsupplied, equipment for Rossiya, the lead icebreaker of the Lider project.

The Division continues to produce RITM-200 reactor units for two follow-on multipurpose nuclear icebreakers under construction, Yakutiya and Chukotka, on schedule. Today, current (RITM-200) and next-generation (RITM-400) products are the most advanced and powerful marine nuclear power units in the world.

JSC Atomenergomash produces all of the key equipment for all NPP construction projects of ROSATOM in Russia and abroad. Now, we manufacture equipment for more than ten power units under construction in Turkey, India, China, etc. In 2021, the Division completed the production of equipment (a reactor and four steam generators) for the first power unit of Kursk NPP 2. This is a reactor of a new type – VVER-TOI. For the VVER-TOI reactor, the number of welds has been reduced from six to four: welds in the core region are eliminated. This reduces radiation impact on welds and improves performance characteristics of the item, which allows to extend its service life for another 40 years after 60-year operation.

I would like to specially recognise JSC Atomenergomash's contribution to strengthening Russia's technological independence through import-substituting products for LNG production. 2021 saw significant achievements in this area: the Division completed the construction of the Europe's first and the world's third test bench for critical LNG equipment. The test bench was built on the site of Efremov Institute of Electrophysical Apparatus (NIIEFA) in Saint Petersburg in the shortest possible time, less than in two years, and was equipped by Russian manufacturers. The project was implemented as part of the execution of the order of the President of the Russian Federation on the localisation of equipment for medium- and large-capacity LNG production. In December 2021, the test bench began testing the first of new Russian large-capacity cryogenic LNG pumps designed and manufactured by JSC Afrikantov OKBM.

The test site is designed for testing three large groups of products – pumps, expanders and compressors – and will be available to any (Russian and foreign) manufacturer. Such a test bed will allow Russia to reduce its dependence on import equipment and contribute to the development of a new sector in the Russian industry. In particular, it will allow ROSATOM's enterprises to refine LNG production technologies, which will help to create more potential for the development of new businesses.

The Division continues to implement the production modernisation programme. JSC Atomenergomash introduced a production equipment monitoring system (PEMS) at seven sites, which makes it possible to remotely monitor the operation of 407 machine tools. With this system, the Division can cope with the existing workload and plan investments more efficiently. The Division's enterprises will continue to work on the digitisation in 2022.

In the course of its operations, JSC Atomenergomash adheres to the global sustainable development agenda. Contributing to sustainable development goals and caring for the environment became a global and Russian trend, and the Division promotes this.

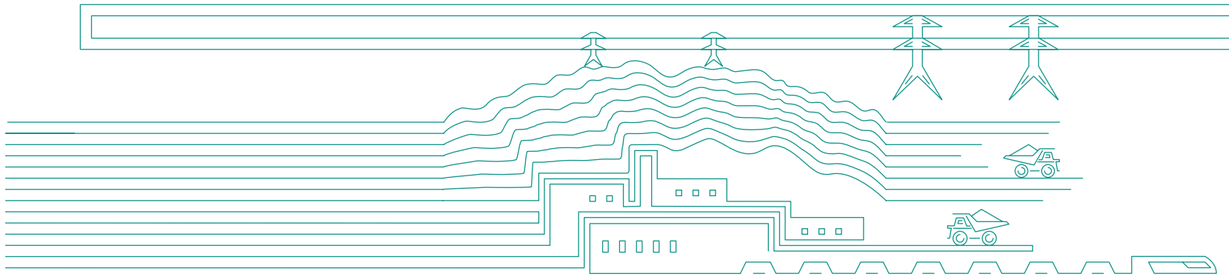
Thus, the optimised floating power units being built by the Mechanical Engineering Division will make it possible to produce low-carbon copper at the Baimskoye deposit. In the Kaliningrad Region, a salt production plant is being prepared for launch. The plant will be the first in Russia to produce salt from crude brines based on SverdNIIKhimmash's technology. With this technology, the final product can be produced in an environmentally-friendly way, without the use of chemicals and impacts on the water balance. In addition, as part of the Clean Country federal programme, the Division's enterprises produce equipment for four waste-to-energy plants under construction in the Moscow Region. Each plant will be able to recycle up to 700,000 tonnes of waste per year. Such facilities will significantly reduce the number of landfills.

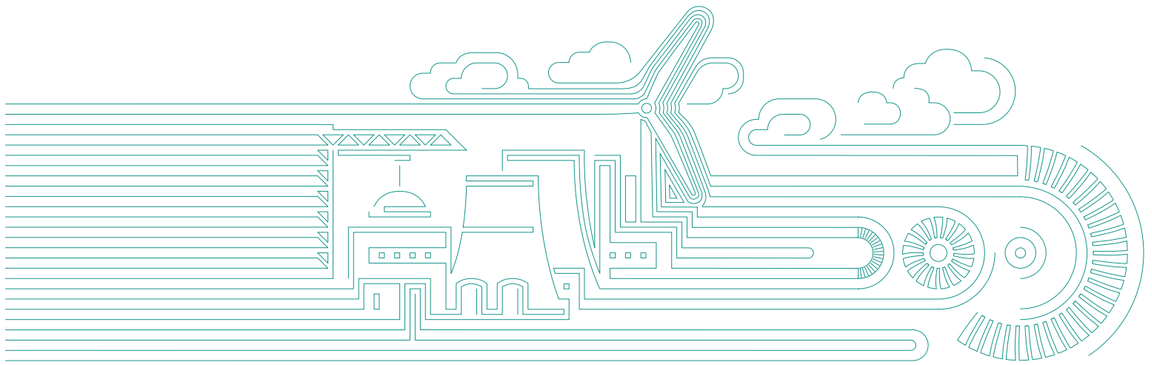
The Division has an important role to play in achieving ROSATOM's strategic goal to increase its revenue up to RUB 4 trillion by 2030. This is why it is important for us not only to develop existing business areas, but also to actively look for new promising products and areas.

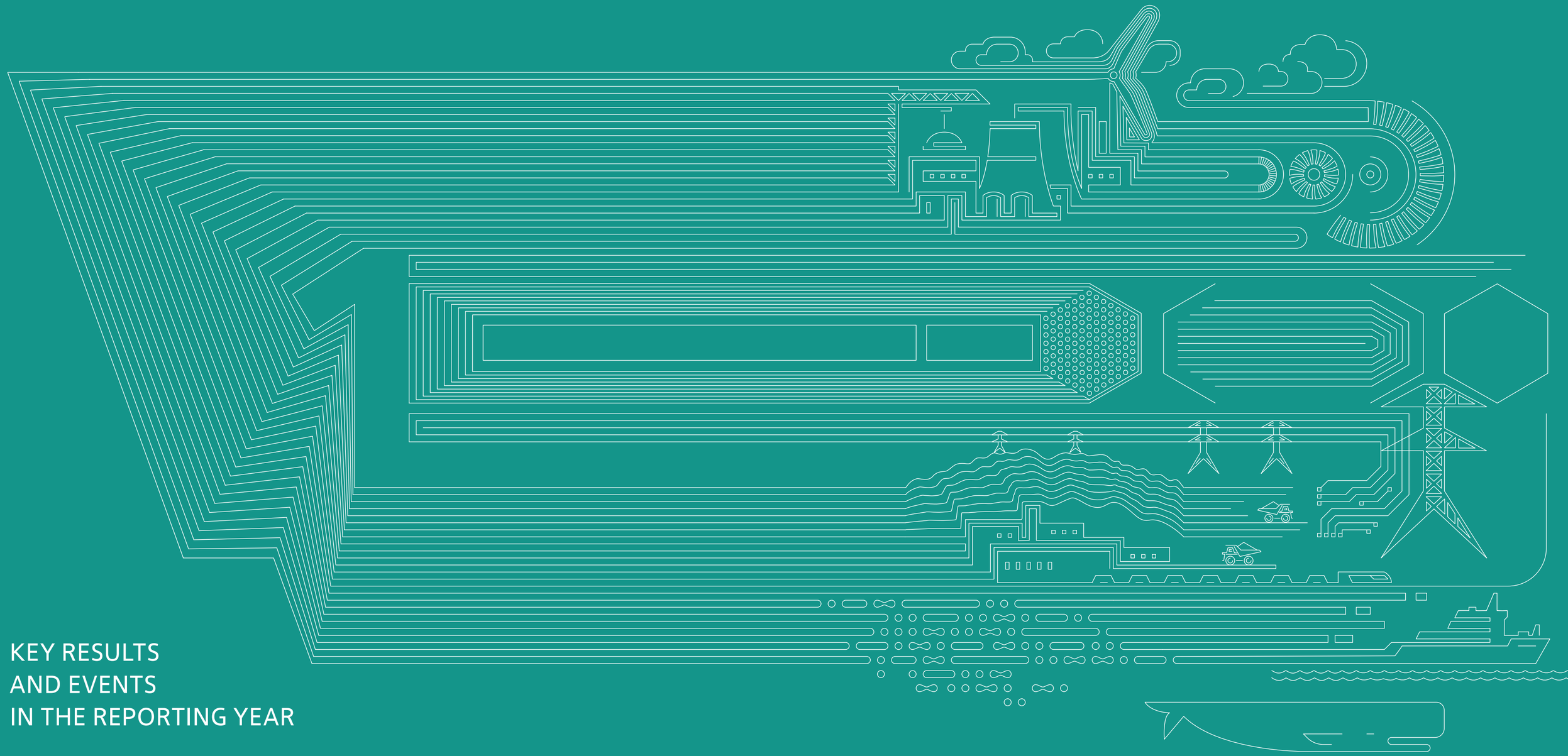
The ongoing COVID-19 pandemic is changing our operations. Health of employees is the Division's priority when making all management decisions. To minimise risks, we enabled remote work for employees whose positions allowed that. We organised mass vaccination, PCR and antibody testing at our enterprises. Together with customers, we introduced technical solutions that allowed us to convert some operations for the acceptance of production stages to a remote format.

We will do our best to improve working conditions and the safety of employees of the Mechanical Engineering Division's enterprises, attract promising young specialists, and support high-tech jobs in the regions of operation. And the advanced technologies and processes that we systematically implement will help the Division to set new records in 2022.

In conclusion, I would like to thank all employees of the Division for their professionalism, as well as our customers and partners for effective mutually beneficial cooperation. High quality standards, focus on the interests of customers and punctuality will remain JSC Atomenergomash's key priorities.







# KEY RESULTS AND EVENTS IN THE REPORTING YEAR

## OPERATING RESULTS

| Indicator | 2019 | 2020 | 2021 | Analysis of changes in operating results |
|---|---|---|---|---|
| Shipment of mechanical engineering products, number of NPPs | 9 | 19 | 16 | Products are delivered for NPP construction projects and for the maintenance and supply of equipment and spare parts for operating units. |
| Share in the Russian power machine engineering industry, % | 38 | 42 | 42.2 | The Division's position is further strengthened by the development of new businesses and the high resilience of the nuclear power industry to adverse impacts of the COVID pandemic. |
| Consolidated revenue, RUB billion | 75 | 83 | 106 | Revenue growth was driven by increased supply of products for NPP construction projects and the development of new non-nuclear businesses. |
| Order portfolio, RUB billion | 756 | 850 | 988 | Portfolio growth was driven by increased supply of products for NPP construction projects and the development of new non-nuclear businesses. |
| Average headcount, people | 16,733 | 17,978 | 18,455 | The increase was driven by increased supply of products for NPP construction projects and the development of new non-nuclear businesses. |
| LTIFR[1] | 0.14 | 0.07 | 0.07 | – |
| Taxes paid, RUB billion | 8.1 | 7.6 | 8.4 | The increase in the amount of VAT accrued and paid to the budget was driven by revenue growth in 2021 compared to 2020. |
| Charity expenses, RUB million | 76 | 85 | 92.7 | The change in the amount of charity spending is due to the fact that it is targeted in nature; accordingly, the list of beneficiaries and the list of charitable activities vary from year to year. |
| Occupational health and safety costs, RUB million | 360 | 535 | 465 | The change is due to the frequency of special assessments of working conditions and training in occupational safety and health. |

[1] The indicator does not include the Division's foreign enterprises.

## KEY EVENTS IN THE REPORTING YEAR

- Production of key equipment for the Akkuyu NPP project (Turkey) was ensured. The Division delivered the main components of the NSGP for units No. 2 and No. 3 as scheduled and started to produce equipment for unit No. 4. The Division continued to produce the main equipment for the turbine island of the NPP for unit No. 1, started to produce equipment for units No. 3 and 4, and launched the production of auxiliary equipment for unit No. 1.
- As part of the project for the construction of Rooppur NPP (Republic of Bangladesh), the Company completed the supply of NSGP equipment for unit No. 1, ensured shipments of key equipment, including VSG, switchgear, CSS, and heat exchange equipment for the turbine island for unit No. 2.
- The Division completed the manufacture of most of the equipment for power unit No. 1 of Kursk NPP 2, ensured the delivery of large-sized equipment to the construction site, including the reactor vessel and four VSGs.
- JSC Atomenergomash signed a contract with FSUE Atomflot for the construction and supply of four MFPUs.
- As part of the production of key equipment for the Lider icebreaker, the Division delivered the first large-sized hull castings, started to produce the RITM-400 reactor unit, and signed contracts for the supply of a shaft line and steering gear.
- Deliveries of hull castings and propeller blanks for follow-on multipurpose nuclear icebreaker No. 4 Chukotka were completed.
- A design concept of an LNG carrier with an innovative LNG storage and transportation system based on Type B independent tanks and draft design specifications for a semi-submersible heavy-lift vessel for the transportation of floating nuclear power units and other items were developed.
- Under the leadership of JSC Atomenergomash, JSC Efremov Institute of Electrophysical Apparatus (NIIEFA) built and put into operation Europe's first and the world's third test bench for critical LNG equipment. The project was implemented in accordance with instructions from the Russian President on replacing imported critical equipment.
- An engineering design was developed for the integrated ground-based SNPP with the RITM-200N reactor unit.
- JSC Afrikantov OKBM developed and delivered three high-pressure LNG pumps for the test bench unit under construction. A pilot sample of a large-capacity LNG pump was developed and manufactured for a project for the extraction of natural gas and for the production of liquefied natural gas. The pump was tested using liquid nitrogen at the created bench unit.
- The Division received a confirmation of the successful pilot operation of LNG pumps, an ethane pump manufactured by JSC Afrikantov OKBM for a project for the production of liquefied natural gas.
- Under existing contracts, the Division continued to produce and supply process equipment for four waste-to-energy plants in the Moscow Region.

# OVERVIEW OF THE DIVISION

The Mechanical Engineering Division of ROSATOM (hereinafter referred to as the “Division”) is one of the leading mechanical engineering holdings in Russia and the key supplier of main and auxiliary equipment for Russian-design NPPs under construction.

The Division is part of ROSATOM and includes engineering, design centres, major power engineering and metallurgical plants, as well as research and material science organisations in Russia, the CIS and EU countries. JSC Atomenergomash’s enterprises are located in six Russian regions, with three more companies based in other countries.

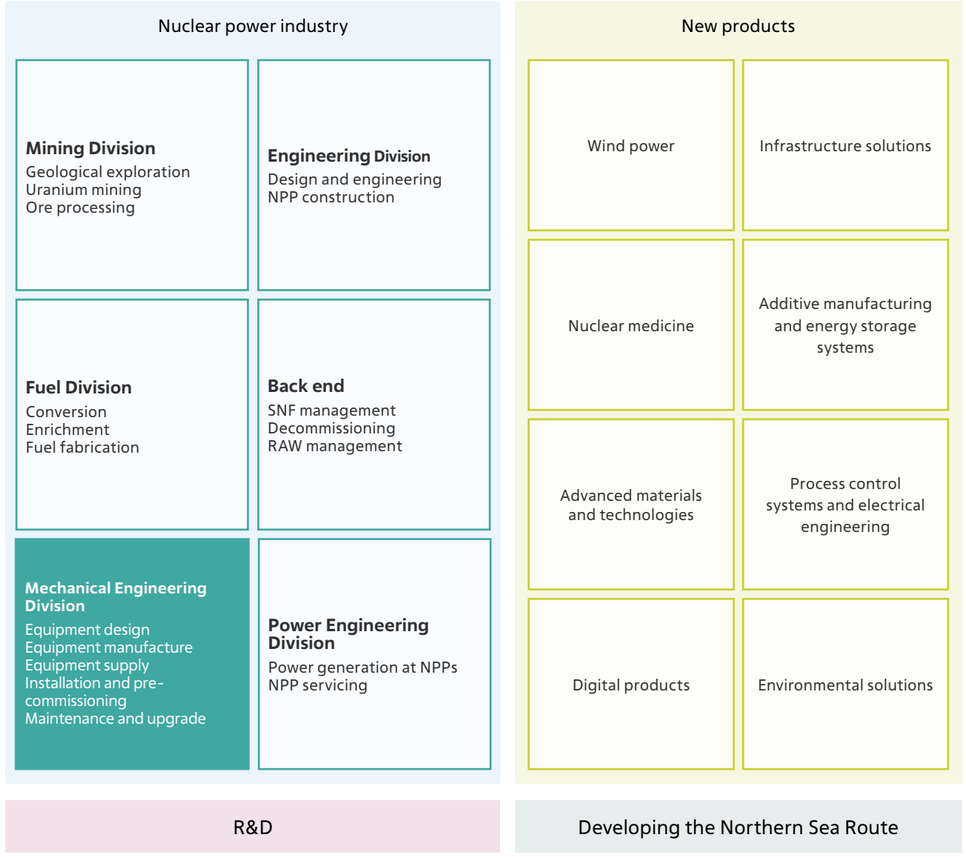
Using competencies gained during multiple years of improving and producing nuclear energy equipment, the Company is successfully developing adjacent business areas at an accelerating pace. JSC Atomenergomash offers a range of solutions for the manufacture and supply of equipment for the nuclear and thermal power industry, shipbuilding, the oil and gas industry, and the special steel market. Extensive production and technological capabilities of the Division’s enterprises and control over the entire production chain enable the Division to supply its customers with high-quality reliable equipment. Thanks to well-coordinated production, JSC Atomenergomash can efficiently implement NPP construction, service and equipment modernisation projects. Equipment produced by JSC Atomenergomash ensures operations of 20% of NPPs worldwide, in almost 20 countries.

All NPPs of Russian design[2] are equipped with JSC Atomenergomash’s products. The Division is the main designer and single-source supplier of all marine reactor units for the multipurpose nuclear icebreakers Arktika, Sibir, Ural, Yakutiya, and Chukotka with the RITM-200 reactor unit (RU), widely regarded as the largest and most powerful icebreakers, as well as for the new-generation Lider nuclear icebreaker being designed (RITM-400 RU) and able to ensure year-round navigation along the Northern Sea Route.

JSC Atomenergomash manufactures high-capacity equipment for Russian oil and gas companies. And the Division’s enterprises have been designing and producing heat energy equipment for many years: the Company supplied its products to 40% of TPPs in Russia and CIS countries. As part of the Clean Country federal project, the Division is the main producer of key process equipment for waste-to-energy plants.

[2] NPPs withVVER reactors.

Role of the Division in the structure of ROSATOM



# CORPORATE GOVERNANCE SYSTEM

The corporate governance system at JSC Atomenergomash is based on the requirements of Russian legislation in the field of corporate law.

The Company applies some provisions of the Corporate Governance Code recommended in Letter No. 06-52/2463 of the Bank of Russia dated April 10, 2014, with due regard to the special characteristics of ROSATOM's legal status stipulated in laws and regulations of the Russian Federation that ensure consistent management of organisations in the nuclear industry. These provisions are incorporated in a number of local regulations of the Company.

## Key governing bodies

In accordance with the Articles of Association, the Company has the following governing bodies[3]:

- The General Meeting of Shareholders (Sole Shareholder);
- The Board of Directors;
- The Chief Executive Officer (Sole Executive Body).

## Authorised capital structure

In 2021, the Company's authorised capital has not changed and totalled RUB 3,410,656 (three million four hundred and ten thousand six hundred and fifty-six) roubles. The number of ordinary shares: 3,410,656 (three million four hundred and ten thousand six hundred and fifty-six).

Authorised capital structure as at December 31, 2021

| Shareholder | Number of shares, pcs. | Share of all outstanding shares, % |
|---|---|---|
| Joint-Stock Company Atomic Energy Power Corporation | 1 | 0.00003% |
| Limited Liability Company AEM Holding Company | 3,410,655 | 99.99997% |

[3] The Company has no Audit Committee as the internal audit of its operations is conducted in accordance with the Company's internal documents and local regulations.

## Membership in associations

- All-Russian Industry Association of Employers 'The Russian Union of Employers in the Nuclear Industry, Power and Science';
- All-Russian Industry Association of Employers 'Union of Machine Builders of Russia';
- Self-Regulatory Organisation and Non-Profit Partnership 'Association of Organisations Engaged in Construction, Reconstruction, Overhaul of Nuclear Facilities "SOYUZATOMSTROY";
- Autonomous Non-Profit Organisation for the Development of the Shipbuilding Industry 'Consortium of Ship Equipment Manufacturers';
- Association of Project Management Specialists and Organisations 'SOVNET Project Management Association';
- Union of Oil and Gas Equipment Manufacturers.

## General Meeting of Shareholders

The powers and the procedure for convening and holding the General Meeting of Shareholders are stipulated in the Company's Articles of Association and the Federal Law on Joint-Stock Companies. In 2021, two General Meetings of Shareholders were held, and three matters were discussed:

| Resolution date | Matters discussed |
|---|---|
| January 12, 2021 | Approval of a new version of JSC Atomenergomash's Articles of Association |
| June 24, 2021 | 1. Distribution of profit (losses) of JSC Atomenergomash (including payment (declaration) of dividends) for the reporting year.<br>2. Election of members of the Board of Directors. |

The Company adopted no local regulations governing its dividend policy.

## Board of Directors

The powers of the Board of Directors are stipulated in the Company's Articles of Association. The meetings of the Board of Directors are convened when necessary, initiated by the Chairman or members of the Board of Directors, the Chief Executive Officer or the Company's Auditor.

The Board of Directors is responsible for the strategic management of the Company's operations and supervises the activities of the executive body.

No special committees were established under the Board of Directors of JSC Atomenergomash.

In 2021, the Board of Directors held 11 meetings and discussed 17 matters.

The Company has no independent members of the Board of Directors, as defined in the Corporate Governance Code.

Throughout 2021, no resolutions were adopted on paying remuneration and/or compensation to the members of the Board of Directors; no remuneration was paid, and no expenses were reimbursed. Apart from the Chief Executive Officer, the Board of Director includes no members that were the Company's full-time or part-time employees during the reporting period.

None of the members of the Board of Directors hold the Company's shares. In 2021, there were no changes in the number of members (five people) or the composition of the Board of Directors of JSC Atomenergomash.

## Information about Members of the Board of Directors[4]

### Chairman of the Board of Directors

**Vladislav Korogodin**
Year of birth: 1969.
Tenure of office: since June 30, 2015.
Education: Moscow Institute of Physics and Technology (1992), degree in Applied Mathematics and Physics; The Russian Presidential Academy of National Economy and Public Administration (2011), Training Programme for the Top Executive Candidate Pool.
Primary employment: Director for NFC and NPP Life Cycle Management, ROSATOM.
Interest in the Company's authorised capital: 0.
The share of the Company's ordinary shares owned: 0.
Mr. Korogodin didn't make any transactions on acquisition or disposal of the Company's shares in the reporting year.

**Ilya Nikolsky**
Year of birth: 1981.
Tenure of office: since June 29, 2018.
Education: State University of Management (2003), Institute of Microeconomics (2007). Candidate of Economic Sciences.
2017–2020: Head of the Economic Planning and Modelling Department, ROSATOM.
Primary employment: Head of the Business Analysis Department, ROSATOM.
Interest in the Company's authorised capital: 0.
The share of the Company's ordinary shares owned: 0.
Mr. Nikolsky didn't make any transactions on acquisition or disposal of the Company's shares in the reporting year.

**Boris Silin**
Year of birth: 1954.
Tenure of office: since November 27, 2014.
Education: Moscow Institute of Chemical Engineering, degree in Chemical Engineering and Apparatus Engineering (1977).
Primary employment: Advisor to the First Deputy Director General for Nuclear Energy, ROSATOM.
Interest in the Company's authorised capital: 0.
The share of the Company's ordinary shares owned: 0.
Mr. Silin didn't make any transactions on acquisition or disposal of the Company's shares in the reporting year.

**Andrey Nikipelov**
Year of birth: 1968.
Tenure of office: since June 29, 2012.
Education: Lomonosov Moscow State University, Faculty of Economics (1992), Skolkovo Business School, programmes: International Competitiveness and Efficiency (2010), the Efficiency strategic training session (2011).
Primary employment: Chief Executive Officer of JSC Atomenergomash, Head of ROSATOM's Division, Member of the Management Board of ROSATOM.
Interest in the Company's authorised capital: 0.
The share of the Company's ordinary shares owned: 0.
Mr. Nikipelov didn't make any transactions on acquisition or disposal of the Company's shares in the reporting year.

[4] http://www.aem-group.ru/about/leadership/directors/sig.html.

**Boris Arseev**
Year of birth: 1971.
Tenure of office: since June 30, 2017.
Education: Ural State Technical University USTU-UPI (1993), degree in Thermal Physics, Automation and Ecology of Thermal Units in Metallurgy; the Russian Presidential Academy of National Economy and Public Administration (2011), Strategic Management (MBA); Yeltsin Ural Federal University (2011).
Primary employment: Deputy Head of the Corporate Development and International Business Unit, Head of the International Business Department, ROSATOM.
Interest in the Company's authorised capital: 0.
The share of the Company's ordinary shares owned: 0.
Mr. Arseev didn't make any transactions on acquisition or disposal of the Company's shares in the reporting year.

## Chief Executive Officer

The functions and powers of the Chief Executive Officer are stipulated in the Company's Articles of Association and are exercised in compliance with the Federal Law on Joint-Stock Companies.

The Chief Executive Officer of the Company, Andrey Nikipelov, has been exercising his powers since April 17, 2012, pursuant to resolutions of the General Meetings of Shareholders/resolutions of the Sole Shareholder (Minutes No. 04/12-BOCA dated April 16, 2016, No. 02/17-BOCA dated April 14, 2017, No. 1 dated January 16, 2019, No. 01/22 dated April 15, 2022) . Mr. Nikipelov does not hold the Company's shares.

The Chief Executive Officer is directly involved in developing the corporate strategy for the Company's development, as well as functional strategies .

In 2021, the Company made no major transactions that are subject to approval by the authorised executive body of the Company pursuant to Chapter X of the Federal Law on Joint-Stock Companies.

The definition of a non-arm's length transaction is given in Chapter XI of the Federal Law on Joint-Stock Companies. However, Clause 3.11 of the Company's Articles of Association stipulates that provisions of Chapter XI of the Federal Law on Joint-Stock Companies do not apply to the Company.

The remuneration of the Chief Executive Officer is stipulated in the employment contract in accordance with Russian legislation and is based on the remuneration system adopted in ROSATOM's organisations; it takes into account progress in achieving key performance indicator (KPI) targets set for the Chief Executive Officer every year.

[5] http://www.aem-group.ru/about/leadership/management/nav.html.
[6] The role of the Board of Directors in defining the Company's development strategy is stipulated in the Company's Articles of Association, page 16.

Information on declared income, property and liabilities is annually published on ROSATOM's official website, in the Anti-Corruption section, in accordance with Russian legislation.

## Top management of the Company[7]

| | |
|---|---|
| **Andrey Nikipelov** | Chief Executive Officer |
| **Anatoly Ogurtsov** | Advisor |
| **Maxim Tyukavkin** | Deputy Chief Executive Officer for Operations |
| **Vladislav Bondarenko** | Deputy Chief Executive Officer, Director for Economy and Finance |
| **Sergey Kuleshov** | Deputy Chief Executive Officer, Corporate Governance Director |
| **Yulia Nikolaeva** | Deputy Chief Executive Officer for Human Resources |
| **Oleg Shumakov** | Director for Gas and Petrochemical Industry |
| **Sergey Shatokhin** | Director for Thermal Power Industry |
| **Alexander Sotnikov** | Director for Internal Audit |
| **Andrey Sinyakov** | Director for Procurement and Logistics |
| **Vladimir Arefiev** | Deputy Chief Executive Officer for Safety |
| **Vladimir Aptekarev** | Director for Shipbuilding and OFPU |
| **Natalya Shirokovskikh** | Chief Accountant |

## Improvement of the corporate governance system

The Company's compliance with the Corporate Governance Code was approved by the Bank of Russia's Board of Directors on March 21, 2014.

Functions of JSC Atomenergomash's governing bodies are optimised through redistributing powers of the Board of Directors, the General Meeting of Shareholders and the Chief Executive Officer in the Articles of Association, which allows the Company to accelerate managerial decision-making.

Non-operating companies are excluded from the scope of consolidation (sale, liquidation).

[7] Biographical data and other information about the Company's CEO and top management are available on the website: http://www.aem-group.ru/about/leadership/management/nav.html.

## KEY MARKETS AND PROJECTS

| Business area | City, country | Project |
|---|---|---|
| Nuclear power industry | Kurchatov, Russia | Kursk NPP |
| | Makarovka, Russia | Kursk NPP 2 |
| | Balakovo, Russia | Balakovo NPP |
| | Volgodonsk, Russia | Rostov NPP |
| | Sosnovy Bor, Russia | Leningrad NPP |
| | Novovoronezh, Russia | Novovoronezh NPP |
| | Polyarnye Zori, Russia | Kola NPP |
| | Desnogorsk, Russia | Smolensk NPP |
| | Udomlya, Russia | Kalinin NPP |
| | Ostrovets, Belarus | Belarusian (Ostrovets) NPP |
| | El Dabaa, Egypt | El Dabaa NPP |
| | Kudankulam, India | Kudankulam NPP |
| | Tianwan, China | Tianwan NPP |
| | Gulnar, Turkey | Akkuyu NPP |
| | Pyhäjoki, Finland | Hanhikivi 1 NPP |
| | Paks, Hungary | Paks II NPP |
| | Pabna, Bangladesh | Rooppur NPP |
| | Levice, Slovakia | Mochovce NPP |
| | Piestany, Slovakia | Bohunice NPP |
| | Temelin, Czech Republic | Temelin NPP |
| | Liaoning, China | Xudabao NPP |
| Thermal power industry | Svistyagino, Russia | Svistyagino WEP |
| | Mogutovo, Russia | Mogutovo WEP |
| | Timokhovo, Russia | Timokhovo WEP |
| | Khmetyevo, Russia | Khmetyevo WEP |
| | Kazan, Republic of Tatarstan, Russia | Kazan WEP |
| | Syktyvkar, Russia | Mondi Syktyvkar TPP |
| | Irkutsk, Russia | Irkutskenergo TPP 10 |
| Gas and petrochemical industry | Amur Region, Russia | Amur GCC |
| | Perm Region, Russia | EuroChem-Usolsky potash plant |
| | Novokuibyshevsk, Russia | Novokuibyshevsk Refinery |
| | Ufa, Russia | Bashneft-Ufanefthim |
| | Kaliningrad, Russia | Varnitsa, LLC |
| | Tobolsk, Russia | West Siberian deep hydrocarbon conversion plant |
| | Yamalo-Nenets Autonomous Okrug, Russia | Ob LNG Project |
| | Yamalo-Nenets Autonomous Okrug, Russia | Kamennomyssk Sea Project |
| | Angarsk, Russia | Angarsk Petrochemical Company |
| | Ust-Luga, Leningrad Region, Russia | Baltic GCC |
| Shipbuilding | Baimskaya ore zone, Russia | MFPU |
| | Northern Sea Route | Lider nuclear icebreaker |
| | Northern Sea Route | Multipurpose nuclear icebreaker |

Business assets of the Company in the Russian Federation

| City | Controlled organisation[8] |
|---|---|
| Volgodonsk | Atommash branch of JSC AEM-Technology |
| Petrozavodsk | Petrozavodskmash branch of JSC AEM-Technology |
| Nizhny Novgorod | JSC Afrikantov OKBM |
| Yekaterinburg | JSC Sverdlovsk Chemical Engineering Research Institute |
| Podolsk | JSC Experimental and Design Organisation GIDROPRESS |
| | JSC ZiO-Podolsk |
| Saint Petersburg | JSC CDBMB |
| | JSC AEM-Technology |
| | AAEM LLC |
| Moscow | JSC RPA CNIITMASH |
| | JSC ATM |

## THE DIVISION'S POSITION ON THE MARKET

Power machine engineering (PME) is one of the most high-technology industries in the world. Power engineering projects are capital-intensive and time-consuming. The key objectives in the power machine engineering industry are to improve energy efficiency, reduce the environmental footprint and promote economic growth by commissioning new power generation capacities.

In 2021, installed capacity of power plants globally increased by 347.3 GW[9], with the maximum increase of 80% from solar and wind power plants. The increase in newly commissioned capacities was driven mainly by renewable energy sources and gas-fired combined heat and power plants. In the reporting year, RES increased by 276 GW, which is 79.5% of the total increase in installed capacity, and the share of RES in the global energy balance grew from 20% to 22.6%. The total capacity of gas-fired CHPPs increased by 58.3 GW, and their share in the energy balance was 25.3%.

The installed HPP capacity grew by 14 GW, increasing the share of hydropower from 14% to 18%. Despite the high utilisation of coal-fired CHPPs, this segment showed a small annual increase of 1 GW, but this generation segment retains the largest share of 28.8% in the global installed capacity. In 2021, the installed capacity of NPPs decreased by 3 GW, and their share reduced from 6% to 5.3%, which was caused by the decommissioning of ten units, mainly in Germany and the UK.

In 2021, the post-pandemic recovery of the global energy sector was completed: an increase of 6% in electricity consumption offset the decline in 2020. Electricity consumption is expected to double by 2050, with the estimated annual mid-term growth of 2.4-2.7% in global electricity consumption.

Focus on carbon neutrality and reducing other greenhouse gas emissions is the main driver of change in the energy sector and industry. Despite the significant commissioning of new capacities, renewable energy sources cannot ensure the reliable operation of the world economy. It will be difficult, both technologically and financially, to achieve zero emission targets without the use of large power units.

In 2021, China announced the commissioning of 150 new power reactors by 2035, and India, as part of its efforts to reduce carbon dioxide emissions, plans to increase the installed capacity of nuclear power plants from 7.9 to 22.5 GW by 2031. These events and plans create the potential for NPP technology development and a growth in demand for NPP equipment.

The energy transition has a significant impact on market players. Most global power machine engineering leaders are exiting the coal-fired CHPP equipment segment, refocusing their operations on other industries. At the same time, there have been structural changes in the strategies and business approaches of global power machine engineering companies. Key competitive advantages of the Mechanical Engineering Division include a combination of safe reference technologies, the ability to provide the package supply of NPP equipment, and extensive in-house manufacturing capabilities.

In 2021, Russian key power-equipment groups showed a variety of trends. In the steam turbine equipment segment, output declined by 67%, while the production of gas turbines increased by 60%[10]. At the same time, the production of steam generation equipment, including nuclear reactors, surged by 207%. This was driven by the implementation of the DPM-shtrikh programme and projects to build new NPP power units. In 2021, the Division retained a 42% share in revenue of the Russian market[11]. The development of new businesses and investment in nuclear technology innovations create the basis for further strengthening of the Division's positions in the Russian and foreign markets.

[8] As at December 31, 2021.

[9] Based on data from IEA, Electricity Market Report.

[10] Estimates based on data from Russia's Federal State Statistics Service.

[11] The assessment was made by JSC Atomenergomash based on the total revenue of the largest Russian engineering companies.

The Division produces all of the main equipment for Russian-design VVER reactors; it also participates in designing and producing equipment for research reactors and small-scale nuclear power plants and is expanding its capabilities in order to enter the market for equipment for Western-design reactors. To enable ROSATOM to remain a leader in the Russian power machine engineering market, in addition to its core business, the Division is also expanding its non-nuclear business segments and is setting ambitious goals in terms of expanding into new markets.

## COMPLIANCE AND INTRODUCTION OF QUALITY MANAGEMENT SYSTEMS IN THE DIVISION

The Division is constantly ensuring the safe operation of NPP equipment. The global future of nuclear power as an energy source and prospects of the nuclear industry depend on the level of safety. Increasingly strict safety requirements for nuclear facilities under construction and in operation impose special obligations on all of the Division's enterprises in terms of product quality. Safety assessment is becoming an integral part of the manufacture of all types of products. The quality of products manufactured by the Division's enterprises (COs) is secured by the developed and certified quality management system of the COs in accordance with the requirements of ISO 9001. In the reporting year, the required level of quality of equipment manufactured for NPPs under construction and in operation was achieved (according to the results of input control at the first presentation).

In 2021, all organisations controlled by JSC Atomenergomash continued to participate in improving the Unified Industry-Wide Quality Management System of ROSATOM (UIS-Quality), with the following extended modules added to the UIS-Quality:

- news;
- automated calculation of KPI progress in 2021;
- formation of legally binding electronic document exchange on quality issues in the UIS-Quality;
- regulatory documents;
- system users;
- irregularity management taking into account the changes made.

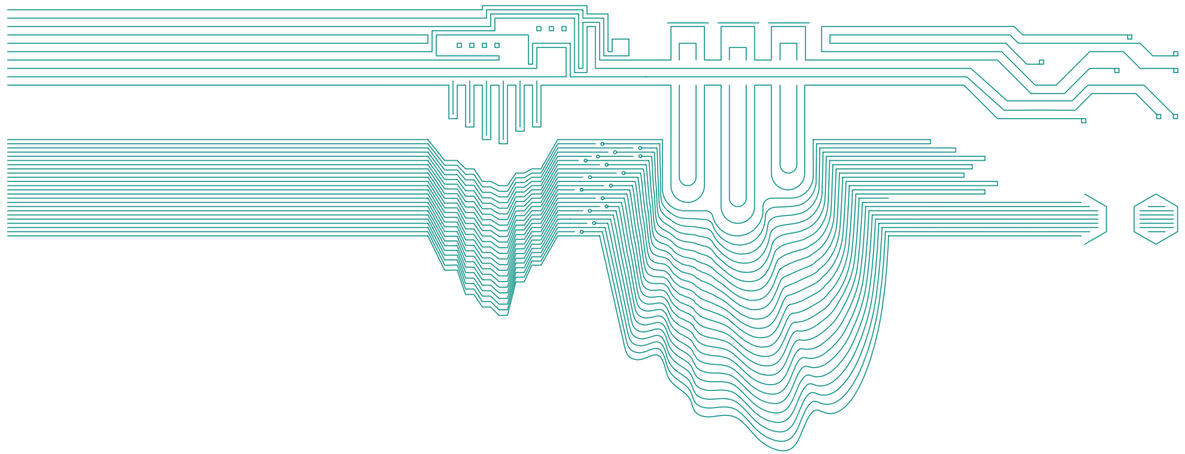
In November 2021, the Division successfully underwent the second surveillance audit confirming the compliance of its quality management system with ISO 9001:2015 and ISO 19443:2018 'Quality Management Systems — Specific Requirements for the Application of ISO 9001:2015 by Organisations in the Supply Chain of the Nuclear Energy Sector Supplying Products and Services Important to Nuclear Safety'. The audit was carried out by the relevant certification body (AFNOR, France). The certification body didn't found any non-conformities.

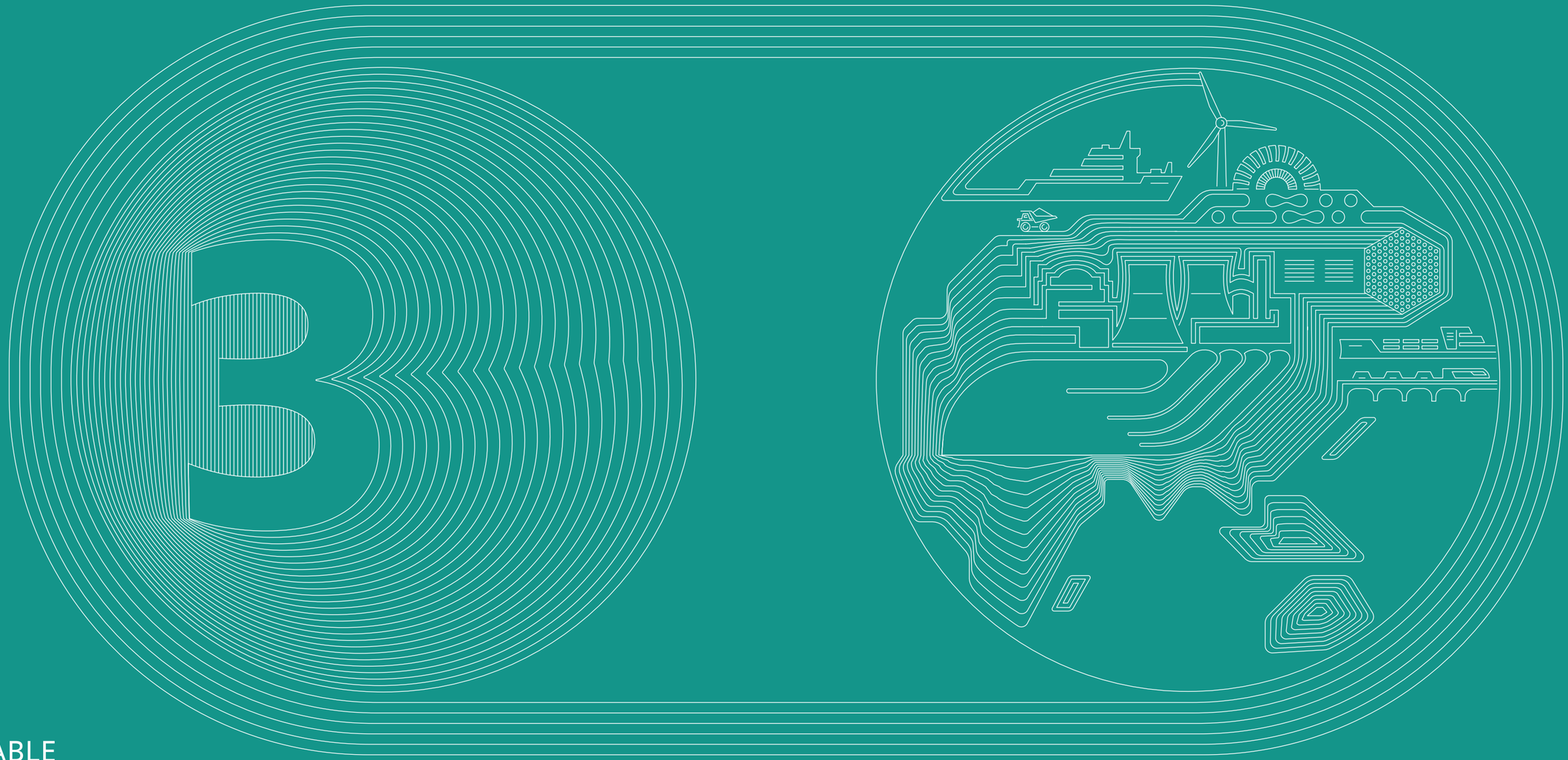
Additional agreements were concluded for the application of the UIS-Quality with a suspensive condition (on approval of the foreign customer) for the projects of Kudankulam NPP, Rooppur NPP, El-Dabaa NPP, Tianwan NPP, Paks II NPP, Xudabao NPP. Currently, irregularities are managed in the UIS-Quality for the projects of Kursk NPP 2, Belarusian NPP, Akkuyu NPP, Hanhikivi 1 NPP.

Since 2021, JSC Atomenergomash's employees have been informed of issues of quality assurance, technical regulation, metrology, standardisation and safety culture.

According to the self-assessment results, the level of safety culture is between acceptable and good. The self-assessment is based on the IAEA's requirements and JSC Atomenergomash's standard ST KSS AES 0033.20.003 'Organisation and Conduct of Safety Culture Self-Assessment. Basic Provisions.'

In the reporting year, 76 employees of the Division completed the Safety Culture Training Programme.





SUSTAINABLE
DEVELOPMENT

In the course of its operations, the Division adheres to the principles of the UN Global Compact, the world's largest corporate sustainability and social responsibility initiative managed by the UN.

The Division manages its production operations in such a way as to support comprehensive economic, social and environmental development of its organisations and the regions where they are located. The Division pursues a socially-oriented policy that meets the fundamental needs of the residents in its home towns and cities without compromising the interests of future generations. According to the sustainable development principles, the Division manages its business based on the principles of openness and close interaction with stakeholders.

The development of new businesses is one of the Division's key strategic activities. In 2021, the Division's revenue from these business areas totalled RUB 58.5 billion. It is expected to gradually grow by 2030. That allows JSC Atomenergomash to create new jobs and ensure social stability in the regions of operation. The new-business development strategy implies the use of the Division's technology, production and human resources, as well as the development of alliances and business partnerships with local enterprises.

## ANTI-CORRUPTION

The principles of business ethics underlie the activities of the Division. Employees are aware of the importance of adherence to high ethical standards, including honesty and conscientiousness in performing work, interacting with partners and suppliers.

Key principles and requirements aimed at identifying, preventing and suppressing corruption on the part of employees and other persons authorised to act on behalf of the Division are set in the following documents:

- Code of Conduct;
- Anti-Corruption Policy;
- anti-corruption laws and regulations;
- feedback for reporting cases of corruption.

In the reporting year, 26 employees of asset protection departments were trained in anti-corruption, including under the following training programmes:

- Corruption Risks in Procurement and Logistics;
- Prevention of Corruption and Other Offenses in Industry Organisations;
- Activities of Asset Protection Departments to Ensure the Cost-Income Operations of Organisations in the Industry;
- Fundamentals of Anti-Corruption in Nuclear Organisations.

As part of the anti-corruption measures, the Division and controlled organisations take the following measures:

- Anti-corruption plans for 2021-2024 were developed and approved.
- The Anti-Corruption section with current local regulations of ROSATOM, JSC Atomenergomash and their enterprises was created on corporate websites and portals.
- Corruption complaints are being received through the hotline.
- Anti-corruption visual campaigns are run.
- Newly hired employees are familiarised with local anti-corruption regulations against signature.
- Corruption risk maps are updated at enterprises.
- Information on income and property obligations of employees holding positions related to high corruption risks is checked against available databases annually as part of declaration preparation.
- Anti-corruption items are included in job descriptions.
- The Commission for Compliance with Requirements for Professional Conduct and Settlement of Conflicts of Interest holds related meetings.
- A mandatory anti-corruption clause is included in draft standard contracts.

# KEY SUSTAINABLE DEVELOPMENT PROJECTS

The Division attaches great importance to environmental safety in affected areas, sustainable use of natural resources and energy. The Company is introducing automated utility metering systems and energy efficiency methodology. JSC Atomenergomash's enterprises are taking measures to reduce hazard class I mercury-containing waste by replacing fluorescent light bulbs with energy-saving LED light bulbs. The Division is also introducing waste sorting.

For details on the related activities conducted by the Division in 2021, see Section 13. Safety of Operations.

## Volunteering and CSR

The Division invests in the regions of operation, contributing to their sustainable development, including through volunteering activities aimed at creating a socially responsible society. The Division actively promotes the initiative to develop volunteer activities in the context of the formation of a sustainable development management system. Corporate volunteering has a great social effect and, in addition, benefits for both employees and the Division.

## Forest of Victory

In the reporting year, the Division continued to plant trees in its home towns and cities. Its employees planted 80 seedling. The Division joined the Forest of Victory all-Russian campaign, as part of which the Victory Grove was planted at the Gladyshevsky Nature Reserve to commemorate the heroic deeds of the Russian people during World War II.

## Plogging campaigns

The Division's employees took part in charity runs. The main purpose of those events is to promote a healthy lifestyle and encourage physical activity among nuclear industry employees and residents of home towns and cities. During some runs, the Division's employees collect waste (plogging campaigns). With such events, we not only help to conserve nature by reducing the anthropogenic impact on recreation areas, but also organise outdoor activities for our employees and their families. The Division's enterprises continued to implement the planned initiatives to set up collection points for bottle caps and batteries and held several volunteer clean-ups.

## Charity

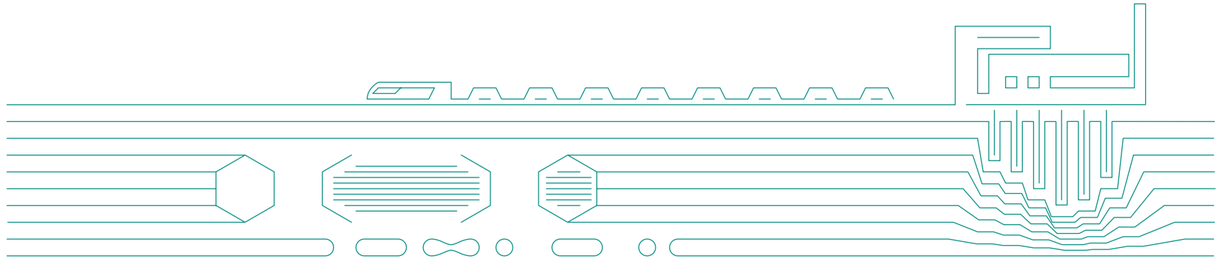
As a socially responsible company, JSC Atomenergomash also holds charity events to help people from various age groups: children from orphanages and boarding schools, children with disabilities, veterans, and retirees. Employees of the Division's enterprises collect humanitarian aid supplies for people under care and those in need and then send them to the recipients. In this format, the Christmas Tree of Wishes, Box of Courage, Bus of Kindness, Green World and other events were held. In the reporting year, the Division paid 50 annual subscriptions to the Young Technician magazine for organisations of the Petrozavodsk city district to popularise blue-collar and engineering jobs among students of institutions of secondary and vocational education in Petrozavodsk. The Division also financed the purchase of vouchers for a children's camp, equipment, household and computer equipment, furniture for children who live in family rooms of the Municipal State Educational Institution for Orphans and Abandoned Children.

## Blood donation campaigns

The Division also supports the Donor Day initiative engaging people in voluntary blood donation. Those events are regularly held at the Company's venues. In the reporting year, more than 15 donor events were held.

Another important part of the Division's sustainable development is occupational health and safety events, support for employees and their families, corporate social programmes, and fair wages and salaries. The Mechanical Engineering Division's enterprises are major taxpayers contributing significantly to budgets of the regions of operation. In some Russian regions, the Division donates funds to municipalities for social and economic development and urban improvement programmes.

*For details on volunteering and charity activities, see Section 9. Developing the Regions of Operation.*

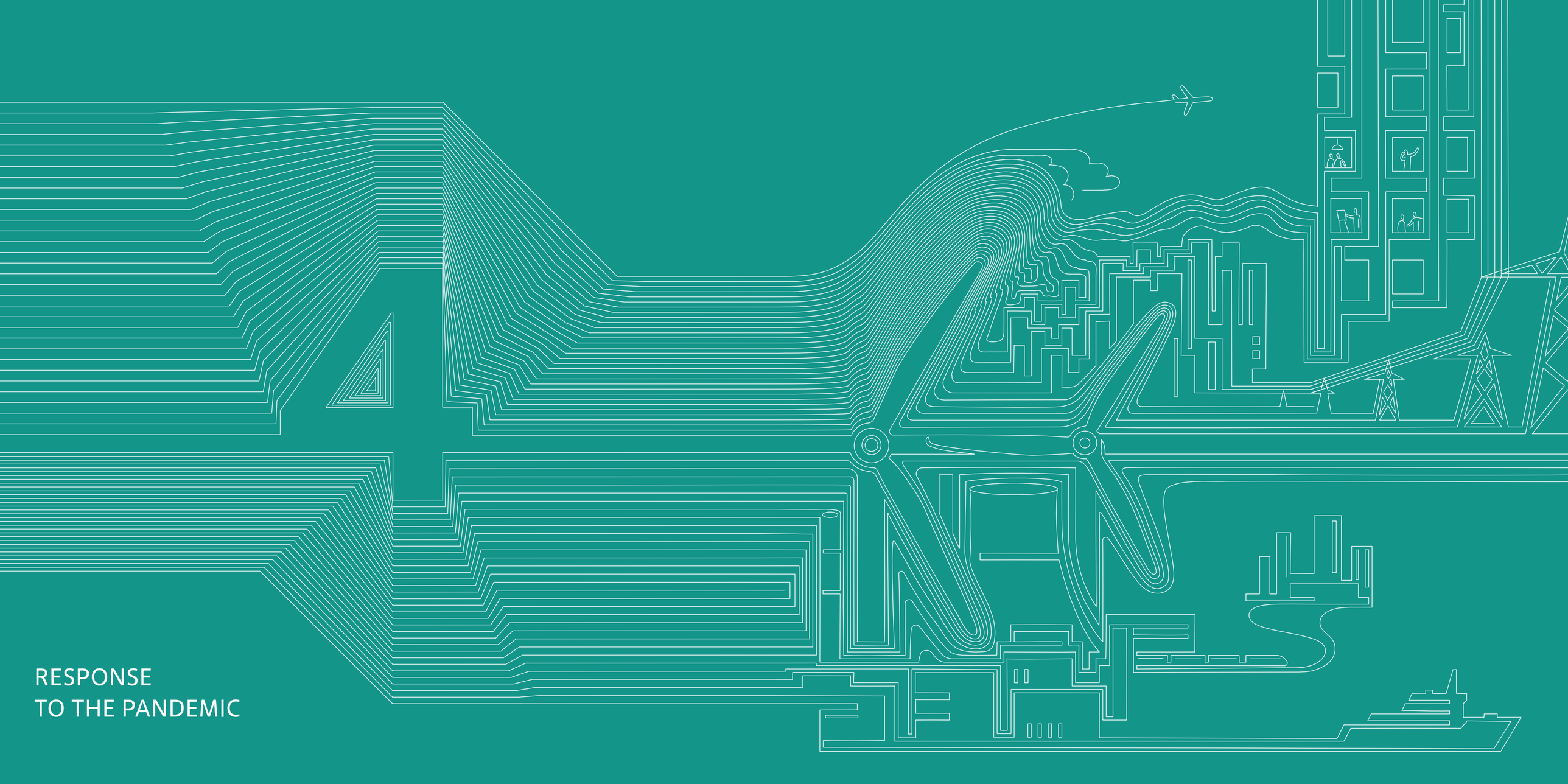


## INTERACTION WITH LOCAL COMMUNITIES

The Division's enterprises make a significant impact on local communities through significant investment in production facilities, good working conditions, and charity programmes. The Company contributes to the social and economic development of the regions of operation.

In the reporting year, the Mechanical Engineering Division continued to work in this area jointly with local authorities under current partnership agreements: the Division supported urban infrastructure, municipality improvement, and environmental projects. Despite the pandemic-related restrictions, in the reporting year, the Company continued to support sports and culture initiatives as much as possible and implemented some charity initiatives and sponsor projects.

For details on the contribution to the development of the regions of operation in 2021, see Section 9. Developing the Regions of Operation.



# RESPONSE TO THE PANDEMIC

In 2021, the COVID-19 pandemic continued to affect the production processes in the Mechanical Engineering Division, but 2020 has taught us to adapt to the trends of a changing world. Given the changes in the epidemiological situation, JSC Atomenergomash successfully performed its production tasks.

Health of employees is the Division's priority. To minimise risks, we enabled remote work for employees whose positions allowed that in agreement with the management. We developed schedules for operating personnel to minimise health risks. Disinfection of all surfaces and premises, strict observance of the face-mask requirements, social distance, contactless temperature screening of employees – all these measures were mandatory at the Division's enterprises in 2021. The Company strictly followed all anti-coronavirus instructions and guidelines from Russia's Federal Medical-Biological Agency, ROSATOM and regional authorities.

## KEY CHALLENGES THAT THE DIVISION FACED DURING THE PANDEMIC

The Division encountered the following main challenges:

- restricted in-person communication and interaction with foreign partners when meeting equipment acceptance milestones under key projects;
- conversion of many events to an online format;
- border closures and travel restrictions;
- support and adaptation of employees who work remotely.

The reporting year made distance learning and online meetings with partners and employees even more popular. We continued to conduct training and compensatory webinars; employees actively participated in them, adapting their work schedules. The positive practice of online breakfast meetings with executives, online visits to enterprises was also applied in 2021. Many partners and communities actively shared their experience and took part in joint online events.

Some employees continued to work remotely, while others worked in a hybrid format. But all the employees had the opportunity to take part in online events.

## ENSURING PRODUCTION CONTINUITY, PANDEMIC IMPACTS ON FINANCE AND PRODUCTION RESULTS

The Division takes all necessary measures to ensure the fulfilment of obligations to customers in full and within time limits stipulated by contracts and to minimise negative impacts of the epidemiological crisis on supply chains. For example, a project was completed to create a divisional system for monitoring industrial equipment. Now, the Division's process equipment and production sites are connected by a single solution that allows us to control the operation of machine tools and improve their performance.

## EMPLOYEE PROTECTION

The Division's comprehensive anti-coronavirus programme included the following measures: remote work, the separation of shifts for operating employees to minimise contacts, temperature monitoring, the use of personal protective equipment (masks and gloves) provided to employees by enterprises' administrative and general services, sanitisers and anti-coronavirus guides with safety tips and contact information of responsible persons for people with COVID-19 symptoms. We held meetings remotely wherever possible, minimised business trips; in many cases, decisions on the personal presence of particular employees were made directly by the Company's Chief Executive Officer. To coordinate actions and inform people of changes in the world, industry and enterprises, crisis centres continued to operate. Disinfection of transport and premises, regular communicating about the coronavirus situation in the industry and enterprises have become an integral part of operations.

To maintain herd immunity and protect personnel, a campaign was organised at all of the Division's enterprises to vaccinate employees against COVID-19 and revaccinate them six months after primary vaccination or a previous disease.

## HELPING LOCAL COMMUNITIES IN THE REGIONS OF OPERATION

Employees of the Mechanical Engineering Division's enterprises were actively involved in volunteering. Volunteers provided assistance in ten cities and towns, mainly to veterans, employees close to retirement and those who were not able to leave home to obtain basic necessities. The Division also helps residents of its home cities and towns, supports medical and educational institutions.

## APPROACH TO RECORDING PANDEMIC-RELATED FACTORS IN THE RISK MANAGEMENT SYSTEM

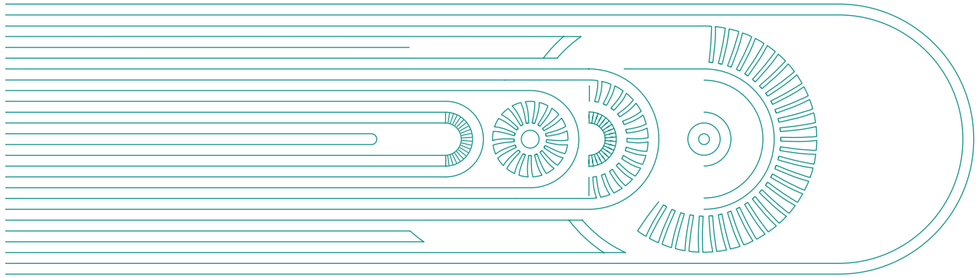
In 2021, risk mitigation measures included disinfection, the provision of protective equipment to employees, separated personnel flows, reimbursement for tests and other health services, remote work, the cancellation of in-person meetings, restrictions on international and regional business trips, and financial aid.

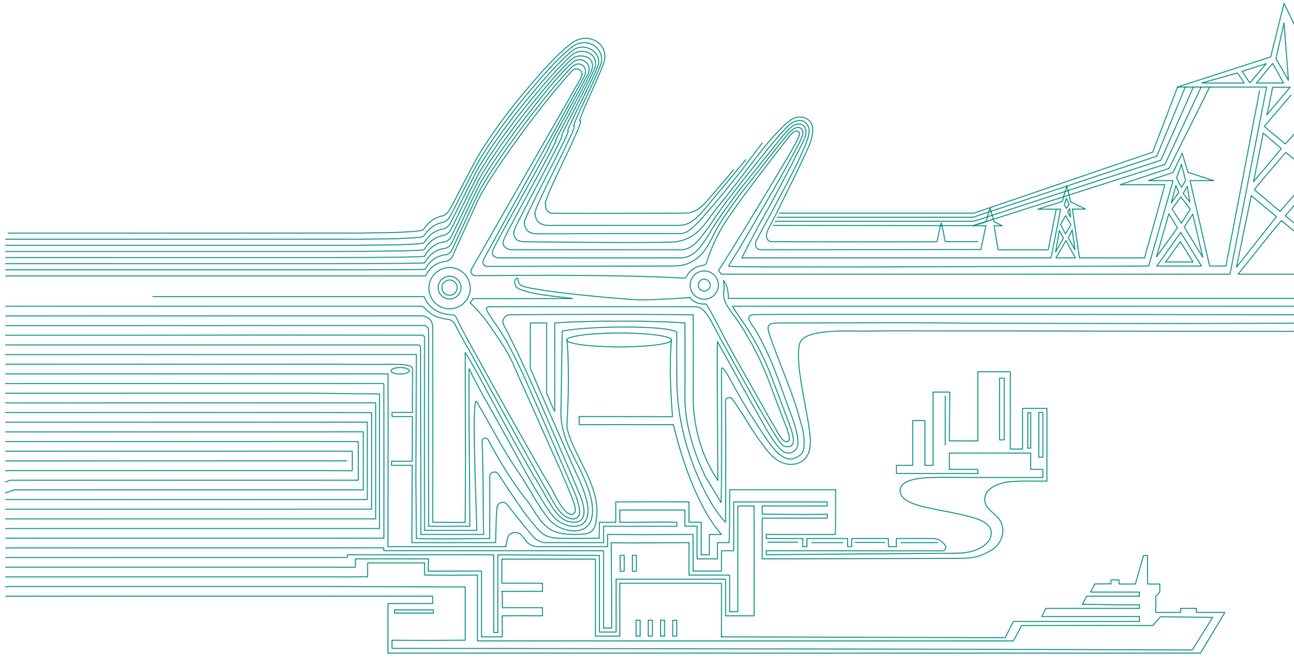
To promptly control the effectiveness of the risk mitigation measures, in 2021, JSC Atomenergomash monitored project and budget risks weekly in its risk management system.

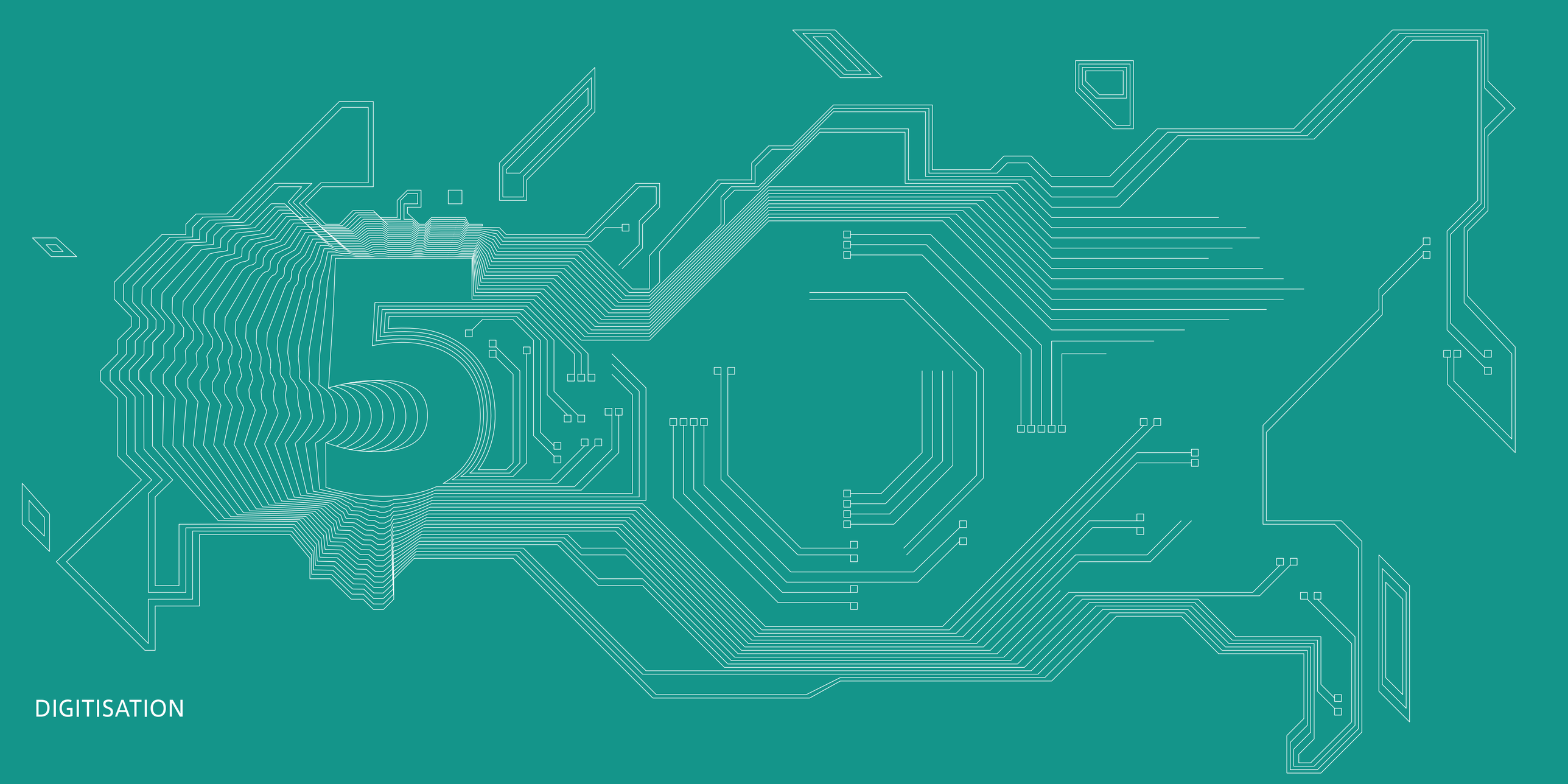
## PLANS FOR 2022

In 2022, in the regions of operation, we plan to add more types of assistance to residents after the restrictions are lifted:

- work with veterans: targeted assistance;
- increasing the number of donors in the Division, holding donor campaigns;
- preservation of the environment: volunteer clean-ups, eco lectures, sports festivals and leisure activities;
- development of 'green offices' at enterprises.






DIGITISATION

The Division focuses on the digitisation of management and production processes, as well as the addition of digital content to products for customers. So, in 2019, JSC Atomenergomash developed its digitisation programme and integrated it in ROSATOM's unified digital strategy.

Deeper integration of processes and data, the creation of a common information space for data exchange between departments, enterprises, divisions are distinctive features of these activities. The Division virtualises (creates digital twins) products and their production processes and approaches continuous product data management throughout the product life cycle.

## KEY RESULTS

A project was completed to create a divisional system for monitoring industrial equipment. Now, more than 400 units of key process equipment and seven production sites of the Division are connected by a single solution that allows us to control the operation of machine tools and improve their performance. This project laid the foundation for further digitisation of production processes.

In 2021, the Division created another solution – a system for budgeting and preparing summary data on the Division's operations. The system allows us to plan and collect information on the actual execution of the management budget, quickly prepare summary data on the results of the Division's operations, which is necessary for making informed management decisions.

The Division's enterprises successfully implemented the following projects:

- creation of digital twins of the rectors under development in JSC Afrikantov OKBM;
- production process management projects in JSC CDBMB, JSC ATM;
- project management solutions implemented both at the level of the managing company (JSC Atomenergomash) and at some enterprises (JSC AEM-Technology, JSC CDBMB, JSC AAEM).

In 2022, we plan to integrate solutions created and used at other enterprises into JSC Atomenergomash's unified divisional production project management system.

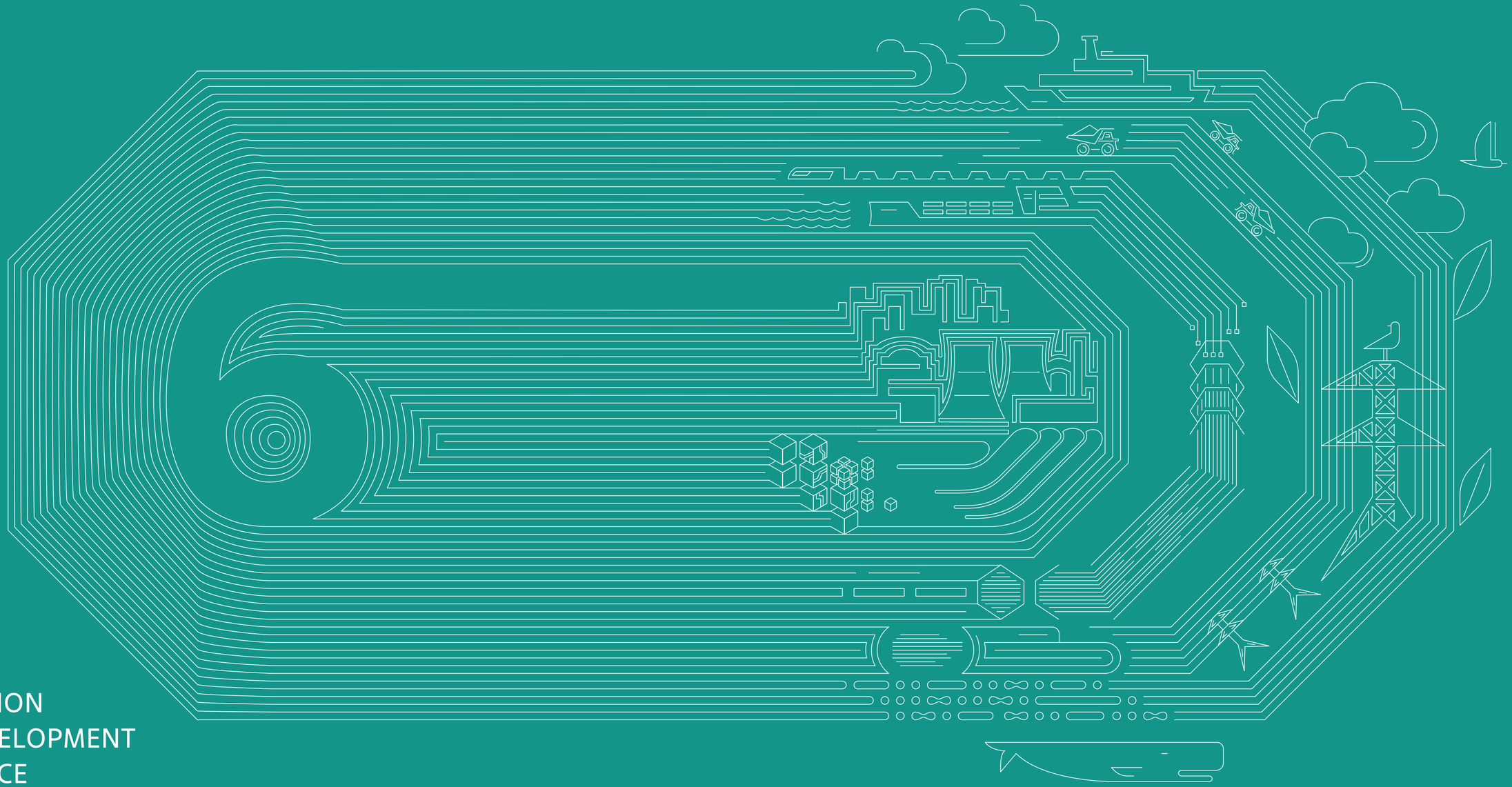
The Division's enterprises implemented production-process digitisation solutions and are preparing for their mass deployment. These solutions include the use of AR/VR technologies, smart hard hats, work with 3D models of products at the workplace, the implementation of vibration diagnostics solutions to predict potential failures and preventive responses reducing the likelihood of their occurrence.

We started to implement a predictive analytics system, create a digital passport for one of the products offered to the customer by the Division, and provide additional services using data received through the offered solution during the operation of equipment.

## PLANS FOR 2022

In 2022, the Division's enterprises plan to further develop projects launched and implemented in 2020-2021. The most successful process digitisation solutions will be replicated with the further expansion of the Division's common information space allowing the exchange of operating results in electronic form between the Division's enterprises, industry organisations and with external counterparties.

We plan to create a specialised solution to manage data at the Division level, integrate it with the industry solution, and implement additional division-wide systems. All that will allow the Division to develop in accordance with the tasks set, using advanced solutions in terms of process automation and sustainable development.



INNOVATION
AND DEVELOPMENT
OF SCIENCE

Scientific and technological activities of the Division are aimed at searching, developing and introducing innovative solutions regarding materials, technologies and design of power equipment to ensure competitiveness of products and expansion into new markets.

In 2021, the Division's enterprises implemented a number of innovative solutions to optimise designing, manufacturing and testing of equipment and to reduce production costs.

Number of patents and certificates for intellectual property obtained by the Division

| 2019 | 2020 | 2021 |
|---|---|---|
| 70 | 68 | 53 |

## KEY RESULTS

### JSC Afrikantov OKBM:

Research was carried out to justify the technologies for creating expander and pumping equipment for domestic LNG units. The project includes R&D and the development of a cryogenic submersible electric LNG pump, the development of an engineering design and working design documentation for a liquid expander/generator for medium- and large-capacity LNG production units, the creation of cryogenic pumps for gas carriers and a low-pressure pumping unit for filling stations. As part of the project, the company continued to develop domestic import-substituting components for cryogenic rotating equipment – a generator and an electric motor.

The Division develops a conceptual design and conducts a feasibility study of the cargo-containing system of a liquefied natural gas tanker with type B independent tanks as compared to existing Yamalmax vessels. The project is aimed at achieving ROSATOM's strategic objectives in terms of developing new products for LNG projects in Russian and foreign markets, strengthening competitive positions in this market segment.

As for innovation activities, the Comprehensive Development of Technology for Manufacturing Components of Nuclear Power Equipment Using AT (SLM method) was launched in 2021. The development and implementation of additive technologies is one of ROSATOM's priorities: AT will reduce the labour intensity and production waste compared to traditional processing methods.

### JSC ZiO-Podolsk:

The enterprise launched the production of reactor equipment for new generation icebreakers with the RITM-200 power unit.

It continues to produce power boilers for solid waste recycling at four waste-to-energy plants (Moscow Region).

### JSC AEM-Technology:

RusAtomExpertiza, a related certification body, started the certification of wedge gate valves and low-pressure check valves in the field of nuclear power use.

The company's employees learned how to apply technologies for the production of wedge gate valves and low-pressure check valves with a cast body (under implementation).

### JSC RPA CNIITMASH:

A process instruction for ultrasonic testing of welded joints made of EP302-Sh steel was developed.

The company conducted a comparative analysis of the requirements of Russian, European and American standards in terms of non-destructive testing methods and quality assessment standards for non-destructive testing of forgings of the Hanhikkivi 1 NPP reactor vessel.

## INNOVATION AND SCIENCE RESULTS

The Division actively contributes to the achievement of the Sustainable Development Goals in the field of generating affordable and clean energy, combating climate change, and preserving land and sea ecosystems.

The results of innovative activities that contribute to the achievement of the UN Sustainable Development Goals include the creation of intellectual property to produce equipment for NPPs with VVER reactors (AKKUYU, the ARABEL project, Kursk NPP 2, unit No. 2, RITM-200 reactor) at JSC ZiO-Podolsk. The production of this equipment helps to reduce $CO_2$ emissions and, thereby, neutralises the impact of electricity generation on climate change.

In addition, JSC ZiO-Podolsk enhanced the mechanisation of production, the production of innovative products.

The manufacture of reactor equipment for new generation icebreakers with RITM-200 power units reduces emissions compared to fossil fuel combustion engines, as well as the dissolution of emissions in marine ecosystems.

The production of power boilers at JSC ZiO-Podolsk for solid waste recycling at four waste-to-energy plants (Moscow Region) reduces the amount of solid household waste to be disposed of. So, terrestrial ecosystems are preserved and protected from the expansion of solid waste landfills.

## PLANS FOR 2022

### JSC Afrikantov OKBM:

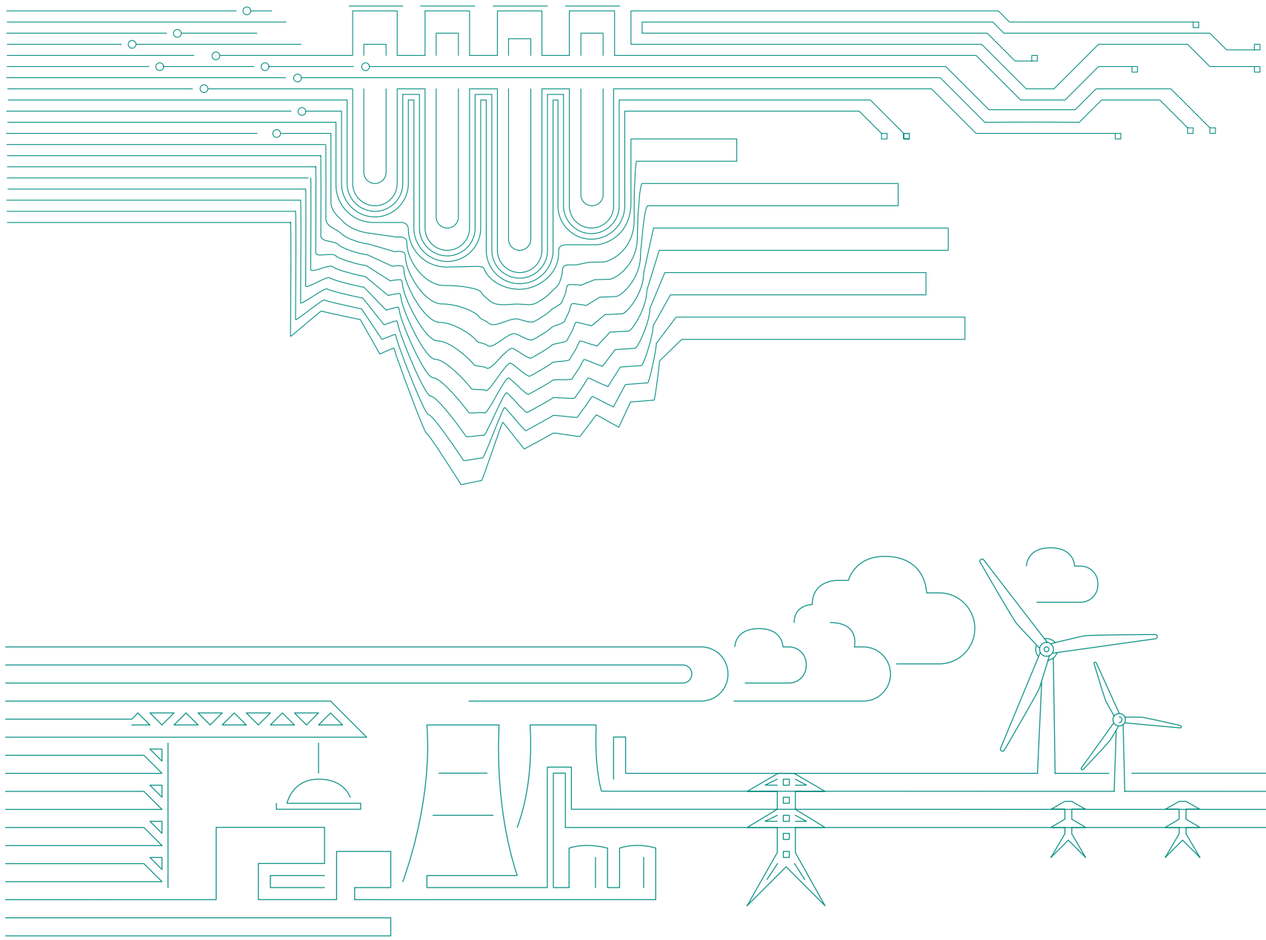
— To complete the implementation of current investment R&D projects and launch mass production.

### JSC CDBMB:

— To achieve the R&D targets ‘Development and Adjustment of Design Documentation, Substantiating R&D of the MCP for the BREST-OD-300 reactor unit. Stage of 2021-2023’.
— To conclude an agreement and start R&D to prototype equipment for remote manufacturing of an uranium-plutonium fuel element for the VVER-1200 reactor.

### JSC AEM-Technology:

— To create high-tech production of gate and wedge stamp-welded valves for nuclear, thermal power and oil and gas industries using a nanodesigned protective coating.



# NEW PRODUCTS AND BUSINESSES

## 1) NUCLEAR POWER INDUSTRY

The Division is a reference supplier of a wide range of equipment for the reactor island and the turbine island of NPPs. In the reporting year, the Division's enterprises produced and shipped mechanical engineering products to 16 NPPs on schedule.

The volume and geography of nuclear power markets are determined by ROSATOM's plans to build new NPP units in Russia and abroad.

In 2021, the enterprises of JSC Atomenergomash shipped mechanical engineering products to a number of NPPs, including nine NPPs in Russia and seven NPPs abroad. In the Russian Federation, equipment was supplied to Kursk NPP 2, Leningrad NPP, Smolensk NPP, Balakovo NPP, Kursk NPP, Rostov NPP, Kalinin NPP, Novovoronezh NPP, Kola NPP. Equipment was also produced and shipped for the following foreign NPPs: Rooppur NPP, Kudankulam NPP, Akkuyu NPP, Mochovce NPP, Bogunice NPP, Paks II NPP, Hanhikivi 1 NPP.

## 2) SHIPBUILDING

The expertise and capabilities of the Division's enterprises enable the Division to meet the highest quality standards. Enterprises of JSC Atomenergomash are leaders in the Russian market for the design and production of reactor units for the navy. Today, the Division produces not only power units but also auxiliary equipment for the shipbuilding industry. The production chain formed in the Division and covering all stages, from a metal blank to the end product, enables the Division to offer a wide range of solutions meeting customer needs. In the reporting year, JSC Atomenergomash increased the production of equipment for the icebreaker fleet. In addition, the Division acts as a single-source supplier of equipment for icebreakers of the Lider project.

One of the key events for the shipbuilding business was the signing of contracts with FSUE Atomflot for the supply of four MFPUs.

In the reporting year, draft design specifications were developed for a semi-submersible heavy-lift vessel for the transportation of floating power units and other items. The Division developed a conceptual design of a gas carrier with an innovative LNG storage and transportation system based on type B independent tanks and received funds for the development of its engineering design.

## 3) THERMAL POWER INDUSTRY

The Division takes the leading positions in the thermal power equipment market. Thanks to the capabilities of its enterprises, the Division can be involved in CHPP construction projects at all stages from design to post-sale services.

The target market for the Division is the market for equipment for thermal solid-waste treatment plants constructed under the Ecology national project. In 2021, full sets of process equipment were supplied to four waste-to-energy plants in the Moscow Region under the existing contracts.

In the reporting year, a contract was agreed in the final version for the supply of electromechanical technological systems and the provision of services for the construction of a waste-to-energy plant in Kazan.

## 4) GAS AND PETROCHEMICAL INDUSTRY

The Division continued to intensively explore the possibilities of supplying a wide range of equipment as part of the import substitution programme. JSC Atomenergomash's enterprises produce a wide variety of process equipment for processing and production of oil, gas and gas condensate, process equipment for refineries.

In the reporting year, JSC Atomenergomash built and put into operation Europe's first and the world's third test bench for critical LNG equipment at JSC Efremov Institute of Electrophysical Apparatus (NIIEFA). The project was implemented in accordance with instructions from the Russian President on replacing imported critical equipment.

The Division developed and delivered three high-pressure LNG pumps for the test bench unit under construction.

A prototype of a large-capacity LNG pump was developed and manufactured. The pump was tested using liquid nitrogen at the created test bench unit. The Division also received a confirmation of the successful pilot operation of LNG pumps, an ethane pump.

## 5) SPECIAL STEELS

This business area comprises production and R&D assets specialising in the design of new structural materials and technologies and in the manufacture of finished products for the power industry, shipbuilding, the metals industry and mechanical engineering.

JSC Atomenergomash acts as a contractor manufacturing blanks for the nuclear power industry.

In 2021, most of the products were manufactured and shipped to foreign nuclear power plants under construction in India, Turkey and China, as well as to enterprises in Europe and South Asia.

The reporting year was marked by deep R&D: JSC RPA CNIITMASH's researchers became the first in Russia to produce a batch of large products through selective laser melting of metal powders.

The enterprise successfully implements a project as part of which it found a way to significantly increase corrosion resistance and created a new multilayer corrosion-resistant material for critical structures.

## PLANS AND OBJECTIVES FOR 2022

- To ensure the supply of key equipment and perform work under concluded contracts.
- To increase revenue from new products and sales in foreign markets.
- To carry out existing contracts and develop cooperation with foreign companies and industrial partners.
- To consolidate the Division's position in target markets.
- To expand the range of equipment supplied by the Division and its sales footprint.

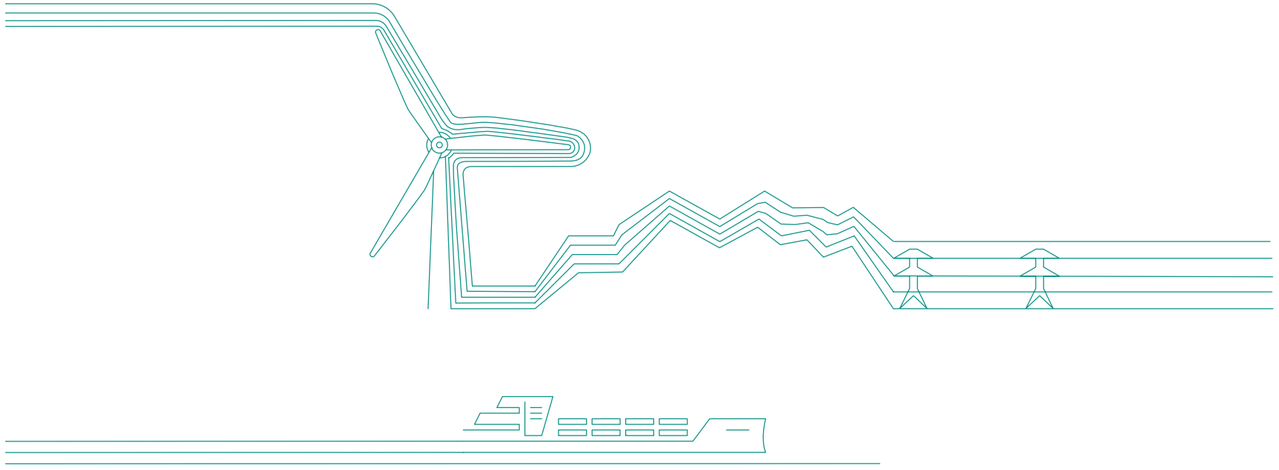
In the gas and petrochemical industry: To produce and supply LNG pumps, produce and test pilot cryogenic LNG pumps for gas carriers. To implement an investment project for the development of LNG loaders.

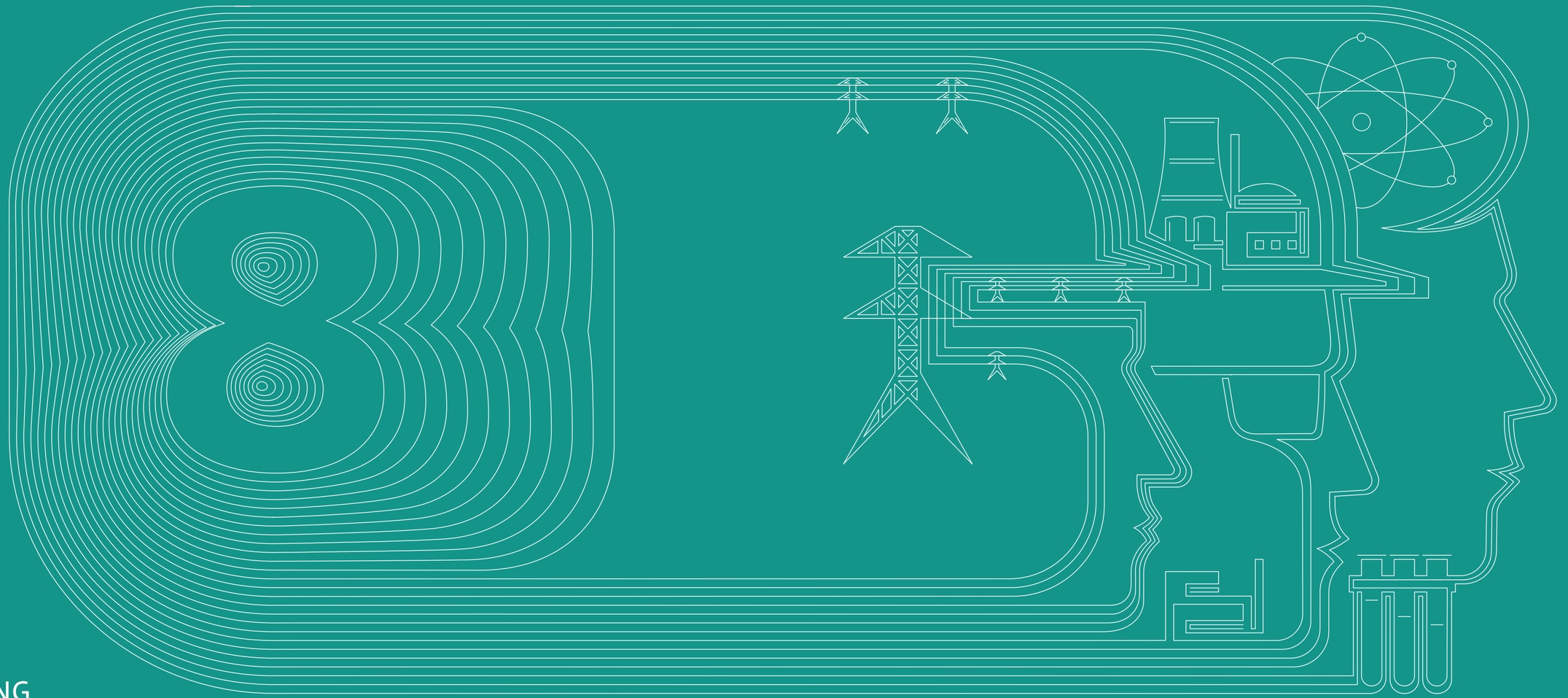
In the thermal power industry:

- To expand the package supply of equipment for waste-to-energy plants and develop engineering and maintenance competences.
- To expand the portfolio of thermal power engineering orders in Russia as part of waste-to-energy plant construction programmes and negotiate the conditions for further implementation of the programme for the construction of waste-to-energy plants in Russia.

In shipbuilding and the construction of floating power units:

- To finalise a full engineering design of the modernised floating power unit (MFPU) and launch the construction of the flagship MFPU.
- To manufacture and deliver the blanks and the core support plate for the RITM-400 reactor unit and prepare for the delivery of castings for ice cutters, rudder horns and the icebreaker stem.
- To obtain the approval of the Russian Maritime Register of Shipping for the LNG carrier design based on Type B independent tanks.
- To develop a conceptual design of a semi-submersible heavy-lift vessel for the transportation of FPUs and other items.
- To develop other promising projects focused on vessels and marine equipment for the benefit of the Division and ROSATOM.





DEVELOPING
THE HUMAN CAPITAL

## PERSONNEL COMPOSITION

Staffing of enterprises is one of the most important elements of effective business management and, undoubtedly, one of the key development priorities for the Division. The Company does business in a socially responsible manner and is committed to providing equal opportunities for employees in different gender and age groups.

The largest enterprises of the Division (JSC Afrikantov OKBM, JSC AEM-Technology, JSC ZiO-Podolsk, JSC Experimental and Design Organisation GIDROPRESS and JSC CDBMB) account for more than 80% of the total headcount. The special features of their operations, namely the fact that jobs in these manufacturing enterprises are physically demanding, have resulted in the relevant predominance of men over women, with an average ratio of 65 to 35.

### Headcount by gender (people)

| Headcount | 2019 | | 2020 | | 2021 | |
|---|---|---|---|---|---|---|
| Actual | 17,939 | | 19,018 | | 18,961 | |
| | **male** | **female** | **male** | **female** | **male** | **female** |
| | 11,727 | 6,212 | 12,519 | 6,499 | 12,431 | 6,530 |
| Average | 16,732.5 | | 17,978.41 | | 18,455.50 | |
| | **male** | **female** | **male** | **female** | **male** | **female** |
| | 11,207.9 | 5,524.6 | 12,081 | 5,897 | 12,338 | 6,117 |

### Gender balance by job levels (people)

| Position | 2019 | | 2020 | | 2021 | |
|---|---|---|---|---|---|---|
| | **male** | **female** | **male** | **female** | **male** | **female** |
| Executives | 1,529 | 375 | 1,596 | 392 | 1,616 | 395 |
| Specialists | 4,258 | 3,993 | 4,413 | 4,201 | 4,347 | 4,284 |
| White-collar workers | 9 | 96 | 9 | 99 | 10 | 88 |
| Blue-collar workers | 5,931 | 1,748 | 6,501 | 1,807 | 6,458 | 1,764 |

### Personnel rotation in the Division in 2019-2021 (%)

| 2019 | 2020 | 2021 |
|---|---|---|
| 11.00 | 7.00 | 15.03 |

The majority of employees work full-time (99.3%). Fixed-term contracts were signed with 2.4% of employees.

### Personnel structure by employment type

| Employee category | 2019 | | 2020 | | 2021 | |
|---|---|---|---|---|---|---|
| | **male** | **female** | **male** | **female** | **male** | **female** |
| Number of fixed-term contracts (people) | 232 | 220 | 233 | 242 | 235 | 220 |
| Share of fixed-term contracts (%) | 2.5[12] | | 2.6 | | 2.4 | |
| Number of part-time employees (people) | 146 | 82 | 107 | 103 | 82 | 55 |
| Share of part-time employees (%) | 1.2 | | 1.1 | | 0.72 | |

The Division's enterprises successfully maintain an optimal balance between the number of highly qualified and experienced employees of retirement age (about 15%) and young promising employees (30%).

### Personnel structure by age group (people)

| Age and gender | 2019 | | | 2020 | | | 2021 | | |
|---|---|---|---|---|---|---|---|---|---|
| | **male** | **female** | **%** | **male** | **female** | **%** | **male** | **female** | **%** |
| Under 35 | 4,006 | 1,648 | 31.5 | 4,164 | 1,790 | 31.3 | 3,929 | 1,737 | 29.8 |
| Retirement age (women over 60 / men over 65) | 1,474 | 1,350 | 15.7 | 1,454 | 1,336 | 15.5 | 1,328 | 1,153 | 13.4 |
| 35-60/65 | 6,264 | 3,261 | 6,901 | 3,373 | 7,174 | 3,640 | 6,264 | 3,261 | 6,901 |

### Share of employees who have worked in the company for more than 10 years (people)

| Up to 5 years | % | 5 to 10 years | % | Over 10 years | % |
|---|---|---|---|---|---|
| 6,818 | 36 | 3,810 | 20 | 8,333 | 44 |

[12] Data recalculated.

## Training

Professional development of employees is a vital prerequisite for the Division's dynamic growth and competitive strength. The Division's enterprises are active participants of professional skill and managerial competence development programmes. Special emphasis is placed on the onboarding of new employees and transfer of key knowledge from experienced mentors to ensure that young specialists quickly demonstrate high performance and preserve the unique and valuable proprietary information within the Division.

Annual budget for training (RUB million)

| 2019 | 2020 | 2021 |
|---|---|---|
| 109.7 | 128.5 | 145.5 |

Average training hours per employee

| Indicator | 2019 | | 2020 | | 2021 | |
|---|---|---|---|---|---|---|
| | male | female | male | female | male | female |
| Training hours (h/person) | 58.53 | 41.63 | 50.19 | 35.94 | 46.13 | 38.38 |
| TOTAL (h/person) | 52.16 | | 44.76 | | 42.26 | |

At the enterprises of the Division, senior students of institutions of secondary vocational and higher education annually undergo an internship.

Number of university students who completed internships at the Division's enterprises (people)

| 2019 | 2020 | 2021 |
|---|---|---|
| 151 | 169 | 261 |

All employees have received appropriate education necessary to obtain the relevant qualifications: at production sites, employees with secondary vocational education prevail, while employees in design bureaus and holding companies have higher vocational education. In 2021, the share of employees with higher education in the Division's enterprises stood at 57%. A number of employees have academic degrees and the titles of professors. The Division employs two academicians of the Russian Academy of Sciences and 17 professors.

Candidates, Doctors of Sciences, MBA (people)

| Candidates | | | Doctors | | | MBA | | |
|---|---|---|---|---|---|---|---|---|
| 2019 | 2020 | 2021 | 2019 | 2020 | 2021 | 2019 | 2020 | 2021 |
| 276 | 283 | 254 | 59 | 54 | 44 | 9 | 26 | 26 |

## WORKING CONDITIONS AND WORK ORGANISATION

In order to make the remuneration system more transparent and increase the level of motivation, the Division has introduced an Integrated Standardised Remuneration System, which makes it possible to establish equal remuneration for employees holding positions comparable in terms of their value to ROSATOM, and to ensure that a significant part of the total financial remuneration received by employees is linked to the achievement of KPI targets. The main goal of the current system is to encourage efficient work and guarantee social security for the Company's employees.

The main regulatory document in this sphere is the Regulation on Remuneration. In addition, the Industry-Wide Agreement on Nuclear Power, Industry and Science for 2019–2022 (hereinafter referred to as the Industry-Wide Agreement) is in force between ROSATOM, the Russian Union of Employers in the Nuclear Industry, Power and Science and the Russian Trade Union of Nuclear Power and Industry Workers. It establishes general principles for regulating social and labour relations in the nuclear industry, including mutual obligations of the parties related to matters concerning remuneration, working conditions and occupational health and safety, the work-life balance, employment, social guarantees, benefits and compensation for employees.

More than 80% of the Division's enterprises have in place collective agreements that cover all employees of the enterprises.

In accordance with the Labour Code of Russia, employees in all enterprises of the Division are notified of organisational changes at least two months in advance.

The Division's enterprises provide all their employees, regardless of the status and type of employment contract, with a package of social welfare payments and benefits approved in the relevant regulatory documents:

- health insurance;
- pension schemes;

- housing programmes;
- health resort treatment and recreation for employees and their children;
- sporting and other events;
- catering for employees;
- provision of financial assistance;
- subsidised gym membership;
- support for veterans and retirees in the industry.

In 2021, social expenses per employee grew and totalled almost RUB 33,000.

| | 2019 | 2020 | 2021 |
|---|---|---|---|
| Share of employees covered by vaccination and voluntary health insurance (VHI) programmes (%) | 88.02 | 93.85 | 95.74 |
| Costs of VHI programmes for employees (RUB million) | 4,705.27 | 5,298.82 | 7,770.46 |

## OCCUPATIONAL HEALTH AND SAFETY

One of the Division's priorities is to reduce the number of accidents, incidents, fatalities and injuries. The Company is fully aware of its responsibility towards its employees, their friends and families, and towards society as a whole and, accordingly, seeks to provide the most favourable and comfortable working conditions.

The Division's enterprises comply with all industrial safety and occupational health and safety requirements. Performance in this area is assessed through the Lost Time Injury Frequency Rate (LTIFR) KPI. In the reporting year, it stood at 0.07, which is 4.2 times better than the target (0.30).

In 2021, there were two operational incidents at the Division.

To prevent injuries and occupational diseases, the Division's enterprises take preventive measures stipulated by local regulations.

Some enterprises (JSC Afrikantov OKBM, JSC ZiO-Podolsk, JSC Experimental and Design Organisation GIDROPRESS, JSC RPA CNIITMASH, AAEM LLC) have undergone certification to the ISO 45001 international standard stipulating requirements for an occupational health and safety management system. In 2021, there were no serious injuries and fatalities at the Mechanical Engineering Division.

### Workplace injuries and occupational diseases

| Indicator | Gender | 2019 | 2020 | 2021 |
|---|---|---|---|---|
| Injuries | male | 5 | 2 | 2 |
| | female | 1 | 0 | 0 |
| Days lost because of injuries | Total | 265 | 10 | 119 |
| Occupational diseases | male | 1 | 1 | 0 |
| | female | 0 | 0 | 0 |
| Fatalities | male | 0 | 0 | 0 |
| | female | 0 | 0 | 0 |
| LTIFR | Total | 0,14 | 0,07 | 0,07 |

A number of enterprises (Ganz EEM ltd, ARAKO spol. s.r.o) have been issued with a certificate of compliance with the requirements of the OHSAS 18001 international standards on the occupational safety and health management system.

The Division's enterprises continue to actively invest in developing their occupational health and safety activities.

In 2021, occupational health and safety costs totalled RUB 464.9 million.

### Occupational health and safety costs (RUB million)

| 2019 | 2020 | 2021 |
|---|---|---|
| 359.5 | 535.1 | 464.9 |

All employees working in hazardous working conditions (4,846 people) regularly undergo periodic medical examinations and are entitled to extra medical examinations.

### Number of employees working in hazardous working conditions (people)

| 2019 | 2020 | 2021 |
|---|---|---|
| 4,498 | 4,860 | 4,846 |

## EMPLOYEE PERFORMANCE MANAGEMENT

The Division has in place a single employee performance management policy that includes:

- developing standardised principles and tools for setting KPI targets and evaluating their achievement by employees;
- evaluating the level of employees' skills, including for the payment of bonuses[13];
- preparing recommendations for forming the talent pool;
- preparing individual development plans for employees to plan further training.

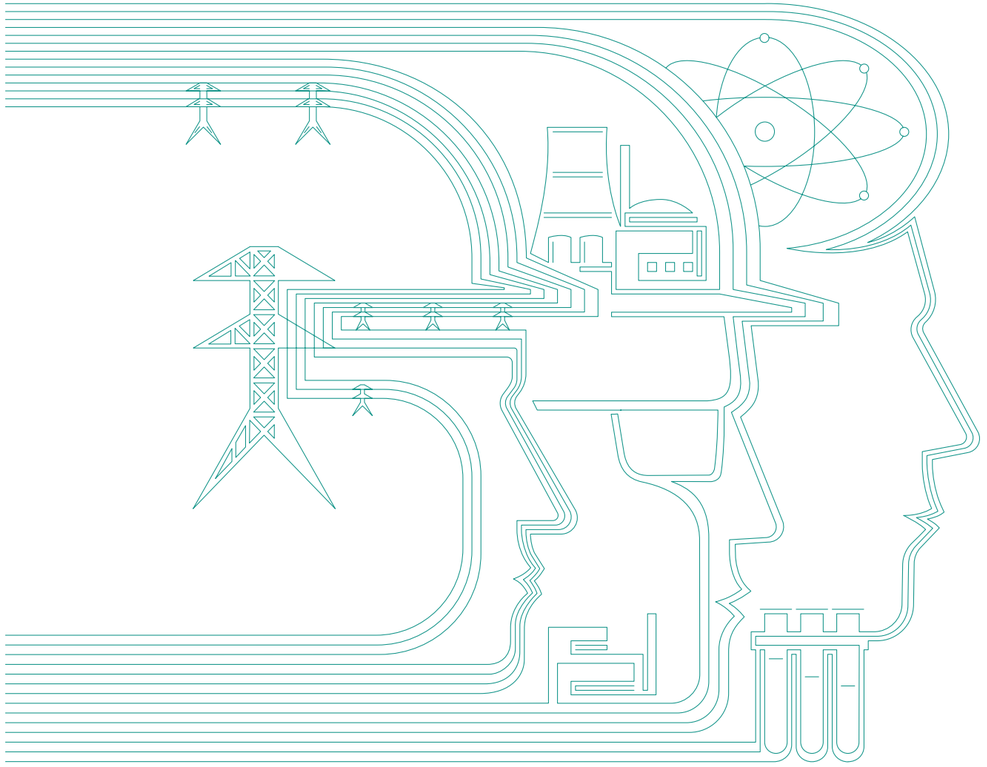
The main indicator reflecting employee performance is labour productivity, which has been growing steadily in recent years.

Employee engagement surveys are an important driver of employee performance. Based on the findings of the survey, the Division's management can gain an insight as to whether employees in the industry are motivated to address prioritised tasks and can identify the key levers for increasing employee engagement and motivation.

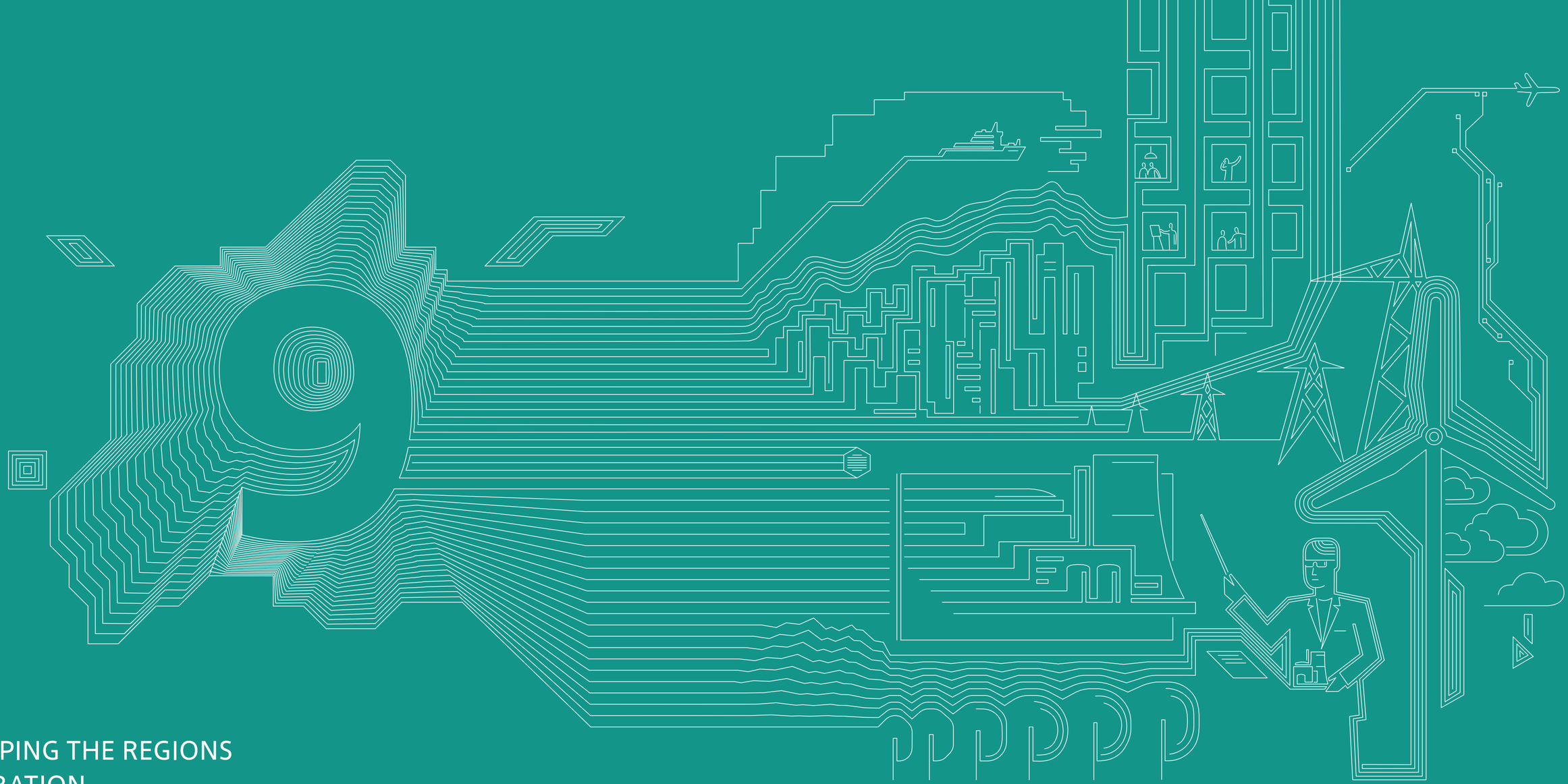
## DEVELOPMENT OF OPERATING PERSONNEL

The Division's enterprises are active participants of professional skill and managerial competence development programmes. Industry-specific training programmes help to build a unified management system and improve the interaction between various departments and enterprises of the Division.

- As ROSATOM's team members, specialists of enterprises of JSC Atomenergomash won two gold medals and one bronze medal in the WorldSkills Hi-Tech 2021 National Competition.
- An employee of JSC AEM-Technology is certified in Worldskills Russia's Welding Technologies national professional community.
- An employee of JSC ZiO Podolsk won a silver medal in the EuroSkills Graz European Championship in the Engineering Design. CAD category.
- At the Atommash branch of JSC AEM-Technology and JSC RPA CNIITMASH, competence centres specialising in welding technologies trained over 700 specialists in the industry and employees of other organisations.



[13] Performance assessment covers employees in all of the Division's enterprises.



# DEVELOPING THE REGIONS OF OPERATION

# SOCIAL RESPONSIBILITY AND CHARITY IN THE REGIONS OF OPERATION

The development of social programmes and active communication and cooperation with regional governments on matters related to the labour market helps to make the Mechanical Engineering Division more attractive to employees and improve the social situation in the regions.

Regional enterprises of the Division are involved in urban improvement and infrastructure development in its regions of operation, especially in their host towns and cities. In addition, the Company takes part in charity projects. In total, in 2021, the Division's enterprises spent over RUB 92 million on charity projects.

## Charity expenses (RUB '000)

| 2019 | 2020 | 2021 |
|---|---|---|
| 76,342 | 85,239 | 92,698 |

About 40 social projects were implemented for employees and other charitable organisations.

JSC Atomenergomash not only participates in charity events and organises them, but also involves employees and their families in these activities.

## Volunteer programmes and charity in 2021

| No. | Project name | Description |
|---|---|---|
| 1 | Green office | 1. Participation of coordinators and volunteers in training meetings under the project according to the industrial training plan.<br>2. Audit conducted by the divisional coordinator at enterprises according to the checklist.<br>3. Implementation of initiatives by enterprises in accordance with volunteering plans: installation of collection points for bottle caps and batteries, organisation of volunteer clean-ups. |
| 2 | Blood donation | 1. Audit conducted by the divisional coordinator at enterprises for the implementation of donor campaigns.<br>2. Formation of the Division's base of donors.<br>3. Running 15 donor campaigns at the Division's enterprises in accordance with the volunteering plans. |
| 3 | Support for veterans and retirees | Congratulations to veterans from the enterprise in the format of an online concert. Delivery of bouquets, envelopes with postcards and grocery store cards to veterans. Organisation of a congratulatory meeting and a concert with the participation of children from the Children's Zudov Art Club. Volunteers visited those veterans who could not attend the meeting.<br>Comprehensive support for retirees in terms of humanitarian aid, involvement in public life; formation of a proactive attitude among employees; development of horizontal linkages between employees of the enterprise and retirees; formation of links between generations of employees in the nuclear industry. |
| 4 | Intellectual volunteering | Meetings of representatives of the Youth Council of enterprises with senior students of supported schools. |
| 5 | Creation of a motivational video | Creation of a video with the participation of the Division's leaders demonstrating their personal involvement in volunteer projects. Broadcasting of video on displays at enterprises and on social media. |
| 6 | Rays of Life Charity Marathon | A communication campaign was held at the Division's enterprises to raise funds for patients of the Dmitry Rogachev Centre. |
| 7 | Let's Help Children Together charity event | Employees of Petrozavodskmash took part in the Let's Help Children Together charity event to collect hygiene products for children with disabilities from the Specialised Children's Home. |
| 8 | Souvenir products for charity | At the end of the year, unsold souvenirs were donated to orphanages, organisations that support disadvantaged families. |
| 9 | Green World eco lecture at an orphanage (St. Petersburg) | An ecology master class was held in the supported orphanage in the Vyritsa village (AEM-Technology provided materials for the master class). |
| 10 | Organisation of a party and humanitarian aid for children in hospitals | JSC CDBMB run two campaigns: The Christmas Tree of Wishes for children with disabilities in Sosnovy Bor and the Box of Courage — collection of toys for children treated in oncology and hematology healthcare centres in Saint Petersburg. Employees of JSC ATM provided assistance to children with special needs. Children needed a sports area to improve gross motor skills and a quartz treatment machine. |
| 11 | Charity runs | Employees took part in the Nuclear Cities Run. The main purpose of the event was to promote a healthy lifestyle and encourage physical activity among nuclear industry employees and residents of Volgodonsk. The distance was 2 km. |
| 12 | Voluntary clean-ups | In JSC CDBMB: 25 employees took part in social activities and cleaned the embankment of the Yekateringofka River in the Admiralteisky District from household waste, leaves, dry branches and trees. That was made both from the shore and from the water as a shipbuilding company provided barges to clean up the river. |

| No. | Project name | Description |
|---|---|---|
| 13 | Caps for Kindness campaign | Collection and further disposal of plastic bottle caps. The campaign aimed at helping people supported by the Charitable Podolsk volunteer movement is held in Gidropress and ZiO-Podolsk. This is a year-round initiative. |
| 14 | Bus of Kindness campaign | Assisting crisis centres with the collection of clothing, personal care products and food. |
| 15 | Tree planting | A tree planting campaign held, 80 seedlings planted. |
| 16 | Helping homeless animals | Collection of feed and medicines, visits to shelters to walk animals. |
| 17 | Humanitarian aid | In November, in the Volgodonsk branch of JSC ATM, a collection was organised as part of a charity project to help people supported by the Comprehensive Social Centre for Assistance to People with No Fixed Abode. |
| 18 | Helping children in orphanages | In Petrozavodsk, JSC AEM-Technology took part in a charity collection of school supplies for children from orphanages. Fundraising was organised for Voskhozhdenie (Rising), Volgodonsk's special boarding school; equipment for sports and musculoskeletal rehabilitation was purchased and transferred to the boarding school. Employees of LLC AAEM organised a New Year's party for children from orphanages in the Novgorod Region: they prepared gifts for each child. They also held a charity event to collect stationery for children supported by the Kingisepp Social and Rehabilitation Centre. Organisation of a party and gifts for children from a boarding school (JSC Afrikantov OKBM). |
| 19 | Let's Help Children Together campaign | Employees of Petrozavodskmash collected basic necessities such as soap, shampoos, tissues, diapers and delivered them to an orphanage. |
| 20 | Green World campaign. Helping children | JSC AEM-Technology took part in the Green World charity campaign. The enterprise purchased T-shirts and paints for an ecology master class held in an orphanage in Vyritsa. |
| 21 | Detsky Mir | JSC CDBMB raised funds to buy the Detsky Mir (Children's World) store's gift cards and donated them to families with children with disabilities through the Sosnovy Bor Society for the Disabled. |
| 22 | Victory Grove | The Victory Grove was planted in the Gladyshevsky Nature Reserve (Vyborgsky District of the Leningrad Region) to commemorate the heroic deeds of our people during World War II. The event was a follow-up to the nationwide Forest of Victory campaign (AAEM Turbine Technology). |
| 23 | Liza Alert South (Volgodonsk branch of JSC ATM) | Collection of useful things for the Liza Alert South search-and-rescue organisation (Volgodonsk branch of JSC ATM). |

| No. | Project name | Description |
|---|---|---|
| 24 | Give a Battery, Save a Tree campaign | The environmental campaign was organised by the Petrozavodskmash branch of JSC AEM-Technology. |
| 25 | Orthodox Service of Mercy | Charity event to collect books and board games for abandoned children. |
| 26 | Preserving the environment, healthy lifestyle | Monthly corporate mailings. |
| 27 | OKBM Alley campaign | JSC Afrikantov OKBM's urban improvement and planting campaign involving the company's employees and their families. Improving the territory of the sponsored day-care centre, planting flowers and other plants. |
| 28 | Children's Day | Organisation of a thematic quiz at a mentoring centre for disadvantaged children supported by the Life Without Barriers Foundation. |
| 29 | Plogging campaign | Family plogging campaign for the Day of Family and Faithfulness. Organisation of a plogging run, including a short warm-up and a mini lecture on running technique. |
| 30 | Pack a Schoolbag charity campaign | A stationery collection event for the beginning of the new school year (September 1) for children from low-income families. |
| 31 | Marvel Tree campaign | Distribution of information about the Marvel Tree campaign (transfer of funds for children/the elderly for the New Year). |
| 32 | Easter donation | Collection of things and gifts for people supported by the Balakhna deanery's Joy (Radost) social office. |
| 33 | Run, Hero! | A citywide half-day charity event. Each employee chooses a suitable distance and runs on the declared day as part of a corporate team. |
| 34 | Best Friend | Participation in the Best Friend charity event dedicated to the Homeless Animals' Day, August 15. Organisation of an on-site collection of food products and accessories for homeless animals that are under care of the Compassion NN charity foundation (located next to the enterprise). |
| 35 | Lecture on ecological culture | Organisation of lectures on ecological culture for children of the enterprise's employees at the Nuclear Power Information Centre together with the Ecocapital (Ecostolitsa) NN public educational project. |
| 36 | Sports festival | A sports festival for children and adults. All winners received medals, cups and valuable gifts. There was also a children's drawing competition. |

| No. | Project name | Description |
|---|---|---|
| 37 | Interview about the importance of volunteering | Posting an interview with the executive about the importance of volunteering on the corporate portal and social media. |
| 38 | What? Where? When? | The What? Where? When? game for employees of the enterprise as part of a charity campaign. Game donations were transferred to a charity fund for the treatment of children with cancer. |

The Division's enterprises annually make tax payments to the budgets of different levels, and four enterprises of the Division – JSC Experimental and Design Organisation GIDROPRESS, JSC Afrikantov OKBM, JSC AEM-Technology and JSC ZiO-Podolsk – are included in the list of the largest taxpayers in their regions.

Payments to budgets of different levels (RUB '000)

| Indicator | 2019 | | 2020 | | 2021 | |
|---|---|---|---|---|---|---|
| | Accrued | Paid | Accrued | Paid | Accrued | Paid |
| Total taxes and duties: | 8,212,297 | 8,167,557 | 10,203,068 | 7,630,197 | 7,672,966 | 8,400,274 |
| Federal budget | 8,009,664 | 7,942,870 | 9,458,722 | 6,822,128 | 7,278,234 | 8,094,150 |
| Regional budgets | 150,255 | 178,907 | 704,708 | 763,569 | 344,787 | 268,469 |
| Local budgets | 52,378 | 45,780 | 41,638 | 48,300 | 47,945 | 37,655 |

## STAKEHOLDER ENGAGEMENT

The Division's Public Reporting Materials (hereinafter referred to as the 'Reporting Materials') are intended to inform all stakeholders of the Company's objectives, activities and achievements. The Reporting Materials contain information about the Company's economics, occupational health and safety activities, environmental activities, climate effects and energy efficiency, interaction with stakeholders and local communities, corporate governance, supply chain management, innovative technology and other information for the period from January 1 to December 31, 2021.

The Division regularly interacts with its stakeholders to determine their interests and expectations, list important aspects of the Company's operations and analyse material topics through questionnaires. Key stakeholder engagement formats include remote dialogues, press tours, and visits of environmental organisations, customers and other stakeholders to enterprises. Such an approach allows the Division to promptly react to potential risks, mainly social and reputational, related to stakeholder engagement.

JSC Atomenergomash focused on the improvement of the safety of NPP equipment operation. So, a key topic of these Reporting Materials is Safe Operation of NPP Equipment. To make the reporting process more transparent and open, the Division held dialogues with stakeholders in a remote format. As part of those dialogues, the Division discussed with its stakeholders socially important aspects of its activities to be disclosed in the Reporting Materials, as well as JSC Atomenergomash's draft Reporting Materials.

The Reporting Materials are prepared in accordance with the Global Reporting Initiative Sustainability Reporting Standards (GRI SRS, Core option). Annual public reports give a comprehensive picture of the Division's activities and strategic decisions and allow stakeholders to see the current level of the sustainable development agenda.


# SPECIFIC RISKS AND MANAGEMENT APPROACHES

A Risk Management Group has been formed in JSC Atomenergomash, acting on the basis of the Regulation on the Risk Management Group of JSC Atomenergomash. It is tasked with forming the Corporate Risk Management System (CRMS) and coordinating activities in the field of risk and insurance management, as well as the settlement of insurance claims. The Group's responsibilities include regular risk audit and verification of compliance with the established risk limits, organisation of communication and cooperation between all participants of the risk management process, from the level of controlled organisations to ROSATOM, in the course of decision-making related to risks and insurance.

Key risks for the Division in 2021 included currency risks (high foreign exchange volatility), operational risks (falling behind schedule or postponement of implementation), inflation and interest rate risks, and credit risks (counterparty risks).

The main risk factors include the persisting macroeconomic and foreign policy uncertainty, the pandemic, a possible deterioration in the market environment and the financial position of existing and potential counterparties.

The most effective methods and measures for risk management at year-end 2021 included the monitoring of purchases made in foreign currencies or in roubles at the foreign exchange rate, the terms and conditions of revenue contracts mirroring those of expense contracts, rescheduling the start of production, implementing RPS projects, achieving savings from procurement procedures, changes in the volume of overhead costs, reducing the consumption of raw materials, analysing counterparty risks when concluding contracts, and monitoring debt risks throughout the entire life cycle of a project.

The Division regularly improves the risk management system and assesses its compliance with international standards (GOST R ISO 31000:2020) and best industry and international practice.

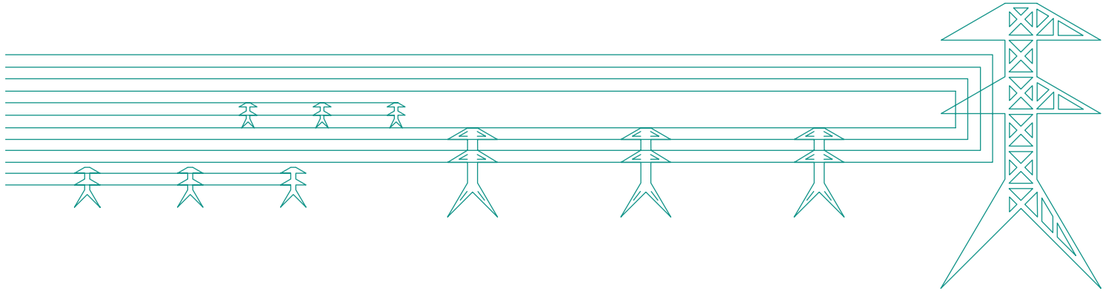
## CASES OF SUCCESSFUL CLIMATE RISK MANAGEMENT

In 2021, JSC Atomenergomash's risk management group worked on a comprehensive assessment of the carbon footprint of controlled enterprises and particular manufactured equipment throughout the life cycle in cooperation with Gubkin Russian State University of Oil and Gas. Promising areas, goals and stages of interaction for 2022 were agreed upon.

## OBJECTIVES FOR 2022 AND THE MEDIUM TERM

In 2022, we plan to further develop the Division's risk management system in the following key areas:

- to develop an automated risk assessment and management system, which will, among other things, enable the Division to maintain and update a knowledge base of typical risks and risk management measures;
- to form an integrated risk management system at the level of CFR 3;
- to adopt procedures (including initial assessment) for managing risks associated with projects and programmes in the sphere of new business development;
- to minimise risks of external customers' doubtful and non-recoverable debts;
- to ensure better prime cost formation and pricing for the key NSGP equipment (preparing for a transition from class 4 to class 3 assessment accuracy) in terms of risk assessment;
- to reduce production facility risks through observing risks and implementing insurance programmes;
- to assess and manage ESG risks in accordance with modern best practices adopted in mechanical engineering and power industries.



# SAFETY OF OPERATIONS

## ENVIRONMENTAL MANAGEMENT

For many years, the Division's enterprises have been implementing a well-considered and responsible environmental and radiation safety policy. They focus on sustainable development of the nuclear industry and are fully aware of their responsibility towards society for environmental preservation and sustainability.

In the course of its operations, JSC Atomenergomash adheres to the environmental policy approved by the order of its Chief Executive Officer. Provisions of the environmental policy are mandatory for all employees of the Division.

As part of implementing foreign projects and enhancing environmental responsibility, JSC Atomenergomash and its controlled organisations (JSC ZiO-Podolsk, JSC RPA CNIITMASH, AAEM LLC, JSC ATM, JSC Experimental and Design Organisation GIDROPRESS, JSC CDBMB, JSC Afrikantov OKBM) introduced environmental management systems and received certificates of conformity to ISO 14001.

Every year, the Division's enterprises assess environmental aspects and impacts and determine so-called reference points related to increased environmental risks. For critical risks and rising environmental impacts, they set environmental targets and develop measures to meet them.

An important priority is to minimise the negative environmental impact of nuclear facilities. As part of their large-scale projects, the Division's enterprises incur costs related to measures aimed at preventing and minimising the environmental impact and to the operation of the environmental management system. In 2021, the total environmental costs exceeded RUB 184 million.

Expenses for prevention of the environmental impact and for the environmental management system (RUB million)

| 2019 | 2020 | 2021 |
|---|---|---|
| 168.31 | 169.382 | 184.48 |

Mechanical engineering enterprises need an uninterrupted and efficient energy supply for the production process. Energy is needed for the operation of machine tools, heating and lighting in buildings, as well as for heat treatment of finished products and blanks.

To assess the benefits from measures to improve energy efficiency, a differentiated target is set in the Division for the annual reduction in the consumption of resources.

Energy consumption ('000 GJ)

| 2019 | 2020 | 2021 | | | |
|---|---|---|---|---|---|
| | | Heat[14] | Electricity | Gas | Total |
| 5,132.2 | 5,216.2 | 277.9 | 1,088.7 | 3,740.3 | 5,106.9 |

Energy savings ('000 GJ)

| 2019 | 2020 | 2021 | | | |
|---|---|---|---|---|---|
| | | Heat | Electricity | Gas | Total |
| 666.6 | 481.9 | -15.0 | 7.9 | -7.9 | -14.9 |

Water resources are required for the business operations of the enterprises and are used in industrial processes (in cooling / heating systems, when checking whether products are leakproof, as part of process fluids). Water consumption increased compared to 2020 as the majority of employees came back to their workplaces after remote work.

Water consumption ('000 $m^3$)

| Source | 2019 | 2020 | 2021 |
|---|---|---|---|
| Municipal water supply | 1,490.2 | 622.4 | 871 |
| Wastewater | 1,068.1 | 980.8 | 951.6 |
| Groundwater | 340.8 | 328 | 361.7 |
| Surface water | 994.6 | 969.3 | 972.8 |
| **TOTAL** | **3,893.7** | **2,900.5** | **3,157.2** |

Wastewater discharges ('000 $m^3$)

| Destination | 2019 | 2020 | 2021 |
|---|---|---|---|
| Municipal sewerage systems | 1,912 | 1,517.9 | 1,602.7 |
| Surface water | 232.7 | 295.7 | 296.6 |
| **TOTAL** | **2,164** | **1,813.6** | **1,899.3** |

[14] Heat is supplied to PJSC ZiO-Podolsk, JSC Afrikantov OKBM and the Petrozavodskmash branch of JSC AEM-Technology from their own boiler houses, which are fuelled mainly with natural gas.

## Greenhouse gas emissions

The Division's enterprises are a source of direct emissions of two types of greenhouse gases: carbon dioxide ($CO_2$) and nitrous oxide ($N_2O$). Large enterprises of the Division (JSC ZiO-Podolsk, JSC Afrikantov OKBM, Atommash Branch of JSC AEM-Technology in Volgodonsk) account for the largest share of emissions.

Direct greenhouse gas emissions ('000 tonnes)

| Gas | 2019 | 2020 | 2021 |
|---|---|---|---|
| carbon dioxide ($CO_2$) | 227.1 | 220 | 234.6 |
| nitrous oxide ($N_2O$) | 3.8 | 0 | 0 |

## Emissions of pollutants

In accordance with Russian legislation, enterprises develop draft standards for waste generation and disposal limits, as well as draft maximum allowable emission targets. As a result, the enterprises receive documents for the disposal of production and consumption waste and permits for the emission of pollutants. The Division's enterprises regularly undertake initiatives to reduce the emission of pollutants. As part of these initiatives, the following measures are implemented on the premises of the enterprises:

- industrial environmental control and monitoring of pollutant emissions into the atmosphere;
- monitoring of compliance with standards and the requirements of environmental legislation;
- pollutant monitoring in buffer areas;
- maintenance, servicing and cleaning of gas scrubbers.

Emissions of ozone-depleting substances (tonnes)[15]

| Substance | 2019 | 2020 | 2021 (target) | 2021 (actual) |
|---|---|---|---|---|
| Tetrachloromethane | 0.032 | 0.03 | 0.03 | 0.03 |

[15] CFC-11 equivalent.

Pollutant emissions into the atmosphere (tonnes)

| Pollutant | 2019 | 2020 | 2021 (target) | 2021 (actual) |
|---|---|---|---|---|
| $NO_x$ | 401.633 | 349.849 | 354.856 | 314.371 |
| $SO_x$ | 20.926 | 30.702 | 33.109 | 20.241 |
| Volatile organic compounds (VOCs) | 53.827 | 87.351 | 91.472 | 82.253 |
| Hazardous air pollutants (HAPs) | 0.129 | 0.124 | 0.124 | 0.12 |
| Particulate matter (PM) | 76.391 | 79.497 | 82.145 | 75.817 |
| Other | 206.387 | 189.997 | 192.250 | 156.588 |

## Waste management

Waste sorting has been introduced at JSC ZiO-Podolsk and Atommash branch of JSC AEM-Technology in Volgodonsk (this involves collecting waste paper, cardboard, polyethylene). In addition, in 2021, Atommash branch of JSC AEM-Technology completed works to reduce the amount of hazard class 1 mercury-containing waste by replacing mercury-containing light bulbs with energy-saving LED light bulbs.

Total weight of waste (tonnes)

| Waste | 2019 | 2020 | 2021 (target) | 2021 (actual) |
|---|---|---|---|---|
| Hazardous | 5,009.112 | 5,066.065 | 5,361.354 | 5,240.101 |
| Non-hazardous | 32,944.308 | 30,029.954 | 32,245.328 | 26,727.193 |
| **TOTAL** | **37,953.42** | **35,096.019** | **37,606.682** | **31,967.294** |

The main waste processing methods used by the Division's enterprises include reuse and disposal at a landfill.

Share of waste by disposal method

| Disposal method | Volume of waste (tonnes) | Share of waste (%) |
|---|---|---|
| Reuse | 11,454.33 | 35.9 |
| Disposal at a landfill | 9,240.32 | 29.0 |
| On-site storage | 887.72 | 2.8 |
| Recovery of valuable components | 10 | 0.03 |
| Other | 10,298.32 | 32.3 |

# INVESTMENT ACTIVITIES

The Division is a single-source supplier and main manufacturer of equipment for the reactor and turbine islands of Russian-design NPPs that are currently under construction. Given the expected growth in production for NPP construction projects, the Company's management implements a large-scale investment programme to modernise and expand the Division's production assets to create Russia's largest power engineering holding.

The aim of the investment programme is the unconditional execution of contracts for the supply of equipment as part of the supply of key equipment for NPPs in Russia and abroad, as well as the development of the research, production, and experimental base in the industry.

The investment programme ensures the achievement of the Division's main mission: to design and develop globally competitive technological solutions for the energy sector in order to maintain a high standard of living and to improve the Company's business performance.

In 2018–2021, the Division invested RUB 26.2 billion in supporting and developing production facilities, including:

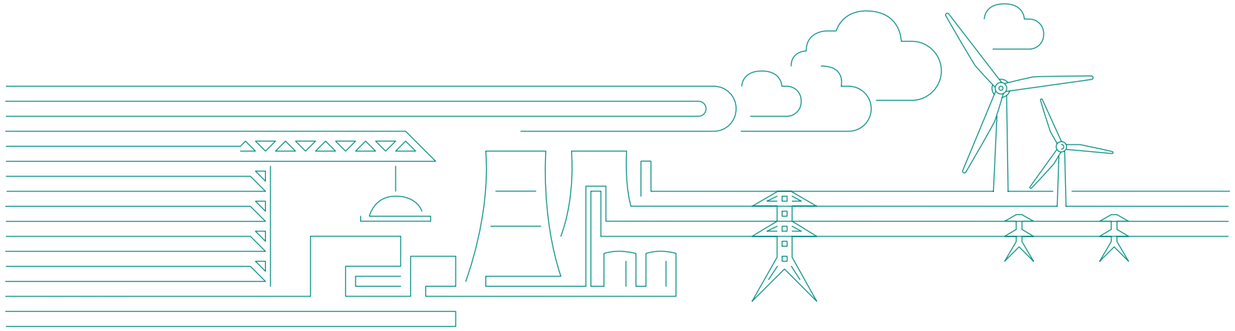
Investments of the Division in supporting and developing production facilities (RUB billion)

| 2018 | 2019 | 2020 | 2021 |
|---|---|---|---|
| 4.0 | 4.5 | 6.7 | 11.0 |

Given a significant increase in utilisation under NPP construction projects for 2022–2026 and the completion of the programme for the consolidation of Russian mechanical engineering assets, the Division plans to invest more than RUB 116.5 billion.

To date, the following major investment projects have been launched and are being implemented at key production sites for NSGP equipment:

- The project titled 'Creating Facilities at JSC AEM-Technology Under the Road Map for the Supply of Equipment for NPPs Under Construction.' It is intended that the site will be provided with production facilities by 2022 in order to accommodate peak utilisation by 2023-2025 and to achieve production capacity of four power units per year to ensure the fulfilment of the target for the supply of key equipment for the construction of ROSATOM's new NPP units in Russia and abroad.
- ARABELLE Project at the site of JSC ZiO-Podolsk. The project is aimed at the acquisition of equipment necessary to perform orders for the manufacture of turbine island equipment for NPPs under construction abroad. As at the beginning of 2022, all the equipment was actually delivered, and the Division's employees learn how to produce equipment for NPP turbine islands with low-speed turbines.
- The project 'Acquisition of New Production Equipment for the Production Base of JSC Experimental and Design Organisation GIDROPRESS' aimed at increasing output of SUSH SHEM 3 drives for NPPs in Russia and abroad.
- In addition, a number of projects are underway to maintain and upgrade the production facilities of JSC CDBMB, JSC RPA CNIITMASH and other companies controlled by the Division.



# APPENDIX 1. INFORMATION ON THE REPORTING MATERIALS

In accordance with Russian legislation, the Annual Reporting Standard of JSC Atomenergomash and the GRI Sustainability Reporting Standards (GRI Standards), JSC Atomenergomash publishes these Reporting Materials, which disclose key performance indicators of the Mechanical Engineering Division of ROSATOM for the period from January 1, 2021 through December 31, 2021 and long-term development prospects.

JSC Atomenergomash traditionally uses an annual reporting cycle; the previous Reporting Materials covering performance in the 2021 reporting year were released in 2022.

The Reporting Materials were prepared taking into account the requirements of the following external regulatory documents (in the current versions):

- Federal Law No. 208-FZ dated December 26, 1995 on Joint-Stock Companies;
- Order of ROSATOM No. 1/1481-P dated December 25, 2021 on Approval of the Uniform Industry-Wide Guidelines for Public Reporting of ROSATOM and Its Organisations;
- Order of ROSATOM No. 1/1060-P dated October 7, 2021 on Amendments to the Uniform Industry-Wide Public Reporting Policy of ROSATOM;
- Letter from the Bank of Russia No. 06-52/2463 dated April 10, 2014 on the Corporate Governance Code;
- The AA1000 AP AccountAbility Principles Standard (2018);
- The Global Reporting Initiative (GRI) Sustainability Reporting Standards;
- The International Integrated Reporting Framework.

The Division has approved an internal regulatory document, namely the Public Annual Reporting Standard, updated by order No. 33/568-P of the Chief Executive Officer dated December 16, 2021. It establishes the procedure and requirements for the reporting process, the responsibility of the participants of this process, and the requirements for the Reporting Materials, including the System of Certified Performance Indicators of JSC Atomenergomash; in addition, requirements for the disclosure of information in the reports of the Division's controlled organisations were added. Responsibility for the preparation of the Reporting Materials has been assigned to the Strategy and Development Department of the Company.

The Division recognises stakeholder engagement as one of the fundamental prerequisites of sustainable development and, together with the enterprises of the Division, consistently promotes constructive engagement. This involves the following:

- analysing the mutual influence of the Company and its stakeholders with regard to various aspects of activities;
- defining stakeholder expectations and aspirations;
- responding to stakeholder expectations and seeking consensus on outstanding issues;
- building long-term partnerships with key stakeholders.

The Division held public dialogues in a remote format to interact with stakeholders. Thus, at the beginning of the reporting campaign, a remote questionnaire survey was carried out among stakeholders concerning the content and relevance of the list of material topics to be disclosed and their prioritisation, as well as the approval of the concept of the Reporting Materials by the Company's Chief Executive Officer.

The practice adopted by the Division does not involve updating the stakeholder map on an annual basis: information on stakeholder prioritisation was disclosed in previous annual reporting materials[16].

To determine the content of the report, the Company applies a procedure for assessing the materiality of topics related to its operations, which has been recognised both in the industry and beyond[17]. When preparing the Reporting Materials, the Company adhered to the principles established in the GRI Standards.

There were no restatements of information as compared to the previous year.

In 2021, there were changes in the structure of the Division: Neftegazspetsstroy LLC was excluded from the scope of consolidation in October 2021. In December, Special Energy LLC was established. The scope of consolidation was approved by JSC Atomenergomash's Order No. 33/58-P dated February 3, 2022.

## Disclaimer

These Reporting Materials contain a number of forecasts and estimates regarding the future position of the Company on various topics, its plans and projected results. Due to their nature, forecasts and estimates are associated with inherent risk and uncertainty. The Company's operations and its external environment can be influenced by a number of economic, political, social and other factors of a probabilistic nature. Accordingly, the Company would like to emphasise that actual results may differ from those stated, directly or indirectly, in the forward-looking statements contained in the Reporting Materials.

[16] https://report.rosatom.ru/aem.

[17] Included in the International Integrated Reporting Council's (IIRC) base of global best practices.

# APPENDIX 2. TABLE OF STANDARD GRI DISCLOSURES[18] (GRI 102-55)

GRI 102-55

| GRI Standard | Indicator | Section in the Reporting Materials | Excluded information/comments |
|---|---|---|---|
| **GRI 101. Foundation (2016)** | 101 | 2. Overview of the Division | |
| **GRI 102. General Disclosures (2016)** | 102–1 | 2. Overview of the Division | |
| | 102–2 | 2. Overview of the Division | |
| | 102–3 | Contact details | |
| | 102–4 | 2. Overview of the Division | |
| | 102–5 | 2. Overview of the Division, Contact details | |
| | 102–6 | 2. Overview of the Division | |
| | 102–7 | 2. Overview of the Division | |
| | 102–8 | 8. Developing the Human Capital | |
| | 102–9 | Appendix 1. Information on the Reporting Materials | Detailed information is presented in the annual report of JSC Atomenergomash for 2019 on page 41 |
| | 102–10 | 2. Overview of the Division. Appendix 1. Information on the Reporting Materials | |
| | 102–11 | 11. Safety of Operations | |
| | 102–12 | 3. Sustainable Development, 8. Developing the Human Capital | |
| | 102–13 | 2. Overview of the Division | |
| | 102–14 | Message from the Head of the Division | |
| | 102–16 | 3. Sustainable Development | |
| | 102–18 | 2. Overview of the Division | |
| | 102–20 | 2. Overview of the Division | |
| | 102–22 | 2. Overview of the Division, 10. Specific Risks and Management Approaches | |
| | 102–23 | 2. Overview of the Division | |
| | 102–26 | 2. Overview of the Division | |
| | 102–33 | 2. Overview of the Division | |
| | 102–40 | Appendix 1. Information on the Reporting Materials | |
| | 102–41 | Appendix 1. Information on the Reporting Materials | |
| | 102–42 | Appendix 1. Information on the Reporting Materials | |
| | 102–43 | | Detailed information is presented in the annual report of JSC Atomenergomash for 2019 on pages 85-87 |
| | 102–44 | 3. Sustainable Development Appendix 1. Information on the Reporting Materials | |
| | 102–45 | Appendix 1. Information on the Reporting Materials | |
| | 102–46 | | Detailed information on the Company's compliance with the principles stipulated in the GRI Standards is presented in the interactive annual report of JSC Atomenergomash for 2019: https://ar2018.aem-group.ru/?/ru |

[18] Reporting materials are prepared in accordance with the GRI Standards (core option).

| GRI Standard | Indicator | Section in the Reporting Materials | Excluded information/comments |
|---|---|---|---|
| | 102–47 | Appendix 2. Table of standard GRI disclosures | |
| | 102–48 | Appendix 1. Information on the Reporting Materials | |
| | 102–49 | Appendix 1. Information on the Reporting Materials | |
| | 102–50 | Appendix 1. Information on the Reporting Materials | |
| | 102–51 | Appendix 1. Information on the Reporting Materials | |
| | 102–52 | Appendix 1. Information on the Reporting Materials | |
| | 102–53 | Contact details | |
| | 102–54 | Appendix 1. Information on the Reporting Materials | |
| | 102–55 | Appendix 2. Table of standard GRI disclosures | |
| | 102–56 | Independent external expert assurance is not conducted | |
| **GRI 103. Management Approach (2016)** | 103–1 | 2. Overview of the Division | |
| | 103–2 | 2. Overview of the Division | |
| | 103–3 | 2. Overview of the Division | |
| **GRI 201. Economic Performance (2016)** | 201–4 | 2. Overview of the Division | In 2021, JSC Atomenergomash and its controlled organisations did not receive significant financial assistance from the government. |
| **GRI 203. Indirect Economic Impacts (2016)** | 203–1 | 3. Sustainable Development, 1.Key Results and and Events in the Reporting Year | |
| **GRI 204. Procurement Practices (2016)** | 204–1 | Appendix 2. Table of standard GRI disclosures | In 2021, the share of purchases from Russian suppliers amounted to 98% of the total purchases (in 2020: 98%). |
| **GRI 205. Anti-Corruption (2016)** | 205–3 | Appendix 2. Table of standard GRI disclosures | In 2021, no employee was held to account. |
| **GRI 207. Tax (2020)** | 207–1 | 8. Developing the Human Capital | |
| **GRI 302. Energy (2016)** | 302–1 | 11. Safety of Operations | |
| | 302–4 | 11. Safety of Operations | |
| **GRI 303. Water and Effluents (2018)** | 303–1 | 11. Safety of Operations | |
| | 303–2 | 11. Safety of Operations | |
| | 303–3 | | There is no breakdown by water category since this data is not recorded. |
| **GRI 305. Emissions (2016)** | 305–1 | 11. Safety of Operations | |
| | 305–6 | 11. Safety of Operations | |
| | 305–7 | 11. Safety of Operations | |
| **GRI 306. Effluents and Waste (2016)** | 306–1 | 11. Safety of Operations | There is no breakdown by water quality since this data is not recorded. |
| | 306–2 | 11. Safety of Operations | There is no breakdown by water quality since this data is not recorded. |
| **GRI 307. Environmental Compliance (2016)** | 307–1 | | There were no significant fines. |
| **GRI 401. Employment (2016)** | 401–1 | | No breakdown by region. |
| | 401–2 | 8. Developing the Human Capital | |
| **GRI 402. Labour/ Management Relations (2016)** | 402–1 | 8. Developing the Human Capital | |

| GRI Standard | Indicator | Section in the Reporting Materials | Excluded information/comments |
|---|---|---|---|
| **GRI 403. Occupational Health and Safety (2018)** | 403–1 | 8. Developing the Human Capital | |
| | 403–2 | 8. Developing the Human Capital | |
| | 403–3 | 8. Developing the Human Capital | |
| | 403–4 | 8. Developing the Human Capital | |
| | 403–5 | 2. Overview of the Division | |
| | 403–6 | 8. Developing the Human Capital<br>4. Response to the Pandemic | |
| | 403–7 | 8. Developing the Human Capital | |
| | 403–8 | | The reporting materials do not contain data on workers covered by an occupational health and safety management system since this data is not recorded. |
| | 403–9 | 8. Developing the Human Capital | The reporting materials do not contain accidents rates since this data is not recorded. |
| | 403–10 | 8. Developing the Human Capital | The reporting materials do not contain the rate, number of registered work-related diseases and number of fatalities caused by work-related diseases since this data is not recorded. |
| **GRI 404. Training and Education (2016)** | 404–1 | 8. Developing the Human Capital | |
| | 404–3 | 8. Developing the Human Capital | |
| **GRI 416. Customer Health and Safety (2016)** | 416–1 | 2. Overview of the Division | |
| **GRI 417. Marketing and Labelling (2016)** | 417–3 | | JSC Atomenergomash complies with current Russian and international marketing communication laws, including advertising and promotion laws. In 2021, there were no violations. |
| **GRI 419. Socioeconomic Compliance (2016)** | 419–1 | | In 2021, the Division's enterprises did not face significant fines or non-financial sanctions. |

## Material topics and management approaches

GRI 102-47
GRI 103-1
GRI 103-2
GRI 103-3

| No. | Topic | Report section | Page |
|---|---|---|---|
| 1 | Economic performance and financial position (GRI 201. Economic Performance (2016)) | 1. Key Results and Events in the Reporting Year<br>12. Investment Activities | 8-9, 86-87 |
| 2 | Market presence | 2. Overview of the Division<br>7. New Products and Businesses | 10, 50 |
| 3 | Commercial operations | 1. Key Results and Events in the Reporting Year<br>2. Overview of the Division | 8-10 |
| 4 | Investment Activities | 12. Investment Activities | 86-87 |
| 5 | Operating results | 7. New Products and Businesses | 50 |
| 6 | Quality and safety (GRI 416. Customer Health and Safety (2016)) | 8. Developing the Human Capital | 57 |
| 7 | Optimisation of operations | 5. Digitisation<br>6. Innovation and Development of Science | 38-39,<br>42-43 |
| 8 | Procurement (GRI 204. Procurement Practices (2016)) | Detailed information is presented in the annual report of JSC Atomenergomash for 2019 on page 41 | |
| 9 | Innovative development | 6. Innovation and Development of Science | 42-43 |
| 10 | Scientific research | | |
| 11 | Emissions and waste (GRI 305. Emissions (2016), GRI 306. Effluents and Waste (2020)) | 11. Safety of Operations | 76-77 |
| 12.1 | Environmental management and compliance (GRI 307. Environmental Compliance (2016)) | | |
| 12.2 | Water consumption (GRI 303. Water (2018)) | | |
| 12.3 | Energy consumption (GRI 302. Energy (2016)) | | |

| No. | Topic | Report section | Page |
|---|---|---|---|
| 13 | Personnel composition | 8. Developing the Human Capital | 57 |
| 14 | Working conditions and work organisation (GRI 402. Labour/Management Relations (2016)) | | |
| 15 | Health and safety in the workplace (GRI 403. Occupational Health and Safety (2016)) | | 62-63 |
| 16 | Employee performance management | | 64-65 |
| 17 | Personnel replacement (GRI 401. Employment (2016), GRI 404. Training and Education (2016)) | | 60-61 |
| 18.1 | Impact on the regions of operation (GRI 203. Indirect Economic Impacts (2016)) | 9. Developing the Regions of Operation | 67 |
| 18.2 | Social investment and charity | | 68-69 |
| 19 | Anti-corruption practices (GRI 205. Anti-Corruption (2016)) | 3. Sustainable Development | 28-29 |
| 20 | Compliance with laws (GRI 419. Socioeconomic Compliance (2016)) | 8. Developing the Human Capital<br>11. Safety of Operations | 57, 76-77 |
| 21 | Marketing and PR communications (GRI 417. Marketing and Labelling (2016)) | Detailed information is presented in the annual report of JSC Atomenergomash for 2019 on page 85. | |
| 22 | Activities of corporate governance bodies | 2. Overview of the Division | 10 |
| 23 | Internal control, audit and risk management | 10. Specific Risks and Management Approaches | 74 |

## APPENDIX 3. GLOSSARY

| | |
|---|---|
| **SNPP** | small-scale nuclear power plant |
| **NPP** | nuclear power plant |
| **NPU** | nuclear power unit |
| **FNR** | fast neutron reactor |
| **RES** | renewable energy sources |
| **VVER** | water-cooled water-moderated power reactor |
| **GTU** | gas turbine unit |
| **MCP** | main circulation pump |
| **MCPL** | main circulation pipeline |
| **KPI** | key performance indicator |
| **CRMS** | corporate risk management system |
| **MFPU** | modernised floating power unit |
| **WEP** | waste-to-energy plant |
| **SMBs** | small and medium-sized businesses |
| **Refinery** | Refinery |
| **STC** | Scientific and Technical Council |
| **CO** | controlled organisations |
| **VSG** | vertical steam generator |
| **RPS** | ROSATOM Production System |
| **IP** | intellectual property |

| | |
|---|---|
| **RU** | reactor unit |
| **JV** | joint venture |
| **QMS** | Quality Management System |
| **LNG** | liquefied natural gas |
| **FNI** | follow-on nuclear icebreaker |
| **CSS** | control and safety system |
| **NFE** | nuclear fuel element |
| **CHPP** | combined heat and power plant |
| **MPNI** | multipurpose nuclear icebreaker |
| **LPC** | low-pressure cylinder |
| **HIPC** | high-pressure and intermediate-pressure cylinder |
| **SDGs** | sustainable development goals |
| **PME** | power machine engineering |
| **NSGP** | nuclear steam generating plant |
| **NPU** | nuclear propulsion unit |

## Terms used in the report

**LTIFR** is the Lost Time Injury Frequency Rate.

**Incoming control** is monitoring the quality and completeness of products delivered to an NPP site and intended for use in the course of its construction and operation.

**Top management (senior management)** is employees of the Company who make decisions that have a significant impact on the operations of the enterprise as a whole (from the level of directors in functional areas up to the Chief Executive Officer).

**Consolidated revenue** is total revenue of organisations included in the consolidated financial statements in accordance with the methodology approved in the company, less intra-group revenue and other adjustments.

**Stakeholder** is an individual, a group of persons or an organisation that is affected by the company and/or can affect it.

**Significant regions of operations** are regions where production facilities and key personnel of the enterprise are located.

**Material topic** is a topic that reflects a significant area of the Company's business or impact on stakeholders.

# CONTACT DETAILS

**Joint Stock Company Nuclear and Power Engineering**
**(JSC Atomenergomash)**

Primary state registration number (OGRN): 1067746426439, registered on March 29, 2006 by Inter-District Inspectorate No. 46 of the Federal Tax Service in Moscow
Form of ownership: other mixed Russian ownership.
Registered office: 24 Bolshaya Ordynka Street, Moscow, 119017
Postal address: 28, bldg. 3, Ozerkovskaya Embankment, Moscow, 115184.

**Fax**
+7 (495) 668-20-95

**Phone number**
+7 (495) 668-20-93

**Email**
aem@aem-group.ru

**Corporate website**
http://www.aem-group.ru

**Public annual reports**
https://report.rosatom.ru/aem

**Official group on Vkontakte**
https://vk.com/atomenergomash

**Yulia Tikhonova**
Head of the Corporate Communications Department
YuVaTikhonova@aem-group.ru
+7(495) 668-20-93 (ext. 1350)

**Inna Vavulina**
Press secretary
IPVavulina@aem-group.ru
+7 (495) 668-20-93 (ext. 1040)