

**BOOK OF APPENDICES
TO THE INTEGRATED ANNUAL
REPORT
ENGINEERING DIVISION
ROSATOM STATE CORPORATION
2018**

President of

JSC ASE EC ,
First Deputy Director General
for Operations Management
of Rosatom State Corporation



A.M. Lokshin



Chief Accountant of

JSC ASE EC



E.V. Samogorodskaya

2019

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Appendix 1. GRI content index, International <IR> Framework content index

Table 1 GRI content index

Disclosure	Page No.	Extent of disclosure
GRI 101 Foundation (2016)	170-179, Appendix 1	Fully disclosed
GRI 102 (2016) General Disclosures		
Organization profile		
102-1 Name of the organization	6	Fully disclosed
102-2 Activities, brands, products, and services	6	Fully disclosed
102-3 Location of headquarters	6	Fully disclosed
102-4 Location of operations	6-7	Fully disclosed
102-5 Ownership and legal form	6	Fully disclosed
102-6 Markets of the company's operation	6-7, 19-21,	Fully disclosed
102-7 Scale of the organization	12, 70, 120	Fully disclosed
102-8 Information on employees and other workers	121, Book of Appendices, table 13.3	Fully disclosed
102-9 Supply chain	page 25 of Annual Report for 2017	Fully disclosed
102-10 Significant changes in the company's scope and its supply chain	39, 120, Appendix 6	Fully disclosed
102-11 Precautionary principle or approach	page 99 of Annual Report for 2017	Fully disclosed
102-12 Initiatives, charters and principles shared by the company	page 98 of Annual Report for 2017	Fully disclosed
102-13 Membership of associations	7	Fully disclosed

Disclosure	Page No.	Extent of disclosure
Strategy		
102-14 Statement from senior decision-maker	4,5	Fully disclosed
102-15 Key impacts, risks, and opportunities	25-38	Fully disclosed
Ethics and Integrity		
102-16 Values, principles, standards, and norms of behavior	6, 123	Fully disclosed
102-17 Procedures of informing of improper or illicit behavior	78	Fully disclosed
Corporate Governance		
102-18 Governance structure	39, 41, 50, 58, 63	Fully disclosed
102-19 Delegating authority	41, 50, 58, 63.	Fully disclosed
102-20 Executive-level responsibility for economic, environmental, and social topics	-	<p>Fully disclosed</p> <p>Due to a wide range of works made by the Division in different areas of activity, the sustainable development issues are regulated and governed separately by each area of activity: social area is within the responsibility of Vice President for HR and Internal Communication, economic and financial area - within the responsibility of Senior Vice President for Corporation Functions, environmental area - within the responsibility of Director for Nuclear, Radiation, Industrial, Fire Safety Assurance, Labor and Environment Protection - General Inspector</p>
102-21 Consulting stakeholders on economic, environmental, and social topics	-	<p>Fully disclosed</p> <p>Authority to provide consultations on economic, environmental and social issues between the stakeholders and the supreme management body is delegated to the sole executive body - the President. Special consultations between the stakeholders and BoD concerning the economic, environmental and social issues are not held.</p>
102-22 Composition of the highest governance	41, 50, 58, 63.	Fully disclosed

Disclosure	Page No.	Extent of disclosure
body and its committees		There are no independent members in the BoD of JSC ASE EC , JSC ASE, JSC “Atomenergoproekt”, JSC ATOMPROEKT.
102-23 Chair of the highest governance body	41, 50, 58, 63.	Fully disclosed
102-24 Nominating and selecting the highest governance body	60	Fully disclosed The BoD members are elected by the resolution of the shareholders’ general meeting The professionals nominated for the Board of Directors shall have an extensive experience of work in the industry and deep understanding of the Company’s activity specifics.
102-25 Conflicts of interest	49, 65, 83	Fully disclosed
102-26 Role of highest governance body in setting purpose, values, and strategy	44, 60, 77	Fully disclosed
102-27 Collective knowledge of highest governance body	-	Fully disclosed According to the RF Civil Code and JSC ASE EC JSC ASE EC Articles of Association, prioritization of the Company’s business areas are within the purview of the Company’s Board of Directors. This management body makes decisions mandatory for the sole executive body, i.e. the Company’s President. No specific measures to develop and enhance the collective knowledge of the BoD members in relation to the economic, environmental and social issues are made in JSC ASE EC .
102-28 Evaluating the highest governance body’s performance	-	Fully disclosed BoD performance is not

Disclosure	Page No.	Extent of disclosure
		assessed.
102-29 Identifying and managing economic, environmental, and social impacts	29-38, 60	<p>Fully disclosed</p> <p>The activity of JSC ASE EC shareholders' general meeting and the Board of Directors is targeted through the respective decision-making at the efficient management of the Company, focused on high profitability of business, minimization of risks and possible negative consequences caused by the Company's economic activity, by meeting requirements of the Russian Federation legislation, international legal norms, legislation of the states in the areas of its operations.</p>
102-30 Effectiveness of risk management processes	-	<p>Fully disclosed</p> <p>The Board of Directors of JSC ASE EC does not participate in the analysis of effectiveness of the organization's risk management practices related to economic, environmental and social issues and does not analyze the economic, environmental and social risks and opportunities. The responsibility for these matters is assigned to the relevant department.</p>
102-31 Review of economic, environmental, and social topics	Appendix 9	Fully disclosed
102-32 Highest governance body's role in sustainability reporting	172	Fully disclosed
102-33 Communicating critical concerns	Appendix 9	Fully disclosed
102-34 Nature and total number of critical concerns	Appendix 9	Fully disclosed

Disclosure	Page No.	Extent of disclosure
102-35 Remuneration policies	-	<p>Fully disclosed</p> <p>The decision on remuneration payment to members of the Board of Directors is made at the shareholders' general meeting.</p> <p>According to the resolution of the shareholders' general meeting, the members of the Board of Directors during performance of their obligations may receive remuneration and/or reimbursement of expenditures related to execution of their functions as members of the BoD. Amounts of such remuneration and compensations are defined by the resolution of the shareholders' general meeting. There are no key performance indicators.</p>
102-36 Process for determining remuneration		
102-37 Stakeholders' involvement in remuneration		
102-38 Annual total compensation ratio	Appendix 13	Fully disclosed
102-39 Percentage increase in annual total compensation ratio		Fully disclosed
Stakeholder engagement		
102-40 List of stakeholder groups	154	Fully disclosed
102-41 Collective bargaining agreements	-	Fully disclosed 41% (as of 31.12.2018)
102-42 Identifying and selecting stakeholders	154	Fully disclosed
102-43 Approach to cooperation with stakeholders	174	Fully disclosed
102-44 Key topics and concerns raised	155, 176	Fully disclosed
Reporting practice		
102-45 Entities included in the consolidated financial statements	171	Fully disclosed
102-46 Defining report content and topic Boundaries	172	Fully disclosed

Disclosure	Page No.	Extent of disclosure
102-47 List of material topics	173	Fully disclosed
102-48 Restatements of information	-	Fully disclosed Changes in the indicator calculating methods are not observed in the reporting year. GRI 2018 standards are used for a range of subjects
102-49 Changes in reporting	171	Fully disclosed
102-50 Reporting period	170	Fully disclosed
102-51 Date of most recent report	171	Fully disclosed
102-52 Reporting cycle	170	Fully disclosed
102-53 Contact point for questions regarding the report	Back cover of the Report	Fully disclosed
102-54 Claims of reporting in accordance with the GRI Standards	170	Fully disclosed
102-55 GRI content index	Appendix 1	Fully disclosed
102-56 External assurance	173	Fully disclosed An independent non-financial auditor is selected within the framework of an open procurement procedure based on the Company President's order on preparation of the annual report
GRI 103: Management approach (2016)		
103-1 Explanation of the material topic and its boundary	Specified separately for each material subject	Fully disclosed
103-2 The management approach and its components		Fully disclosed
103-3 Evaluation of the management approach		Fully disclosed

Disclosure	Page No.	Extent of disclosure
GRI material topics		
<i>GRI 204 Procurement Practices (2016)</i>		
103-1 Explanation of the material topic and its boundary	110, 111	Fully disclosed
103-2 The management approach and its components	110, 111	Fully disclosed
103-3 Evaluation of the management approach	110, 111	Fully disclosed
204-1 Percentage of procurement from local suppliers	113	Fully disclosed
GRI 301 Materials (2016)		
103-1 Explanation of the material topic and its boundary	131, 138-140	Fully disclosed
103-2 The management approach and its components	131, 138-140	Fully disclosed
103-3 Evaluation of the management approach	131, 138-140	Fully disclosed
301-1 Materials used by weight or volume	147, Appendix 11	Partially disclosed, There is no accounting of construction materials use by the Engineering Division and it is not planned due to a significant number of contractors and subcontractors.
301-2 Recycled materials used	-	The indicator is not disclosed due to the lack of accounting system
301-3 Reclaimed products and their packaging materials	-	Not applicable to the Division's activities
<i>GRI 303 Water and Effluents (2018)</i>		
103-1 Explanation of the material topic and its boundary	131, 138-140	Fully disclosed
103-2 The management approach and its components	131, 138-140	Fully disclosed
103-3 Evaluation of the management approach	131, 138-140	Fully disclosed

Disclosure	Page No.	Extent of disclosure
303-1 Interactions with water as a shared resource	135,145	Fully disclosed
303-2 Management of water discharge-related impacts	135, 146, Appendix 11	Fully disclosed
303-3 Water withdrawal	27, 136, 145 Appendix 11	Fully disclosed
303-4 Water discharge	146	Fully disclosed
303-5 Water consumption	145, Appendix 11	Fully disclosed
<i>GRI 304 Biodiversity (2016)</i>		
103-1 Explanation of the material topic and its boundary	131, 138-140	Fully disclosed
103-2 The management approach and its components	131, 138-140	Fully disclosed
103-3 Evaluation of the management approach	131, 138-140	Fully disclosed
304-1 Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas	136, 144	Fully disclosed
304-2 Significant impacts of activities, products, and services on biodiversity	136, 144	Fully disclosed
304-3 Habitats protected or restored	136, 144	Fully disclosed Land plots where NPPs are constructed are not located in the areas with high biodiversity and, consequently, measures to restore the habitat are not taken.
304-4 IUCN Red List species and national conservation list species with habitats in areas affected by operations	136, 144	Fully disclosed
<i>GRI 306 Effluents and Waste (2016)</i>		
103-1 Explanation of the material topic and its boundary	131, 138-140	Fully disclosed
103-2 The management approach and its components	131, 138-140	Fully disclosed

Disclosure	Page No.	Extent of disclosure
103-3 Evaluation of the management approach	131, 138-140	Fully disclosed
306-1 Water discharge by quality and destination	146	Fully disclosed
306-2 Waste by type and disposal method	27	Fully disclosed
306-3 Significant spills	-	Fully disclosed There are no significant spills
306-4 Transported hazardous waste	148	Fully disclosed
306-5 Water bodies affected by water discharges and/or runoff	146	Fully disclosed
<i>GRI 307 Environmental Compliance (2016)</i>		
103-1 Explanation of the material topic and its boundary	131, 138-140	Fully disclosed
103-2 The management approach and its components	131, 138-140	Fully disclosed
103-3 Evaluation of the management approach	131, 138-140	Fully disclosed
307-1 Non-compliance with environmental laws and regulations	150	Fully disclosed
<i>GRI 403 Occupational Health and Safety (2018)</i>		
103-1 Explanation of the material topic and its boundary	138-140	Fully disclosed
103-2 The management approach and its components	138-140	Fully disclosed
103-3 Evaluation of the management approach	138-140	Fully disclosed
403-1 Occupational health and safety management system	126-128, Appendix 12	Fully disclosed
403-2 Hazard identification, risk assessment, and incident investigation	Appendix 12	Fully disclosed
403-3 Occupational health services	Appendix 12	Fully disclosed
403-4 Worker participation, consultation, and communication on occupational health and safety	Appendix 12	Fully disclosed
403-5 Worker training on occupational health and safety	127	Fully disclosed

Disclosure	Page No.	Extent of disclosure
403-6 Promotion of worker health	129, Appendix 12	Fully disclosed
403-7 Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	127, 128, Appendix 12	Fully disclosed
403-8 Workers covered by an occupational health and safety management system	126, 127, Appendix 12	Fully disclosed
403-9 Work-related injuries	128	Partially disclosed Occupational injuries frequency rates for companies beyond the scope of JSC ASE EC management are not disclosed due to the lack of information collection system
403-10 Occupational diseases	128	Fully disclosed
GRI 404 Training and Education (2016)		
103-1 Explanation of the material topic and its boundary	117-119	Fully disclosed
103-2 The management approach and its components	117-119	Fully disclosed
103-3 Evaluation of the management approach	117-119	Fully disclosed
404-1 Average hours of training per year per employee	27, 123, Appendix 13	Fully disclosed
404-2 Programs for upgrading employee skills and transition assistance programs	123, Appendix 13	Fully disclosed
404-3 Percentage of employees receiving regular performance and career development reviews	123, 124, Appendix 13	Fully disclosed
GRI 406 Non-discrimination (2016)		
103-1 Explanation of the material topic and its boundary	117-119	Fully disclosed
103-2 The management approach and its components	117-119	Fully disclosed

Disclosure	Page No.	Extent of disclosure
103-3 Evaluation of the management approach	117-119	Fully disclosed
406-1 Incidents of discrimination and corrective actions taken	-	Fully disclosed No discrimination cases were registered in 2018.
GRI 413 Local Communities (2016)		
103-1 Explanation of the material topic and its boundary	117-119	Fully disclosed
103-2 The management approach and its components	117-119	Fully disclosed
103-3 Evaluation of the management approach	117-119	Fully disclosed
413-1 Operations with local community engagement, impact assessments, and development programs	168	Partially disclosed Share of operations is not calculated due to the lack of accounting system.
413-2 Operations with significant actual and potential negative impacts on local communities	166	Partially disclosed Share of operations is not calculated due to the lack of accounting system. The Division's impact on the local communities is assessed for the entire Division.
GRI 416 Consumers' health and safety (2016)		
103-1 Explanation of the material topic and its boundary	138-140	Fully disclosed
103-2 The management approach and its components	138-140	Fully disclosed
103-3 Evaluation of the management approach	138-140	Fully disclosed
416-1 Assessment of the health and safety impacts of product and service categories	132, 134	Fully disclosed
416-2 Incidents of non-compliance concerning the health and safety impacts of products and services	25	Fully disclosed
Material topics not related to GRI topics		
Ensuring the performance by the Company of its obligations under the contracted projects		
103-1 Explanation of the material topic and its boundary	95-102	Fully disclosed

Disclosure	Page No.	Extent of disclosure
boundary		
103-2 The management approach and its components	95-102	Fully disclosed
103-3 Evaluation of the management approach	95-102	Fully disclosed
Reducing NPP construction time and costs		
103-1 Explanation of the material topic and its boundary	95-102	Fully disclosed
103-2 The management approach and its components	95-102	Fully disclosed
103-3 Evaluation of the management approach	95-102	Fully disclosed
Engineering Division's transformation		
103-1 Explanation of the material topic and its boundary	13-16	Fully disclosed
103-2 The management approach and its components	13-16	Fully disclosed
103-3 Evaluation of the management approach	13-16	Fully disclosed
Safety culture		
103-1 Explanation of the material topic and its boundary	138-140	Fully disclosed
103-2 The management approach and its components	138-140	Fully disclosed
103-3 Evaluation of the management approach	138-140	Fully disclosed
Company's contribution to implementation of program "Digital Economy in the Russian Federation"		
103-1 Explanation of the material topic and its boundary	71	Fully disclosed
103-2 The management approach and its components	71	Fully disclosed
103-3 Evaluation of the management approach	71	Fully disclosed

Table 2 Selected disclosures on GRI topics not included in material topics

Disclosure	Page No.	Extent of disclosure
<i>GRI 201 Economic Performance (2016)</i>		
103-1 Explanation of the material topic and its boundary	68	Fully disclosed
103-2 The management approach and its components	68	Fully disclosed
103-3 Evaluation of the management approach	68	Fully disclosed
201-2 Financial implications and other risks and opportunities due to climate change	136	Fully disclosed
201-4 Financial assistance received from government	166	Fully disclosed

Table 3. International <IR> Framework content index

Underlining fundamental concepts of the International <IR> Framework in the Report

Fundamental concepts	applied /not applied
Capitals	applied
Business model	applied
Value creation for the organization and for others	applied

Compliance of the Report with the guiding principles of International <IR> Framework

Guiding principles	Conforming/Non-conforming
Strategic focus and future orientation	Conforming
Connectivity of information	Conforming
Stakeholder relationships	Conforming
Materiality	Conforming
Conciseness	Conforming
Reliability and completeness	Conforming
Consistency and comparability	Conforming

Presence of International <IR> Framework elements in the Report

Content elements	Report section	Page No.
Organizational overview and external environment	Company's background and geography of operations	6-21
Governance	Corporate management	39-97
Business model	Business model	22-27
Risks and opportunities	Risks and opportunities	29-38
Strategy and resource allocation	Strategy and KPI of its implementation Implementation of strategic objectives of Rosatom State Corporation	19-27
Performance	Business model, Key activity results	68-168
Outlook	Strategy and KPI of its implementation. Implementation of Rosatom State Corporation strategic objectives, Results of the activity in 2018	68-168

Appendix 2. Opinion of Internal Control and Audit Service

CONCLUSION

of JSC ASE EC Internal Control and Audit Service based on the results of internal audit of the public annual reporting generation process in Rosatom State Corporation Engineering Division for 2018

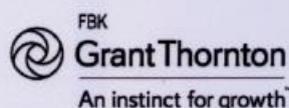
The internal audit of the public annual reporting generation process in the Engineering Division of Rosatom State Corporation (hereinafter – Rosatom) for 2018 was conducted by JSC ASE EC Internal Control and Audit Service based on the CA plan of IC&A for the first half of 2019 and a detailed schedule for preparation and promotion of the Annual Report of Rosatom State Corporation Engineering Division for 2018, approved by JSC ASE EC order No. 40/352-P dd. 14.03.2019 “On Arrangement of Work for Preparation of the Integrated Public Annual Report of Rosatom State Corporation Engineering Division for 2018”.

In the auditors’ opinion, the process of generation of the Public Annual Report of Rosatom Engineering Division for 2018 complies with the valid legislation, the reporting Guideline in the field of sustainable development GRI SRS, international standards regarding the interaction with stakeholders AA1000, Rosatom State Corporation Policy in the field of public reporting and internal regulatory requirements of JSC ASE EC , which regulate the business process of the public reporting generation.

Simultaneously, the auditors defined a possibility of taking measures to improve the process, issued recommendations on the quality improvement for the process of preparation of the Public Annual Report of Rosatom Engineering Division. Some of them have been implemented, the others are accepted to be worked out within the established time period.

The audit conducted allows making the conclusion that the system of internal control of public reporting generation process of the Engineering Division basically complies with the requirements for efficiency and reliability, ensuring completeness and trustworthiness of information presented in the Report.

Appendix 3. Independent practitioner's limited assurance report (translation from Russian original)



INDEPENDENT PRACTITIONER'S LIMITED ASSURANCE REPORT [TRANSLATION FROM RUSSIAN ORIGINAL]

To the management of Joint-stock company ASE Engineering Company.

We have undertaken a limited assurance engagement of nature and level of Joint-stock company ASE Engineering Company (hereinafter referred to as ASE EC JSC) compliance with the principles of the AA1000 Accountability Principle (2018) (hereinafter referred to as AA1000 AP 2018) in the process of stakeholder engagement in sustainability activities as well as compliance of the accompanying translation of annual report of Engineering Division of Rosatom State Corporation for 2018 to English (hereinafter referred to as the Report) with the requirements of GRI Sustainability Reporting Standards to the report prepared in accordance with the Comprehensive option and with the requirements of the International Integrated Reporting Framework.

Responsibility of ASE EC JSC

ASE EC JSC is responsible for its compliance with the principles of the AA1000 AP 2018 in the process of stakeholder engagement in sustainability activities as well as preparation of the Report in compliance with the requirements of GRI Sustainability Reporting Standards to the report prepared in accordance with the Comprehensive option and with the requirements of the International Integrated Reporting Framework. This responsibility includes the design, implementation and maintenance of internal control relevant to the preparation of the Report that is free from material misstatement, whether due to fraud or error.

Our Independence and Quality Control

We have complied with the independence and other ethical requirements of the Rules of Independence of the Auditors and Audit Organizations and The Code of Professional Ethics of the Auditors, which are in accordance with Code of Ethics for Professional Accountants issued by the International Ethics Standards

Board for Accountants, which is founded on fundamental principles of integrity, objectivity, professional competence and due care, confidentiality and professional behavior, and we have fulfilled our other ethical responsibilities in accordance with these requirements

The firm applies International Standard on Quality Control 1, Quality Control for Firm that Perform Audits and Reviews of Financial Statements, and Other Assurance and Related Services Engagements, and accordingly maintains a comprehensive system of quality control including documented policies and procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.

Our Responsibility

Our responsibility is to express a limited assurance conclusion on nature and level of ASE EC JSC compliance with the principles of the AA1000 AP 2018 in the process of stakeholder engagement in sustainability activities as well as compliance of the Report with the requirements of GRI Sustainability Reporting Standards to the report prepared in accordance with the Comprehensive option and with the requirements of the International Integrated Reporting Framework based on the procedures we have performed and the evidence we have obtained. We conducted our limited assurance engagement in accordance with International Standard on Assurance Engagements 3000 (Revised), Assurance Engagements Other than Audits or Reviews of Historical Financial Information, as well as in accordance with AA1000 Assurance Standard 2008 (type 2, as defined by AA1000AS 2008). These standards require that we plan and perform this engagement to obtain limited (moderate as defined by AA1000AS 2008) assurance about whether ASE EC JSC complies with the principles of the AA1000 AP 2018 in the process of stakeholder engagement in sustainability activities and whether the Report is free from material misstatement.

A limited assurance engagement undertaken in accordance with these standards involves assessing the following criteria (hereinafter referred to as Criteria):

- Nature and level of ASE EC JSC compliance with the principles of the AA1000 AP 2018 – inclusivity, materiality, responsiveness and impact – in the process of stakeholder engagement in sustainability activities;
- Compliance of the Report with the requirements of GRI Sustainability Reporting Standards to the report prepared in accordance with the Comprehensive option;
- Compliance of the Report with the requirements of the International Integrated Reporting Framework

A limited assurance engagement is substantially less in scope than a reasonable assurance engagement in relation to both the risk assessment procedures, including an understanding of internal control, and the procedures performed in response to the assessed risks.

The procedures we performed were based on our professional judgment and included inquiries, inspection of documents, analytical procedures, evaluating the appropriateness of quantification methods and reporting policies, and agreeing or reconciling with underlying records.

Given the circumstances of the engagement, in performing the procedures listed above we have performed the following procedures:

TRANSLATION NOTE: Our report has been prepared in Russian. In all matters of interpretation of information, views or opinions, our original report in Russian takes precedence over this translation from Russian into English.

1 из 3

- Study and selective testing of systems and processes implemented by ASE EC JSC to ensure and analyze the compliance of the activities with the AA1000 AP 2018 principles; collection of evidence confirming practical implementation of these principles.
- Interviewing the management and employees of ASE EC JSC and obtaining documentary evidence.
- Participation in public dialogues and consultations with stakeholders and study of minutes of dialogues and consultations with stakeholders.
- Study of information available on the websites of Rosatom State Corporation Engineering Division organisations related to their activities in the context of sustainable development.
- Study of public statements of third parties concerning economic, environmental and social aspects of the Rosatom State Corporation Engineering Division organisations activities, in order to check validity of the declarations made in the Report.
- Analysis of non-financial reports of companies working in the similar market segment for benchmarking purposes.
- Analysis of the current system of internal audit of non-financial reporting in ASE EC JSC.
- Selective review of documents and data on the efficiency of the management systems of economic, environmental and social aspects of sustainable development in ASE EC JSC.
- Study of the existing processes of collection, processing, documenting, verification, analysis and selection of data to be included into the Report.
- Analysis of information in the Report for compliance with the requirements of Criteria.

The procedures were performed only in relation to data for the year ended 31 December 2018.

The evaluation of reliability of the information on performance in the Report was conducted in relation to compliance with the requirements of Standards to the report prepared in accordance with the Comprehensive option and information referred to in the annex to the Report "GRI Content Index" as well as in relation to compliance with the requirements of the International Integrated Reporting Framework. In respect to the quantitative performance indicators the conformity assessment to external and internal reporting documents provided to us was performed.

The procedures were not performed in relation to forward-looking statements; statements expressing the opinions, beliefs and intentions of ASE EC JSC as Managing Company of Rosatom State Corporation Engineering Division to take any action relating to the future; as well as statements based on expert opinion.

The procedures were performed in relation to the translation of annual report of Engineering Division of Rosatom State Corporation for 2018 to English, which includes information to be published in a hard-copy form as well as in digital form on the ASE EC JSC website.

We had no chance to verify that the Report was published on the ASE EC JSC website as well as that Global Reporting Initiative was notified of the use of the Standards in the Report preparation, due to the fact that the date of signing this Assurance Report preceded the planned dates of these procedures completion.

We had no chance to verify that ASE EC JSC has received the conclusion on public verification by Non-Financial Reporting Board of the Russian Union of Industrialists and Entrepreneurs as well as by the Russian Integrated Reporting Regional Network due to the fact that the date of signing this Assurance Report preceded the planned dates of the procedures completion.

The procedures performed in a limited assurance engagement vary in nature and timing from, and are less in extent than for, a reasonable assurance engagement. Consequently, the level of assurance obtained in a limited assurance engagement is substantially lower than the assurance that would have been obtained had we performed a reasonable assurance engagement. Accordingly, we do not express a reasonable assurance opinion about ASE EC JSC adherence to the principles of the AA1000 AP 2018 as well as about compliance of the Report, in all material respects, with the Criteria.

Limited Assurance Conclusion

Nature and extent of compliance of ASE EC JSC with AA1000 AP 2018 principles

Based on the procedures performed and evidence obtained, nothing has come to our attention that causes us to believe that ASE EC JSC stakeholder engagement in sustainability activities has not complied, in all material aspects, with the criteria of AA1000 AP 2018 in respect to adherence of ASE EC JSC to the principles (Inclusivity, Materiality, Responsiveness and Impact).

Compliance of the Report with the GRI Sustainability Reporting Standards (Comprehensive option)

Based on the procedures performed and evidence obtained, nothing has come to our attention that causes us to believe that the Report has not complied, in all material aspects, with requirements of GRI Sustainability Reporting Standards to the report prepared in accordance with the Comprehensive option.

Compliance of the Report with the requirements of the International Integrated Reporting Framework

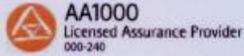
Based on the procedures performed and evidence obtained, nothing has come to our attention that causes us to believe that the Report has not complied, in all material aspects, with the guiding principles of the International Integrated Reporting Framework and with requirements to the structure of content elements of integrated reports.

Recommendations

Based on the results of the limited assurance engagement we recommend:

- Disclose in more detail in the Report the methodology for identification the boundaries for the material topics.
- It is reasonable to disclose GRI indicators in relation to target values.
- Consider the possibility of increasing the extent of disclosure of information concerning contractors on the material topics.
- In case of significant changes in the list of material topics, explain reasons of changes in materiality assessment.
- In case of disclosure with omissions due to absence of a recording system, provide information about plans to obtain data in future.
- Extend disclosure of information on how the organization evaluates the management approach to all material topics.

The recommendations are not intended to detract from the practitioner's conclusion. Our conclusion is not modified in respect of the matters referred to in the recommendations.



FBK, LLC



V.Y. Skobarev

Practitioner
Partner
acting under Power of Attorney No. 76/18 of December 17, 2018
The Russian Federation, Moscow, June 26, 2019

Appendix 4. Certificate of public endorsement by the RSPP Council on non-financial reporting



Appendix 5.

Opinion of the Russian Regional Network on Integrated Reporting Commission on the Annual Report of the Engineering Division of State Atomic Energy Corporation ROSATOM for 2018 Review to assuring its compliance with the International Integrated Reporting Standard



**Opinion of the Russian Regional Network on Integrated Reporting Commission
on the Annual Report of the Engineering Division of State Atomic Energy Corporation
ROSATOM for 2018 Review
to assuring its compliance with the International Integrated Reporting Standard**

07/10/2019

This Opinion was prepared by the Russian Regional Network Commission for Integrated Reporting (hereinafter the RRN Commission) on the compliance of the Engineering Division of ROSATOM (hereinafter JSC ASE EC, Company) Annual Report for 2018 with concepts, principles and elements of the International Integrated Reporting Standard (hereinafter <IR> Framework).

During the period from June, 20 to July 2, 2019, the RRN Commission conducted an analysis of the Annual Report at the initiative of the Company, which resulted in the Opinion of this Report in accordance with the Integrated Reports Certification rules.

The members of the RRN Commission are experts in the field of corporate reporting and sustainable development and comply with the ethical requirements of independence and objectivity of expert assessments.

The Report was assessed by the following criteria:

- Using the fundamental concepts of the <IR> Framework: value creation for the organization and for others, capital, the value creation process.
- Compliance with the guiding principles of the <IR> Framework, which underlie the way information is presented: strategic focus and future orientation, connectivity of information, stakeholder relationships, materiality, conciseness, reliability and completeness; consistency and comparability.
- The presence of the main content elements of the <IR> Framework: organizational overview and external environment, governance, business model, risks and opportunities, strategy and resource allocation, performance, outlook.

Detailed description of <IR> Framework concepts, principles and content elements is covered in the International Integrated Reporting Standard. (<http://integratedreporting.org/resource/international-ir-framework/>).

The aim of this assurance is to confirm the compliance of the report with the International Integrated Reporting Standard. The task of assurance does not include verification of the authenticity of the actual data contained in the report.

The Company has the right to use this Opinion, both for internal corporate purposes and for communication with interested parties, publishing it without any changes.

RRN Commission Opinion

This Report is the fourth integrated annual report of the Engineering Division of the State Corporation Rosatom and the eleventh JSC ASE EC. The Report comprehensively reflects the Company's operations, including financial and non-financial aspects and the results of operations for the reporting period.

Based on the analysis carried out by members of the Commission, the fact that the Report complies with the main provisions of the International Integrated Reporting Standard is confirmed.

Conclusions

The report has top management message. The report contains a detailed Materiality definition process and the materiality matrix. The report informs about the principles, formats and tools of interaction with stakeholders and the updated stakeholders' map. It also indicates how the stakeholders' requests were taken into account.

The Report complies with the logical structure properly, contains hyperlinks to more detailed information on the Company's website and in reports of subsidiaries. There are also internal cross-references.

The information in the Report is certified by the Internal Control and Audit Service. The Report was certified by external independent auditors: "Nexia Pacholli" LLC (financial information auditor) and "Financial and Accounting Consultants" LLC (non-financial information auditor). The Report also passed an external stakeholder and expert assurance certification by the Russian Union of Industrialists and Entrepreneurs Council for non-financial reporting.

The Report provides Company's performance and the external environment overview through a description of the main activities, markets and position in the industry. In addition, a business model and a capital transformation scheme are presented, which includes a wide range of indicators' changes based on the results of activities in 2018.

The report describes the risks (using a risk map) with likelihood evaluation of risk realization and potential damage to the Company. This section is a strong point of the report. The Company's risks are divided into categories: political, economic and financial, project risks, reputational, technological, etc. The tabular form describes the key risk management and response to realised risks in 2018, as well as the results of risk management in the reporting period.

Final statements

Now Company is transforming its operations and management system, respectively, the public reporting system is also reorganising in response to these changes. This annual report for 2018 forms a complete picture of the Company's activities and its development areas. It describes approaches to engaging with stakeholders, including them to report preparing process, to highlight material topics on a wide range of issues. The information is disclosed briefly and at the same time with sufficient completeness in accordance with the fundamental concepts and leading principles of the <IR> Framework.

The report was prepared using guidelines and standards applied in Russian and international reporting practices, including the Global Reporting Initiative standards (Global Reporting Initiative SRS), the International Integrated Reporting Standard (<IR> Framework), AA1000 series standards (Institute of Social and Ethical Accountability), etc.

The usage of various forms of independent assessment of the Report (professional audit of financial and non-financial reporting information, public / stakeholder certification and public / expert certification) indicates the responsible attitude of the Company to its obligations to reliably inform stakeholders and the quality of disclosed information.

Recommendations

The RRN Commission notes the high quality of the Report and its compliance with the International Integrated Reporting Standard. For a greater disclosure of material topics and more

complete compliance with the <IR> Framework, the RRN Commission has drawn up a number of recommendations Company can take into account in subsequent reporting cycles.

More carefully work out the strategic focus and future orientation. The report does not sufficiently explain how an organization's strategy relates to an organization's ability to create value in the short, medium and long term. It is also necessary to add the some persons' opinions about the relationship between the past and future performance, as well as factors that can change this relationship, and how the organization achieves a combination of short-term, medium-term and long-term strategic goals. Provide planned information on key indicators and on the main programs implemented in the Company. It is recommended to supplement the Report with a small section devoted to the development strategy of the Division, where it will be possible holistically describe the mission, vision (perspective state, what they are going to strive for in the future strategy), strategic goals, objectives and activities to achieve them.

To finalise presentation of the business model and other report's elements connectivity. Linking business model information to other elements of the Report content can be shown graphically. For example, the business model presented in the Report is tied to capital and performance, but does not correlate with strategy, risks and opportunities. In addition, whenever possible, for all types of capital in the business model, give an assessment of what contribution they make to the Company's revenue.

Supplement the description of the risk management and internal control system with a description of competence distribution among the corporate governance participants (Board of Directors, executive bodies, management). This can be done in the risk section or in the section on corporate governance. For external users, information on how the organization is governed is important, especially in such an important part as risk management. In addition, it is recommended to expand the description of the external environment to make the Report able to presents a description of the external environment challenges and how the Company responds / will respond to it. Some elements of the answer to this question can be found in interviews with representatives of top management, but such information is not available as a dedicated section, which complicates the analysis.

Provide more information on strategy and resource allocation. The Report does not describe the resources required for the strategy implementation, and also does not spell out the medium-term and strategic goals of the organization.

Supplement the Report with information on the KPIs itself and its composition - this will allow assessing the future development and achievement in the past. It is desirable that KPIs cover all major aspects of the activity (not only financial and production capital), but also all types of capital.

Improve the section "Top management statements". In this section it is recommended to place information on the role of persons with managerial functions in the preparation and presentation of the Report. Also, there is desirable to describe actions which were taken to include the Top management statements in future reports and specify the time frame for such inclusion. The Report includes only a message from the President (executive body) of the Company. So, it is recommended to include also a consolidated letter from the Chairmen of the Boards of Directors of the main organizations of the Engineering Division. The absence of such item may create the impression that everything described in the Report relates only to the level of management, includes only operational issues and does not affect the competence of the Board of Directors.

Additional recommendations

It is also recommended to disclose the consolidated financial statements (if available) with the auditor's opinion; in its absence explain how the financial KPIs that are included in the report are determined.

The RRN Commission positively assesses the content of the Report, underlying the JSC ASE EC commitment to the openness and transparency principles, and confirms that the JSC ASE EC annual integrated report for 2018 was certified for compliance with the International Integrated Reporting Standard.

Member of the RRN Commission, Alexander V. Poltavtsev,
Director for Internal Control and Risk Management of the
Corporate Development Center



Member of the RRN Commission Alexander I. Ageev,
General Director of the Institute of Economic Strategies of the Russian
Academy of Sciences



Head of RRN Marina V. Galushkina



Appendix 7. Operating Assets of the Engineering Division's Companies (GRI 102-7)

No.	Operating assets (companies within the Engineering Division's scope of management):	
1	The Russian Federation JSC ASE EC , JSC ASE, JSC "Atomenergoproekt", JSC ATOMPROEKT, SMU No. 1 LLC, VdMU LLC, Trest RosSEM Ltd, JSC "NIKIMT-Atomstroy", PJSC ESM, JSC "Spb EIZ".	
2	Germany NUKEM Technologies GmbH, NUKEM Technologies Engineering Services GmbH	
No.	Branch offices:	
1	The Arab Republic of Egypt;	JSC ASE
2	The Republic of Bulgaria;	
3	The Republic of Turkey;	
4	The People's Republic of Bangladesh;	
5	The Russian Federation, Moscow.	
6	Hungary, the town of Paks	JSC ATOMPROEKT
7	Finland, Helsinki	
8	Russia, Kaluga region, Maloyaroslavets	JSC "Atomenergoproekt"
9	Russia, Saratov region, Balakovo	
10	Russia, Smolensk region, Desnogorsk	
11	Russia, Voronezh region, Novovoronezh, Novovoronezh Branch Office - NVNPP-2 Construction Directorate	
12	Russia, Kursk region, Kurchatov	
13	Russia, Moscow	
14	Novovoronezh Branch Office, Hotel Don, Novovoronezh	
15	Novovoronezh Design and Survey Branch Office	
16	Republic of Turkey, Ankara	
17	Russia, St.Petersburg (VNIPIET)	
18	People's Republic of Bangladesh	
19	Russia, Tver region, Udomlya	JSC ASE EC
20	Russia, Moscow (Moscow Branch of JSC ASE EC)	
21	Russia, Nizhny Novgorod region, Navashino	
22	Russia, Kursk region, Kurchatov	
23	Hungary, the town of Paks	
24	Russia, Rostov region, Volgodonsk	
25	Russia, Kaliningrad region, the settlement of Malomozhaiskoye (Baltic Branch Office)	
No.	Representative offices:	
1	Hungary (Budapest);	JSC ASE
2	Republic of India (Mumbai);	

3	People's Republic of China (Beijing and Lianyungang);	
4	Slovak Republic (Bratislava);	
5	Republic of Belarus (Ostrovets);	
6	People's Republic of Bangladesh (Dhaka)	
7	Russia, Moscow (Moscow Representative Office)	JSC ASE EC
8	Russia, Volgodonsk (Volgodonsk Representative Office)	
9	Ukraine, Kharkov (Kharkov Representative Office)	
10	Republic of Belarus	
11	Russia, St.Petersburg	

Appendix 8. Governance in - PJSC ESM, JSC "NIKIMT-Atomstroy" and Trest RosSEM Ltd

This Appendix specifies information on the Division's subsidiaries within its framework of consolidation. As compared to the previous reporting period, the consolidation framework was not changed. According to item 3 of Minutes of the Meeting of the Committee for Public Reporting of the Division dated 01.11.2017, the basic consolidation framework for information in the Annual Report of the Engineering Division is defined as JSC ASE EC, JSC ASE, JSC "Atomenergoproekt", JSC ATOMPROEKT, their subsidiaries and other companies in the management scope of JSC ASE EC with planned revenue over 2 billion rubles or the number of 2 thousand employees.

PJSC ESM

Public Joint-Stock Company Energospetsmontazh is registered by:

- The Moscow Registration Chamber Certificate No. 013.848 dd. 25.08.1993 Series LD No.004174,
- Certificate Series 77 No. 008016560 issued by FTSI No. 39 of Moscow about making a record into the Unified State Register of Legal Entities under the primary state registry No. 1027739052912 dd. 08.08.2002.

The legal form of organization: PJSC ESM is a public joint-stock company, form of PJSC ESM incorporation is a joint Russian ownership with the federal ownership interest.

The location (legal address) of PJSC ESM: 27 Boytsovaya Str., Moscow, 107150.

As of 31.12.2018, PJSC ESM has 8 branch offices, including 7 on the territory of the RF, 1 in the People's Republic of Bangladesh; 1 representative office in the Republic of Belarus.

As of the end of 2018, PJSC ESM does not have any shares in associated companies.

JSC "NIKIMT-Atomstroy"

Joint-Stock Company "Research and Development Institute of Construction Technology – Atomstroy" was established as a result of reorganization in the form of transformation of Federal State Unitary Enterprise Rosatomstroy Investment and Construction Consortium based on Resolution of Federal Agency for State Property Management No. 1574-r dd. 29.09.2008.

It was registered by Moscow Interdistrict Federal Tax Service Inspection of Russia No. 46 on 13.10.2008 under primary state registration number (PSRN) 5087746235836. Certificate of state registration of a legal entity: Series 77 No. 011106035.

Non-abbreviated name of the Company before 23.06.2009: Atomstroy Investment and Construction Consortium, Open Joint-Stock Company. Abbreviated name of the company: Rosatomstroy ICC, JSC.

Record into the Unified State Register of Legal Entities (USRLE) of change in the company name was made by Moscow Interdistrict FTSI of Russia No. 46 on 23.06.2009, state registration number (SRN) of the record: 6097747372981.

Within the period from 23.06.2009 to 23.10.2014, the company's non-abbreviated name was: Research and Development Engineering Institute of Installation Technologies - Atomstroy, Open Joint-Stock Company.

Since 23.10.2014, the Company's non-abbreviated name is: Joint-Stock Company "Research and Development Institute of Construction Technology – Atomstroy"; abbreviated name is JSC "NIKIMT-Atomstroy" JSC "NIKIMT-Atomstroy".

Record of change in the company name was made in the USRLE by Moscow Interdistrict FTSI of Russia No. 46 on 23.10.2014, SRN is 9147747896155.

Predecessor of JSC "NIKIMT-Atomstroy" is Federal State Unitary Enterprise Rosatomstroy Investment and Construction Consortium (Rosatomstroy ICC FSUE).

The location (legal address) of JSC “NIKIMT-Atomstroy”: 43 bldg. 2, Altufievskoye Shosse, Moscow, 127410.

As of 31.12.2018, JSC “NIKIMT-Atomstroy” has 9 branch offices and 1 representative office.

JSC “NIKIMT-Atomstroy” has two subsidiaries:

- Joint-Stock Company Zheleznogorsk HPP (Zheleznogorsk HPP JSC), PSRN 1147746715247, registration date: 25.06.2014).

JSC “NIKIMT-Atomstroy” share in the charter capital of Zheleznogorsk HPP JSC is 100%.

- Joint-Stock Company Seversk Heating Systems (SHS JSC), PSRN 1137746452194, registration date: 28.05.2013).

JSC “NIKIMT-Atomstroy” share in the charter capital of SHS JSC is 100%.

JSC “NIKIMT-Atomstroy”¹ does not have any associated companies.

Trest RosSEM Ltd. Trest RosSEM Ltd. is a subsidiary of JSC ASE EC .

As of 31.12.2018, the company’s shareholders are JSC ASE EC (owns the charter capital share of 99.9%) and SMU No. 1 LLC (owns the charter capital share of 0.1%). Within 2018, the shareholders and ownership ratio did not change.

Rosspetsenergmontazh Complex LLC (Trest RosSEM Ltd.) is a construction company rendering services in the field of nuclear and industrial construction.

As in previous years, in 2018 Trest RosSEM Ltd. rendered integrated services related to erection of cast-in-situ structures, as well as multiple industrial and civil facilities, including manufacturing and installation of steel and reinforced concrete structures for nuclear power plants. Many significant facilities of Rosenergoatom JSC are constructed with direct involvement of Trest RosSEM Ltd..

In 2018, Trest RosSEM Ltd. performed construction and erection works and works related to process structures installation at the following facilities:

- Belarus NPP
- Kursk NPP
- Rooppur NPP (the People's Republic of Bangladesh)
- Akkuyu NPP (the Republic of Turkey).

Branch and representative offices of Trest RosSEM Ltd. make a unified construction and investment complex being one of the largest construction companies operating in the nuclear industry.

Trest RosSEM Ltd. has necessary material and labor resources to perform works on the construction service market.

The company is a member of self-regulatory organization based on membership of construction parties - Non-commercial Partnership SOYUZATOMSTROY Association of Organizations Conducting Construction, Modernization, Overhaul of Nuclear Facilities.

Trest RosSEM Ltd. has all licenses necessary to perform construction and erection works (including the most complicated ones) and structural design.

Trest RosSEM Ltd. has design and engineering departments, production areas for manufacturing of building steel structures, considerable technical facilities consisting of the main construction machines, mechanisms, equipment and tools.

There are construction machines and mechanisms, load lifting cranes and trucks owned by Trest RosSEM Ltd.

¹ An associated company is a company not being a subsidiary, activities of which are significantly influenced by the investor (NIKIMT-Atomstroy JSC).

Trest RosSEM Ltd. has Technical Inspection Service with employees certified for weld quality control by means of ultrasonic, X-ray and vacuum testing methods in the course of steel structures manufacturing and installation.

The experience and potential of Trest RosSEM Ltd., which often acts as one of the primary construction participants, allowed establishing close ties with other specialized construction and erection companies for efficient implementation of all construction and erection works at a range of large construction facilities simultaneously.

The priority business area of Trest RosSEM Ltd. is erection of NPP main buildings, including:

- installation of cast-in-situ and reinforced concrete structures;
- erection of prefabricated and reinforced concrete structures;
- erection of steel structures;
- installation of external water supply networks;

Trest RosSEM Ltd. manufactures steel structures for construction of any type of complex facilities using its own resources. High-quality erection and steel structures manufacturing are one of the main characteristics of building structures durability and strength. All weld joints of the steel structures are made in accordance with specification and strict compliance with drawings. The steel structures are manufactured on the basis of technical documentation of Trest RosSEM Ltd. customer.

Trest RosSEM Ltd. can manufacture the following building structures:

- beams and trusses;
- columns;
- frames, framework, decking;
- wall partitions, shields, metal ceiling elements;
- other steel structures.

Trest RosSEM Ltd. performs construction and erection works (CEW) on the turnkey basis, starting the production cycle from steel structures manufacturing and pre-assembly and finishing with premises handover for equipment installation after concreting.

The industrial construction method (steel structures pre-assembly) is one of the specifics of the technology of CEW performance by Trest RosSEM Ltd.. Use of steel structures pre-assembly allows for a significant reduction of the labor costs for erection and associated companies' work in the conditions of lack of space and crane time. Trest RosSEM Ltd. has mastered and is improving performance of works on steel structures concreting at nuclear power plants. Concreting technology with the use of self-compacting concrete (SCC) and radial formwork with a section height up to 4.5 meters is being developed. Use of SCC allows for a significant reduction of the labor costs related to vibrocompression of the laid concrete mixture. There are construction laboratories operating on NPP construction sites for control of the technology and temperature conditions of the concrete.

Trest RosSEM Ltd. develops the design-process documentation. It develops detailed drawings (SED) of nuclear reactor building structures: containments, inner and outer containments of the reactor building, equipment maintenance platforms and pipeline supporting structures, drawings of fixtures used for the industrial construction method.

Design process units of the company execute the following:

- designer's supervision of steel structures manufactured and installed for the facilities being erected in compliance with occupational health and safety rules and regulations,
- detailed design of civil steel structures for buildings and facilities, including development of foundations and civil and architectural drawings;
- development of work production plans, including especially complex ones;
- development of detailed drawings of steel structures (SED stage) provided that they are manufactured at the company's production facilities;
- development of estimate construction documentation,

Appendix 9. Board of Directors' Reports on the Activity Results (GRI 102-31, 102-33,102-34)

JSC ASE EC

41 meetings of the Board of Directors have been held in 2018 with decisions made on 55 agenda issues. The decisions were made for prioritized areas of activity, such as:

- consent to JSC ASE EC concluding an agreement to handover to the Company authorities of SEZAM JSC sole executive body (executing functions of the managing company);
- JSC ASE EC participation in non-commercial organization Association of Construction Companies in the Nuclear Industry;
- inclusion of candidates nominated by JSC ASE EC shareholders into the list of candidates to be voted as members of the Board of Directors at the annual general and extraordinary JSC ASE EC meetings of shareholders;
- approval of JSC ASE EC annual report for 2017;
- approval of the JSC ASE EC annual accounting (financial statements) by the results of 2017;
- recommendation to the JSC ASE EC annual general meeting of shareholders on distribution of profits of JSC ASE EC , including the amount of dividend on JSC ASE EC shares and the procedure of its payment and JSC ASE EC losses by the results of 2017;
- approval of JSC ASE EC auditor and determination of remuneration of his services;
- approval of JSC ASE EC President's report on JSC ASE EC budget performance for 2017;
- approval of the List of JSC ASE EC Charity Initiatives for 2018, as well as amendments and supplements thereto;
- adoption of amendments to Procurement Regulations;
- approval of budget and scheduled indices of JSC ASE EC financial activities in 2018;
- consent to the Company's making transactions in cases stipulated by the Company's Articles of Association.

JSC ASE

According to i. 13.1 of the Company's Articles of Association, the Company's Board of Directors implements the general management of the Company's activities.

Within the reporting period, the Board of Directors held 31 meetings where, among others, the following important decisions were made:

- on approval of JSC ASE budget for 2018;
- on approval of JSC ASE annual report for 2017 and JSC ASE annual accounting (financial statements) by the results of 2017;
- on recommendations on profit distribution, including the amount of dividend on JSC ASE shares, and the procedure of its payment by the results of 2017;
- on the election of JSC ASE Board of Directors Chairman and the chairman for JSC ASE Board of Directors meeting;
- on approval of JSC ASE auditor for 2018 and determination of his services remuneration;
- on the opening of JSC ASE Representative Office in the People's Republic of Bangladesh (Dhaka);
- on JSC ASE share in the charter capital of JSC SEZAM;
- on approval of the List of Charity Initiatives of JSC ASE for 2018;
- on adoption of amendments to Procurement Regulations;
- on determination of the price of major transactions, on approval of conclusions on major transactions, on the offer to the sole shareholder to make a decision on the consent to major

transactions;

- on the consent to the Company's making transactions in cases stipulated by the Company's Articles of Association.

JSC "Atomenergoproekt"

The Board of Directors held 23 meetings in the reporting period. The following Board of Directors decisions shall be considered as important:

- on approval of JSC "Atomenergoproekt" budget for 2018;
- on approval of JSC "Atomenergoproekt" annual report for 2017 and JSC "Atomenergoproekt" annual accounting (financial statements) by the results of 2017;
- on the election of JSC "Atomenergoproekt" Board of Directors Chairman and the chairman for JSC "Atomenergoproekt" Board of Directors meeting;
- on approval of JSC "Atomenergoproekt" auditor for 2018 and determination of his services remuneration;
- on the opening of JSC "Atomenergoproekt" Branch Office in the People's Republic of Bangladesh.

JSC ATOMPROEKT

Currently JSC ATOMPROEKT is facing new challenges at the global market, while addressing these challenges depends largely on Rosatom Engineering Division's abilities to fulfill timely and properly their obligations towards their partners within the budget limits. The company is one of the innovation leaders of the national nuclear industry and implements successfully the advanced technologies of complex engineering facilities management in the current projects. Innovations, complete partner reliability and the highest quality of work are the main prerequisites of JSC ATOMPROEKT success in 2019.

JSC ATOMPROEKT Board of Directors is sure that the company's staff will retain its leadership on the upsurging global market of NPP construction and make as well a new impressive success to add to the portfolio both in traditional and new areas of activities.

JSC ATOMPROEKT Board of Directors held 20 meetings in the reporting period.

The following Board of Directors decisions shall be considered as important:

- 1) On the consent to conclude a major transaction- conclude a loan contract with JSC ASE;
- 2) On approval of JSC ATOMPROEKT budget for 2018;
- 3) On approval of JSC ATOMPROEKT annual report for 2017 and JSC ATOMPROEKT annual accounting (financial statements) by the results of 2017;
- 4) On recommendations on profit distribution, including the amount of dividend on JSC ATOMPROEKT shares, and the procedure of its payment by the results of 2017;
- 5) On the election of JSC ATOMPROEKT Board of Directors Chairman and the chairman for JSC ATOMPROEKT Board of Directors meeting;
- 6) on approval of JSC ATOMPROEKT auditor for 2018 and determination of his services remuneration;

Appendix 10. Information about Major Transactions and Transactions with Interest

JSC ASE EC

Table 10.0 - List of major transactions committed in 2018 and approved by JSC ASE EC managing bodies according to Federal Law “On Joint-Stock Companies” and the Company’s Articles of Association

No · of ite m	Parties of the transaction	Subject and other significant transaction conditions	Body that made the decision on the approval of the transaction
1	Guarantor: JSC ASE EC ; Borrower: JSC “Atomenergoproekt”; Creditor: Atomenergoprom JSC.	Guarantee agreement between JSC ASE EC (Guarantor), JSC “Atomenergoproekt”(Debtor) and Atomenergoprom JSC (Creditor) is concluded by the parties on the following terms: Subject of the agreement: Within the limits set by para. 1.2 of the Guarantee, the Guarantor shall be answerable to the Creditor for improper performance by the Debtor of its obligations under the Main Contract. Main Contract is the Loan Contract No. 5/9663-D dd. 07.11.2017 signed between the Borrower and the Creditor for provision of funds as a loan. Para. 1.2 of the Guarantee: The basis for the Guarantor's liability shall be the Debtor's failure to perform or failure to properly perform its obligations under the Main Contract regarding the repayment of received funds and payment of interest on them at the time and in the manner specified in the Main Contract. The Guarantor is well aware of all the terms and conditions of Loan Contract and the Guarantor has become familiar with the wording thereof, including the following: - The total amount of debt limit associated with loans granted at any moment of the Loan Contract validity(without the accrued interest and penalties) may not exceed 11 000 000 000 (Eleven billion) rubles; - Interest rate or procedure of its determination: at least 4.5 (Four point five) annual percent and not more than 9.7 (Nine point seven) annual percent from the amount of provided funds; - Date of loan granting: in accordance with the Borrower’s applications to the Loan	JSC ASE EC Board of Directors, Minutes of Meeting No. 7 dd. 05.03.2018.

		<p>Contract;</p> <ul style="list-style-type: none"> - Date of loan repayment: as specified in the Borrower's applications. - Number of loans (tranches) under the Loan Contract - unlimited; - Loan Contract validity period - by July 31, 2020. <p>The Guarantee is valid from the day of its signing till September 29, 2020.</p>	
2	<p>Lender: JSC ASE; Borrower: JSC ASE EC .</p>	<p>The Loan Contract is concluded by the parties on the following terms: The Lender grants funds and the Borrower commits itself to reimburse the received funds and pay interest under the following conditions:</p> <ul style="list-style-type: none"> - maximum amount of aggregate debt at each moment of the Loan Contract validity may not exceed 10 000 000 000 (Ten billion) rubles; - amount of turned-over loans granted in the calendar year is not limited; - loans are granted on the basis of applications filed by the parties according to Appendix No. 2 to the Loan Contract that are a prerequisite of the Loan Contract; - the period of granting the loan is determined by the parties in the applications according to the form as per Appendix No. 2 to the Loan Contract; - the Lender is to be paid by the Borrower an interest on each loan according to the rate established by the respective application but not less than 4% (Four percent) annual percent and not more than 7.95 (Seven point nine five) annual percent in the order established by the Loan Contract; - Loan Contract validity period: 1 (one) year from the moment of its signing. <p>This transaction is an interconnected major transaction for JSC ASE EC .</p>	<p>JSC ASE EC Board of Directors, Minutes of Meeting No. 18 dd. 29.05.2018.</p>

JSC ASE EC did not commit any interested party transactions in the reporting period.

JSC ASE EC Articles of Association include a provision for non-applicability to the Company of Chapter XI of Federal Law No. 208-FZ dd. 19.12.1995 "On Joint-Stock Companies" (i. 3.10. of Article 3 of the Articles of Association).

JSC ASE

Within the reporting period, 4 major transactions were concluded (3 transactions concluded on 21.09.2018, 1 transaction concluded on 07.12.2018), consent of JSC ASE sole shareholder to conclude these transactions was obtained (JSC ASE sole shareholder's resolutions No. 1 dd. 17.01.2018, No. 2 dd. 02.04.2018, No. 5 dd. 21.09.2018, No. 7 dd. 04.12.2018). Details on these transactions cannot be disclosed within the report as it contains confidential information.

According to item 3.11 of Section 3 of JSC ASE Articles of Association, provisions of Chapter XI of Federal Law No. 208-FZ dd. 26.12.1995 "On Joint-Stock Companies" are not applicable to the Company (clause 8 of Article 83 of Federal Law No. 208-FZ dd. 26.12.1995 "On Joint-Stock Companies").

JSC "Atomenergoproekt"

5 major transactions were concluded within the reporting period:

1. Agreement on making an unremunerated contribution to the property of the joint-stock company between Joint-Stock Company "Atomenergoproekt" and Joint-Stock Company "Atomstroyexport"(PSRN 1027739496014):

Parties of the transaction:

Shareholder - Joint Stock Company "Atomstroyexport";

Company - Joint-Stock Company "Atomenergoproekt".

Transaction subject: Joint-Stock Company "Atomstroyexport" as a shareholder of JSC "Atomenergoproekt" according to Article 32.2 of the Federal Law No. 208-FZ dd. 26.12.1995 "On Joint-Stock Companies", subclause 11 of clause 1 of Article 251 of the RF Tax Code, in order to finance and maintain JSC "Atomenergoproekt" activities, transfers without compensation to JSC "Atomenergoproekt" a contribution provided for by this agreement and Joint-Stock Company "Atomenergoproekt". Joint-Stock Company "Atomenergoproekt" accepts the contribution. As a contribution, JSC ASE transfers funds in the amount of 8 940 000 000 (Eight billion nine hundred million) rubles 00 kopecks. This contribution does not change the share of JSC ASE, does not increase the charter capital of JSC ASE and does not change the nominal value of JSC ASE share in the charter capital of JSC "Atomenergoproekt".

Transaction price: 8 940 000 000 (Eight billion nine hundred forty million) rubles 00 kopecks.

Time of transfer of contribution: JSC ASE transfers the contribution to JSC "Atomenergoproekt" by 31.12.2018 inclusive.

Board of Directors consent to conclude the transaction was obtained (MoM No. 311 dd. 02.07.2018).

2. Loan Contract between Joint-Stock Company "Atomstroyexport" and Joint-Stock Company "Atomenergoproekt":

Parties of the transaction:

Lender: Joint-Stock Company "Atomstroyexport";

Borrower: Joint-Stock Company "Atomenergoproekt".

Transaction subject: Under the Contract, the Lender provides funds as a loan (hereinafter - Loan) on the whole or in parts, total loan amount of which at each moment of Loan Contract validity period (not considering the accrued interest for the use of loan and penalties) may not exceed 22 000 000 000.00 (Twenty two billion) rubles without VAT and on the terms stipulated by the Contract, and the Borrower undertakes to pay back the received funds and to pay interest for them at the time and in the manner specified in the Contract.

Loan under the Contract shall be provided at the interest rate not exceeding 9.2 (Nine point two) annual percent from the amount of provided funds.

Transaction price: 26 042 576 001.20 (Twenty six billion forty two million five hundred seventy six thousand one) ruble 20 kopecks, considering the maximum accrued interest in the amount of 4 042 576 001.20 (Four billion forty two million five hundred seventy six thousand one) ruble 20 kopecks.

Transaction validity period: The Contract is considered as concluded from the date of Loan amount/part of Loan transfer to the Borrower's account upon the first application of the Borrower. The loan is provided to the Borrower for the period till December 23, 2020.

Consent of the general shareholders' meeting to conclude a transaction is obtained (MoM No. 10 dd. 03.12.2018).

3. Additional Agreement No. 1 to Loan Contract No. 02/17912-D dd. January 27, 2017 between Joint-Stock Company "Atomstroyexport" and Joint-Stock Company "Atomenergoproekt".:

Parties of the transaction:

Lender: Joint-Stock Company "Atomstroyexport";

Borrower: Joint-Stock Company "Atomenergoproekt".

Transaction subject: Item 1.1 of the Contract shall have the following wording:

"Under the Contract, the Lender provides funds as a loan (hereinafter - Loan) on the whole or in parts, total loan amount of which at each moment of Loan Contract validity period (without the accrued interest for the use of loan and penalties) may not exceed 18 400 000 000.00 (Eighteen billion four hundred million) rubles (not subject to VAT) and on the terms stipulated by the Contract, and the Borrower undertakes to return the received funds and to pay interest for them at the time and in the manner specified in the Contract".

Transaction price: in the wording of Additional Agreement No. 1, the transaction price is 21 668 701 369.80 (Twenty one billion six hundred sixty eight million seven hundred one thousand three hundred sixty nine) rubles 80 kopecks, considering the maximum accrued interest in the amount of 3 268 701 670 (Three billion two hundred sixty eight million seven hundred one thousand six hundred seventy) rubles.

Consent of the general shareholders' meeting to conclude a transaction was obtained (MoM No. 7 dd. 13.04.2018).

4. Additional Agreement No. 28 to Subcontract No. 259//08108/378 DS11 dd. 26.04.2011 (hereinafter - Subcontract) between Joint-Stock Company "Atomenergoproekt" and Public Joint-Stock Company Energospetsmontazh.

Parties of the transaction:

General Contractor: Joint-Stock Company "Atomenergoproekt";

Contractor: Public Joint-Stock Company Energospetsmontazh.

Transaction subject: In order to ensure performance of construction and erection works on the Facilities within the deadlines established by Appendix No. 1 "Level 1 Construction Schedule of Unit 2, Novovoronezh NPP-2" to Additional Agreement No. 17-93 dd. 16.08.2017 to the contract No. 08108/378 dd. 15.08.2008, as stated in Agreement No. 9-1 (Rosenergoatom JSC as the Customer), the Parties agreed to specify the deadlines of work performance and scope of Works under the Subcontract due to the update of estimate documentation being the subject of Contract within the scope of DCW and defined the scope of Works to be performed by the Contractor in 2018, based on which the Parties reached an agreement to make the following amendments to the Subcontract:

1.1. Item 3.1 of the Subcontract shall have the following wording:

"The cost of the work under the Subcontract (Works Price) is determined based on the calculation of the price of Works and services and amounts as the benchmark price of year 2000 to 1 087 013 568 (one billion eighty seven million thirteen thousand five hundred sixty eight) rubles, at the current price level, taking into account the contractual coefficient 0.9848, it amounts to 11 562 316 282 (eleven billion five hundred sixty two million three hundred sixteen

thousand two hundred eighty two) rubles 78 kopecks, including 18% VAT in the amount of 1 763 743 161 (one billion seven hundred sixty three million seven hundred forty three thousand one hundred sixty one) rubles 78 kopecks.

The Price of Works under the Subcontract at the current price level is preliminary. The price of the works under the Subcontract at the current price level shall be specified in accordance with the Procedure of determining the price of works and services by signing Additional Agreements”.

1.2. Item 6.1 of the Subcontract shall have the following wording:

“Commencement of the works - 26.04.2011;

Completion of the works - 31.12.2018.

The time periods of works execution, including interim ones, are specified in the Level 3 Work Process Schedule”.

2. The cost of works performed as of 01.01.2018 was 968 720 308 (nine hundred sixty eight million seven hundred twenty thousand three hundred eight) rubles as the benchmark price of year 2000, at the current price level it amounts to 10 256 527 544 (ten billion two hundred fifty six million five hundred twenty seven thousand five hundred forty four) rubles 10 kopecks, including VAT 18% - 1 564 555 049 (one billion five hundred sixty four million five hundred fifty five thousand forty nine) rubles 10 kopecks.

The cost of works to be performed in 2018 will amount: as the benchmark price of year 2000 to 118 293 260 (one hundred eighteen million two hundred ninety three thousand two hundred sixty) rubles, at the current price level to 1 305 788 738 (one billion three hundred five million seven hundred eighty eight thousand seven hundred thirty eight) rubles 68 kopecks, including VAT 18% – 199 188 112 (one hundred ninety nine million one hundred eighty eight thousand one hundred twelve) rubles 68 kopecks.

3. Conclusion of Agreement shall not relieve the Contractor from responsibility provided for by the Subcontract for the failure to perform its obligations within the deadlines earlier stipulated by the Subcontract. The General Contractor reserves the right to lay claims to recovery of penalties and damages, the penalties are imposed from the moment of breaching the deadlines earlier stipulated by the Subcontract up to the moment of works completion.

4. The following documents shall be considered as invalid:

4.1. Appendix No. 1 “Level 3 NPP Construction Schedule” to Additional Agreement No. 25 dd. 28.11.2017 to the Subcontract;

4.2. Appendix No. 1 “Calculation of Price of Works and Services” to Additional Agreement No. 26 dd. 13.04.2018 to the Subcontract;

4.3. Appendix No. 2 “Topical Plan for Execution of Works in 2018” to Additional Agreement No. 26 dd. 13.04.2018 to the Subcontract;

5. The following documents shall be made effective:

5.1. “Level 3 NPP Construction Schedule”, according to Appendix No.1 to the Agreement;

5.2. “Calculation of Price of Works and Services”, according to Appendix No.2 to the Agreement;

5.2. “Topical Plan for Execution of Works in 2018”, according to Appendix No. 3 to the Agreement;

6. This Agreement comes into force since being signed by authorized representatives of the Parties.

7. This Agreement is executed and signed in 2 (two) copies, one copy for each Party.

8. In all the other respects not specified by this Agreement, the terms of the Subcontract shall be applied.

9. The Agreement comes into force from the date of its signing by the Parties and is an integral part of the Subcontract.

10. This Agreement is executed in two copies having equal legal force, one for each Party.

11. The following Appendices shall be an integral part of this Agreement:

11.1. Appendix 1 “Level 3 NPP Construction Schedule”;

11.2. Appendix No. 2 “Calculation of Price of Works and Services”;

11.3. Appendix No. 3 “Topical Plan for Execution of Works in 2018”.

Board of Directors consent to conclude the transaction was obtained (MoM No. 306 dd. 14.05.2018).

Additional Agreement to the contract for construction of Novovoronezh NPP-2 power units 1 and 2 dd. 15.08.2008 reg. No. 2008/23.1/29946 (No. 08108/378) in the revision of Agreement No. 9-1 dd. 22.02.2011 reg. No. 2008/23.1/29946-11 between Joint-Stock Company Russian Concern for Heat and Electricity Generation at Nuclear Power Plants (PSRN 5087746119951) and Joint-Stock Company “Atomenergoproekt” (hereinafter - the contract):

Parties of the transaction:

Customer - Joint-Stock Company Russian Concern for Heat and Electricity Generation at Nuclear Power Plants;

General Contractor - Joint-Stock Company “Atomenergoproekt”.

Transaction subject:

1.1. In accordance with i. 34.1 of the Contract and based on the Minutes of Meeting in absentee form No. 1-OK/9-pr dd. 09.02.2018 of the Operational Committee of Rosatom State Corporation on the subject “Establishment of remuneration indicators for construction and erection personnel involved in the NPP construction”, the Parties reached an agreement to make the following amendments to the Contract:

1.1.1. Appendix No. 8 “Procedure for Determination of Price of Works and Services, Settlements for Works Performed” (in the wording of Appendix No. 1 to Additional Agreement No. 17-88 dd. 12.04.2017, reg. No. 2008/23.1/29946-88 to the Contract, taking into account the amendments made by Additional Agreement No. 17-98, dd. 29.12.2017, reg. No. 2008/23.1/29946-98) shall have the wording of Appendix No. 1 to Additional Agreement (Appendix No. 3 to the MoM).

JSC ATOMPROEKT

In accordance with item 3.11 of the Articles of Association of JSC ATOMPROEKT, the provisions of Chapter XI of Federal Law “On Joint-Stock Companies” that determine the terms and conditions of the transactions in relation to which there is an interest, and the procedure of approval foreseen for transactions in relation to which there is an interest, shall not be applicable for the Company.

There was one major transaction within the reporting period for JSC ATOMPROEKT.

Conclusion of loan contract with JSC ASE

Parties to the Contract:

Lender: JSC ASE,

Borrower: JSC ATOMPROEKT.

Subject of the Contract:

The Lender provides funds as a loan (hereinafter - Loan) on the whole or in parts, total loan amount of which at each moment of Loan Contract validity period (without the accrued interest and penalties) may not exceed 10 000 000 000.00 (Ten billion) rubles (not subject to VAT in accordance with clause 3, subclause 15, Article 149 of the RF Tax Code) and on the terms stipulated by the Contract, and the Borrower undertakes to return the received funds and to pay interest for them at the time and in the manner specified in the Contract.

Loan under the Contract shall be provided at the interest rate of at least 4.5 (four point five) annual percent and not more than 8.6 (eight point six) annual percent from the amount of provided funds. It is not subject to VAT in accordance with clause 3, subclause 15, Article 149 of the RF Tax Code.

The Lender shall provide cashless Loan by money transfer in whole or in parts (hereinafter - part of the Loan) in compliance with written Applications of Borrower (Appendix

No. 2 to the Contract) at his settlement account specified in the Borrower's Application. Applications for receipt of the Loan/part of the Loan shall be executed in accordance with i. 3 of the Contract.

The Loan/part of the Loan shall be considered as provided from the date of money transfer under the Application to the Borrower's settlement account (hereinafter - Date of Loan/part of the Loan provision).

Contract price:

It consists of the sum of the loan in the amount not exceeding 10 000 000 000.00 (Ten billion) rubles (not subject to VAT in accordance with clause 3, subclause 15, Article 149 of the RF Tax Code) and interest at the rate of at least 4.5 (four point five) annual percent and not more than 8.6 (eight point six) annual percent from the amount of provided funds.

Contract validity period:

The Contract is considered as concluded from the date of Loan amount/part of the Loan transfer to the Borrower's account upon the first application of the Borrower.

The Contract is valid till February 01, 2021.

Appendix 11. Additional Information to Chapter “Natural Capital”

Table 11.1 - List of certificates and auditors' conclusions on the compliance of the Engineering Division companies with the standards of quality and environmental safety.

Company name	Standard	Certification authority	Certificate details	Validity period of the certificate
JSC ASE EC (considering branch offices)	ISO 9001:2015	BUREAU VERITAS Certification Holding SAS – UK Branch	RU229233Q-U/1, version 1 of 22.05.2018	22.05.2018 – 21.05.2021
JSC ASE EC (considering branch offices)	ISO 14001:2015	BUREAU VERITAS Certification Holding SAS – UK Branch	RU229233E -U/1, version 1 of 22.05.2018	22.05.2018 – 21.05.2021
JSC ASE	ISO 9001:2015	BUREAU VERITAS Certification Holding SAS – UK Branch	RU229233E -U/2, version 1 of 22.05.2018	22.05.2018 – 21.05.2021
JSC ASE	ISO 14001:2015	BUREAU VERITAS Certification Holding SAS – UK Branch	RU229233E -U/2, version 1 of 22.05.2018	22.05.2018 – 21.05.2021
JSC “Atomenergoproekt”	ISO 9001:2015	TUV SUD Management Service GmbH	1210013667 TMS of 15.05.2018	15.05.2018 – 21.03.2019
JSC “Atomenergoproekt”	ISO 9001:2015	Academia-Cert	POCC RU.ФК94.И00019 of 09.04.2018	09.04.2018 – 09.04.2021
JSC ATOMPROEKT	ISO 9001:2015	AFNOR Certification	2011/40708.3 of 25.12.2018	25.12.2018 - 24.12.2021
JSC ATOMPROEKT	ISO 14001:2015	AFNOR Certification	2011/40709.2 of 12.02.2018	12.02.2018 - 11.02.2021
TREST ROSSEM LTD.	ISO 9001:2015	BUREAU VERITAS Certification Holding SAS – UK Branch	RU229245Q-U, version 1 of 29.06.2018	29.06.2018 – 28.06.2021
TREST ROSSEM LTD.	ISO 14001:2015	BUREAU VERITAS Certification Holding SAS – UK Branch	RU229245E-U, version 1 of 29.06.2018	29.06.2018 – 28.06.2021
JSC “NIKIMT-Atomstroy” (considering branch offices)	ISO 14001:2015	Russian register	18.2227.026 of 07.12.2018	07.12.2018 – 07.12.2021
JSC “NIKIMT-Atomstroy” (considering branch offices)	ISO 9001:2015	Russian register	17.0645.026 of 24.04.2017	24.04.2017 – 18.02.2020

Company name	Standard	Certification authority	Certificate details	Validity period of the certificate
JSC "NIKIMT-Atomstroy" (considering branch offices)	ISO 9001:2015	IQNet	RU-17.0645.026 of 24.04.2017	24.04.2017 – 18.02.2020
JSC "NIKIMT-Atomstroy" (considering branch offices)	ISO 14001:2015	IQNet	RU-18.2227.026 of 07.12.2018	07.12.2018 – 07.12.2021
JSC "NIKIMT-Atomstroy" (considering branch offices)	ISO 9001:2015	Russian register	POCC RU.ГA45.K00260 of 16.05.2017	16.05.2017 - 16.05.2020
PJSC ESM	ISO 14001:2015	RusPromGrupp LLC	СДC.ТII.СМ.10329- 17 of 14.07.2017	14.07.2017 - 14.07.2020
PJSC ESM	ISO 9001:2015	BUREAU VERITAS Certification Holding SAS – UK Branch	RU002350, version 1 of 11.01.2019	11.01.2019 – 10.01.2022
PJSC ESM	ISO 14001:2015	BUREAU VERITAS Certification Holding SAS – UK Branch	RU002351, version 1 of 11.01.2019	11.01.2019 – 10.01.2022

Table 11.2 - Energy resources used by the Engineering Division of Rosatom State Corporation

Type of resources	Resource flow rate/ resource purchase expenses						
	2016		2017		2018		(2018-2017)/ 2017, %
	GJ or kW/h	mln. rubles	GJ or kW/h	mln. rubles	GJ or kW/h	mln. rubles	
JSC ASE EC (Nizhny Novgorod and Nizhny Novgorod region)							
Electric power, including spent one, kW/h:	4,174,947	19.07	4,104,076	24.5	4,169,213	26.9	+1.6
- for domestic needs	4,174,947	19.07	4,104,076	24.5	4,169,213	26.9	+1.6
- for operation of electric devices in process flows	-	-	-	-	-	-	-
- for operation of electric motors	-	-	-	-	-	-	-
Thermal energy, including spent one, GJ:	18,600	15.06	16,629	13.3	17,354	16.1	+4.4
- for heating	9,228	10.80	-	-	-	-	-
- for process needs	7,593	2.95	-	-	-	-	-
- for hot water supply	1,779	1.31	-	-	-	-	-
Other (for heating, hot water supply and process needs)	-	-	16,629	13.3	17,354	16.1	+4.4
JSC ASE EC Volgodonsk Branch Office							
Electric power, including spent one, kW/h:	7,900,000	39.54	5,300,000	15	1,700,000	9.5	-68
- for domestic needs	2,680,000	13.44	3,400,000	9.6	1,300,000	7.26	-62
- for operation of electric devices in process flows	5,220,000	26.1	1,900,000	5.4	400,000	2.24	-79
- for operation of electric motors	-	-	-	-	-	-	-
Thermal energy, including spent one, GJ:	36,609.62	10.74	7,777.5	2.4	0	0	0
- for heating	36,609.62	10.74	7,777.5	2.4	0	0	0
- for process needs	-	-	-	-	-	-	-
- for hot water supply	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-
JSC ASE EC Kursk Branch Office							
Electric power, including spent one, kW/h:	244,235	0.87	552,888	2.33	1,191,989	5.34	+115.6
- for domestic needs	244,235	0.87	346,082	1.43	516,695	2.30	+49.3
- for operation of electric devices in process flows	-	-	206,806	0.90	601,357	2.69	+190.8
- for operation of electric motors	-	-	-	-	73,937	0.34	not applicable
Thermal energy, including spent one, GJ:	48.00	0.12	-	-	-	-	-
- for heating	48.00	0.12	-	-	-	-	-
- for process needs	-	-	-	-	-	-	-
- for hot water supply	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-

Type of resources	Resource flow rate/ resource purchase expenses						
	2016		2017		2018		(2018-2017)/ 2017, %
	GJ or kW/h	mln. rubles	GJ or kW/h	mln. rubles	GJ or kW/h	mln. rubles	
JSC ASE EC Baltic Branch Office							
Electric power, including spent:	2,993,000	18.23	2,661,530	10.34	2,601,463	8.89	-2.3
- for domestic needs	2,795,450	17.02	2,395,377	9.31	2,341,316.1	8.00	-2.3
- for operation of electric devices in process flows	131,700	0.80	159,692	0.62	156,087.78	0.53	-2.3
- for operation of electric motors	65,850	0.41	106,461	0.41	104,058.52	0.36	-2.3
Thermal energy, including spent:	-	-	-	-	-	-	-
- for heating	-	-	-	-	-	-	-
- for process needs	-	-	-	-	-	-	-
- for hot water supply	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-
JSC ASE EC Representative Office in the Republic of Belarus							
Electric power, including spent:	15,632,201	141.8	18,404,455	157.53	26,075,558	244.15	+41.7
- for domestic needs	15,632,201	141.8	18,404,455	157.53	26,075,558	244.15	+41.7
- for operation of electric devices in process flows	0	0	0	0	0	0	0
- for operation of electric motors	0	0	0	0	0	0	0
Thermal energy, including spent:	2310.76	33.91	3050.1	40.84	3,458.98	48.19	+13.4
- for heating	2310.76	33.91	3050.1	40.84	3,458.98	48.19	+13.4
- for process needs	-	-	-	-	-	-	-
- for hot water supply	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-
JSC ASE							
Electric power, including spent:	4,178,760	19	3,874,169	19.89	4,261,758	22.84	+9.1
- for domestic needs	4,178,760	19	3,874,169	19.89	4,261,758	22.84	+9.1
- for operation of electric devices in process flows	-	-	-	-	-	-	-
- for operation of electric motors	-	-	-	-	-	-	-
Thermal energy, including spent:	35,001.65	13.18	32,142.06	12.74	31,911.79	13.48	-0.7
- for heating	-	-	-	-	-	-	-
- for process needs	-	-	-	-	-	-	-
- for hot water supply	-	-	-	-	-	-	-
Other (heating and hot water supply)	35,001.65	13.18	32,142.06	12.74	31,911.79	13.48	-0.7
JSC ATOMPROEKT							
Electric power, including spent:	3,721,502	12.69	3,564,089	17.12	3,784,765	22.40	+6.2
- for domestic needs	3,721,502	12.69	3,564,089	17.12	3,784,765	22.40	+6.2
- for operation of electric devices in process flows	-	-	-	-	-	-	-
- for operation of electric motors	-	-	-	-	-	-	-
Thermal energy,	21,535.05	8.39	18,404	7.75	18,131	11.70	-1.5

Type of resources	Resource flow rate/ resource purchase expenses						
	2016		2017		2018		(2018-2017)/ 2017, %
	GJ or kW/h	mln. rubles	GJ or kW/h	mln. rubles	GJ or kW/h	mln. rubles	
including spent:							
- for heating	-	-	-	-	-	-	-
- for process needs	-	-	-	-	-	-	-
- for hot water supply	-	-	-	-	-	-	-
Other (heating and hot water supply)	21,535.05	8.39	18,404	7.75	18,131	11.65	-1.5
JSC "Atomenergoproekt"(administrative and economic activities)							
Electric power, including spent:	2,915,691	6.96	2,063,967	7.98	2,825,066	11.24	+36.9
- for domestic needs	2,798,374.4	6.50	1,950,515	7.58	2,686,550	9.90	+37.7
- for operation of electric devices in process flows	-	-	-	-	-	-	-
- for operation of electric motors (operation of ventilation installations)	117,316.6	0.41	113,452	0.41	138,516	24.20	+22.1
Thermal energy, including spent:	17,417.80	1.56	110.68	0.57	265	5.74	+139.43
- for heating	15,234.20	1.11	53.67	0.23	105	1.11	+95.6
- for process needs	-	-	-	-	-	-	-
- for hot water supply	2,183.6	0.45	57.01	0.34	148	4.63	+159.6
Other	-	-	-	-	-	-	-
JSC "Atomenergoproekt"(Novovoronezh NPP-2 Construction Directorate)							
Electric power, including spent:	333,002	1.8	329,552	1.9	299,665	1.5	-9
- for domestic needs	333,002	1.8	329,552	1.9	299,665	1.5	-9
- for operation of electric devices in process flows	-	-	-	-	-	-	-
- for operation of electric motors (operation of ventilation installations)	-	-	-	-	-	-	-
Thermal energy, including spent:	4,856	3	602	3.7	586	3.29	-2.7
- for heating	4,856	3	602	3.7	586	3.29	2.7
- for process needs	-	-	-	-	-	-	-
- for hot water supply	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-
TREST ROSSEM LTD. (Volgodonsk Branch Office)							
Electric power, including spent:	643,413	3.756	229,090	1.51	-	-	not applicable
- for domestic needs	75,300	0.45	27,490	0.18	-	-	-
- for operation of electric devices in process flows	568,113	3.311	201,600	1.33	-	-	-
- for operation of electric motors	-	-	-	-	-	-	-
Thermal energy, including spent:	7074.0	1,301	3,580	0.72	-	-	not applicable
- for heating	4,374	0.80	2,183	0.44	-	-	-
- for process needs	-	-	-	-	-	-	-

Type of resources	Resource flow rate/ resource purchase expenses						
	2016		2017		2018		(2018-2017)/ 2017, %
	GJ or kW/h	mln. rubles	GJ or kW/h	mln. rubles	GJ or kW/h	mln. rubles	
- for hot water supply	2,700	0.50	1,397	0.279	-	-	-
Other	-	-	-	-	-	-	-
TREST ROSSEM LTD. (Kursk Branch Office)							
Electric power, including spent:	-	-	-	-	2,577,209	14.38	not applicable
- for domestic needs	-	-	-	-	878,232	4.90	-
- for operation of electric devices in process flows	-	-	-	-	1,698,977	9.48	-
- for operation of electric motors	-	-	-	-	-	-	-
Thermal energy, including spent:	-	-	-	-	1,216.48	0.95	not applicable
- for heating	-	-	-	-	942.48	0.72	-
- for process needs	-	-	-	-	-	-	-
- for hot water supply	-	-	-	-	304	0.24	-
Other	-	-	-	-	-	-	-
TREST ROSSEM LTD. (Representative Office in the Republic of Belarus)							
Electric power, including spent:	-	-	-	-	3,036,034	23.93	not applicable
- for domestic needs	-	-	-	-	955,662	7.55	-
- for operation of electric devices in process flows	-	-	-	-	2,080,372	16.38	-
- for operation of electric motors	-	-	-	-	-	-	-
Thermal energy, including spent:	-	-	-	-	2,148.63	0.33	not applicable
- for heating	-	-	-	-	1,850.63	0.29	-
- for process needs	-	-	-	-	-	-	-
- for hot water supply	-	-	-	-	298	0.05	-
Other	-	-	-	-	-	-	-
TREST ROSSEM LTD. (Branch Office in the People's Republic of Bangladesh)							
Electric power, including spent:	-	-	-	-	2,411,206	22.4	not applicable
- for domestic needs	-	-	-	-	936,449	8.7	-
- for operation of electric devices in process flows	-	-	-	-	1,474,759	13.74	-
- for operation of electric motors	-	-	-	-	-	-	-
Thermal energy, including spent:	-	-	-	-	-	-	-
- for heating	-	-	-	-	-	-	-
- for process needs	-	-	-	-	-	-	-
- for hot water supply	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-
JSC "NIKIMT-Atomstroy"							
Electric power, including spent one, kW/h:	4,726,060.65	37.31	4,468,658.5	36.49	8,486,559.4	44.85	89.9
- for domestic needs	1,438,255.65	19.75	777,120.03	16.97	3,284,937.2	18.44	322.7
- for operation of electric devices in process flows	3,149,495	16.84	3,399,378.5	17.81	4,803,959	23.84	41.3
- for operation of	138,310	0.72	292,160	1.712	397,663.18	2.56	36.1

Type of resources	Resource flow rate/ resource purchase expenses						
	2016		2017		2018		(2018-2017)/ 2017, %
	GJ or kW/h	mln. rubles	GJ or kW/h	mln. rubles	GJ or kW/h	mln. rubles	
electric motors							
Thermal energy, including spent one, GJ:	40,179.11	8.11	65,300.1	3.40	93,780.16	4.05	43.6
- for heating	36,735.68	6.21	54,864.96	3.06	79,363.06	6.32	44.6
- for process needs	0	0	5000	0.03	11,000	0.06	120
- for hot water supply	3,443.43	1.89	5,435.14	0.312	12,206.18	0.33	124.6
Other	-	-	-	-	-	-	-
PJSC ESM							
Electric power, including spent:	6,422,084.49	29.46	3,892,259	20.31	2,271,965	12.15	-41.6
- for domestic needs	153,112	0.70	202,463.8	1.40	129,883	0.6	-35.8
- for operation of electric devices in process flows	6,045,318.49	27.73	3,448,449.2	17.80	2,142,082	11.55	-37.88
- for operation of electric motors	223,654	1.03	241,346	1.12	0	0	not applicable
Thermal energy, including spent:	2,841.6	1.28	3,539.91	1.99	1,613.63	1.32	-54
- for heating	2,841.6	1.28	3,539.91	1.99	1,613.63	1.32	-54
- for process needs	-	-	-	-	-	-	-
- for hot water supply	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-
ENGINEERING DIVISION*							
Electric power, including spent:	53,884,896.14	330.49	49,444,733.5	314.90	63,281,244.4	448.07	+28
- for domestic needs	38,225,139.05	253.09	39,375,388.83	267.41	50,684,234.3	376.74	+28.7
- for operation of electric devices in process flows	15,114,626.49	74.78	9,315,925.7	43.86	11,882,834.78	66.71	+27.6
- for operation of electric motors	545,130.60	2.57	753,419	3.65	714,174.7	27.46	-5.2
Thermal energy, including spent:	186,473.59	96.65	151,135.35	87.41	170,465.67	105.13	+12.8
- for heating	112,237.86	67.97	72,071.14	52.66	87,919.78	61.23	+22
- for process needs	7,593.00	2.95	5,000	0.03	11,000	0.06	+120
- for hot water supply	10,106.03	4.15	6,889.15	0.93	12,956.18	5.25	+88.1
Other (heating and hot water supply)	56,536.70	21.57	67,175.06	33.79	67,396.79	41.25	+0.3

*The data earlier provided in the Public Annual Reports for 2016, 2017 was recalculated for 2016, 2017, 2018 due to the following:

- exclusion of information about Sibirsky Orgstroyproekt JSC caused by the lack of activity from the 2nd half-year of 2017 and the enterprise's being liquidated;
- exclusion of information about VdMU LLC, SMU No. 1 LLC, JSC "Spb EIZ";
- closing/opening of TREST ROSSEM LTD. branch offices;
- separation of information regarding Novovoronezh NPP-2 Construction Directorate in JSC "Atomenergoproekt";
- overall provision of information on Belarus NPP construction site (considering subcontractors), not only for Representative Office of JSC ASE EC in the Republic of Belarus.

Table 11.3 - Impact on atmosphere during NPP construction

Company (facility) name/ pollutant substances released into the atmosphere	Volume of pollutant substances, tons			
	2016	2017	2018	(2018-2017)/2018, %
JSC ASE EC (Nizhny Novgorod and Nizhny Novgorod region)				
Sulphur dioxide	0.004	0.65	0.54	-16.7
Carbon oxide	0.04	3.10	4.62	+49.2
Nitrogen oxide	0.04	0.38	0.17	-54
Other substances	4.28	8.26	4.32	-48
<i>Total:</i>	<i>4.36</i>	<i>12.39</i>	<i>9.66</i>	<i>-22</i>
JSC ATOMPROEKT				
Sulphur dioxide	0.00004	0.00004	0.00004	0
Carbon oxide	0.005	0.005	0.005	0
Nitrogen oxide	0.0001	0.0001	0.0001	0
Other substances	0.31	0.31	0.31	0
<i>Total:</i>	<i>0.31</i>	<i>0.31</i>	<i>0.31</i>	<i>0</i>
JSC "Atomenergoproekt"				
Sulphur dioxide	0.0	0.0	0.006	not applicable
Carbon oxide	0.03	0.03	0.20	more than 200
Nitrogen oxide	0.0	0.0	0.008	not applicable
Other substances	0.44	0.02	0.03	+68
<i>Total</i>	<i>0.47</i>	<i>0.05</i>	<i>0.24</i>	<i>more than 200</i>
JSC "Atomenergoproekt"(Novovoronezh Branch Office - Novovoronezh NPP-2 Construction Directorate)				
Sulphur dioxide	0.1	0.29	0.26	- 10
Carbon oxide	2.39	2.38	2.12	- 11
Nitrogen oxide	0.32	3.34	3.01	- 10
Other substances	0.81	1.04	0.92	- 11.5
<i>Total</i>	<i>3.62</i>	<i>7</i>	<i>6.30</i>	<i>- 9.9</i>
TREST ROSSEM LTD. (Volgodonsk Branch Office)				
Sulphur dioxide	0.004	0.002	0	not applicable
Carbon oxide	2.93	1.47	0	
Nitrogen oxide	0.57	0.29	0	
Other substances	11.13	5.56	0	
<i>Total:</i>	<i>14.64</i>	<i>7.32</i>	<i>0</i>	
JSC «NIKIMT-Atomstroy»				
Sulphur dioxide	0.09	0.39	0.009	-97.7
Carbon oxide	3.06	4.70	1.48	-68.5
Nitrogen oxide	1.57	0.44	0.05	-88.9
Other substances	6.02	33.18	3.80	-88.6
<i>Total:</i>	<i>10.75</i>	<i>38.72</i>	<i>5.34</i>	<i>-86.2</i>
PJSC ESM				
Sulphur dioxide	0.0002	0	0	not applicable
Carbon oxide	0.24	0.36	0.20	-44.1
Nitrogen oxide	0.007	0.03	0.006	-79.78
Other substances	2.59	0.71	0.45	-36.37
<i>Total:</i>	<i>2.84</i>	<i>1.10</i>	<i>0.66</i>	<i>-40</i>
ENGINEERING DIVISION*				
Sulphur dioxide	0.20	1.34	0.82	-38.8
Carbon oxide	8.71	12.05	8.63	-28.3
Nitrogen oxide	2.51	4.48	3.25	-27.5
Other substances	25.56	49.08	9.83	-80
Total:	36.98	66.88	22.52	-66.3

*The data earlier provided in the Public Annual Report for 2016, 2017 was recalculated for 2016, 2017, 2018 due to exclusion of information about VdMU LLC, SNU No. 1 LLC, JSC "Spb EIZ" and exclusion of information about Sibirsky Orgstroyproekt JSC for 2016.

(GRI 303-3, 303-5) Table 11.4 - Total volume of water withdrawal in the regions of operation with a breakdown by the following sources, mln liters

List of water supply sources	Name of water supply source	Water consumption (intake), thousand m3			
		2016	2017	2018	(2018-2017)/2017, %
JSC ASE EC (Nizhny Novgorod and Nizhny Novgorod region)					
Surface waters, including swamps, rivers, lakes and oceans	-	-	-	-	-
Underground waters	Well of Forest Comfort recreation center	2.59	2.34	1.56	-34
Sea water	-	-	-	-	-
Water being a by-product of production process	-	-	-	-	-
Rain water collected and stored by the company	-	-	-	-	-
Sewage waters of other companies;	-	-	-	-	-
Municipal and other water supply systems.	Nizhny Novgorod Water Channel, the Oka river	18.54	20.80	20.90	0
JSC ASE EC Volgodonsk Branch Office					
Surface waters, including swamps, rivers, lakes and oceans	Tsimlyansk storage lake	30.50	27.60	10.00	-64
Underground waters	-	-	-	-	-
Sea water	-	-	-	-	-
Water being a by-product of production process	-	-	-	-	-
Rain water collected and stored by the company	-	-	-	-	-
Sewage waters of other companies;	-	-	-	-	-
Municipal and other water supply systems.	-	-	-	-	-
JSC ASE EC Baltic Branch Office					
Surface waters, including swamps, rivers, lakes and oceans	-	-	-	-	-
Underground waters	Wells No.3/2010, No.5/2010	9.66	9.32	9.08	-3
Sea water	-	-	-	-	-
Water being a by-product of production process	-	-	-	-	-
Rain water collected and stored by the company	-	-	-	-	-
Sewage waters of other companies;	-	-	-	-	-
Municipal and other water supply systems.	-	-	-	-	-
JSC ASE EC Representative Office in the Republic of Belarus					
Surface waters, including swamps, rivers, lakes and oceans	The Vilia river (Belarus NPP RUE)	-	-	66.92	not applicable
Underground waters	-	-	-	-	-
Sea water	-	-	-	-	-

List of water supply sources	Name of water supply source	Water consumption (intake), thousand m3			
		2016	2017	2018	(2018-2017)/2017, %
Water being a by-product of production process	-	-	-	-	-
Rain water collected and stored by the company	-	-	-	-	-
Sewage waters of other companies;	-	-	-	-	-
Municipal and other water supply systems.	Belarus NPP RUE - domestic	9.50	10.10	51.36	more than +200
JSC ASE EC Branch Office in Hungary					
Surface waters, including swamps, rivers, lakes and oceans	Not applicable				
Underground waters					
Sea water					
Water being a by-product of production process					
Rain water collected and stored by the company					
Sewage waters of other companies;					
Municipal and other water supply systems.					
JSC ASE					
Surface waters, including swamps, rivers, lakes and oceans	-	-	-	-	-
Underground waters	-	-	-	-	-
Sea water	-	-	-	-	-
Water being a by-product of production process	-	-	-	-	-
Rain water collected and stored by the company	-	-	-	-	-
Sewage waters of other companies;	-	-	-	-	-
Municipal and other water supply systems.	Surface source of water - Moskvoretsko-Vazuzskaya and Volzhskaya water systems Northern water treatment station Moswaterchannel JSC	14.92	15.43	17.43	-34
JSC ATOMPROEKT					
Surface waters, including swamps, rivers, lakes and oceans	-	-	-	-	-
Underground waters	-	-	-	-	-
Sea water	-	-	-	-	-
Water being a by-product of production process	-	-	-	-	-
Rain water collected and stored by the company	-	-	-	-	-

List of water supply sources	Name of water supply source	Water consumption (intake), thousand m3			
		2016	2017	2018	(2018-2017)/2017, %
Sewage waters of other companies;	-	-	-	-	-
Municipal and other water supply systems.	Vodokanal SPb SUE	20.46	17.24	18.42	7
JSC "Atomenergoproekt"					
Surface waters, including swamps, rivers, lakes and oceans	-	-	-	-	-
Underground waters	-	-	-	-	-
Sea water	-	-	-	-	-
Water being a by-product of production process	-	-	-	-	-
Rain water collected and stored by the company	-	-	-	-	-
Sewage waters of other companies;	-	-	-	-	-
Municipal and other water supply systems.	Moswaterchannel JSC, Balakovo Vodokanal MUE Volgograd Gorvodokanal; Desnogorsk Public Utility MUE; MUE GTS; Vodokanal MUE; Aquaservice MUE	20.01	22.57	21.74	-4
Novovoronezh Branch Office of JSC "Atomenergoproekt"					
Surface waters, including swamps, rivers, lakes and oceans	no water intake				
Underground waters					
Rain water collected and stored by the company					
Sewage waters of other companies;					
Municipal and other water supply systems.					
TREST ROSSEM LTD. (all branch offices)					
Surface waters, including swamps, rivers, lakes and oceans	no water intake				
Underground waters					
Rain water collected and stored by the company					
Sewage waters of other companies;					
Municipal and other water supply systems.					
JSC "NIKIMT-Atomstroy"					
Surface waters, including swamps, rivers, lakes and oceans	-	-	-	-	-

List of water supply sources	Name of water supply source	Water consumption (intake), thousand m3			
		2016	2017	2018	(2018-2017)/2017, %
Underground waters	-	-	-	-	-
Sea water	-	-	-	-	-
Water being a by-product of production process	-	-	-	-	-
Rain water collected and stored by the company	-	-	-	-	-
Sewage waters of other companies;	-	-	-	-	-
Municipal and other water supply systems.	Moswaterchannel JSC	33.34	28.40	22.41	-21
	Vodokanal MUE, Obninsk	3.78	4.00	3.82	-4
	Seversk Vodokanal JSC	2.29	2.31	2.39	+3
PJSC ESM					
Surface waters, including swamps, rivers, lakes and oceans	no water intake				
Underground waters					
Rain water collected and stored by the company					
Sewage waters of other companies;					
Municipal and other water supply systems.					
ENGINEERING DIVISION*					
Surface waters, including swamps, rivers, lakes and oceans	Tsimlyansk storage lake, the Vilia river	30.50	27.60	76.92	+179
Underground waters	Well of Forest Comfort recreation center, wells No. 3/2010, No. 5/2010	12.25	11.66	10.64	-9
Rain water collected and stored by the company	-	-	-	-	-
Sewage waters of other companies;	-	-	-	-	-
Municipal and other water supply systems.	Nizhny Novgorod Water Channel, the Oka river, Belarus NPP RUE, Mezofold Paks, Zrt., Moskvoretsko-Vazuzskaya and Volzhskaya water systems, Northern water treatment station of Moswaterchannel JSC, Moswaterchannel JSC, Balakovo Vodokanal MUE; Volgograd Gorvodokanal;	122.84	121.34	158.93	+31

List of water supply sources	Name of water supply source	Water consumption (intake), thousand m3			
		2016	2017	2018	(2018-2017)/2017, %
	Desnogorsk Public Utility MUE; MUE GTS; Vodokanal MUE; Aquaservice MUE, Vodokanal SPb SUE, Vodokanal MUE, Obninsk, Seversk Vodokanal JSC				
Total (not considering the natural water inflow)		165.58	160.60	246.49	+53.5
Natural water inflow	Header drainage water in the pit of units under construction No. 1 and 2 of Kursk NPP-2		7,420.40	10,430.20	+40.6
Total (considering the natural water inflow)		165.58	7,581.00	10,676.69	+40.8

Increase in the surface water consumption by 179% by the Engineering Division's companies in 2018 as compared to 2017 is related to water withdrawal by JSC ASE EC Representative Office in the Republic of Belarus from the river Vilia.

Water withdrawal from underground sources has reduced due to organizational and technical measures aimed at the water intake reduction in JSC ASE EC, as well as decreased number of staff of JSC ASE EC Baltic Branch Office. Water intake structures of underground sources are provided with water metering equipment. The water taken from wells is used for domestic and production consumption (fire-fighting pipeline).

For water supply of Kursk NPP-2 construction site, delivered bottled water is used in JSC ASE EC Kursk Branch Office. The water intake structures have not been put in operation.

There is no water withdrawal by TREST ROSSEM LTD. and PJSC ESM.

In the majority of the Engineering Division's companies, water is supplied from urban water supply utilities under contracts.

Water withdrawal at overseas construction facilities is provided by customers.

The water used for water supply is classified as fresh water.

(GRI 303-4) Table 11.5 - Total volume of water discharge with a breakdown by regions of operation and by destination

Type of destination of water discharge	Name of destination of water discharge	Discharge volume, thousand m3			
		2016	2017	2018	(2018-2017)/2017, %
JSC ASE EC (Nizhny Novgorod and Nizhny Novgorod region)					
Surface waters, including swamps, rivers, lakes and oceans	-	-	-	-	-
Underground waters	-	-	-	-	-
Sea water	-	-	-	-	-
Other destinations and the volume of water supplied to other companies:	Nizhny Novgorod Water Channel	27.83	20.53	20.87	+1.6
JSC ASE EC Volgodonsk Branch Office					
Surface waters, including swamps, rivers, lakes and oceans	Central treatment facilities of Rostov NPP	27.10	25.40	6.80	-73
Underground waters	-	-	-	-	-
Sea water	-	-	-	-	-
Other destinations and	-	-	-	-	-

Type of destination of water discharge	Name of destination of water discharge	Discharge volume, thousand m3			
		2016	2017	2018	(2018-2017)/2017, %
the volume of water supplied to other companies:					
JSC ASE Kursk Branch Office					
Surface waters, including swamps, rivers, lakes and oceans	the Seym river (CHER/DNEPR/892/360)	-	7,420.40	10,430.20	+41
Underground waters	-	-	-	-	-
Sea water	-	-	-	-	-
Other destinations and the volume of water supplied to other companies:	-	-	-	-	-
JSC ASE EC Baltic Branch Office					
Surface waters, including swamps, rivers, lakes and oceans	In-18-8 channel	40.50	108.66	104.06	-4
Underground waters	-	-	-	-	-
Sea water	-	-	-	-	-
Other destinations and the volume of water supplied to other companies:	-	-	-	-	-
JSC ASE EC Representative Office in the Republic of Belarus					
Surface waters, including swamps, rivers, lakes and oceans	-	-	-	-	-
Underground waters	-	-	-	-	-
Sea water	-	-	-	-	-
Other destinations and the volume of water supplied to other companies:	Ostovets RUE for housing and community amenities	9.20	7.00	50.36	more than 200
JSC ASE					
Surface waters, including swamps, rivers, lakes and oceans	-	-	-	-	-
Underground waters	-	-	-	-	-
Sea water	-	-	-	-	-
Other destinations and the volume of water supplied to other companies:	Moswaterchannel JSC Mosvodostok SUE	23.83	24.34	26.34	+8.2
JSC ATOMPROEKT					
Surface waters, including swamps, rivers, lakes and oceans	-	-	-	-	-
Underground waters	-	-	-	-	-
Sea water	-	-	-	-	-
Other destinations and the volume of water supplied to other	Vodokanal SPb SUE	49.05	40.68	34.58	-15

Type of destination of water discharge	Name of destination of water discharge	Discharge volume, thousand m3			
		2016	2017	2018	(2018-2017)/2017, %
companies:					
JSC "Atomenergoproekt"					
Surface waters, including swamps, rivers, lakes and oceans	-	-	-	-	-
Underground waters	-	-	-	-	-
Sea water	-	-	-	-	-
Other destinations and the volume of water supplied to other companies:	Mosvodostok SUE; Balakovo Vodokanal MUE; Volgograd Gorvodokanal; Desnogorsk Public Utility MUE; MUE GTS; Vodokanal MUE; Aquaservice MUE	25.80	31.12	85.59	+175
JSC "NIKIMT-Atomstroy"					
Surface waters, including swamps, rivers, lakes and oceans	--	-	-	-	-
Underground waters	-	-	-	-	-
Sea water	-	-	-	-	-
Other destinations and the volume of water supplied to other companies:	Moswaterchannel JSC Vodokanal MUE, Obninsk Seversk Vodokanal JSC Mosvodostok SUE	81.32	75.90	76.12	+0.3
ENGINEERING DIVISION					
Surface waters, including swamps, rivers, lakes and oceans	Central treatment facilities of Rostov NPP, the Seym river (CHER/DNIEPER/892/360), Channel In-18-8	67.60	7,554.46	10,541.06	+40
Underground waters	-	-	-	-	-
Sea water	-	-	-	-	-
Other destinations and the volume of water supplied to other companies:	Nizhny Novgorod Vodokanal; Ostovets RUE for housing and community amenities; Mosvodokanal JSC; Mosvodostok SUE; Vodokanal SPb SUE Balakovo Vodokanal MUE; Volgograd Gorvodokanal; Desnogorsk Public Utility MUE; MUE GTS; Vodokanal MUE; Aquaservice MUE; Vodokanal MUE, Obninsk;	217.02	199.57	293.86	+47.2

Type of destination of water discharge	Name of destination of water discharge	Discharge volume, thousand m3			
		2016	2017	2018	(2018-2017)/2017, %
	Seversk Vodokanal JSC				
TOTAL:		284.62	7,754.03	10,834.92	+40

Table 11.6 - Fuel types used in the Engineering Division

Fuel type	Fuel consumption/ fuel purchase expenses						(2018-2017)/2017, %
	2016		2017		2018		
	t	mln. rubles	t	mln. rubles	t	mln. rubles	
JSC ASE EC (Nizhny Novgorod and Nizhny Novgorod region)							
Motor petrol	266.80	12.18	193.33	8.76	165.97	8.00	-14
Diesel fuel	104.50	3.88	84.76	3.46	103.72	4.65	22
Fuel oil	-	-	-	-	-	-	-
Natural gas	-	-	-	-	-	-	-
Coal	104.30	0.52	124.00	0.61	119	0.73	-4
Other	-	-	-	-	-	-	-
JSC ASE EC Volgodonsk Branch Office							
Motor petrol	196.10	8.67	123	5	8.32	4.35	-93
Diesel fuel	158.90	5.59	53	2	28.30	1.30	-47
Fuel oil	-	-	-	-	-	-	-
Natural gas	-	-	-	-	-	-	-
Coal	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-
JSC ASE EC Kursk Branch Office							
Motor petrol	25.00	1.00	33.00	1.10	55.00	2.70	67
Diesel fuel	31.00	1.10	177.00	5.80	291.00	12.40	64
Fuel oil	-	-	-	-	-	-	-
Natural gas	-	-	-	-	-	-	-
Coal	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-
JSC ASE EC Baltic Branch Office							
Motor petrol	16.09	0.81	13.28	0.68	13.33	0.67	0
Diesel fuel	4.14	0.19	4.95	0.22	4.08	0.18	-18
Fuel oil	-	-	-	-	-	-	-
Natural gas	-	-	-	-	-	-	-
Coal	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-
JSC ASE EC Representative Office in the Republic of Belarus							
Motor petrol	98.16	4.42	92.09	4.12	114.09	6.18	24
Diesel fuel	126.83	25.7	138.73	6.15	164.36	8.62	18
Fuel oil	-	-	-	-	-	-	-
Natural gas	-	-	-	-	-	-	-
Coal	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-
JSC ASE EC Branch Office in Hungary							
Motor petrol	-	-	27.00	3.26	9.00	1.09	-67

Fuel type	Fuel consumption/ fuel purchase expenses						(2018-2017)/ 2017, %
	2016		2017		2018		
	t	mln. rubles	t	mln. rubles	t	mln. rubles	
Diesel fuel	-	-	-	-	-	-	-
Fuel oil	-	-	-	-	-	-	-
Natural gas	-	-	-	-	-	-	-
Coal	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-
JSC ASE							
Motor petrol	106.95	4.64	94.08	4.41	93.07	4.67	-1
Diesel fuel	4.20	0.15	5.90	0.23	6.80	0.31	15
Fuel oil	-	-	-	-	-	-	-
Natural gas	-	-	-	-	-	-	-
Coal	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-
JSC ATOMPROEKT							
Motor petrol	89.66	3.23	63.49	2.09	64.05	2.88	1
Diesel fuel	76.75	1.38	41.82	1.28	39.16	1.57	-6
Fuel oil	35.07	1.08	-	-	-	-	not applicable
Natural gas	-	-	-	-	-	-	-
Coal	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-
JSC "Atomenergoproekt"							
Motor petrol	-	-	105.06	3.15	101.40	3.70	-3
Diesel fuel	7.00	0.21	12.00	0.45	19.00	7.25	58
Fuel oil	-	-	-	-	-	-	-
Natural gas	-	-	27.00	0.23	-	-	not applicable
Coal	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-
Novovoronezh Branch Office of JSC "Atomenergoproekt"							
Motor petrol	-	-	-	-	-	-	-
Diesel fuel	-	-	-	-	62.80	3.50	not applicable
Fuel oil	-	-	-	-	-	-	-
Natural gas	-	-	-	-	-	-	-
Coal	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-
Volgodonsk Branch Office of TREST ROSSEM LTD.							
Motor petrol	13.90	0.57	10.30	0.41	-	-	not applicable
Diesel fuel	184.55	6.46	65.54	2.94	-	-	not applicable
Fuel oil	-	-	-	-	-	-	-
Natural gas	-	-	-	-	-	-	-
Coal	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-
Representative Office of TREST ROSSEM LTD. in the Republic of Belarus							
Motor petrol	-	-	-	-	25.05	1.10	not applicable
Diesel fuel	-	-	-	-	214.32	8.98	not applicable
Fuel oil	-	-	-	-	-	-	-
Natural gas	-	-	-	-	-	-	-

Fuel type	Fuel consumption/ fuel purchase expenses						
	2016		2017		2018		(2018-2017)/ 2017, %
	t	mln. rubles	t	mln. rubles	t	mln. rubles	
Coal	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-
Kursk Branch Office of TREST ROSSEM LTD.							
Motor petrol	-	-	-	-	46.49	2.04	not applicable
Diesel fuel	-	-	-	-	338.32	14.18	not applicable
Fuel oil	-	-	-	-	-	-	-
Natural gas	-	-	-	-	-	-	-
Coal	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-
Branch Office of TREST ROSSEM LTD. in the People's Republic of Bangladesh							
Motor petrol	-	-	-	-	-	-	-
Diesel fuel	-	-	-	-	30.56	2.53	not applicable
Fuel oil	-	-	-	-	-	-	-
Natural gas	-	-	-	-	-	-	-
Coal	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-
JSC "NIKIMT-Atomstroy"							
Motor petrol	252.25	9.06	169.43	5.99	159.81	7.1	-6
Diesel fuel	593.73	20.48	362.81	14.25	383.76	14.76	6
Fuel oil	-	-	-	-	-	-	-
Natural gas	1525.01	9.70	1249.93	9.54	1085.61	8.47	-13
Coal	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-
PJSC ESM							
Motor petrol	278.44	11.36	282.45	11.57	206.78	9.30	- 27
Diesel fuel	421.08	15.65	336.15	12.84	299.94	13.98	-11
Fuel oil	-	-	-	-	-	-	-
Natural gas	-	-	-	-	-	-	-
Coal	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-
ENGINEERING DIVISION*							
Motor petrol	1,343.35	55.94	1,206.51	50.55	1,062.36	53.77	-12
Diesel fuel	1,712.68	80.79	1,282.66	49.63	1,986.12	94.20	55
Fuel oil	35.07	1.08	0	0	0	0	-
Natural gas	1,525.01	9.70	1,276.93	9.77	1,085.61	8.47	-15
Coal	104.30	0.52	124.00	0.61	119.00	0.73	-4
Other	-	-	-	-	-	-	-

*The data earlier provided in the Public Annual Reports for 2016, 2017 was recalculated for 2016, 2017, 2018 due to the following:

- exclusion of information about Sibirsky Orgstroyproekt JSC caused by the lack of activity from the 2nd half-year of 2017 and the enterprise's being liquidated;
- exclusion of information about VdMU LLC, SMU No. 1 LLC, JSC "Spb EIZ";
- closing/opening of TREST ROSSEM LTD. branch offices;
- separation of information regarding Novovoronezh NPP-2 Construction Directorate in JSC "Atomenergoproekt";

Table 11.7 - Generation of wastes as per hazard categories and ways of processing

Generation of wastes as per hazard categories and ways of processing	Waste volume, tons			
	2016	2017	2018	(2018-2017)/2017, %
JSC ASE EC (Nizhny Novgorod and Nizhny Novgorod region)				
I hazard class waste (extremely hazardous), including:	0.14	0.41	0.41	1
- handed over to other specialized companies for decontamination.	0.14	0.41	0.41	1
II hazard class waste (high hazard), including:	-	-	-	-
III hazard class waste (moderately hazardous), including:	-	-	-	-
IV hazard class waste (low-hazard), including:	335.10	342.91	345.63	1
- handed over to other specialized companies for decontamination.	1.70	-	-	-
- handed-over to the landfill site of other company	333.30	342.91	345.63	1
V hazard class waste (no significant hazard), including:	49.00	58.31	52.96	-9
- handed over to other specialized companies for use	7.40	6.69	6.11	-9
- handed-over to the landfill site of other company	41.60	51.62	46.85	-9
Total for I-V hazard category wastes	384.21	401.63	399.00	-1
JSC ASE EC Volgodonsk Branch Office				
I hazard class waste (extremely hazardous), including:	0.19	0.72	0.19	-73
- storage on company site	-	-	0.19	not applicable
- handed over to other specialized companies for decontamination	0.19	0.72	-	not applicable
II hazard class waste (high hazard), including:	0.21	0.73	0.49	-34
- handed over to other specialized companies for decontamination	0.21	0.73	0.49	-34
III hazard class waste (moderately hazardous), including:	-	-	0.01	not applicable
- handed over to other specialized companies for decontamination	-	-	0.01	not applicable
IV hazard class waste (low-hazard), including:	259.90	268.00	126.80	-53
- handed over to other specialized companies for decontamination	-	-	1.0	not applicable
- handed-over to the landfill site of other company	259.90	268.00	125.80	-53
V hazard class waste (no	83.30	85.10	45.00	-47

Generation of wastes as per hazard categories and ways of processing	Waste volume, tons			
	2016	2017	2018	(2018-2017)/2017, %
significant hazard), including:				
- handed-over to the landfill site of other company	83.30	85.10	45.00	-47
Total for I-V hazard category wastes	343.60	354.56	172.50	-51
JSC ASE EC Kursk Branch Office				
I hazard class waste (extremely hazardous), including:	0.01	0.08	0.01	- 82
- handed over to other specialized companies for decontamination	0.01	0.08	0.01	- 82
II hazard class waste (high hazard), including:	-	-	-	-
III hazard class waste (moderately hazardous), including:	-	-	-	-
IV hazard class waste (low-hazard), including:	23.67	36.05	48.60	35
- handed over to other specialized companies for use	-	0.83	1.90	129
- handed-over to the landfill site of other company	23.67	35.22	46.70	33
V hazard class waste (no significant hazard), including:	-	2.24	11.30	more than +200
- handed-over to the landfill site of other company	-	2.24	11.30	more than +200
Total for I-V hazard category wastes	23.68	38.37	59.91	56
JSC ASE EC Baltic Branch Office				
I hazard class waste (extremely hazardous), including:	0.02	0.01	0.04	171
- handed over to other specialized companies for decontamination	0.02	0.01	0.04	171
II hazard class waste (high hazard), including:	0.08	-	-	-
- handed over to other specialized companies for use	0.08	-	-	-
III hazard class waste (moderately hazardous), including:	0.16	-	-	-
- handed over to other specialized companies for use	0.16	-	-	-
IV hazard class waste (low-hazard), including:	86.80	34.70	14.80	-57
- handed over to other specialized companies for use	0.10	-	-	-
- handed-over to the landfill site of other company	86.70	34.70	14.80	-57
V hazard class waste (no significant hazard), including:	187.70	150.00	-	not applicable
- handed over to other specialized companies for use	0.20	-	-	not applicable
- handed-over to the landfill site of other company	187.50	150.00	-	not applicable

Generation of wastes as per hazard categories and ways of processing	Waste volume, tons			
	2016	2017	2018	(2018-2017)/2017, %
Total for I-V hazard category wastes	274.76	184.71	14.84	-92
JSC ASE EC Representative Office in the Republic of Belarus				
I hazard class waste (extremely hazardous), including:	-	0.05	0.06	26
- storage on company site	-	-	0.06	not applicable
- handed over to other specialized companies for decontamination	-	0.05	-	not applicable
II hazard class waste (high hazard), including:	-	-	-	-
III hazard class waste (moderately hazardous), including:	-	2.91	0.70	-76
- handed over to other specialized companies for use	-	2.91	0.70	-76
IV hazard class waste (low-hazard), including:	3.00	1.24	-	not applicable
- handed over to other specialized companies for use	3.00	1.24	-	not applicable
V hazard class waste (no significant hazard), including:	38.31	41.41	46.93	13
- handed over to other specialized companies for use	38.31	0.02	-	not applicable
- handed-over to the landfill site of other company	-	41.39	46.93	13
Total for I-V hazard category wastes	41.31	45.61	47.69	5
JSC ASE				
I hazard class waste (extremely hazardous), including:	0.55	0.50	0.21	-59
- handed over to other specialized companies for decontamination	0.55	0.50	0.21	-59
II hazard class waste (high hazard), including:	-	-	-	-
III hazard class waste (moderately hazardous), including:	-	-	-	-
IV hazard class waste (low-hazard), including:	224.60	303.10	244.50	-19
- handed over to other specialized companies for decontamination	2.00	-	1.60	not applicable
- handed over to other specialized companies for disposal	-	1.60	-	not applicable
- handed-over to the landfill site of other company	222.60	301.50	242.90	-19
V hazard class waste (no significant hazard), including:	0.60	11.00	0.70	-94
- handed-over to the landfill site of other company	0.60	11.00	0.70	-94
Total for I-V hazard	225.79	314.60	245.41	-22

Generation of wastes as per hazard categories and ways of processing	Waste volume, tons			
	2016	2017	2018	(2018-2017)/2017, %
category wastes				
JSC ATOMPROEKT				
I hazard class waste (extremely hazardous), including:	0.45	0.32	-	not applicable
- handed over to other specialized companies for decontamination	0.45	0.32	-	not applicable
II hazard class waste (high hazard), including:	-	-	-	-
III hazard class waste (moderately hazardous), including:	-	-	-	-
IV hazard class waste (low-hazard), including:	200.50	196.20	228.40	16
- handed over to other specialized companies for use	42.80	-	-	not applicable
- handed-over to the landfill site of other company	157.70	196.20	228.40	16
V hazard class waste (no significant hazard), including:	43.60	2.10	12.49	more than +200
- handed over to other specialized companies for use	20.40	2.10	12.49	more than +200
- handed-over to the landfill site of other company	23.20	-	-	not applicable
Total for I-V hazard category wastes	244.44	198.62	240.89	21
JSC "Atomenergoproekt"				
I hazard class waste (extremely hazardous), including:	0.57	0.45	0.48	6
- handed over to other specialized companies for decontamination	0.57	0.45	0.48	6
II hazard class waste (high hazard), including:	0.05	0.52	0.21	-60
- handed over to other specialized companies for decontamination	0.05	0.52	0.21	- 60
III hazard class waste (moderately hazardous), including:	2.45	1.80	2.00	12
- handed over to other specialized companies for use	0.75	-	-	not applicable
- handed over to other specialized companies for decontamination	1.70	1.79	2.00	12
IV hazard class waste (low-hazard), including:	1,286.89	1,203.31	786.56	- 35
- handed over to other specialized companies for decontamination	1.86	2.07	1.04	- 50
- handed-over to the landfill site of other company	1,285.03	1,201.24	785.52	- 35
V hazard class waste (no	216.70	259.01	133.30	- 49

Generation of wastes as per hazard categories and ways of processing	Waste volume, tons			
	2016	2017	2018	(2018-2017)/2017, %
significant hazard), including:				
- handed over to other specialized companies for use	3.43	14.18	-	not applicable
- handed-over to the landfill site of other company	213.27	224.83	133.29	- 41
Total for I-V hazard category wastes	1,507.28	1,466.69	922.54	- 37
Novovoronezh Branch Office of JSC "Atomenergoproekt"				
I hazard class waste (extremely hazardous), including:	-	0.02	-	not applicable
- handed over to other specialized companies for decontamination	-	0.02	-	not applicable
II hazard class waste (high hazard), including:	-	-	-	-
III hazard class waste (moderately hazardous), including:	0.62	1.59	0.24	- 85
- storage on company site	-	-	0.07	not applicable
- handed over to other specialized companies for decontamination	0.62	1.59	0.17	- 89
IV hazard class waste (low-hazard), including:	-	-	0.40	not applicable
- handed over to other specialized companies for decontamination	-	-	0.40	not applicable
V hazard class waste (no significant hazard), including:	-	-	-	-
Total for I-V hazard category wastes	0.62	1.61	0.64	- 60
Volgodonsk Branch Office of TREST ROSSEM LTD.				
I hazard class waste (extremely hazardous), including:	0.02	-	-	not applicable
- handed over to other specialized companies for decontamination	0.02	-	-	not applicable
II hazard class waste (high hazard), including:	-	-	-	-
III hazard class waste (moderately hazardous), including:	0.11	-	-	not applicable
- handed over to other specialized companies for use	0.11	-	-	not applicable
IV hazard class waste (low-hazard), including:	-	2.10	-	not applicable
- handed over to other specialized companies for decontamination	-	2.10	-	not applicable
V hazard class waste (no significant hazard), including:	346.00	72.40	-	not applicable
- handed over to other specialized companies for use	346.00	72.40	-	not applicable

Generation of wastes as per hazard categories and ways of processing	Waste volume, tons			
	2016	2017	2018	(2018-2017)/2017, %
Total for I-V hazard category wastes	346.33	74.50	-	not applicable
Representative Office of TREST ROSSEM LTD. in the Republic of Belarus				
I hazard class waste (extremely hazardous), including:	-	-	0.26	not applicable
- storage on company site	-	-	0.26	not applicable
II hazard class waste (high hazard), including:	-	-	-	-
III hazard class waste (moderately hazardous), including:	-	-	1.96	not applicable
- storage on company site	-	-	1.96	not applicable
IV hazard class waste (low-hazard), including:	-	-	224.03	not applicable
- handed over to other specialized companies for decontamination	-	-	4.06	not applicable
- storage on company site	-	-	220.00	not applicable
V hazard class waste (no significant hazard), including:	-	-	817.00	not applicable
- storage on company site	-	-	349.44	not applicable
- handed-over to the landfill site of other company	-	-	467.54	not applicable
Total for I-V hazard category wastes	-	-	1,043.22	not applicable
Kursk Branch Office of TREST ROSSEM LTD.				
I hazard class waste (extremely hazardous), including:	-	-	-	-
II hazard class waste (high hazard), including:	-	-	-	-
III hazard class waste (moderately hazardous), including:	-	-	-	-
IV hazard class waste (low-hazard), including:	-	-	249.90	not applicable
- handed-over to the landfill site of other company	-	-	249.90	not applicable
V hazard class waste (no significant hazard), including:	-	-	303.60	not applicable
- handed-over to the landfill site of other company	-	-	303.60	not applicable
Total for I-V hazard category wastes	-	-	553.50	not applicable
JSC "NIKIMT-Atomstroy"				
I hazard class waste (extremely hazardous), including:	0.26	0.37	0.61	66

Generation of wastes as per hazard categories and ways of processing	Waste volume, tons			
	2016	2017	2018	(2018-2017)/2017, %
- handed over to other specialized companies for decontamination	0.26	0.37	0.61	66
II hazard class waste (high hazard), including:	0.90	-	-	-
- handed over to other specialized companies for decontamination	0.90	-	-	-
III hazard class waste (moderately hazardous), including:	3.27	0.08	3.56	more than +200
- handed over to other specialized companies for use	2.25	-	-	-
- handed over to other specialized companies for decontamination	0.50	0.08	3.40	more than +200
- handed-over to the landfill site of other company	0.53	-	0.161	not applicable
IV hazard class waste (low-hazard), including:	437.61	397.94	583.40	47
- handed over to other specialized companies for use	32.91	0.50	-	-
- handed over to other specialized companies for decontamination	45.70	-	-	-
- handed-over to the landfill site of other company	359.03	397.44	583.40	47
V hazard class waste (no significant hazard), including:	714.77	746.43	764.15	2
- used for in-house manufacture	46.85	-	-	-
- handed over to other specialized companies for use	38.84	58.80	11.08	-81
- handed-over to the landfill site of other company	629.09	681.07	753.07	11
- handed over to other specialized companies for decontamination	-	6.56	-	-
Total for I-V hazard category wastes	1157.28	1144.82	1351.72	18
PJSC ESM				
I hazard class waste (extremely hazardous), including:	0.08	0.04	0.30	more than +200
- storage on company site	0.08	0.03	-	-
- handed over to other specialized companies for decontamination	-	0.01	0.30	more than +200
II hazard class waste (high hazard), including:	-	0.31	-	not applicable
- handed over to other specialized companies for decontamination	-	0.31	-	not applicable
III hazard class waste (moderately hazardous), including:	1.58	1.45	-	not applicable

Generation of wastes as per hazard categories and ways of processing	Waste volume, tons			
	2016	2017	2018	(2018-2017)/2017, %
- storage on company site	1.58	-	-	not applicable
- handed over to other specialized companies for use	-	1.20	-	not applicable
- handed over to other specialized companies for decontamination	-	0.25	-	not applicable
IV hazard class waste (low-hazard), including:	83.01	131.77	284.99	116
- storage on company site	0.40	-	-	not applicable
- handed over to other specialized companies for use	-	2.76	0.93	-66
- handed over to other specialized companies for decontamination	14.96	-	-	not applicable
- handed-over to the landfill site of other company	67.65	129.01	284.06	120
V hazard class waste (no significant hazard), including:	493.82	374.34	221.13	-41
- storage on company site	1.39	-	-	not applicable
- handed over to other specialized companies for use	41.454	48.88	26.916	-45
- handed-over to the landfill site of other company	450.98	325.46	194.22	-40
Total for I-V hazard category wastes	578.48	507.89	506.42	0
ENGINEERING DIVISION*				
I hazard class waste (extremely hazardous), including:	2.30	2.96	2.57	-13
- storage on company site	0.08	0.03	0.51	more than +200
- handed over to other specialized companies for decontamination	2.22	2.94	2.06	-30
II hazard class waste (high hazard), including:	1.23	1.59	0.70	-55
- handed over to other specialized companies for use	0.08	-	-	not applicable
- handed over to other specialized companies for decontamination	1.18	1.56	0.70	-55
III hazard class waste (moderately hazardous), including:	8.20	7.82	8.48	8
- storage on company site	1.58	-	2.03	not applicable
- handed over to other specialized companies for use	3.27	4.11	0.70	-83
- handed over to other specialized companies for decontamination	2.82	3.71	5.59	51
- handed-over to the landfill site of other company	0.53	-	0.16	not applicable
IV hazard class waste (low-hazard), including:	2,941.074	2,917.32	3,138.00	8
- storage on company site	0.40	-	220.00	not applicable
- handed over to other specialized companies for use	78.81	5.33	2.83	-47

Generation of wastes as per hazard categories and ways of processing	Waste volume, tons			
	2016	2017	2018	(2018-2017)/2017, %
- handed over to other specialized companies for decontamination	66.19	4.17	8.10	94
- handed over to other specialized companies for disposal	-	1.60	-	not applicable
- handed-over to the landfill site of other company	2,795.57	2,906.22	2,907.11	0
V hazard class waste (no significant hazard), including:	2,173.79	1,802.34	2,408.53	34
- used for in-house manufacture	46.85	-	-	not applicable
- storage on company site	1.40	-	349.44	not applicable
- handed over to other specialized companies for use	496.03	203.07	56.60	-72
- handed over to other specialized companies for decontamination	-	6.56	-	not applicable
- handed-over to the landfill site of other company	1,629.53	1,572.71	2,002.49	27
Total for I-V hazard category wastes	5,126.60	4732.00	5,558.30	17

*The data earlier provided in the Public Annual Report for 2016, 2017 was recalculated for 2016, 2017, 2018 due to the following:

- exclusion of information about Sibirsky Orgstroyproekt JSC caused by the lack of activity from the 2nd half-year of 2017 and the enterprise's being liquidated;
- exclusion of information about VdMU LLC, SMU No. 1 LLC, JSC "Spb EIZ";
- closing/opening of TREST ROSSEM LTD. branch offices;
- separation of information regarding the Directorate for Novovoronezh NPP-2 in JSC "Atomenergoproekt";

(GRI 301-1) Table 11.8 - Information about the weight of the disposed paper products

Name of company (object/name of materials used including paper products)	Weight of materials used, tons			
	2016, t	2017, t	2018, t	(2018 - 2017)/2017, %
JSC ASE EC	No data	170.48	91.17	-46.5
JSC ASE	No data	12.00	9.90	-17.5
JSC ATOMPROEKT	No data	49.9	46.70	-6.4
JSC "Atomenergoproekt"	No data	48.10	83.92	+ 74.5
JSC "NIKIMT-Atomstroy"	No data	27.28	30.10	+10.3
PJSC ESM (with account of branch offices)	No data	12.87	1.63	-37.1
TREST ROSSEM LTD. (with account of branch offices)	No data	No data	14.39	not applicable
Total for the Engineering Division	No data	320.63*	277.81	-13.4

* the data is updated

Table 11.10 - Surface of applied and reclaimed soil

Title	Total area of used land, m2				Total area of reclaimed land, m2			
	2016	2017	2018	2018/2017 %	2016	2017	2018	(2018- 2017)/201 7 %
JSC ASE EC Volgodonsk Branch Office	83,747	83,747	-	-	-	-	-	-
JSC ASE EC Kursk Branch Office	997,000	-	-	-	27,667	-	-	-
TOTAL	997,000	83,747	-	-	27,667	-	-	-

Table 11.11 Expenditures for environmental protection measures, mln. rubles

Name of company	2016	2017	2018 plan	2018 fact	(2018-2017)/ 2017, %
JSC ASE EC (Nizhny Novgorod and Nizhny Novgorod region)	2.59	2.73	-	5.44	99
JSC ASE EC Volgodonsk Branch Office	0.31	0.67	0.43	0.43	-36
JSC ASE EC Kursk Branch Office	0.25	2.04	-	1.05	-49
JSC ASE EC Baltic Branch Office	0.77	0.73	2.40	2.40	229
JSC ASE EC Representative Office in the Republic of Belarus	0.11	0.27	0.10	0.04	-85
JSC ASE EC Branch Office in Hungary	-	-	-	-	-
JSC ASE	1.29	2.29	-	1.64	-28
JSC ATOMPROEKT	3.38	1.12	2.40	2.34	109
JSC "Atomenergoproekt"	1.24	1.98	1.93	0.71	-64
Novovoronezh Branch Office of JSC "Atomenergoproekt"	0.73	0.68	0.86	0.84	24
Volgodonsk Branch Office of TREST ROSSEM LTD.	0.03	0.03	-	-	not applicable
Representative Office of TREST ROSSEM LTD. in the Republic of Belarus	-	-	-	0.39	not applicable
Kursk Branch Office of TREST ROSSEM LTD.	-	-	-	0.95	not applicable
Branch Office of TREST ROSSEM LTD. in the People's Republic of Bangladesh	-	-	-	0.38	not applicable
JSC "NIKIMT-Atomstroy"	4.18	5.01	3.50	3.50	-30
PJSC ESM	0.04	0.10	0.02	0.02	-83
Total for Rosatom State Corporation Engineering Division*	14.90	17.66	11.64	20.14	14

Appendix 12. Additional information to chapter “Manufactured Capital”

Table 12.1 - Reducing the time of designing and construction as a result of implementation of Rosatom Production System projects (RPS)

Plans for reduction of the time period Project	Purpose	
	Days	% of the basis status
Kursk NPP-2		
Completion of arrangement of outer contour walls from elevation - 5.450 till elevation -2.150 in axes 3-5 of reactor building (10 UJA)”	48	23%
Optimization of processes to achieve the milestone Molten Corium Trap Installation at Kursk NPP-2 Unit 1	67	47%
“Reduced time of process of CEW completion for workshop of manufacturing of reinforced metal blocks at Kursk NPP-2 construction base”	13	3,2%
Handover of artificial foundation for installation of sensors under 20UJA foundation slab of Kursk NPP-2	13	6,2%
Start of concreting of the foundation slab of the Unit pump station (10URS) at Kursk-2 NPP	4	2%
Completion of arrangement of the concrete bedding of the foundation slab at Kursk-2 NPP 20 UJA building	21	32%
Novovoronezh NPP-2		
Optimization of the process of installation and termination of auxiliary transducers 20CPW03, 20CPW04, 20CPW05 KTH for stage PIC at Novovoronezh NPP-2 Unit 2	2	200
Reduction of the time of equipment and pipelines installation for filling of the spent fuel pool at Novovoronezh NPP-2 Unit 2	30	57
Optimization of the process of installation of stage 1 CEP 20LCB11-13AP001 at Novovoronezh NPP-2 Unit 2	32	64
Reduction of the time of QTZ-315 tower crane installation at Novovoronezh NPP-2 Unit 2	14	67
Enhancement of performance of installation of the physical barriers at 20 UKC facility of Novovoronezh NPP-2 Unit 2	18	56
Reduction of the time of installation of 20PAH15AP001, 20PAH25AP001, 20PAH35AP001, 20PAH45AP001 locks for ball return pumps at Novovoronezh NPP-2 Unit 2	4	50
Reduction of time of alignment of the HPC flow channel at Novovoronezh NPP-2 Unit 2	9	64
Optimization of the process of the fire alarm installation in 20URS building at NPP-2	83	79
Reduction of installation of temporary pipelines designated for HT providing cold and hot trial run at NVNPP-2	15	43
Reduction of time of heat and installation works performance for 21UBN facility at NVNPP-2	40	83
Optimization of process of installation of PGB50-60 systems in 20 UKC building at NVNPP-2	37	82
Enhancement of performance of physical barriers installation in 20 UMA building at NVNPP-2	1	40
Enhancement of performance of works for installation and termination of LCR cabinets at NVNPP-2	4	133
Enhancement of performance of works necessary for installation of separate drain pipeline (LCT47) in the turbine building at NVNPP-2	128	70
Optimization of time of reactor assembly	103	58
Optimization of time for installation of process pipelines for the cold and hot trial run stage	154	92
Reduction of time of heat installation works performance for 21UBN facility (Standby diesel power plant building of emergency electric power supply system at NVNPP-2 Unit 2).	33	73
Optimization of the SVCS cabinet installation process in 20 URS building at NVNPP-2 Unit 2	20	74

Plans for reduction of the time period Project	Purpose	
	Days	% of the basis status
Optimization of the installation process of 20LDF system pipeline at NVNPP-2 Unit 2	11	65
Optimization of availability and timely beginning of the working shift during installation of LSC system installation at NVNPP-2	30	40
Reduction of time of installation works for installation of DN57 pipeline of LCB system at 20UMA facility	21	58
Reduction of the time of installation of grids provided with the engineering security devices	11	52
Reduction of time of 20UMX roofing installation	21	84
Optimization of the process of availability and timely beginning of the working shift at NVNPP-2 of Yuhemets S.V team including 4 persons	30	59
Optimization of the process of availability and timely beginning of the working shift at NVNPP-2 of Kapustina D.V team including 4 persons	30	55
Reduction of time of installation works for installation of DN57 pipeline of LCB system at 20UMA facility	22	61
Reduction of the time of installation of grids equipped with the engineering security devices	10	48
Reduction of the time of handover of rooms for the cold phase stage A-3.1 Hydraulic Tests and Circulation Flushing of the Primary Circuit, substage A-3 cold and hot run	28	12
Optimization of process of performance of works for installation of 20 UJA ventilation systems, reactor building	117	89
Reduction of time of general construction works performance for 20URS Unit pump station facility	45	73
Reduction of time of installation of stator winding and thrust rings water cooling system	60	82
Reduction of time of pipelines installation at LCE10 system at 20UMA facility	30	67
Optimization of works for installation of LCQ50 pipeline system	69	75
Optimization of works for installation of LBG10-70 0002 pipeline system design	5	63
Optimization of works for installation of PGB60-70 pipeline system	10	30
Reduction of time of installation of MKF01-50 stator winding and thrust rings water cooling system in 20UMA building	63	86
Optimization of works for installation of KPN pipeline system design in 20 UKC building	70	81
Optimization of time of installation of LRAW solidification pipelines by means of KPN concreting in 20UKC building	70	81
Optimization of process of performance of works for finishing of 20 UJA rooms. Reactor building	98	75
Optimization of works for supply of power to SVCS cabinet in 20UMX building NVNPP-2 Unit 2	5	56
Reduction of time of revision of the crane rail in 20UJA building	3	21
RPS-projects NB-DC		
Optimization of the process of manufacturing of irrigator units	70	233
Optimization of process of achieving milestone Commencement of Hot and Cold Run at Novovoronezh NPP-2 Unit 2	158	79
Optimization of time of installation of high-voltage gas-insulated bus ducts at NVNPP-2	68	83
Optimization of process of agreement and permission procedures for obtaining the permission to performance of works by subcontractors at NVNPP2	12	69
Optimization of process of installation of unit removable heat insulation of equipment and pipelines of the primary circuit of Novovoronezh NPP-2 Unit 2	10	83
Reduction of the time of handover of rooms for the cold phase stage A-3.1 Hydraulic Tests and Circulation Flushing of the Primary	45	56

Plans for reduction of the time period Project	Purpose	
	Days	% of the basis status
Circuit, Substage A-3 cold and hot run		
Reduction of time of procedures of starting the hydraulic tests during NVNPP-2 Unit 2 construction	2	50
Overseas sites		
Belarus NPP		
Optimization of the process of MCP welding at Belarus NPP Unit 2	80	41
Reduction of time of termination of electric valves in 10UJA containment of Belarus NPP	14	50
Optimization of process of the modernized containment pre-stressing system installation and cable laying to stage of hydraulic tests and circulation flushing	120	46
Optimization of installation of ECCS tanks at Belarus NPP Unit 2	9	25
Installation of oil ducts of the control system	91	22
Optimization of installation of the autonomous fire-fighting system in 10UUC building	32	26
Optimization of the process of the dome arrangement of the reactor building exterior containment until elevation +59.850 of Belarus NPP Unit 1	470	41
Optimization of the process of laying of the cable conductor products for Physical Start-up stage of of Belarus NPP Unit 1	2	65
Rooppur NPP		
Optimization of the process of starting the foundation slab concreting of Rooppur NPP Unit 2 reactor building	214	45
Optimization of the process of customs clearance, supply and incoming inspection of materials and equipment	45	36
	10	50
	5	17
Optimization of process of passenger transportations between Rooppur NPP site and Dhaka International Airport	0	100
	0	75
Optimization of process of the incoming inspection of the molten corium trap casing	3	93
Optimization of the starting of installation of the molten corium trap casing	318	5
Optimization of process of the incoming inspection of the equipment for mechanization of the construction site	7	80
Implementation of the labor protection control at Rooppur NPP site	0	100
El-Dabaa NPP		
Optimization of process of development and handover to the Owner of the documentation for obtaining of the construction license for El-Dabaa NPP Units 1, 2	0	Fulfilled in the time of basic state
Akkuyu NPP		
Optimization of the process with the purpose of achieving the 1st concrete milestone during the construction of Akkuyu NPP Unit 1.	181	33
Obtaining TAEK license for construction of Akkuyu NPP Unit 1	183	33
Optimization of CEW at the Western berth of Akkuyu NPP	<i>In process of implementation</i>	

Plans for reduction of the time period	Purpose	
Project	Days	% of the basis status
Optimization of the process of preparation for the beginning of dispatch of the MCC embedded parts from the manufacturing plant	16	53
Optimization of the process of the foundation slab concreting of Akkuyu NPP Unit 1 reactor building	<i>In process of implementation</i>	
Kudankulam NPP		
Optimization of the process of dispatching of the generator for Unit 3 turbine for Kudankulam NPP	0	Fulfilled in the time of basic status
Reduction of time of the process for agreement of the quality plans based on the example of Kudankulam NPP	<i>In process of implementation</i>	
Tianwan NPP		
Ensuring the timely physical start-up of Tianwan NPP Unit 4	36	27

Appendix 13. Additional information to chapter “Human Capital”

Table 13.1 - Number of employees dynamics, persons

Name of the company	2015 fact	2016 fact	2017 fact	2018 planned	2018 fact	(2018-2017)/2017, %
JSC ASE	749	504	637	968	1 524	139%
JSC ASE EC	4 057	4 349	4 635	5 068	4 741	2%
JSC “Atomenergoproekt”	2 806	2 409	2 497	2 522	2 508	0%
JSC ATOMPROEKT	3 150	2 086	2 292	2 333	2 498	9%
JSC “NIKIMT-Atomstroy”	2 058	1 708	2 163	2 053	3 640	68%
PJSC ESM	2 726	1 964	2 412	2 076	2 820	17%
TREST ROSSEM LTD.	2 209	1 542	2 031	3 253	5 823	187%
Total for Engineering Division	17 755	14 562	16 667	18 273	23 554	41%

* Number of employees means the aggregate value of the payroll staff (taking into account those on maternity leave), external part-timers and employees on civil law contract as of the end of the year.

Table 13.2 Total manpower - the breakdown by gender, age and employees categories

Company name	Employees categories	Total number of personnel*											
		2018											
		TOTAL:		Share of employees under 35 y.o.	Under 35 y.o.			36-50 y.o.			Over 50 y.o.		
		plan	fact		m	f	total	m	f	total	m	f	total
JSC ASE	Executives	154	241	11.6%	15	13	28	62	37	99	97	17	114
	Specialists	779	1,230	36.3%	227	220	447	192	261	453	157	173	330
	Other office staff	7	11	0.0%	0	0	0	0	5	5	0	6	6
	Workers	25	40	22.5%	8	1	9	9	2	11	17	3	20
	other**	3	2	50.0%	0	1	1	1	0	1	0	0	0
	Total	968	1,524	31.8%	250	235	485	264	305	569	271	199	470
JSC ASE EC	Executives	670	647	14.8%	72	24	96	231	99	330	153	68	221
	Specialists	4,104	3,792	48.4%	968	867	1,835	651	739	1,390	267	300	567
	Other office staff	31	37	18.9%	1	6	7	0	17	17	1	12	13
	Workers	259	263	18.6%	41	8	49	99	14	113	90	11	101
	other	4	2	50.0%	1	0	1	0	0	0	0	1	1
	Total	5,068	4,741	41.9%	1,083	905	1,988	981	869	1,850	511	392	903
JSC "Atomenergoproekt"	Executives	300	299	14.0%	36	6	42	101	43	144	76	37	113
	Specialists	2,014	2,011	41.9%	445	398	843	286	362	648	193	327	520
	Other office staff	24	22	27.3%	0	6	6	0	6	6	1	9	10
	Workers	176	176	19.3%	26	8	34	53	24	77	56	9	65
	other	8	0	0.0%	0	0	0	0	0	0	0	0	0
	Total	2,522	2,508	36.9%	507	418	925	440	435	875	326	382	708
JSC ATOMPPOEKT	Executives	274	274	16.8%	39	7	46	82	62	144	46	38	84
	Specialists	1,952	2,117	52.8%	558	559	1,117	241	355	596	155	249	404
	Other office	15	15	13.3%	0	2	2	0	4	4	0	9	9

Company name	Employees categories	Total number of personnel*											
		2018											
		TOTAL:		Share of employees under 35 y.o.	Under 35 y.o.			36-50 y.o.			Over 50 y.o.		
		plan	fact		m	f	total	m	f	total	m	f	total
	staff												
	Workers	92	92	19.6%	11	7	18	20	8	28	30	16	46
	Other***	0	0	0.0%	0	0	0	0	0	0	0	0	0
	Total	2,333	2,498	47.4%	608	575	1,183	343	429	772	231	312	543
JSC "NIKIMT-Atomstroy"	Executives	159	286	33.6%	83	13	96	68	25	93	80	17	97
	Specialists	360	656	49.1%	155	167	322	84	76	160	78	96	174
	Other office staff	10	18	72.2%	2	11	13	1	2	3	1	1	2
	Workers	1,487	2,670	39.2%	1,002	45	1,047	910	107	1,017	523	83	606
	other	38	10	40.0%	3	1	4	0	1	1	3	2	5
	Total	2,053	3,640	40.7%	1,245	237	1,482	1,063	211	1,274	685	199	884
PJSC ESM	Executives	162	250	43.6%	96	13	109	71	21	92	36	13	49
	Specialists	196	332	59.0%	80	116	196	37	65	102	9	25	34
	Other office staff	2	3	33.3%	0	1	1	0	2	2	0	0	0
	Workers	1,716	2,220	40.5%	832	68	900	799	54	853	421	46	467
	other		15	40.0%	4	2	6	5	1	6	2	1	3
	Total	2,076	2,820	43.0%	1,012	200	1,212	912	143	1,055	468	85	553
TREST ROSSEM LTD.	Executives	174	313	46.6%	131	15	146	89	20	109	46	12	58
	Specialists	236	424	59.9%	111	143	254	52	64	116	19	35	54
	Other office staff	7	11	72.7%	0	8	8	0	3	3	0	0	0
	Workers	2,830	5,065	52.7%	2 633	35	2,668	1,782	36	1,818	548	31	579
	other	6	10	20.0%	1	1	2	2	1	3	4	1	5
	Total	3,253	5,823	52.9%	2,876	202	3,078	1,925	124	2,049	617	79	696

Company name	Employees categories	Total number of personnel*											
		2018											
		TOTAL:		Share of employees under 35 y.o.	Under 35 y.o.			36-50 y.o.			Over 50 y.o.		
		plan	fact		m	f	total	m	f	total	m	f	total
Total for Engineering Division	Executives	1,893	2,310	24,4%	472	91	563	704	307	1,011	534	202	736
	Specialists	9,641	10,562	47.5%	2,544	2,470	5,014	1,543	1,922	3,465	878	1,205	2,083
	Other office staff	96	117	31.6%	3	34	37	1	39	40	3	37	40
	Workers	6,585	10,526	44.9%	4,553	172	4,725	3,672	245	3,917	1,685	199	1,884
	other	59	39	35.9%	9	5	14	8	3	11	9	5	14
	Total	18,273	23,554	44.0%	7,581	2,772	10,353	5,928	2,516	8,444	3,109	1,648	4,757

* Total manpower means the aggregate value of the payroll staff, external part-timers and employees under civil law contract as of the end of the year.

**“Other” category refers to the employees recruited on the basis of civil law contracts.

Table 13.3 - The total manpower with breakdown by the type of employment (full-time/part-time), employment contract (Temporary/Permanent), regular/non-regular (including male-female detailing) (GRI 102-8)

Company name	Employees categories	Total number of personnel*													
		2018													
		TOTAL:		Type of employment**				Employment contract**				Regular employees (staff members)		Non-regular employees (under civil contract)	
				full-time		part-time		Temporary		Permanent					
plan	fact	m	f	m	f	m	f	m	f	m	f	m	f		
JSC ASE (Nizhny Novgorod)	Executives	154	241	157	60	17	7	93	14	81	53	174	67	0	0
	Specialists	779	1 230	557	630	19	24	285	181	291	473	576	654	0	0
	Other office staff	7	11	0	11	0	0	0	0	0	11	0	11	0	0
	Workers	25	40	33	6	1	0	2	0	32	6	34	6	0	0
	other***	3	2	0	0	0	0	0	0	0	0	0	0	1	1
	Total	968	1,524	747	707	37	31	380	195	404	543	784	738	1	1
JSC ASE EC (Nizhny Novgorod)	Executives	670	647	433	185	23	6	53	24	403	167	456	191	0	0
	Specialists	4,104	3,792	1,818	1,854	68	52	406	393	1,480	1,513	1,886	1,906	0	0
	Other office staff	31	37	2	29	0	6	1	20	1	15	2	35	0	0
	Workers	259	263	218	32	12	1	95	17	135	16	230	33	0	0
	other***	4	2	0	0	0	0	0	0	0	0	0	0	1	1
	Total	5,068	4,741	2,471	2,100	103	65	555	454	2,019	1,711	2,574	2,165	1	1
JSC "Atomenergoproekt" (Moscow)	Executives	300	299	198	76	15	10	3	1	210	85	213	86	0	0
	Specialists	2,014	2,011	838	920	86	167	84	121	840	966	924	1,087	0	0
	Other office staff	24	22	1	20	0	1	1	1	0	20	1	21	0	0
	Workers	176	176	134	41	1	0	7	1	128	40	135	41	0	0
	other***	8	0	0	0	0	0	0	0	0	0	0	0	0	0

Company name	Employees categories	Total number of personnel*													
		2018													
		TOTAL:		Type of employment**				Employment contract**				Regular employees (staff members)		Non-regular employees (under civil contract)	
				full-time		part-time		Temporary		Permanent					
plan	fact	m	f	m	f	m	f	m	f	m	f	m	f		
	Total	2,522	2,508	1,171	1,057	102	178	95	124	1,178	1,111	1,273	1,235	0	0
JSC ATOMPROEKT Saint-Petersburg	Executives	274	274	154	98	13	9	7	10	160	97	167	107	0	0
	Specialists	1,952	2,117	892	1061	62	102	103	175	851	988	954	1,163	0	0
	Other office staff	15	15	0	10	0	5	0	6	0	9	0	15	0	0
	Workers	92	92	61	31	0	0	1	5	60	26	61	31	0	0
	other***	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total	2,333	2,498	1,107	1,200	75	116	111	196	1,071	1,120	1,182	1,316	0	0
JSC "NIKIMT-Atomstroy" (Moscow)	Executives	159	286	226	53	5	2	18	5	213	50	231	55	0	0
	Specialists	360	656	298	312	19	27	59	42	258	297	317	339	0	0
	Other office staff	10	18	4	13	0	1	0	0	4	14	4	14	0	0
	Workers	1,487	2,670	2,412	233	23	2	955	86	1,480	149	2,435	235	0	0
	other***	38	10	0	0	0	0	0	0	0	0	0	0	6	4
	Total	2,053	3,640	2,940	611	47	32	1,032	133	1,955	510	2,987	643	6	4
PJSC ESM (Moscow)	Executives	162	250	199	46	4	1	22	5	181	42	203	47	0	0
	Specialists	196	332	124	200	2	6	17	25	109	181	126	206	0	0
	Other office staff	2	3	0	3	0	0	0	1	0	2	0	3	0	0
	Workers	1,716	2,220	2,039	165	13	3	403	32	1,649	136	2,052	168	0	0
	other***	0	15	0	0	0	0	0	0	0	0	0	0	11	4
	Total	2,076	2,820	2,362	414	19	10	442	63	1,939	361	2,381	424	11	4
TREST ROSSEM LTD. (Nizhny Novgorod)	Executives	174	313	264	47	2	0	212	32	54	15	266	47	0	0

Company name	Employees categories	Total number of personnel*													
		2018													
		TOTAL:		Type of employment**				Employment contract**				Regular employees (staff members)		Non-regular employees (under civil contract)	
				full-time		part-time		Temporary		Permanent					
plan	fact	m	f	m	f	m	f	m	f	m	f	m	f		
	Specialists	236	424	181	240	1	2	145	181	37	61	182	242	0	0
	Other office staff	7	11	0	11	0	0	0	7	0	4	0	11	0	0
	Workers	2,830	5,065	4,957	96	0	0	4,339	61	618	35	4,957	96	10	2
	other***	6	10											7	3
	Total	3,253	5,823	5,402	394	3	2	4,696	281	709	115	5,405	396	17	5
Total for Engineering Division	Executives	1,893	2,310	1,631	565	79	35	408	91	1,302	509	1,710	600	0	0
	Specialists	9,641	10,562	4,708	5,217	257	380	1,099	1,118	3,866	4,479	4,965	5,597	0	0
	Other office staff	96	117	7	97	0	13	2	35	5	75	7	110	0	0
	Workers	6,585	10,526	9,854	604	50	6	5,802	202	4,102	408	9,904	610	10	2
	other***	59	39	0	0	0	0	0	0	0	0	0	0	26	13
	Total	18,273	23,554	16,200	6,483	386	434	7,311	1,446	9,275	5,471	16,586	6,917	36	15

* Total manpower means the aggregate value of the payroll staff (taking into account those on maternity leave), external part-timers and employees under civil law contract as of the end of the year.

** without employees under civil contracts.

*** category "other" includes employees under civil contracts.

Table 13.4 - Share of new employees in the breakdown by the age group, gender and region

Company name	Employees categories	The share of newly recruited employees from the general manpower within the reporting period %									
		2018									
		TOTAL:	Under 35 y.o.			36-50 y.o.			Over 50 y.o.		
			m	f	total	m	f	total	m	f	total
JSC ASE EC (Nizhny Novgorod),	Executives	13.0%	20.6%	27.9%	22.0%	17.0%	12.5%	15.6%	9.7%	1.2%	6.9%
	Specialists	24.2%	36.4%	32.4%	34.7%	22.5%	17.0%	19.7%	10.5%	6.1%	8.1%
	Office workers	13.7%	0.0%	66.7%	60.0%	0.0%	6.5%	6.1%	0.0%	0.0%	0.0%
	Workers	59.5%	121.6%	23.3%	102.3%	54.1%	54.5%	54.2%	44.4%	29.3%	42.3%
	Total	25.1%	40.0%	32.4%	36.9%	25.2%	17.1%	21.5%	16.6%	5.9%	11.9%
JSC “Atomenergoproekt”(Moscow)	Executives	2.9%	3.4%	0.0%	2.8%	7.6%	0.0%	5.4%	0.0%	0.0%	0.0%
	Specialists	15.8%	27.4%	33.6%	29.8%	10.1%	11.0%	10.5%	6.7%	2.8%	4.2%
	Office workers	14.8%	0.0%	50.2%	42.3%	-	0.0%	0.0%	400.0%	0.0%	10.8%
	Workers	8.8%	29.1%	68.6%	38.3%	1.8%	13.5%	5.2%	0.0%	0.0%	0.0%
	Total	13.6%	25.8%	34.1%	28.9%	8.5%	9.8%	9.1%	4.1%	2.4%	3.2%
JSC ASE (Nizhny Novgorod)	Executives	34.7%	91.0%	29.1%	63.9%	46.1%	31.3%	41.0%	26.6%	15.8%	25.2%
	Specialists	50.6%	92.3%	64.0%	79.2%	65.3%	36.8%	49.4%	23.4%	21.4%	22.4%
	Office workers	0.0%	-	-	-	-	0.0%	0.0%	-	0.0%	0.0%
	Workers	10.2%	12.2%	0.0%	11.2%	18.7%	0.0%	16.1%	6.3%	0.0%	5.6%
	Total	46.2%	88.3%	61.9%	76.4%	58.5%	35.1%	46.4%	23.4%	20.1%	22.1%
JSC ATOMPROEKT (Saint Petersburg).	Executives	1.7%	0.0%	0.0%	0.0%	2.8%	1.8%	2.4%	2.5%	0.0%	1.4%
	Specialists	22.1%	33.0%	33.3%	33.1%	15.5%	9.9%	12.4%	10.0%	2.6%	5.7%
	Office workers	8.8%	-	0.0%	0.0%	-	0.0%	0.0%	-	14.6%	14.6%
	Workers	6.9%	0.0%	0.0%	0.0%	10.5%	39.5%	18.8%	0.0%	6.6%	2.3%
	Total	19.0%	30.1%	32.3%	31.1%	12.3%	9.2%	10.6%	7.2%	2.8%	4.8%
JSC “NIKIMT-	Executives	36.1%	46.4%	27.3%	43.8%	52.4%	11.1%	43.2%	27.6%	5.6%	23.4%

Company name	Employees categories	The share of newly recruited employees from the general manpower within the reporting period %									
		2018									
		TOTAL:	Under 35 y.o.			36-50 y.o.			Over 50 y.o.		
			m	f	total	m	f	total	m	f	total
Atomstroy” (Moscow)	Specialists	46.9%	75.2%	54.8%	65.4%	70.5%	43.9%	56.7%	21.3%	7.4%	13.5%
	Office workers	120.0%	200.0%	114.3%	125.0%	-	100.0%	200.0%	0.0%	-	0.0%
	Workers	123.8%	173.8%	171.4%	173.7%	122.4%	115.8%	121.7%	65.4%	49.4%	62.9%
	Total	99.7%	147.8%	75.8%	135.8%	112.3%	74.5%	105.6%	54.6%	24.2%	47.1%
PJSC ESM (Moscow)	Executives	37.1%	47.0%	15.7%	41.5%	38.6%	43.5%	39.5%	20.5%	36.1%	23.2%
	Specialists	49.7%	58.8%	57.5%	58.0%	51.7%	43.6%	46.8%	16.7%	16.5%	16.6%
	Office workers	33.3%	-	0.0%	0.0%	-	100.0%	100.0%	-	0.0%	0.0%
	Workers	74.4%	90.2%	74.9%	89.3%	74.6%	64.6%	74.0%	44.3%	78.5%	46.4%
	Total	69.1%	84.9%	58.5%	81.3%	71.4%	53.5%	69.4%	42.0%	51.6%	42.9%
TREST ROSSEM LTD. (Nizhny Novgorod)	Executives	25.1%	9.8%	161.0%	19.6%	20.5%	38.7%	23.8%	38.2%	52.1%	41.7%
	Specialists	60.2%	49.4%	34.1%	40.9%	86.8%	56.0%	70.5%	224.8%	62.2%	109.3%
	Office workers	171.1%	0.0%	221.2%	168.4%	-	63.1%	94.6%	-	1034.5%	1034.5%
	Workers	75.6%	71.2%	237.9%	73.2%	74.7%	72.1%	74.7%	89.4%	66.2%	87.9%
	Total	71.4%	66.8%	73.8%	67.3%	72.2%	57.2%	71.2%	89.5%	66.8%	86.4%
Total Share of new employees	Executives	19.3%	27.7%	30.7%	28.2%	22.4%	14.0%	19.9%	15.6%	6.0%	12.9%
	Specialists	28.2%	41.2%	38.0%	39.8%	28.5%	20.4%	24.2%	15.7%	8.0%	11.3%
	Office workers	34.3%	64.1%	87.3%	84.4%	240.0%	14.3%	19.6%	44.4%	12.0%	14.0%
	Workers	82.9%	98.6%	105.5%	98.9%	81.3%	76.6%	81.0%	58.2%	47.5%	57.1%
	Total	50.6%	71.4%	42.8%	63.9%	60.0%	25.0%	50.0%	37.9%	12.4%	28.9%

Table 13.5 - Personnel turnover - the breakdown by age, gender and region*

Company name	Age groups	Personnel turnover factor %								
		2016			2017			2018		
		m	f	total	m	f	total	m	f	total
JSC ASE (Nizhny Novgorod)	Total	6.1%	6.8%	6.3%	9.0%	3.8%	7.1%	10.2%	9.7%	10.0%
	Up to 35 y.o.	4.3%	17.6%	10.0%	28.6%	8.7%	18.2%	12.0%	13.2%	12.6%
	36 – 50 y.o.	6.8%	6.2%	6.5%	7.6%	4.5%	6.3%	14.0%	11.3%	12.6%
	Over 50 y.o.	5.7%	4.3%	5.4%	7.7%	0.0%	5.9%	5.6%	4.0%	5.0%
JSC ASE EC (Nizhny Novgorod),	Total	6.5%	5.4%	6.0%	6.9%	5.9%	6.5%	7.9%	6.5%	7.3%
	Up to 35 y.o.	13.2%	14.5%	13.8%	17.5%	19.5%	18.3%	9.3%	9.7%	9.4%
	36 – 50 y.o.	3.5%	2.8%	3.2%	4.3%	3.5%	4.0%	7.3%	6.3%	6.8%
	Over 50 y.o.	8.1%	4.7%	6.5%	5.9%	2.9%	4.5%	6.4%	2.3%	4.6%
JSC “Atomenergoproekt”(Moscow),	Total	6.8%	9.5%	8.1%	4.4%	4.6%	4.5%	5.9%	5.5%	5.7%
	Up to 35 y.o.	9.0%	11.4%	9.9%	6.2%	8.8%	7.1%	9.5%	9.7%	9.5%
	36 – 50 y.o.	3.5%	4.8%	4.1%	4.7%	3.3%	4.0%	3.3%	4.8%	4.0%
	Over 50 y.o.	7.4%	12.1%	10.0%	2.0%	3.0%	2.5%	4.2%	3.2%	3.7%
JSC ATOMPROEKT (Saint-Petersburg).	Total	2.2%	1.6%	1.8%	4.1%	5.8%	5.1%	3.6%	5.0%	4.3%
	Up to 35 y.o.	2.3%	0.9%	1.6%	4.0%	6.1%	5.0%	4.5%	6.6%	5.4%
	36 – 50 y.o.	2.9%	1.9%	2.3%	6.7%	6.7%	6.7%	2.6%	3.6%	3.1%
	Over 50 y.o.	1.1%	2.1%	1.7%	2.2%	4.8%	3.7%	2.9%	4.1%	3.5%
TREST ROSSEM LTD. (Nizhny Novgorod)	Total	15.6%	16.1%	15.6%	10.8%	15.1%	11.3%	12.9%	17.3%	13.2%
	Up to 35 y.o.	13.8%	11.8%	13.7%	12.1%	21.4%	13.0%	18.8%	18.5%	18.8%
	36 – 50 y.o.	14.8%	12.1%	14.6%	11.0%	18.8%	11.6%	8.0%	15.7%	8.4%
	Over 50 y.o.	20.8%	25.5%	21.4%	8.6%	5.5%	8.1%	11.6%	17.9%	12.5%
JSC “NIKIMT-Atomstroy” (Moscow)	Total	49.1%	20.8%	41.3%	25.3%	6.9%	21.1%	19.8%	10.2%	17.9%
	Up to 35 y.o.	67.3%	29.1%	55.8%	34.6%	11.9%	30.0%	25.1%	7.5%	22.2%
	36 – 50 y.o.	63.4%	21.0%	52.6%	26.8%	7.8%	23.1%	20.6%	14.9%	19.6%
	Over 50 y.o.	21.3%	14.7%	19.5%	13.6%	2.8%	10.5%	11.3%	8.5%	10.6%

Company name	Age groups	Personnel turnover factor %								
		2016			2017			2018		
		m	f	total	m	f	total	m	f	total
PJSC ESM (Moscow)	Total	29.4%	14.8%	26.8%	46.0%	35.5%	44.5%	55.7%	30.5%	52.7%
	Up to 35 y.o.	21.2%	10.2%	18.8%	61.6%	45.7%	59.3%	65.9%	36.7%	61.9%
	36 – 50 y.o.	44.3%	35.7%	43.3%	41.3%	28.7%	39.5%	53.6%	27.4%	50.6%
	Over 50 y.o.	24.9%	10.1%	22.3%	35.5%	35.2%	35.4%	39.2%	18.9%	37.2%
TOTAL Personnel turnover factor	Total	18.0%	8.0%	14.5%	17.4%	7.7%	14.0%	19.7%	8.7%	16.5%
	Up to 35 y.o.	18.7%	10.5%	16.0%	24.7%	13.6%	21.1%	24.9%	11.8%	21.4%
	36 – 50 y.o.	19.9%	6.0%	15.0%	15.7%	6.2%	12.4%	17.6%	8.5%	15.0%
	Over 50 y.o.	14.1%	8.3%	11.9%	12.1%	4.8%	9.3%	13.8%	5.0%	10.7%

*The reasons of turnover include resignations due to employees' dissatisfaction with the job or dismissals if the company is not satisfied with personnel's performance (voluntary resignation, dismissals due to absenteeism, violations of safety rules, absence for reasons not caused by production or state needs);

Table 13.6 Payroll budget and social payments, mln. RUR

Company name	2016 fact	2017 fact	2018 planned	2018 fact	(2018-2017)/2017, %
JSC ASE	827.4	850.0	1,502.5	1,789.6	110.5%
Payroll budget including	824.6	840.4	1,482.5	1,740.0	107.0%
Amounts of remuneration in cash and natural forms paid by the company over worked and non-worked time	468.6	504.8	914.6	1,141.6	126.2%
Stimulating payments and incentives	292.7	126.2	245.8	248.6	97.0%
Compensation payments related to the terms of work and labor	24.1	8.9	12.8	24.7	178.8%
Bonuses and one-time incentive payments	11.2	182.3	298.4	304.9	67.2%
Other payments from the payroll budget	26.5	7.3	9.5	19.7	169.6%
Payments to persons who are not the company's employees but who participate in its activities	1.4	11.0	1.4	0.6	-94.3%
Other forms of personnel support including	2.8	9.6	20.0	49.5	416.8%
Payment of hotel vouchers (compensations) to employees and their families for treatment and recreation	0.4	0.4	0.8	1.1	184.1%
Financial aid provided to individuals for family reasons, for medication, birth, funerals	2.4	2.5	4.8	3.0	22.1%
Other social expenditures	0.1	6.7	14.4	45.4	575.3%
JSC ASE EC	5,711.0	6,315.0	7,772.0	7,274.7	15.2%
Payroll budget including	5,515.9	6,089.6	7,637.1	7,179.9	17.9%
Amounts of remuneration in cash and natural forms paid by the company over worked and non-worked time	3,261.1	3,635.5	4,645.5	4,378.8	20.4%
Stimulating payments and incentives	745.8	522.0	680.4	620.8	18.9%
Compensation payments related to the terms of work and labor	12.4	102.9	14.8	85.4	-17.0%
Bonuses and one-time incentive payments	1,432.4	1,707.6	2,207.0	2,030.9	18.9%
Other payments from the payroll budget	63.0	67.2	87.2	61.9	-7.9%
Payments to persons who are not the company's employees but who participate in its activities	1.3	54.3	2.0	2.1	-96.1%
Other forms of personnel support including	195.1	225.4	135.0	94.8	-57.9%
Payment of hotel vouchers (compensations) to employees and their families for treatment and recreation	13.6	9.0	10.7	9.2	2.6%
Financial aid provided to individuals for family reasons, for medication, birth, funerals	24.1	24.3	30.8	25.4	4.7%
Other social expenditures	157.4	192.2	93.5	60.2	-68.7%
JSC "Atomenergoproekt"	3,870.8	3,500.0	3,735.6	3,556.4	1.6%
Payroll budget including	3,746.0	3,477.7	3,715.3	3,537.1	1.7%

Company name	2016 fact	2017 fact	2018 planned	2018 fact	(2018-2017)/2017, %
Amounts of remuneration in cash and natural forms paid by the company over worked and non-worked hours	2,017.8	2,002.2	2,184.2	2,008.3	0.3%
Stimulating payments and incentives	499.2	438.8	467.2	391.9	-10.7%
Compensation payments related to the terms of work and labor	11.3	82.9	71.7	85.9	3.6%
Bonuses and one-time incentive payments	1,168.7	887.4	961.7	972.2	9.6%
Other payments from the payroll budget	43.3	23.3	25.5	38.2	63.7%
Payments to persons who are not company's employees but who participate in its activities	5.8	43.2	5.0	40.7	-5.9%
Other forms of personnel support including	124.8	22.3	20.2	19.3	-13.6%
Payment of hotel vouchers (compensations) to employees and their families for treatment and recreation	5.7	0.0	0.0	0.0	0.0%
Financial aid provided to individuals for family reasons, for medication, birth, funerals	20.3	10.2	10.5	10.5	2.4%
Other social expenditures	98.8	12.1	9.7	8.8	-27.1%
JSC ATOMPROEKT	3,462.1	2,811.0	3,622.2	3,253.7	15.7%
Payroll budget including	3,346.2	2,797.0	3,607.5	3,238.3	15.8%
Amounts of remuneration in cash and natural forms paid by the company over worked and non-worked time	1,295.0	1,636.0	1,997.0	1,778.2	8.7%
Stimulating payments and incentives	324.7	289.0	360.9	286.8	-0.8%
Compensation payments related to the terms of work and labor	211.9	93.0	93.5	132.3	42.2%
Bonuses and one-time incentive payments	1,197.5	699.7	1,135.5	1,009.5	44.3%
Other payments from the payroll budget	316.3	25.6	17.1	31.5	23.4%
Payments to persons who are not company's employees but who participate in its activities	0.7	53.7	3.5	0.0	-100.0%
Other forms of personnel support including	115.9	14.0	14.7	15.4	10.0%
Payment of hotel vouchers (compensations) to employees and their families for treatment and recreation	8.9	2.81	3.0	3.0	7.5%
Financial aid provided to individuals for family reasons, for medication, birth, funerals	19.1	4.89	5.1	6.1	25.4%
Other social expenditures	87.9	6.30	6.6	6.2	-0.9%
JSC "NIKIMT-Atomstroy"	1,333.9	1,422.9	1,657.8	2,135.0	50.0%
Payroll budget including	1,327.6	1,395.6	1,644.9	2,121.0	52.0%
Amounts of remuneration in cash and natural forms paid by the company over worked and non-worked time	717.9	646.6	903.9	1,158.2	79.1%
Stimulating payments and incentives	47.6	48.0	48.0	61.5	28.1%
Compensation payments related to the terms of work and labor	76.5	75.3	16.7	21.4	-71.6%
Bonuses and one-time incentive payments	410.2	526.1	620.9	795.6	51.2%
Other payments from the payroll budget	60.2	39.8	31.5	40.3	1.2%

Company name	2016 fact	2017 fact	2018 planned	2018 fact	(2018-2017)/2017, %
Payments to persons who are not company's employees but who participate in its activities	15.3	59.8	23.9	44.0	-26.4%
Other forms of personnel support including	6.3	27.3	12.8	14.0	-48.8%
Payment of hotel vouchers (compensations) to employees and their families for treatment and recreation	0.2	0.0	0.5	0.0	0.0%
Financial aid provided to individuals for family reasons, for medication, birth, funerals	1.8	1.3	1.2	1.1	-16.9%
Other social expenditures	4.2	26.0	11.1	12.9	-50.4%
PJSC ESM	1,090.4	1,241.8	1,342.6	1,896.6	52.7%
Payroll budget including	1,085.7	1,240.8	1,338.1	1,895.6	52.8%
Amounts of remuneration in cash and natural forms paid by the company over worked and non-worked time	688.6	767.1	826.1	1,078.4	40.6%
Stimulating payments and incentives	70.2	5.0	11.6	19.2	280.2%
Compensation payments related to the terms of work and labor	9.6	17.4	14.1	23.5	35.2%
Bonuses and one-time incentive payments	259.1	420.5	452.9	741.3	76.3%
Other payments from the payroll budget	50.5	17.7	19.0	19.0	7.4%
Payments to persons who are not company's employees but who participate in its activities	7.8	13.1	14.5	14.2	8.5%
Other forms of personnel support including	4.7	1.0	4.5	1.0	0.0%
Payment of hotel vouchers (compensations) to employees and their families for treatment and recreation				0.0	0.0%
Financial aid provided to individuals for family reasons, for medication, birth, funerals	3.9	0.9	4.3	0.9	-0.9%
Other social expenditures	0.8	0.1	0.2	0.1	7.3%
TREST ROSSEM LTD.	1,152.4	975.1	2,093.4	2,454.9	151.8%
Payroll budget including	1,150.8	967.9	2,088.8	2,453.5	153.5%
Amounts of remuneration in cash and natural forms paid by the company over worked and non-worked time	754.5	449.5	970.8	1,208.0	168.7%
Stimulating payments and incentives	40.3	20.5	44.3	31.4	52.8%
Compensation payments related to the terms of work and labor	27.0	29.0	62.6	11.4	-60.6%
Bonuses and one-time incentive payments	222.4	416.1	898.7	1,037.4	149.3%
Other payments from the payroll budget	102.4	50.6	109.4	157.4	210.8%
Payments to persons who are not organization's employees but who participate in the organization's activities	4.2	2.1	3.0	7.9	277.3%
Other forms of personnel support including	1.6	7.2	4.6	1.4	-80.6%
Payment of hotel vouchers (compensations) to employees and their families for treatment and recreation		0.0			0.0%

Company name	2016 fact	2017 fact	2018 planned	2018 fact	(2018-2017)/2017, %
Financial aid provided to individuals for family reasons, for medication, birth, funerals	0.9	0.4	1.5	0.7	89.7%
Other social expenditures	0.7	6.8	3.1	0.7	-89.8%
Total Remuneration and other payments and benefits to employees	17,448.0	17,116.0	21,726.1	22,360.8	30.6%
Payroll budget including	16,996.9	16,809.1	21,514.3	22,165.4	31.9%
Amounts of remuneration in cash and natural forms paid by the company over worked and non-worked time	9,203.5	9,641.7	12,442.1	12,751.4	32.3%
Stimulating payments and incentives	2,020.5	1,449.5	1,858.3	1,660.2	14.5%
Compensation payments related to the terms of work and labor	372.7	409.3	286.2	384.6	-6.0%
Bonuses and one-time incentive payments	4,701.5	4,839.8	6,575.1	6,891.7	42.4%
Other payments from the payroll budget	662.2	231.6	299.1	368.0	58.9%
Payments to persons who are not company's employees but who participate in its activities	36.5	237.3	53.4	109.5	-53.8%
Other forms of personnel support including	451.1	306.8	211.7	195.4	-36.3%
Payment of hotel vouchers (compensations) to employees and their families for treatment and recreation	28.9	12.2	15.0	13.4	9.7%
Financial aid provided to individuals for family reasons, for medication, birth, funerals	72.5	44.4	58.2	47.7	7.4%
Other social expenditures	349.8	250.2	138.6	134.3	-46.3%

* - data for payroll budget, social payments and payroll budget for employees under commercial contracts are given in accordance with the form of statistical reporting No 4 "Information on the number and salaries of employees" (Rosstat of RF) (item 8, 9, 10, 11).

Table 13.7 Level of average monthly salary in the scope of management of Engineering Division by regions regarding the average level on the labor market within the reporting period

Company name	Name of the branch office/ representative office	Region	2018		
			Average salary (thousand rubles) *	Average salary (thousand rubles) on the labor market in the regions**	Ratio of the salary
JSC ASE EC (Nizhny Novgorod),	Headquarters	Nizhny Novgorod region	153.5	32.9	4.7
	JSC ASE EC JSC Representative Office in the Republic of Belarus	Republic of Belarus, Grodno region	70.6	25.5	2.8
	Volgodonsk Branch Office	Rostov region	85.1	30.6	2.8
	Kursk Branch Office	Kursk region	75.4	29.9	2.5
	Moscow Branch Office	Moscow	133.3	83.6	1.6
JSC “Atomenergoproekt ”(Moscow),	JSC “Atomenergoproekt”	Moscow	149.3	83.6	1.8
	Maloyaroslavets Survey Branch of JSC “Atomenergoproekt”(MSB)	Kaluga region	99.2	37.7	2.6
	Balakovo Design and Survey Branch of JSC “Atomenergoproekt”(BDSB)	Saratov region	115.8	26.8	4.3
	Volgograd Design Branch of JSC “Atomenergoproekt”(BDB)	Volgograd region	115.2	30.4	3.8
	Kurchatov Design and Survey Branch of JSC	Kursk region	104.4	29.9	3.5

Company name	Name of the branch office/ representative office	Region	2018		
			Average salary (thousand rubles) *	Average salary (thousand rubles) on the labor market in the regions**	Ratio of the salary
	“Atomenergoproekt”(KDSB)				
	Desnogorsk Design and Survey Branch of JSC “Atomenergoproekt”(DDSB)	Smolensk region	88.8	29.3	3.0
	Novovoronezh Design and Survey Branch of JSC “Atomenergoproekt”(NDSB)	Voronezh region	114.3	31.3	3.7
	Novovoronezh Branch of JSC «Atomenergoproekt»- NVNPP-2 Construction Directorate (NB-DC)	Voronezh region	109.9	31.3	3.5
	Novovoronezh Branch of JSC “Atomenergoproekt”- “Don” hotel (NB-Hotel)	Voronezh region	39.4	31.3	1.3
	VNIPIET Branch of JSC “Atomenergoproekt”	Saint-Petersburg	126.8	60.2	2.1
JSC ASE (Nizhny Novgorod)	JSC ASE	Moscow	141.8	83.6	1.7
	JSC ASE	Nizhny Novgorod region	87.6	32.9	2.7
	JSC ASE	Saint-Petersburg	97.8	60.2	1.6

Company name	Name of the branch office/ representative office	Region	2018		
			Average salary (thousand rubles) *	Average salary (thousand rubles) on the labor market in the regions**	Ratio of the salary
	JSC ASE	Voronezh region	74.5	31.3	2.4
	Construction Directorate at Kudankulam NPP Site.	India	149.0	No data	-
	JSC ASE Representative Office in China (Lianyungang)	China	171.4	No data	-
	JSC ASE Branch Office in the People's Republic of Bangladesh	The People's Republic of Bangladesh	104.0	No data	-
	JSC ASE Branch Office in the Republic of Turkey	Turkey	193.8	No data	-
	JSC ASE Branch Office in the Arab Republic of Egypt	Egypt	206.7	No data	-
	JSC ASE Representative Office in the Republic of Belarus	Republic of Belarus, Grodno region	57.8	25.5	2.3
	JSC ASE Branch Office in Belene (Bulgaria)	Bulgaria	238.9	No data	-
	JSC ASE Representative Office in Slovakia (Bratislava)	Slovakia	304.4	No data	-

Company name	Name of the branch office/ representative office	Region	2018		
			Average salary (thousand rubles) *	Average salary (thousand rubles) on the labor market in the regions**	Ratio of the salary
	JSC ASE Representative Office in Hungary (Budapest)	Hungary	268.2	No data	-
JSC ATOMPROEKT (Saint Petersburg).	JSC ATOMPROEKT	Saint-Petersburg	129.1	60.2	2.1
TREST ROSSEM LTD. (St.Petersburg)	Directorate	Moscow	136.0	83.6	1.6
	Kursk Branch Office	Kursk region	49.0	29.9	1.6
	Representative Office of TREST ROSSEM LTD. in the Republic of Belarus	Republic of Belarus, Grodno region	50.0	25.5	2.0
	Branch Office in the Republic of Bangladesh	The People's Republic of Bangladesh	46.0	No data	-
	Branch Office in the Republic of Turkey	Republic of Turkey	113.0	No data	-
JSC "NIKIMT- Atomstroy" (Moscow)	Headquarters	Moscow	198.7	83.6	2.4
	JSC "NIKIMT-Atomstroy" Representative Office in the Republic of Belarus	Republic of Belarus, Grodno region	54.3	25.5	2.1
	JSC "NIKIMT-Atomstroy" Branch Office in the People's Republic of Bangladesh	The People's Republic of Bangladesh	40.8	No data	-

Company name	Name of the branch office/ representative office	Region	2018		
			Average salary (thousand rubles) *	Average salary (thousand rubles) on the labor market in the regions**	Ratio of the salary
	JSC «NIKIMT-Atomstroy» Branch Office - NIKIMT JRC	Kaluga region	73.5	37.7	1.9
	JSC «NIKIMT-Atomstroy» Branch Office - Directorate at Kursk NPP	Kursk region	48.7	29.9	1.6
	JSC «NIKIMT-Atomstroy» Branch Office - Directorate at Novovoronezh NPP	Voronezh region	60.5	31.3	1.9
	JSC «NIKIMT-Atomstroy» Branch Office - Directorate in Ozersk	Chelyabinsk region	99.4	35.0	2.8
	JSC «NIKIMT-Atomstroy» Branch Office - VNIPIET Tomsk Design&Survey Institute	Tomsk region	45.6	41.2	1.1
	JSC «NIKIMT-Atomstroy» Branch Office - Directorate at Smolensk NPP	Smolensk region	40.5	29.3	1.4
	PJSC ESM (Moscow)	Directorate	Moscow	116	83.6
	Branch Office Voronezh Construction Directorate	Voronezh region	36	31.3	1.1
	MSU-5 Branch Office	Voronezh region	51	31.3	1.6

Company name	Name of the branch office/ representative office	Region	2018		
			Average salary (thousand rubles) *	Average salary (thousand rubles) on the labor market in the regions**	Ratio of the salary
	North-West Branch Office	Voronezh region	54	31.3	1.7
		Kursk Region	32	29.9	1.1
	Branch Office Mechanization and Motor Transport Division	Voronezh region	34	31.3	1.1
	MSU-58 Branch Office	Udmurt Republic	44	31.7	1.4
	MSU-3 Branch Office	Rostov region	52	30.6	1.7
	Branch Office in the Republic of Bangladesh	The People's Republic of Bangladesh	88	No data	-
	Representative Office in the Republic of Belarus	The Republic of Belarus, Grodno region	71	25.5	2.8

Table 13.8 - Ratio between the average salary between 10% of the best-compensated employees and 10% of the least-compensated employees of Engineering Division

Company name	2016			2017			2018		
	Average monthly salary of 10% of the least-compensated employees, thousand rubles	Average monthly salary of 10% of the best-compensated employees, thousand rubles	Ratio of salary	Average monthly salary of 10% of the least-compensated employees, thousand rubles	Average monthly salary of 10% of the best-compensated employees, thousand rubles	Ratio of salary	Average monthly salary of 10% of the least-compensated employees, thousand rubles	Average monthly salary of 10% of the best-compensated employees, thousand rubles	ratio of the salary
JSC ASE	59.9	405.8	6.8	62.2	378.1	6.1	45.0	268.8	6.0
JSC ASE EC	37.1	336.1	9.1	39.6	447.3	11.3	44.6	453.9	10.2
JSC "Atomenergoproekt"	42.1	287.5	6.8	42.6	288.9	6.8	46.5	305.1	6.6
JSC ATOMPROEKT	33.9	231.0	6.8	58.2	324.7	5.6	47.5	257.2	5.4
JSC "NIKIMT-Atomstroy"	23.2	173.4	7.5	23.2	228.8	9.9	29.7	228.7	7.7
PJSC ESM	27.1	69.8	2.6	27.3	70.1	2.6	27.9	71.9	2.6
TREST ROSSEM LTD.	36.8	118.6	3.2	27.54	115.53	4.2	28.50	232.80	8.2

Table 13.9 - Annual total compensation ratio (GRI 102-38)

Percentage increase in annual total compensation ratio (GRI 102-39).

Company name and country	Annual total compensation ratio (GRI 102-38)	Percentage increase in annual total compensation ratio (GRI 102-39).	Comments
JSC ASE			
The Russian Federation	6.4	1.0	-
The People's Republic of Bangladesh	8.0	1.6	Keeping ahead of the growth rate of income of the best-compensated employee as compared to the average income of employees is due to his promotion to a higher position.
JSC ASE EC			
The Russian Federation	54.6	1.6	Keeping ahead of the growth rate of income of the best-compensated employee as compared to the average income of employees is due to payment in 2018 of remuneration for 3 preceding years
The Republic of Belarus	16.8	1.0	-
Hungary	4.0	1.2	-
JSC "Atomenergoproekt"			
The Russian Federation	8.2	0.8	Keeping behind in the growth rate of income of the best-compensated employee as compared to the average income of employees is due to a decrease of the fulfillment of key performance indicators by 2.6%, as well as the absence in 2018 of rewards for performing particularly important tasks. At the same time, the average income of workers increased by 3.9%, including due to indexation
JSC ATOMPROEKT			
The Russian Federation	9.4	1.2	Keeping ahead in the growth rate of income of the best-compensated employee as compared to the average income of employees is due to an increase of the fulfillment of key performance indicators by 21%
JSC "NIKIMT-Atomstroy"			
The Russian Federation	8.6	0.7	Decrease of the income of the best-compensated employee is due to his transition to the part-time employment. At the same time, the average income of workers increased by 6%, including due to indexation

Company name and country	Annual total compensation ratio (GRI 102-38)	Percentage increase in annual total compensation ratio (GRI 102-39).	Comments
The Republic of Belarus	9.1	1.0	-
The People's Republic of Bangladesh	2.2	-	The Branch Office was established in 2018.
PJSC ESM			
The Russian Federation	19.2	0.6	Keeping ahead in the growth rate of income of the best-compensated employee as compared to the average income of employees is due to a decrease of the fulfillment of key performance indicators. At the same time, the average income of workers increased by 36%, including due to the change of the personnel structure and indexation
The Republic of Belarus	5.0	1.6	The ratio of the growth of the total annual remuneration of the Branch Office Director was influenced by the fact that in 2017 the bonus by the results of work for 2016 was not paid in full (he was promoted to the position in May 2017)
The People's Republic of Bangladesh	1.6	-	The Branch Office was established in 2018.
TREST ROSSEM LTD.			
The Russian Federation	23.5	1.5	Keeping ahead in the growth rate of the head's income as compared to the average income of employees is mainly caused by the growth of the activities efficiency and the payment of an annual bonus in a larger amount. In 2017, the works mobilization at Kursk NPP was represented by highly paid engineers.
The Republic of Belarus	5.9	1.17	Keeping ahead of the growth rate of the best-compensated employee's income as compared to the average income of employees is mainly caused by the increase in the efficiency of his activities and the payment of the annual bonus in a larger amount, since in 2017 the share of revenue from Belarus NPP amounted to 85% of the total revenue from TREST ROSSEM LTD. In 2018, it was agreed to increase the monthly payroll rate of Director of the Representative Office in the Republic of Belarus from 01.07.2018 by 26%.
The People's Republic of Bangladesh	7.5	1.5	The mobilization of works at Rooppur NPP took place in 2017. The staff was represented by the highly paid engineers. In 2018, the construction employed the considerable amount of workers from the local personnel. The growth of the best-compensated employee's income in 2018 is caused by the partial payment of the annual bonus for 2018 and in 2017 this payment was not made since the recruitment in the Branch Office is implemented since 01.07.2017.
Total for Engineering Division	78.6	1.7	Keeping ahead of the growth rate of the best-compensated employee's income as compared to the average income of employees is due to payment of remuneration in 2018 over 3 preceding years

Table 13.11 - Average age of employees (as per categories)

Company name	Average age of employees, years		
	as of 31.12.2016	as of 31.12.2017	as of 31.12.2018
JSC ASE including:	47	45	44
Executives	52	50	49
Specialists	45	43	42
Office workers	53		50
Workers	48	47	49
JSC ASE EC including:	40	40	40
Executives	46	47	46
Specialists	38	39	38
Office workers	47	47	47
Workers	46	45	46
JSC “Atomenergoproekt” including:	42	42	42
Executives	47	47	47
Specialists	41	41	41
Office workers	42	43	45
Workers	46	47	46
JSC ATOMPROEKT including:	42	41	40
Executives	47	46	46
Specialists	41	39	39
Office workers	47	48	49
Workers	48	47	48
JSC “NIKIMT-Atomstroy” including:	43	43	41
Executives	45	44	44
Specialists	42	42	41
Office workers	33	33	35
Workers	44	43	40
PJSC ESM including:	41	39	39
Executives	42	40	40
Specialists	38	36	36
Office workers	35	32	35
Workers	41	40	40
TREST ROSSEM LTD. including:	40	39	37
Executives	43	40	39
Specialists	35	36	36
Office workers		27	32
Workers	40	39	36
Total Average age of Engineering Division’s employees	41	41	40
Executives	46	46	45
Specialists	40	40	39
Office workers	43	44	43
Workers	42	41	39

Table 13.12 - Non-state pension provision of the Division's employees

Company name	2016	2017	2018	(2018-2017)/2017, %
JSC ASE				
The number of employees with non-state pension provision, persons	0	0	12	0%
Expenses for non-state public provision, mln. rubles	0	0	0.44	0%
JSC ASE EC				
The number of employees with non-state pension provision, persons	151	155	158	2%
Expenses for non-state public provision, mln. rubles	14.7	17.9	17.4	-3%
JSC "Atomenergoproekt"				
The number of employees with non-state pension provision, persons	45	0	0	0%
Expenses for non-state public provision, mln. rubles	20.6	0	0	0%
JSC ATOMPROEKT				
The number of employees with non-state pension provision, persons	0	0	0	0%
Expenses for non-state public provision, mln. rubles	0	0	0	0%
JSC "NIKIMT-Atomstroy"				
The number of employees with non-state pension provision, persons	0	0	0	0%
Expenses for non-state public provision, mln. rubles	0	0	0	0%
PJSC ESM				
The number of employees with non-state pension provision, persons	0	0	0	0%
Expenses for non-state public provision, mln. rubles	0	0	0	0%
TREST ROSSEM LTD.				
The number of employees with non-state pension provision, persons	0	0	0	0%
Expenses for non-state public provision, mln. rubles	0	0	0	0%
Total for Engineering Division				
The number of employees with non-state pension provision, persons	196	155	170	10%
Expenses for non-state public provision, mln. rubles	35.3	17.9	17.8	-1%

Table 13.13 - Expenses for labor protection measures in the Engineering Division, thousand rubles

Name of legal entity	2016	2017	2018	(2018-2017)/2017, %
JSC ASE EC	168,938	222,514	213,814	-4%
Medical programs (voluntary medical insurance and non-state insurance)	54,146	58,815	66,575	13%
Health promotion (health resort treatment and health improvement for employees and their families)	13,590	8,989	9,218	3%
Occupational health and safety	101,202	154,711	138,021	-11%
JSC ASE	12,964	15,440	18,727	21%
Medical programs (voluntary medical insurance and non-state insurance)	5,035	5,195	14,524	180%
Health promotion (health resort treatment and health improvement for employees and their families)	364	404	1,148	184%
Occupational health and safety	7,564	9,841	3,055	-69%
JSC "Atomenergoproekt"	247,574	137,394	145,938	6%
Medical programs (voluntary medical insurance and non-state insurance)	42,239	40,123	36,442	-9%
Health promotion (health resort treatment and health improvement for employees and their families)	5,718	5,785	6,011	4%
Occupational health and safety	199,617	91,486	103,485	13%
JSC ATOMPROEKT	61,344	56,821	72,654	28%
Medical programs (voluntary medical insurance and non-state insurance)	40,017	44,642	49,294	10%
Health promotion (health resort treatment and health improvement for employees and their families)	8,950	5,679	6,744	19%
Occupational health and safety	12,377	6,500	16,616	156%
JSC "NIKIMT-Atomstroy"	4,844	3,146	4,049	29%
Medical programs (voluntary medical insurance and non-state insurance)	1,148	1,591	1,979	24%
Health promotion (health resort treatment and health improvement for employees and their families)	231	0	0	0%
Occupational health and safety	3,465	1,555	2,070	33%
TREST ROSSEM LTD.	426	454	637	40%
Medical programs (voluntary medical insurance and non-state insurance)	426	454	637	40%
Health promotion (health resort treatment and health improvement for employees and their families)	0	0	0	0%
Occupational health and safety	0	0	0	0%
PJSC ESM	83	31	51	61%
Medical programs (voluntary medical insurance and non-state insurance)	0	0	0	0%
Health promotion (health resort treatment and health improvement for employees and their families)	0	0	0	0%
Occupational health and safety	83	31	51	61%
Total for Rosatom State Corporation Engineering Division	496,173	435,802	455,869	5%
Medical programs (voluntary medical insurance and non-state insurance)	143,012	150,820	169,451	12%

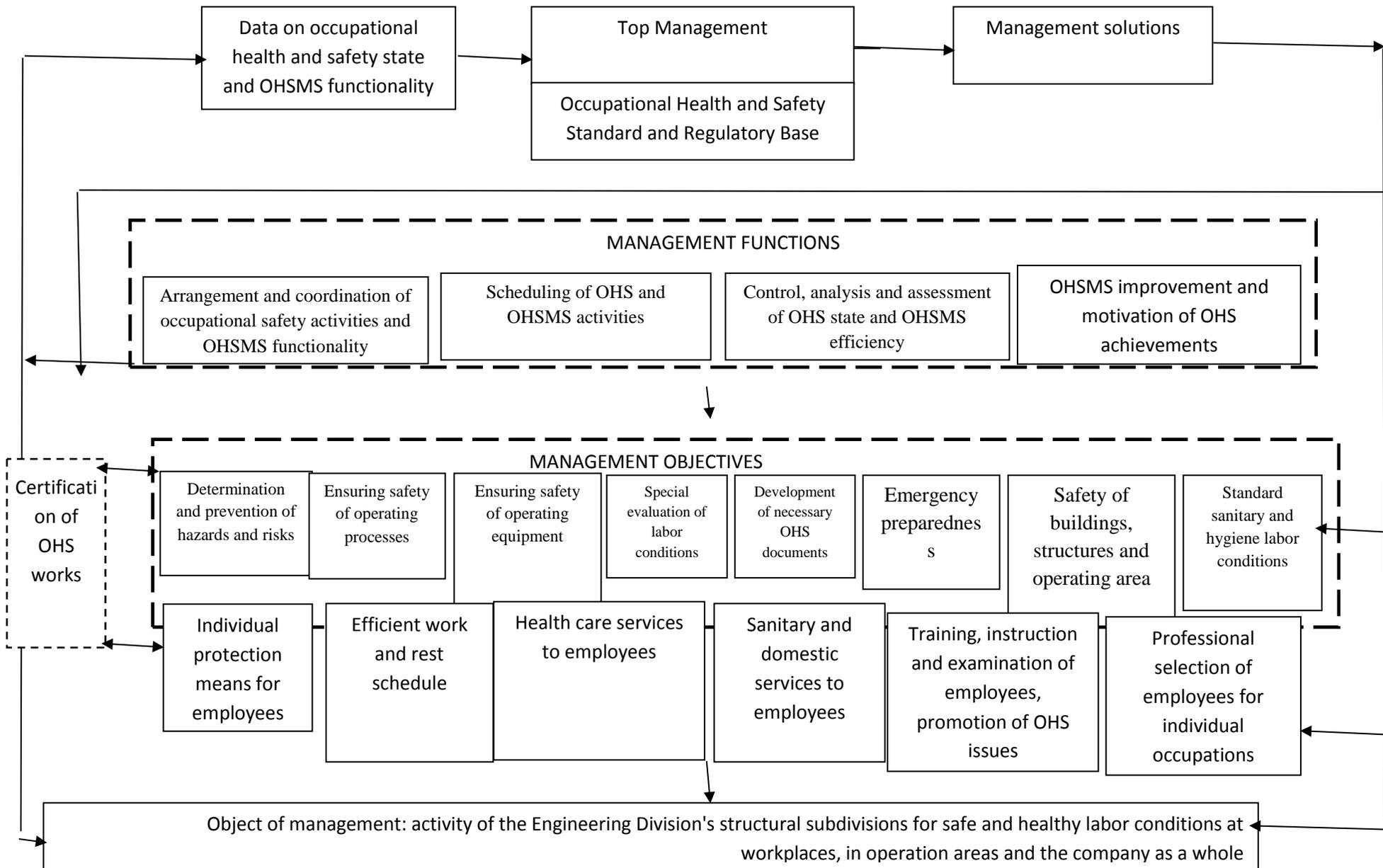
Health promotion (health resort treatment and health improvement for employees and their families)	28,853	20,857	23,120	11%
Occupational health and safety	324,309	264,125	263,298	0%

Table 13.14 Expenses for social programs, cultural and sports activities, thousand rubles

Company name	2016	2017	2018	2018/2017, %	Comments
JSC ASE					
Social programs including:	15,368	18,059	36,585	103%	In 2018, expenses grew due to recruitment of specialists in the design unit, Prospective Projects Division, Directorate for Projects in China, overseas branch offices.
Cultural and sports activities	2,259	5,618	12,678	126%	In 2018, the increasing amount of measures including the measures in overseas branch offices.
JSC ASE EC					
Social programs including:	194,627	191,103	206,070	8%	-
Cultural and sports activities	34,886	37,743	43,229	15%	-
JSC "Atomenergoproekt"					
Social programs including:	124,819	106,739	106,647	0%	-
Cultural and sports activities	12,837	26,115	28,961	11%	-
JSC ATOMPROEKT					
Social programs including:	99,571	93,105	91,940	-1%	-
Cultural and sports activities	18,884	18,086	20,026	11%	2018 1. The increase in the average headcount, the corresponding increase in the payroll budget, the size of which affects the obligations of the employer to transfer funds to the trade union organization to conduct mass culture and sports and recreation events. 2. The increase in the share of young people in the organization, the number of children covered by the obligations under the Collective Agreement, which, respectively, indicates the relevance or direct obligation to ensure the participation of these categories of people in the mass culture and sports and recreation events.

Company name	2016	2017	2018	2018/2017, %	Comments
JSC "NIKIMT-Atomstroy"					
Social programs including:	6,367	6,267	5,337	-15%	Due to the growth of the number of personnel in the company and the establishment of a new branch office in the People's Republic of Bangladesh, the social expenses have increased. This is primarily related to employees' insurance (voluntary medical insurance and non-state insurance) in overseas branch offices (in Bangladesh).
Cultural and sports activities	2,854	3,162	2,162	-32%	-
PJSC ESM					
Social programs including:	4,719	1,411	3,340	137%	The change of these data is due to the closure of MSU-3 Branch Office at Rostov NPP construction site and the growth of the average salary which led to the reduction of the planned applications for the financial aid.
Cultural and sports activities	699	520	2,346	351%	The increase of expenditures is due to the growth of the headcount of personnel that were given children's gifts for the New Year
TREST ROSSEM LTD.					
Social programs including:	1,595	911	1,391	53%	The overrun of expenditures is due to mobilization of overseas construction sites and additional expenditures for medical programs
Cultural and sports activities	282	89	55	-38%	-
Total for Engineering Division					
Social programs including:	447,066	417,595	451,311	8%	-
Cultural and sports activities	72,702	91,333	109,457	20%	-

Figure 13. 1 – Occupational Health and Safety Management System (OHSMS) of the Engineering Division (GRI 403-1)



The evaluation of production risks, measures for safety improvement at the workplace (GRI 403-2)

In order to identify and analyze hazardous situations arising in the process of production activities, assessment and management of possible risks, as well as to address the fundamental tasks of monitoring safety and preventing harm to life and health of workers, the standard STO 8841271.049-2018 "Hazard Identification and Occupational Risks Assessment" is introduced.

The hazard identification involves identifying of possible sources of unfavorable factors affecting the health and safety of workers during their work activities at workplaces, activities near the workplace related to work managed by companies (including seconded and outsourced personnel), and outside the workplace (business trip to construction sites and to third-party organizations, including transportation to the place of work).

Hazards during fulfillment of their duties, including observation of labor conditions and examination of workplaces, are identified by employees of structural subdivisions (with OHS authorized persons) annually before the 1st of May of the current year.

During the analysis of hazards, the main factors having an impact on safety of workplaces of respective divisions are traced, such as:

- production process;
- safety culture of the workplace;
- occupational safety during work at production equipment (when necessary);
- safety during the use of raw materials and materials (when necessary);
- qualification, work experience, personnel skills;
- personnel training
- human factor (behavior, capability, etc.);
- environmental factors at the workplace;
- ergonomic factors;
- passages and passways;
- the use of controls (technology, labels, signs, instructions, PPE);
- opportunities for salvation and the first aid.

To register the identified hazards, the OHS authorized employees of the structural subdivisions maintain records. All identified hazards are entered in the hazard register and sent to the OHS department for further assessment of the risks significance and development of risk mitigation measures. The register of hazards is formed for an independent structural subdivision.

In addition to the annual identification of hazards, all potentially dangerous events that did not lead to an injury or a minor injury are recorded by the person in charge of occupational health and safety of the structural subdivisions in the occupational health and safety monitoring log.

If the identified danger can provoke the risk of injury or impairment of health currently or in the immediate future, it is necessary to have it eliminated by employees of the structural subdivision (in cases where there is no threat to life or health) with informing the head of the structural subdivision and the occupational health and safety department, and, as to construction facilities - the occupational health and safety department, a branch office (representative office) at the construction site as established.

For familiarization with possible hazards and risks in branch offices, representative offices and at construction sites, an introductory briefing is conducted by occupational health and safety specialists or an employee appointed by an order (regulation) to conduct the introductory briefing. A record of the introductory briefing is made in the introductory briefing log.

Familiarization of employees with the possible hazards and risks of the head office in accordance with STO 8841271.049–2018 is available at JSC ASE internal website (Quality/IMS documents / Level 3 / Instructions). STO 8841271.049–2018 is sent to representative offices and construction sites by e-mail by the Integrated Management System Division.

Familiarization with the possible hazards and risks of workers performing construction, erection and other works on the territory of JSC ASE EC central office is ensured by JSC ASE EC Administrative and Economic Division, Procurement Division to support the company's activities, System Corporate Resource Division, the Application Systems Support Division with the registration in the introductory training log.

In JSC ASE EC branch offices and representative offices, employees are familiarized with the possible hazards and risks during the introductory training conducted by the occupational health and safety department. In order to familiarize themselves with possible hazards and risks, the heads of JSC ASE EC and JSC ASE structural subdivisions provide employees with primary, repeated, unscheduled, target briefings with registration in the workplace briefing log.

Investigation of accidents at work, causes of accidents and incidents in the Engineering Division of Rosatom State Corporation is carried out in accordance with regulations P 04.04-13 "Procedure for Investigating Accidents at NIAEP JSC", the guidelines of R GC.007-2016 "Procedure for Investigating the Causes of Accidents and Incidents in Atomstroyexport Joint-Stock Company, Moscow Branch of NIAEP JSC and Moscow Representative Office of NIAEP JSC" and R GK.019-2016 "Procedure for Investigating Accidents in Atomstroyexport JSC, Moscow Branch of NIAEP JSC and Moscow Representative Office of NIAEP JSC". STO 48546926.076-2018 "Procedure for Investigating the Accidents in Atomstroyexport Joint-Stock Company and Moscow Branch of ASE Engineering Company JSC" is at the stage of signing.

Functioning of Occupational Health and Safety Service

In order to ensure functioning of the occupational health and safety system in all independent and separate structural subdivisions of the Engineering Division, occupational health and safety services have been established.

The functioning of occupational health and safety services ensures the following (**GRI 403-3**):

- involvement and participation of employees in the process of hazard identification, risk assessment and management measures;
- involvement of workers in the development and analysis of occupational health and safety policies and objectives;
- advising workers on any changes affecting their occupational safety,
- meeting the requirements for the safety of buildings, structures, production areas and operation of production equipment;
- following the efficient work and rest schedule;
- workers performing work in harmful and (or) hazardous working conditions are provided with compensations based on the results of OHSMS;
- healthcare services are provided for employees;
- periodic medical examination of workers is carried out according to the results of the OHSMS and in accordance with the order of the RF Ministry of Health and Social Development No. 302n dd. 12.04.2011;
- daily pre-trip and post-trip medical examinations for car drivers are carried out;
- compliance of the employees' sanitary and hygienic working conditions with regulatory requirements is ensured;
- necessary medical care is provided in medical institutions in accordance with contracts concluded with insurance companies (voluntary medical insurance);
- equipment of workplaces is provided with means of collective protection against dangerous and (or) harmful production factors;
- equipment for industrial and office premises of companies of Rosatom State Corporation Engineering Division is provided with first-aid kits.

In 2018, in accordance with JSC ASE Order No. 007/122-P dd. 06.11.2018 "On Providing JSC ASE Employees with Personal Protective Equipment and Appointment of Responsible Persons", JSC ASE EC Order No. 40/1038-P dd. 29.06.2017 "On Providing Employees of JSC ASE EC Central Office with Personal Protective Equipment, Washing and Neutralizing Agents", JSC ASE EC Order No. 40/1353-P dd. 23.08.2017 "On Approval of the List of Positions of Managers, Specialists and Workers of JSC ASE EC Central Office Working in Harmful Working Conditions and the Rules for Issuing Free Individual Protective Equipment, Washing and Neutralizing Agents During These Works", the monitoring was conducted over the timely acquisition and delivery of free special clothing, footwear and individual

protective equipment (hereinafter - PPE). The OHS department was provided with the quarterly information on acquired and issued PPE at construction sites and in divisions.

In 2018, the works were continued for special assessment of the labor conditions (LCSA). LCSA data is given in i. 1.19

Consultation process and employees’ participation in OHSMS development, implementation and assessment (GRI 403-4)

OHS authorized persons are appointed in all companies of the Division.

Functions of the OHS authorized persons include:

- participation in development and analysis of occupational health and safety policies and objectives;
- participation in investigation of accidents in order to develop corrective measures and learn lessons;
- involvement and participation of employees in the processes of hazard identification, risk assessment and management measures;
- advising workers on any changes affecting their occupational safety,

The occupational health and safety services carry out quarterly workshops for persons responsible for occupational health and safety in order to inform them about change of the legislation, accidents and lessons learned, results of administrative control and other occupational health and safety issues.

Improving the skills of workers in the field of occupational health and safety, including the general preparation and preparedness for specific hazards related to work, hazardous activities or situations

In accordance with STO 48546926.048 – 2018, the following measures are annually taken in the Engineering Division to improve the skills of workers in the field of occupational health and safety, and prevention of occupational injuries:

- all newly recruited workers are given an introductory briefing on the day they are hired;
- primary, repeated and unscheduled briefings are conducted at the workplace;
- test of knowledge in occupational health and safety requirements;
- non-electrical personnel having the 1st group of electric safety are briefed once in a year in the area of electric safety.

Information about employees trained in vocational institutions with the subsequent qualification in 2018.

Company	Number of pers.
JSC ASE EC	343
JSC ASE EC Representative Office in the Republic of Belarus	4
Moscow Branch of JSC ASE EC	59
JSC ASE	219
JSC “Atomenergoproekt”	106
JSC ATOMPROEKT	38
VdMU LLC	14
TOTAL:	783

Information about employees trained in vocational institutions with the subsequent qualification in groups 2-5 of electrical safety in 2018.

Organization	Number of pers.
JSC ASE ECKursk Branch Office	27
JSC ASE EC Representative Office in the Republic of Belarus	36
Moscow Branch of JSC ASE EC	11
JSC ASE	27
JSC “Atomenergoproekt”	2
JSC ATOMPROEKT	7
VdMU LLC	3
TOTAL:	113

Table 13.15 Measures undertaken by the Engineering Division to prevent or mitigate the negative impact on the health and safety of employees (GRI 403-2, 403-6)

Factors and/or hazards	Consequences	Risk management action
Physical/elevated level of electromagnetic radiation. Enhanced electromagnetic field strength (office equipment, computer system unit, mobile phone, microwave oven)	Diseases of the cardiovascular and nerve system	<ol style="list-style-type: none"> 1. Systematic informing of employees about the existing risk of health impairment and necessary protection measures - repeated and unscheduled briefings (I GK.019 (introductory briefing program), I GK.022 or Instruction No. 38). 2. Training of employees and testing of their knowledge in the area of occupational health and safety (R GK.003). 3. Special assessment of labor conditions (R GK.017, P 04.03-14). 4. Organization of work on the operation and maintenance of buildings, structures, territories in accordance with the occupational health and safety rules and regulations. 5. Production control of the levels of electrical, magnetic, electromagnetic fields at workplaces (Production Control Program). 6. Periodical medical examination (Order of the Ministry of Social Development No. 302n dd. 12.04.2011). 7. Voluntary medical insurance (VMI). 8. Target examinations, operative control (STO 48546926.048).
Physical / Direct and reflected brightness Increased ripple of light flux (monitors)	Diseases of vision organs	<ol style="list-style-type: none"> 1. Systematic informing of employees about the existing risk of health impairment and necessary protection and preventive measures - repeated and unscheduled briefings (I GK.019 (introductory briefing program), I GK.022 or No. 30). 2. Training of employees and testing of their knowledge in the area of occupational health and safety (R GK.003). 3. Special assessment of labor conditions 4. Target examinations, operative control (STO 48546926.048). 5. Special assessment of labor conditions (Federal Law No.426-FZ). 6. Production control of the levels of indicators and light parameters at workplaces (Production Control Program). 7. Periodical medical examination (Order of the Ministry of Social Development No. 302n dd. 12.04.2011). 8. Voluntary medical insurance
Physical / electrical current (exposed wires, devices without grounding)	Burn, cut, electric shock, etc.	<ol style="list-style-type: none"> 1. Systematic informing of employees about the existing risk of injuries and necessary protection measures - repeated and unscheduled briefings (I GK.019 (introductory briefing program)), I GK.022). 2. Assignment of electrical safety Group 1 to JSC ASE EC non-electrical personnel (Order No. 40/543-P dd. 02.04.2018). 3. Training of employees and testing of their knowledge in the area of occupational health and safety (R GK.003). 4. Target inspections to check the trouble-free operation of all protective devices, reliability of grounding

Physical / glaze ice.	Fracture, strain, bruising, etc.	<ol style="list-style-type: none"> 1. Systematic informing of employees about the existing risk of injuries - repeated and unscheduled briefings (I GK.019 (introductory briefing program), I GK.022 or Instruction No. 1). 2. Carrying out seasonal activities (cleaning of pedestrian paths; sand and salt mixture treatment of territories; restriction of hazardous areas with signal tape; provision of entrance groups of buildings with anti-slip mats) 3. Training of employees and testing of their knowledge in the area of occupational health and safety (STO 48546926.048). 4. Target examinations (STO 48546926.048).
Physical / Movement of vehicles (including transport)	Fracture, strain, bruises, brain injury, thermal or chemical burn, poisoning, death	<ol style="list-style-type: none"> 1. Systematic informing of employees about the existing risk of injuries - repeated and unscheduled briefings (I GK.019 (introductory briefing program), I GK.022 or Instruction No. 30). 2. Employee training and control of knowledge of driving regulations. 3. Keeping of motor vehicles in serviceable state 4. Special assessment of labor conditions (R GK.017, P 04.03-14).
Physical / Uneven surfaces (gratings, ladders, etc.)	Fracture, strain, bruising, etc.	<ol style="list-style-type: none"> 1. Systematic informing of employees about the existing risk of injuries - repeated and unscheduled briefings (I GK.019 (introductory briefing program), I GK.022 or No. 1). 2. Training of employees and testing of their knowledge in the area of occupational health and safety (STO 48546926.048).
Physical / slippery surfaces (slippery floor, staircases, stepladders)	Fracture, strain, bruising, etc.	<ol style="list-style-type: none"> 1. Systematic informing of employees about the existing risk of injuries - repeated and unscheduled briefings (I GK.019 (introductory briefing program), I GK.022 or No. 1). 2. Training of employees and testing of their knowledge in the area of occupational health and safety (R GK.003). 3. Systematic checks of stepladders and staircases 4. Target examinations, operative control (STO 48546926.048).
Physical/Height, falling objects Stormy wind Thaw Hurricane	Bruising, brain injury etc.	<ol style="list-style-type: none"> 1. Systematic informing of employees about the existing risk of injuries - repeated and unscheduled briefings (I GK.019 (introductory briefing program), I GK.022 or No. 30). 2. Training of employees and testing of their knowledge in the area of occupational health and safety (R GK.003). 3. Limitation of dangerous areas by the warning line 4. Target examinations, operative control (STO 48546926.048).
Human factor/errors in work	Prick, cut, abrasion, scratch, etc.	<ol style="list-style-type: none"> 1. Systematic informing of employees about the existing risk of injuries - repeated and unscheduled briefings (I GK.019 (introductory briefing program), I GK.022 or No. 30). 2. Training of employees and testing of their knowledge in the area of occupational health and safety (R GK.003). 3. Target examinations, operative control (STO 48546926.048).

<p>Physical / Flames, sparks, smoke, low air concentration</p> <p>Chemical nature of the effects on the human body / Toxic</p>	<p>Poisoning by burning products, burns, fractures, strains, bruises, etc.</p>	<ol style="list-style-type: none"> 1. Systematic informing of employees about the existing risk of injuries - repeated and unscheduled briefings (I GK.019 (introductory briefing program), I GK.022 or No. 30). 2. Employee training and control of knowledge of fire safety regulations and emergency response (I GK.015, Order No.40/422-P dd. 16.03.2018). 3. Carrying out planned inspections of the building for fire safety (Order No. 40/422-P dd. 16.03.2018). 4. Carrying out of the planned training for the evacuation of people from the building (R GK.011, Order No. 40/422-P dd.16.03.2018).
<p>Biological/Microorganisms, insects, animals and reptiles</p>	<p>Allergic reaction, edema, wound, dangerous infection (encephalitis, malaria, dysentery, etc.)</p>	<ol style="list-style-type: none"> 1. Informing of employees about the existing risk of health impairment and necessary protection and preventive measures - repeated and unscheduled briefings before secondments (I GK.019 (introductory briefing program), I GK.022 or No. 30). 2. Vaccination against tick-borne encephalitis according to epidemiological indications (voluntary health insurance) 3. Seasonal flu vaccination (voluntary health insurance). 4. Vaccination of employees sent on missions to countries with unfavorable sanitary and epidemiological situation against infections in accordance with WHO recommendations.
<p>Physical/Increased or reduced air temperature in the working area. Air mobility</p>	<p>Disease, cold, reduced immunity, exacerbation of chronic diseases, heat stroke</p>	<ol style="list-style-type: none"> 1. Organization of work on the operation and maintenance of buildings, structures, territories in accordance with the occupational health and safety rules and regulations. 2. Systematic informing of employees about the existing risk of health impairment and necessary protection and preventive measures - repeated and unscheduled briefings (I GK.019 (introductory briefing program), I GK.022 or No. 30). 3. Target examinations, operative control (STO 48546926.048). 4. Production control of the indicators of microclimate at workplaces (Production Control Program). 5. Periodical medical examination (Order of the Ministry of Social Development No. 302n dd. 12.04.2011). 4. Voluntary medical insurance
<p>Physical/Increased temperature of equipment surfaces, materials</p>	<p>Burn, slit</p>	<ol style="list-style-type: none"> 1. Organization of work on the operation and maintenance of buildings, structures, territories in accordance with the occupational health and safety rules and regulations. 2. Systematic informing of employees about the existing risk - repeated and unscheduled briefings (I GK.019 (introductory briefing program), I GK.022 or No. 30). 3. Training of employees and testing of their knowledge in the area of occupational health and safety (R GK.003). 4. Target examinations, operative control (STO 48546926.048). 5. Production control of the indicators of microclimate at workplaces (Production Control Program). 6. Periodical medical examination (Order of the Ministry of Social Development No. 302n dd. 12.04.2011). 7. Voluntary medical insurance

Physical/Movement of mechanisms	Fracture, strain, contusion, brain injury, death	<ol style="list-style-type: none"> 1. Organization of work on the operation and maintenance of buildings, structures, territories in accordance with the occupational health and safety rules and regulations. 2. Systematic informing of employees about the existing risk of injuries - repeated and unscheduled briefings (I GK.019 (introductory briefing program), I GK.022 or No. 30). 3. Maintenance and inspection of elevators 4. Operative control, control of management, target inspections (RF Gosstroy, Order No. 158 dd. 30.06.99)
Chemical/ By penetration into the human body through the respiratory organs (scanner, printer, etc.)	Poisoning (by penetration into the human body through the respiratory organs)	<ol style="list-style-type: none"> 1. Systematic informing of employees about the existing risk of health impairment and necessary protection measures - repeated and unscheduled briefings (I GK.019 (introductory briefing program), I GK.022 or No. 30). 2. Training of employees and testing of their knowledge in the area of occupational health and safety (R GK.003). 3. Rational organization of working places 4. Regular airing of premises
Chemical/ By penetration into the human body through the gastrointestinal tract (food and drugs)	Disease of the digestive tract (by the entry into the human body through the gastrointestinal tract)	<ol style="list-style-type: none"> 1. Informing of employees about the existing risk of health impairment and necessary protection and preventive measures - repeated and unscheduled briefings (I GK.019 (introductory briefing program), I GK.022 or No. 30).
Physical / Staircases, doorways, doors	Fracture, brain injury, contusion	<ol style="list-style-type: none"> 1. Systematic informing of employees about the existing risk of injuries - repeated and unscheduled briefings (I GK.019 (introductory briefing program), I GK.022 or No. 1).
Psycho-physiological - physical stress / Static overstress of analyzers, monotonous labor	Physical inactivity, hypomnesia, reduced vision	<ol style="list-style-type: none"> 1. Informing of employees about the existing risk of health impairment and necessary protection and preventive measures - repeated and unscheduled briefings (I GK.019 (introductory briefing program), I GK.022 or No. 30). 2. Familiarization with the Instruction on Occupational Health and Safety When Working at a Personal Computer (I GK.018 or No. 38) 3. Prevention of visual and general stress
Psychophysiological - neuropsychiatric / Mental overstrain, stress, mental workload, emotional stress	Nervous breakdown, chronic fatigue, apathy, depression	<ol style="list-style-type: none"> 1. Informing of employees about the existing risk of health impairment and necessary protection and preventive measures - repeated and unscheduled briefings (I GK.019 (introductory briefing program), I GK.022 or No. 30). 2. Rational organization of work and rest (organization of 10-15 minute breaks every 45-60 minutes of work). 3. Performance of activities aimed at a healthy lifestyle (sports, cycling, walking, outdoor activities, etc.). 4. Periodical medical examination (Order of the Ministry of Social Development No. 302n dd. 12.04.2011). 5. Voluntary medical insurance
Physical/increased levels of static electricity;	Burn, reflex movement leading to a possible injury	<ol style="list-style-type: none"> 1. Informing of employees about the existing risk of health impairment and necessary protection and preventive measures - repeated and unscheduled briefings (I GK.019 (introductory briefing program), I GK.022 or No. 30). 2. Check of reliable earthing 3. Control of relative humidity at working places

Audits (GRI 403-8)

In order to analyze the functioning and effectiveness of the OHSMS and its elements ensuring the safety and health of workers and prevent incidents, internal and external audits of the OHSMS performance are regularly carried out in the Engineering Division.

In 2018, the following types of occupational health and safety control were carried out in companies of the Engineering Division:

- operational control in the workplace;
- quarterly local control conducted by the heads of independent structural subdivisions with or without occupational health and safety specialists. The risk assessment and all violations identified during the monitoring of the occupational health and safety status were recorded in the occupational health and safety monitoring log of an independent structural subdivision according to JSC ASE EC IMS documents and JSC ASE STO 48546926.048-2018 and STO 8841271.049-2018 "Hazard Identification and Professional Risks Assessment";

- target inspection; results of the monitoring are presented in the form of acts enclosed with a plan of measures for the elimination of the revealed violations, indicating the responsible executors and deadlines for implementation; 4 (four) target audits were carried out in the Head Office of JSC ASE EC companies and JSC ASE (inspection acts No. 40/91/30/15/7-1 dd. 19.03.2018; No. 40/91/30/15/13-1 dd. 09.06.2018; No. 40/91/30/15/49-1 dd. 12.09.2018, No. 40/91/30/15/50-1 dd. 29.12.2018, comments are eliminated following the inspections);

- assessment of the occupational health and safety status in independent and independent / separate structural subdivisions carried out during internal audits. Bureau Veritas Certification Rus JSC conducted a certification audit from May 14 to May 18, 2018, during which the activity on the implementation of the occupational health and safety was checked in JSC ASE.

- assessment of the state of the occupational health and safety in independent and independent / separate structural subdivisions carried out during the external audit. 7 (seven) IMS internal audits were conducted, when the compliance with occupational health and safety requirements was verified against requirements of OHSAS 18001: 2007, as well as compliance with the state regulatory requirements that are contained in the federal laws and other RF regulatory acts was verified, as well as compliance with internal regulatory requirements in the IMS documents.

In March 2018, a scheduled inspection of the safety status was carried out in JSC ASE EC Representative Office in the Republic of Belarus.

Data on types of injuries as per contractors

In order to ensure injury prevention in the Engineering Division, the work was organized to inform workers about accidents that occurred in other companies of the industry, at the NPP construction sites in 2018, indicating the causes and circumstances contributing to the occurrence of these cases. From the beginning of 2018, six accidents occurred in the Engineering Division's and subcontractors' companies.

Engineering Division's companies of JSC ASE EC

No.	Date	Scope of management	Injury severity	Investigation complete/incomplete
1	17.03.2018	Within ASE scope of management	Light*	Completed (Certificate H-1 dd. 22.03.2018)
2	21.06.2018	Within ASE scope of management	Severe*	Completed (Certificate H-1 dd. 26.07.2018)

*The severity of damage to health is determined in accordance with the requirements of the RF legislation.

JSC ASE EC contractors

No.	Date	Scope of management	Injury severity	Investigation complete/incomplete
1	09.07.2018	Outside the scope of management	Severe**	Completed (Certificate H-1 dd. 30.08.2018)
2	10.07.2018	Outside the scope of management	Severe**	Completed (Certificate H-1 dd. 08.08.2018)

3	16.07.2018	Outside the scope of management	Fatal**	Completed (Certificate H-1 dd. 21.09.2018)
4	21.12.2018	Outside the scope of management	Fatal**	Investigation incomplete

*The severity of damage to health is determined in accordance with the requirements of the RF legislation.

*The severity of damage to health is determined in accordance with the requirements of the legislation in the country of operation.

Table 13.17 Information on the lost day rate (LDR) and absentee rate (AR)

Company name	Total number of days lost due to occupational injuries	Total amount of time worked by all enterprise employees in the reporting period (hours)	Workplace absence due to any disability (except for maternity leave and leave for the care of child under 3), days	Total amount of time to be worked by all enterprise employees in the reporting period (scheduled production resource, days)	Lost day rate (LDR)	Absentee rate (AR)
Engineering Division	354	35,837,452 (42,305,072)	135,138	4,798,547	1.97 (1.67)	5,632.4
including:						
JSC ASE EC	90	8,027,745	36,494	1,189,624	2.24	6,135.3
JSC "Atomenergoproekt"	0	3,889,612	17,251	609,780	0	5,658.1
JSC ATOMPROEKT	0	3,743,200	20,799	573,213	0	7,256.9
JSC ASE	0	2,028,541	4,652	300,803	0	3,093
JSC "NIKIMT-Atomstroy"	0	5,123,502	17,482	625,289	0	5,591.6
TREST ROSSEM LTD.	264	7,837,754	13,760	948,512	6.73	2,901.4
PJSC ESM	0	5,187,098	24,700	551,326	0	8,960.2

Projects/events/topics which took place in the field of occupational health and safety within the reporting year

From July 30 to August 03, 2018, occupational health and safety experts of JSC ASE EC , Moscow Branch, JSC ASE, JSC “Atomenergoproekt”, TREST ROSSEM LTD., SPB Research and Survey Institute JSC took part for the first time in the 3rd industry championship Atomskills, in the competence “Occupational health and safety”.

Within the reporting period, JSC “NIKIMT-Atomstroy” signed subcontracts at Kursk NPP-2, Rooppur NPP, binding the contract parties to use in their activities Standard Regulations on the Occupational Safety Management System at NPP Construction Sites. These Regulations establish the procedure for occupational safety control and management, which is uniform for all participants of NPP units construction, in accordance with the legislation of the Russian Federation and industry regulations, establish basic requirements and procedures for interface generation and assurance. Standard Regulations on the Occupational Safety Management System at NPP Construction Sites contain 12 mandatory procedures, including: “Safety Lineups”, “Construction Site Patrolling”, “Office for the Safe Execution of Works”. In 2018, JSC “NIKIMT-Atomstroy” was certified for occupational health and safety management system in accordance with the requirements of OHSAS 18001 international standard (GOST R 54934), certificate No. 18.2226.026 dd. 07.12.2018.

The first workshop meeting on the occupational health and safety issues was held in the Engineering Division within the framework of safety culture achieving. The topic of the meeting was “Behavioral safety audit as demonstration of the executive’s personal responsibility for the safety and feedback from the employees”. This cumbersome title implies a very simple meaning that is expressed in the basic safety culture principles adopted in the nuclear industry, namely: - safety culture development and involvement shall be the priorities in all the employees’ activities and executives shall demonstrate the priority of safety and compliance with job practices by their own examples; - violation of safety requirements shall be perceived by all employees as an unacceptable event. The first workshop meeting on the occupational health and safety issues was held in the Engineering Division within the framework of safety culture achieving. Representatives of the Division’s occupational health and safety units, inspection services and delegates from all overseas sites took part in this event. The talk was very business-like and constructive. The current situation was evaluated, areas for occupational health and safety management system improvement and for work improvement in this field in general were defined. Having noted a clear progress in the occupational safety activities in the Division, the workshop meeting participants concurred that it was too early to be complacent as there is a long way to go to avoid and prevent occupational incidents and accidents.

Table 13.18 Summary list of labor conditions special assessment results

Company name	Title	Number of workplaces and number of employees engaged in these workplaces		Number of workplaces and number of engaged employees by labor conditions classes (sub-classes) out of the number of workplaces specified in column 3 (items)						
		total	including the ones for which a special assessment of labor conditions is made	class 1	class 2	class 3				class 4
						3.1	3.2	3.3	3.4	
JSC ASE EC	Workplaces (items)	3,248	3,248	0	3,182	51	6	9	0	0
	Employees engaged at workplaces (people)	3,347	3,347	0	3,182	55	6	9	0	0
	Including women	1,421	1,421	0	1,419	1	1	0	0	0
	Including ones at the age of under 18	0	0	0	0	0	0	0	0	0
	Including the disabled	1	1	0	1	0	0	0	0	0
JSC ASE	Workplaces (items)	1,523	744	0	744	0	0	0	0	0
	Employees engaged at workplaces (people)	1,523	744	0	744	0	0	0	0	0
	Including women	738	255	0	255	0	0	0	0	0
	Including ones at the age of under 18	0	0	0	0	0	0	0	0	0
	Including the disabled	0	0	0	0	0	0	0	0	0
JSC “Atomenergoproekt”	Workplaces (items)	2,339	2,339	5	2,334	21	1	-	-	-
	Employees engaged at workplaces (people)	2,241	2,241	5	2,236	23	1	0	0	0
	Including women	1,029	1,029	2	1,027	0	0	0	0	0
	Including ones at the age of under 18	0	0	0	0	0	0	0	0	0
	Including the disabled	0	0	0	0	0	0	0	0	0
JSC ATOMPROEKT	Workplaces (items)	2,204	600	0	600	0	0	0	0	0
	Employees engaged at workplaces (people)	2,224	600	0	600	0	0	0	0	0
	Including women	1,105	342	0	329	0	0	0	0	0
	Including ones at the age of under 18	0	0	0	0	0	0	0	0	0
	Including the disabled	16	3	0	5	0	0	0	0	0
VdMU LLC	Workplaces (items)	345	345	0	140	167	38	0	0	0
	Employees engaged at workplaces (people)	354	354	0	145	171	38	0	0	0
	Including women	87	87	0	74	13	0	0	0	0
	Including ones at the age of under 18	0	0	0	0	0	0	0	0	0
	Including the disabled	0	0	0	0	0	0	0	0	0

Company name	Title	Number of workplaces and number of employees engaged in these workplaces		Number of workplaces and number of engaged employees by labor conditions classes (sub-classes) out of the number of workplaces specified in column 3 (items)						
		total	including the ones for which a special assessment of labor conditions is made	class 1	class 2	class 3				class 4
						3.1	3.2	3.3	3.4	
SMU No.1 LLC	Workplaces (items)	949	0	0	0	0	0	0	0	0
	Employees engaged at workplaces (people)	949	0	0	0	0	0	0	0	0
	Including women	97	0	0	0	0	0	0	0	0
	Including ones at the age of under 18	0	0	0	0	0	0	0	0	0
	Including the disabled	0	0	0	0	0	0	0	0	0
TREST ROSSEM LTD.	Workplaces (items)	818	818	0	403	62	353	0	0	0
	Employees engaged at workplaces (people)	1,892	1,892	0	572	128	1,192	0	0	0
	Including women	195	195	0	174	19	2	0	0	0
	Including ones at the age of under 18	0	0	0	0	0	0	0	0	0
	Including the disabled	0	0	0	0	0	0	0	0	0
JSC "NIKIMT-Atomstroy"	Workplaces (items)	435	435	0	324	10	101	0	0	0
	Employees engaged at workplaces (people)	448	448	0	333	10	105	0	0	0
	Including women	65	65	0	56	2	7	0	0	0
	Including ones at the age of under 18	0	0	0	0	0	0	0	0	0
	Including the disabled	1	1	0	1	0	0	0	0	0
PJSC ESM	Workplaces (items)	2,072	2,020	38	380	1,185	402	15	0	0
	Employees engaged at workplaces (people)	2,955	2,698	32	507	1,376	768	15	0	0
	Including women	354	349	32	257	45	15	0	0	0
	Including ones at the age of under 18	0	0	0	0	0	0	0	0	0
	Including the disabled	0	0	0	0	0	0	0	0	0
TOTAL:	Workplaces (items)	13,933	10,549	43	8,107	1,496	901	24	0	0
	Employees engaged at workplaces (people)	15,933	9,975	37	8,319	1,763	2,110	15	0	0
	Including women	5,091	3,743	34	3,334	80	16	0	0	0
	Including ones at the age of under 18	0	0	0	0	0	0	0	0	0
	Including the disabled	18	5	0	7	0	0	0	0	0

Table 13.19 Documents regulating representation of employees as regards health and safety

Company*	Documents
JSC ASE EC	“Regulations for Occupational Health and Safety Authorized Persons” P 04.07-13, approved by order No. 40/4118-P dd. 19.11.2013
JSC ASE	PF GK.007-2016 Regulations for Occupational Health and Safety Authorized Persons in ASE Structural Subdivisions”
Rosspetsenergmontazh Complex LLC	“Regulations for Occupational Health and Safety Authorized Persons” approved by Order No. 334-04/622-P dd. 29.06.2018
JSC “NIKIMT-Atomstroy”	“Regulations for Occupational Health and Safety Authorized Persons” P SM 02-OT-04-2016, approved by order No. 39/755-P dd. 19.12.2016
JSC ATOMPROEKT	PrOT 14-2018 “Regulations for Joint Occupational Health and Safety Committee of JSC ATOMPROEKT”
VdMU LLC	“Regulations for Occupational Health and Safety Authorized Persons from the Labor Collective” P-OOO VdMU-15-06-2015, approved by Order No. 226/319-P dd. 22.09.2015

* In JSC «Atomenergoproekt»and PJSC ESM, functions of occupational health and safety authorized persons are assigned to representatives of trade union committees

(GRI 404-1) Table 13.20 Average hours of training per year per employee, man/hour

Company name	2016	2017	2018	(2018-2017)/2017, %	Analytical comment
JSC ASE EC	23.4	38.4	36.6	-4.82	Decrease in the number of hours is related to the increase of training programs in a remote format.
JSC “Atomenergoproekt”	24.4	25.4	53.8	+112	-
JSC ASE	3.7	3.8	23.2	+509	Increase in the average number of training hours is caused by the change in the staff structure
JSC ATOMPROEKT	10.4	30.3	57.5	+90	The increase is caused by the fact that mandatory training of the executives was held in 2018 (frequency is once in 3 years)
JSC “NIKIMT-Atomstroy”	30.3	31.5	16.9	-46.4	Decrease in the number of hours is caused by the increase of training programs in a remote format.
PJSC ESM	30.5	27.4	20.1	-26.45	-
TREST ROSSEM LTD.	8.0	9.2	34.5	+275	The growth is caused by increased number of workers’ training hours in 2018
Total for Engineering Division	21.3	28.4	34.37	+21	-

(GRI 404-1) Table 13.21 Average hours of training per year per employee of different categories

Company name	2016	2017	2018	(2018-2017)/2017, %	Analytical comment
JSC ASE EC	23.4	38.4	36.6	-4.8%	the number of employees is minimal, there is no specific information on this category, we can estimate the indicators as 0.0-0.05
Executives	54.2	55	40.0	-	
Specialists	15.5	37.4	36.7	-	
Office workers	the number of employees is minimal, there is no specific information on this category, we can estimate the indicators as 0.0-0.05		-	-	
Workers	12.5	6.2	29.3	-	
JSC “Atomenergoproekt”	24.4	25.4	53.8	112%	-
Executives	56.6	53.2	93.0	-	there are no “office workers” and “workers” categories
Specialists	20.2	22.5	50.7	-	
Office workers				-	
Workers	16.8	16.3	23.8	-	
JSC ASE	3.7	3.8	23.2	509%	
Executives	7.9	5.2	54.1	-	the increase is caused by the fact that mandatory training of the executives was held in 2018 (frequency is once in 3 years)
Specialists	1.74	1.9	17.9	-	
Office workers	-	-	-	-	
Workers	-	-	-	-	
JSC ATOMPROEKT	10.4	30.3	57.5	90%	
Executives	34.8	50.02	82.6	-	-
Specialists	8.1	26.1	56.9	-	
Office workers	0	0	0.0	-	
Workers	0	38.6	1.6	-	
JSC “NIKIMT-Atomstroy”	30.3	31.5	16.9	-46.4%	
Executives	58.8	56.8	28.3	-	-
Specialists	10.5	11.1	9.5	-	
Office workers				-	
Workers	21.5	28.3	17.5	-	
PJSC ESM	30.45	27.37	20.1	-26.45%	
Executives	47.1	63.81	43.6	-	-
Specialists	15.3	65.11	7.7	-	
Office workers			0.0	-	
Workers	30.6	21.62	19.1	-	
TREST ROSSEM LTD.	8	9.2	34.5	275.00%	
Executives	14	15.6	5.6	-	The growth is caused by increased number of workers’ training hours in 2018
Specialists	11	11.2	9.5	-	
Office workers	-	-	0.0	-	
Workers	7	9.2	38.8	-	
Total for Engineering Division	21.3	28.4	34.4	21%	

(GRI 404-1) Table 13.22 Average hours of training per year per one male employee

Company name	2016	2017	2018	(2018-2017)/2017, %
JSC ASE EC	30.1	44.8	40.9	-9%
JSC “Atomenergoproekt”	29.3	30.2	58.7	+94%
JSC ASE	4.4	4.1	28.7	+599%
JSC ATOMPROEKT	13.3	30.6	60.4	+97%
JSC “NIKIMT-Atomstroy”	37.6	36.5	15.9	-56%
PJSC ESM	35.5	26.8	20.8	-22%
TREST ROSSEM LTD.	8.2	10.4	36.5	+251%
Total for Engineering Division	26.1	30.3	34.50	+14%

(GRI 404-1) Table 13.23 Average hours of training per year per one female employee

Company name	2016	2017	2018	(2018-2017)/2017, %
JSC ASE EC	15.4	25.7	30.9	+20%
JSC “Atomenergoproekt”	19.4	20.2	48.0	+137%
JSC ASE	2.6	3.7	16.6	+348%
JSC ATOMPROEKT	10.7	29.6	54.6	+84%
JSC “NIKIMT-Atomstroy”	38.7	32.0	20.8	-35%
PJSC ESM	6.4	52.2	15.0	-71%
TREST ROSSEM LTD.	7.0	7.6	9.4	-23%
Total for Engineering Division	15.9	26.5	34.05	28%

Table 13.24 Programs of skills development and lifelong learning intended to sustain the employees' working abilities and assist in their retirement

Company name	Programs for upgrading employee skills and transition assistance programs Skills (GRI 404-2).	Type and nature of programs and assistance in the employees' advanced training implemented in the Engineering Division.	Support programs offered to employees in their search of further employment or career ending management in case of retirement or work termination.
JSC ASE	-	Advanced training is held if required (employee's re-qualifying in a certain field), at the employee's will if agreed by his/her manager and such training is available in the annual plan.	Assistance to the employees dismissed due to job cuts in new employment in other companies of the group and in CV preparation.
JSC ASE EC	There was no employees' training under such programs.	There was no employees' training under such programs.	There was no employees' training under such programs.
JSC «Atomenergoproekt»	JSC «Atomenergoproekt» JSC «Atomenergoproekt» uses the PROGRAM of coaching system development, under which specialists with high qualification (including those who are retired) share their important knowledge with young specialists.	Employees' Training and Qualification Enhancement Program is approved in JSC «Atomenergoproekt» JSC «Atomenergoproekt» for every year. Upon agreement with their managers, every employee can apply for training required for their professional activities.	A comprehensive program is being implemented in JSC «Atomenergoproekt» JSC «Atomenergoproekt» for pensioners and veterans. Various events are organized annually for support of pensioners and honored employees, their special importance for the company.
JSC ATOMPROEKT	arrangement of qualification maintenance training for the employees; arrangement of English classes for the employees; English clubs for the employees.	employees' mandatory training (in accordance with the requirements of the RF state supervisory authorities); advanced training for the employees; English classes (group studies, speaking clubs); industry training programs (candidate pool, globalizer leaders); management skills development in the employees hired/promoted to executive positions.	-
JSC «NIKIMT-Atomstroy»	- English classes; - active participation in various professional skills contests.	Employees' training and advanced training are held in accordance with the annual Training and Development Plan.	There are no programs in this area.
PJSC ESM	English classes; improvement of professional competencies; management skills development; remote learning	English classes; improvement of professional competencies; management skills development; remote learning	-

Company name	Programs for upgrading employee skills and transition assistance programs Skills (GRI 404-2).	Type and nature of programs and assistance in the employees' advanced training implemented in the Engineering Division.	Support programs offered to employees in their search of further employment or career ending management in case of retirement or work termination.
TREST ROSSEM LTD.	<ul style="list-style-type: none"> - English classes; - active participation in various professional skills contests. - coach training in branch offices 	Employees' training and advanced training are held in accordance with the annual Training and Development Plan.	-

Table 13.25 Structure of Rosatom State Corporation Engineering Division expenses on the employees' training in the reporting period, million rubles

Company name	Expenses, million rubles	Key partners
JSC ASE EC	63.25	
Mandatory professional training	6.46	ANO CPE Rosatom Technical Academy, NEI CPE Professional Development Center for the Employees of the Nuclear Industry Construction Complex, JSC «NIKIMT-Atomstroy»
Industry training and development programs	14.33	ANO Rosatom Corporate Academy
Additional training	40.73	ANO Rosatom Corporate Academy, ANO CPE Rosatom Technical Academy, PEI CPE TsNTI Progress, PI CPE Branch Project Management University, PI CE EMS MASTERCLASS, Softline Training Center
Other expenses for training, assessment and development	1.73	ANO Rosatom Corporate Academy, PEI CPE TsNTI Progress
JSC ASE	7.57	
Mandatory professional training	0.78	ANO CPE Specialists Advanced Training Institute; ANO CPE Rosatom Technical Academy;
Industry training and development programs	2.03	ANO Rosatom Corporate Academy
Additional training	2.28	ANO Rosatom Corporate Academy
Other expenses for training, assessment and development	2.48	ANO Rosatom Corporate Academy
JSC «Atomenergoproekt»	38.41	
Mandatory professional training	1.91	ANO CPE Rosatom Technical Academy; ANO CPE Intra-industry Technological Advanced Training Institute; NEI CPE Balakovo Institute of Retraining and Advanced Training; PI CPE Professional, Integral Institute for Continuing Education and Training
Industry training and development programs	3.60	ANO Rosatom Corporate Academy
Additional training	30.74	ANO Rosatom Corporate Academy, ANO CPE Rosatom Technical Academy, PMSOFT Group of Companies, TsNTI Progress, Strategic Analysis and Entrepreneurial Development Institute LLC
Other expenses for training, assessment and development	2.16	ANO Rosatom Corporate Academy
JSC ATOMPROEKT	51.87	
Mandatory professional training	0.46	PEI CPE Institute for Occupational Health and Safety and Social Partnership
Industry training and development programs	3.04	ANO Rosatom Corporate Academy
Additional training	44.89	ANO Rosatom Corporate Academy, ANO CPE Rosatom Technical Academy, TsNTI Progress, FSAEI CPE St. Petersburg Energy Institute for Advanced Training.
Other expenses for training, assessment and development	3.48	ANO Rosatom Corporate Academy
JSC «NIKIMT-Atomstroy»	16.44	
Mandatory professional training	7.16	NEI CPE Professional Development Center for the Employees of the Nuclear Industry Construction Complex; Professional JSC; ANO CPE PromEnergо Garant
Industry training and development	4.53	ANO Rosatom Corporate Academy

Company name	Expenses, million rubles	Key partners
programs		
Additional training	3.97	ANO Rosatom Corporate Academy; ANO CPE Rosatom Technical Academy
Other expenses for training, assessment and development	0.78	ANO Rosatom Corporate Academy
PJSC ESM	14.33	
Mandatory professional training	10.19	Professional Training Center LLC, Occupational Safety and Labor Conditions Center LLC, Occupational Safety Departmental Certification Center LLC, Znanie PRO LLC, PEI CPE Znanie PRO in Volgodonsk, Training and Production Cooperative Bezopasnost Dvizheniya
Industry training and development programs	2.06	ANO Rosatom Corporate Academy
Additional training	1.27	Professional Training Center LLC, NEI CPE Professional Development Center for the Employees of the Nuclear Industry Construction Complex
Other expenses for training, assessment and development	0.81	
TREST ROSSEM LTD.	13.65	
Mandatory professional training	4.96	ANO CPE TC PRIS, ANO CPE TC Region Study Center, Urban Economy Evaluation Center LLC, JSC «NIKIMT-Atomstroy»
Industry training and development programs	1.69	ANO Rosatom Corporate Academy
Additional training	2.90	ANO CPE Rosatom Technical Academy and other external training centers
Other expenses for training, assessment and development	4.10	NEI CPE Professional Development Center for the Employees of the Nuclear Industry Construction Complex
Total for Engineering Division	205.52	

Table 13.26 Expenditure of resources for personnel training (with a breakdown by Rosatom State Corporation Engineering Division companies), million rubles²

Company name	Employees' categories	2016		2017		2018		Provide an analytical comment to the table
		m	f	m	f	m	f	
JSC ASE EC	Heads	13.20	5.70	21.90	4.30	16.90	3.90	Personnel training expenses are not represented in the expenditure - the number of employees is minimal, there is no specific information on this category, we can estimate the indicators as 0.0-0.05
	Specialists	12.30	7.50	16.80	14.80	22.70	17.50	
	Office workers	-	-	-	-	0.00	0.00	
	Workers	0.20	0.03	0.10	-	0.50	0.03	
	Total	38.93		57.90		61.53		
JSC "Atomenergoproekt"	Heads	7.50	3.90	9.60	3.80	6.90	2.80	The total sum of expenditure excludes the expenses for training and certification
	Specialists	8.60	8.50	15.60	10.60	15.60	11.20	
	Office workers	-	-	-	-	-	-	
	Workers	0.20	0.05	0.16	0.11	0.17	0.02	
	Total	28.75		39.88		36.69		
JSC ASE	Heads	0.70	0.50	0.80	0.40	2.34	0.53	Training expenses are indicated in terms of mandatory and additional programs arranged through external contracting parties (sole and competitive service providers). The total sum of expenditure excludes other expenses on personnel assessment, training and development.
	Specialists	0.20	0.20	5.10	3.30	1.73	0.63	
	Office workers	0.00	0.00	0.00	0.00	0.00	0.00	
	Workers	0.00	0.00	0.50	0.20	0.00	0.00	
	Total	1.60		10.30		5.23		
JSC ATOMPROEKT	Heads	1.10	2.10	3.90	2.60	6.23	3.23	-
	Specialists	4.80	5.40	14.80	13.30	20.55	18.53	
	Office workers	0.00	0.00	0.00	0.00	0.00	0.00	
	Workers	0.00	0.00	0.03	0.04	0.02	0.02	
	Total	13.40		34.66		48.58		
TREST ROSSEM LTD.	Heads	0.31	0.26	0.33	0.27	0.42	0.18	-
	Specialists	0.80	0.35	0.90	0.40	1.50	0.34	
	Office workers	-	-	-	-	-	-	
	Workers	1.40	0.03	1.70	0.00	9.81	1.40	
	Total	3.15		3.60		13.65		
JSC "NIKIMT-Atomstroy"	Heads	4.82	0.72	6.01	0.92	6.53	0.84	Expenses on the workers' training have been increased due to large-scale recruitment
	Specialists	1.37	0.65	1.70	1.09	1.41	2.09	
	Office workers	-	-	-	-	-	-	

² In the table on expenditure of resources for personnel training, other expenditures for assessment, training and development are not taken into account for the personnel that are not registered in the breakdown as per categories of employees

Company name	Employees' categories	2016		2017		2018		Provide an analytical comment to the table
		m	f	m	f	m	f	
	Workers	2.44	0.15	3.82	0.10	5.57		of personnel (workers) in the PRB
	Total	10.15		13.64		16.44		
PJSC ESM	Executives	0.86	0.20	0.56	0.13	0.98	0.23	
	Specialists	0.16	0.27	0.31	0.51	0.61	0.99	
	Office workers	-	-	-	-	0.00	0.00	
	Workers	7.15	0.59	6.01	0.49	9.90	0.81	
	Total	9.22		8.01		13.51		
Total for Engineering Division	Executives	28.49	13.38	43.10	12.42	40.30	11.71	-
	Specialists	28.23	22.87	55.21	44.00	64.10	51.28	
	Office workers	0.00	0.00	0.00	0.00	0.00	0.00	
	Workers	11.39	0.85	12.31	0.94	25.97	2.28	
	Total	105.21		167.99		195.64		

GRI 404-3) Table 13.27

Percentage of employees receiving regular performance and career development reviews with a breakdown by the employees' gender and categories

Company and region of operation	Employees' categories	2018			Analytical comment
		m	f	%	
JSC ASE EC (Nizhny Novgorod),	Executives	420	179	92.58	The increase in the number of employees to be assessed is due to the extension of the list of positions included in the RECORD assessment system
	Specialists	687	419	29.17	
	Office workers	-	-	-	
	Workers	-	-	-	
	Total	1,705		35.96	
JSC "Atomenergoproekt" (Moscow)	Executives	174	81	85.28	-
	Specialists	14	31	2.24	
	Office workers	0	3	13.64	
	Workers	0	0	-	
	Total	303	-	12.08	
JSC ASE (Nizhny Novgorod)	Executives	79	19	40.66	there are no "office workers" and "workers" categories
	Specialists	-	-	-	
	Office workers	-	-	-	
	Workers	-	-	-	
	Total	98	-	6.43	
JSC ATOMPROEKT (Saint Petersburg)	Executives	129	88	79.20	The increase in the number of employees to be assessed is due to the extension of the list of positions included in the RECORD assessment system
	Specialists	26	0	1.23	
	Office workers	-	-	-	
	Workers	-	-	-	
	Total	243	-	9.73	
TREST ROSSEM LTD. (St.Petersburg)	Executives	11	2	4.15	-
	Specialists	-	-	-	
	Office workers	-	-	-	
	Workers	-	-	-	
	Total	13	-	0.22	
JSC "NIKIMT-Atomstroy" (Moscow)	Executives	98	52	52.45	-
	Specialists	3	7	1.52	
	Office workers	-	-	-	
	Workers	-	-	-	
	Total	160	-	4.40	
PJSC ESM (Moscow)	Executives	27	6	13.20	-
	Specialists	34	43	23.19	
	Office workers	-	-	-	
	Workers	-	-	-	
	Total	110	-	3.90	
TOTAL for the Engineering Division	Executives	938	427	59.09	The increase in the number of employees to be assessed is due to the extension of the list of
	Specialists	764	500	11.97	

Company and region of operation	Employees' categories	2018			Analytical comment	
		m	f	%		
	Office workers	0	3	2.56		positions included in the RECORD assessment system
	Workers	-	-	-		
	Total	2,632	-	11.17		

Table 13.28 Information on the number of students who have undergone practical training and the number of the students who were given a job offer upon the results of such practical training

Company name	2016	2017	2018	(2018-2017)/2017
JSC ASE EC				
Number of students educated according to programs of target training	2	26	26	100 %
Number of students who were given a job offer	2	0	0	0
JSC "Atomenergoproekt"				
Number of students educated according to programs of target training	43	50	42	-16 %
Number of students who were given a job offer	-	1	12	83 %
JSC "NIKIMT-Atomstroy"				
Number of students educated according to programs of target training	3	3	3	100 %
Number of students who were given a job offer	0	0	0	0
PJSC ESM				
Number of students educated according to programs of target training	7	7	7	100 %
Number of students who were given a job offer	0	0	0	0
Total for Engineering Division				
Number of students educated according to programs of target training	105	86	78	2.84
Number of students who were given a job offer	2	1	12	0.83

Appendix 14. Additional Information to Chapter “Financial Capital”

Table 14.1 - Total tax payments, billion rubles

Company	2016	2017	2018 (plan)	2018	Reporting period /previous year
JSC ASE	-3.35	-0.57	-4.52	2.32	-5.04
JSC ASE EC	2.71	4.62	4.44	5.33	+0.15
JSC “Atomenergoproekt”	2.40	0.32	1.15	0.78	+1.45
JSC ATOMPROEKT	1.77	1.79	2.28	2.00	+0.12
PJSC ESM	0.65	0.68	1.45	1.74	+1.56
JSC “NIKIMT-Atomstroy”	0.72	0.67	0.90	1.27	+0.9
TREST ROSSEM LTD.	0.96	0.78	0.88	1.19	+0.53
NUKEM Technologies Engineering Services GmbH and Nukem Technologies GmbH	0.39	0.30	0.26	0.00	-0.99
total tax payments	6.24	8.58	6.83	14.62	+0.71

Regarding Nukem Technologies Engineering Services GmbH and Nukem Technologies GmbH, the amount for 2018 is indicated for both companies. JSC ASE, JSC ATOMPROEKT and PJSC ESM corrected the information for previous periods.

The growth is related to the fact that there were more advance payments received from the Customer in 2018 due to the financing/ expenditure schedule, which led to the increase of VAT charged and paid into the budget. The amount of VAT on effected advance payments was less as the advance payments were transferred to suppliers of the long manufacturing cycle equipment.

Table 14.2 - Fines, penalties, forfeit under commercial contracts, forfeit to be paid into the budget and other fees, fines, penalties to off-budget funds for taxes and fees, million rubles

Name of legal entity	2016	2017	2018	(2018-2017)/2017, %	Circumstances when significant fines were imposed and non-financial sanctions applied
JSC "NIKIMT-Atomstroy" (if the information is available), total sum of significant fines	91,219	2	34	15	-
number of cases of non-financial sanctions application	-	-	-	-	-
number of cases with the use of dispute settlement procedures	2	2	7	-	-
Total sum of significant fines	91	2	34	15	fines, penalties, forfeit under commercial contracts, forfeit to be paid into the budget and other fees, fines, penalties to off-budget funds for taxes and fees