

RESPONSIBLE PEOPLE

Annual Report 2015.
Short version



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INTERACTIVE
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In 2015 the Russian nuclear industry managed to reach the target levels in all indicators

The year 2015 was definitely successful for TVEL JSC: The Company fulfilled unexceptionally all contractual commitments to Russian and foreign customers. Leadership positions of the Company are confirmed by the highest quality products and the latest technological solutions.

ALEXENDER M. LOKSHIN

Chairman of the Board of Directors of TVEL JSC

First Deputy Director General for Operational Management of ROSATOM State Corporation




In 2015 the Russian nuclear industry managed to reach the target levels in all indicators and in some of them there was registered a significant exceedance of the planned values.

Despite the difficult economic conditions, ROSATOM proceeded with increasing the portfolio of foreign orders. Following the year results, the orders portfolio for the ten-year period made USD 110.3 bln (against USD 101.4 bln in 2014), while the projects portfolio reached the number of 34 NPP Power Units worldwide. Proceeds of ROSATOM from foreign contracts increased by more than 20% and amounted up to USD 6.26 bln.

TVEL Fuel Company entered into new agreements and contracts in 2015. Particularly, the signed ten-year contract provides for fuel supplies and related services for prospective Power Units No. 5 and No. 6

of the Paks Nuclear Point Plant in Hungary. The new signed commitments ensure opportunities to deliver the Russian low-enriched nuclear fuel and its components for research and power reactors in Argentina.

The year 2015 was definitely successful for TVEL JSC: The Company fulfilled unexceptionally all contractual commitments to Russian and foreign customers. Leadership positions of the Company are confirmed by the highest quality products and the latest technological solutions.

The year 2015 can be justifiably considered as the year of the beginning by Russian nuclear experts to develop and master a whole range of new technologies for the nuclear power of the future, and, primarily, the technology of closed nuclear fuel cycle that allows generating electric power without irradiated fuel disposal problems. Within the framework of the project "Proryv" TVEL Fuel

Company launched the construction works of the mixed nitride uranium-plutonium fuel fabrication module for BREST-OD-300 reactor in Seversk industrial site.

The world's largest uranium enrichment plant, Ural Electrochemical Integrated Plant JSC, placed into operation two new units of 9th generation gas centrifuges, as well as testing of 9+ centrifuges has started. These achievements can significantly improve the efficiency of the uranium enrichment process.

The first Federal Target Program on Nuclear and Radiation Safety Assurance was completed in the past year. In the course of this program accomplishment the potentially dangerous facilities of the nuclear "heritage", that are primarily associated with spent nuclear fuel and radioactive waste, were transferred into a stable, controlled status.

The Russian nuclear industry shall steadily face new challenges of 2016. One of the key factors ensuring ROSATOM global leadership positions is innovative and technological development of TVEL Fuel Company. Success on the global market, development of new business lines, financial results prove that the Company is headed in the right direction.

I am sure that knowledge, competence, experience and professionalism of the workers will allow TVEL Fuel Company to guarantee high-quality solutions to its all ambitious targets and to remain the flagship of the nuclear industry further on, taking its rightful place in the Russian economy! ●

Being a leader is a tough job

Against the background of the difficult market conditions we managed to fully accomplish our plans for production and supply of products, significantly increase productivity and efficiency, strengthen our position in the traditional markets and enter the new ones.

YURI A. OLENIN

President of TVEL JSC




The year 2015 that passed under the sign of the 70th Anniversary of the Russian nuclear industry was notably a success. Against the background of the difficult market conditions we managed to fully accomplish our plans for production and supply of products, significantly increase productivity and efficiency, strengthen our position in the traditional markets and enter the new ones.

The key events of our foreign trade activities include signing the additional agreement to the fuel contract with the Chinese corporations JNPC and CNEIC for the Tianwan NPP 3.4 Power Units transition to the 18-month fuel cycle operation mode. The contract with the Department of Atomic Energy, Government of India, ensures supplies of enriched uranium fuel pellets for the nuclear fuel complex in Hyderabad.

In 2015 we exported a batch of nuclear fuel with secondary neutron sources (SNS)

to the Temelin Nuclear Power Plant (Czech Republic). Despite the fact that SNS are not used in VVER reactors in Russia, TVEL JSC having an effective scientific and technological complex in its reserve coped with the challenging order of the Czech partners.

The Company delivered new age TVSA-12 fuel to the Kozloduy NPP. Now the Bulgarian Nuclear Power Plant will be operated on the fuel with higher consumer properties and, thus, with improved economic efficiency.

TVEL pays unchangingly considerable attention to development of non-nuclear business lines. In 2015 a number of new areas of the general industrial activities showed convincing results. Sales growth in comparison with 2014 on such non-nuclear products as titanium milling, calcium and calcium injection wire, lithium compounds and automotive catalysts is more than 35%.

TVEL Fuel Company is fully aware of its responsibility for environmental safety both of its personnel and of the relevant territories. The year 2015 marked the completion of the Federal Target Program "Nuclear and Radiation Safety Assurance for 2008 and up to 2015". There were accomplished 37 activities in seven sites of the Company for the total amount RUB 9.6 bln.

Being a socially responsible company, TVEL Fuel Company takes an active part in supporting socially significant projects organized in the cities of its business operations. In 2015 TVEL JSC and its subsidiaries sponsored a number of charitable initiatives in the total amount of more than RUB 139 mln.

TVEL Fuel Company is one of the world leaders in nuclear fuel production. We hold 17% of the world fabrication market and deliver fuel to 14 countries. The share of TVEL

JSC accounts for one third of ROSATOM total revenue.

The strategic goals of the Company include growth in the markets of the front end nuclear fuel cycle, development of general industrial production, increase in operational efficiency, social and environmental acceptability. Within the next two or three years we need to achieve 30% increase in orders portfolio and revenue, labor productivity, while reducing expenditures and production costs.

Our plans remain unchangingly ambitious. Maintaining leadership is a challenging task. But only the most daring initiatives impart driving force to business development. ●

Key Results of TVEL Fuel Company

189,017 RUB mln

Revenue (net) from sale of products

86.6 RUB mln

Adjusted free cash flow

55,734 RUB mln

Net income

43.5%

EBITDA margin

15,296 RUB mln

Dividends paid in 2015

10.3 USD bln

Export orders portfolio for products and services of FE NFC for a 10 year period

8.4 RUB mln / person

Labor efficiency

22,527 persons

Average staff number

2,318 RUB mln

Environmental expenses

31,283 RUB mln

Gross tax liabilities (actually paid)

10.8%

Average salary growth



2015 Highlights

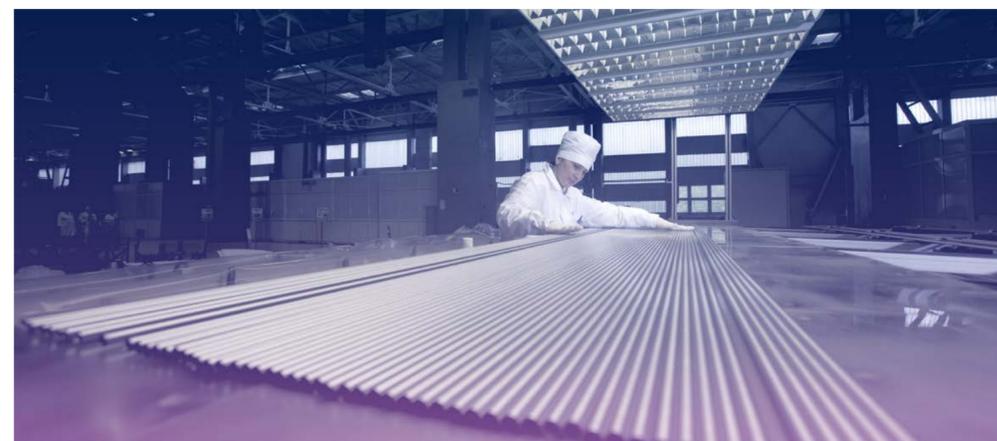
January

Mastering the production of new product — calcium injection wire for metallurgical melts treatment — on the basis of the existing calcium metal production in ChMP JSC. Production of the full cycle of this product in Russia was not available before.

February

Start of works under the long-term contract for fuel supplies to the power units being constructed in the Paks Nuclear Power Plant in Hungary.

Center of Energy Efficiency INTER RAO UES LLC completed the large-scale project on development and introduction of the energy management system into TVEL Fuel Company.



March

Signing of the contract for fuel pellets supply to the BWR reactor of the American design to the Tarapur Atomic Power Station in India.

UEIP JSC placed into operation the power unit No. 58 of the separation production updated pursuant to modern 9th generation gas centrifuges.

"Factory Process" project was launched in Mashinostroitelny Zavod JSC.

TVEL JSC was recognized as the leader in terms of the productivity and as the most efficient division in ROSATOM.

Within the framework of the diversification of the core production, ChMP JSC mastered the production technology and moved on to industrial production of titanium welding wire. The share of ChMP JSC in the Russian titanium wire market reached 50% within the first year of industrial supplies.

April

An alternative aviation route for fuel delivery to the Kozloduy NPP (Bulgaria) was organized.

TVEL JSC signed Memorandum of Understanding with The National Commission for Atomic Energy of Argentina and with INVAP S.E., the industrial company from Argentina.

ZEP LLC at Gazprom transgaz Ekaterinburg LLC conducted a series of preliminary acceptance tests of independent current sources on solid oxide fuel cells as part of gas pipeline system cathodic protection block-container.

With the view of developing electrolyte production for chemical current sources, SGChE JSC and AltN SPA OJSC concluded the contract for products supplies (lithium tetrafluoroborate based electrolyte) for the period 2015–2016.

May

The efforts of VNIINM JSC in the metrology support of MOX fuel production were recognized with a gold medal at the Moscow International Innovative Forum "Precision measurements — the basis of quality and safety 2015".

June

Under the "Proryv" project the construction works started on the mixed nitride uranium-plutonium fuel fabrication module, the design documentation for power unit construction with BREST-OD-300 reactor and the SNF processing module were prepared; four experimental FA with nitride fuel were elaborated and transferred to testing in FN-800.

The ecological report made by UEIP JSC became the winner in "Ecological Culture in Industry and Energy" category of the V.I. Vernadsky International Project Fund "Ecological Culture. Peace and Harmony".



July

Signing of the additional agreement to the fuel contract with JNPC and CNEIC on the Tianwan NPP 3, 4 Power Units transition to the 18-month fuel cycle operation mode will allow to increase the portfolio of foreign orders for the engineering services to the amount about USD 6 mln.

UEIP JSC as part of the scientific and industrial consortium "Additive Technology" became the industrial partner in development and creation of multi-laser automated complex of layer-by-layer synthesis conducted in the line of the Ministry of Education and Science of the Russian Federation.

Conducting the acceptance tests of new age fuel TVSA-12 possessing the improved technical and economic features and substantiated for operation with the power of 104% of the nominal power.

Successful completion of the next stage of the international research project on production of new age mass standard Kilogram-2 made of high-purity highly enriched silicon ²⁸Si. In continuation of the works under the project PA ECP JSC signed the contract with the Federal Office of Weights and Measures (PTB, Germany) for highly enriched silicone ²⁸Si supplies.

August

NCCP PJSC introduced the new high limit product to the global market — High purity lithium hydroxide monohydrate LHM-7 (99.99%).

September

Signing of the contract for fuel initial loading of power unit No. 1 in the Leningrad NPP.

Completion of the process of mastering ingots melting made of titanium-based intermetallic alloys, used in production of parts of perspective aviation gas turbine engines developed in Russia.

October

Start of modified fuel TVSA-12 supplies to the Kozloduy NPP (Bulgaria).

Within the International Scientific Collaboration Program ECP JSC and AMoRE signed the contract for supplying molybdenum that is enriched as stable isotope ¹⁰⁰Mo in the form of oxide. The products are intended for scientific experiments to define properties of elementary new generation particles.

November

Signing of contracts for FA and zirconium components supplies to the research reactor "Maria" (Poland).

TVEL JSC was included in the top three of Performance Rating for Russian State Companies, as determined by the international group of companies "Intalev".

TVEL JSC was recognized as the winner of the Russian Regional Networks Rating on Integrated Reporting "Corporate Transparency of the Largest Russian Companies — 2015".

Annual report of TVEL JSC for 2014 was acknowledged as the four-time winner of MarCom Awards 2015.

December

Accomplishment within the shortest time limits the contract for removal of enriched uranium product from Iran in exchange for the Russian natural uranium supplies.

Completion of the large scale project on decommissioning and rehabilitation of the nuclear "heritage" facilities — research building "B" of VNIINM JSC.

The enterprises of sublimation-separation complex of TVEL FC — UEIP JSC, PA ECP JSC and SGChE JSC — completed decommissioning of 5th generation GC.

An experimental prototype of FA with MOX-fuel for RU FN-800 was produced.

I. About TVEL Fuel Company

On-line versions of TVEL FC 2015 Annual Report and prior reports are available at http://tvel.ru/wps/wcm/connect/tvel/tvelsite/finance/annual_report/



1.1. TVEL Fuel Company

TVEL Fuel Company (TVEL FC, the Company) is presently one of the major players on the global market of front end nuclear fuel cycle (FE NFC).

TVEL JSC is a parent company of TVEL Fuel Company of ROSATOM.

The core activity of the Company is uranium enrichment, development and production of gas centrifuges and the associated equipment, development, fabrication and sale (including export) of nuclear fuel and related non-nuclear products.

TVEL Fuel Company produces fuel assemblies for all types of operating Russian power units (VVER, RBMK, EGR, FN), research and marine reactors, PWR and BWR reactors in Western Europe in cooperation with AREVA, and TVS-KVADRAT fuel of proprietary design for PWR reactors of western design.

Apart from its core products, the Company supplies non-nuclear products to the Russian and global markets in four main directions: Metallurgy, Machine building, Instrumentation, Chemistry and Power Engineering. The enterprises of TVEL Fuel Company have proprietary research and development design divisions that contribute to successful operation of hydrometallurgical, metalworking, machine-building and rolling facilities.

TVEL Fuel Company takes a central place in the structure of ROSATOM for the front end nuclear fuel cycle.

TVEL Fuel Company is the single supplier of nuclear fuel to Russian nuclear power

plants. It provides with nuclear fuel 78 power reactors in Russia, European and Asian countries, research reactors in 9 countries worldwide and transportation reactors of the Russian Nuclear Powered Fleet. One out of every six power reactors in the world operates with fuel manufactured by TVEL Fuel Company.

The enterprises of TVEL Fuel Company are located in 11 regions of the Russian Federation. Information about the Company's representative offices abroad is available on the website http://tvel.ru/wps/wcm/connect/tvel/tvelsite/about/structure/foreign_offices/.

The Fuel Company consists of four complexes for type-specific production of the front end of nuclear fuel cycle (FE NFC).

Separation-Sublimation Complex (SSC) comprises of a group of integrated plants engaged in enrichment and conversion of uranium.

Nuclear Fuel Fabrication Complex (NFFC) is a group of subsidiary industrial enterprises that manufacture nuclear fuel for various reactors.

Gas Centrifuge Complex (GCC) — is a group of subsidiary industrial enterprises producing gas centrifuges (GC) and accessories for enterprises of the separation-sublimation complex¹.

Research and Engineering Complex: The merger of R&D and technological competences of gas centrifuge design bureau (NRDC LLC, OKB-Nizhny Novgorod JSC, Branch of NRDC LLC — Centrotech-SPb JSC) and production facilities (UGCMP LLC) took place in 2015. That was the first stage of Research and Production Association (RPA) establishment in TVEL Fuel Company aimed at R&D improvement and provision of the product full life cycle (from marketing to disposal). The second stage in 2016 will combine ZEP RPA LLC and Uralpribor LLC (Novouralsk CATU).

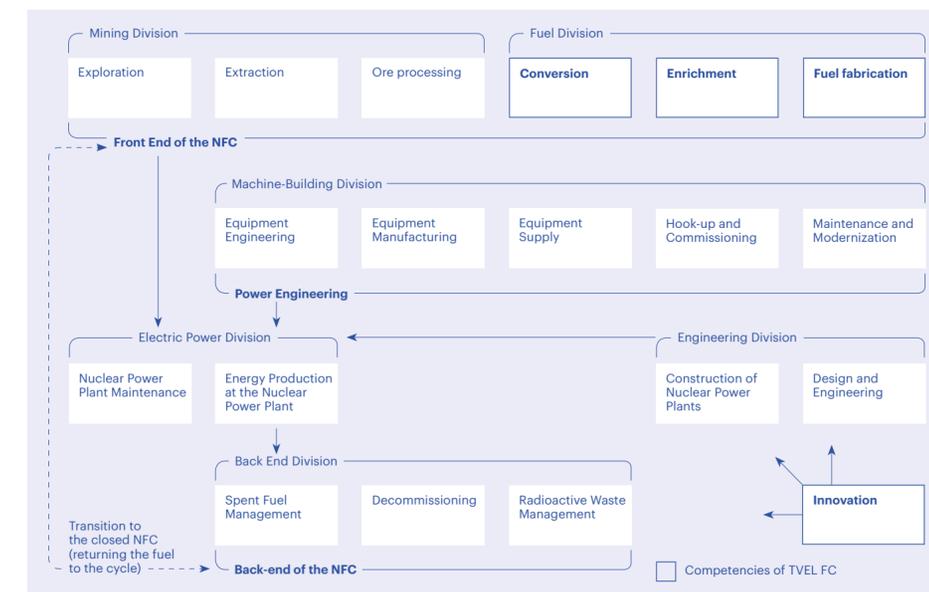
1. In the course of GCC Enterprises Reorganization project accomplishment, the Company carried out rebalancing of GCC enterprises production capacities in 2014. GC Production was primarily located in KMP PJSC and partially in UGCMP LLC. Tochmash VPA JSC replaced the GC production with civilian and special production, as well as the production of accessories for enterprises of the nuclear industry.

All activities are in strict compliance with safety requirements: nuclear, radiation, industrial, fire, environmental, labor safety, physical protection of nuclear facilities and readiness for emergency response.

Regions of Presence of TVEL Fuel Company



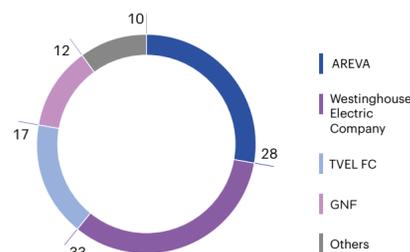
Position of TVEL Fuel Company in Nuclear Technological Chain



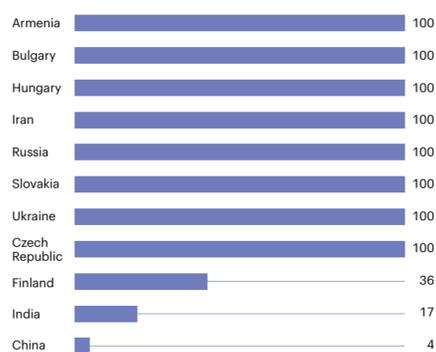
1.2. Position of TVEL FC in the World Market of the Front End Part of the Nuclear Fuel Cycle

TVEL Fuel Company is a global leader in nuclear fuel production. The Company's share in the global market of fuel fabrication in 2015 reached 17%. TVEL jointly with Technobexport JSC take one third of the world market services on uranium enrichment.

Key Competitors of the Nuclear Fuel Fabrication Market in 2015, %



Share of NPP running on Russian fuel, %



Provision of NPPs of foreign/Russian design with nuclear fuel and FA



Number of reactors of Western design running on Russian-made fuel (in cooperation with AREVA) | Number of reactors of Russian design running on Russian-made fuel

Due to real competition growth in the fuel fabrication market, the initiatives of TVEL Fuel Company on improvement of technical and economic features of the fuel, making its production more attractive for customers both on traditional fuel market for reactors of Russian design, and in fuel market of PWR reactors of western design, are extremely important.

REVIEW OF FE NFC WORLD MARKET FROM TVEL FUEL COMPANY PERSPECTIVE

Basic factors having influence on the global market of FE NFC products and services are the state and trends in development of the global fleet of nuclear power reactors. Despite the Fukushima meltdown in 2011 that had affected the plans of a number of countries for commissioning of new nuclear power-generating facilities, nuclear industry is still an integral part of the global power sector.

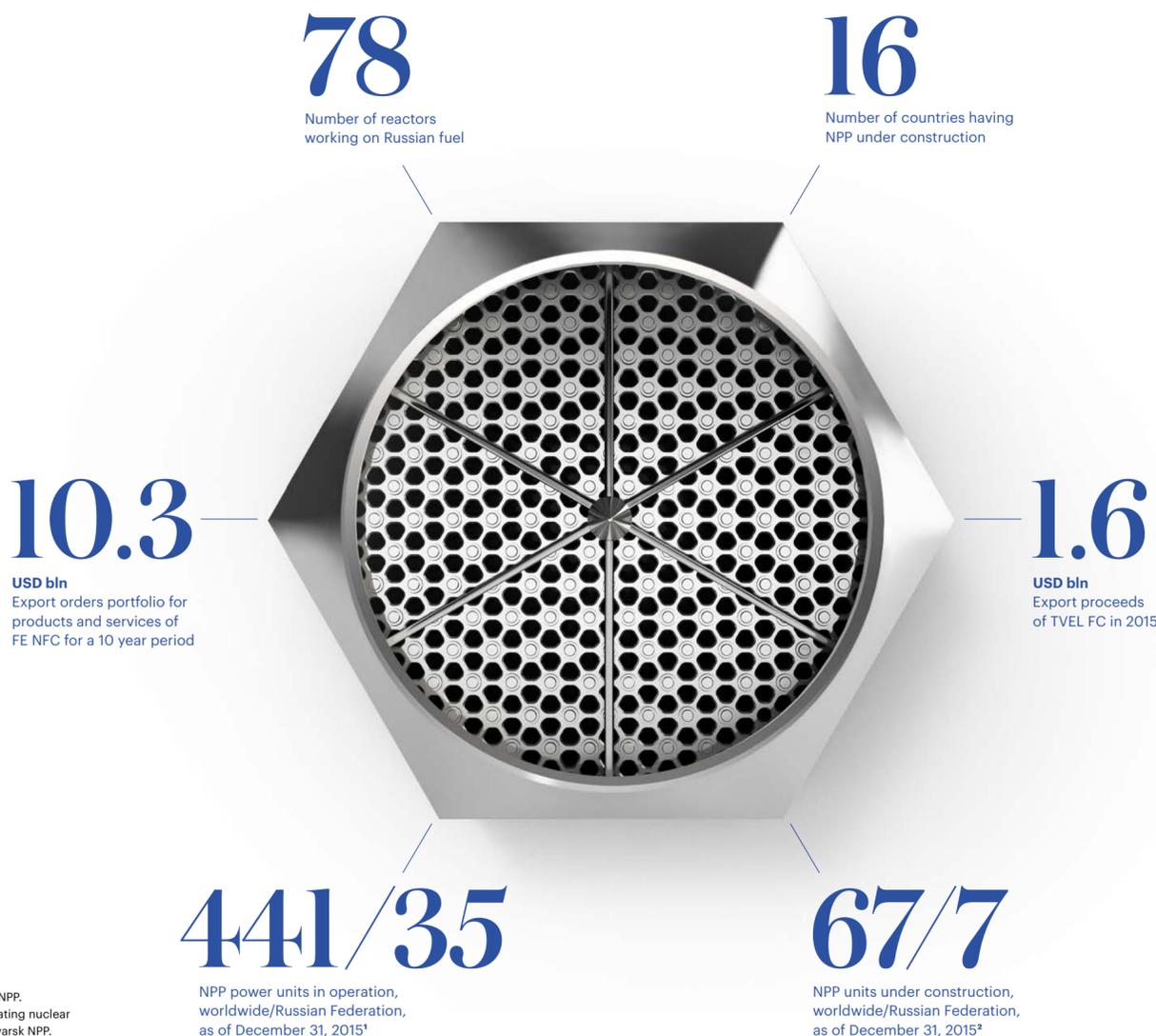
The international market of nuclear power generation is expected to grow primarily owing to China, India, South-East Asia (Vietnam), Middle East (Saudi Arabia, the United Arab Emirates) and Africa (the Republic of South Africa). The European market will remain stable mainly by replacing the outdated decommissioned facilities with the new ones. The U.S. market is now being flooded by affordable shale gas energy carriers, causing the active expansion of the share of gas-fired power plants. According to optimistic scenario, the U.S. nuclear power sector will retain its share, or will start shrinking under the opposite scenario.

According to the forecasts, the capacity of nuclear power market will approach 380 GW by 2017.

Uranium Conversion and Enrichment Markets

The price of SWU commenced its decline in 2011 and continued in 2015. By the end of the reporting period it dropped to USD 72 per SWU under the long-term contracts. The emerging market conditions and current geopolitical environment give rise to aggravation of competition on the global market of uranium enrichment. In this connection current and potential customers are offered additional attractive options which will help to both preserve the leading positions of ROSATOM on the global market of uranium enrichment and expand the market share.

Key performance indicators of the Global Nuclear Fuel Market (NF) in 2015



TVEL Fuel Company in the Global Market of Nuclear Fuel for Power Reactors



Major events on the market of uranium conversion and enrichment in 2015

By end of 2015 the Georges Besse II plant gained approximately 97% of the project capacity. Achievement of the target value 7.5 mln SWU/year at AREVA enterprise (France) is scheduled for 2016.

The plant URENCO in New Mexico, USA, reached the capacity of 4.7 mln SWU/year. Construction of the third stage will be carried out according to the schedule. Achievement of the target value 5.7 mln SWU/year is scheduled for the year 2022.

Aimed at self-sufficiency in products and services throughout the whole nuclear fuel cycle chain, China expands its conversion and enrichment capacities, focused on the development of domestic reactor park.

By the end of 2015, the main China's separation facilities were distributed at four sites (more than 4.5 mln SWU/year). According to estimates in 2020 they will exceed 9 mln SWU/year. Thereat China plans to expand capacities due to the use of centrifuges made in China.

In 2015 the operating Lanzhou conversion works continued expansion, as well construction of a new conversion works in Hengyang has started. Their aggregate capacity may reach in 2020 17 mln kgU/year as compared to 5 mln kgU/year in 2015.

Growth of AREVA and URENCO production capacities at enrichment plants will result in increased competition at the global enrichment market.

Nuclear Fuel Fabrication Market

Major events on the market of NF fabrication in 2015:
 • Increased competition in the market of nuclear fuel for PWR reactors of western design:

- the number of operators interested in qualification of Russian fuel TVS-KVADRAT for PWR reactors throughout the world;
- NAC "Kazatomprom" (Kazakhstan) and CGN (China) signed an agreement for commercial engineering and construction of TVC manufacturing plant up to 200 tons/year for Chinese NPP in Kazakhstan and on joint development of uranium deposits in Kazakhstan;
- The U.S. Nuclear Regulatory Commission (NRC) performed expert examination and admitted an application of the Korean Consortium headed by Korea Electric Power Co. for consideration and the design certification of the Korean reactor PWR APR-1400 and fuel PLUS7TM 16X16 in the USA.
- Increased competition in the market of nuclear fuel for reactors of Russian design:
 - The Ukraine loaded the first batch of modified fuel by Westinghouse in the Power Unit No.3 of the South-Ukrainian NPP.

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

This company from the USA also undertakes attempts of entering the VVER segment in EC countries, including through the grants system allocated by the European Commission. Alongside with the increasing political pressure, the necessity increases to reduce the power dependence on Russia, diversification of supply sources, which can be used as a means of competition restraint.



PETR I. LAVRENUK

Senior Vice-President for Scientific and Technological Activities, Technology and Quality

Today it is uncontroversial that the creation of TVEL JSC was the only right way forward. Since its first days, the Company has addressed such challenges as building an effective management system, increasing the robustness and improving the competition capacity of enterprises while giving the priority to the modernization of production, technical re-equipment and introduction of advanced technology.



The leadership position of the Fuel Company

OLEG A. GRIGORIEV

Vice-President for Commerce and International Cooperation



What countries are more attractive for TVEL Fuel Company from the perspective of long-term cooperation?

We believe these are China and India. China is the most dynamically growing economy; it has very ambitious plans to develop domestic nuclear power industry, and it is the largest market. At the moment, the Middle Kingdom operates a total of around 30 commercial reactors; this number is expected to increase to 50 by 2020, and by 2030 the country will have more than 100 power units. Notably, neither the Fukushima disaster, nor the global economic crisis could shake China's resolve, and the country managed to maintain the nuclear power industry growth rate.

Currently TVEL Fuel Company has contracts for the supply of nuclear fuel and zirconium-based components for units 1-4 of the Tianwan Nuclear Power Plant.

In addition, we have transferred to a Chinese company the technology of producing fuel for UTVS and TVS-2M VVER reactors, and have supplied China with fuel for its CEFR, China's Experimental Fast Reactor. We can see a colossal cooperation potential, a cooperation that may well reach beyond our internal markets and continue to the markets of third countries. The scope is vast, the two countries have enjoyed friendly relations, this is to say, the environment is quite favourable.

Most of the above equally applies to our potential cooperation with India. At the moment, TVEL Fuel Company supplies fuel for the Kudankulam Nuclear Power Plant, as well as enriched pellets and natural enriched pellets. The level of cooperation and trust between the two countries is so high that it is beyond any doubt that the cooperation will continue on a mutually beneficial basis.

Have the political sanctions affected the international cooperation of TVEL Fuel Company?

We should bear in mind that there have been no direct sanctions against the Russian nuclear power industry. On the one hand, it is a blessing. On the other hand, it is a curse. The positive aspect is that we do not have to act under any restrictions. Meanwhile, certain implicit restrictions may be applied to our products, and these are extremely hard to predict. This is to say, we do not always know the game that is played on the foreign markets.

It is especially true for Europe, with its different quantitative restrictions on Russian products and services.

In the recent two years, the European Union has introduced new requirements to the operators, demanding the diversification of the imported sources of nuclear fuel.

We have no fear of healthy competition in the global nuclear fuel market, and we have won many contracts in fair contest, solely due to our technological and commercial advantages.

We respect any decision of our partners, if such decisions are honest and transparent, and if they contribute to the development of global nuclear power industry. Nuclear power industry is a delicate matter, safety should be the priority, and this is clearly no place for politics.

We regard the current political situation in the world primarily as a window of opportunity. For a year now, to meet the new European requirements on diversification, we have actively cooperated with our partners in Europe on creating nuclear fuel reserves. We have already signed the first contracts, and we intend to continue our efforts.

We have no fear of healthy competition in the global nuclear fuel market, and we have won many contracts in fair contest, solely due to our technological and commercial advantages. We have worked hard

to create new modifications of nuclear fuel and have managed to preserve these advantages. Importantly, all the new nuclear fuel modifications must receive reference in Russia before they are supplied to our foreign partners.

We have most ambitious goals and objectives in terms of increasing our presence on foreign NFC markets in the mid-term. We realize that the VVER markets alone will not be enough for us to carry our plans to fulfillment. Therefore, our growth drivers will be the promotion and commercialization of our TVS-KVADRAT fuel and expanding our cooperation in Southeast Asia.

Last year we made great progress with our TVS-KVADRAT fuel for reactors of Western design that has already been used in real life. The new fuel uses all the best technology solutions that that we developed for our TVS VVER reactors. ♣

Agreements and contracts signed in 2015

1.

Increased number of nuclear power plant operators in different parts of the world that have expressed their interest in the qualification of the Russian-made TVS-KVADRAT fuel intended for use in PWRs of Western design

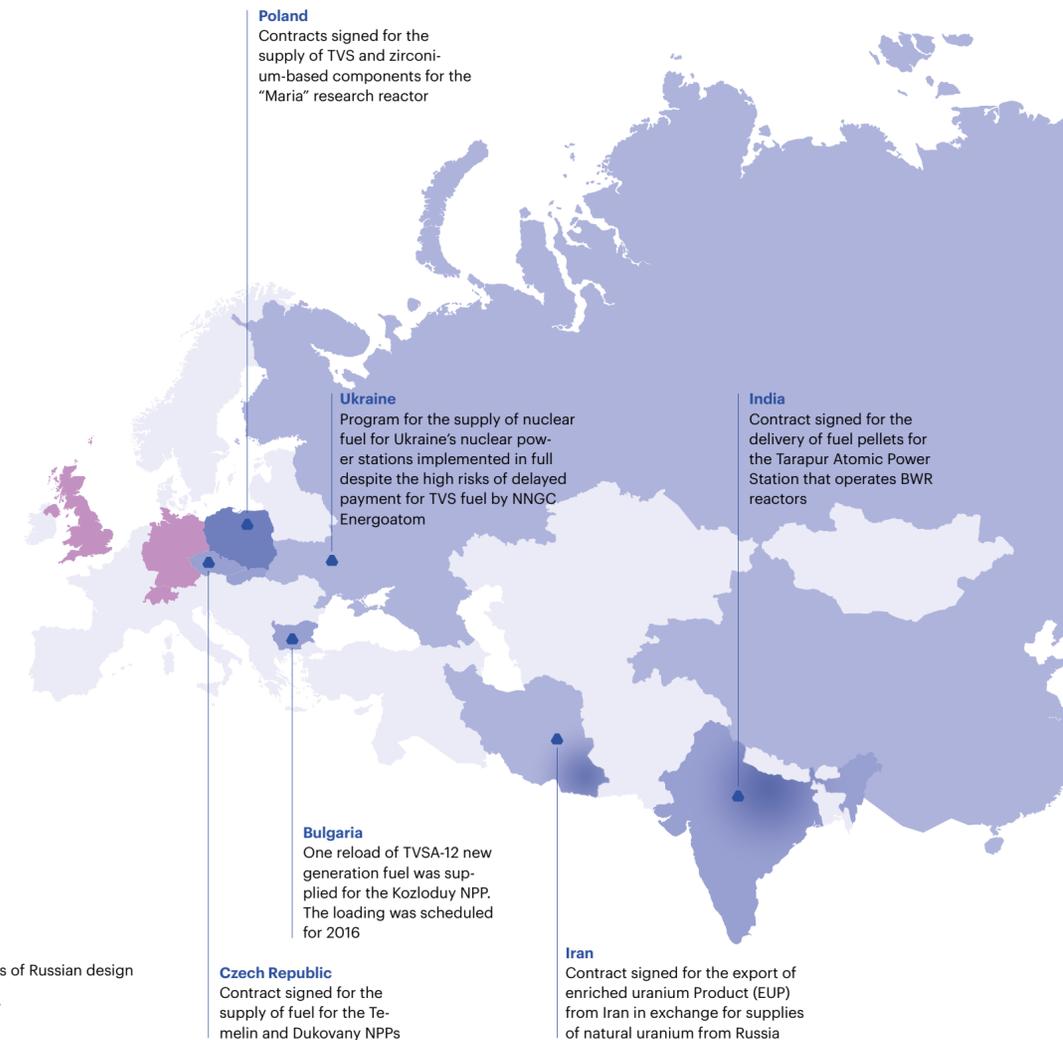
2.

Memoranda of understanding signed with nuclear agencies of Argentina and Indonesia providing for the development of cooperation with the two countries in the field of nuclear fuel cycle

3.

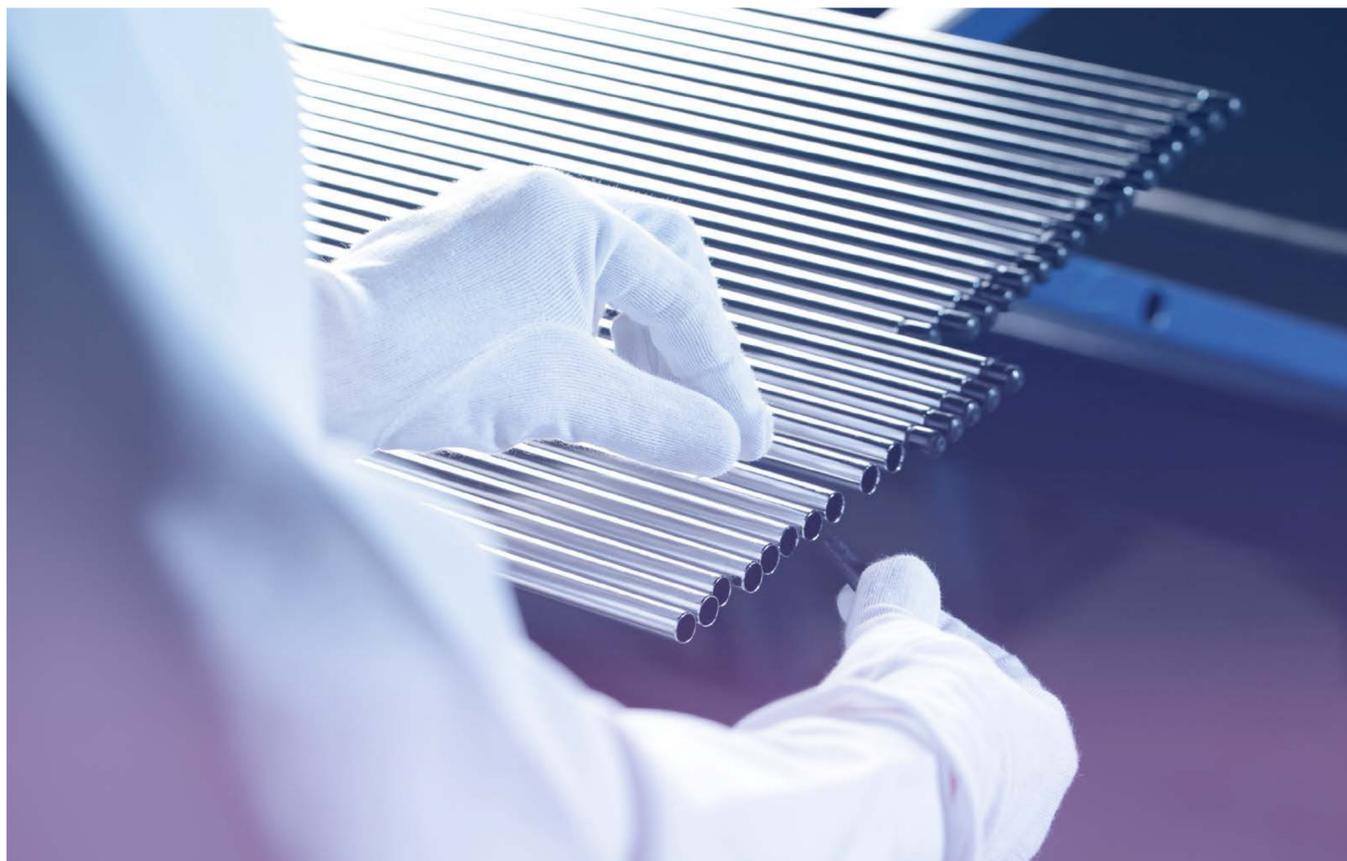
Increased cooperation with foreign partners on the promotion of fuel and its components in a number of countries that use research reactors of Western design

■ Ongoing nuclear fuel supplies for power units of Russian design
■ Ongoing supplies in cooperation with AREVA
■ Areas where the situation has changed



Customer satisfaction is of highest priority for TVEL Fuel Company. The assets of TVEL FC in all process cycles of nuclear fuel fabrication offer its customers package deals at NF market with flexible terms and conditions. Distribution of TVEL FC assets in different regions of Russia renders effective cooperation in a wide range of issues and aspects.

2. Strategy of TVEL Fuel Company



2.1. Mission and Values

Mission of TVEL Fuel Company: Meeting the requirements of the customers of TVEL Fuel Company both in the sphere of nuclear fuel cycle and in the related sectors, in strict compliance with requirements of safety, security, environmental and social awareness*.

Strategic Vision of TVEL Fuel Company: Fuel Division is the global leader in FE NFC and the related spheres.

Values that the employees of TVEL JSC are guided by are the ones that are shared by all the organisations and enterprises within ROSATOM. These core Values were formed throughout the history of development of the nuclear sector in Russia and conform with global approach to determination of the fundamental principles of the sector activity.

2.2. Strategy



In 2014 TVEL Fuel Company accomplished the pilot project of ROSATOM for translation and strengthening of ROSATOM's values in the corporate culture of TVEL Fuel Company (for details please refer to the Annual Report of TVEL JSC for 2014).

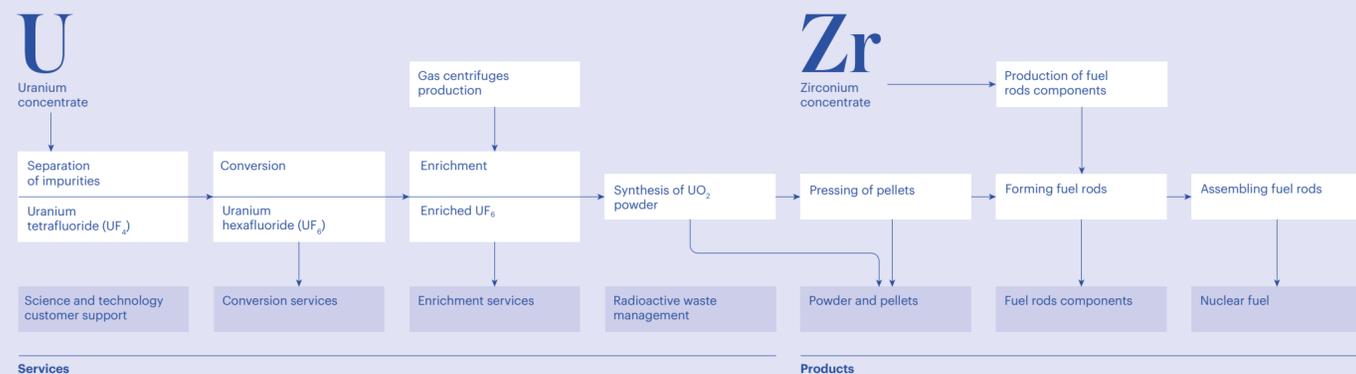
- The strategy of TVEL Fuel Company implies the achievement of the following indicators by the year 2030:
 - Enrichment market share gain to 42% (including 20% supply through JSC Tekhsnabexport), nuclear fuel fabrication — up to 22% owing to manufacture of traditional products having good consumer properties, and entry to new nuclear markets;
 - Twofold growth of the revenue in comparable terms of 2014;
 - Tenfold growth of revenue in non-nuclear directions (including established businesses) in comparable terms of 2014.
 - Threefold growth of labor efficiency in comparable terms of 2014.

2.3. Business Model and Value Creation

RESOURCES

Financial capital	Natural capital	Production capital	Intellectual capital	Human capital	Social capital
<ul style="list-style-type: none"> Proceeds, reserves Funds from the Federal Target Program Loans 	Raw materials, such as uranium, zirconium, etc.	<ul style="list-style-type: none"> High-technology production base Social infrastructure 	<ul style="list-style-type: none"> Patents, know-hows Domestic and industry-specific technologies 	<ul style="list-style-type: none"> Employees Potential employees, students 	<ul style="list-style-type: none"> Brand, reputation Corporate culture Relations with customers and suppliers

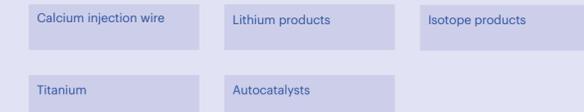
FRONT END NFC PRODUCTION CHAIN



SECOND CORE



MAIN PRODUCTS



2015 RESULTS

Financial capital	Natural capital	Production capital	Intellectual capital	Human capital	Social capital
55.7 RUB bln Net profit	2.3 RUB bln Environmental expenditure	7.4% Net asset growth	159 Newly registered intellectual property items	59 thousand RUB Social costs per employee	70% IFI (Information Favored Index) increase
15.3 RUB bln Dividend payments	0 New areas polluted with radionuclides	53.1% Increase in labor efficiency	0.14 LTIFR	31.3 RUB bln Gross tax payments	
43.5% EBITDA margin	0 INES accidents	0 Customer complaints	10.8% Average wage increase	139.3 RUB mln Charitable contributions	
		-31% Reduction of energy consumption by value			4.4% Increased positive vs negative perception of nuclear development programs by Russian citizens

3. Performance management

By the year 2015 there have evolved a number of new external and internal conditions governing the Company activities. In 2015 the Company has taken measures aimed at efficiency improvement.

ROSATOM raised the requirements to dynamics of the key performance indicators (KPI) — the objectives set for a 5-year period must be achieved within 2–3 years. ROSATOM sets a challenging task to TVEL Fuel Company to increase free cash flow and labor efficiency by 30% and to reduce production costs, semi-fixed costs and resources by 30%.



Reduction of production cost is the only way to preserve the Company profitability under the conditions of fall in the SWU global prices. At the moment there is a gap between target and estimated indices of production costs till 2018; this gap must be closed to achieve the set objectives.

- to search and elaborate decisions to close the “gaps” between the target and the estimated indices,
 - to ensure common vision of the situation, decisions and plans,
- the decision was made to conduct the workshops — the collaborative efforts of the key heads of the Company aimed at elaboration of important strategic decisions. The workshops have become basic tools in the search for measures to close the gaps between the target and estimated indices of the Company.

New approaches and tools were used to focus the efforts of the management in the search for the required solutions:

- “Objective Trees” — decomposition of strategic initiatives of the Company to the level of production manager of enterprise;
- “Hoshin Kanri Matrix” — maintenance of full accordance of targets, directions, tactical programs, monitoring indicators between different levels of management.

Results of the workshops 2015:

- development of the Objective Trees of TVEL Fuel Company and its enterprises;
- development of X-matrix (tactical plans) of the heads of TVEL Fuel Company and its enterprises;
- activities have been planned to compensate the gap between the target and estimated values of indicators;
- based on the X-matrix — development of KPI and monitoring indicators of Directors

Communication of management information and receiving feedback

250 meetings of the top management with 3 teams

3 days to communicate information



What are the medium- and long-term objectives of TVEL JSC?

NATALIA V. NIKIPELOVA

Senior Vice-President for Finance, Economy and Corporate Management



93% costs controlled through the system of KPIs in 2015

Given the global market challenges faced by ROSATOM, I would say TVEL JSC will have to work hard in the mid- and long-term perspective. In the two or three years to come TVEL will have to meet some extremely difficult targets in terms of increasing the labor efficiency, the portfolio of orders, proceeds, speed of production processes and free cash flow, as well as reducing the production costs and stocks. The increase of efficiency will be achieved both through short-term measures aimed at improving business processes and utilization, and with the help of investment programs. ●

General and Deputies Directors General for economics and finance, production, technology, commerce, personnel;

- adoption of the command KPI of the heads of TVEL Fuel Company — Adjusted Free Cash Flow indicator and command KPI of each enterprise.

Thus, by the beginning of 2016 the targets and directions for efficiency increase have been specified, responsibility for targets achievement has been allocated. The decision has been taken to form within the Objective Tree a single branch for efficiency increase, and to avoid separation on current activities and future periods activities, long-term horizon period has been defined for 10 years. By now the activities for efficiency increase represent both short-term steps, for instance, activities that do not require any investments (reduction of stock, semi-fixed costs, optimization of process time) and ambitious reforms both in terms of time and volume, that require attraction of investments (production modernization, establishment and development of new productions, R&D establishment, etc.).

- The most significant directions of efficiency increase in 2016:
- cost saving (cost of production, nuclear products cost price, semi-fixed costs);
 - reduction of stock;
 - asset management (development of industrial sites, non-core assets management, service asset management);
 - increase of operating performance (profitability for groups of products);
 - concentration and modernization in production;
 - establishment of R&D at the premises of three design engineering departments and the enterprise of gas centrifuge production;
 - process improvement (suggestions for improvement realization, implementation of RPS-projects).

ALEKSEY A. GRIGORIEV

Senior Vice-President for Strategy and Marketing



In the recent decade, despite the intense open competition, TVEL has won every contract for supplying fuel to the nuclear power plants in Eastern Europe. The most illustrative and high-profile case was when TVEL JSC won the contract for the supply of nuclear fuel to the Temelin nuclear power plant, and the Czech operator replaced all the Westinghouse fuel rods with the Russian nuclear fuel ahead of schedule.

The mid-term objectives of TVEL JSC are defined by the strategic goals of the Company and the current situation that is characterized by market threats and intensified competition. The priorities will be maintaining the markets in Eastern Europe, further expansion to the Chinese market and Second Business Core development. One of the key objectives for the entire industry is closing the nuclear fuel cycle under the “Proryv” (“Breakthrough”) project.

In the longer term, we aim not only to maintain the market presence but also to acquire a significant market share for reactors of Western design. We are planning to achieve this aim by actively promoting our next generation TVS-KVADRAT fuel relying upon the standard requirements of the majority of energy companies that there must be alternative suppliers. Achieving these objectives will enable us to fulfill the strategic goals on maintaining our position as a global supplier in the fuel fabrication market. ●

The priority will be maintaining the markets in Eastern Europe, further expansion to the Chinese market and Second Business Core development.

3.1. Corporate Governance System

In corporate governance TVEL JSC adheres to the policy of compliance with Russian and international standards, as well as with ROSATOM corporate governance practice. Improvement of the corporate governance system is aimed at increase of efficiency, reliability, transparency of the Company activities and management.

BOARD OF DIRECTORS

By the decision of the Sole Shareholder of TVEL JSC No. 25 dated June 30, 2015 the following six members were elected to the Board of Directors:

- Zalimskaya Lyudmila Mikhaylovna, Director General of TENEX;
- Komarov Kirill Borisovich, Deputy Director General for Development and International Business of ROSATOM;
- Korogodin Vladislav Igorevich, Director for NFC and NPP Lifecycle Management of ROSATOM;
- Lokshin Aleksandr Markovich, First Deputy Director General for Operational Management of ROSATOM, Chairman of the Board of Directors of TVEL JSC;

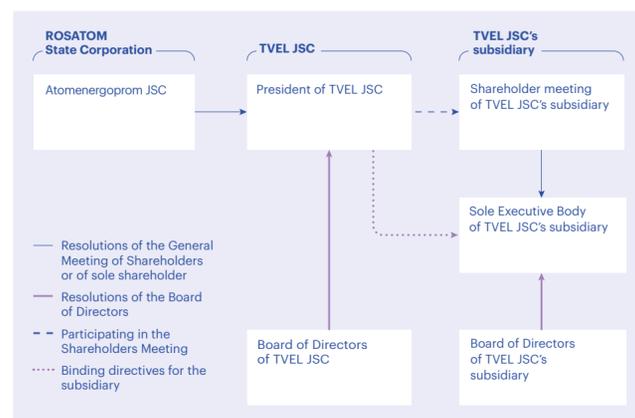
- Solomon Nikolay Iosifovich, First Deputy Director General for Corporate Affairs — Senior Finance Director of ROSATOM;
- Olenin Yuri Alexandrovich, President of TVEL JSC.

SOLE EXECUTIVE BODY

In accordance with the decision of the Sole Shareholder the functions of the Sole Executive Body are imposed on the President of TVEL JSC — Olenin Yuri Alexandrovich.

Key Performance Indicator (KPI) Card of the President of TVEL JSC includes 12 indicators. For information concerning achievement of indicators please refer to the Section "Financial Capital".

Structure of TVEL JSC Corporate Governance Bodies



3.2. Procurement Efficiency Management

Dynamics in the above figures shows the enhanced efficiency of procurement management and transparency of the procedures. Efficient interaction with suppliers reduces the risk of corruption, fraud and purchase of substandard quality products.

More than 90% of competitive procurement procedures are carried out through on-line sales platforms. This promotes openness and transparency of the Com-

pany and saves labor and financial resources. Procurement procedures are implemented using the following electronic platforms: United Electronic Market Place JSC, Fabrikant LLC and Economics Development Center JSC.

Total amount saved by the subsidiaries of the Company in 2015 through the procurement procedures made RUB 2,852 mln.

Structure of TVEL FC Procurement

Indicator	2013	2014	2015	2016 (plan)
Share of procurement through public competitive procedures under the UIPS, %	95	95	97	94
Total amount of procurement of TVEL FC	161,200	168,962	130,632	123,060
Total amount saved by subsidiaries of TVEL FC from procurement through public competitive procedures, RUB mln	2,534	2,601	2,852	minimum 2,000

4. Efficiency in results 2015



4.1. Financial Capital

In 2015 all KPI¹ and target production indicators applied to evaluate performance of TVEL Fuel Company were achieved.

FINANCIAL RESULTS

In 2015 the export products were sold to the total amount of USD 1,532 mln.

Sales of nuclear fuel and its components amounts to 94.4% — the largest share in the export revenue.

Revenue of TVEL Fuel Company increased by RUB 51 bln in the reporting year. The revenue increase was influenced by both macroeconomic factors (increase in rates of major currencies) and increase in sales of production.

INVESTMENT ACTIVITIES

Investments management system of TVEL Fuel Company is based on the principle of efficiency.

The investment projects financing volume made RUB 29,125 mln. Since TVEL Fuel Company implements over 250 investment projects simultaneously, the amount of funding tends to vary year to year, depending on combination of various stages of projects life cycles.

Funding of industrial and technological base of primary production accounts for the biggest share in overall investment outlay.

Achievement of Major KPI and Production Indicators of TVEL FC in 2015²

Indicator	Target	Actual value	Deviation, %
Investment activity integrating efficiency indicator*, %	100	105	4.5
AFCF of TVEL FC, RUB bln**	78.6	86.6	10.2
Labor efficiency (TVEL Fuel Company + TECHSNABEX-PORT JSC), RUB mln /person	13	14.2	9.3
Semi-fixed costs, RUB bln	38.9	35.9	-7.7
Foreign orders portfolio for 10 years, USD bln	10,300	10,305	0.0
Foreign proceeds, USD mln	1,572.0	1,608.9	2.4
IRR for portfolio of new business projects, %	12	70.1	> 100
Integral indicator for new products***, %	100	91	-9.0
Proceeds on new products beyond and within the profile on a competitive basis, RUB mln	4,151	4,230.6	1.9
New products order portfolio of FC for 10 years, RUB mln	16,325.4	13,078.4	-19.9
LTIFR****	0.34	0.14	-58.8
No INES incidents at level 2 with personnel radiation exposure exceeding 50 mSv annually	No incidents	No incidents	No incidents
No industry-based INES incidents of above level 2	No incidents	No incidents	No incidents
Completion of state orders, %	100	100	0.0

* To be determined on the basis of such indicators of investment projects implemented by the Company as net present value, internal rate of return, adjusted in accordance with their volume and other calculation factors.

** Adjusted free cash flow — free cash flow with specific adjustments.

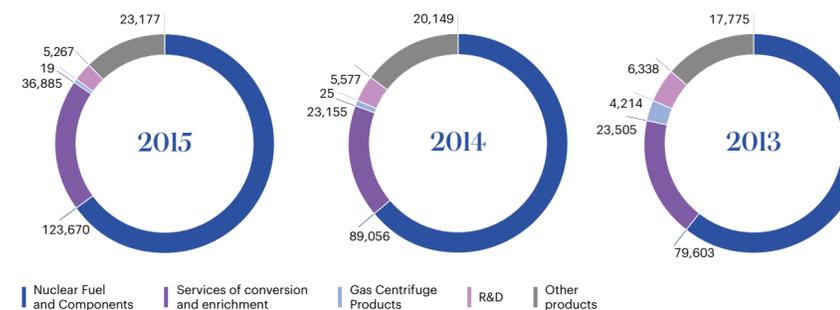
*** The indicator includes income and new products order portfolio for 10 years List of goods and services classified as new products shall be annually agreed with ROSATOM. 100% target value is determined in planning; this means complete performance of the target values subject to both components of the indicator.

**** Lost time injury frequency rate — number of lost time incidents divided by total hours worked for the reporting year and rated as 1 mln man hours.

1. KPI "New products order portfolio of FC for 10 years" was accomplished at a lower level.

2. Financial and economic indicators are given in accordance with consolidated management statements of TVEL Fuel Company.

Distribution of Consolidated Revenue by Types of Products, RUB mln



Amount of Financing for TVEL FC Investment Projects by Directions, RUB mln

Direction	2013	2014	2015	Share in amount of investments for 2015, %	2016 (plan)
Nuclear industry	17,582	17,295	18,553	63.7	21,818
Development of general industrial activities	931	536	1,070	3.7	1,434
Development of infrastructure	3,585	1,245	1,212	4.2	3,554
Safety and encumbrances	4,128	2,645	7,982	27.4	14,462
Other	10,694	7,745	309	1.1	1,114
Total for TVEL FC	36,920	29,466	29,125	100.0	42,383

Production and Economic Results

Name of parameter	2013	2014	2015	Δ 2015/2014, %
Average headcount, persons	29,238	25,171	22,527	-10.5
Labor efficiency, RUB mln / person	4.51	5.49	8.40	53.1
Revenue + Recognition of costs undertaken by external financing*, RUB mln	131,820	138,281	189,284	36.9

* Except for costs undertaken by the special reserve fund of ROSATOM State Corporation.

4.2. Manufactured Capital



BUSINESS PERFORMANCE ASSURANCE

The need to expand an order portfolio to achieve strategic objectives, as well as severe and ever-growing competition in global markets always required from TVEL Fuel Company special approaches to production and management processes and development of performance efficiency management system.

ROSATOM Production System

ROSATOM Production System (RPS) means culture of lean manufacturing and continuous improvement of processes to ensure a competitive advantage on a global scale. RPS is aimed at strategic targets of ROSATOM, while the industry-based RPS projects are focused on productivity growth, cost reduction and increased quality of production. Knowledge of RPS tools and ability to apply such tools are obligatory for professional growth of employees engaged in nuclear industry.

In the beginning of 2015 ROSATOM decided to apply a systematic approach in RPS deployment. There were selected 10 pilot enterprises of the industry (within TVEL Fuel Company — MSZ PJSC, KMP PJSC, UEIP JSC) to implement currently the single package of RPS measures.

In systematic deploying of the production system, the company, included into ROSATOM profile, receives the status of a RPS enterprise. According to RPS development concept all RPS enterprises are divided into three levels:

- RPS Leaders
- RPS Candidates;
- RPS Reserve

Enterprises that are RPS Leaders receive the package of privileges including the following: visits of a business

"Process Factory"

"Process Factory" represents Lean Laboratory simulating the production chain of company. This is a modern classroom divided into several zones: warehouse, industrial, instrumental and advisory. The main objective of the project is to give participants an opportunity to practice ROSATOM Production System in a form of business game simulating the industrial chain.

Participants of the one-day training must simulate the full cycle of production assembly using the RPS tools and, to the extent possible, reduce production losses: reduce the area, minimize costs, gain profit, etc. Participants simulate several conventional shifts during which they need to release the planned number of products. The goal for participants is to conduct analysis of production, giving suggestions for improvement to optimize the work flow and eliminate losses, and eventually do the work as efficiently as possible. Tasks in "Process Factory" are deliberately drafted taking into account the stress situations and errors that are inevitable in the course of works.

The uniqueness of "Process Factory" lies in the fact that it is a learning platform in which the most part of RPS tools can be applied in practice and evaluated in terms of their efficiency in actual production conditions. Trainings organized in "Process Factory" enable the employees to change their thinking and attitude towards lean manufacturing.

"Process Factory" proved its success in ChMP JSC, UEIP JSC, MSZ PJSC and KMP JSC. About 2,000 employees of TVEL Fuel Company passed such trainings.

On February 19, 2016 participants of the dialogue with stakeholders, held in preparation of the annual report of the Company for 2015, had the opportunity to personally take part in "Process Factory" business game.

coach to the enterprise, possibility of employees travelling to share experience in Russian and foreign advanced enterprises, family tickets, certificates for training in ROSATOM Corporate Academy, participation in Workspace Design project, etc.

In the reporting year TVEL Fuel Company opened and accomplished 1,497 RPS projects aimed at process efficiency improvement. This is 6.4 times more than in 2014. About 96% of managers of 1 to 3 level were covered by the project activities. Projects impact on business goals of the enterprise was assessed on the basis of top managers' projects.

Suggestions for Improvement

In 2015 there were filed more than 108 thousand SFIs, out of which 91.9% — accepted for realization and 81.7% — implemented. One of SFIs process efficiency indicators is the indicator SFIs' quality to be calculated as the ratio of the adopted SFIs to the submitted ones. SFIs' quality is improved from year to year.

PRODUCTION AND ECONOMIC RESULTS

In 2015 all plans on products and services realization were fulfilled to the full extent, which ensured compliance with all contractual commitments of the Company to Russian and foreign customers.

Considerable increase of labor efficiency in TVEL Fuel Company over the period from 2013 to 2015 proves the growth of production efficiency. Increase in production efficiency was achieved primarily through the introduction of ROSATOM Production System and increase in revenues of the Company, as well as owing to headcount optimization during the Fuel Company restructuring.

>9,000

employees trained in efficiency management

45

RUB mln individual bonuses paid for the effect from innovation proposals and SFI

5.02

average SFI filed by 1 employee (+39%)

89%

SFI was implemented (of the total SFI filed)

227

RUB mln operating bonuses paid to small groups for the effect from the innovation proposals and SFI

108.3

thousand SFI filed by employees

80%

of the employees file SFI

379.2

RUB mln economic effect from innovation proposals and SFI

A team that stands strong and united



VLADIMIR V.
ROZDESTVENSKY

Senior Vice-President
for Production

Today we develop and introduce new technology, modernize the companies to retain the leadership positions on the global market. I strongly believe that the young people who will join the Fuel Company in the coming decades will have just as many reasons to be proud of the gains achieved by the previous generations of nuclear experts.

Do you think ROSATOM Production System has played an important role in increasing the competitiveness of the Fuel Company?

The effect from the implementation of RPS at the plants has been quite significant. During my latest visit to the Novosibirsk Chemical Concentrates Plant (NCCP), they showed me around the plant that had been newly modernized in line with the requirements of RPS, and I must say, the positive difference was immediately noticeable.

The main thing is, we managed to engage the employees in the process. At the initial stage of the RPS implementation, the perception of it by workers varied from hostility and skepticism to enthusiasm. However, being able to test the RPS tools 'on the job', as well as being part of the process, has clearly made a difference. Statistics shows that there has been a dramatic increase in the number of suggestions for improvement filed, which means that the majority of the plants' workers have actively contributed to the development of RPS. As the result, the process time has been significantly reduced for most of the products, and so were the production areas and the warehousing stocks. In contrast, the labor efficiency has increased... This is an ongoing process — new ideas appear, they are implemented, give the expected result. And then there are new ideas, and in fact they often arise in areas where you would think there is no room left for improvement.

Mr. Rozhdestvensky, as you may know, General Director of ROSATOM State Corporation Sergey Kiriyenko has been heard say that the industry's true wealth are its people. What do you think are the main qualities an employee must have to work at the main plants of the enterprises?

Being responsible, disciplined and well-qualified would be the best assets. I would like to use the opportunity and extend my sincerest thanks to the pioneers who were there when the first nuclear companies were created, the veterans who laid the foundation of the entire industry and the companies that are now part of the Fuel Company, and who managed to preserve the finest traditions of nuclear experts and hand them down to the current generation. For the Fuel Company as ROSATOM's Fuel Division that is a single, globally recognizable brand, the main wealth is its employees. Our employees have always been noted for their sense of responsibility and mission, the passion they have for their job and their commitment, they were the ones who have preserved the legacy of the industry veterans and increased the potential that they had created. Today we develop and introduce new technology, modernize the companies to retain the leadership positions on the global market. I strongly believe that the young people who will join the Fuel Company in the coming decades will have just as many reasons to be proud of the gains achieved by the previous generations of nuclear experts. ♣

Production Results of FE NFC

Stable long-term relations with the end-product consumers allow development of long-term production and scientific plans, ensuring orders for subsidiaries and research establishments of TVEL Fuel Company. Portfolio of foreign orders is formed in the amount of USD 10,304 mln up to the year 2025 and comprises commitments on nuclear fuel and its components supplies for foreign reactors of Russian design, as well as commitments on supplies for European reactors BWR, PWR in production cooperation with AREVA NP, for reactors PHWR and BWR in the context of cooperation with Nuclear Power Department of the Government of India.

For the period from 2013 till 2015 the revenue from FA sales increased by 1.5 times (including all categories of consumers) and made RUB 109,299 mln.

Second Business Core Production Results

TVEL Fuel Company develops production of competitive, high-tech products for nuclear and other industries. Development of general industrial activities (production of non-nuclear products and services for non-nuclear subjects) is based not only on the need to develop new markets outside NFC, but also the need to create substituting high-tech production for the released in the process of restructuring qualified personnel. Detailed information about innovations in the field of general industrial activity see Sect. "Second Business Core Development".

Following the results of the year 2015 volume of sales from general industrial activities achieved RUB 12,628 mln, which is equal to 12.3% of the consolidated revenue of TVEL Fuel Company.

QUALITY MANAGEMENT

There were no claims or complaints filed by the customers in 2015.

The Company's Quality Management is based on the principles specified in international standards ISO 9000. TVEL Fuel

Company uses the Integrated Quality Management System (QMS), certified in accordance with the requirements of international standard ISO 9001:2008, ISO 14001:2004, ISO 50001:2011 and BS OHSAS 18001:2007 in TUV International Certification. The system includes complete cycle of design, development, production, storage, delivery and scientific and technical assistance in work with FA and components of nuclear reactor cores, as well as with materials and accessories thereto.

In 2015 compliance of the integrated management system of TVEL JSC and subsidiary companies with the international standards was confirmed by TÜV International Certification company. Witness audits are planned in 2016 and 2017.

TVEL JSC performed management system audits at all companies of the Fuel Company's management profile in the reporting period. The companies obtained Good marks as a result of the auditing.

Number of revealed non-conformities of NF and GC products by QC departments and Customer's representatives at manufacturing plants decreased by 8%.

ENERGY EFFICIENCY

Energy Saving and Efficiency Improvement Program

TVEL Fuel Company is one of the leaders in introduction of automated systems for accounting of energy resources and methods to improve energy efficiency in the nuclear industry, including processes of energy inspections, formation of long-term investment, organizational and technical programs and specific activities for energy efficiency. The Company's organizations have been involved in Energy Saving and Efficiency Improvement Program (further "the Program") as pilot participants since 2011. The Program was approved subject to the results of energy and thermovision inspections held at the Company's organizations.

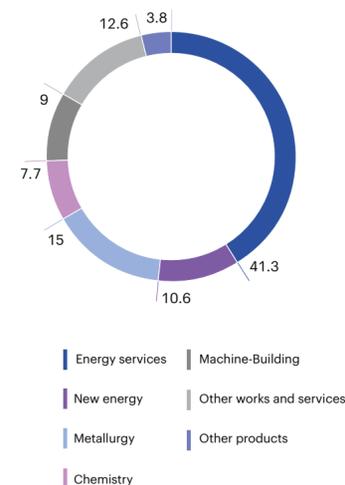
The first five-year period of realizing the Program events terminated in the reporting year. The total volume of the Program financing in 2011–2015 made RUB 9,364 mln.

In 2015 the enterprises of TVEL Fuel Company performed the repeated energy inspections through a designated company, Center of Energy Efficiency INTER RAO UES LLC. Within the context of energy audit there were developed new events and activities for 2016–2020.

Major projects of the Program that were accomplished in 2011–2015:

- creation of automated energy accounting systems (Automated Measuring and Information System for Electric Power Fiscal Accounting, Automated Measuring and Information System for Electric Power Technical Accounting, Automated Measuring and Information System for Electric Power Accounting, Type Test Certificate, Data Acquisition and Processing Center);

Structure of Revenue from General Industrial Activities in 2015, %



Distribution of revenue from nuclear fuel sales by consumers' geography, %



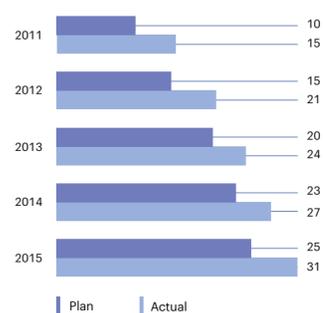
Revenue from FA sales, RUB mln

109,299 ^{+34.8%} 2015

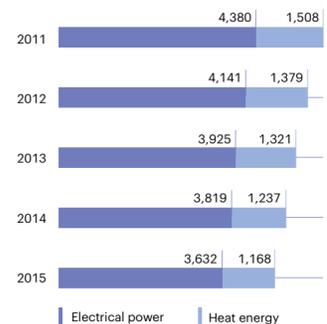
81,055 2014

73,595 2013

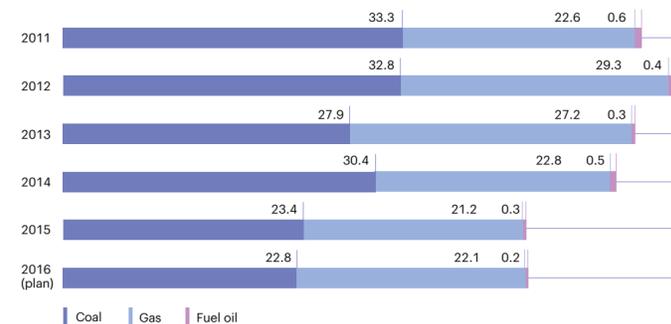
Reduction of energy consumption at TVEL FC (as compared to 2009 under comparable conditions) in monetary terms, %



Electric power and heat energy consumption by TVEL FC enterprises in money terms under comparable conditions, RUB mln



Primary energy sources consumption, mln GJ



program volumes of TVEL Fuel Company; it was achieved through implementation of the activities under the Program.

Energy Consumption

Realization of Energy Saving Program ensured annual decrease in energy consumption. The enterprises of TVEL Fuel Company used 44,873 thous. GJ of primary energy sources, which is 16.4% less as compared to 2014. Indirect energy consumption at the Company's enterprises made 16,294 thous. GJ. Amount of consumption of electric power and heat energy in monetary terms made RUB 3,632 mln and RUB 1,168 mln respectively.

Plans for 2016

- reduction of energy consumption by the Company's enterprises (under comparable conditions versus 2015) by 3%;
- continuation of implementation of the Energy Saving and Efficiency Improvement Program at the Company's enterprises;
- integrated management system audits for compliance with the international standard ISO 50001:2011 in TVEL JSC subsidiaries and structural units.

1. Hereinafter calculation of saving is carried out in accordance with the approved by the order of ROSATOM State Corporation Methods for calculation of cost saving gained from reducing the energy consumption, as well as the own methods for TVEL FC companies to be approved by TVEL JSC and coordinated with ROSATOM State Corporation.

4.3. Intellectual Capital

The main goal of the scientific and technical work is to ensure competitiveness of the products and safety of production and operation.

Number of registered inventions, utility models, industrial designs and production secrets (know-how)

Items of intellectual property	2013	2014	2015
Russian Inventions	65	52	53
Foreign Inventions	7	4	3
Russian Utility Models	12	9	6
Foreign Utility Models	0	0	1
Russian Industrial Designs	0	0	0
Foreign Industrial Designs	0	0	0
Production Secrets (Know-How)	97	83	96

1,812

intellectual property items owned by TVEL Fuel Company, as of end-2015.

INNOVATIVE ACTIVITIES IN THE NUCLEAR INDUSTRY

Services and products of FE NFC form the basis of subsidiaries' activities of TVEL Fuel Company (more than 80% of revenue following the results 2015), and that is why innovative activities in nuclear industry are essential to ensure long-term competitiveness and sustainability of the Company.

Main R&D projects are as follows:

- design and improvement of nuclear fuel and reactor cores of the Russian design (primarily VVER-1000/1200/1300);
- design of nuclear fuel for Western reactors (PWR);
- design of nuclear fuel for low-capacity nuclear power stations, research reactors and nuclear-powered icebreaker (NPIB).

"Proryv" Project

The Strategic Investment Project "Proryv" of ROSATOM is carried out within the framework of the Federal Target Program "New Age Nuclear Energy Technologies for the Period 2010–2015 and up to 2020" and aimed at creation of the closed nuclear fuel cycle that allows generating energy without irradiated fuel disposal problems. The project includes the construction of an Experimental Demonstration Energy Complex (EDEC) on the basis of SGChE JSC.

EDEC includes Fabrication / Refabrication Module (FRM), power unit with reactor BREST-OD-300 and module of spent nuclear fuel (SNF) processing BREST-OD-300.

Results 2015:

- SGChE JSC obtained the status of an operating organization for EDEC facilities setting;
- the license for FRM construction was granted and construction works started;

- completion of elaboration of the design documentation for non-standard equipment of Fabrication/Refabrication Module (FRM);
- within the frameworks of NF substantiation there were produced and placed for testing in FN-600 reactor the eleven experimental fuel assemblies with the mixed nitride uranium plutonium fuel (6 full-scale experimental FA with nitride fuel and 5 composite fuels (oxide and nitride fuel));
- full-scale FA models stand tests for BREST-OD-300 reactor were developed, produced and carried out;
- SGChE JSC completed the construction of experimental facilities complex for testing of FRM prototype equipment;
- SGChE JSC completed the construction of affination stand to test SNF hydrometallurgical processing technologies BREST.

SECOND BUSINESS CORE DEVELOPMENT

In order to create new and innovative industries aimed at development of the second core business of TVEL Fuel Company, the projects are implemented on four programs of innovative development: New Energy, Machine Building, Metallurgy, Chemistry.

The Company's enterprises are the basis for construction of the industrial centers (clusters) as growth points for innovative non-nuclear production. Creation of the new knowledge-based innovative industries will create more jobs, give employment to highly qualified staff released due to restructurization, as well as attract young professionals, form the business environment in the cities of presence of TVEL Fuel Company, improve living standards and attractiveness of the territories.

Total revenue from the sale of innovative projects in non-nuclear sphere in 2015 reached RUB 7,334 mln, which is 21% higher than in 2014.

INTELLECTUAL PROPERTY

TVEL Fuel Company owns 1,812 items of intellectual property as of the end of 2015. About 20 applications for protected intellectual activity are filed annually (for 100 researchers and developers).

159 items of intellectual property were registered in 2015, out of which the major part is registered for VNIINM JSC (81 items).

As of the end of 2015 the number of publications in peer-reviewed publications worldwide in the field of nuclear energy amounted to 39 pc. (100 researchers and developers per year).

Investments into R&D by TVEL JSC, RUB mln

3,476 2013

1,514 2014

1,494 2015

Current Products by New Businesses of TVEL FC

New businesses	Current products		
	Products	Basic enterprises	Scope
New Energy	Lithium and Lithium-Based Materials	Lithium Hydroxide-7, Lithium Metal, Lithium Chloride	NCCP JSC Transportation, Electric Power, Industries, Telecommunications Systems
	Materials for Li-Ion cells	• Lithium Ferrophosphate • Lithium Cobaltate	NCCP JSC / Cathode Materials LLC (Subsidiary of NCCP JSC)
	Accumulators and generators, fuel elements	• Special purpose (military and space machinery) electrochemical power sources (alkaline fuel cells) • Electrochemical power sources for solid oxide fuel cells	ZEP (Electrochemical Converter Plant) LLC (Subsidiary of NCCP JSC)
Metallurgy	Special metallurgy	• Zirconium alloys • Titanium alloys • Hafnium • Calcium metal and Calcium injection wire	ChMP JSC Electric Power, Engineering, Medicine, Metallurgy
	Special tube rolling	Titanium alloys rolling (tubes, rods)	ChMP JSC Engineering, Medicine
	Nanometallurgy	Superwires and DMA-based wires	ChMP JSC Electric Power, Industries, Medicine, Transportation, Telecommunications Systems
		Nickel filtering elements, powders	UEIP JSC Industries
Chemistry	Production of stable isotopes	Production of 95 isotopes of 19 chemical elements: Ar, W, Ge, Fe, Ir, Cd, Si, Kr, Xe, Mo, Ni, Sn, Os, Pb, Se, S, Te, C, Zn	• PA ECP JSC • SGChE JSC Industries, Medicine, Research in the sphere of new generation elementary particles characteristics, Agriculture, Metrology, Research in the sphere of Geology, Biology, Oceanology
	Catalysts	Autocatalysts	Ecoalliance LLC (Subsidiary of UEIP JSC) Industries, Transportation
		Zeolite catalysts for petroleum chemistry	NCCP JSC Industries
	Fluorine compounds	Extra Pure Fluorine Hydrogen	• ECP JSC • SGChE JSC Nuclear, Oil extraction, Chemicals, Transportation
Machine Building	Instrument making	• Car electrical equipment	VPA Tochmash JSC Electric Power, Industries, Transportation
		• Static frequency converters • Dosimeters, radiation meters • Controllers • Printing plates • Junction boxes	Uralpribor LLC Electric Power, Industries
Nuclear fuel cycle equipment	• Ball- and screw-type plugs • Stop valves • Units and components for gas centrifuges	VPA Tochmash JSC Electric Power, Industries	
Mining industry equipment	Oil-fields equipment	UGCMP LLC Geological exploration, mining and processing of minerals	

Innovation clusters of the second core business



YURY A. KUDRYAVTSEV

Senior Vice-President for Development of New Businesses

Setting up new high-tech production units at the enterprises of the Fuel Company will help not only create new jobs, but also form a positive business environment in our cities of presence, increase overall living standards and the social appeal of the territories.

Mr. Kudryavtsev, what do you think are the main achievements and successes, as far as the development of general industrial activities is concerned?

The development of general industrial activities is driven not only by the necessity to enter new markets outside the nuclear fuels cycle, but also by the appearance of substitution high-technology production units and new jobs. This strategy enabled us to achieve serious progress in the development of non-nuclear activities. For instance, the proceeds from our key non-nuclear products increased 2.4-fold between 2012 and 2015. The main growth drivers are lithium and lithium products, calcium and calcium wire, titanium products, isotope products and autocatalysts.

How are the general industrial activities structured within the Fuel Company? How are they developed?

To create new innovational production units and develop second core business of the Fuel Company, we have implemented projects in four key areas: New Energy, Machine-Building, Metallurgy and Chemistry. As I've already said, setting up new high-tech production units at the enterprises of

the Fuel Company will help not only create new jobs, but also form a positive business environment in our cities of presence, increase overall living standards and the social appeal of the territories.

Which enterprises of TVEL JSC would you name as the most successful in terms of developing general industrial activities?

We focus on developing general industrial activities at all of our enterprises. However, the enterprises have different potentials for growth. Naturally, several enterprises can be singled out as leaders in this field, in particular the Novosibirsk Chemical Concentrates Plant PAO and Chepetsky Mechanical Plant JSC. By the way, in the recent years the Novosibirsk Plant has significantly increased the range of lithium products, and in 2015 it started to master the production of a new promising product, metallic lithium highly enriched in the stable ⁷Li isotope, that is used in nuclear medicine to treat cancer.

Our strategic goal in terms general industrial activities, as set by ROSATOM State Corporation, is exponential growth of proceeds and achieving a share of no less than 15% of the total proceeds of the Fuel Company. Meanwhile, we should not overlook the social aspects that are associated with rapid growth and ensure a decent life for every employee who contributes to the achievement of the said goal. ●

4.4. Social Capital



Publicity Capital (public image property, reputation capital) is qualitative and quantitative totality of all information related to TVEL JSC and known within public communications space. Growth of the publicity capital volume means increase public confidence, strengthening of a positive image, formation of increasingly favorable public opinion, escalation of political weight, etc.

INCREASE OF PUBLICITY CAPITAL

Publicity capital provides a means for TVEL Fuel Company to position itself as a global technology leader, as a global player in the front-end part of the nuclear fuel cycle, as a strong, competitive and diversified company in mechanical engineering and nuclear industries.

Publicity capital growth was encouraged in 2015 by the integrated communications model implemented by the company, the adopted Uniform Information Policy, the target communications support of advancement on the world market of a wide range of non-nuclear products, the new PR strategy "TVEL-Progress".

In 2015 the organizations of TVEL Fuel Company applied a systematic approach to enhance the communicative function (public relations) with the view of improving the efficiency of its impact on business results and ensuring the publicity capital growth.

The growth of public (information) popularity of the Company in 2015 is directly dependent on the Uniform Information Policy adopted by TVEL JSC, according to which standards for information generation and promotion were introduced; the course of increasing the share of production news in the structure of the information content was defined, all information messages were tagged by values of ROSATOM, which in its turn had a positive effect on references to TVEL JSC and its subsidiaries in the mass media.

ENSURING SOCIAL ACCORD IN THE TERRITORIES OF PRESENCE

Achievement of strategic objectives by TVEL Fuel Company is impossible without social accord in the territories of presence or compliance with social and environmental acceptability requirements. Social strain in regions and on territories of presence may cause reputation damage to TVEL JSC which has the image of a reliable supplier of nuclear fuel and uranium enrichment services, and therefore may cause re-orientation by foreign partners towards the Company's competitors.

Agreements on cooperation with the regions

In 2012 TVEL JSC initiated the drawing up and signing of Agreements on Cooperation between ROSATOM and public authorities of the territorial entities of the Russian Federation.

Now there are agreements with Sverdlovsk region, Tomsk region, Krasnoyarsk territory and the Udmurt Republic.

The key point of each Agreement is understanding on the return of regional taxes surplus from operation of enterprises of ROSATOM in the territory of a constituent entity of the Russian Federation to the municipal budget for activities aimed at social and economic development of nuclear power cities (see Table 43). Moreover, the agreements determine the terms of co-funding of Entrepreneurial Development and Supporting Fund and establishment of Physical and Mathematical Lyceums.

CATU Development Programs

In 2014 the working teams of TVEL Fuel Company's subsidiaries developed the Integrated Development Programs (IDP) of CATU Zelenogorsk, Seversk, Novouralsk. IDP were approved by local and regional authorities, and submitted for inspection and approval to the Government of the Russian Federation.

IDP are aimed at consistent, stage-by-stage sustainable development of CATU economics and social sphere, rational use

of production and technological potential of the city-forming enterprises, social and economic, potential as well as natural resource potential of cities.

IDP will form the basis of the concept of the Territory of Advanced Social and Economic Development (TASED) of nuclear industry in CATU.

TASED is the part of a territorial entity of the Russian Federation with the special legal regime for entrepreneurial and other activities.

Charitable Activity and Support of External Social Programs

TVEL Fuel Company's contribution to social and economic development of the regions of presence implies not only participation in the regional and local budgets income base, but also realization of the whole body of social and charity programs.

Program for social and economic development of the cities of presence of TVEL Fuel Company, 2015

City	Scope of finance, RUB mln	Events
CATU Novouralsk	215	"Safe city" Project Accomplishment.
Glazov	361	Repairing and equipping of the Concert-Sports Complex building.
CATU Seversk	89	Capital repair of the Ice Sports Palace. Support for sports teams.
TOTAL	665	Construction of multi-sports complex

Funding of charity and social initiatives of TVEL FC in 2015, RUB mln.

No.	Events (Projects)	Scope of Finance
1	Support of pensioners, the social order mass cultural events, financial support of sports and youth, "Baikal Stars" Festival, The Baikal Economic Forum (under an agreement with the Governor of Irkutsk region)	41.6
2	Improving the material equipment and working conditions in children's kindergartens in Glazov and Kovrov	1.5
3	Support of social facilities transferred to municipal ownership	4.4
4	Support to Atomclasses activities in the cities of TVEL FC presence	6.0
5	Support to the activities of the nuclear industry information centers in the regions of TVEL FC subsidiaries presence (ANO "Data Center of Nuclear Field")	2.0
6	Support to international social and environmental initiatives in the cities of TVEL FC subsidiaries presence	5.6
7	Aid to Russian Orthodox Church parishes	11.5
9	Support to the sports activities in the cities of presence of TVEL FC subsidiaries	23.5
10	Participation and holding of a contest "Businessman of the year" in the cities of presence of TVEL FC subsidiaries	1.2
11	Support to social and cultural events in the regions of TVEL FC subsidiaries presence	3.1
12	Organization of the youth camp and support to international children's events of environmental focus	1.0
13	Support to non-governmental organizations, orphanages, boarding schools, veterans, persons with disabilities, persons who are in difficult life situation, in the cities of presence of TVEL FC subsidiaries	2.4
14	Support to educational institutions in the regions of TVEL FC subsidiaries presence	3.4
15	Grants following the results of the social and charity projects contests in the cities of presence of TVEL FC subsidiaries	16.7
16	Other projects of TVEL JSC and subsidiary companies of TVEL JSC	15.5
TOTAL		139.3

TASED projects development stages



Эффект от создания ТОСЭР в ЗАТО

CATU	Number of new jobs	Scope of investment, RUB mln
Zelenogorsk	242	647
Seversk	840	8 280
Novouralsk	874	2 638

Looking to the future



TVEL JSC has always focused on sustainability and increasing the living standards in the territories of its presence. Gennady N. Lisavkin, Director of the Program for Regional Development at TVEL JSC, speaks on the measures taken by the Fuel Company in this area.

GENNADY N. LISAVKIN

Director for the Program for Regional Development and Social Projects

To ensure social acceptability of the business, TVEL JSC has implemented a number of social initiatives through centralized funds and with support from the enterprises. For example, the Company built an eight-apartment house for teachers in CATU Zelenogorsk (Krasnoyarsk Territory) and provided 10 apartments for health care workers in CATU Novouralsk (Sverdlovsk Region) as a measure of attracting subspecialists to the city. In Glazov (Republic of Udmurtia) the central Svoboda Square was renovated and equipment was purchased for the public utilities. Urban development measures were also financed in the two cities.

In February 2012 we drafted three agreements between ROSATOM State Corporation and the governors of the Sverdlovsk and Tomsk Regions and the Krasnoyarsk Territory. The agreements provided for the cooperation between the nuclear industry and the constituent entities on the development of nuclear power in the regions, and also for the support by ROSATOM of the regions' education, investment and innovation projects. Under the agreements, the difference between the taxes to the regional

budget that may arise from ROSATOM's new policy aimed at increasing their efficiency, implementing new products and introducing new products and the taxes for the base year will be returned to the Fuel Company's cities of presence where these funds will be allocated to socially conscious investment in particular to Novouralsk, Glazov, Zelenogorsk and Seversk. In 2013, in line with the agreements, the first social projects were financed in the said cities. In the three years (between 2013 and 2015) additional social projects worth RUB 2.6 bln were financed through the regional budgets — quite a large amount of money. Last year alone, this money was used to implement the Safe City program, renovate a concert and sports complex in Novouralsk, the ice arena in Glazov, build a multi-purpose sports complex in Seversk and totally replace the surface of several motorways.

Children's needs were also addressed: we developed a special project to support mathematics and physics schools that was co-financed by three parties: the regional authorities, the municipal administration and TVEL enterprises. As part of the project,

the local and regional authorities renovated the buildings of mathematics and physics schools in Zelenogorsk, Seversk and Glazov. In particular, in Seversk they built a modern two-storey athletic wing, and in Glazov the construction of a sports complex and workshops is being completed. The funds provided by the Fuel Company were used to purchase textbooks, physics and chemistry laboratory kits, interactive whiteboards and computers, and to train the teachers in new teaching methods, etc. Today, the mathematics and physics schools in the said cities are equipped to the highest standards, and have arguably become the regions' leading schools. The result was the high educational level at these schools, with more than 90% of the graduates making it to the universities and colleges across the country. Another proof of the quality of education is that every fourth honor student comes from Novouralsk. TVEL JSC is proud of the education system that was created in the CATU, and of the teachers and students of the mathematics and physics schools.

The following figures reflect the scope of social activities of the Fuel Division: in 2015

alone, TVEL JSC implemented charity initiatives in various areas worth RUB 139 mln, with another RUB 130 mln allocated by the enterprises, so the total was RUB 269 mln.

The next project of the Fuel Company will be to develop technology parks at schools. The aim would be to identify talent among school students, to find those who are keen on and have a potential in design and engineering innovation. TVEL JSC is interested in creating such technology parks not only in specialized schools, but also in other schools in CATU. The plants and combines will provide the relevant engineering problems that the students will compete to solve. Such competitions will be a good way to identify and stimulate talent. The winners may also be financially rewarded with enhanced stipends that may motivate them to seek a position at the Fuel Company. In other words, this is a long-term project that may help create the personnel reserve for TVEL's future activities. ♣

4.5. Human Capital

HR Policy of TVEL FC is implemented in accordance with the Development Strategy of TVEL Fuel Company, and it is intended to ensure efficient use of human resources contributing to the achievement of the Company's strategic goals.

Average headcount of TVEL FC staff, persons

22,662 2018

22,695 2017

22,240 2016

Steady decrease in headcount in 2011-2014 was caused by restructuring processes, centralization of management functions and personnel outsourcing. The ultimate goal of these processes with regard to HR management is to enhance labor efficiency in TVEL FC subsidiaries to match major foreign competitors.

PERSONNEL ENGAGEMENT

Personnel engagement, employees involvement in business and success of the Company have direct impact on business performance and efficiency. The Company carries out a set of arrangements aimed at increase of personnel engagement, encourages the employees to move from formal performance of obligations as per job description to their activity improvement.

Personnel engagement rate increased in 2015 by 2 percentage points and made 83%. This defined the leading position of TVEL Fuel Company among production divisions of the nuclear industry.

MOTIVATION AND REWARD

Motivation and reward policy in TVEL Fuel Company is aimed at maintenance of salary competitiveness. The salary increase and indexation amounted RUB 740 mln in the reporting period.

In 2015 the average salary level in TVEL Fuel Company, TVEL JSC not included, made RUB 73,223, which is 10.8% higher than the previous year average salary rate.

Ratio of standard entry level wage of TVEL FC subsidiaries to minimum wage shall vary from 1 to 1.5 (Moscow and Moscow region, Novosibirsk region and Tomsk region), and 2 to 2.5 (Krasnoyarsk territory).

Arrangements 2015:

- salary indexation in all subsidiaries, except for TVEL JSC (indexation — over 6.7%, in certain subsidiaries selectively as per several lower grades — up to 15%);
- increase of annual premium rate in certain subsidiaries (increase by per cent corresponding to salary indexation per cent);
- selective reconsideration of the employees' personal additional incentive following the results of the annual assessment;
- review of remuneration system and benefits efficiency in the Company's enterprises; collection of the employees' proposals for alteration of salary disclosure documents.

Non-Material Benefits

System of non-material benefits for the employees of TVEL Fuel Company is aimed to encourage professional growth, increase in efficiency and performance, attainment of the goals and the best final results of activities, enhancement of the work quality and arrangement of conditions for creative activity.

During the year 2015 in celebration of commemorative days and anniversaries more than 2.9 thous. workers and veterans of TVEL FC received rewards and bonuses for work achievements, contribution to de-

velopment of enterprises, the Fuel Company and nuclear industry, in particular:

- national awards — 2 employees;
- awards of ROSATOM — more than 1.7 thous. persons, including merit badges and anniversary medals "70 Years of Nuclear Industry in Russia" — 338 workers and veterans, labor merit badges "Veteran of Nuclear Power and Industry" — 451 workers;
- awards of TVEL JSC — more than 900 persons.

TVEL JSC staff was awarded with the Certificate of Merit by ROSATOM for conscientious work, significant contribution to development of the nuclear industry and high achievements in the field of industrial provision with fuel of nuclear power industry.

Personnel Engagement Rate in TVEL FC

83% 2015

81% 2014

76% 2013

In 2010–2014 due to implementation of the policy in the field general industrial activities the Company managed to create and maintain more than 1,500 workplaces. Moreover, about 3,000 new skilled workplaces are scheduled to appear before 2019.



99.1%
staffing level

1.4%
undesirable employee turnover

5–6
skills per employee

>90%
utilization of employees

4–5
levels of operations management

>80%
utilization of production workers

43.6
average age of employees

25.2%
young professionals under 35

11
employees per manager

3
levels of office management

Guided by the Values of ROSATOM



Today the employees of TVEL JSC are characterized by wide interchangeability and knowledge of related professions/operations: each production worker has 5 to 6 professions/skills. As the result, an employee now has significantly greater value to the Fuel Company: the qualification of employees has become so high that it is increasingly difficult to replace them. We highly appreciate our employees' willingness and readiness to increase their professional level.

NATALYA S. SOBAKINSKAYA

HR Director

What are the current employment standards?

The employment standards have traditionally been very high in the nuclear industry. The high technology and knowledge-intensive industry requires best-qualified personnel. One of the most recent major changes was that process improvement skills are now required from employees in every position. Today, in addition to competently and reliably lead the processes, an employee is expected to be willing to improve personal performance, participate in the enterprises' development projects and be proactive in pursuing specific improvements...

The Company has always been assigned with ambitious tasks. The technologies and modern equipment alone is not enough to fulfill them. Of equal importance is the overall engagement and teamwork...

In the recent years, ROSATOM State Corporation has applied the engagement

management concept. In industry terms, engagement implies that an employee speaks positively of the enterprise, has no desire to get a job at another organization and strives to do more than is required by the job description. The Fuel Company managed to achieve significant progress in increasing the engagement from 58% to 83% within 6 years.

In our opinion, a person may be called engaged when he or she knows and understands the Company's goals and his/her role in achieving them, has the required resources to contribute to the achievement of the said goals, in particular, knowledge resources. An engaged employee works in what he/she perceives is a team of like-minded people, enjoys support from the manager and colleagues and has a high internal motivation.

In 2015 we applied the new approach to strategic decision making and the methods of arriving at such decisions through strategic sessions across the company, from top-managers to each unit. The new approach is supposed to help align the positions on all the main aspects of the Company's development, enable each employee to embrace the assigned goals, understand what needs to be done and see what key projects influence the development strategy of the Fuel Company.

At this point, we register a high level (70%) of employee satisfaction with the available training and development opportunities. The Company has made huge investments into human resources. As the result, the employees obtain unique competencies, and the Company gets an impetus for further development. In 2015, a total of 23,000 employees were trained, which is one third more than the 2014 figure. More than RUB 100 mln was invested in the training.

Another essential factor is the satisfaction of employees with their career opportunities. One of the Company's priorities is to offer

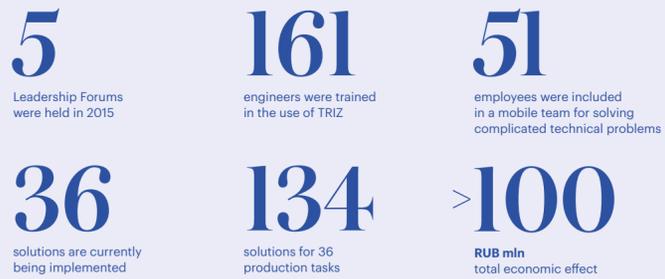
its employees an opportunity for further career and professional growth. In 2014 50% of senior managers in the Fuel Company were appointed from the succession pool, and in 2015 the figure increased to 60%, which is in line with the global best practices.

As to specific victories, I would like to mention was taking control over the Career Opportunities factor, which is considered to be one of the most unmanageable factors. In the recent years the satisfaction with this factor has increased from 24% to 65%. One of the reasons is that the Fuel Company has introduced the institution of small group leaders as an important element of operations management. Today, being a small group leader is an honor that many people try to achieve.

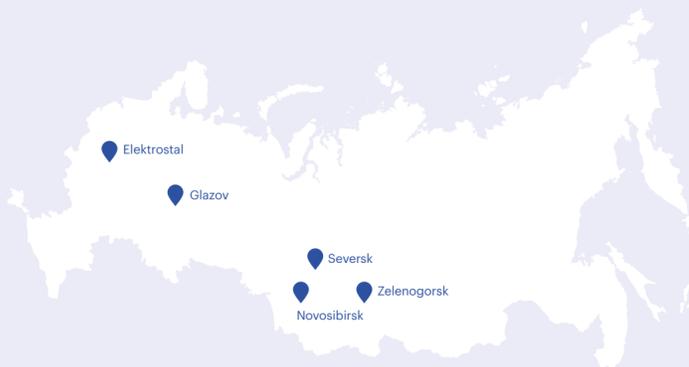
What skills and qualities are most important in the HR function, in terms of efficiency?

First of all, as an HR officer, you should be able to predict the business needs. It is not always clear how the technologies and the processes may change in the future, and what new products may appear. At the same time, we must be prepared to provide the business with the relevantly trained employees right at the moment when they are needed. Another factor of assessing the effectiveness of the HR function is labor efficiency. The world's top high-technology companies achieve superior financial results with a small team of highly trained professionals. The Company's team consists of highly trained professionals, therefore one of the priorities is to develop new areas and new products and create high tech jobs in order to fully realize the potential of the employees. At the same time, every product has to be cost-effective and must contribute to the sustainability of the Fuel Company's business. If we come produce good products but our labor efficiency is low, we'll have no future in the market. And a third essential factor is personnel engagement. ●

Leader Forums are unique practices for Russia



Leadership Forums: Geography



Two global objectives pursued by Leader Forums are solutions to technical problems of a particular enterprise and training the engineers to apply TRIZ tools.

Engineer Leader Forum is a proven communicative format for TVEL Fuel Company that allows solving several problems at once:

- involve the engineering staff in the process of continuous development of TVEL FC enterprises,
- improve the skills and enhance the intellectual potential of the Company,
- develop motivation for professional growth,
- use off-line engineering ideas generated during “brainstorming” and searching for optimal solutions to real industrial problems based on TRIZ methodology (Theory of Inventive Problem Solving).

Leader Forum reveals those who understood and mastered TRIZ tools better than others. They will further take part in the training program of specialists on TRIZ tools, i.e. they will become experts themselves and will train new staff in order to have new TRIZ specialists within ROSATOM.

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

HR DEVELOPMENT AND TRAINING

Average length of training in 2015 for each employee of the Company was 51 hours.

SOCIAL PROGRAMS IMPLEMENTATION

In addition to mandatory social guarantees, benefits and privileges envisaged by the labor laws, the Company's subsidiaries developed for the employees working on a full-time basis the corporate social programs such as:

- non-state pension provision;
- voluntary health and industrial injuries insurance;
- assistance in housing programs;
- sanitary and resort treatment and recreation of employees and their children;
- provision of meals to employees;
- assistance to non-working pensioners;
- organization of sports and cultural events;
- benefits to employees in difficult situations.

Total amount spent by the Company on its social programs in 2014 is RUB 1,340.5 mln or RUB 59 thous. per worker.

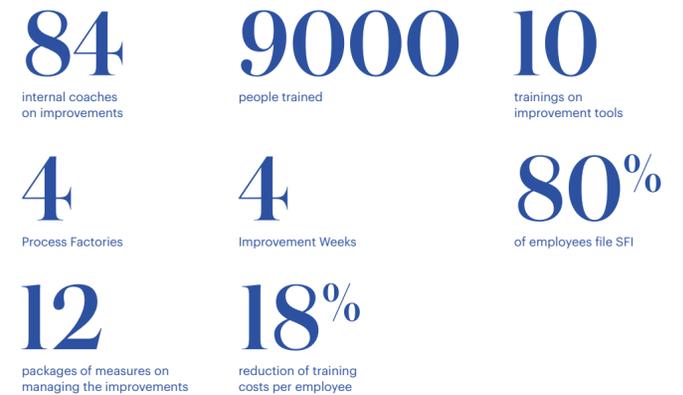
OCCUPATIONAL HEALTH AND SAFETY Health and Safety Management System

Owing to preventive measures in the sphere of labor protection during the period 2010-2014, TVEL Fuel Company managed to uphold the downward industrial injuries tendency at the enterprises included into the management system of TVEL Fuel Company.

No violations of safety parameters or limits of the effective and equivalent doses set by the nuclear and radiation safety regulations were registered at the subsidiaries of the Company in 2015.

The Company spent grand total of RUB 1.2 bln or RUB 56.1 thous. per each employee on labor protection arrangements in 2015.

TVEL JSC and AECC JSC became winners in nomination ‘For good performance in occupational health&safety of All-Russian Contest “Russian Business Leaders: Dynamics and Responsibility – 2015”, organized by Russian Union of Entrepreneurs and Industrialists.



Health and Safety Management in TVEL Fuel Company



Safety is a shared responsibility

Occupational health and safety, improving working conditions, ensuring nuclear, radiation, industrial security and environmental protection have always been top priorities of TVEL JSC and the companies included in the management system of the Fuel Company in carrying out the processes that support the production. Safety is a shared responsibility.



KIRILL G. BOCHAROV

Director of the Nuclear, Radiation, Industrial Safety and Environmental Protection Department

By implementing the measures aimed at improving the working conditions and ensuring occupational health and safety in the Fuel Company, we have managed to maintain the downward trend in industrial injury rates in the recent years. Presently, a key performance indicator known as LTIFR (lost time injury frequency rate) is applied to the accountable managers of TVEL JSC and entities included in the management system of the Fuel Company. The indicator is calculated as the number injuries divided by total hours worked in the reporting year (hours) and rated as 1 mln man hours. The LTIFR indicator was introduced across the industry to enable benchmarking against global best practices. For example, LTIFR of top foreign companies amounts to 0.5, while the industry level for ROSATOM State Corporation is around 0.4. To encourage responsible behavior and reduce injury rates not only in the subsidiaries, but also in organizations formed as the result of restructuring and optimization, it was decided to include the injuries that took place in the subsidiaries of the enterprises in the indicators for the entire Fuel Company starting from 2015. In 2015 the injury rates further improved as compared to 2014, if we compare the figures related to the same scope of reporting.

The effectiveness of activities aimed at ensuring nuclear and radiation safety in the companies included in the management system of the Fuel Company has been proved by the absence of events of INES (International Nuclear and Radiological Event Scale) level 2 or more, and personnel radiation exposure in dozens exceeding the irradiation dose limits specified in the regulatory documents. Effective average annual irradiation doses and occupational collective dose are reducing and are currently lower than the industry average.

TVEL JSC makes every effort to meet global best practices. The Fuel Company has introduced a corporate integrated system for managing quality, environmental safety, operational health and safety and energy in line with the international standards ISO 9001, ISO 14001, BS OHSAS 18001, ISO 50001 and the GR-R-3 standard of the IAEA. Today, the Fuel Company is faced with quite ambitious tasks to implement the new versions of the ISO 9001:2015 and ISO 14001:2015 standards and to develop the safety culture as an element of the integrated management system of the Fuel Company. ●

4.6. Environmental Impact (Natural Capital)

In 2015 the enterprises of TVEL Fuel Company:

- registered no violation that could be referred to INES incidents of level 2 and above;
- exceeded no limits of the annual effective radiation doses for the personnel;
- had no Group A personnel exposed to an effective radiation dose 100 mSv and more over any successive 5 years.

ENVIRONMENTAL POLICY

TVEL Fuel Company activities aimed at reduction of negative impact on the environment of the enterprises are characterized by branch specificity and must be executed in two directions:

- Removal of the environmental "heritage" of the first nuclear project, created as a result of execution of the military state programs on the enterprises included into the management system of the Company, which implies execution of large scale works connected with decommissioning of the nuclear industry facilities and rehabilitation of the contaminated territories;
- Reduction of the impact by the enterprises on the environment connected with current production operations. Within this activity framework the system of ecological management has been developed, modern resource saving technologies of production are implemented, current environmental protection measures are executed and constant monitoring of environment condition is executed.

ENVIRONMENTAL IMPACT Industrial and Consumer Waste Disposal

In 2015 the total amount of industrial and consumer waste of the Company was decreased by 31% as compared to the level of 2014 and made around 210 thous. tons.

Main reasons of waste formation decrease in 2015:

- increase of the amount of ashes and slag waste of Hazard Class 5 (slightly hazardous) in connection with the decrease in the coal burning at heat and power plant (HPP) of SGChE JSC and cease of coal use as fuel at HPP of CHMZ JSC which also generate thermal and electrical energy for the population of nearby settlements;
- cease of sublimation production by AECC JSC and its preparation for decommissioning;

- reduction of construction works volume and completion of works on land improvement of the industrial site territory of PA ECP JSC;
- change in the schemes of handling household waste in UEIP JSC as a result of which the waste owner became a contracting organization rendering services in places of waste accumulation;
- sale of shares of KhMZ JSC (Krasnoyarsk) and its exclusion from the management system of the Company.

In 2015 5.4 thous. tons of wastes were recycled or reused by the enterprises of the Company. The use of wastes is mainly organized at MSZ JSC, ChMP JSC and NCCP JSC, which in 2015 used in their production 31.3%, 66.4% and 32.1% of their wastes respectively.

The bulk of wastes (92.6%) was represented by Hazard Class 5 (slightly hazardous) wastes, such as ash slag resulting from solid fuel burning at the TPPs. Ash slags are dumped by the TPP and the bulk of other wastes is delivered to specialized organizations.

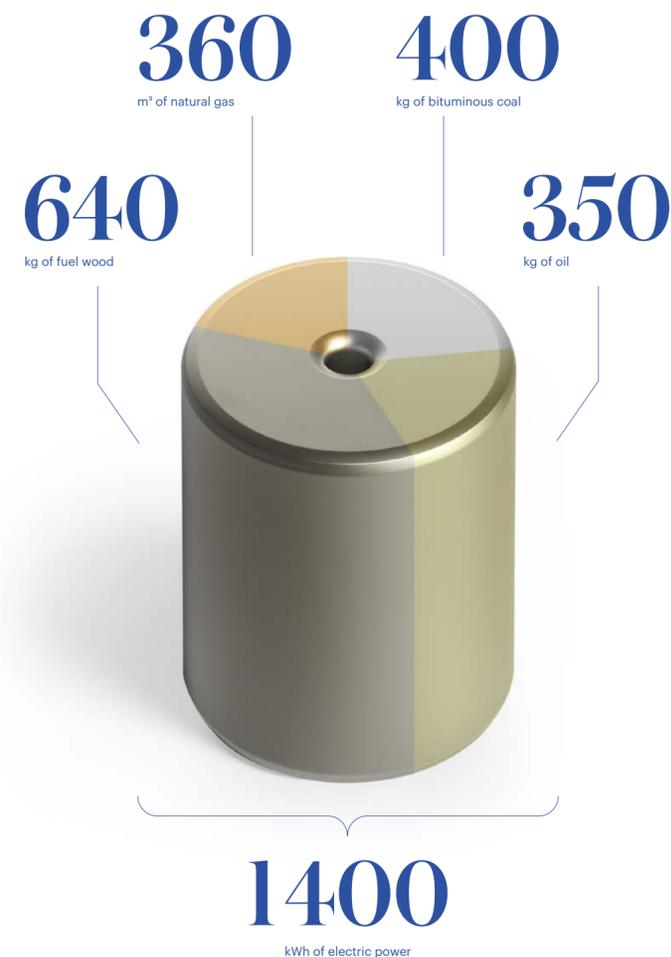
Water Consumption and Water Disposal

In 2015 withdrawal of water by the enterprises of the Company decreased by 20.5% as compared to the previous year and was 434 mln m³, water consumption decreased by 22% and amounted to 393.9 mln m³.

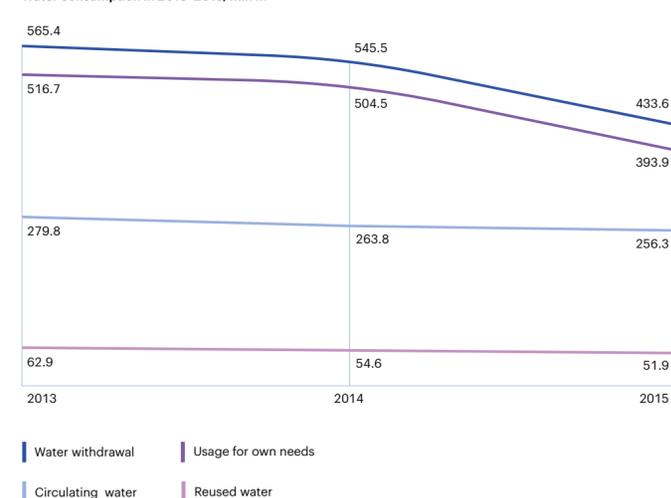
Causes of decrease in volumes of water withdrawal and consumption:

- decrease in water withdrawal by SGChE JSC and ChMP JSC due to reduction of the electric supply program of HPP of SGChE JSC and HPP of ChMP JSC;
- cease of sublimation production by AECC JSC and its preparation for decommissioning;
- implementation of actions on Energy Saving and Efficiency Improvement Program in PA ECP JSC, connected with in-

One pellet of nuclear fuel weighing 4.5 g substitutes:



Water consumption in 2013-2015, mln m³



Total Emission of Pollutants*, thous. tons

16.4 2015

20.7 2014

20.1 2013

Emission of ozone-depleting substances, tons

259 2015

262 2014

267 2013

Carbon dioxide emissions**, tons

602 2015

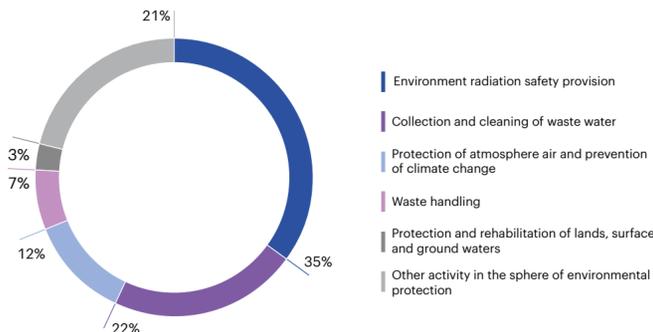
1,010 2014

1,156 2013

*Determined by computational method, along with instrumental verification.

**Determined by estimating and computational method. Subsidiary companies of TVEL FC keep no record of emissions of greenhouse gases due to the absence of relevant legislative requirements.

Environment protection costs outlay of TVEL FC in 2015



No contamination of new areas occurred caused by activities of TVEL FC subsidiaries in 2015. All identified contaminated areas are consequence of activities of the enterprises focusing on improving the defensive ability of the country during the period of the “nuclear shield” creation.

stallation of frequency converters on the industrial pumping station in building 811 and optimization of water consumption in subdivisions of the enterprise;

- decrease in water consumption by UEIP JSC consumers.

The main source of water withdrawal is represented by natural sources (406 mln m3). Water withdrawal from public and other water supply systems was equal to 28 mln m3. Water withdrawal by the Company's enterprises has no significant impact on natural water sources.

In 2015 the volume of disposal of polluted waste water by the Company's enterprises decreased by 7%, which is directly connected to decrease in water withdrawal.

Pollutant Emissions

In 2015 total pollutant emissions into the atmosphere by the Company's enterprises amounted to 16.4 thousand tons (24.4% of the set standard).

Decrease of emissions in comparison with 2014 by 20.6% is conditioned by the decrease of the burnt fuel in the form of coal on the HPPs of SGChE JSC and ChMP JSC.

Emissions of ozone-depleting substances at the enterprises of the Company in 2015 decreased by 1.2% and amounted to 259 thous. tons, which is due to the equipment modernization.

In 2015 greenhouse gas emission intensity amounted to 3.18 kg/mln rub. of revenue (in 2014 — 7.32 kg/mln rub.). The bulk of greenhouse gas emissions is caused by energy facilities (HPP, boiler houses) and transport.

Expenses related to minimization of the environmental impact

In 2015 operating expenses of the Company enterprises for environment protection amounted to RUB 2,318 mln. Target funds allocated in the framework of the investment and project activities of TVEL Fuel Company and ROSATOM were used to finance both technical and organizational measures.

The essential share of environment protection expenses of TVEL Fuel Company falls on SGChE JSC, UEIP JSC and ChMP JSC.



NUCLEAR AND RADIATION SAFETY

Assurance of nuclear and radiation safety (NRS) of facilities of the Fuel Company subsidiaries, prevention and exclusion of any possibility of inadmissible exposure of the personnel, population and environment to radiation are among the priority activities of TVEL Fuel Company.

In 2008–2015 within the FTP NRS, TVEL Fuel Company managed to accomplish 37 activities on 7 sites for the total amount RUB 9.6 bln, including the federal budget resources — RUB 7.1 bln, other sources — RUB 2.5 bln:

- liquidation of 56 nuclear and radiation hazardous facilities (NRHF);
- commissioning of 1,710 m3 capacities of radioactive waste (RW) depositories;
- transfer into ecologically safe state of 2.74 RW power blocks;
- rehabilitation of 155.5 thous. m2 of radiation-tainted territories.

In 2015 the total volume of works on FTP NRS activities amounted to RUB 1.4 bln, including the federal budget resources — RUB 1.2 bln and other sources — RUB 0.2 bln. 4 nuclear and radiation hazardous facilities were liquidated.

In 2016 and subsequent years the works on elimination of the nuclear “heritage” will be continued within the approved FTP “Nuclear and Radiation Safety Assurance for the period of 2016–2020 and up to 2030”. FTP allowed to 2.2 times speed up the solution of the nuclear “heritage” problems.

Where do you see the Company in 10 years from now?



YAKOV Y. KOP

Senior Vice-President for Personnel and Organization Development

Achieving ambitious goals assigned to the Fuel Company will never be possible without reducing the time required to launch new products. In this context, the priorities of the Fuel Company will be to intensify the search for new ideas, reform the planning process and creating engineering centers to develop new products.

I see a market leader, a competitive high tech company that uses best practices and has an extensive portfolio of innovative products. I see a highly professional team that is united and well-coordinated. And I also see a successful company, just as it is meant to be, with us working so hard to achieve that.

The Company of the nearest future will be an organization that relies on the ‘one goal one team’ principle, whose motto is “Be fast, be flexible, keep it simple”. By this I mean that any change within the Company should be really fast, the processes should be as flexible as possible and the role assigned to each employee in the context of achieving the common goal should be simply explained.

Any of this will never be possible unless we retain our primary focus on people, on developing their competencies and training them at throughout the entire product life-cycle.

A key priority for the Company in the coming decade will be to revise the production system and customer relations, more specifically, to increase the accuracy of planning, forecasting and implementation. Meanwhile, the main thing about any reform is the speed of implementation. Remember the fable of the Lion and the Gazelle, who have to run faster every day, or else the Lion will starve and the Gazelle will be killed.

It is important to note that our competitors have closely watched the activities of the Fuel Company and its

subsidiaries and have responded with their own programs aimed at getting to the top and winning market leadership. They have developed new organizational business models that focus on customers and the possibilities to increase sales.

In the context of increased flexibility we notice the increased role of IT systems which motivates us to analyze the experience of our competitors and introduce it at the enterprises of the Fuel Company. It should be said that the world's leading corporations have extensively used IT systems, such as MRP, MRP-II, SCOR Apics. But what is more important, these companies are definitely focusing on implementing advanced information systems (such as APS, Big Date) that can rebalance the production systems every 1 to 7 days, the process does not require several month or an entire year like it used to.

One of the toughest challenges for the coming decade will be second core business development that will require a considerable organizational. First of all, the Company we will have to define the role and responsibilities of all those involved in launching new products. It particularly applies to the system of planning and achieving the set goals, a top priority area for the development and implementation of operational standards with subsequent transition to using IT systems, which is exactly what our competitors are doing at the moment. ●

Abbreviations

A

AFCF — Adjusted free cash flow.
ARMS — Automated Radiation Monitoring System.

B

BWR — Boiling water reactor — a reactor that uses boiling water as heat carrier.

C

CATU — Closed Administrative and Territorial Unit.
CU — Conversion unit.

D

DDG — Deputy Director General.
DG — Director General.

E

EBITDA — Earnings before interest, taxes, depreciation and amortization — an analytical indicator, used to define a company's profit before taxes, interest, depreciation and amortizations costs are subtracted.

EDEC — Experimental Demonstration Energy Complex.

EGR — Energy channel-type graphite reactor with steam overheat, used on Bilibino NPP.

EUP — Enriched uranium product.

F

FE, FEG — Fuel element.

FE NFC — Front End of Nuclear Fuel Cycle.

FN — Fast neutron reactor where the heat carrier within the first and second loop consists of sodium, while the third loop carries water and steam. In Russia it is applied at Beloyarsk NPP.

FRM — Fabrication / Refabrication Module.

FTP — Federal Target Program.

G

GC — Gas Centrifuge.

GCC — Gas centrifuge complex.

H

HEU — Highly enriched uranium.

HPP — Heat and power plant.

HR — Human resources.

I

IAEA — International Atomic Energy Agency — international regulatory body that monitors nuclear safety performance and non-proliferation of nuclear weapons in the world.

INES — International Nuclear Event Scale.

IMS — Integrated Management System for Quality, Environment and Safety.

J

JSC — Joint-Stock Company.

JV — Joint venture.

K

KPI — Key Performance Indicators.

L

LHM — High purity lithium-7 hydroxide monohydrate.

LLC — Limited Liability Company.

LTIFR — Lost time injury frequency rate — number of lost time incidents divided by total hours worked for the reporting year and rated as 1 mln man hours.

M

MOX-fuel — Mixed Oxide Nuclear Fuel (generally on basis of uranium and plutonium).

MW — Megawatt — unit of power equal to 10⁶ watts. MW(e) relates to electric power

of a generator; MW(t) relates to thermal power of a reactor or heat source (e.g., full thermal power of the reactor itself is generally three times higher than the electric power).

N

NCO — Non-commercial organization.

NF — Nuclear fuel.

NFC — Nuclear fuel cycle, set of arrangements aimed at operation of nuclear power industry, including production and processing of uranium ore, fuel production, its transportation to NPP, storage and treatment of SNF. In case of SNF burial NFC is called opened, if fuel reprocessing and repeated use are provided — it is called closed.

NPIB — Nuclear-powered icebreaker.

NPP — Nuclear power plant, industrial facility for electric power production.

NRS — Nuclear radiation safety.

NRHF — Nuclear and radiation hazardous facilities.

P

PHWR — Pressurised heavy water reactor — type of foreign reactors with heavy water (D₂O) as reactor coolant.

PJSC — Public Joint Stock Company.

PR — Public relations.

PWR — Pressurized water reactor — type of foreign reactors with pressurized water, analogue of VVER reactor.

R

RBMK — High-power channel-type reactor — type of single-cycle energetic reactor with water as heat carrier, and graphite as decelerator.

R&D — Research and Development.

RPS — ROSATOM Production System.

RR — Research Reactor.

RU — Reactor unit.

RW — Radioactive waste.

S

SC — Subsidiary Company.

SFI — Suggestions for Improvement.

SNF — Spent nuclear fuel.

SSC — Separation and Sublimation Complex.

SWU — Separative work unit.

T

TASED — Territory of Advancing Social and Economic Development.

TVEL FC, TVEL Fuel Company — TVEL JSC and subsidiary companies included into the management system of the Company and consolidation perimeter used for the reporting.

TVSA (FAAD) — Fuel assembly of alternative design.

TVS-KVADRAT — Name of fuel assembly for PWR reactors developed in Russia.

U

UIPS — Uniform Industrial Procurement Standard of ROSATOM.

V

VHI — Voluntary Health Insurance.

VVER — Water-to-water power reactor.

W

WANO — World Association of Nuclear Operators.

About the Report

This Annual Integrated Report (hereinafter referred to as “the Report”) covers performance of TVEL JSC and its subsidiary companies (hereinafter together referred to as TVEL Fuel Company, TVEL FC, the Company) in 2015.

Report Profile

TVEL JSC, MSZ JSC, ChMP JSC, NCCP JSC, MZP JSC, VNIINM JSC, UEIP JSC, SGChE JSC, AECC JSC, PA ECP JSC, VPA Tochmash JSC, KMZ JSC, EC RGC JSC, UGCMP LLC, NRDC LLC, EDB-Nizhniy Novgorod, Centrotech-SPb JSC, Uralpribor LLC.

The Company appreciates the employees who took part in preparation of this Report, and all participants of public consultations and dialogues. We hope you will find this Report interesting and informative in terms of the new information about TVEL Fuel Company. Our working team is open to your feedback and suggestions on the matters and issues that you would like to see in the next annual report. Please refer to Feedback form in interactive version of the Report at www.tvel.ru http://tvel.ru/wps/wcm/connect/tvel/tvelsite/finance/annual_report/.

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