

TVEL JSC ANNUAL REPORT 2013

**TVEL**

Innovation towards breakthroughs

CONTENTS

2 INTRODUCTION

- 2 Message by Chairman of the Board of Directors of TVEL JSC
- 3 Message by President of TVEL JSC

4 KEY RESULTS

- 8 Schedule of Key Milestones

10 GENERAL DATA

- 10 Company Background Information
- 12 Place of TVEL FC in the World Market of FE NFC
- 15 TVEL FC Development Strategy

17 MANAGEMENT SYSTEM

- 17 Sustainable Development Management
- 18 Corporate Governance
- 19 Organizational Structure of TVEL JSC
- 19 Risk Management
- 22 Internal Control of TVEL FC
- 23 Procurement Activities
- 24 Legal Scope of Activity of TVEL FC

- 25 Corruption Management and Settlement of Conflicts of Interest

26 OUTCOMES

- 26 Productive Efficiency Management
- 27 Quality Management
- 28 Fundamental Scientific Activity
- 29 Innovative Activities in Nuclear Industry
- 31 Innovative Activities Non-Nuclear Industry
- 33 Intellectual Property of TVEL FC
- 33 Personnel Management
- 39 Labor Protection and Industrial Safety
- 39 Ecological Policy
- 40 Nuclear and Radiation Safety
- 41 Energy Saving and Efficiency Improvement
- 42 Development of the Regions of Presence

46 APPENDICES

- 46 Appendix 1. Glossary and Abbreviations
- 55 Appendix 2. Contact Information

Message by Chairman of the Board Of Directors of TVEL JSC

Dear Colleagues,

ROSATOM State Corporation successfully solved all organizational, scientific and production tasks by the end of 2013. As a leader of the IT high tech sector, the Corporation demonstrated the ability of its companies to compete successfully on international market in conditions of a heavy economic decline.

TVEL JSC is one of the leading companies in this sector. Its accomplishments in the year of report are based on the adapted strategy of its expanding presence on the markets, modernization of the existing and launching of new production facilities and output of innovative products.

The Company demonstrated high efficiency, thereby confirming that its choice of strategy is correct. In pursuance of the industry-specific and corporate programs, the company optimized the production, enhanced productivity of labor, efficiency of applied sciences and management. To this effect, the Company strengthened its position on European market through further enhancement of VVER-1000 capacity and improvement of quality of fuel offered to foreign consumers.

In response to increasingly hard rules of the game on international market, with shifting geographic segments and growing number of participants, the Fuel Company focused on development of non-nuclear facilities. Over the entire period of report, non-nuclear sector was developing with the focus on high-tech government contracts, thereby fulfilling the production potential and competitive advantages of TVEL, such as extensive engineering capabilities, advanced laboratory and testing infrastructure, unique competencies of its employees, preservation of which the Company strongly believes to be its corporate and strategic objective.

This Report is a representation of the Company's accomplishments over the year of report, and I would extend my heartfelt gratitude to its authors and publishers.



Chairman of the Board of Directors of TVEL JSC

Alexander Lokshin

Message by President of TVEL JSC

Dear friends and colleagues,

This Report is a representation of performance of TVEL JSC and its subsidiary companies in 2013. According to financial, economic and production indicators, the Company was remarkably successful – both in terms of the national customers and deliveries to international markets.

Despite the increasing competition and the decrease in demand on the global nuclear market, the Company overfulfilled the quotas for sale of products and services, thereby securing further growth of productivity and salaries at its enterprises.

The Company kept moving strongly toward technological dominance on the market of front end nuclear fuel cycle. Pursuant to the adopted and updated 2013 strategy, the Company mastered modern technologies and market outlets while modernizing and concentrating its production and conducting infrastructural and personnel optimization.

The purpose and the objective of the reforms is to promote innovative approach and mobilize the scientific and production potential of the Company for the enhancement of its efficient projects, quality products and services. The innovative approach contributed greatly to the successful development of high capacity gas centrifuges and implementation of the “zero failure level” program while extending the operation cycle of the power units. We signed and successfully implement a contract with a PWR operator in Western Europe for the delivery of prototype TVS-KVADRAT assemblies. To date TVEL FC has fulfilled its current contract obligations in full and within the established terms.

TVEL JSC has also fulfilled all of its international obligations. The company completed the historical inter-governmental agreement (also known as HEU-LEU Contract) under which deliveries of low-enriched uranium extracted from the Russian weapons-grade uranium to the United States have been continuing for twenty years. All these years the Fuel Company facilities converted the uranium into fuel for the U.S. nuclear power plants. The Company strengthened and in some areas expanded its presence in Central and Eastern Europe. We signed a contract with Chinese customers for the delivery of fuel and the related engineering services for a period of 12 years, which is indicative of recognition of high level of Russian technologies by strategic partners of TVEL JSC.

In addition to development of traditional sectors, the Company focused on development of non-nuclear facilities. All-purpose products greatly contributed to business economics, development of business environment and creation of jobs. The potential of the second point of growth is based on the productive fusion of applied science and production facilities of the Fuel Company and its desire to stay in the forefront of the national nuclear industry.

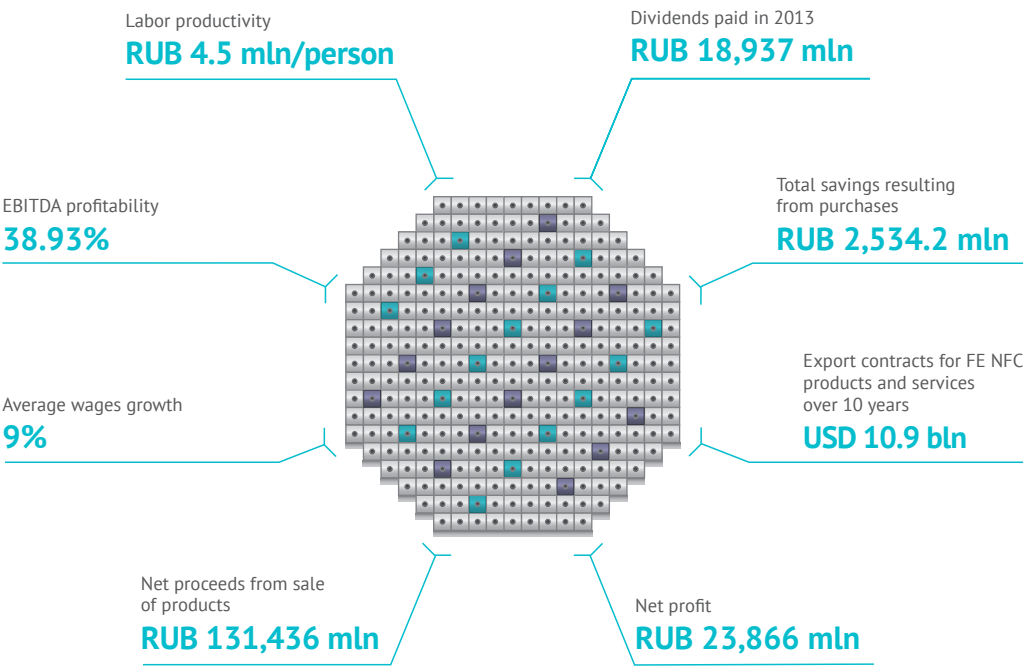


Sustainable balance between the economic efficiency, social and environmental continuity represents fundamental principle of TVEL JSC. Production activity of its enterprises was steadily bolstered by introduction of the ROSATOM Production System (the RPS), involvement of employees in management process and collective final result orientation. All that we have accomplished over the reporting period is the result of common effort of the entire staff of the Fuel Company. Innovative spirit, competence, safety, environmental and social responsibility contributed to business environment at every enterprise and organization. I am confident we will keep it that same way in the current year as well.

President of TVEL JSC

Yuri Olenin

Key Results 2013*



* This Report aggregates financial and operating performance indicators of TVEL FC and its subsidiaries (hereinafter collectively referred to as “the Fuel Company”, “TVEL FC” or “the Company”) in 2013. The Report covers activities of TVEL FC, MSZ, CMP, NNCP, MZP, VNIINM, UEIP, NNCP, AECC, PA ECP, VPA Tochmash, KMP, Engineering Center Russian Gas Centrifuge, United Company Separation-Sublimation Complex, UGCMP, NRDC, OKB-NN, Centrotech-SPb and Uralpribor.

Item	2011	2012	2013
Net revenue from sales (less VAT, excise taxes and similar compulsory payments), RUB mln	126,090	121,958	131,436
Gross profit, RUB mln	33,506	39,289	39,628
Net profit, RUB mln	16,494	19,642	23,866
Net assets, RUB mln	559,318	566,907	579,708
EBITDA (earnings before interest, tax, depreciation and amortization), RUB mln	38,078	42,668	51,163
Gross taxes payable to federal, regional and local budgets, RUB mln	25,502	23,419	27,695
Capital investments*	43,434	41,328	36,920
Dividends paid to Atomenergoprom	3,138	19,486	18,937
Dividends paid to TVEL FC by its SA	3,204	515	4,150

Consolidated revenue by source

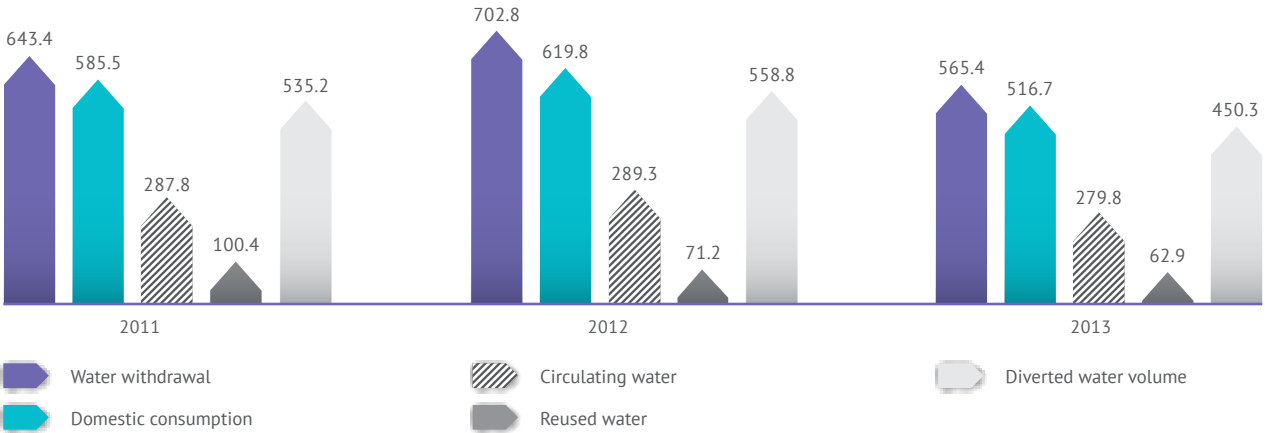
Product	Sales, mln RUB			The share of the total volume of revenue in 2013, %
	2011	2012	2013	
Nuclear fuel and components	69,189.4	75,017.3	79,603	60,56
Conversion and enrichment services	29,166.1	18,403.2	23,505.1	17,88
Gas centrifuge products	2,053.3	2,916.7	4,214.3	3,21
R&D	3,331.8	4,301.4	6,338.5	4,82
Other	22,349.3	21,319.4	17,775.1	13,52
Total	126,089.9	121,958	131,436	100

TVEL FC enterprises fulfilled their quotas for output and sale of products and services in 2013, thereby enabling the Company to perform its contract obligations to Russian and foreign customers in full.

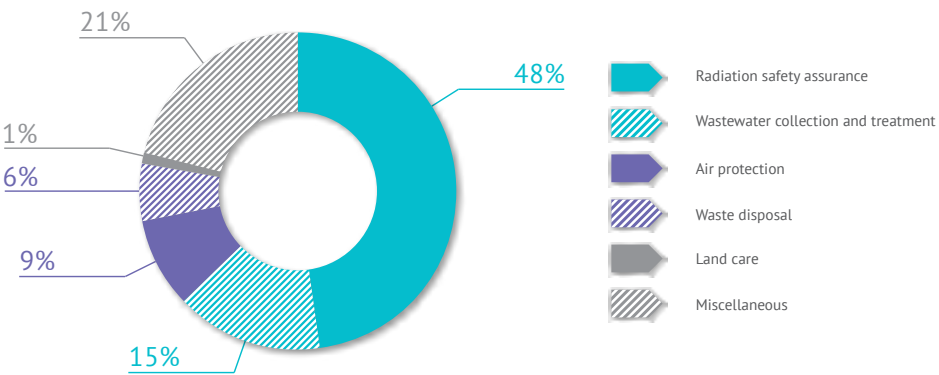
* TVEL FC runs a total of more than 250 investment projects although investments vary year by year depending on a combination of project stages.

Environmental indicators	2011	2012	2013
Current (operation) costs on environment protection, mln RUB	2,212	2,224	2,213
Total pollutant emissions into the atmosphere, thousand tons	32.1	24.4	20.1
Emission of Ozone Depleting Substances, tons	277.5	278.6	267.1
Carbon dioxide emissions, tons	1,283.1	951.5	1,156.1
Carbon Dioxide Emissions, tons	384.1	368.1	297.3
Electric Power Consumption, mln kWxh	3,445	3,271	3,104
Thermal Energy Consumption, thousand Gcal	3,138	2,881	2,756

Water consumption in 2011-2013, mln m³ and water disposal in 2013, mln m³

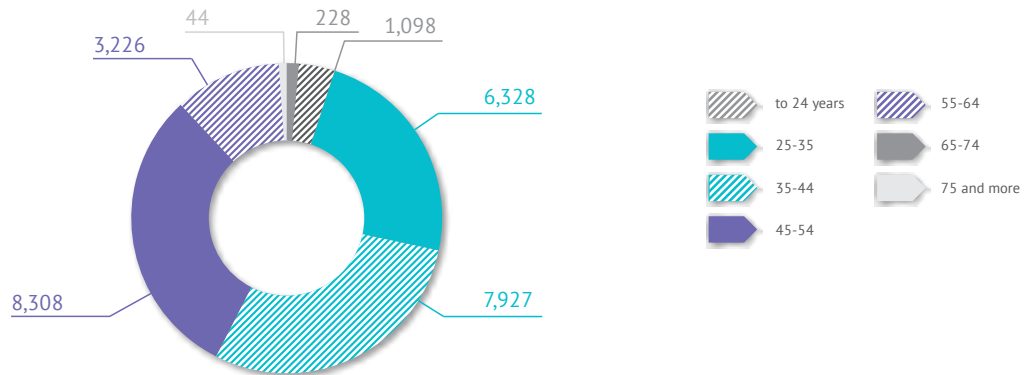


TVEL FC environment protection costs outlay in 2013



Human resource indicators	2011	2012	2013
Headcount of TVEL FC staff at the year end, persons*	36,922	30,964	27,159
Industrial Injuries Frequency Rate (IIFR) on the TVEL FC Enterprises**	0.44	0.43	0.27
Candidates and doctors of science	308	290	312
Holders of MBA degree	11	11	12

Total staff by age groups (payroll), 2013



Total staff by categories at the year end

Category	2011	2012	2013
Consolidation contour (total), persons including:	36,922	30,964	27,159
Main workers	13,553	11,716	9,743
Auxiliary workers	9,062	6,961	5,615
Managers	4,600	3,520	2,618
including top executives (General Directors and their deputies)	160	132	96
Specialists	9,024	8,256	8,839
Employees	466	395	312
Non-industrial group	217	116	32

* Men make up 65.5% of the total headcount and 92.7% of top managers. The absolute majority of employees (over 98%) works under indefinite-term employment contracts providing for standard working hours (40-hour working week).

** Accidents per 1,000 employees a year.

Schedule of Key Milestones



* SWU – the services on uranium enrichment are measured in separative work units.

GENERAL DATA

The core activity of TVEL FC is development, production and sale of nuclear fuel for power and test reactors in Russia and abroad, as well as of associated nuclear and non-nuclear products in strict compliance with safety requirements.

TVEL JSC is a parent company of the Fuel Company of ROSATOM State Atomic Energy Corporation.

The Fuel Company is the sole supplier of nuclear fuel to Russian nuclear power plants. TVEL FC supplies nuclear fuel to 76 power reactors in 15 countries all over the world, research reactors in 9 countries worldwide and caters to transportation plants of the

Russian Nuclear Powered Fleet. One out of every six power reactors in the world runs on fuel manufactured by TVEL FC.

In addition to core business that involves production of nuclear fuel, TVEL FC supplies to the Russian and international market a wide range of non-nuclear products: zirconium, lithium, calcium, magnets, thin-walled pipes, polishing powders, pinch rolls, zeolite catalysts, superconductor materials, etc.

TVEL FC has proprietary research and development design divisions that contribute to successful operation of hydrometallurgical, metalworking, machine-building and rolling facilities.

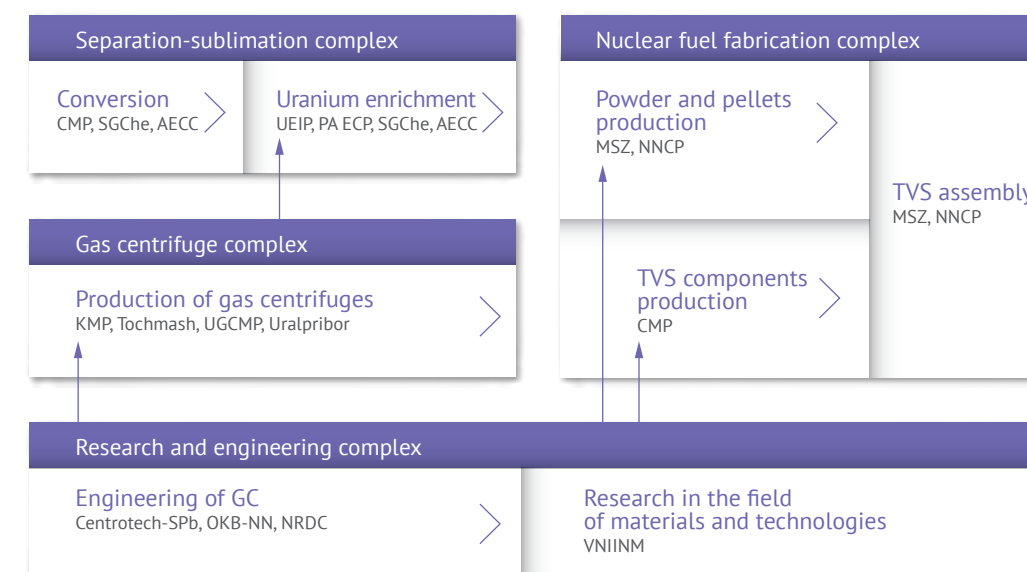
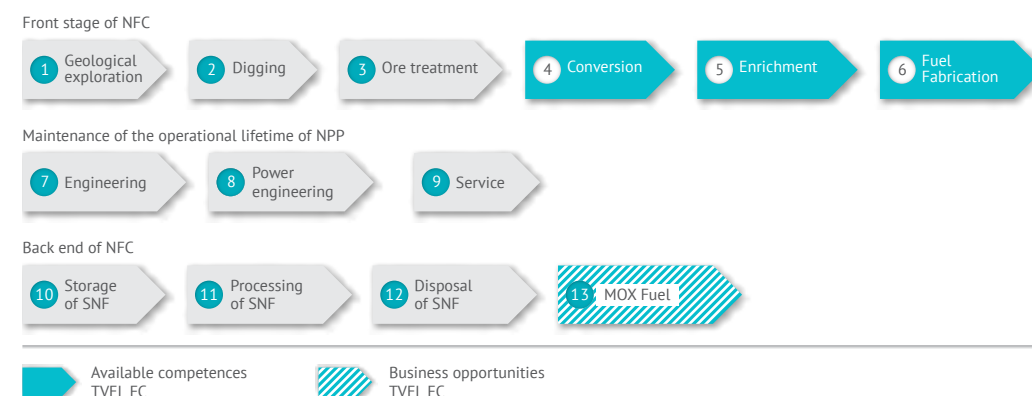
The Fuel Company comprises of four complexes that correspond to type-specific production of the FE NFC:

- Separation-sublimation Complex comprises of a group of integrated plants engaged in enrichment and conversion of uranium
- Nuclear fuel fabrication complex comprises of industrial enterprises that manufacture nuclear fuel for various reactors.
- Gas centrifuge complex is a group of industrial companies producing gas centrifuges and accessories for enterprises of separation-sublimation complex
- Research and engineering complex.

Company Background Information

The Fuel Company is comprised of enterprises engaged in nuclear fuel fabrication, uranium conversion and enrichment, production of gas centrifuges as well as research and development organizations.

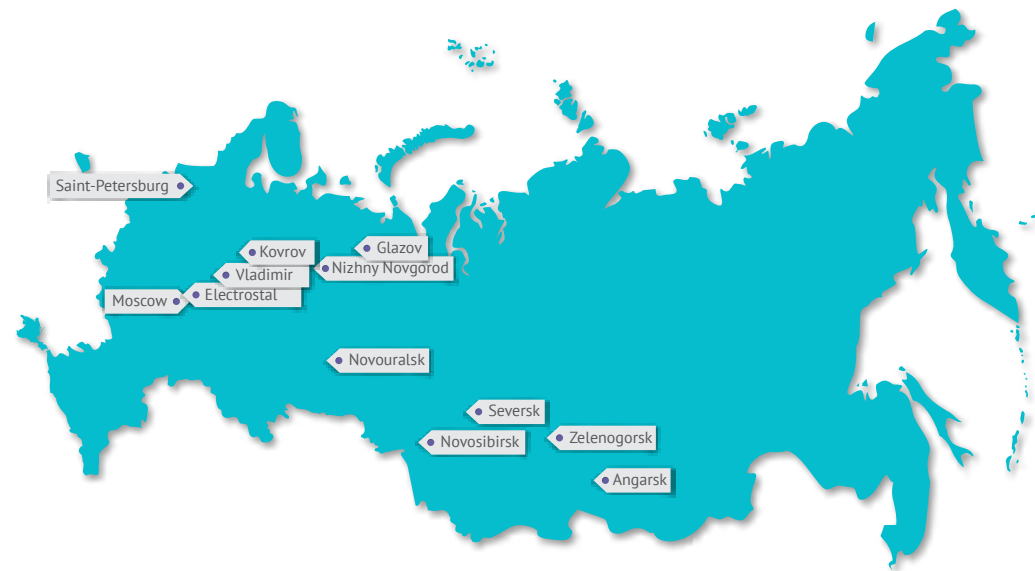
TVEL FC Position in Nuclear Fuel Cycle



The Fuel Company has enterprises all over the Russian Federation.

As far as specifics of social environment are concerned, three enterprises of TVEL JSC are located within Closed Administrative Territorial Units (Seversk, Novouralsk and Zelenogorsk) and one is located within a company town (Glazov) where they happen to be backbone enterprises and major taxpayers.

Territory of TVEL JSC enterprises

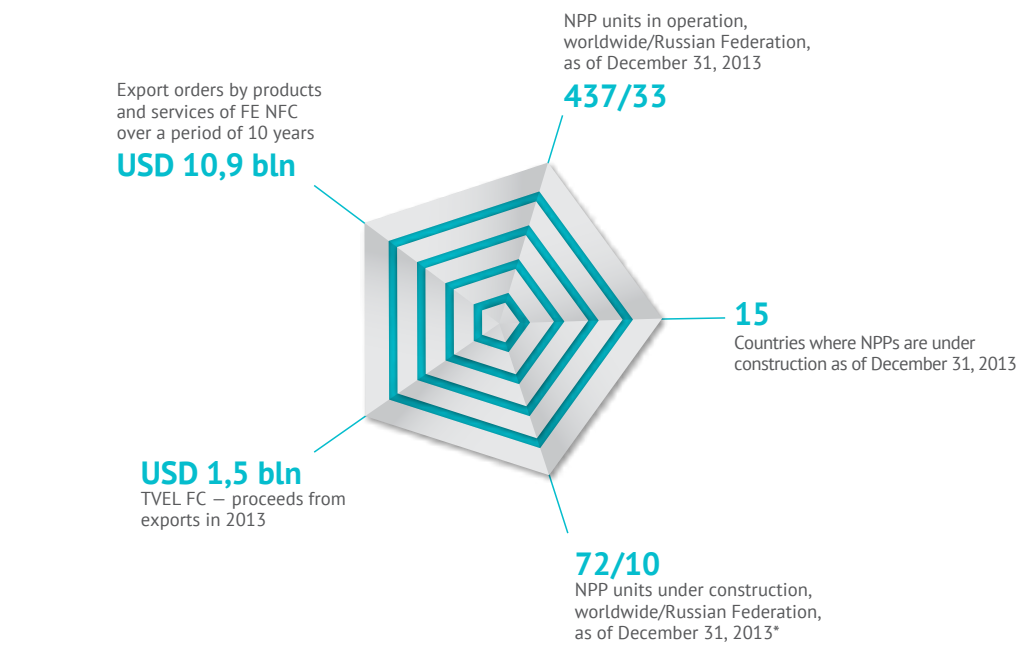
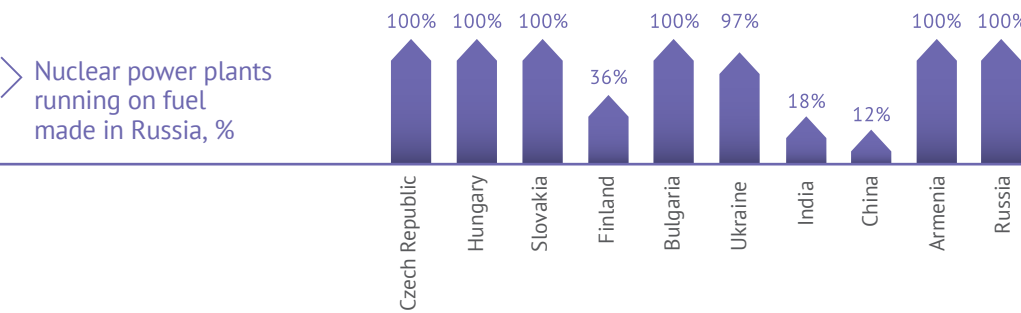
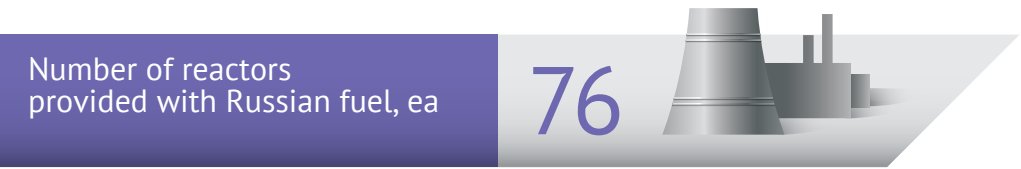
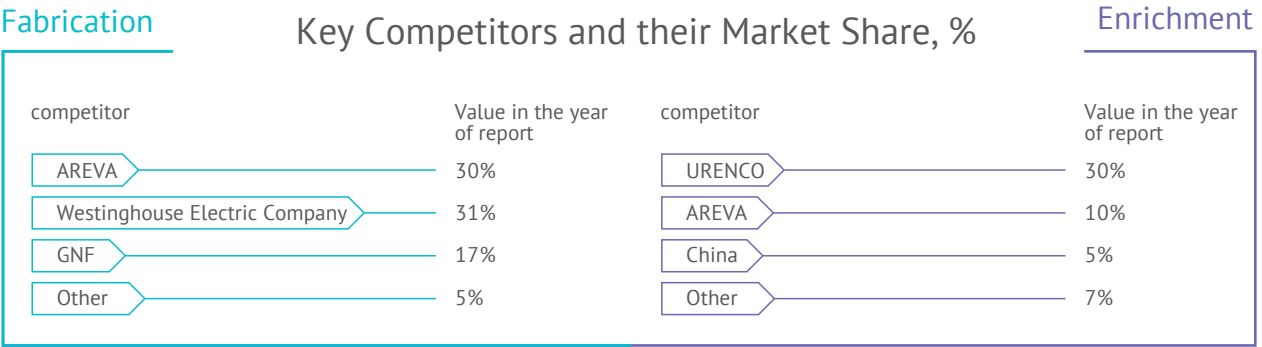


Place of TVEL FC in the World Market of FE NFC

TVEL FC is the world leader in nuclear fuel production and uranium enrichment services.



* 17% on the market of fabrication in 2012; 16% in 2011.
** 45% on the market of enrichment in 2012 and 2011 (together with JSC Technobexport).



* According to IAEA, including floating nuclear power plants (FNPP)

International Economic Activities of TVEL FC

The Fuel Company boasts a number of properties indicative of its long-term sustainability in conditions of increasing competition on international market of FE NFC products and services.

The Fuel Company is sufficiently competent to supply fuel for reactors designed in Russia, light-water reactors designed in the West (PWR and BWR), and components for PHWR abroad. The Company is successfully manufacturing nuclear fuel from reprocessed uranium in compliance with requirements of European regulators to manufacture technology and to the products.

Key events for TVEL FC in 2013 with respect to its international business:

- Renewal of contract for the delivery of fuel to Dukovany NPP (Czech Republic) in 2014-2028;
- Contract for delivery of fuel and components for Unit 3 and Unit 4 of Tianwan NPP (China);
- Fuel delivery contract for the commissioning and further operation of Hanhikivi NPP (Finland);
- Successful qualification of TVEL JSC (JSC CMP) by CANDU Energy Inc. (Canada) with the assistance of Atomic Energy of Canada Ltd. as the supplier of zirconium pressure tubes for CANDU reactors.

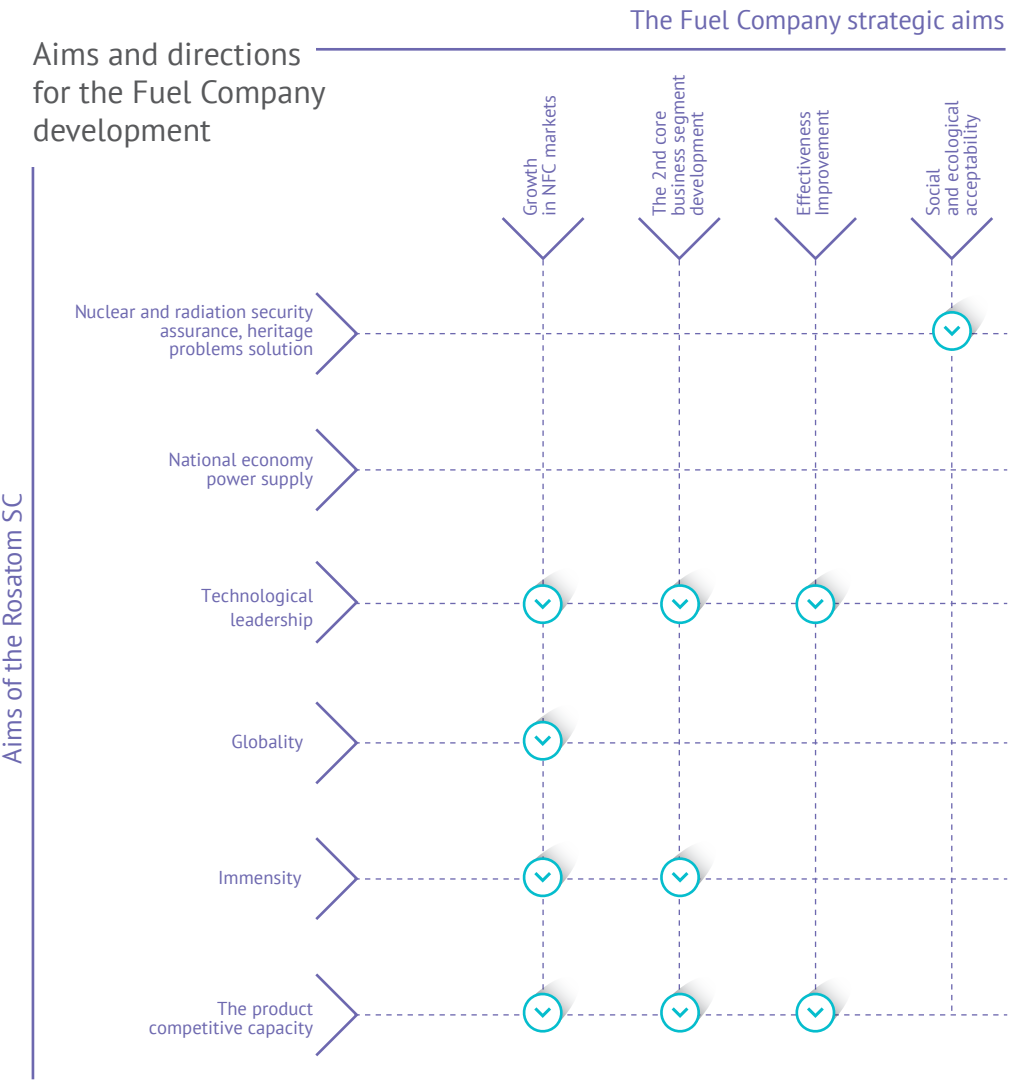
In addition, the Company continued implementation of the following international projects in the sphere of FE NFC, seeking to retain and to expand its presence on the markets and to promote the development of the Company on the emerging markets:

Project	Performance in 2013
Cooperation with AREVA	September 2013 – ceremonial delivery of the 3,000th fuel assembly to the Customer for PWR and BWR. During the operation of FA made by MSZ JSC under the contract with AREVA NP, no loss of containment has ever been registered
TVS-KVADRAT	Autumn 2013 – TVS-KVADRAT assemblies manufactured for loading in PWR scheduled for 2014
JV ALVEL a.s. – Center for Technology Services	A number of contracts entered into with the leading European operators of Western reactors, increasing the corporate portfolio which is a milestone for the Company's success in the future
Uranium Enrichment Center (Project TSOU)	End of September 2013 – the Joint-Venture Uranium Enrichment Center (Russia-Kazakhstan) completed the purchase of 25% + 1 share in the enrichment enterprise of JSC UEIP (Russia). The Joint-Venture will have access to 5 mln SWUs a year. Effective period of the project – 30 years. In November 2013 – first shipment of TSOU CJSC product under the Project TSOU

Project	Performance in 2013
The ITER Project	2013 – the Company continued to improve the production technologies with respect to Nb-Ti and Nb-Sn strands for international Project "ITER". 20,000 tons of strands supplied in 2013

TVEL FC Development Strategy

TVEL FC Development Strategy updated in 2013.



Growth on FE NFC Markets

By 2030 the Company intends to control 41%* of the global market of products and enrichment services and 20% of the nuclear fuel fabrication market by making top-quality traditional products and expanding to the emerging nuclear markets.

Second Core Business Development

The Fuel Company focuses on innovations, seeing them as a tool that will strengthen its competitive position on the markets of machine building, chemical industry, metallurgy and new energy sector.

Enhancement of Efficiency

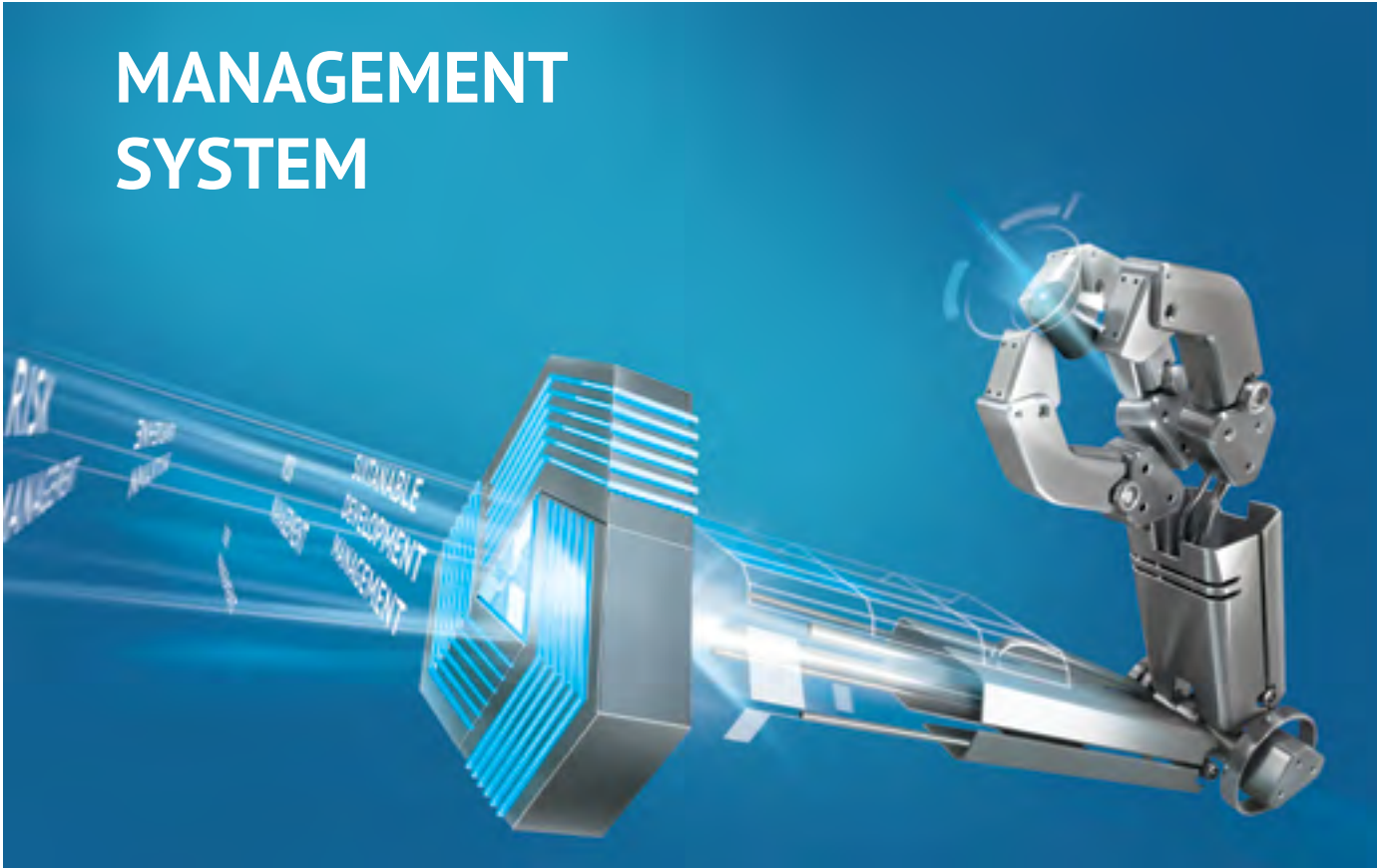
TVEL FC continuously promotes technological and organizational improvements in its enterprises to reduce the production costs and to retain competitive edge against other market players.

Social and Ecological Acceptability

The Fuel Company is committed to promotion of sustainable social welfare in the towns of its presence, ensuring environmental safety, rational use of natural resources and nuclear materials, and removal of negative impact caused by the enterprises in prior years.

* Including 22% – supplies via JSC Technabexport.

MANAGEMENT SYSTEM



Sustainable Development Management

Sustainable development is the development that meets the needs of the present without compromising the ability of future generations to meet their own needs.

Social commitment of the Fuel Company is historically a given, whereas strict compliance with safety regulations is an essential property of the entire nuclear sector. Therefore, sustainable growth of TVEL FC is in harmony with TVEL JSC abides by basic Russian and international standards and corporate practices of ROSATOM State Corporation in the area of corporate governance. Improvement of corporate the strive

for high financial and industrial indicators while upholding social and environmental efficiency.

Regardless of the objective limitations that bind the nuclear power sector, it is still about the power of the future and the sector that may contribute greatly to the long-term solution to the problem of global depletion of energy resources and climate change.

The Fuel Company is aimed at complying with several principles which are essential for sustainable development, including:

- Unconditional promotion of nuclear and radiation safety;
- Reduction of negative environmental impact of its activity through development and introduction of modern and advanced technologies;

- Securing the financial stability of the Company and increasing its competitive capacity;
- The increasingly efficient production activity;
- Development of scientific and engineering potential of TVEL FC and the entire nuclear sector;
- Social and economic development of the regions of presence;
- Personnel care;
- Respect for human rights;
- Resistance to corruption.

Corporate Governance

TVEL JSC abides by basic Russian and international standards and corporate practices of ROSATOM State Corporation in the area of corporate governance. Improvement of corporate governance practices aims to increase capitalization of the Company by ensuring efficiency, accountability and transparency of its operations and management.

Management bodies of TVEL JSC are established in accordance with its Articles of Association.

Decisions on competence of the General Meeting of Shareholders are made by the sole shareholder of TVEL JSC – Atomenergoprom JSC. Supreme executive bodies of the companies comprising TVEL FC are represented by the General Meeting of Shareholders (Participants). The General Meeting of Shareholders (Participants) of the companies comprising TVEL FC makes decisions in accordance with procedures set forth in their respective bylaws.

In addition, TVEL JSC and companies comprising TVEL FC are governed by the Board of Directors and by the sole executive bodies who conduct their activity in accordance with applicable bylaws approved by the General Meeting of Shareholders.

TVEL JSC and companies comprising TVEL FC are controlled by the audit commissions that conduct their activity in accordance with applicable bylaws approved by the General Meeting of Shareholders (Participants).

Authorized capital of the Company comprises of par value of the Company’s shares owned by the sole shareholder – Atomenergoprom JSC.

The Company floated 22,961,670 (Twenty-two million nine hundred and sixty-one thousand six hundred and seventy) registered ordinary shares, each worth RUB 1 (One ruble).

No changes happened to the structure of equity capital in the year of report.

Board of Directors

The Board of Directors of TVEL JSC plays the key role in management of the Fuel Company.

By decision of the sole shareholder of TVEL JSC No. 21 of June 28, 2013, the Board of Directors comprises of:

Members of the Board of Directors do not hold shares of TVEL JSC and its SA. The Company has no independent members of the Board of Directors within the meaning of the Corporate Code of Conduct recommended by Decree of Federal Commission on Securities Market (FCSM) of the Russian Federation No. 421/r of April 4, 2002.

Members of the Board of Directors of TVEL JSC are entitled to no remuneration and refund of expenses related to the performance of their duties.

Sole Executive Body

Yuri Alexandrovich Olenin, President of TVEL JSC, performs functions of the Sole Executive Body in accordance with Articles of Association of TVEL JSC, decision of the Sole Shareholder of the Company (No. 17 of June 28, 2012) and on the basis of contract entered into with the Company.

President of the Company does not hold any shares of TVEL JSC and its SA.

In accordance with the contract between TVEL JSC and the President of TVEL JSC, the amount of the President’s remuneration due at the end of the year shall be determined by Resolution of the Company’s Board of Directors based on the financial and economic performance of the Company.

Organizational Structure of TVEL JSC

The Organizational Structure of TVEL JSC in 2013 underwent a series of transformations caused by restructuring in accordance with “target programs and tasks first” principle and introduction of design-based approach to implementation of the FC strategy.

This approach is in line with industry-wide standards and is put into effect to implement ROSATOM State Corporation project to promote harmonization of the organizational structures of companies comprising the industry. The ultimate goal of these transformations is to establish functional chains of ROSATOM State Corporation – TVEL JSC – SA, enhance the efficient interaction between the management levels within the Fuel Company and to cut the red tape.

Similar approach was applied in 2013 to promote transformation of organizational structures of companies comprising the management pool of the Fuel Company with the focus on standardization of corporate structures within framework of the same technological conversion, reduction of the number of management levels (target indicator for all SA of TVEL FC – four levels), improvement of quality management and centralization of support functions.

Risk Management

Strategic Tasks and Goals of Corporate Risk Management System (hereinafter – “the CRMS”) of TVEL JSC:

- Promotion of implementation of corporate strategy of ROSATOM State Corporation by performance of corporate-wide risk management process;
- Securing the continuity (stability) of all business processes through identification, assessment and minimization of threats capable of influencing the results of activities of TVEL FC, as well as development and introduction of risk monitoring and reporting procedures;
- Integration of risk management process in the administrative decision-making processes.

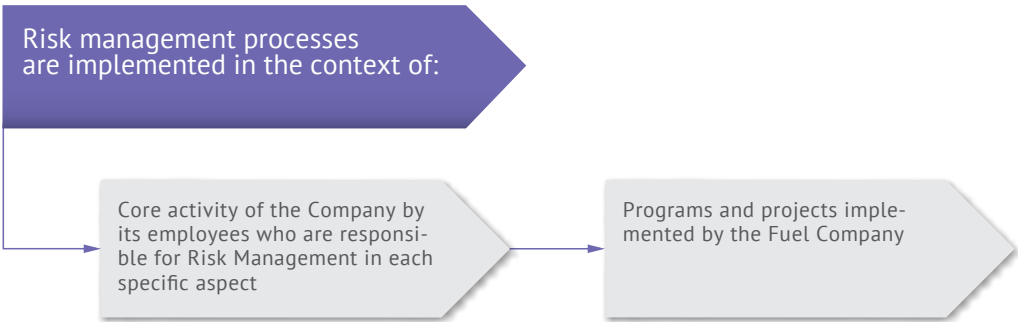
Table 9. TVEL FC Key Risks Management

Risk	Risk	Risk management procedure
Slump in demand for products and services of FE NFC (including reduction of the estimated volume of nuclear fuel supplies and steady volume of work on the conversion and enrichment)	Emergency at the NPP – early decommissioning of power units	Development and promotion of Russian nuclear fuel for NPPs with PWR – the TVS-KVADRAT Project
	Delays in construction and commissioning of power units	Establishment of TVS-KVADRAT production. Increased production and sales of products for general industrial use
	Transition to the production of nuclear fuel with increased resource properties	
	Transition of the foreign enrichment market competitors to centrifuge technology and tightening of quotas	
	Development of new enrichment facilities in China	
	Shale gas boom	
Loss of technological advantages in uranium enrichment technology	Lagging in the technology development behind the competitors	Development and improvement the design of gas centrifuges (GC) of the 9th and 10th generation
		Development of structural materials and GC of the 11th generation
Exchange risk	Gaps in the claim volume and liabilities denominated in the same currency	Hedging (including natural)
	Volatility of world currencies	
Credit risk	Counterparty's failure to perform its obligations in full and in a timely manner due to: deteriorating financial stability of suppliers/customers, increased advances to suppliers/customers, increased volumes/timing of accounts receivable, etc.	Insurance
		Reduced share of advance payments in settlements with external suppliers
Increase in the cost of services for fabrication, enrichment and conversion, GC production	External risk factors:	Development and improvement of the design of GC of the 9th and 10th generation
	<ul style="list-style-type: none">disruption in global/Russian monetary system;revision of rates applicable to public utilities, transportation companies, etc.;increase of the minimum wages, etc.	Development of structural materials and GC of the 11th generation
	Internal risk factors:	Creation of a new conversion production at JSC SGChE
	<ul style="list-style-type: none">faults in organization of production processes;reduced utilization of equipment;depreciation of production technology and equipment, malfunctions, etc.	Development of new models of accessories for separation plants
		Implementation of energy efficiency and power saving programs

Risk	Risk	Risk management procedure
Property risk	Theft, damage, negligent personnel	Insurance
	Failures of technical, technological, information, etc. systems	
Commodity risk	Market dynamics	Fixed price on products when entering into contracts with suppliers
Reduction of the real supply of non-nuclear products compared to the planned ones	Overrated demand for non-nuclear products	Optimization of process analysis, development and implementation of investment projects aimed at the creation of the production of non-nuclear products
	Absence of explicit advantages in conditions of high competition on prospective markets	Financial and organizational support for the production of innovative products at the times of local deteriorating market conditions
	Deficient competencies and human resources for successful development of non-nuclear businesses	Human resources building-up, more efficient use of human resources, attraction of highly skilled personnel made redundant during the restructuring of the enterprises of TVEL FC, involvement of students and young professionals in the process of production and development of new products
Major accidents/incidents involving the SA	Failure of systems vital for safety	Introduction of modern means of protection and production technologies to ensure protection of workers, population and environment from negative effects and threats
	Insufficient coordination of safety management	Modernization and technical re-equipment of dangerous facilities
	Insufficient resources for implementation of safety arrangements	Neutralization (liquidation) of the sources of hazard
	Insufficient qualification of the staff engaged in the sphere of safety	Personnel development
	Defaulting on mandatory safety requirements	
Social risk	Social changes in the regions of presence that influence the activity of TVEL FC. These changes are caused by non-alternative (in terms of competitiveness) production optimization and reconfiguration of the facilities of TVEL FC	PR and GR events
		Provision of support to new business units formed in the course of restructuring
		Initiation of a series of projects to create innovative production lines at the vacated sites of TVEL FC enterprises
Reputation risk	Publication of materials containing false/intentionally distorted facts that are aimed at discrediting the Company and its products in the media	Rebutment (including in the court) of false information damaging the reputation of the Fuel Company. Organization of PR-campaign to communicate reliable information to a wider audience of stakeholders and to mitigate the possible reputational damage
	Implementation of any key risks	Taking measures for key risk management

TVEL FC Risk Management is based on continuous monitoring of the external and internal environment, comprehensive study of threats and opportunities that affect the achievement of economic and social goals.

TVEL FC Key Risks Management



Internal Control of TVEL FC

The Internal Control System (ICS) of the Fuel Company is an interconnected integral complex of organizational structures, processes and procedures, rules for their implementation, management system characteristics, that continuously or from time to time performs the function of internal control and ensures the achievement of the objectives of internal control.

Special Department for Internal Control (SDIC) – competence of the Internal Control and Audit Division – comprises Control and Audit Administration, Internal Audit Department and Competitive Policy Control Department and acts in accordance with regulatory legal acts of the Russian Federation, local regulations of ROSATOM State Corporation and TVEL JSC, and Provisions on the said structural divisions.

In pursuance of the objectives set for the year of 2013, the Internal Control and Audit Division of TVEL JSC carried out:

- 1) Audits of business (management) processes to assess the risk of defaulting on the operations goals; following the audit, the ICS efficiency was assessed and recommendations were made as to the improvement of efficiency and performance of these processes;
- 2) Audit arrangements to assess the efficiency of financial and business performance of TVEL JSC and SA of the Fuel Company; based on the results, the auditors drafted the remedial actions plan with respect to violations detected in the course of the audit.

In 2013, the Control and Audit Division conducted 51 audits and inspections (up from 38 in 2012).

Procurement Activities

Basic documents of TVEL JSC and its SA that regulate procurement activities and set the supplier and contractor selection criteria are:

- Unified Industrial Procurement Standard of ROSATOM State Corporation ("the UIPS");
- TVEL JSC Corporate Standard Procurement Process.

Since 2013, all enterprises comprising the Fuel Company place their competitive bids by means of an integrated solution of the centralized procurement system EOS-Zakupki Rosatom (SAP SRM), online trade platforms and the official Website of ROSATOM State Corporation <http://zakupki.rosatom.ru/>.

Procurement procedures are implemented using the following electronic platforms: EETP JSC, Fabrikant LLC and A-K-D LLC. This approach to procurement management promotes its openness and transparency, and saves labor and financial resources.

Over 90% of competitive procurement procedures are carried out at electronic trading platforms.

Procurement procedures based on free competition saved TVEL FC in 2013 approx. RUB 2,534.2 mln.

Dynamics of key indicators of efficiency of TVEL FC procurement activities is shown in table below

Indicator	Unit of measurement	2011	2012	2013
Share of procurement through public competitive procedures under the UIPS	%	90.1	96.2	95.22
Total amount of procurement by TVEL FC	mln RUB	98,152.6	133,386.7	161,199.8
Total amount saved by TVEL FC from procurement through public competitive procedures	mln RUB	1,994.6	2,051.0	2,534.2

Pursuant to TVEL JSC Procurement Standards, the Company may not provide any preferences to the suppliers on a territorial basis. Local suppliers participate in competitive procedures on a common basis and are subject to no special approach of any kind. The

exception is only envisaged for outsourcing companies founded during the restructuring of the Fuel Company (TVEL FC guarantees certain volumes of orders over a period of five years). To this effect, 75% of orders in 2013 were guaranteed to enterprises com-

prising TVEL FC and 25% to open tenders; starting in 2014, the proportion will change from 60%-40% to 50%-50% and to 25%-75% every year.

Some of the key suppliers and contractors of TVEL FC enjoy monopolist position on the market*. Under the TVEL JSC Procurement Standards, procurement procedures with such contractors are implemented without announcement of any tender (for entities representing natural monopolies) and through the "Procurement from Sole Supplier" procedure.

In furtherance of the roadmap "Streamlined Admittance of Small and Mid-sized Businesses to Procurements by Infrastructural Monopolies and Government-linked Companies", approved by Decree of the Government of the Russian Federation No. 867-r of May 29, 2013, TVEL JSC developed a plan to facilitate participation of small and mid-sized businesses in competitive procedures of TVEL FC. Implementation of the plan will commence following the approval of regulatory legal acts applicable the roadmap.

Project "FC Logistics Management System Optimization" started late in 2013.

Purpose of a project:

- Introduction of category management* in TVEL FC;
- Reduction of stock at the warehouses of companies comprising the Fuel Company (optimization of uncalled stock and reduction of their level at the enterprises);
- Optimization of warehouse infrastructure and material flows (optimization of material flows both in the internal logistics scheme of the enterprises, between the enterprises comprising TVEL FC and between enterprises of various divisions of ROSATOM State Corporation).

Legal Scope of Activity of TVEL FC

TVEL JSC takes part in legislative initiatives of ROSATOM State Corporation in accordance with the plan of law-making activities and within its own competence. The working group prepares suggestions, analyzes draft documents of federal executive authorities, and drafts bills. The suggestions considered by the working group affect the regulation of the activities of TVEL FC and other organizations of the nuclear power industry.

For example, in 2013 TVEL FC professionals participated in drafting of the following regulations:

- Regulatory legal acts necessary for implementation of Federal Law No. 190-FZ dated on July 11, 2011 – "On Nuclear Waste Handling and on Amendments to Certain Legislative Acts of the Russian Federation";
- Draft Federal Law "On Amendments to Federal Law No. 170-FZ dated on November 21, 1995 "On the Use of Nuclear Energy" (in the working (in the working group of ROSATOM State Corporation).

* Category management as it pertains to procurement means the operations plan to promote efficient management of procurement, supplies, stock and interaction with suppliers of each specific category of purchased products. By introducing the category management, TVEL FC intends to minimize involvement of go-between companies and to enter into long-term contracts directly with manufacturers.

Corruption Management and Settlement of Conflicts of Interest

The management of TVEL FC fully shares the anti-corruption policy implemented by the government of the country.

Aiming to create conditions that will contribute to reduction of corruption and embezzlement, the enterprises comprising the Fuel Company have adopted a local regulatory document "On Implementation of Comprehensive Program to Prevent Corruption and Embezzlement within TVEL JSC and Companies Subordinate to the Fuel Company".

Key Results in 2013

- 430 inspections (397 in 2012) organized and carried out to prevent damage and loss of assets. 42 packages of materials (34 in 2012) sent to the law enforcement authorities 34 of which (17 in 2012) proceeded to prosecution. Disciplinary actions taken against 121 employees (109 in 2012), 9 of which were dismissed (4 in 2012);
- 52 inspections held to verify information obtained from specialized Hot Line channels about abuse and violations; 13 cases were confirmed (24 out of 51 confirmed in 2012); administrative and material liability imposed against 7 culprits; 3 persons dismissed; no materials were sent to law enforcement authorities;
- Business contacts with EnergoRemKomplekt LLC discontinued because the company happened to supply contraband automatic switches;
- Damage prevented and indemnified resulting from implementation of economic security and asset protection policy amounted to RUB 473 mln, which is 29% more than in 2012;
- No legal proceedings against the company or its employees with respect to corruption practices completed over the period of report.

OUTCOMES

Productive Efficiency Management

The need to expand the portfolio of orders to achieve strategic goals, and tough and ever-increasing competition on global markets always demanded from the Company special approaches to the production and management processes, and development of productive efficiency management system.

In 2008, organizations comprising the nuclear industry, including enterprises within the control loop of the Fuel Company, commenced implementation of the ROSATOM Production System (the RPS).

The RPS is an industrial complex of interconnected production processes designed to improve enterprise performance and to minimize all kinds of costs. The

system is based on Japanese philosophy of continuous improvement "kaizen" pioneered by Toyota.

The RPS serves to promote continuous improvement of production and business processes, applied technologies and workplaces. It is based on optimization of engineering operations and cost reduction through elimination of losses resulting

from activities that do not generate added value (redundant relocations, time lost on waiting, equipment downtime, redundant stock and processing, remaking, defective products and overproduction).

The Fuel Company has made considerable progress since 2010 when it commenced implementation of the RPS.

In 2013, over 6,500 employees were trained to apply principles and tools of the ROSATOM Production System.

The ROSATOM Production System is largely

based on the initiative and suggestions of its workers.

There is a positive dynamics in the number of suggestions for improvement ("the SFI"): 2.5 times growth in 2013 against 2012. Out of over 40,000 SFI, 90% were accepted and 80% were implemented in 2013. In 2012, there were 65% of implemented SFI. This happened, among other things, thanks to the automated SFI filing system and enhanced implementations control.

2013 – Projects and their Results:

- **KMP OJSC – Project "Unit's exhaust pulling system organization":**
 - 1) Reduction of lead time 2,2 times (from 1,124 to 502 hours);
 - 2) Reduction of inventories 2,1 times (from 192 to RUB 93 mln);
- **MSZ JSC – Product yield of pellets for reactor of type CANDU was increased from 83% to 90%;**
- **Production moved from JSC MZP to MSZ JSC:**
 - 1) efficient space utilization increased 4 times (from 32,500 to 8,000 m²);
 - 2) productivity per person doubled (from RUB 20 mln to RUB 41 mln);
 - 3) personnel downsizing 4 times (from 400 to 100 persons);
 - 4) energy costs reduced 2.2 times.
- **JSC CMP – Reducing of the prime cost in the project "Losses reducing in the through flow of superconducting materials production"**
- **JSC AECC – compacting of sublimation facility prior to movement thereof to JSC SGChE, labor efficiency doubled (personnel downsizing from 800 to 400 persons);**
- **Joint work with Rosenergoatom Concern JSC in inter-divisional projects for RBMK fuel production smoothing – production schedule smoothed by 25%.**

Quality Management

TVEL FC builds its Quality Management on the principles of Total Quality Management set forth in International Standards ISO 9000. The Company operates an integrated corporate quality management system ("the ISM") certified for compliance with ISO 9001:2008, ISO 14001:2004 and BS OHSAS 18001:2007 by TUV International Certification*. The system covers the entire cycle of design, development, production, storage, supply and scientific and technical support in handling the TVS and components of reactor cores, as well as the materials and components for them.

* Introduction of the ISM at the enterprises comprising the Fuel Company completed in 2013. The integrated corporate quality system was tested in accordance with Corporate Standard Procedure STK-7-2006 "Organization and Conduct of Audits".

In 2014, the Company plans to establish Energy Management System in accordance with ISO 50001 and Supply Chain Safety Management System in accordance with ISO 28000:2007.

Project “Zero Failure Level”

TVEL JSC initiated the project in 2012 to enhance reliability and safety of products manufactured by the Fuel Company (TVS for VVER-1000). According to international practices, operational reliability of nuclear fuel is assessed by the number of unsealed fuel elements detected in the course of operation. Over the five years period preceding the commencement of the project (2008-2012) this indicator for NPP operating VVER-1000 was 1.5×10^{-5} 1/year.

By the early 2014, Memorandum on Joint Efforts to Attain Zero Failure Level for Nuclear Fuel was signed with Rosenergoatom Concern JSC. Similar, quadripartite Memorandum was signed with operators: ČEZ a.s. (Czech Republic), SE NNEGC Energoatom (Ukraine), NPP Kozloduy (Bulgaria) and TVEL JSC as the supplier of nuclear fuel.

TVEL FC conduct annual satisfaction checks of its main customers in accordance with Customer Satisfaction Assessment Procedure based on ISO 9001:2008 requirements. In 2013, 11 customers participated in the procedure.

According to the survey results, average customer satisfaction index in 2013 was 4.36 out of 5 points. No claims were filed by the customers in 2011-2013.

Fundamental Scientific Activity

Main purpose of scientific and technological activity of the Company is to promote competitiveness and safety of production.

Scientific and engineering activities of TVEL FC are regulated by the following documents:

- ROSATOM State Corporation Program for Innovative Development and Technological Modernization for the period up to 2020 (in the public part);
- Long-term Program “Nuclear Fuel and Effective Nuclear Cycles at Russian NPP for 2012-2016 and up to 2020”.

R&D composition is defined by decisions of management of ROSATOM State Corporation and by contract obligations and is subject to revision on an annual basis at the meeting of

Scientific and engineering Council No. 2 of ROSATOM State Corporation – “Nuclear Materials and Technologies of Nuclear Fuel”.

TVEL FC focuses its scientific and technological activities on:

- improvement of characteristics and technology of nuclear fuel production;
- design and technology development of separation-sublimation complex;
- innovative activities in non-nuclear industry.

In 2013, TVEL FC invested in research and development RUB 3,476 mln (equivalent of 2.64% of the FC proceeds (RUB 3,945 mln in 2012). All R&D yielded results.

The share of proceeds from scientific activities of TVEL FC in overall revenues of the company in 2013 was 4.82% or RUB 6,338 mln (3.53% or RUB 4,301 mln in 2012).

Since 2008, TVEL FC has been awarding corporate prize to the teams of inventors of subsidiaries and affiliates of TVEL JSC for excellent production and financial performance, outstanding scientific and engineering performance and considerable contribution to development of the Fuel Company. Six categories of Corporate Prize were awarded in 2013: “Top Engineering and Process Solution”, “Top R&D Prototype”, “Top Solution for the Establishment of New Production Facility”/“Top Solution for Reconstruction and Building”, “Excellent Management Performance”, “Top Business Solution for Development of Entrepreneurship within the Closed Administrative Territorial Unit” and, for the first time ever, “Top Solution to Reduce Negative Environmental Impact”. The Prize is due only for the projects that have been implemented over the previous three years and proved to be economically justified. Twenty-two projects and 107 authors thereof were earned the Prize in 2013.

Innovative Activities in Nuclear Industry

Services and products of FE NFC represent the core activity of enterprises comprising the Fuel Company (~80% of revenues at the end of 2013), and that is exactly why innovative activities in nuclear industry are critical for ensuring longterm competitiveness and sustainability of TVEL FC.

In 2013, the Company spent RUB 1,687 mln (RUB 1,779 mln in 2012) on research and development for the purpose of design and improvement of nuclear fuel.

Main tasks of innovative activities of TVEL FC in nuclear industry appear to be as follows:

- Design and improvement of nuclear fuel and cores of the Russian design (primarily VVER-1000/1200);
- Design of nuclear fuel for Western reactors (PWR);
- Design of nuclear fuel for low-capacity nuclear power stations (LNPS) and research reactors (RR).

In its effort at nuclear innovations, the Company seeks to increase the burn up fraction, life cycle of TVS, functional reliability of nuclear fuel, to justify the performance of fuel in maneuver modes, and likewise justify the performance of TVS in conditions of enhanced output of reactors while ensuring unconditional safety.

Project “Proryv”

Federal Target Program “New Age Nuclear Energy Technologies for the Period of 2010-2015 and up to 2020” makes provisions for Project “Proryv” that envisages the design of the new age lead-cooled fast reactors running in a closed fuel cycle. The intention is to create an experimental demonstration energy complex (“the EDEC”) with reactor BREST-OD-300 at JSC SGChE, followed by development of the startup energy complex based on BN-1200.

To provide fuel for BREST-OD-300 and BN-1200, JSC VNIINM designs fuel assemblies and technologies for the production of high-density and thermal conductivity and low thermal capacity nitride fuel. These properties add up to conversion ratio in the core remarkably close to 1, thereby enabling the core to continue operation without any material reactivity charge, while considerably reducing maximum temperature of the fuel and thermal energy reserve therein. All this contributes to higher safety.

Under the Project “Proryv”, the EDEC seeks to create a module that would make fuel (fabrication/refabrication module), an SNF conversion module and RAW conditioning technologies. As far as the conversion module is concerned, JSC VNIINM will handle the hydrometallurgical SNF conversion technology (stage immediately following the pyrochemistry) and preparation of materials for refabrication. For all these technologies, JSC VNIINM is charged with the task of preparing reference data (process description and material flow estimates) necessity for module equipment design.

As far as new age reactors are concerned, the Company intends to design and provide substantiation for the structural materials of fuel elements, absorber elements and fuel assemblies that would ensure economically feasible burn-up rates, and to develop end-to-end technologies for manufacture (from smelting to finished product) and control thereof in pursuance of front-end designs of core elements.

Innovative Activities in Non-Nuclear Industry

In order to create new and innovative non-nuclear industries aimed at the development of the second core business, there are projects on four programs of innovative development: “New Energy”, “Machine building”, “Metallurgy”, “Chemistry”.

The Company’s enterprises are the basis for industrial centers created as points of growth of innovative non-nuclear production.

Creation of the new knowledge-based innovative industries at the enterprises of the FC will create more jobs and attract young professionals to form the business environment in the cities of presence of TVEL FC enterprises, improve living standards and attractiveness of the territories.

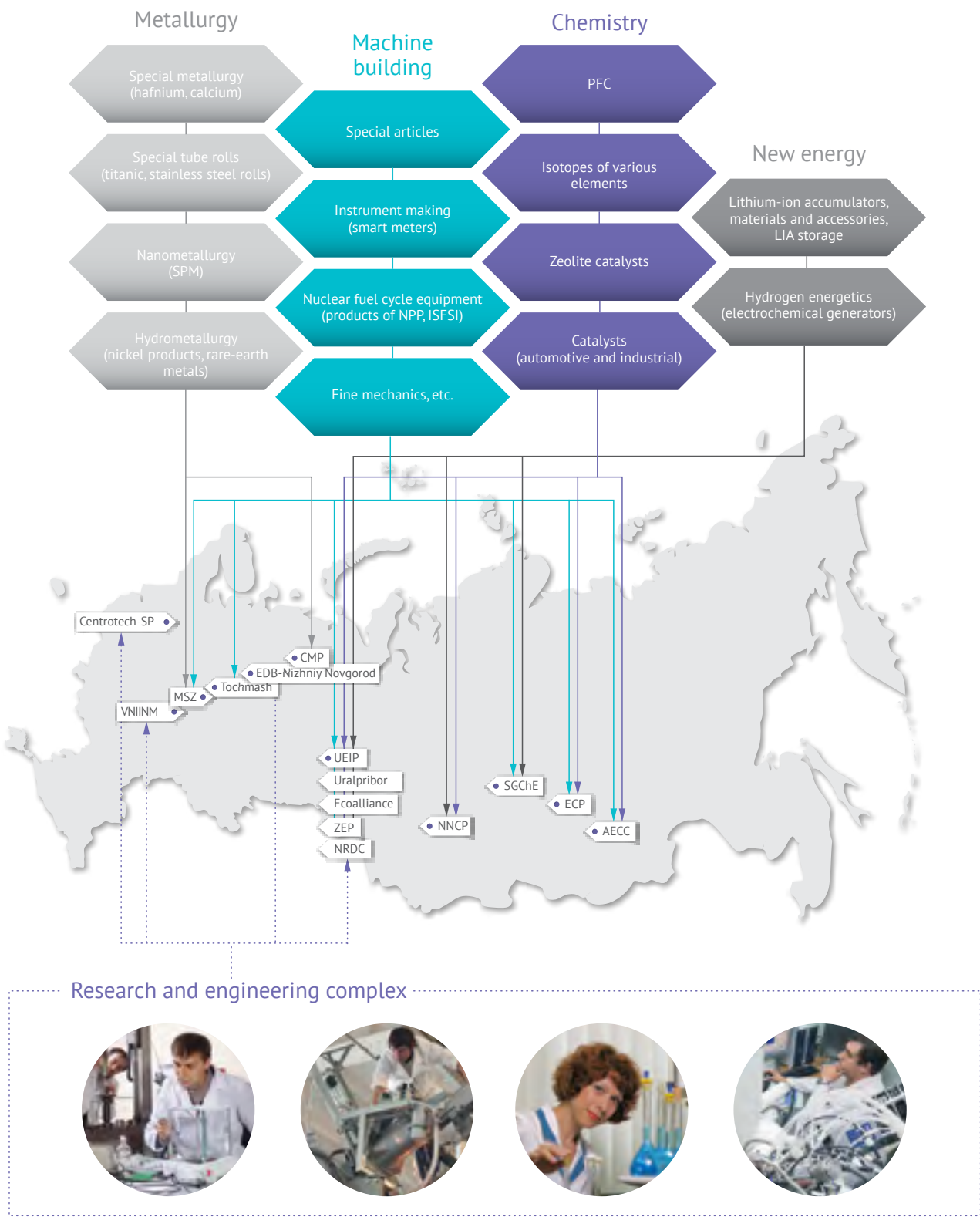
New businesses may develop at the FC enterprises on the basis of:

- Basic competencies in each of the innovative development programs;
- Competence of the R&D enterprises;
- Availability of infrastructure for distribution of new production facilities – buildings, railways, co-generation plants, sewage treatment plants, etc.;
- Availability of qualified personnel;
- Good manufacturing practice.

Total revenues from sale of innovative projects in non-nuclear sphere in 2013 reached RUB 4,819 mln, which is 19% higher than in 2012 (RUB 4,054 mln).

In 2013, TVEL FC invested over RUB 1 bln in innovative projects in non-nuclear sphere.

TVEL FC Innovative Development Programs



Intellectual Property of TVEL FC

TVEL FC owns over 1,600 items of intellectual property.

The objects of legal protection are represented by inventions, useful models, production secrets (know-how), software, databases, trademarks and production prototypes. Intellectual Property Identification and Legal Protection System as it applies to the items created by subsidiaries and affiliates of TVEL FC is implemented in accordance with applicable laws of the Russian Federation, Standard Industry Methodological Recommendations and by local regulations of the entities comprising the Company.

Functions to identify and secure legal protection of the items of intellectual property created by the enterprises of the Fuel Company are assigned to the Department of Patent and Licensing Work of TVEL JSC, as well as to technical departments, development design offices, groups for intellectual property protection and patent-information departments of TVEL FC enterprises.

Number of Registered Inventions, Useful models, Production Prototypes and Production Secrets (Know-How)

Items of Intellectual Property	2011	2012	2013
Inventions: Russian, pcs	53	60	65
Inventions: foreign, pcs	5	2	9
Useful models: Russian, pcs	16	12	12
Useful models: foreign, pcs	0	2	0
Production prototypes: Russian, pcs	1	1	0
Production prototypes: Foreign, pcs	0	0	0
Production secrets (know-how), pcs	67	93	97

Personnel Management

The TVEL FC Personnel Policy serves to promote the balance of interests of its employees and the employer and aims to make employees consent to the efficient development of their professional and managerial potential in accordance with the long-term development strategy of the Fuel Company.

Main long-term goals of the TVEL FC Personnel Policy include:

- Increase personnel involvement to promote sustainable growth of the company;
- Continuous growth of labor productivity;
- Development of common corporate values;
- Enhancement of development level of strategically important competencies and skills of the personnel up to compliance with requirements to the personnel common to international global companies;

- Involvement of each employee in solving the problems of strategic development and application of the "collective mind";
- Promotion of social acceptability of the changes.

Motivation and Remuneration of Labor

In 2013, the Company continued implementation of the industrial project “Harmonization of the Unified System of Labor Remuneration” (USLR).

Accomplishment of 2013:

- Salary growth at the enterprises comprising the Fuel Company by 9% against the previous year thanks to the increase of personnel involvement and to implementation of USLR Harmonization Project;
- Great results in unification of salary systems in the course of introduction of the Standard Salary Regulations with respect to workers of all enterprises comprising TVEL FC;
- Introduction of a number of tools allowing to increase incentive and promote the environment of team competition, such as organization of small groups, handling the suggestions regarding the improvements and development of the incentive system on the basis of the results obtained.

In 2013, average monthly salary in the Fuel Company (excluding TVEL JSC) was RUB 54,444 (in scientific institutions – RUB 72,759), which is 9% (19.4%) more than the year before.

TVEL FC upholds the principle of equality and tolerates no gender discrimination: male and female workers and employees get the same salary, regardless of categories.

TVEL FC Incentive and Salary Policy aims to maintain the salary at competitive level. Ratio of standard entry level wage of enterprises comprising TVEL FC compared to local minimum wage at significant locations of operations is ~1.5. At the end of 2013, in some regions (Moscow, Sverdlovsk Region, Krasnoyarsk Territory, Irkutsk Region) this ratio varies from 2 to 3.

Enhancement of Personnel Involvement

Personnel involvement, meaning the commitment of employees to the business and success of the Company, directly influences the performance and efficiency of business. Personnel Involvement Indicator is included in the KPI of the President of TVEL JSC. According to our research, personnel involvement in the Fuel Company went up by 2% on the average (from 74% to 76%).

Personnel Efficiency Assessment

In 2013, all TVEL subsidiaries and affiliates launched an annual personnel efficiency assessment that includes the RECORD (REsult, COmpetency, REcognition, DEvelopment) assessment (covering 36.1% of the total headcount or 97.8% of managers / qualified employees in 2013) and professional and personal competency assessment (covering 57% of the total headcount or 93.1% of all blue-collar workers). Based on the personal efficiency assessment, the Company put forward recommendations on personal incentives, training programs and inclusion of employees in the management reserve.

Personnel Development and Training

Traditionally, personnel development and training is in the focus and one of top priorities of personnel policy of the Fuel Company.

Acting on the basis of Personnel Development and Training Provisions, the enterprises of TVEL FC regularly implement training programs to enhance competencies of their managers and ordinary workers.

In 2013, enterprises of TVEL FC provided training to 19,035 employees.

Average length of training in 2013 for each employee of the Company was 44 hours (33 hours in 2012). Training of workers usually takes the longest (83 hours).

The Fuel Company has special programs for development of skills and competencies of its managers, including: School of Leadership, Small Group Leadership Development, Production Management Development, Cost Engineering in Machine Building and R&D, Project management in Fuel Company, Leadership forums Ideas that Change the World.

Development events that contribute to development of skills of the employees are implemented using the resources of internal coaches and the external providers of training services.

Special training and development programs are arranged for the industry management reserve.

Young employee recruitment programs

Recruitment of prospective young people is one of the top priorities in personnel policy of the Fuel Company. By hiring young specialists, the Company intends to preserve and strengthen its position in the sphere of science and advanced technologies.

As part of its cooperation program with educational institutions engaged in personnel training, the Company signed agreements with sector-specific higher educational institutions (five of which form a consortium of base schools of ROSATOM State Corporation) and vocational secondary schools: NRNU MEPHI and its branches; UrFU, MISiS, NI TPU, NTK, VI GU, Lomonosov Moscow State University FCT, D.I. Mendeleev UCTR, MATI – Russian State Technological University, etc.

The cooperation is implemented by way of:

- Special career events at the higher educational institutions (career days, vacancy fairs, meetings with Company's CEOs, contests, qualifications, etc.);
- Organizing internship of the students;
- Involvement of employees of enterprises comprising TVEL FC in operation of the state examination

commission at the educational institutions.

In 2013, enterprises of the Fuel Company provided internship to 969 students of the higher educational institutions and vocational secondary schools. In 2014, the Company expects 850 students to take their internship courses at its enterprises.

Over the period of report, the Company hired 129 graduates of the higher educational institutions and vocational secondary schools, 14 of which took target preparation classes for employment by TVEL FC.

To promote career guidance, school students a taken on regular (twice a year) tours at the enterprises of the Fuel Company where they meet young specialists and take part in a variety of contests (intellectual environmental game “First Step Into a Nuclear Project”, etc.).

To promote the development of the graduates training, recruitment and hiring system, the Company focuses on:

- Implementation of talent hunt system;
- Development and implementation of the higher and secondary vocational education programs (in cooperation with educational institutions);
- Development of requirements profile for the graduates of vocational secondary schools;
- Development and implementation of secondary vocational education programs in compliance with requirements of high-tech manufacturers under the dual training model (in cooperation with vocational secondary schools).

In 2013, the Company developed a scout system that covers top graduates of educational institutions and helps recruit talented graduates who qualify under the requirements profile (average score ≥ 4.2; ability test ≥ 35; four competencies rate ≥ 4.5).

The additional criteria include:

- Successful completion of internship by the graduate at the enterprise of TVEL FC (formal evaluation required);
- The CV should mention the graduate’s participation in student conferences and contests, prior successful projects, publications in professional mass media (proper documentation required).

For example, JSC SGChE in cooperation with STI NRNU MEPHI implements Joint Program for implementation of cooperation agreement by and among TVEL JSC and NRNU MEPHI in the sphere of education, science and personnel training.

This Program makes provisions for:

- Joint development and implementation of higher vocational training programs to prepare professionals in prospective business of JSC SGChE, specifically – train specialists competent in X-ray diffraction and fluorescence analysis and electronic microscopy;
- Open Radiochemistry Department at JSC SGChE to promote practical training of students under the program “Chemical Materials Engineering in Modern Power Industry (specialization: Chemical Materials Engineering of NFC”).

Implementation of Social Programs

In addition to mandatory social guarantees, benefits and privileges envisaged by the labor laws, enterprises of TVEL FC have corporate social programs, such as:

- Non-state pension provision;
- Voluntary health and industrial injuries insurance;
- Housing program;
- Sanitary and resort treatment and recreation of employees and their children;
- Provision of meals to employees;

- Assistance to veterans and pensioners of the industry;
- Organization of cultural and sports events, etc.

TVEL FC social programs represent a strong motivating factor. According to the involvement studies, up to 55% of employees find their social package satisfactory.

Total amount spent by TVEL FC on its social programs in 2013 was RUB 1,612.1 mln (RUB 53,700 per worker).

Implementation of Corporate Social Programs in 2013

Corporate social program	Funds allocated under the program in 2013, mln RUB	Basic facts
Voluntary health insurance (VHI)	188	100% of TVEL FC employees are covered by the VHI policy. Maximum amount under the VHI policy in 2014-2015 is increased by 15%
Personal accident and sickness insurance	11.8	90% of TVEL FC employees are covered by personal accident and sickness insurance
Sanitary and resort treatment, recreation of children	185.8	4,262 employees (2,992 of whom were working in harmful conditions) got vouchers to sanitary and rehabilitation resorts in 2013. Maximum amount of each voucher in 2014 was increased by 10% – to RUB 50,400 for a 21-days leave
Assistance in improvement of housing conditions	59.9	548 employees used the program to improve their housing conditions in 2013. 489 of them were young workers
Benefits	52.2	6,334 workers got their benefits in 2013. Average benefit amount – RUB 8,250. The amount of benefit does not depend on the official position. Types and criteria of benefit provision are unified
Sports and cultural events	141.2	Over 350 corporate competitions took place at the enterprises of TVEL FC in 2013. Total number of participants – over 37,000 workers and members of their families

Implementation of Corporate Social Programs in 2013

Corporate social program	Funds allocated under the program in 2013, mln RUB	Basic facts
Assistance to non-working pensioners	618.6	<p>The number of non-working pensioners supported by the Fuel Company – over 42,000 persons. Average amount paid as assistance to a pensioner – RUB 10,000 a year.</p> <p>Vouchers to rehabilitation institutions were provided to 6,610 non-working pensioners.</p> <p>In 2013, the Fuel Company introduced a new corporate program that regulates provision of support to non-working pensioners in accordance with the social policy of ROSATOM State Corporation. Under the new program, privileges and guarantees are contingent on the status assigned to each veteran (distinguished veteran, honorable veteran and veteran w/o status). The status is assigned on the basis of individual merits and the length of service in the industry. Non-working pensioners of TVEL FC got their status in 2013. The new corporate program helped structure the benefits, including the amount and regularity thereof. The biggest accomplishment of the reform includes the increase of the minimum amount of the benefit, improvement of targeting ad provision of assistance to single and low-income non-working pensioners at the times of hardship</p>
Non-state pension ("the NPO")	148.2	<p>By the end of 2013, around 17.9% of TVEL FC workers are involved in the non-state pension program. The highest rates of involvement are achieved at JSC CMP (35.3%), MSZ JSC (29.5%), JSC PA ECP (25.9%) and JSC UEIP (23.3%).</p> <p>The Fuel Company pays pension tax at the rates set by local regulations (up to 1 to 7, but no more than RUB 4,000 a month) in addition to personal deposits of the worker.</p> <p>Pension accruals under the NPO program are accumulated mostly at the Non-state Pension Fund Atomgarant.</p> <p>According to the 2012 Statement, pension accruals accumulated in the above-mentioned fund are covered by the appropriate provisions 1.5+ times. The fund is rated A++ (stable) by the Expert RA Rating Agency</p>

Interaction with Labor Unions

Primary cells of labor unions function at every enterprise of TVEL FC. Each worker of the Fuel Company may join a labor union that would represent its interests during the collective negotiations.

Management of ROSATOM State Corporation and TVEL FC appreciate it when their workers join labor unions.

Some enterprises have labor unions that unite up to 98% of their workers. The Fuel Company interacts with labor unions under the social partnership program. The CEOs acknowledge

the important role of labor union in implementation of corporate social programs and in enhancement of employee awareness. Social stability at the enterprises and the places of presence of the Fuel Company is the result of cooperation between TVEL JSC and Labor Union of Nuclear Energy and Industry of Russia (RPRAEP), enterprises of the Fuel Company and primary labor union organizations, veteran councils and other workers' associations.

Labor Protection and Industrial Safety

By taking preventive measures in the sphere of labor protection, in 2013 the Company continued the downward industrial injuries tendency. The number of injured at work went down by 46% (15 in 2012 and 8 in 2013).

At the 17 enterprises of TVEL FC 8 persons were injured in 2013, two of whom happened to be heavily injured. No emergencies at hazardous facilities or mass accidents occurred over the period of report.

No breach of safety parameters or limits of the effective and equivalent doses set by the nuclear and radiation safety regulations, and no violations that may be construed as accidents and emergencies under the INES were registered at the enterprises of the Company in 2013.

All production enterprises of the Fuel Company operate within the approved effective dose limits applicable to the personnel, no Group A personnel is available (individuals exposed to the effective dose of 100+ mSv over* a period of five consecutive years, or effective dose of 50+mSv during any one year.

In 2013, each employee of TVEL FC involved in functioning and maintenance of nuclear and radiation-hazard facilities took on the average 54.24 hours of training in standards of nuclear and radiation safety (NRS).

The Company spent grand total of RUB 2.05 bln (RUB 68,000 per each employee) on labor protection arrangements in 2013.

Ecological Policy

TVEL FC in its environmental activities is committed to promotion of environmental, nuclear and radiation safety.

To improve the efficient environmental management, all enterprises of TVEL FC have organized divisions responsible for performance of operations in the sphere of environment protection.

Environmentally important enterprises of TVEL FC* issue annual public reports on environmental safety, to inform the stakeholders, partners, public, citizens and local self-government bodies, and publish them on Websites of the enterprises and ROSATOM State Corporation in Section “Customers and Partners” – “Environmental Management”.

TVEL Environment Policy sets out guidelines for the Company’s activities in the field of environment protection, and lays a foundation for the Environment Policy Action Plan that includes a range of administrative and action-oriented environment measures.

Nuclear and Radiation Safety

Assurance of nuclear and radiation safety (NRS) of facilities of the Fuel Company’s enterprises, prevention and exclusion of any possibility of inadmissible exposure of the personnel, population and environment to radiation are one of the priority types of the TVEL FC’s activities.

The Company’s enterprises make comprehensive effort to prevent radiation accidents, improve safety of hazardous production facilities, and train their personnel and action teams to respond to accidents and emergencies.

Activities of the TVEL JSC and the Fuel Company’s enterprises are carried out in accordance with the laws of the Russian Federation pertaining to the use of nuclear power taking into account IAEA requirements.

* Environmentally important enterprises of TVEL FC include: JSC AECC, JSC SGChE, JSC PA ECP, JSC UEIP, JSC NNCP, JSC CMP and MSZ JSC.

The main program documents providing for realization of activities in the area of NRS are the Federal Target Program “Nuclear and Radiation Safety Assurance for 2008 and for the Period until 2015” (FTP NRS) and “Principles of the State policy in the Area of Assurance of the Nuclear and Radiation Safety of the Russian Federation for the Period until 2025”.

In accordance with FTP NRS, carrying out of 38 activities at the Fuel Company’s enterprises has been planned for the period until 2015 in the amount of RUB 12.4 bln, including RUB 9.5 bln at the expense of the federal budget and RUB 2.9 bln at the expense of other sources. Liquidation of 56 nuclear and radiation hazardous sites (NRHS), putting into operation 1.71 thousand m³ of capacities of radioactive wastes (RAW) repositories, putting 4.46 RAW power blocks into an environmentally safe state, as well as rehabilitation of 1,225.4 thousand m² of radiation contaminated areas are planned.

In 2013, at the expense of special reserve fund №3 “Decommissioning and R&D” of ROSATOM State Corporation for 2011, 2012 and 2013 works under 30 activities were accomplished in the amount of RUB 904.7 mln, including under 23 activities that are not included in FTP NRS in the amount of RUB 468.5 mln.

Pollution of the environment with radionuclides (RN)

Indicator	2011	2012	2013
Emission of alpha-active RN into the atmosphere, Bq	8.32×10 ⁹	7.81×10 ⁹	7.54×10 ⁹
Presence of areas contaminated with RN, thousand m²	13,205.4	13,601.4	13,600.3
Disposal of wastewater containing RN, Bq	5.64×10 ⁹	4.78×10 ⁹	5.15×10 ⁹

Areas contaminated with radionuclides are within the zone of professional responsibility of enterprises of MSZ JSC, JSC NNCP, JSC CMP and JSC SGChE. No industrial activity is carried out at the said enterprises, access to them is highly restricted.

In 2013, there was no contamination of new areas with radionuclides as a result of activities of the TVEL FC’s enterprises. All identified contaminated areas are a consequence of activities of enterprises that were intended for improving the defensive ability of the country during the period of creation of the “nuclear shield”.

Energy Saving and Efficiency Improvement

The project for power consumption reduction and improvement of the energy efficiency of industrial enterprises of ROSATOM State Corporation is one of the key projects for the purpose of achieving set targets pertaining to improvement of the industry’s competitive ability. The Fuel Company’s enterprises are pilot enterprises that are in the process of organization and implementation of an energy saving methodology and accounting in the industry in general, starting from energy studies, development of long-term programs and specific activities.

In 2013, power consumption at the TVEL FC enterprises was reduced by 20.2% (787 mln kWh or 2.8 mln GJ), heat energy – by 32.7% (1,339 thousand Gcal or 5.6 mln GJ) as compared to the base 2009 under comparable conditions*. The reduction in energy resources consumption

* Adjusted with bringing compared power consumption indicators to the same volume of production and provided services.

(under conditions comparable with 2009) in monetary terms was 24.4% (RUB 1,951 mln), while the target indicator was 20%.

Reduction of energy consumption is not related to reduction of the volume of the TVEL FC’s production program and was achieved by way of realization of activities under the Program “Energy Saving and Efficiency Improvement” effective at the TVEL FC’s enterprises from 2011. In 2013, the volume of financing under the Program was RUB 1,847.5 mln.

Development of the Regions of Presence

Achievement of strategic targets set before the TVEL FC is impossible if there is no social agreement, if requirements of social and environmental acceptability are not complied with. This, in its turn, is caused by the fact that social tension in regions may inflict irreparable reputational harm to the Fuel Company in the international market with respect to the reliability of supplies and, therefore, result in the foreign clients’ reorientation towards dealing with the Company’s competitors.

In this connection, in determining strategic development targets, the management company TVEL JSC has taken into account to the fullest extent potential social and economic consequences of taken decisions and has developed projects for development of regions of presence and assurance of their social stability.

For the purpose of realization of projects for development of areas of the enterprises’ presence, the TVEL FC has developed and approved in September 2013 the Program “Formation and preservation of social agreement environment in regions of the Fuel Company’s presence” which is oriented at all enterprises of the TVEL JSC, systemizes the Company’s experience in this area and includes three groups of projects:

- Cooperation with local and regional public authorities with respect to the concept of coordination with local and regional public authorities with respect to the concept of the territories’ development, the growth of regional taxes and maintenance of social and economic stability for years 2016-2018;
- Social programs at the enterprises and in the cities of presence, development of social partnership;
- Building multi-level internal and external communications.

Agreements on cooperation with the regions

In 2012, the TVEL JSC initiated the drawing up and signing of Agreements on cooperation between ROSATOM State Corporation and public authorities of Russian Federation constituent entities on which territory enterprises of the Fuel Company are located. Such agreements are the result of efficient cooperation with public authorities and provide for realization of an entire complex of activities aimed at social and economic development of regions and cities of the Fuel Company’s presence.

In these agreements, the following key aspects are determined:

- Mechanisms of reallocation of tax payments in favor of regional budgets and local budgets;
- Terms of co-financing of business support and development funds;
- Terms of collective participation in realization of a Program of creation of new jobs;
- Terms of collective participation in the establishment of physical and mathematical lyceums*.

Based on the results of the positive innovative experience, such practice has been extended to the majority of regions of presence of enterprises of ROSATOM State Corporation. In addition to 4 Agreements signed in 2012 (with the Sverdlovsk and Tomsk Regions, Krasnoyarsk Territory and the Udmurt Republic), an Agreement was entered into with the Vladimir Region in June 2013.

The key point of each Agreement is an arrangement to re-invest any increase in regional taxes, which are charged from ROSATOM locally, into social and economic development of nuclear communities.

Consolidated group of taxpayers

On November 16, 2012, the Federal Tax Service of Russia registered an agreement on creation from year 2013 of a consolidated group of taxpayers.

The consolidated group of taxpayers includes 34 organizations of the nuclear industry, 10 enterprises of the Fuel Company (TVEL JSC, JSC SGChE, JSC PA ECP, JSC AECC, JSC CMP, JSC MZP, JSC VNIINM, JSC VPA Tochmash, UGCMP Ltd., NRDC LLC).

Creation of the consolidated group of taxpayers in the nuclear industry will make it possible to increase profit tax payments to budgets of regions in which productions capacities are registered and operate

Each specific budget of a constituent entity of the federation will receive a part of the total profit tax depending on the value of capital assets of the participant of the consolidated group of taxpayers who is registered in its territory and the number of employed personnel.

Thus, in 2013 (as of the end of 2012) the actual return of the profit tax to budgets of regions in which the TVEL FC operated was RUB 447.5 mln, and it is planned that in 2014 this figure will be above RUB 2,000 mln

* The report contains information on the most material results of the reporting period that were achieved in the course of realization of agreements: on realization of the project “Proryv” (“Breakthrough”) for creation of a pilot and demonstrational complex with a a BREST-OD-300 reactor on the base of JSC SGChE (see the section “Innovative Activities in Nuclear Industry”), on development of physical and mathematical lyceums (see the section “Charitable Activity and Support of External Social Programs”), on the growth of profit tax payments to regional budgets (see the subsection “Consolidated group of taxpayers” of this section.

Three-sided commissions for the solution of the social problems

In the Closed Administrative Territorial Units and Angarsk the three-sided commissions, called the Coordination Councils, established for the solution of the social problems continued its work in 2013. They consist of the directors of enterprises, heads of the Closed Administrative Territorial Unit and the heads of trade unions. Within the frameworks of such commissions the parties come up with the solutions for the improvement of the economic conditions and development of the TVEL FC companies, for the ensuring of the coordinated activities to maintain stability in the labor market, for the extensive support of the active employment which furthers the creation of new jobs, achievement of social and economical stability in the Closed Administrative Territorial Units.

The plans for the year 2014 and in the mid-term view

The primary objective of TVEL FC in the mid-term view with regard to the impact on the territory of presence shall be the development jointly with ROSATOM State Corporation of the industrial program of the strategic development of the Closed Administrative Territorial Unit of the nuclear industry.

The development of such program suggests the working-out and harmonizing the series of critical decisions with the authorities on different levels, in particular, on the following problems:

- Target directions for the development of the Closed Administrative Territorial Unit hosted by ROSATOM State Corporation;
- Relocation of innovative and/or technology intensive works which are the priority for the state (including industry works) to the sites within the Closed Administrative Territorial Units;
- Creation of the industry parks projects in Novouralsk, Tomsk and Seversk through allocation of the dedicated territories and removing of the advanced technology enterprises to the specialized sites having appropriate infrastructure and personnel resources;
- Development and synergism in transportation, social and engineering infrastructure in the agglomeration Tomsk – Seversk and in the agglomeration of Yekaterinburg*;
- Liberalization of treatments within the Closed Administrative Territorial Unit.

Charitable Activity and Support of External Social Programs

The contribution of the Fuel Company to the social and economic development of the regions of presence means not only the participation in the formation of the income base for the regional and local budgets but also the implementation of the whole body of social and charity programs.

* Including the city of Novouralsk.

The charitable activity of the Fuel Company is arranged systematically and based on the principles of:

- Support to charity programs and projects in the cities of presence of the TVEL FC enterprises;
- Support to the common values (energizing of business environment, creation of new jobs, development of the educational, health-care, culture and sports infrastructure);
- Co-funding of charity programs jointly with the local authorities and central government bodies of the Russian constituent entities.

In 2013, TVEL FC donated RUB 170.28 mln to support charity programs and social initiatives.

One of the primary areas of the charitable activity which is put into effect jointly with ROSATOM State Corporation is the creation and development of physics and mathematics lyceums for the training of the prospective skilled specialists for the nuclear industry.

This project is designed to create conditions for the self-actualization of children, finding out and maintaining of the talented schoolchildren, bringing up of the prospective great as physics and mathematics, to facilitate the entry to the higher educational establishments which specialization is physics and mathematics. At this stage the project is being implemented in three cities: Seversk, Zelenogorsk and Glazov.

Appendix No. 1 Glossary and Abbreviations

This 2013 TVEL JSC Report uses the following terms and definitions:

<i>Term</i>	<i>Definition</i>
Nuclear power engineering	A sector of power engineering that uses nuclear energy for electrification and heat supply
Becquerel (Bq)	A unit of activity of a nuclide in radioactive source that is equal to activity of the nucleus at the rate of one decay per second
Business model	According to International Integrated Reporting Standard, a business model means a system that describes activity of a company with conversion of capital for achievement of strategic goals and value creation over a short-, mid- and long-term period
Fast neutrons	Neutrons, the kinetic energy of which is higher than a certain definite value. In nuclear reactor physics, neutrons are commonly referrers to fast if their energy is more than 0.1 MeV
PWR	Pressurized water reactor where water is used as both decelerator and heat carrier. The most common types of reactors in Russia: VVER-440 and VVER-1000
Radioactivity discharge	Radionuclide emission into the atmosphere resulting from operation of a nuclear facility
Decommissioning	Decommissioning of a reactor facility and subsequent operations to ensure its safe dismantling, disposal of equipment and further use of the site
Depletion of nuclear fuel	Impoverishment of any nuclide in nuclear fuel due to nuclear transformations of this nuclide during the reactor operation
Highly-enriched uranium	Uranium containing uranium-235 isotope with a mass of 20% or more
Gas centrifuge	Equipment designed for obtaining enriched uranium necessary for ensuring the operation of nuclear reactors of nuclear power plants
Gas diffusion technology	Gas diffusion technology of separation of uranium isotopes based on molecular diffusion through the micropores of membranes (partitions)
Gate approach to investment	Planning and investment approach, in which the investment processes are broken down into phases; the achieved results, plans and risks of the further implementation of the project are reviewed in an integrated manner before each phase, and then the decision to move to the next phase of the project is made
Uranium hexafluoride	Chemical compound of uranium and fluorine (UF ₆). It is the only highly volatile uranium-fluorine compound (when heated to 53°C uranium hexafluoride goes over from solid to gas); it is used as a raw material for the separation of isotopes of uranium-238 and uranium-235 by gas diffusion technology or gas centrifuge technology and the production of enriched uranium (chemical combination of uranium and fluorine (UF ₆))
Global Reporting Initiative (GRI)	Internationally accepted system of reporting on economic, environmental and social performance based on Sustainability Reporting Guidelines, technical protocols and industry-specific applications

<i>Term</i>	<i>Definition</i>
Burnup fraction	Percentage of the initial quantity of number of nuclei of a certain type which have gone through nuclear transformation in the reactor at the neutron influence
Division	A business entity with which ROSATOM State Corporation set the rules for interaction determining this company as a Division, managing business entities covered by the control loop of the Division
Radiation dose	A sum of individual radiation doses received or planned during the work on operation, maintenance, repair, replacement or disassembly of a nuclear facility
Background radiation	Ionizing radiation composed of space radiation and ionizing radiation of naturally distributed natural radionuclides (on Earth surface, in the air, foodstuffs, water, human organism, etc.)
Closed nuclear fuel cycle	A nuclear fuel cycle in which nuclear fuel, used and discharged from the reactor, is recycled for extraction of uranium and plutonium for reproduction of nuclear fuel
Ash-slag	Waste generated by burning of solid fuel
Integrated report	Brief overview of how the strategy, management, performance and prospects of a company in the context of the environment lead to value creation over the short, medium and long-term periods
Intellectual capital	The International Integrated Reporting Standard defines intellectual capital as intangible assets of intellectual nature
Research reactor	A nuclear reactor used as a research object to obtain data on the physics and technology of reactors required for the design and development of this type of reactors or components thereof
Capital	The International Integrated Reporting Standard defines it as resources and relations that serve as the source and the results of value (integrated value) creation processes
Uranium conversion	A chemical technology process of converting uranium-bearing materials into uranium hexafluoride
Radiation control	Acquisition of information on the radiation situation in the organization and environment and on the levels of radiation of humans (including dosimetric control and radiometric surveillance)
Indirect energy use	Use of energy produced outside the organizational limits of the organization preparing the report
Production localization	Organization of production outside the Russian Federation
Neutron	An elementary particle that has no electrical charge and is present in the nucleus of each atom except hydrogen. Single mobile neutrons moving at different speeds arise because of the fission reaction. Slow (heat) neutrons, in their turn, can easily cause fission of nuclei of “fissionable” isotopes, e.g., U-235, Pu-239, U-233; fast neutrons can cause fission of nuclei of a “fertile” isotope, e.g. U-238. Sometimes atomic nuclei just capture neutrons
Low-enriched uranium	Uranium containing U-235 isotope with a mass of fewer than 20%
Nuclide	Type of atom with a definite number of protons and neutrons in the nucleus characterized by an atomic mass and atomic (order) number
Depleted uranium	Uranium in which the content of U-235 isotope is lower than in natural uranium

<i>Term</i>	<i>Definition</i>
Enrichment (by isotope)	a) particular isotope atom content in the mixture of isotopes of the same element, if it exceeds the proportion of the isotope in a mixture of naturally occurring (in %); b) a process resulting in increased content of a particular isotope in a mixture of isotopes
Uranium ore enrichment	Totality of processes of treatment of mineral uranium-containing raw material for the purpose of separation of uranium from other minerals contained in the ore. Meanwhile, there is no change in the composition of minerals, just a mechanical separation of ore concentrate
Enriched nuclear fuel	Nuclear fuel in which the content of fissionable nuclides is higher than in natural raw material
Enriched uranium	Uranium in which the content of U-235 isotope is higher than in natural uranium
Fuel element cans	Reactor quality uranium is usually enriched approximately to 3.5% U-235, and the content of U-235 in weapon-grade uranium is over 90% Metal tubes in the active zone of the reactor containing oxide fuel pellets
Circulating water	Water that has been used in the processing cycle and that is to be used for the same purposes after cooling or purification
Radioactive waste treatment	General term that covers all activities related to the processing, conditioning, transportation, storage and burial of radioactive waste
Ozone-depleting substances	Any substance with an ozone-depleting potential higher than 0, able to deplete the stratospheric ozone layer. Most of ozone-depleting substances, including CFC, halons and methylbromide, fall under the Montreal protocol as amended
Trial performance	Stage of PP commissioning from the beginning of the power launch till the PP acceptance for industrial operation
Depleted uranium	Uranium depleted through extraction of U-235, which is economically unfeasible to use; stored at a disposal site (dump)
Primary energy sources	Source energy form used for satisfying the energy needs of the organization preparing the report. Examples of primary sources include irreplaceable energy sources, e.g. coal, natural gas, oil and nuclear energy. They also include such replaceable sources as biomass, sun and wind energy, geothermal and hydraulic energy
First nuclear project	The USSR's nuclear project aimed at creating weapons of mass destruction with the use of nuclear energy
Fuel recharging	Operation performed by material-handling machines for replacement of the used fuel; the fuel radiation degree at which the recharging is done depends on the fuel composition after radiation, on the allowable work duration and on the reactivity change
Fuel reprocessing	A complex of chemical processes designed to remove fission products from spent nuclear fuel and fissile material recovery for reuse

<i>Term</i>	<i>Definition</i>
Radioactive waste processing	Technological operations aimed at altering the aggregative state and/or physic-chemical properties of radioactive waste and transforming them into forms suitable for transportation, storage and/or disposal
Maximum permissible dose	The maximum value of the individual equivalent radiation dose per year, which does not cause unfavorable changes in the personnel's health after 50 years of uniform exposure
Manufactured capital	The International Integrated Reporting Standard defines it as man-made physical facilities (as opposed to natural objects) which the Company uses to manufacture products and services: - buildings and structures; - equipment; - infrastructure objects
Natural capital	The International Integrated Reporting Standard defines it as renewable and non-renewable natural resources and processes, including air, water, soil, mineral resources and forests; biological diversity and environmental balance
Fuel production	Nuclear fuel production, generally in the form of ceramic pellets enclosed in metal tubes (fuel elements), which are subsequently assembled in fuel assemblies (TVS)
Radioactive isotopes	Isotopes with unstable nuclei undergoing radioactive decay
Radioactive waste	Nuclear materials and radioactive substances that no longer can be used
Radiation safety	System of measures aimed at limiting the exposure of employees and public to the lowest values of the radiation dose achieved by means acceptable to the society, and preventing the occurrence of early radiation effects and limiting manifestations of the long-term effects of radiation to an acceptable level
Radionuclides	General name for radioactive atoms that pose a great danger to environment
Regenerated uranium	Uranium separated from used nuclear fuel in the process of chemical processing for reuse in nuclear fuel (regenerated fuel)
Rehabilitation of contaminated areas	Reduction of the extent of radioactive contamination to the level ensuring the maximum protection of population and recovery of all elements of the ecosystem (water, soil, air) to the current normative level
Discharge of radioactive substances	Controlled discharge of radionuclides into the water with liquid effluents of a nuclear facility
Social capital	The International Integrated Reporting Standard defines it as a system of relationship established within the Company and between the Company, various groups of stakeholders and other communities that serves to enhance prosperity of all stakeholders
Social partnership	A system of institutes and mechanisms of coordination of the interests of the production process participants (workers, employers, state authorities, local self-government) based on equal cooperation
International Standard on Assurance Engagements (ISAE 3000)	International standard that regulates audit of non-financial reports

<i>Term</i>	<i>Definition</i>
Sublimation production	Uranium hexafluoride production
Fuel pellet	A pellet made of compacted uranium dioxide that serves as the base of nuclear fuel and is placed inside fuel elements
Fuel assembly	Assembly of fuel elements (rods, bars, plates, etc.), held together by support plates and other structural components all-in-one during transportation and exposure in the reactor. Assemblies are loaded into the core of a nuclear reactor
Heat carrier	Liquid or gas used for heat transfer from the active zone of the reactor to steam generators or directly to the turbines
Production placement topology	Plan of territorial location of production facilities
Uranium-233	Artificial uranium isotope with half-life period of 1.6 x 10 ⁵ years obtained by transmutation of thorium-232 after neutron capturing; a fissionable nuclide
Uranium-235	Natural uranium isotope with atomic mass 235 and half-life of 7.1 x 10 ⁸ years; the only fissionable material existing in nature
Uranium-238	Natural uranium isotope with atomic mass 238 and half-life of 4.5 x 10 ⁹ years; can be used as fertile material to obtain plutonium-239
Financial capital	The International Integrated Reporting Standard defines it as financial resources that are: – available to the Company in the course of products manufacturing and provision of services; – received by way of loans, investment made by owners and uncompensated receipts from operating activities and in the form of investments
Backend	An element (part) of fuel assembly
Tail storage	Complex of special structures and equipment designed for storage or burial of radioactive, toxic and other non-utilizable wastes of minerals enrichment called tails
Human capital	The International Integrated Reporting Standard defines it as competencies, abilities, expertise and motivation of the people, including: – involvement in corporate management technologies, risk management methods and ethics; – understanding and support of corporate strategy; – loyalty to and motivation for reforms, including the ability to control, manage and cooperate
Power unit	One of the NPP reactors with necessary additional equipment
Nuclear facility	Any installation that generates, processes or handles radioactive or fissionable materials
Nuclear energy	Internal energy of atomic nuclei released by nuclear fission or nuclear reactions
Nuclear fuel	Material containing fissile nuclides capable of starting chain reaction when placed in a nuclear reactor
Nuclear waste	Radioactive materials generated on various stages of the nuclear fuel cycle, including development of uranium deposits, enrichment, fuel production, reactor operation, fuel processing, etc.

<i>Term</i>	<i>Definition</i>
Nuclear reactor	A unit wherein a controlled chain nuclear reaction with energy release takes place. Reactors are classified by purpose, carrier type, design and other characteristics
Nuclear fuel cycle	Sequence of manufacturing processes for nuclear reactor functioning, from uranium mining to the disposal of radioactive waste
Abbreviations	
<i>Term</i>	<i>Definition</i>
ASKRO	Automated radiation monitoring system
LNPS	Low-capacity nuclear power station
ACS DEP	Automated Control System for Design Engineering Pre-production
NPP	Nuclear power station, an industrial facility that generates electric power
BN	Fast neutron reactor where sodium is the carrier in the first and second loop and water and vapor in the third loop. In Russia, operated at Beloyarsk NPP
VVER	Water – water energy reactor
HEU	Highly enriched uranium
GC	Gas centrifuge
SA	Subsidiaries and affiliates
DPKR	Department of Legal and Corporate Operations of ROSATOM State Corporation
UIPS	Uniform Industrial Procurement Standard of ROSATOM State Corporation
SWU	Separation work unit
USLR	Unified System of Labor Remuneration
LC	Life cycle
CATU	Closed Administrative Territorial Unit
RR	Research reactor
IMS	Integrated Management System for Quality, Environment and Safety
ITER	International Thermonuclear Experimental Reactor built on basis of a tokomak by an international group of scientists under the aegis of IAEA. It is supposed to be a type of the world's first DEMO thermonuclear power plant

<i>Term</i>	<i>Definition</i>
I&C	Instrumentation and controls
KPI	Key performance indicators
CRMS	Corporate Risk Management System
KETVS	Combined experimental fuel assembly
IAEA	International Atomic Energy Agency (IAEA), international controlling body monitoring the observance of nuclear safety and non-proliferation of nuclear weapons in the world
MW	Megawatt – unit of power equaling to 10 ⁶ Watts. MW(e) relates to electric power of a generator; MW(t) relates to thermal power of a reactor or heat source (e.g., the full thermal power of the reactor itself is generally three times higher than the electric power)
MOX-fuel	Mixed Oxide Nuclear Fuel (generally on basis of uranium and plutonium)
CU	Conversion unit
IIRS	International Integrated Reporting Standard
MFR	Fabrication-refabrication module
R&D	Research & Development
LEU	Low-enriched uranium
FE NFC	Front end of nuclear fuel cycle
STC	Scientific and Technical Council
EIAS	Environmental impact assessment study
DUHF	Depleted uranium hexafluoride
EDEC	Experimental demonstration energy complex
EP	Environment protection
SNF	Spent nuclear fuel
FNPP	Floating nuclear power plant
PTC	Permanent technical commission
SFI	Suggestion for Improvement
RPS	ROSATOM Production System
FCC	Fabrication and Refabrication of Close-Packed Fuel Cycle Center

<i>Term</i>	<i>Definition</i>
RAW	Radioactive Waste
RBMK	High-power pressure-tube reactor – a type of single-loop power reactor where water is the heat carrier and graphite is the decelerator
RN	Radionuclides
RPRAEP	Trade Union of Nuclear Energy and Industry of Russia
SSC	Separation-sublimation complex
MSE	Managers, specialists, employees
RU	Reactor facility
ICS	Internal Control System
dpa (displacement per atom)	A unit of irradiation that serves as a physical basis for matching the levels of damage within reactors with varying neutron spectra and irradiation by various particles
SDIC	Special Department of Internal Control
JV	Joint Venture
EPLS	Emergency Prevention and Liquidation System (Facility Level)
TVS	Fuel assembly
TVS-KVADRAT	Name of a FA for PWR reactors developed in Russia
TVEL	Fuel element
TVEL FC Fuel Company	TVEL JSC and enterprises controlled by the Company and included in consolidated reports.
HPP	Heat and power plant
CFHC	Chlorofluorohydrocarbons
FMBA	Federal Medical and Biological Agency
FSFM	Federal Service for Financial Markets
FTP	Federal target program
GPR	Superheat pressure tube graphite power reactor (Bilibino NPP)
ETVS	Experimental fuel assembly
NRS	Nuclear and Radiation Safety

<i>Term</i>	<i>Definition</i>
NF	Nuclear fuel
NRHS	Nuclear and radiation hazardous sites
NFC	Nuclear fuel cycle — a complex of measures for ensuring the functioning of nuclear energy engineering including extraction and processing of uranium ore, fuel fabrication, transportation to the NPP, storage and treatment of UNF. In the event of UNF burial, the NFC is called open; if fuel processing and reuse is provided, the cycle is closed
BWR	Boiling water reactor — a reactor that uses boiling water as heat carrier
EBITDA	Earnings before Interest, Taxes, Depreciation and Amortization — an analytical indicator that means the amount of profit before income tax expense, interest and accumulated depreciation
INES	International Nuclear Event Scale
PR, GR	Public relations, Government relations
PWR	Pressurized water reactor — foreign design reactors that use pressurized water — analogue of VVER

Contact Information

Joint Stock Company TVEL
Adress: 49, Kashirskoe Shosse, Moscow, 115409, Russian Federation.
Phone: +7 (495) 988-82-82
Fax: +7 (495) 988-83-83 (ext. 6956)
E-mail: info@tvel.ru
Official Website: <http://www.tvel.ru>

Alexander Uzhanov,
Head of Public Relations Department
Phone: +7 (495) 988-82-82 (ext. 6290)



FUEL COMPANY OF ROSATOM

TVEL

