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

A team that stands strong and united

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Looking to the future

Guided by the Values of ROSATOM

Safety is a shared responsibility

Innovation clusters of Second Business Core

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

www.tvel2015.ru
In 2015 the Russian nuclear industry managed to reach the target levels in all indicators

ALEXANDER M. LOKSHIN
Chairman of the Board of Directors of TVEL JSC

In 2015 the Russian nuclear industry met all the targets, and even managed to exceed the expectations for some of the indicators. 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 bn (against USD 101.4 bn 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 bn.

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 Power 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 “Proryv” (“Breakthrough”) project, 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, Urals Integrated Electrochemical 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!
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 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.

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.
STORY OF SUCCESS
At the time of TVEL Fuel Company incorporation, the market of reactors of Russian design was occupied by competitors. The Russian nuclear industry was about to lose its position in the global nuclear fuel market, and this fact gave particular relevance to forming up the effective work in foreign markets and, certainly, increased the importance of such issues as corporate and industrial transformations. As a result, by the mid-2000s TVEL Fuel Company managed to regain its position in all regional markets and began to solve the objectives not only to preserve and strengthen its positions on traditional markets, but also to break into new segments of the global nuclear fuel market.

Open Joint Stock Company “TVEL” was established on September 12, 1996 in conformity with the Decree of the President of the Russian Federation dated February 8, 1996 No. 165 “On management improvement of the nuclear fuel cycle enterprises” in order to achieve optimal management structure for the enterprises dealing with the front end nuclear fuel cycle, as well as to increase the efficiency and competitiveness in the global market.

The authorized capital of TVEL OJSC includes shares of the following enterprises on fabrication (production) of nuclear fuel (NF):
• Mashinostroitelnyy Zavod OJSC (49% shares), Elektrostal, Moscow region;
• Chepetsky Mechanical Plant OJSC (51% shares), Glazov, the Udmurt Republic;
• Novosibirsk Chemical Concentrates Plant OJSC (38% shares), Novosibirsk;
• Chemical-Metallurgical Plant OJSC (51% shares), Krasnoyarsk.
2000s

The collapse of the USSR led to the fact that some countries of the former socialist state changed their political vector, giving preference to cooperation with Western companies. Our enterprises faced threat of losing their traditional markets. For example, in 1993 the Westinghouse Electric Corporation (USA) won the contract for the completion of constructing the Temelin Nuclear Power Plant in Czech Republic (the station had been constructed in accordance with the Russian technologies and equipped with the Russian reactors VVER-1000) and its supplying with fuel. After TVEL OJSC incorporating and combining the assets, the enterprises apart from working under a single brand now received an opportunity to advance the the frontiers of their development. Innovative activities, development of new technologies, production and financial and economic solutions came to the foreground. Among the first major contracts for nuclear fuel supply the following should be noted:
• the Tianwan NPP (China) in 1997;
• the Paks NPP (Hungary) in 1999;
• the Dukovany NPP (Czech Republic) in 2001.

By the early 2000s TVEL OJSC increased its share in its subsidiaries, created support infrastructure companies, as well as consolidated sectoral mining assets, which subsequently formed the basis for incorporation of the uranium mining company Atomredmetzoloto OJSC.

2001

In 2001 in co-operation with TVEL OJSC the Ukrainian-Kazakh-Russian joint venture UKRTVS CJSC was established and in 2003 the Tripartite Intergovernmental Agreement on Assistance in the Joint Venture Activities was signed. As part of the cooperation implied by this project, TVEL OJSC transferred to the Ukraine the steel components production technologies for the fuel assembly of alternative design (TVSA) which was successfully mastered by the Ukrainian enterprises.

By the mid 2000s TVEL OJSC established itself firmly on its traditional markets despite the difficulties in competing with foreign producers.

2006

In 2006 within the global tenders the contracts were concluded for NF supplies to the Temelin NPP (Czech Republic) due to TVEL OJSC overcoming Westinghouse (USA) and to the Loviisa NPP (Finland) till the end of its operation due to TVEL OJSC overcoming the British company BNFL.

In 2007 open joint stock company “Atomenergoprom” became the sole shareholder of TVEL OJSC and combined the assets of the Russian nuclear industry. In accordance with the Federal Law d/d December 1st, 2007 No 317-FZ “On the State Atomic Energy Corporation “Rosatom”, the shares of Atomenergoprom OJSC (100%) located in federal ownership were transferred to ROSATOM as the asset contribution of the Russian Federation.

In 2007 the enterprises included in TVEL OJSC management system launched “Novy Oblik” (“New Image”) program aimed at increasing work efficiency and labor productivity. It was the transition to a qualitatively new level. TVEL OJSC set the goals to increase the competitiveness of the plants by reducing costs, optimize the functional structure of the enterprises, diversify the production while ensuring high product quality and safety. The main phase of TVEL OJSC restructuring was completed in 2012. Following the results of “Novy Oblik” program realization for the period 2007-2012 the cumulative economic effect obtained was more than RUB 12 bln.

In 2007 the specialists of TVEL OJSC completed the unique project at the Parks NPP (Hungary) — liquidation of the acci-

Total economic effect of the New Image program implemented in 2007–2012
In 2008 Vice-Presidents of TVEL OJSC, Petr Lavrenyuk, Vasily Konstantinov and Konstantin Sokolov, were awarded with the high state award of the Republic of Hungary — the Knight’s Cross Order — for success in elimination of the accident.

2008
In 2008 the Agreement on the Russian fuel fabrication was signed for all Slovakian power units of the NPP till the end of their operation life. The first Nuclear Power Plant in India, the Kudankulam NPP, received the first batch of fuel for its commissioning.

In the mid 2008 the Company concluded with CNEIC, the Chinese corporation, a contract for construction of IV Stage of the Gas Centrifuge Plant for Uranium Enrichment in Hanzhong, as well as the respective long-term contract for enriched uranium product supplies till 2020.

2009
In September 2009 ROSATOM decided to create the Fuel Company of ROSATOM based on TVEL OJSC. The Fuel Company combined the Russian large enterprises for nuclear fuel fabrication, separation-sublimation complex and gas centrifuge complex, as well as the organizations responsible for developing and planning technology processes, tools and equipment necessary for creating a unique high technology, metallurgical, forging and rolling equipment production line was created at TVEL OJSC

In 2009 Chepetsky Mechanical Plant (Glazov, Republic of Udmurtia) launched superconductors production within the execution of the Russian commitments to participate in construction of International Thermonuclear Experimental Reactor (ITER) and ensuring superconductor materials supply. Accomplishment of this task is an example of the country’s industrial potential revival, since superconductor production line was created at TVEL OJSC nearly from the ground up.
In 2010 within the frameworks of accomplishment of the initiative by Russian President Vladimir Putin dated January 26, 2006 on creation of the system of international centers of NFC services under the Agreement between the Russian Government and IAEA there was formed and located at the territory of AECC OJSC in Angarsk the guaranteed reserve of low-enriched uranium (120 tons). At present moment the founders of International Center of Uranium Enrichment OJSC apart from Russia include Kazakhstan, Ukraine and Armenia.

In 2010 in the city of Krasnoyarsk members of the technical committee of ROSATOM and TVEL OJSC signed the act of decommissioning the nuclear facility for production of low enrichment uranium dioxide ceramic powders in the territory of Chemical-Metallurgical Plant (previously included in TVEL Fuel Company). This document marked the final stage in the history of the Russia’s first project of decommissioning the nuclear and radiation-hazardous facility and its transition to a state of “green lawn”. The Committee confirmed officially that this site can be used for industrial or social needs without any restrictions. The unique project lasted 4 years.

In 2011 within the official visit of Russian President Dmitry Medvedev to the Czech Republic the documents were signed to create the Center of Technological Services in the Form of Joint Venture ALVEL JSC. The Center is aimed to assist the existing and the future customers of TVEL and ALTA from the European Union countries. By the decision the Czech operator CEZ JSC there was performed pre-term discharge of the American fuel assemblies from the power unit No. 1 in Temelin NPP and their replacement with the Russian fuel assemblies. Nuclear fuel produced by TVEL Fuel Company was loaded to the nuclear core of the second power unit in Temelin NPP. After the end of works on loading and launching the second power unit, the Czech NPP is completely operated on the Russian fuel.

In 2012 the Company started serial production of 9th generation gas centrifuges to modernize the separation enterprises of TVEL Fuel Company. Commissioning of the first industrial unit of 9th generation gas centrifuges at PA ECP OJSC is considered as the milestone event. The new development allowed to significantly increase the GS performance due to the unique structural solutions and use of new materials. This was an important event not only for TVEL OJSC but for the whole nuclear industry in Russia.
<table>
<thead>
<tr>
<th>2013</th>
<th>2014</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Completion of the qualification of TVEL OJSC (CHMP OJSC) by Candu Energy Inc., the Canadian company, as pressure pipes supplier for the CANDU reactors.</td>
<td>Completion of the transaction on acquisition of the shares in Urals Integrated Electrochemical Plant OJSC by the joint Russian-Kazakh enterprise, UEC CJSC. Delivery within the UEC project of the first batch of products in the amount of 300,000 separative work units (SWU).</td>
<td>Signing of the contract with Finenovomir, the company from Finland, on nuclear fuel supply for the first loading of the new Hanzhink NPP and its operation within 10 years with the chances of the contract prolonging for further operators.</td>
</tr>
<tr>
<td>Signing the contract to extend fuel supplies to the Dukovany NPP (Czech Republic) from 2014 till 2028.</td>
<td>Signing the contract in Beijing with Jargau Nuclear Power Corporation (JNPC) and China Nuclear Energy Industry Corporation (CNEIC) for fuel supply for the initial zone of 3 and 4 Power Units in the Tianwan NPP, as well as six packaged refuelings of 3rd unit and the contract for components supply to produce fuel at Yibin Fuel Factory for all four power units. The contract provides for regular supplies of TVS-2M fresh nuclear fuel and components till 2025.</td>
<td>Signing the four-party memorandum under the “Zero Failure” project by TVEL Fuel Company and the operators from Czech Republic, Bulgaria, Ukraine and Russia.</td>
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<tr>
<td>In 2013, TVS-KVADRAT was loaded to the power unit reactor in one of the European NPP for pilot operation. The TVS-KVADRAT design is based on long experience in manufacturing and operation of nuclear fuel in VVER-1000 reactors. The developed TVS-KVADRAT fuel allows to enter the most capacious and competitive fuel market segment — PWR.</td>
<td>In 2014 the pilot lot of four TVS-KVADRAT (fuel assemblies of Western design) was loaded to the power unit reactor in one of the European NPP for pilot operation. The decision about developing fuel assemblies of own design for the reactors of Western design (PWR) was adopted by the management bodies of TVEL OJSC in 2002. The TVS-KVADRAT design is based on long experience in manufacturing and operation of nuclear fuel in VVER-1000 reactors. The developed TVS-KVADRAT fuel allows to enter the most capacious and competitive fuel market segment — PWR.</td>
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</tr>
</tbody>
</table>

**Key Results of TVEL Fuel Company**

- **Revenue (net)** from sale of products, RUB mln
- **Adjusted free cash flow**, RUB bln
- **Net income**, RUB mln
- **EBITDA margin**, %
- **Dividends paid in 2015**, RUB mln
- **Export orders portfolio for products and services of FE NFC for a 10 year period**, USD bln
- **Labor efficiency**, RUB mln / person
- **Average staff number, persons**
- **Environmental expenses**, RUB mln
- **Gross tax liabilities, (actually paid)**, RUB mln
- **Average salary growth**, %

### 2013

- Completion of the qualification of TVEL OJSC (CHMP OJSC) by Candu Energy Inc., the Canadian company, as pressure pipes supplier for the CANDU reactors.
- Completion of the transaction on acquisition of the shares in Urals Integrated Electrochemical Plant OJSC by the joint Russian-Kazakh enterprise, UEC CJSC. Delivery within the UEC project of the first batch of products in the amount of 300,000 separative work units (SWU).
- Signing of the contract with Finenovomir, the company from Finland, on nuclear fuel supply for the first loading of the new Hanzhink NPP and its operation within 10 years with the chances of the contract prolonging for further operators.
- Signing the contract to extend fuel supplies to the Dukovany NPP (Czech Republic) from 2014 till 2028.
- Signing the contract in Beijing with Jargau Nuclear Power Corporation (JNPC) and China Nuclear Energy Industry Corporation (CNEIC) for fuel supply for the initial zone of 3 and 4 Power Units in the Tianwan NPP, as well as six packaged refuelings of 3rd unit and the contract for components supply to produce fuel at Yibin Fuel Factory for all four power units. The contract provides for regular supplies of TVS-2M fresh nuclear fuel and components till 2025.
- Signing of the four-party memorandum under the “Zero Failure” project by TVEL Fuel Company and the operators from Czech Republic, Bulgaria, Ukraine and Russia.
- Completion of the HEU-LEU contract. The four separation enterprises of the Fuel Company — UEP OJSC, SGCHE OJSC, PA ECF OJSC and AECC OJSC — accomplished successfully the task within the twenty years historic intergovernmental agreement for low-enriched uranium delivery to the USA, produced from the Russian weapon-grade uranium, — the contract is known as the HEU-LEU contract. During these years the works on the material, which would serve as the fuel for the US nuclear power plants, were carried out by the separation enterprises of TVEL Fuel Company.
Highlights

January
- 03
- Signing of the contract with the Federal Office for Weights and Measures (PTB, Germany) for designing and implementing the project for the construction of a prototype reactor.

February
- 02
- Start of the construction of a prototype reactor.

March
- 04
- TVEL JSC signed a memorandum of understanding with UKRAZATOM-UKRANATOM for the construction of a pilot-scale reactor.

April
- 05
- TVEL JSC signed a memorandum of understanding with the Argentine company INVAP for the construction of a pilot-scale reactor.

May
- 06
- TVEL JSC signed a memorandum of understanding with COMAS for the construction of a pilot-scale reactor.

June
- 07
- Signing of the contract for initial loading of fuel to the power unit No. 1 in the Leningrad NPP.

July
- 08
- Successful completion of the next stage of the project for the construction of a prototype reactor.

August
- 09
- Signing of the contract for the construction of a prototype reactor.

September
- 10
- TVEL JSC signed a memorandum of understanding with the Argentine company INVAP for the construction of a pilot-scale reactor.

October
- 11
- TVEL JSC signed a memorandum of understanding with the Argentine company INVAP for the construction of a pilot-scale reactor.

November
- 12
- TVEL JSC signed a memorandum of understanding with the Argentine company INVAP for the construction of a pilot-scale reactor.

December
- 13
- TVEL JSC signed a memorandum of understanding with the Argentine company INVAP for the construction of a pilot-scale reactor.
Chapter 1.

About TVEL Fuel Company

TVEL JSC is a parent company of TVEL Fuel Company of ROSATOM. TVEL JSC was registered by Moscow Registration Chamber on September 12, 1996. In 2015 a new edition of the Articles of Association with the new name of the company TVEL Joint Stock Company (TVEL JSC) was approved in order to bring the Articles of Association of TVEL OJSC in accordance with applicable Civil Code of the Russian Federation (Federal Law as amended on May 5, 2014 under No. 99-FZ).

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 TVEL KVADRAKT fuel of proprietary design for PWR reactors of Western design.

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).
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.

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, including:
- zirconium
- isotopes
- lithium
- polishing powders
- calcium
- titanium products
- zeolite catalysts
- fluorohydrogen compounds
- rare-earth metals
- superconductor materials

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.

TVEL JSC (the Holding Managing Company) is the management center for TVEL Fuel Company’s operations.

Position of TVEL Fuel Company in the Nuclear Technological Chain

- Exploration
- Extraction
- Ore processing
- Conversion
- Enrichment
- Fuel fabrication

Regions of Presence of TVEL Fuel Company

- MSZ PJSC (Elektrostal)
  - Production of nuclear fuel for power reactors of Russian design.
  - Production of nuclear fuel made of RepU reprocessed uranium for PWR and BWR Western reactors in cooperation with AREVA.
  - Production of nuclear fuel and components for research reactors

- NCCP PJSC (Novosibirsk)
  - Production of nuclear fuel for power reactors of Russian design.
  - Production of nuclear fuel for PWR reactors of Western design (TVS-KVADRAT).
  - Production of nuclear fuel and components for research reactors

- AECC JSC (Angarsk)
  - Uranium Enrichment

- TVEL JSC (Moscow)
  - Uranium Enrichment

- VNIINM JSC TsPTI SC (Moscow)
  - Uranium Enrichment

- MSZ PJSC (Moscow)
  - Uranium Enrichment

- OKB-Nizhny Novgorod JSC (Nizhny Novgorod)
  - Uranium Enrichment

- ChMP JSC (Glazov)
  - Uranium Enrichment

- VPA Tochmash JSC (Vladimir)
  - Uranium Enrichment

- AECC JSC (Angarsk)
  - Uranium Enrichment

- Zheleznyak JSC (Zheleznyak)
  - Uranium Enrichment

- KMP PJSC (Kovrov)
  - Uranium Enrichment

- Uralpribor LLC (Novouralsk)
  - Uranium Enrichment

- VNIINM JSC TsPTI SC (Moscow)
  - Uranium Enrichment

- OKB-Nizhny Novgorod JSC (Nizhny Novgorod)
  - Uranium Enrichment

- Centrotech-SPb JSC (St. Petersburg)
  - Uranium Enrichment

- PA ECP JSC (Zelenogorsk)
  - Uranium Enrichment

- AECC JSC (Angarsk)
  - Uranium Enrichment

- TVEL JSC (Moscow)
  - Uranium Enrichment

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  - Uranium Enrichment

- TVEL JSC (Moscow)
  - Uranium Enrichment
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)** — a group of integrated plants engaged in enrichment and conversion of uranium.
- **Nuclear Fuel Fabrication Complex (NFFC)** — a group of subsidiary industrial enterprises that manufacture nuclear fuel for various reactors.
- **Gas Centrifuge Complex (GCC)** — a group of subsidiary industrial enterprises producing gas centrifuges (GC) and accessories for enterprises of the separation-sublimation complex.
- **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 — Centretech—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).

Specific nature of the social environment of TVEL FC operations is that three enterprises of the Company are located within Closed Administrative Territorial Units (CATU): Seversk, Novouralsk, Zelenogorsk and one is located within a mono-town (Glazov). These enterprises are town-forming organizations and major taxpayers.

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. VPA Tochmash JSC replaced the GC production with civilian and special production, as well as the production of accessories for enterprises of the nuclear industry.

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

<table>
<thead>
<tr>
<th>Company</th>
<th>Share</th>
</tr>
</thead>
<tbody>
<tr>
<td>Areva</td>
<td>28%</td>
</tr>
<tr>
<td>Westinghouse Electric Company</td>
<td>17%</td>
</tr>
<tr>
<td>TVEL FC</td>
<td>10%</td>
</tr>
<tr>
<td>GNF</td>
<td>6%</td>
</tr>
<tr>
<td>Others</td>
<td></td>
</tr>
</tbody>
</table>

NPP Units in Operation as of the End of the Reporting Year

<table>
<thead>
<tr>
<th>Region</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asian-Pacific</td>
<td>129</td>
</tr>
<tr>
<td>North America</td>
<td>118</td>
</tr>
<tr>
<td>West Europe</td>
<td>115</td>
</tr>
<tr>
<td>CIS and Eastern</td>
<td>70</td>
</tr>
<tr>
<td>South America</td>
<td>7</td>
</tr>
<tr>
<td>Africa</td>
<td>2</td>
</tr>
</tbody>
</table>

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 Techsnabexport JSC take one third of the world market services on uranium enrichment.
Global nuclear fuel market highlights 2015

78 Reactors supplied with domestically produced fuel

16 Countries where nuclear power plants are currently under construction

10.3 $bn USD portfolio of export orders for Front End NFC products and services for the next 10 years

1.6 $bn USD proceeds from exports of TVEL Fuel Company in 2015

441/35 Nuclear power units operational globally/in Russia, as of 31 December 2015

67/7 Nuclear power units currently under construction globally/in Russia, as of 31 December 2015

Major points of presence

35 units in Russia

15 units in Ukraine

6 units in the Czech Republic

4 units in Slovakia and 4 units in Hungary

1. Including unit 4 of the Beloyarsk NPP
2. According to IAEA, excluding floating nuclear thermal power plants and the Beloyarsk NPP
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. nuclear power market will approach 380 GW by replacing the outdated decommissioned facilities with the new ones. 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.

Competitive advantages of TVEL Fuel Company: operation excellence, hi-tech, powerful research cluster, continuous fuel improvement.

In this connection current and potential customers are offered additional attractive options which will help to both preserve the loading positions of ROSATOM on the global market of uranium enrichment and expand the market share.

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. The plant 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

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.

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 CMG (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 admit 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 PLUS/FTM 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.

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 restriction.

Customer satisfaction is of highest priority for TVEL Fuel Company. The requirements of highest priority for TVEL Fuel Company are:

- The Ukraine loaded the first batch of modified fuel by Westinghouse in the Power Unit No.3 of the South-Ukrainian NPP
- TVEL Fuel Company comprises the enterprises engaged in separation-sublimation and fabrication cycles enabling the Company to offer NF products and services in the form of package deliveries. Ultimately, it contributes to flexible contract pricing and optimized transport logistics. With a number of enterprises in each NF cycle, the Company is able to make highly reliable deliveries.
- TVEL Fuel Company is sufficiently competent to supply fuel for reactors designed in Russia, light-water Western-design reactors (PWR and BWR), and components for pressurized heavy water reactors (PHWR) abroad. The Company successfully manufactures nuclear fuel from reprocessed uranium in compliance with the EU regulations for manufacturing technology and the products manufactured.
- TVEL Fuel Company issues General License of the Federal Service for Export Control of Russia. The Federal Service for Export Control of the Russian Federation issued 59 single-use licenses by requests of TVEL JSC. Besides, nuclear fuel supplies were performed under the previously issued General License of the Federal Service for Export Control of Russia. The Federal Customs Service of the Russian Federation supervises the execution of the licenses issued by TVEL JSC. No violations were detected at year-end.

Main objectives for 2016

1. Development and strengthening of cooperation with all foreign partners of TVEL JSC.
2. Further expansion of the Company’s positions on the international markets of NFC, through promotion of fuel components produced in conformity with the Russian or foreign technologies.
3. Further extension of cooperation with foreign partners on fabrication of nuclear fuel and components from reprocessed uranium.
4. Further cooperation with foreign partners on fuel supplies for research reactors designed in other countries.

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.

Foreign Economic Activities of TVEL Fuel Company

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

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.

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 respect any decision of our partners, if such decisions are honest and transparent, and if they contribute to the development of the 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.

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.
Poland
Contracts signed for the supply of TVS and zirconium-based components for the “Maria” research reactor

Bulgaria
One reload of TVSA-12 new generation fuel was supplied for the Kozloduy NPP. The loading was scheduled for 2016

India
Contract signed for the delivery of fuel pellets for the Tarapur Atomic Power Station that operates BWR reactors

Iran
Contract signed for the export of enriched uranium Product (EUP) from Iran in exchange for supplies of natural uranium from Russia

Czech Republic
Contract signed for the supply of fuel for the Temelin and Dukovany NPPs

Ukraine
Program for the supply of nuclear fuel for Ukraine’s nuclear power stations implemented in full despite the high risks of delayed payment for TVS fuel by NNGC Energoatom

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

List and characteristic of international alliances and projects with foreign partners, as well as the key results in the reporting year

Project 2015 results

Cooperation with AREVA
TVEL JSC continues its cooperation with AREVA concerning production by MSZ PJSIC of nuclear fuel and components from reprocessed uranium using AREVA technologies for European NPPs with PWR and BWR reactors. During the operation of FA made by MSZ PJSIC under the contract with AREVA, no loss of containment has ever been registered.

TVS-KVADRAT Project
Continued cooperation with foreign partners on TVS-KVADRAT fuel promotion to nuclear fuel markets for research reactors of Western design. Continuation of pilot operation of TVS-KVADRAT in Swedish PWR reactor. A number of NPP operators with PWR reactors throughout the world show active interest in qualification of the Russian fuel.

Center for Technology Services ALVEL a.s. JSC Joint Venture
Continued successful accomplishment of the Russian-Czech Joint Project “Center for Technology Services”. Key operation areas:
• experimental and analytical research under contract with VNIINM JSC;
• coordination and administration of Move to Zero Fuel Failure project;
• promotion of general purpose industrial products.

Uranium Enrichment Center Project
Successful implementation of joint Russian-Kazakhstan project on Uranium Enrichment Center establishment

UKRTVS Joint Venture CJSC
Development of bilateral cooperation in nuclear fuel fabrication. TVSA and components were used to fabricate FA for the Ukrainian NPP.

Project “Fabrication Plant in Ukraine”
Within the year 2015 the project of nuclear fuel production set up in the Ukraine was frozen. No practical measures were put into effect due to lack of finances of Ukrainian partner. Nevertheless, TVEL JSC considers that the project is in the best strategic interests of both Company and the Ukrainian party, and is prepared to continue the project fulfillment on the previously agreed terms.

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

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).
Strategy

Strategy and Business Plan of TVEL Fuel Company for 2015–2019 were approved by the Strategic Board of ROSATOM. The strategy established core performance indicators for mid-term and long-term periods till 2030.

Under the current conditions on the FE NFC markets, as well as with restricted investment recourse, the continuous efficiency improvement is a key condition to preserve leadership by TVEL Fuel Company in the international field. Effective execution of research and development (R&D) and realization of production capacities modernization are aimed to ensure multiple growth of the key financial and economic indicators by the year 2030.

Adequate management of the enterprises’ resources, ensuring flexibility of technological conversions in accordance with the market conditions and continuous increase of labor efficiency contribute to the image of TVEL Fuel Company as the most efficient division of ROSATOM.

Efficiency

We always look for the best solution. We are efficient in everything we do. When faced with a task, we use the company’s resources as rationally as possible and always seek to improve the work processes. No obstacle can prevent us from finding the most effective solution.

Safety

Safety comes first. In our activities our top priority is to ensure full safety of people and environment. When it comes to safety, every little thing matters – we know our safety rules, strictly follow them and never hesitate to crack down on safety violations.

Respect

We respect our customers, partners and suppliers. We always listen to and hear each other regardless of the positions and jobs that any of us may have. We respect the history and traditions of the industry. The achievements of the past inspire us to new levels of success.

One step ahead

Our ambition is to be a leader in the global markets. We are always one step ahead in terms of technology, knowledge and qualifications of our employees. We can tell what tomorrow will bring and we stand prepared today. We are always learning and developing. Every day we attempt to do better than we did yesterday.

A united team

We are ROSATOM. We have common goals. Working as a team of like-minded colleagues, we can achieve truly extraordinary results. Together we stand stronger and can meet our most ambitious goals. The achievements of our employees are the achievements of the Company.

Taking responsibility for the result

Each of us bears personal responsibility to the state, the industry the colleagues and the customers for the result and quality of our work. We require excellence in everything we do. We process the result, not the effort. A good result is the basis of our further progress.

Structure of values of TVEL Fuel Company

Efficiency

We always look for the best solution. We are efficient in everything we do. When faced with a task, we use the company’s resources as rationally as possible and always seek to improve the work processes. No obstacle can prevent us from finding the most effective solution.

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Contribution of the results 2015 in achievement of the strategic goals of TVEL Fuel Company

**Goal / Indicators**  
**Target** GROWTH ON NFC MARKETS

### Project Creation of conceptually new fuel types

**Goals / Indicators**  
Nuclear fuel for fast neutron reactors (MNUP fuel), REMIX.

**Results of 2015**  
Within the frameworks of NF substantiation 4 experimental fuel assemblies with the mixed nitride uranium plutonium fuel were produced and placed for testing in FN-600 reactor.

**Effect**  
Development prospects.

### Project Creation of Experimental Demonstration Energy Complex

**Goals / Indicators**  
Construction of reactor facility BREST-OD-300, MNUP fuel fabrication modules and SFN reprocessing module.

**Results of 2015**  
The license for Fabrication/Refabrication Module (FRM) construction was granted and construction works were started; SGCHE JSC officially obtained the status of an operating organization; the License for Fabrication/Refabrication Module (FRM) construction was granted and construction works were started; SGCHE JSC officially obtained the status of an operating organization.

**Effect**  
Development prospects.

### Project MOX-fuel production

**Goals / Indicators**  
Completion of MOX-fuel production mastering for RU FN-800 and reaching the design properties of productivity.

**Results of 2015**  
The pilot lot TVS-KVADRAAT was operated in power unit core of one of the European NPPs. During the first one-year operation phase, no fuel cell was depressurized.

**Effect**  
Market development.

---

**Project TVS-KVADRAAT**

**Goals / Indicators**  
Enter to the market of nuclear fuel for Western design reactors.

**Results of 2015**  
The pilot lot TVS-KVADRAAT was operated in power unit core of one of the European NPPs. During the first one-year operation phase, no fuel cell was depressurized.

**Effect**  
Market development.

---

**Project Creation of fuel with new consumer properties**

**Goals / Indicators**  
VVER-1000: TVSA-12, TVS-4A, TVS-4M, VVER-440: RK-3, RBMK: TVS-C.

**Results of 2015**  
Completion of supporting materials development for TVSA-12; Launching into production. Full make-up shipment to Kozloduy NPP; Acceptance tests of new age fuel TVSA-12 were conducted; that has the improved technical and economic features and is substantially more efficient on operation for power 104% from the nominal one.

**Effect**  
Market retention.

---

**Project Fabrication Plant in Ukraine**

**Goals / Indicators**  
Organization of nuclear fuel production in the Ukrainian Federation.

**Results of 2015**  
No practical measures were put into effect in 2015 due to lack of finances of Ukrainian partner. TVEL JSC is ready to continue its realization on earlier coordinated conditions.

**Effect**  
Market retention.
• Lead time decline, increase in labor productivity, manufacture
• Anchoring at precision engineering market
• Expansion at chemical machinery and products market;
• Implementation of sectoral, divisional RPS projects, as well as
• Expansion at Russian metallurgy market and entry to interna-

Results of 2015: UEP JSC as part of the consortium with the leading scientific organizations became the industrial partner in develop-

cipment and creation of multi-laser automated complex of lay-
er-by-layer synthesis conducted in the line of the Ministry of Edu-
cation and Science of the Russian Federation.

In the framework of production diversification VPA Toshmash JSC
mastered the series production of nuclear reactor core compo-
ents for NPP RU RBMK; the commitments under the 3-year
contract with Rosenergoatom Concern JSC were fulfilled.

First export contract for delivery of 70 tons of calcium injection wire by one of the countries of Asia-Pacific Region was signed by
CMMP JSC.

For execution of a foreign contract NCCP PJSC created the pro-
tory of Ideas”.

ACCE JSC continued works of refrigerating station reconstruction
with installation of 8 refrigerating machines in building No. 10A.

ChMP JSC completed decommissioning of building 7 earlier used
for production of fuel for IGUR.

NCCP PJSC completed decommissioning of buildings 22, 6S
and 17 produced by TVEL for industrial uranium-graphite reactor
(IUGR).

CMMP JSC completed decommissioning of building 7 earlier used
for production of fuel for IGUR.

PA ECP JSC conducted modernization with transition to ozone-

1. According to the International Integrated Reporting Framework, “capitals” mean resources and relations being the sources and the results of value creation processes.

TVEL Fuel Company holds an important place in the national economy and has a considerable impact on the regions of its presence. The Company is seeking to maximize positive effects of its activities. The Company activity is marked with a specific uncontaminating environment
al impact of its production facilities and business processes, in particular, at the back end of the nuclear fuel cycle.

TVEL Fuel Company activity depends on a great number of external and internal factors and is conducted in close cooper-

The value generated by TVEL Fuel Company is not only marketable products and increase of profitability of the Company, but also in a great variety of economic, social and environmental effects of their activities.
The business model reflects the capitals (resources and relationship) used by TVEL Fuel Company, the products and services, as well as operating results that have an impact on the capitals, and illustrate the role of the business model in the relationships with the interested parties.

**Business model of TVEL Fuel Company**

- **RESOURCES**
  - Financial capital
  - Human capital
  - Intellectual capital
  - Natural capital
  - Production capital
  - Social capital

- **SECOND CORE**
  - Employees
  - Suppliers and partners
  - Customers
  - Researchers and developers

- **MAIN PRODUCTS**
  - Nuclear fuel products
  - Conversion services
  - Enrichment services
  - Production of fuel rods
  - Poweder and pellets

- **FRONT END NFC**
  - Production chain of productive activities of TVEL Fuel Company
  - The main activities and key products

- **SERVICES AND PRODUCTS**
  - Enrichment services
  - Production of fuel rods
  - Poweder and pellets

- **2015 RESULTS**
  - Financial capital
  - Human capital
  - Intellectual capital
  - Natural capital
  - Production capital
  - Social capital

**Business model scheme**

The business model scheme represents detailed processes and business activities of TVEL Fuel Company. The key element is the production chain: from uranium concentrate to nuclear fuel assemblies and thereby generating growth of other capitals of TVEL Fuel Company. Capital gains ensure maintenance of production plans. The business model scheme reflects the relationship with external parties.

**Value for the Company**

TVEL Fuel Company generates both the value for the Company and the value for its stakeholders. To harmonious relationships with the environment, the Company conducts activities that contribute to development of educational, scientific and social infrastructure, and thereby maintaining growth of other capitals.

**Value for stakeholders**

The relationship between TVEL Fuel Company and its stakeholders determines the perception of nuclear development by the international community and its awareness of the Russian nuclear fuel producer; contribution to development of educational, scientific and social infrastructure of presence, and its stakeholders determines the perception of nuclear development by the international community and its awareness of the Russian nuclear fuel producer.

**Main Products**

- Nuclear fuel products
- Conversion services
- Enrichment services
- Production of fuel rods
- Powder and pellets

**2015 Results**

- Financial capital
- Human capital
- Intellectual capital
- Natural capital
- Production capital
- Social capital

**Being a socially responsible company and striving to harmonious relationships with the environment, TVEL Fuel Company generates both the value for the Company and the value for its stakeholders.**

- Financial Capital
- Human Capital
- Intellectual Capital
- Natural Capital
- Production Capital
- Social Capital

**Main Products**

- Nuclear Fuel Products
- Conversion Services
- Enrichment Services
- Production of Fuel Rods
- Powder and Pellets

**2015 Results**

- Financial capital
- Human capital
- Intellectual capital
- Natural capital
- Production capital
- Social capital

**Business model scheme**

The business model scheme represents detailed processes and business activities of TVEL Fuel Company. The main activities and key products.

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**Main Products**

- Nuclear fuel products
- Conversion services
- Enrichment services
- Production of fuel rods
- Powder and pellets

**2015 Results**

- Financial capital
- Human capital
- Intellectual capital
- Natural capital
- Production capital
- Social capital
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.

ROSTOM 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. ROSTOM 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%.

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 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.

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.

In 2015 TVEL Fuel Company (as well as KMZ JSC, UEIP JSC, and MSZ PJSC) became the pilot division in RPS-project of ROSTOM “Complex Manufacturing Optimization of Enterprises of Nuclear Industry” for development of objective trees and Hoshin Kanri Matrices (X-matrices).

With the purpose:
• 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.

Chapter 3.
Performance management
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).

Realization of efficiency improvement goals

<table>
<thead>
<tr>
<th>Long-term objectives within the Strategy for 2015–2030</th>
<th>Key projects</th>
<th>Efficiency indicators included in the KPI of the heads</th>
<th>Record of Achievements of TVEL FC in 2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Measures for optimization and concentration of production; Program for separation plants modernization; Preparation to transition to new enrichment technology platform (new generation gas centrifuges); Large-scale implementation of RPS projects and involvement of all functional services in its development.</td>
<td>Projects for operational efficiency improvement; Projects for improvement of long-term efficiency of future periods; Nuclear products stock optimization; Material assets stock optimization; Sites development concept; R&amp;D establishment; Energy consumption optimization; RPS adoption.</td>
<td>AIFCF; Labor efficiency; Prime cost of enrichment and fabrication; Semi-fixed costs; Reserves.</td>
<td>Reduction of semi-fixed costs by 10% by the year 2014; Labor savings of 21% by the year 2014; Completion of conversion process stage at SGCHE JSC; 2 sites were granted the status of RPS-enterprises, and there are 4 enterprises-candidates; Implementation of nearly 1,000 personal RPS projects, which is about 1,300 projects higher than in 2014. Economic effect is RUB 1,475 mln; Employees of the Company filed more than 108,000. SFIs with economic effect equal to RUB 388.7 mln; Start of works on R&amp;D establishment at Novouralsk site.</td>
</tr>
</tbody>
</table>

The foundation that the effectiveness of TVEL JSC rests upon

1. Competitive level of SWU net cost, even compared to the new Western production facilities
2. Successful implementation of measures aimed at increasing production efficiency
3. Development of a wide range of products and mastering of new technologies (nuclear fuel for research reactors of Western design, BWR fuel pellets)
4. Introduction of state-of-the-art and efficient gas centrifuges
5. Successful implementation of RPS (ROSATOM Production System) projects

In 2007 the enterprises of TVEL JSC started implementation of the program “New Image” aimed at improvement of operation efficiency and labor efficiency increase. TVEL JSC established a task to increase competitive abilities of the enterprises and to maintain safety and high quality of products. The solution involved:

- cost reduction,
- corporate structure optimization,
- production diversification.

The program was implemented in close cooperation with trade unions, local governments and regional authorities. TVEL JSC participated actively in social projects and development of the regions of presence. The enterprises conducted regular meetings with labor collectives, veterans and youth, open discussions of different issues connected with restructuring.

As a result, the enterprises of fabrication, separation-sublimation and gas centrifuge complexes achieved remarkable success. For instance, performance of MSZ PJSC increased 3.5 times, and economic effect of reorganization in production of powder and fuel pellets amounted to RUB 3 bln. In 2006 average salary at the factory amounted to RUB 15,000, and in 2010 — more than RUB 43,000.

Reserves Identification Project

Implementation of the large-scale project for identification of the reserves in conversion, separation and fabrication cycles of ROSATOM State Corporation is a significant direction in efficiency improvement. Main efforts are focused on the following areas:

- improvement of efficiency in power facilities and power consumption;
- optimization of consumption of outsourced services and services rendered by own departments;
- optimization of the costs related to personnel;
- optimization of the costs related to non-nuclear materials;
- optimization of the costs related to administration and maintenance activity;
- reduction of stock material assets and incomplete production;
- optimization of floor efficiency (i.e. non-core assets);
- optimization of receivables and payables ratio.


The Company has been running the system production cost management since 2014. Cost management system was adopted as the Concept for nuclear products prime cost management; it is reflected in KPI 2015.

Starting from 2015 responsibility is divided into production costs directions. Responsibility is assigned for each cost element on an individual basis in the form of clear and particular goals — from the level of the senior vice-presidents and on, vertically, to all specialists, including each “minor group leader”.

Gemba Offices

Information centers for production management (Gemba offices) were established in the shops of the enterprises. These offices make it possible to observe and to estimate the influence of each worker on production cost and financial performance of the whole enterprise. This creates an important channel for visualization of involvement of each worker in cost management.

Level of costs control through KPI system, %

93% costs controlled through the system of KPIs in 2015

Economic effect of the reorganization in the production of powder and pellets

RUB bln

<table>
<thead>
<tr>
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What are the medium- and long-term objectives of TVEL JSC?

ALEKSEY A. GRIGORIEV
Senior Vice-President for Strategy and Marketing

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.

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.

NATALIA V. NIKIPELOVA
Senior Vice-President for Finance, Economy and Corporate Management

What are the medium- and long-term objectives of TVEL JSC?
31. Corporate Governance System

The principal direction for corporate governance improvement is maintenance of rapid decision-making by management bodies along with detailed consideration of the matters, which ensures efficient activities of TVEL JSC and its subsidiaries. The objective lies in reduction of decision-making process and quality improvement of the documents submitted to the management bodies.

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.

Measures taken by TVEL JSC to improve the corporate governance:
- exclusion to the extent possible of the circulation of paper media used for convening meetings and for submission to their Board of Directors of materials on the agenda. The decision-making process by the management bodies is implemented through the Uniform Industry-Specific Electronic Document Management System;
- local regulatory acts are being amended with the purpose to reduce the time and improve the quality of corporate paperwork.

In the reporting year the system of corporate governance in the Fuel Company was focused on improvement of interaction between the management bodies, increase of their efficiency, and exclusion of wrong decisions. Similar plans have been also determined for the next year.

Implementation of the corporate policy implies coordination and supervision over scientific and research, investment, financial, selling, social and HR activities, and pricing policy of the subsidiaries. Legal relations between TVEL JSC and subsidiary companies in decision making procedures in the process of production economic activity are based on the approved regulations on interaction of the ROSATOM with TVEL JSC and of TVEL JSC with its subsidiaries.

TVEL JSC and its subsidiaries have placed already into practice some provisions of the Corporate Governance Code recommended by the letter of the Central Bank of Russia of 09 April 10, 2014, with due regard to specific character of the legal status of ROSATOM set by legal regulatory acts of the Russian Federation, providing for unity of nuclear industry enterprises management; these provisions are reflected in the number of local regulatory acts. TVEL JSC on a voluntary basis, assuming no obligations on regular and required disclosure, discloses all the required information on the website http://www.e-disclosure.ru/portal/company.aspx?id=400, namely:
- Articles of Association, amendments and supplements thereto;
- Annual Reports;
- Annual Financial Statements, notices of approval of the annual financial statements, explanatory notes to the annual financial statements;
- Audit Reports;
- List of affiliates, changes made to the list of affiliates, notices of disclosure of the list of affiliates, and other information stipulated by the Regulation Concerning Disclosure of Information by Issuer of Emission Securities.

Scheme of TVEL JSC Corporate Governance Bodies

The supreme governance bodies of subsidiaries — participants of TVEL Fuel Company are the General Meetings of Shareholders (Members). The procedure of decision-making at general meetings of shareholders (members) in the subsidiaries included in TVEL Fuel Company is determined by the internal regulations on these bodies.

The management bodies of TVEL JSC and its subsidiaries include the Boards of Directors and the Sole Executive Bodies acting on the ground of relevant regulations approved by the general meetings on shareholders.

In 2015 Atommenergoprom JSC, the Sole Shareholder of TVEL JSC, adopted nine decisions including but not limited to: approval of the Annual Report 2014; approval of the Annual Financial Statement 2014; approval of the auditor of the Account (Financial) Statements 2014; election of the members to the Board of Directors, the auditing committee; distribution of income for 2014 and dividend payment following the results of half-year and nine-months periods of 2015 financial year.

The Board of Directors of TVEL JSC is formed by the Sole Shareholder of TVEL JSC — Atommenergoprom JSC (AEP JSC) with due regard to qualification and expert knowledge that are required to solve the specified problems.

The Board of Directors consists mainly of outside directors (not the employees of the Company), professionals who have wide experience in the industry and understanding of the specifics of the nuclear industry and the Company activities.

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:

- Lyudmila Mikhailovna Zalimskaya, Director General of TENEX;
- Kirill Borisovich Kornav, Deputy Director General for Development and International Business of ROSATOM;
- Valdaslav Igorovich Korogadin, Director for NFC and NPP Lifecycle Management of ROSATOM;
- Aleksandr Markovich Lokshin, First Deputy Director General for Operational Management of ROSATOM, Chairman of the Board of Directors of TVEL JSC;
- Nikolay Losifovich Solomom, First Deputy Director General for Corporate Affairs — Senior Finance Director of ROSATOM;
- Yuri Alexandrovich Olenin, President of TVEL JSC.
Members of the Board of Directors are not shareholders of TVEL JSC. Information on TVEL JSC shareholding must be disclosed by the candidate in the position of the member of the Board of Directors at the time of filling the consent form for election.

There are no independent members in the Board of Directors within the meaning of the Corporate Governance Code of TVEL JSC.

In accordance with the Articles of Association of TVEL JSC decision on payment of remuneration to the members of the Board of Directors of the Company falls within the competence of the General Meeting of Shareholders (decision of the Sole Shareholder of TVEL JSC — AEP JSC).

No remuneration and compensation of the expenses related to performance of obligations were provided for the members of the Board of Directors of TVEL JSC in 2015. All members of the Board of Directors of the Company get salary according to the place of their primary business. No assessment (including self-assessment) of the activity of the Board of Directors was performed.

No committees and commissions operated within the Board of Directors of TVEL JSC during the reporting period.

REPORT OF THE BOARD OF DIRECTORS OF TVEL JSC ON THE RESULTS OF THE COMPANY DEVELOPMENT IN THE PRIORITY FIELDS

In 2015 the Board of Directors held 11 meetings and made decisions on the most important issues of TVEL FC activity, including:

• approval of the budget and scheduled financial-economic indicators of activity of TVEL JSC;
• approval of organizational structure of TVEL JSC;
• decision on participation of TVEL JSC in Autonomous Non-Profit Organization for Sports and Recreation "Atom-Sport";
• approval of recommendations to the Sole Shareholder for net income distribution following the results; and
• approval of recommendations to the Sole Shareholder for dividend payment following the results of the half-year and nine-months periods of the reporting year.

In 2014 TVEL JSC made no transactions classified by law as major transactions and interested party transactions, subject to preliminary approval by the Governance Bodies of TVEL JSC.

SHARE CAPITAL STRUCTURE

The Company’s authorized capital is formed from nominal value of the Company’s shares held by the Sole Shareholder — AEP JSC.

The Company’s authorized capital amounts to Twenty-two million nine hundred sixty-one thousand six hundred seventy (22,961,670) rubles.

The Company distributed registered common shares with nominal value of one (1) rouble per each in the amount of Twenty-two million nine hundred sixty-one thousand six hundred seventy (22,961,670) pieces. All shares of the Company are issued in non-documentary form.

SHARE CAPITAL STRUCTURE

The share capital structure was not changed during the reporting year.

Risk Management of TVEL Fuel Company is based on continuous monitoring of its external and internal environment, complex analysis of threats and opportunities affecting achievement of both economic and social goals of the Company.

Main goal of TVEL JSC Corporate Risk Management System (CRMS) is identification, assessment and minimization of threats that may affect the results of activities of the Company.

Main CRMS objectives are the following:

• timely identification of risks that may affect the achievement of the goals by the Company;
• support of stable financial environment of the companies of TVEL Fuel Company with due consideration of the risks;
• continuous monitoring of risks and control over implementation of the plans of arrangements aimed at reduction of likelihood of risks occurrence and minimization of the consequences of such occurrences.

Analysis of the risks affecting achievement of target values of financial and economic activities of TVEL JSC and the companies forming the TVEL Fuel Company’s management system shall be carried out at the stage of development of the budget and medium-term plans, and at the stage of their control and performance forecast.

Regulatory documents aimed at CRMS development of the Fuel Company, approved in 2015:

• Methodological guidelines for credit risks management of TVEL JSC and the companies forming the management system of TVEL Fuel Company;
• Procedure and methodological guidelines for financial risks management of TVEL JSC and the companies forming the management system of TVEL Fuel Company.
### Management of key risks at TVEL Fuel Company

#### 1. Risk of NFC product/service sales volume reduction
- **Risk factors:** Delays in commissioning of power units; appearance of new players on the world service market for Uranium enrichment; politically motivated decisions on products/services substitution.
- **Risk management mechanisms:** Improvement of technical characteristics of fuel and introduction of new types of fuel; improvement of economic characteristics of fuel; IFR determination for “Foreign orders portfolio for 10 years”.
- **Brief results of risk management in the reporting year:** Pellets production was started upon confirmation by the Indian part of its readiness to contract execution. Production to intermediate container with subsequent refueling the customer’s containers. The product was delivered in due time.
- **Trends in likelihood of risk occurrence in the reporting year:**
- **Trends in significance of risk occurrence:**

#### 2. Price risk
- **Risk factors:** Reduction of prices for the products and services of the Fuel Company due to changes in market prices for natural uranium and its conversion and enrichment services; reduction of prices for the products and services of the Fuel Company due to changes in prices of fuel deflator indices.
- **Risk management mechanisms:** Including in the contracts of the Fuel Company of the hedging mechanisms aimed to smooth market prices fluctuation; Including in the contracts of the Fuel Company of the deflator indices bracketed with account of specific nature of the regional markets of nuclear fuel having independent publication sources.
- **Brief results of risk management in the reporting year:** There has been provided partial hedging of risk of changes in market prices for natural uranium and NFC services.
- **Trends in likelihood of risk occurrence in the reporting year:**
- **Trends in significance of risk occurrence:**

#### 3. Currency risk
- **Risk factors:**贬值 in a set of assets and liabilities denominated in the same currency; growth of volatility courses of the main world currencies (Euro, dollar) changing financial situation of the Fuel Company.
- **Risk management mechanisms:** Hedging (including natural): export proceeds of TVEL JSC, denominated in currency, exceed greatly the amount of short-term currency credits raised to cover operating cash deficiency in 2015; foreign orders portfolio diversification.
- **Brief results of risk management in the reporting year:** Amount of the credits raised in 2015 has decreased in Euros — by 63%, in USD — by 100% as compared to 2014.
- **Trends in likelihood of risk occurrence in the reporting year:**
- **Trends in significance of risk occurrence:**

#### 4. Risk of failure on the part of counterpart parties (suppliers, customers) to fulfill obligations in full and on time
- **Risk factors:** Decreased financial economic stability of customers/suppliers; reduced equipment loading level; weak points in production chain, shortage of resources.
- **Risk management mechanisms:** Provision in the contracts of payment methods and methods of securing obligation to reduce the credit risk level, including without limitation: letter of credit, advance payment (100%, impossible, but no less than 10%), funds reservation, provision by the counterparty of bank guarantee or guarantee of payment equal to the amount of the granting of a trade credit under the contract is providing for deferred payment for the delivered products/services.
- **Brief results of risk management in the reporting year:** Monitoring of financial standing of the counterparties with the purpose to detect any signs of changes in financial standing, leading to changes in the level of the credit risk and/or the measures of the credit risk management.
- **Trends in likelihood of risk occurrence in the reporting year:**
- **Trends in significance of risk occurrence:**

#### 5. Risk of growth of expenses for NFC services and products
- **Risk factors:** Changes in service tariffs of natural monopolies, sole suppliers; reduced equipment loading level; weak points in production chain, shortage of resources.
- **Risk management mechanisms:** Application of the principles of the Uniform Industrial Procurement Standard of ROSATOM; Application by the enterprises of pulling production management systems, RPS, implementation of the program “RPS-Division”.
- **Brief results of risk management in the reporting year:** Partial recovery of inflationary costs increase was provided.
- **Trends in likelihood of risk occurrence in the reporting year:**
- **Trends in significance of risk occurrence:**

#### 6. Risk of nuclear, radiation safety
- **Risk factors:** Violation of requirements in environment protection and nuclear safety, insufficient level of emergency preparedness, lack of resources for safety measures, etc.
- **Risk management mechanisms:** Modernization of hazardous objects; decontamination (treatment) of sources of hazard; professional development of personnel; constant monitoring of nuclear, radiation, industrial and fire safety; setting of tasks and objectives, and elaboration of measures aimed at reduction of risks in the field of environment protection, IRS, complex and technical inspections.
- **Brief results of risk management in the reporting year:** No INS events; no excess of the set level of radiation exposure of personnel, population and environment; outside emergency response teams subject to attestation in the reporting year have confirmed their availability in emergency situations.
- **Trends in likelihood of risk occurrence in the reporting year:**
- **Trends in significance of risk occurrence:**

#### 7. Risk to environmental safety
- **Risk factors:** Violation of requirements in environment protection and nuclear safety, insufficient level of emergency preparedness, lack of resources for safety measures.
- **Risk management mechanisms:** Implementation of actions aimed at safety improvement using special reserve funds of ROSATOM; comprehensive environmental monitoring and public opinion survey; improvement of the integrated professional (labor safety), industrial and environmental safety management system (ISO 14001:2004, OHSAS 18001: 2007), setting of tasks and objectives, and elaboration of measures aimed at reduction of risks in the field of environment protection; complex and technical inspections.
- **Brief results of risk management in the reporting year:** Reduction of the significance of environmental risks connected with water consumption, emission of polluting and ozone-depleting substances, production of radioactive and non-radioactive waste.
- **Trends in likelihood of risk occurrence in the reporting year:**
- **Trends in significance of risk occurrence:**

#### 8. Risk of labor safety
- **Risk factors:** Lack of resources for safety measures.
- **Risk management mechanisms:** Safety culture improvement; improvement of the integrated professional (labor safety), industrial and environmental safety management system (ISO 14001:2004, OHSAS 18001: 2007), setting of tasks and objectives, and elaboration of measures aimed at reduction.
- **Brief results of risk management in the reporting year:** LTIFR indicator in 2015 is 0.14, which is lower than the target value of 0.34 established in KPI.
- **Trends in likelihood of risk occurrence in the reporting year:**
- **Trends in significance of risk occurrence:**

#### 9. Risk of industrial safety
- **Risk factors:** Insufficient level of emergency preparedness, lack of resources for safety measures.
- **Risk management mechanisms:** Emergency response drills; performance review of outside emergency response teams; improvement of the integrated professional (labor safety), industrial and environmental safety management system (ISO 14001:2004, OHSAS 18001: 2007), setting of tasks and objectives, and elaboration of measures aimed at reduction.
- **Brief results of risk management in the reporting year:** No accidents and incidents that are subject to registration in the database.
- **Trends in likelihood of risk occurrence in the reporting year:**
- **Trends in significance of risk occurrence:**
3.3. Improvement of the Assets Protection System

The management of TVEL Fuel Company fully shares the anti-corruption policy implemented by the government of the country. In order to create conditions for reduction of corruption and embezzlement, the enterprises of the Fuel Company adopted a local regulatory document “Concerning implementation of complex program for anti-corruption and anti-embezzlement in TVEL JSC and companies of the management system of the Fuel Company”. The document is based on “Complex Program for Anti-Corruption and Anti-Embezzlement in the Nuclear Industry for 2014–2015” approved by ROSATOM. Within the implementation of the Complex program ROSATOM approved “Plan for Anti-Corruption Actions Improvement in ROSATOM”. To arrange a system for prevention of illegal behavior the following was established in TVEL Fuel Company:

- Security Unit (at the level of TVEL JSC), including department of economic security, commercial secrecy safety department and Group of information and analytical support;
- Assets Protection Subdivisions (at the SIC level).

Structural subdivisions of TVEL FC for prevention of unlawful behavior perform continuous monitoring of assets flow, analysis of factors and terms that contribute to external and internal threats (risks) to assets and economic interests of TVEL JSC and SIC, implement measures for prevention, combating and neutralization of their negative consequences. In 2015 the analysis covered all subsidiaries of TVEL Fuel Company.

TVEL JSC implemented the Standard Industry-Specific Instructional Guidelines on Assessment of Corruption Risks in Organizations of ROSATOM. Accordingly, all subdivisions analyzed their business-processes, with specification of critical points and description of probable corruption offences. Based on the analysis the Company elaborated the cards of the corruption risks and developed measures aimed at risks mitigation.

The management of TVEL Fuel Company

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8-800-100-07-07@rosatom.ru — contacts of the corporate hot line of ROSATOM State Corporation for anti-corruption and anti-embezzlement in nuclear sector. For details visit ROSATOM website [http://www.rosatom.ru/en/about-us/anti-corruption/].


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The system for combating unlawful behavior in TVEL Fuel Company.
The challenges that the Security Unit faces are addressed by highly trained professionals, many of whom are also experienced nuclear experts. Thanks to their commitment, knowledge of the situation at the facilities, their integrity and alertness, the Security Unit can effectively prevent and deter serious incidents. All members of the Unit spare no effort knowing only too well that they have no margin for error.

Besides, TVEL Fuel Company has its own industry-specific program on anti-embarrassment and anti-fraud, for prompt decision-making the hot line was opened within the framework of this program. The program provides for material remuneration and protection of workers participating in the Program.

All suppliers and contractors are informed on anti-corruption policy and measures through procurement documents and contract provisions.

KEY RESULTS 2015:
1. 583 inspections (476 in 2014) were arranged and performed to prevent damage and loss of assets. More than 100 appeals to law enforcement agencies, resulting in initiation of more than 30 criminal cases. 146 workers were brought to disciplinary actions, 22 of whom were dismissed.
2. 120 inspections were carried out with regard to information on irregularities and violations received via specialized communication channels “Hot line”, in 32 cases the information was confirmed (in 2014 there were confirmed 18 cases of violation out of the 101 checked).
3. The amount of prevented and reimbursed damage resulted from measures for economic safety and assets protection was RUB 689 mln (against RUB 397 mln in 2014).
4. There are no completed legal actions against the organization or its employees in relation to corruption.

PLANS 2016:
• Identification and settlement of situations connected with the conflict of interests;
• Estimation of corruption risks in main business processes.

In 2015 “ROSATOM Corporate Academy” ANO trained 100% of workers of TVEL JSC under the program “Anti-Corruption Policy in the Organization”.

3.4. Internal Control System

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

Special Department of Internal Control (SDIC) is a subdivision of TVEL Fuel Company’s organization engaged in activities for implementation of the group of processes “Internal control and internal audit”:
• control and auditing activity;
• internal audit;
• functions of controlling authority for competition policy;
• interaction with the stakeholders regarding the internal control issues;
• management of coordination, planning and methodology of monitoring.

SDIC of TVEL JSC (a unit of the Director for Internal Control and Audit) operates in accordance with the Russian Federation, local regulations of TVEL JSC and ROSATOM. According to local regulations of TVEL JSC and ROSATOM, Special department for internal control of TVEL JSC provides functional guidance of 8 SDIC companies forming the management system of TVEL Fuel Company: AECC JSC, VNIIRMM JSC, KMZ JSC, SGCHE JSC, UEIP JSC, ChMP JSC, NCCP PJSC.

KEY RESULTS 2015:
1. The workers of the Unit of the Director for Internal Control and Audit carried out 31 arrangements, including participation in two corporate inspections of ROSATOM: “Check of efficiency of work of the delegated powers” and “Execution of state contracts operating in 2015 by organizations of ROSATOM for the years 2013–2015”.
2. There were carried out 5 reviews of SDIC efficiency in the companies of the management system of TVEL Fuel Company: AECC JSC, KMZ JSC, SGCHE JSC, UEIP JSC, ChMP JSC. No material violations were revealed in SDIC activity.
3. NCCPJ PJSC created the Internal Control Unit consisting of 3 persons.
4. VNIIRMM JSC introduced the post of the chief auditor.

PLANS FOR 2016:
It is planned to change the working environment of SDIC: improvement of internal control system and development of internal audit function.
3.5. Procurement Efficiency Management

TVEL Fuel Company supports, respects and protects basic human rights and builds its external business relationship on the principles of honesty, integrity and openness.

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

In 2015 total volume of warehouse material assets reduction at the enterprises of TVEL Fuel Company amounted to RUB 2,094 mln.

The largest procurement groups are the following: the products and services purchased from the companies of nuclear industry, power supply. These are the largest categories in procurement from sole supplier.

Basic groups of competitive procedures:
- materials and equipment,
- construction and installation works,
- manufacture of components,
- repair and maintenance of equipment.

Pursuant to provisions of the Uniform Industrial Procurement Standard of ROSATOM the Company may not provide any preferences to the suppliers on a territorial basis. The exception is only envisaged for outsourcing companies founded during the restructuring of TVEL Fuel Company. UIPS guarantees to such companies certain volumes of orders over a period of five years from the date of incorporation in the following way: the first year — 90%, the second year — 70%, the third year — 60%, the fourth year — 40%, the fifth year 25% of total annual demand of the client.

Local suppliers participate in competitive procedures on a common basis. Specific approaches to local suppliers are not applied. The Company maintains no special records for such suppliers.

Some of the key suppliers and contractors of the Company enjoy monopolist position on the market. Under the provisions of UIPS (Uniform Industrial Procurement Standard of ROSATOM) no tender is provided for such contractors (natural monopoly entities), only the “Procurement from Sole Supplier” procedure.

In the reporting year the works within the framework of the Project “Optimization of the Fuel Company Logistics Management System” were continued, this project is planned for implementation till 2016. Purpose of the project:
- introduction of category management,
- reduction of stock reserves (works for optimization of uncalled stock and reduction of their level),
- optimization of warehouse infrastructure and material flows (optimization of material flows both in the internal logistics scheme of the enterprises, between the subsidiaries of the Company, and between enterprises of various divisions of ROSATOM).

In 2015 the Arbitration Committee of TVEL JSC received 109 complaints concerning procurement procedures of the Fuel Division (please refer to Diagram 6). This is about half the number of complaints received during the previous year. 22 complaints were recognized as reasonable and partially reasonable.

![Diagram]

**Diagram 6**

Procurement structure according to cost criterion, %

<table>
<thead>
<tr>
<th>Category</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
<th>2016 (plan)</th>
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<tr>
<td>Non-competitive</td>
<td>50.0</td>
<td>50.0</td>
<td>50.0</td>
<td>50.0</td>
</tr>
<tr>
<td>Competitive</td>
<td>50.0</td>
<td>50.0</td>
<td>50.0</td>
<td>50.0</td>
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</tbody>
</table>

**Complaints received by the Arbitration Committee of TVEL JSC in 2015**

<table>
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<tr>
<th>Amount (RUB)</th>
<th>Recognized reasonable</th>
<th>Withdrawn</th>
<th>Recognized unreasonable</th>
</tr>
</thead>
<tbody>
<tr>
<td>50,000–100,000</td>
<td>14</td>
<td>16</td>
<td>8</td>
</tr>
<tr>
<td>100,000–500,000</td>
<td>20</td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td>Over 500,000</td>
<td>51</td>
<td>51</td>
<td>51</td>
</tr>
</tbody>
</table>

**Main documents regulating procurement and establishing the criteria for the selection of suppliers and contractors of TVEL Fuel Company:**
- Unified Industrial Standard of Procurement, ROSATOM;
- Corporate Standard of TVEL JSC “Procurement Process”.

**Structure of TVEL FC Procurement:**

<table>
<thead>
<tr>
<th>Indicator</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
<th>2016 (plan)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Share of procurement through public competitive procedures under the UIPS, %</td>
<td>95</td>
<td>95</td>
<td>97</td>
<td>94</td>
</tr>
<tr>
<td>Total amount of procurement of TVEL FC</td>
<td>181,200</td>
<td>186,962</td>
<td>193,632</td>
<td>123,060</td>
</tr>
<tr>
<td>Total amount saved by subsidiaries of TVEL FC from procurement through public competitive procedures, RUB mln</td>
<td>2,534</td>
<td>2,601</td>
<td>2,852</td>
<td>minimum 2,000</td>
</tr>
</tbody>
</table>

**Structure of Suppliers and Contractors of TVEL FC**

| | Russia | Non-residents | Total |
| | 2013 | 2014 | 2015 | 2016 (plan) |
| Total Suppliers and Contractors | 3,298 | 34 | 3,332 |
| Competitive procurement procedures | 1,785 | 14 | 1,799 |
| Non-competitive procurement procedures | 1,513 | 21 | 1,634 |
Chapter 4.  
Efficiency  
In Results 2015

### EFFICIENCY IN RESULTS 2015

#### 4.1. Financial Capital

**FINANCIAL POLICY**

Financial management is maintained in accordance with the approved Financial Policy of TVEL Fuel Company to be agreed upon with ROSATOM.

- conservative approach to select financial institutions;
- diversification of funding sources, subject to an acceptable level of financial risks;
- single treasurer’s office;
- full disclosure.

Budgeting in the subsidiaries of TVEL Fuel Company is set in accordance with the unified budgeting procedure and standards of ROSATOM.

Budgets of the subsidiaries of TVEL Fuel Company are approved at the meetings of the Board of Directors of SC based on the results of consideration of the consolidated budget of the Company by the budget committees of TVEL JSC and ROSATOM.

**FINANCIAL RESULTS**

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

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Target</th>
<th>Actual value</th>
<th>Deviation, %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Investment activity integrating efficiency indicator*, %</td>
<td>100</td>
<td>105</td>
<td>4.5</td>
</tr>
<tr>
<td>AFCF of TVEL FC, RUB bln**</td>
<td>78.6</td>
<td>86.6</td>
<td>10.2</td>
</tr>
<tr>
<td>Labor efficiency (TVEL Fuel Company + TECHSNABEXPORT JSC), RUB mln /person</td>
<td>13</td>
<td>14.2</td>
<td>9.3</td>
</tr>
<tr>
<td>Semi-fixed costs, RUB bln</td>
<td>38.9</td>
<td>39.9</td>
<td>-2.5</td>
</tr>
<tr>
<td>Foreign orders portfolio for 10 years, USD bln</td>
<td>10,300</td>
<td>10,305</td>
<td>0.0</td>
</tr>
<tr>
<td>Foreign proceeds, USD mln</td>
<td>1,572.0</td>
<td>1,608.9</td>
<td>2.4</td>
</tr>
<tr>
<td>IRR for portfolio of new business projects, %</td>
<td>12</td>
<td>70.1</td>
<td>&gt;100</td>
</tr>
<tr>
<td>Integral indicator for new products***, %</td>
<td>100</td>
<td>91</td>
<td>-9.0</td>
</tr>
<tr>
<td>Proceeds on new products beyond and within the profile on a competitive basis, RUB mln</td>
<td>4,151</td>
<td>4,230.6</td>
<td>1.9</td>
</tr>
<tr>
<td>New products order portfolio of FC for 10 years, RUB mln</td>
<td>16,325.4</td>
<td>13,078.4</td>
<td>-19.9</td>
</tr>
<tr>
<td>LTIFR****</td>
<td>0.34</td>
<td>0.14</td>
<td>-58.8</td>
</tr>
<tr>
<td>No INES incidents at level 2 with personnel radiation exposure exceeding 50 mSv annually</td>
<td>No incidents</td>
<td>No incidents</td>
<td>No incidents</td>
</tr>
<tr>
<td>No industry-based INES incidents of above level 2</td>
<td>No incidents</td>
<td>No incidents</td>
<td>No incidents</td>
</tr>
<tr>
<td>Completion of state orders, %</td>
<td>100</td>
<td>100</td>
<td>0.0</td>
</tr>
</tbody>
</table>

---

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.

* 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.
Distribution of Export Revenue by Types of Products, USD mln

<table>
<thead>
<tr>
<th>Indicator</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nuclear fuel and components</td>
<td>1,437</td>
<td>1,412</td>
<td>1,447</td>
</tr>
<tr>
<td>Engineering services</td>
<td>7</td>
<td>12</td>
<td>8</td>
</tr>
<tr>
<td>Lithium products</td>
<td>3</td>
<td>5</td>
<td>18</td>
</tr>
<tr>
<td>Calcium, titanium, zirconium</td>
<td>12</td>
<td>11</td>
<td>11</td>
</tr>
<tr>
<td>Isotope products</td>
<td>10</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>Other products</td>
<td>26</td>
<td>22</td>
<td>37</td>
</tr>
<tr>
<td>Total</td>
<td>1,505</td>
<td>1,522</td>
<td>1,532</td>
</tr>
</tbody>
</table>

* The data are presented without adjustments for multiplying factor of the adjusted net foreign exchange position.

Dividend payout, RUB mln

<table>
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<tr>
<th>Indicator</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dividends paid to ATOMENERGO-PROM JSC, RUB mln</td>
<td>18,937</td>
<td>16,257</td>
<td>15,296</td>
</tr>
<tr>
<td>Dividends paid to TVEL JSC from subsidiaries</td>
<td>4,151</td>
<td>3,046</td>
<td>1,930</td>
</tr>
<tr>
<td>Total</td>
<td>23,088</td>
<td>19,293</td>
<td>17,226</td>
</tr>
</tbody>
</table>

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, specifically:

- increase in sales of nuclear fuel and its components for foreign NPPs (RUB +9,174 mln), particularly in 2015 refueling for Bushehr (Iran) in total volume RUB 3,527 mln) was completed;
- significant changes of macroeconomic factors (rates of major currencies against the ruble) resulted also in increase of 2015 revenue by RUB 27,274 mln as compared to 2014.
- changes in sales volume of other products, works and services affected positively the revenue in total volume of RUB 753 mln.
- increase in sales of nuclear fuel and its components for Russian NPPs had positive impact on revenue of 2015 in volume RUB 1,883 mln, particularly in 2015 the initial fuel loading was done on the new power unit of Leningrad NPP.
- decrease in other income and changes in foreign exchange rates.

Changes in sales of nuclear fuel and its components for Russian NPPs had positive impact on revenue of 2015 in volume RUB 1,883 mln, particularly in 2015 the initial fuel loading was done on the new power unit of Leningrad NPP. 2015 recorded the growth of uranium concentrate supplies and services of uranium conversion and enrichment — changes in sales volume in this direction of TVEL Fuel Company activities influenced increase of the revenue by RUB 9,703 mln.

Changes in sales volume of other products, works and services affected positively the revenue in total volume of RUB 753 mln.

Changes in contract prices and tariffs as compared to 2014 had positive impact on the results of the year 2015 and the revenue increased by RUB 2,268 mln.

Significant changes of macroeconomic factors (rates of major currencies against the ruble) resulted also in increase of 2015 revenue by RUB 27,274 mln as compared to 2014. The main factors of net profit growth are increase in revenues, cost optimization, increase in other income and changes in foreign exchange rates.

Dividend policy of TVEL JSC with regard to subsidiary and associated companies is established in compliance with the need for investment in production, its reconstruction and improvement of technical facilities.

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- nuclear fuel components (enriched fuel pellets) were sold to India in the amount of RUB 2,268 mln;
- macroeconomic factors (rates of major currencies against the ruble) resulted also in increase of 2015 revenue by RUB 27,274 mln as compared to 2014.
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Dividend policy of TVEL JSC with regard to subsidiary and associated companies is established in compliance with the need for investment in production, its reconstruction and improvement of technical facilities.
TVEL Fuel Company carries out its investment activities in line with the Uniform Industry-Specific Policy of ROSATOM and its organizations. Investments management system of TVEL Fuel Company is based on the principle of efficiency.

Investment activities

TVEL Fuel Company carries out its investment activities in line with the Uniform Industry-Specific Policy of ROSATOM and its organizations. Investments management system of TVEL Fuel Company is based on the principle of efficiency. The Investment Committee (further “the Committee”) is the permanent collegial advisory board acting under the guidance of the Chairman of the Committee and following the principles of the investment policy of ROSATOM and its organizations.

1. Optimization of investment demand on the projects, which primary tool is projects feasibility study or technical and economic audit (TEA). The procedure for TEA includes several stages: analysis of the existing needs (in conformity with the approved passport); ratio of the existing needs with the current situation in terms of ensuring the fixed assets with production volumes and so forth; identification of reserves to reduce the investment needs.

2. Identification of needs in prospective products. Within this framework the Portfolio of TVEL Fuel Company took the projects which had a positive impact on its profitability, both on a short and long term horizon. Such projects in TVEL Fuel can be: carbonate processing (NCCP PJSC); development and creation of layer-by-layer automated systems (UEIP JSC); creation of niobium and tantalum oxides production (AEEC JSC).

3. Identification and recognition of the economic effects of the projects already functioning. Such projects may include the projects with research and development (GC-9, GC-10, GC-11). These projects were referred earlier to the cost of projects (at initial stages of implementation), but after commissioning the aggregates and installation of aggregates on industrial complexes (GC-9), the effects which previously had an “estimated” status were confirmed and included when forming the Portfolio of TVEL Fuel Company (h.1% to portfolio yield).

The following organizational arrangements are held to increase the profitability of TVEL Fuel Company investment portfolio:

1. Optimization of investment demand on the projects, which primary tool is projects feasibility study or technical and economic audit (TEA). The procedure for TEA includes several stages: analysis of the existing needs (in conformity with the approved passport); ratio of the existing needs with the current situation in terms of ensuring the fixed assets with production volumes and so forth; identification of reserves to reduce the investment needs.

The following measures can serve to reduce the needs: replacing the new fixed assets acquisition with overhaul of the existing equipment; reducing the number of the equipment acquired based on the assessment of potential load in production capacity analysis; purchase of equipment with lower capacity or similar equipment from other producer. Based on the results of TEA 2015, the fuel optimization in TVEL Fuel Company made RUB 1,617 mln.

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Table 21 and 22). Since TVEL Fuel Company implements over 250 investment projects simultaneously, the amount of funding tends to reach common agreement on the following:

• investment priorities in order to implement the Business strategy of ROSATOM and TVEL Fuel Company;
• composition, structure, parameters of projects portfolio and amendments thereto;
• holding, structure, parameters of projects and achievement of the expected results;
• control of projects execution on each stage of the life cycle through preventive and corrective actions.

Results 2015

TVEL JSC Investment Committee held 32 meetings in 2015. The investment projects financing volume made RUB 29,125 mln (see Table 21 and 22). Since TVEL Fuel Company implements over 250 investment projects simultaneously, the amount of funding tends to vary to 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.

Assessment of Investments Efficiency

Efficiency of investment operations in TVEL Fuel Company is estimated using an Integrating indicator of investment activity efficiency. This indicator contains several elements (indicators) characterizing the efficiency of investment activity (further “IA”) in several areas:

Investment activity efficiency integrating indicator = NPV (30%) + IRR (30%) + key events performance indicator (40%).

1. Short-term efficiency of IA is estimated by NPV indicator for the period of 2015–2019. This indicator is used to assess profitability of the portfolio on a short-term horizon and it is a kind of “barrier” for inclusion in the Company’s portfolio of long term repay projects. Target value of NPV indicator for 2015–2019 is set to the amount of RUB 19.4 bn, actually the value reached following the results 2015 the level of RUB 9.4 bn, which made 151.3% of the performance relative to the planned value.

2. Long-term efficiency of IA is estimated using IRR of the portfolio for 2015–2030. Value of this indicator is set as 39.4%, actually the performance percentage made 128.9% (IRR for 2015–2030 made 50.9% on actual basis).

3. Quality of execution of the most important projects of the Company is estimated by the performance indicator of key events for the current year. List of the projects, key events of which are selected to be included into investment activity efficiency benchmark, is approved by ROSATOM on the basis of top level schedules that represent the “goal plan” status of the project. An event can be proved as complete based of the defined list of supporting documents, including but not limited to certificate of completion, act of assets acceptance for accounting, etc. Performance indicator of the key events subject to the results 2015 made 84.7%.

The events considered as incomplete include the following:

• Commissioning of control and measuring devices and automatic equipment (CMD&A) on AKSU-3 of 4 units bldg 3001 (UEIP JSC);
• Installation and commissioning of station control system XPV-25 (No. 2) (CSMP JSC);
• Modernization of site for defuorinated zirconium hydroxide production (CSMP JSC).

Commissioning and modification of new equipment; reducing the number of the equipment acquisition; identification of reserves to reduce the amount of funding; purchase of equipment with lower capacity or similar equipment from other producer.

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• ratio of the existing needs with the current situation in terms of ensuring the fixed assets with production volumes and so forth;
• identification of reserves to reduce the investment needs.
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.

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: • setting clear objectives to the level of small group leaders based on the objectives of the enterprise, • teaching RPS methodology to senior management and project participants, • implementation of RPS projects in the office and production on a single method, • introduction of the industry-specific automated system “Factory of Ideas”.

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.

Enterprises that are RPS Leaders receive the package of privileges including the following: visits of a business 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 2015 MSZ PJSC, KMP PJSC, UEIP JSC and TVEL JSC became pilot companies to introduce the industry-specific automated system “Factory of Ideas”.

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.

Examples of RPS projects in 2015 and the results

<table>
<thead>
<tr>
<th>Enterprise</th>
<th>Project</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>TVEL JSC</td>
<td>“Optimization of promising products development”</td>
<td>• Reducing the process time (PT) to produce and test samples by 53%; • Increase in labor efficiency by 16%</td>
</tr>
<tr>
<td>MSZ PJSC</td>
<td>“Optimization of manufacturing flow of TVEL and FA FN in production concentration in the block 279”</td>
<td>• Reduction of incomplete production (RIP) within the flow by 40%; • Increase in labor efficiency by 13%; • Economic effect RUB 250 mln</td>
</tr>
<tr>
<td>NCCP PJSC</td>
<td>“Production smoothing of FA VVER 1000”</td>
<td>• Reduction of PT for FA manufacturing by 17%; • Increase of labor efficiency from 0.35 FA/person per shift up to 0.40 FA/person per shift (22%); • Total economic effect for NCCP PJSC and TVEL JSC on related projects made RUB 84 mln</td>
</tr>
<tr>
<td>UEIP JSC</td>
<td>“Optimization of an across value stream for production of enriched uranium product in UEIP JSC”</td>
<td>• Reduction of across PT on ELP flow from 250 up to 130 days and nights; • Reduction of RIP in the flow on average till and after enrichment by 38%</td>
</tr>
</tbody>
</table>

Business Performance Assurance

Rosatom Production System

ROSATOM Production System (RPS) means the culture of lean manufacturing and continuous improvement of processes to ensure a competitive advantage on a global scale. RPS is based on five principles which encourage the employees:

• to be attentive to customer’s requirements;
• to solve problems as they occur;
• to incorporate quality into the process and produce no defective products;
• to identify and eliminate any loss (excess inventory, decoupling stocks, downtime, unnecessary movements, etc.);
• to be an example to colleagues.

These principles were formulated on the basis of the best examples of domestic and foreign experience, especially, the system of scientific organization of labor, production and management of the USSR Ministry of Medium Machine Building and Toyota Production System of Toyota, the Japanese automobile company.

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 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

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:

• setting clear objectives to the level of small group leaders based on the objectives of the enterprise,
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RPS enterprises in 2016

RPS Leaders:
• MSZ PJSC
• KMP PJSC
• UEIP JSC

RPS Candidates:
• NCCP PJSC
• SGCHE JSC
• PA ECP JSC

RPS Reserve

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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.

Enterprises that are RPS Leaders receive the package of privileges including the following: visits of a business 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 2015 MSZ PJSC, KMP PJSC, UEIP JSC and TVEL JSC became pilot companies to introduce the industry-specific automated system “Factory of Ideas”.

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.

Examples of RPS projects in 2015 and the results

<table>
<thead>
<tr>
<th>Enterprise</th>
<th>Project</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>TVEL JSC</td>
<td>“Optimization of promising products development”</td>
<td>• Reducing the process time (PT) to produce and test samples by 53%; • Increase in labor efficiency by 16%</td>
</tr>
<tr>
<td>MSZ PJSC</td>
<td>“Optimization of manufacturing flow of TVEL and FA FN in production concentration in the block 279”</td>
<td>• Reduction of incomplete production (RIP) within the flow by 40%; • Increase in labor efficiency by 13%; • Economic effect RUB 250 mln</td>
</tr>
<tr>
<td>NCCP PJSC</td>
<td>“Production smoothing of FA VVER 1000”</td>
<td>• Reduction of PT for FA manufacturing by 17%; • Increase of labor efficiency from 0.35 FA/person per shift up to 0.40 FA/ person per shift (22%); • Total economic effect for NCCP PJSC and TVEL JSC on related projects made RUB 84 mln</td>
</tr>
<tr>
<td>UEIP JSC</td>
<td>“Optimization of an across value stream for production of enriched uranium product in UEIP JSC”</td>
<td>• Reduction of across PT on ELP flow from 250 up to 130 days and nights; • Reduction of RIP in the flow on average till and after enrichment by 38%</td>
</tr>
</tbody>
</table>
A team that stands strong and united

VLADIMIR V. ROZDESTVENSKY
Senior Vice-President for Production

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.

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.

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.
Suggestions for Improvement

The Company provides regulated payments for suggestions for improvement (SFI).

• SFIs adopted: payments equal to RUB 300,000/1,000 for submitting SFIs of various categories and economic value.
• SFIs implemented with economic effect: payment upon introduction of a percent of the resulting economic effect; contributing to implementation of SFIs with technical solutions (rationalization proposals): up to 30% of the amount paid to the authors.

In 2015 there were filed more than 108,000 SFIs, out of which 91.9% were 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.

In 2015 the winners of the sectoral SFI competition and RPS realization projects among specialists of ROSATOM State Corporation are the following persons:
• in nomination “The most active worker on SFIs submission”: Dmitri Vyacheslavovich Maksimov, Process Engineer in CIMP JSC, who filed 188 suggestions for improvement;
• in nomination “The most active organizational on SFIs submission and realization”: UEIP JSC, filed over 14,000 SFIs and implemented — about 13,000 SFIs;
• in nomination “Quality Improvement”: Grigori Konstantinovich Izdol, Senior Engineer in CIMP JSC.

In 2015 there were filed more than 80% of SFIs from innovation proposals and SFI individual bonuses paid for the effect from the innovation proposals and SFI.

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**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.**

**PRODUCTION AND ECONOMIC RESULTS**

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.

The tasks set to the management of TVEL JSC subsidiaries for the next few years:
- further transformation of industrial relations;
- organization of small groups as a dynamic form of production control covering 100% of direct workers;
- increase in workload;
- building a system of cooperation between all management levels through controlled performance indicators;
- development of internal communications.

**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.

**Separation — Sublimation Complex**

In 2015 the plan of ISC enterprises on EUP production and achievement of the fixed utilization coefficient for installed capacity was accomplished to the full extent.

Major events 2015:
- transfer of the separation production AECC ISC to production mode for primary uranium hexafluoride (UHF);
- EUP production of RS-E grade to use in NF production for foreign NPPs (Temelin, Tianwan);
- disabling the fifth generation GC in accordance with the planned schedule;
- works in PA ECP ISC on highly enriched raw material to produce metallic uranium for Munich-II reactor;
- UEP ISC supplied additionally primary UHF to China.

**Main objectives for 2016 and in the midterm:**
- preparation and beginning of implementing measures aimed at optimizing the conversion production in CHMP ISC and SOCHE ISC in 2015–2016;
- release of EUP in SOCHE ISC to store at the warehouse of the International Center Uranium Enrichment (under IAEA control).

The main activity of TVEL Fuel Company is production and sales of fuel assemblies for power and research reactors.

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 108,299 mln.

Consumption structure of the products of this complex subsidiaries is not changed materially and main consumers are Russian and European NPPs.

In 2015 the plan of TVEL Fuel Company on nuclear fuel production was accomplished to the full extent, production capacities on nuclear fuel fabrication made 1,750 tHM.

**Revenue from FA sales, RUB mln**

<table>
<thead>
<tr>
<th>Name of parameter</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
<th>∆ 2015/2014, %</th>
<th>2016 (plan)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average headcount, persons</td>
<td>29,238</td>
<td>25,171</td>
<td>22,527</td>
<td>-10.5</td>
<td></td>
</tr>
<tr>
<td>Labor efficiency, RUB mln/pers</td>
<td>4.31</td>
<td>4.49</td>
<td>4.89</td>
<td>10.1</td>
<td></td>
</tr>
<tr>
<td>Revenue + Recognition of costs undertaken by external financing, RUB mln</td>
<td>131,820</td>
<td>138,281</td>
<td>189,284</td>
<td>36.9</td>
<td></td>
</tr>
</tbody>
</table>

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

**Labor efficiency dynamics of the separation-sublimation complex, RUB mln/person**

<table>
<thead>
<tr>
<th>Subsidiary companies</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
<th>∆ 2015/2014, %</th>
<th>2016 (plan)</th>
</tr>
</thead>
<tbody>
<tr>
<td>SGCHE JSC</td>
<td>2.82</td>
<td>3.41</td>
<td>3.88</td>
<td>13.9</td>
<td>4.25</td>
</tr>
<tr>
<td>AECC JSC</td>
<td>4.45</td>
<td>3.52</td>
<td>4.54</td>
<td>29.2</td>
<td>5.41</td>
</tr>
<tr>
<td>FA ECP JSC</td>
<td>4.79</td>
<td>5.52</td>
<td>5.77</td>
<td>4.6</td>
<td>6.48</td>
</tr>
<tr>
<td>UEP JSC</td>
<td>5.91</td>
<td>7.78</td>
<td>9.40</td>
<td>20.8</td>
<td>9.62</td>
</tr>
</tbody>
</table>

**Revenue from FA sales, RUB mln**

<table>
<thead>
<tr>
<th>Indicator</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
<th>∆ 2015/2014, %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Revenue from FA sales</td>
<td>73,595</td>
<td>81,055</td>
<td>109,299</td>
<td>34.8</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Year</th>
<th>Asian consumers</th>
<th>European consumers</th>
<th>Russian consumers</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015</td>
<td>43.4</td>
<td>42.7</td>
<td>33.7</td>
</tr>
</tbody>
</table>

**Production volume of the fabrication complex enterprises, ea**

<table>
<thead>
<tr>
<th>Product</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
<th>∆ 2015/2014, %</th>
<th>2016 (plan)</th>
</tr>
</thead>
<tbody>
<tr>
<td>FA VVER-1000</td>
<td>1,223</td>
<td>1,299</td>
<td>1,393</td>
<td>3.0</td>
<td>1,200</td>
</tr>
<tr>
<td>FA VVER-440</td>
<td>1,750</td>
<td>1,764</td>
<td>1,806</td>
<td>2.3</td>
<td>1,790</td>
</tr>
<tr>
<td>FA RBMK-1000</td>
<td>2,680</td>
<td>3,221</td>
<td>3,220</td>
<td>-0.03</td>
<td>3,410</td>
</tr>
<tr>
<td>FA BN-600, FN-800</td>
<td>485</td>
<td>291</td>
<td>286</td>
<td>-17</td>
<td>406</td>
</tr>
<tr>
<td>FA EGR-6</td>
<td>144</td>
<td>144</td>
<td>144</td>
<td>0</td>
<td>144</td>
</tr>
<tr>
<td>FA for research reactors</td>
<td>79</td>
<td>0</td>
<td>96</td>
<td>-96</td>
<td>74</td>
</tr>
<tr>
<td>FA PWR, BWR</td>
<td>337</td>
<td>352</td>
<td>104</td>
<td>-70.5</td>
<td>84</td>
</tr>
<tr>
<td>TOTAL, FA</td>
<td>6,847</td>
<td>6,624</td>
<td>6,062</td>
<td>17</td>
<td>6,538</td>
</tr>
<tr>
<td>Ceramic fuel pellets, 1U</td>
<td>1,490</td>
<td>1,505</td>
<td>1,605</td>
<td>6.4</td>
<td>1,386</td>
</tr>
</tbody>
</table>

**Labor efficiency dynamics of the fabrication complex, RUB mln/person**

<table>
<thead>
<tr>
<th>Subsidiary companies</th>
<th>2013</th>
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<th>2015</th>
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<tr>
<td>MSZ FSC</td>
<td>3.56</td>
<td>4.49</td>
<td>5.20</td>
<td>15.9</td>
<td>5.33</td>
</tr>
<tr>
<td>NCCP FSC</td>
<td>3.85</td>
<td>3.38</td>
<td>4.83</td>
<td>52.0</td>
<td>4.67</td>
</tr>
<tr>
<td>CHMP ISC</td>
<td>2.94</td>
<td>3.34</td>
<td>4.02</td>
<td>20.5</td>
<td>4.42</td>
</tr>
</tbody>
</table>
Gas Centrifuge Complex
Main consumers of the products of the gas centrifuge complex are companies of the separation and sublimation complex. Production plans on GC-9 and pilot batches of new advanced GC were accomplished to the full extent.

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.

Labor Efficiency Dynamics of the Gas Centrifuge Complex, RUB mln/person

<table>
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<tr>
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Non-Nuclear Products Manufacturing

<table>
<thead>
<tr>
<th>Direction</th>
<th>Major events 2015</th>
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</tr>
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<tbody>
<tr>
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<td>• achieved productivity on uranium dioxide powder and fuel pellets in one line in the amount of 500 tons per year; • manufactured and prepared metallic uranium for Munich-II research reactor shipment;</td>
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<td>Main tasks for the year 2016: • achievement of the established standards on the indicator “satisfactory output” during implementation of zirconium products manufacturing process on 3-rolling scheme at CIMP JSC; • mastering the production of FAAD-12 for Kizloduy NPP (Bulgaria) and FAAD plus for Kalinin NPP in NCCP PJSC (FA delivery to the customer in January 2016); • completion of mastering the production of the rest of CIPSBR for transport plants in MSZ PJSC;</td>
<td>Increase of sales volume of commercial lithium products and international expansion is planned in 2015. Plans include developing investment projects on modernization and enhancement of lithium production safety, further implementation of structures aimed at improving production efficiency, costs reduction due to mechanization of a number of operations and development of autonomous electrolyzers of lithium metal. Market conditions will be reviewed to increase production volumes.</td>
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Additive Technology
| | UDEP JSC acted as an industrial partner in the project on creation of domestic metal 3D printer by the consortium of the leading Russian research institutes, including Gridmash JSC and RPA CNIMASH JSC entering the group of ROSATOM. The consortium participants began works on designing and developing separate elements of 3D printer. | In 2016 development of domestic metal 3D printer will be continued by the consortium of the leading Russian research institutes (Gridmash JSC, RPA CNIMASH JSC, The National University of Science and Technology MISiS, St. Petersburg Polytechnic University) with participation of UDEP JSC as an industrial partner. Also the plans include the possibility to organize production on provision of 3D printers with domestic metallic powders. In 2017 works on 3D printer designing and development are scheduled for completion. |

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</table>

Additive Technology
| | UDEP JSC acted as an industrial partner in the project on creation of domestic metal 3D printer by the consortium of the leading Russian research institutes, including Gridmash JSC and RPA CNIMASH JSC entering the group of ROSATOM. The consortium participants began works on designing and developing separate elements of 3D printer. | In 2016 development of domestic metal 3D printer will be continued by the consortium of the leading Russian research institutes (Gridmash JSC, RPA CNIMASH JSC, The National University of Science and Technology MISiS, St. Petersburg Polytechnic University) with participation of UDEP JSC as an industrial partner. Also the plans include the possibility to organize production on provision of 3D printers with domestic metallic powders. In 2017 works on 3D printer designing and development are scheduled for completion. |

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.

Labor Efficiency Dynamics of the Gas Centrifuge Complex, RUB mln/person

<table>
<thead>
<tr>
<th>Subsidiary companies</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
<th>2016 (plan)</th>
</tr>
</thead>
<tbody>
<tr>
<td>KMZ JSC</td>
<td>2.83</td>
<td>2.42</td>
<td>2.33</td>
<td>-3.6</td>
</tr>
<tr>
<td>UGCMP LLC</td>
<td>2.28</td>
<td>3.48</td>
<td>2.99</td>
<td>-14.0</td>
</tr>
</tbody>
</table>
TVEL JSC recognizes that the quality of the product being supplied affects safety and efficiency of operation of the facilities these products.

The main strategic objective of TVEL JSC in the aspect of quality is a permanent increase of the product quality, aimed at maximum satisfaction of customers and allowing to extend the markets, ensure sustainable development of its subsidiary companies and to obtain global leadership.

Except from the TVEL JSC Quality Policy

QUALITY MANAGEMENT
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. The audits did not reveal any critical non-conformities.

ENERGY EFFICIENCY
Energy Saving and Efficiency Improvement Program
The project on energy consumption reduction and energy efficiency improvement in industrial companies of ROSATOM is one of the major projects aimed to improve competitiveness in the specific industry.

TVEL Fuel Company is one of the leaders in introduction of saving equipment and with the possibility of automatic activating the programs was approved subject to the results of energy and thermovisual inspections held at the Company’s organizations. The Program events were defined by the Federal Law d/d November 23, 2009 No. 261-FZ “Concerning Energy Conservation and Energy Efficiency improvement” and the order of ROSATOM d/d August 09, 2011 “On approval of target indicators of energy consumption reduction by organizations of this sector in 2011–2015”.

Major projects of the Program that were accomplished in 2011:

• 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);
• installation of frequency-regulated drives of various systems with replacement of electric drives;
• modernization of lighting systems with switching to energy saving equipment and with the possibility of automatic activating (APCS);
• replacement and modernization of energy-intensive technological and power equipment;
• decentralization of compressor park;
• implementation of energy management system ISO 50001;
• winterization of enclosure structures in buildings and facilities;
• replacement and modernization of engineering networks (water supply, steam supply, air supply) with replacement of insulating coatings of pipelines surfaces, fittings, etc.

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. The Program established target values for reduction of energy consumption (as compared to the reference year 2009) in monetary terms. As a result of the implemented activities these values were achieved and exceeded (see Diagram 12). In 2015 energy consumption by the Company’s subsidiaries was reduced by 27.2%, heat energy – by 40.3% as compared to the reference values of 2009 under comparable conditions.

Over the period 2011–2015 the energy saving as a result of implementation of activities on reduction of energy consumption and energy efficiency increase in money terms under comparable conditions made RUB 8,820 mln. Reduction of energy consumption is not related to reduction in the production 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

Hereunder calculation of savings 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 consumptions, as well the own methods for TVEL FC companies to be approved by TVEL JSC and coordinated with ROSATOM State Corporation.
We have learned to be more flexible in our work, listen to our customers and, more importantly, hear what they have to say. We have learned to understand and even anticipate their needs and match them with the right solutions and innovations that we may thus extensively contribute to the competitiveness and sustainability of the Company.

In line with the decision of the Operations Committee of ROSATOM State Corporation, on 1 January 2015 the enterprises of TVEL Fuel Company signed energy supply agreements with the newly appointed Atomenergopro姆bty distribution company. To reduce the cost of energy (power) for certain enterprises of TVEL Fuel Company, TVEL JSC and Atomenergopro姆bty JSC negotiated an additional discount (to the existing discount of RUB 10 for MW/h that is applied to all the entities of TVEL FC).

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.

Competitive positioning of the Company as a result of our work, listen to our customers and match them with the right solutions and innovations that we may contribute to the competitiveness and sustainability of the Company.

As for operating and new power units of NPPs, works are aimed to increase the discharge burn-up range, increase service life of FA, improve operational reliability of nuclear fuel, prove the working efficiency of FA in terms of increased capacity of power units (104–107% of N nominal) with unconditional security. Works on optimizing the design of TVS-KVADRAT assemblies (for PWR), new fuels for the RR, floating power units, new cores for NPIB offer many innovations and ensure the strategy of entering new markets.

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 Innovative Development and Technological Modernization for the period up to 2020 (in the public part).
- Long-Term Program “Nuclear Fuel and Effective Fuel Cycles at Russian NPPs for 2012–2016 and up to 2020”.

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

Main provisions of scientific and technical activities of TVEL Fuel Company:
- Improvement of characteristics and technology of nuclear fuel production;
- Design and technological development of the separation sublimation complex;
- Innovative activities in the non-nuclear industry.

**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.**

**Design of nuclear fuel for Western reactors**

- The pilot lot TVS-KVADRAT was operated in connection with the introduction of modernized version of the fuel assembly — TVSA-T.mod.1 (optimization of spring cartridge, support grid and first spacer grid). Launching into production, Fuel was produced and delivered to NPP in full make-up volume.

**Design of nuclear fuel for low-capacity nuclear power stations, RR, NPIB**

- Conducting acceptance tests of two experimental fuel assemblies IRT-3M with low-enriched uranium-molybdenum fuel for research reactors.
- Start of production of FE, AE, BPR, start-up neutron sources and emergency shutdown rods for the core 14-15-T.

**Results of activities on improvement of nuclear fuel properties and production technologies in 2015**

**Design and adaptation of nuclear fuel and cores for Russian power reactors**

- Completion of supporting materials development for TVSA-12, Launching into production; Full make-up shipment to Kudankul NPP.
- Completion of licensing procedure for TVS-2M with profiled fuel cells to reach the power 1070 MW of the NPP. Launching into production, Full make-up shipment to Power Unit 2 of Balakovo NPP.
- Start of operation of the second generation fuel with high enrichment in 15-month fuel cycle under conditions of the increased capacity (1,485 MW) on one of the Units of Rys NPP.
- TVS-2M nuclear fuel was put into operation in 18-month cycle on Power Units 1 and 2 of Tianwan NPP (in make-up volumes).
- Addendum to the Front End Design of TVSA-T for the Temelin NPP was elaborated in connection with the introduction of modernized version of the fuel assembly — TVSA-T.mod.1 (optimization of spring cartridge, support grid and first spacer grid). Launching into production, Fuel was produced and delivered to NPP in full make-up volume.

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- The pilot lot TVS-KVADRAT was operated in power unit core of one of the European NPPs. During the first one-year operational phase, no fuel cell was depressurized

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- Conducting acceptance tests of two experimental fuel assemblies IRT-3M with low-enriched uranium-molybdenum fuel for research reactors.
- Start of production of FE, AE, BPR, start-up neutron sources and emergency shutdown rods for the core 14-15-T.
Plans for nuclear fuel design and improvement in 2016:
- Completion of licensing of TVS-12 in Bulgaria
- Start of operation of the first core of NPP-2006 Project (Power Unit 1 of Novovoronezh NPP-2).
- Development of supporting materials for the implementation of TVS-2M from first charges of Units 3 and 4 of Tianwan NPP.
- Development of materials for preliminary substantiation of safe operation of Hanhikivi NPP.
- Manufacture of equipment for the inspection and repair branch of the European country, where a pilot of TVS-KVAD-RAT is operated.

“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 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. FRM is intended for production of mixed nitride uranium-plutonium fuel (MNUP fuel) for start load and reload of the BREST-OD-300 reactor. Spent mixed nitride uranium-plutonium fuel is transferred to the SNF processing module for extraction (SNF PM) of 99.9% of nuclear materials for the purpose of using such for production of MNUP fuel again. Construction of three facilities such as FRM, BREST-OD-300 and SNF PM will demonstrate the closure of the nuclear fuel cycle, that was not succeeded in any other country in the world.

The Operation Headquarters for EDEC facilities construction, created in 2015, includes representatives of ROSATOM, TVEL JSC, SGCHE JSC, VNINM JSC, Private Institution of ROSATOM SC Innovation and Technology Center for “Proryv” project, Atomprom JSC, SverdNIIhimmach JSC, YaVA Stroi LLC, NII CJSC and other organizations of the State Corporation. The main objective of the Headquarters is organization of cooperation and coordination of EDEC participants.

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-800 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 hydro-metallurgical processing technologies BREST.

Creation of Fast Neutron Reactors Line
Currently only two fast neutron (FN) power reactors are operated in the world and the two both are located in Russia — FN-600 and FN-800. FN-800 is operated with uranium fuel and FN-800 is operated with mixed MOX-Fuel in the production facility to be established in the end of 2014. Thus, ROSATOM holds a 100% share of the MOX-Fuel market for Fast Neutron Power Reactors.

Within the context of constructing the power unit with BREST-OD-300 reactor with lead coolant, the design documentation for power unit construction was approved by ROSATOM and state expertise in 2015. The works on reactor construction are carried out in compliance with the schedules.

Within the context of constructing the industrial energy complex with RU FN-1200, the works on optimization of project solutions continued in 2015 and ROSATOM conducted the Scientific and Technical Council (STC) to consider the reactor project, as a result of which the Company obtained recommendations for its further optimization. All RU project development must be completed by the year 2017.

SECOND BUSINESS CORE DEVELOPMENT
In order to create new knowledge intensive 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 subsidiaries are the basis for construction of the industrial centers (clusters) as growth points for intensive non-nuclear production. Creation of the new innovative technologies 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.

Grounds for development of the second core business:
- competencies in each of the innovative development programs;
- availability of infrastructure for distribution of new production facilities — buildings, railways, co-generation plants, sewage treatment plants, etc.;
- qualified personnel;
- good manufacturing practice.

Total revenue from the sale of innovative projects in non-nuclear sphere in 2015 reached RUB 7,334 mln, which is 20.1% higher than in 2014.

Within the recent years, TVEL JSC is increasing its investment in development of general industrial activities. In 2014 the investments (Company’s own funds) in general industrial activities amounted around RUB 300 mln on account of own funds, and the investments of 2015 made more than RUB 400 mln, since the beginning of 2016 more than RUB 450 mln was spent.

Accomplished within this period investment projects made a major contribution to the development and increase of sales volume on key non-nuclear products (increase by 2.4 times over the period 2012–2015).

Main areas for TVEL FC new business development

Revenue from Innovative Projects in the Non-Nuclear Industry, RUB mln

<table>
<thead>
<tr>
<th>Business Segment</th>
<th>2015</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>New Energy</td>
<td>2,891</td>
<td>3,453</td>
</tr>
<tr>
<td>Machine Building</td>
<td>3,740</td>
<td>4,819</td>
</tr>
<tr>
<td>Metallurgy</td>
<td>3,872</td>
<td>4,609</td>
</tr>
<tr>
<td>Chemicals</td>
<td>1,765</td>
<td>2,269</td>
</tr>
<tr>
<td>Total</td>
<td>12,288</td>
<td>16,131</td>
</tr>
</tbody>
</table>
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 $^7\text{Li}$ isotope, that is used in nuclear medicine to treat cancer. As to the Chepetsky Plant, in addition to developing new products and introducing them into production (for example, in 2015 it was hot-rolled titanium tubes of large diameter, titanium welding and spring wire and intermetallic products), the facility also showed a significant increase in the sales of general industry products. Most significantly, the new products and the expansion of non-nuclear production enabled the Chepetsky Plant to preserve around 200 jobs and ensure employment for qualified personnel which is especially important in the single-industry town where ROSATOM State Corporation is present.

The enterprises of the Novouralsk site also have a significant growth potential. Despite the tough situation in the Russian automotive market (namely, a serious decline in the passenger car sales), Ekoalyans CJSC, an enterprise of the Novouralsk site, managed to increase the proceeds from the sales of autocatalysts by more than 30%.

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.
Superconductive Materials
Within the framework of the Russia’s participation in ITER International Project under TVEL JSC control the superconductive materials technology was developed and its production was launched on the basis of ChMP JSC since 2009.

In the course of the technology development, its developers, employees of VNIINM JSC, solved a number of difficult technical problems. Novelty of the developed technical solutions, their relevance and practical value were confirmed by 18 patents.

The uniqueness of superconductors production in ChMP JSC lies in the fact that their manufacture takes place in the same enterprise, starting from raw materials (niobium, niobium-titanium alloy, high tin bronze) to the final product: superconducting strands — wires of less than 1 mm in diameter with the number of superconducting fibers more than 18,000 (for Nb3Sn strands).

With the view of further development of superconducting materials, CHMP JSC continued the development of structures and technology for superconducting wires manufacture for advanced directions of science and technology: medical computed tomography and magnetic systems of particle accelerators, including for the Russian project NICA.

Scope of superconductive materials application:
• medicine — NMR scanners;
• transportation — water, air, land (magnetic levitation trains);
• electric power — energy storage devices;
• industries — magnetic separators;
• research in chemistry and biology — nuclear magnetic scanners;
• research laboratories — high field pulsed magnets;
• telecommunications systems;
• geological exploration, mining and processing of minerals.

99.995%

NCCP PJSC mastered the production for high purity lithium monohydrate LHM-7 with purity 99.995%.

Within the framework of the relevant investment project the possibility was confirmed to achieve high degree enrichment of lithium-7 isotope. The first batches of high purity LHM-7 were supplied to the customer.

Current Products by New Businesses of TVEL FC

<table>
<thead>
<tr>
<th>New businesses</th>
<th>Current products</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lithium and Lithium-Based Materials</td>
<td>Lithium Hydroxide 7, Lithium Metal, Lithium Ethynolate</td>
</tr>
</tbody>
</table>
| Materials for Li-ion cells | • Lithium Ferrophosphate
• Lithium Cobaltate |
| 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 |
| Special metallurgy | • Zirconium alloys
• Titanium alloys
• Hafnium
• Calcium and Calcium injection wire |
| Special tube rolling | Titanium alloys rolling (tubes, rods) |
| Nanometalurgy | Superconductors and SMA-based wires |
| Nickel filtering elements, powders | |
DEVELOPMENT OF RESEARCH-COMPLEX

Modernization and Technical Upgrade of Research and Development Complex

TVEL Fuel Company continues modernization and development of infrastructure of its R&D complex within the framework of the projects of technical upgrade of the enterprises comprising the complex and in accordance with Federal Target Program „New Age Nuclear Energy Technologies for the Period of 2010–2015 and up to 2020“ (FTP NANET). The purchased new equipment will help to solve the problems more effectively. For example, technical upgrade in VNIINM JSC will allow to increase the level of safe operation of equipment, engineering systems and to increase the performance on contractual obligations associated with improved technical parameters and upgraded equipment of scientific and engineering units.

Results 2015:
• commissioning works on TP-10 substation, construction and installation works on TP-11 substation;
• supplied: VU-VSM 1200/6 (MESH 70) for application of double-layer "insulator-metal" coating with the layer of 15 mcm thick, Alcortron-16c machine, HITACHI TM 3030 microscope;
• supplied: APC Smart-UPS single-phase uninterruptible power supply, options for transmission electron microscope Tecnai G2 20 TWIN, circular grinding machine with PLC G20P-50NC;
• completed construction and installation work on modernization of special ventilation systems in buildings 29, 29a, 34;
• executed: contracts for supply of input ventilation systems, refrigeration equipment, control cabinets.

Training of Personnel

VNIINM JSC implements training of graduate students in the following directions and specialities:

as it applies to the items created by the Company’s enterprises is assigned to the Patent and Licensing Department of TVEL JSC, as well as to technical departments, developmental design offices, intellectual property protection teams and patent-information departments of the Company’s enterprises.

The number of registered inventions, utility models, industrial designs and production secrets (know-how) as of December 31, 2015.

Involvement of Universities in Implementation of Investment Projects

National Research Nuclear University MEPhI (Moscow Engineering Physics Institute), Moscow Institute of Steel and Alloys (MISA), branch of MEPhI (NRIU) in Seversk, Ural Federal University and other institutions were also involved by sub-contracting with branch organizations (VNIINM JSC, CHMP JSC) in the development of mathematical models of processes, investigations of the properties of different materials, etc.

Amount of investment for R&D in higher educational establishments was equal to RUB 20 mln.

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).

The objects protected by law are inventions, utility models, production secrets (know-how), software for electronic computing machines, databases (DB), trademarks and industrial designs.

Intellectual Property Identification and Legal Protection System as it applies to the items created by the Company’s enterprises is implemented in accordance with applicable laws of the Russian Federation, 18.06.01 — industrial methodology recommendations and by local regulations.

Functions to identify and secure legal protection of the items of intellectual property are assigned to the Patent and Licensing Department of TVEL JSC, as well as to technical departments, developmental design offices, intellectual property protection teams and patent-information departments of the Company’s enterprises.

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).

INTRODUCTION OF NEW INFORMATION TECHNOLOGIES

With the view of increasing the efficiency and optimizing business processes, TVEL Fuel Company uses up-to-date information technologies (IT) and solutions.

Results 2015:
1. Prominnovatsii CJS completed successfully the replication project for company resource management on SAP ERP base. The system was placed into commercial operation on 01.01.2016. Following the results of this project the Company’s SAP ERP system obtained the centralized solution on substantive technical support.
2. In December 2015 the Laboratory Information System (CRMP CSJ) was transferred to pilot commercial operation.
3. System Design stage was completed under the project “Introduction of Automated Control System for Design Engineering Pre-Production (ACS DEP) in Tochmash JSC”.
4. Completion of pilot introduction of Development of Concept for Integrated Design Management System (IMisd) at CPTI JSC on the following directions:
   • development of methodology and implementation of the basic functionality of the detailed planning in Corporate Project Management System (Line 2),
   • creation of the basic functionality of computer-aided design of IMSd (Line 3).
5. Following the results of Development of Operating Activity Automation Concept for VNIINM JSC named after A. A. Bochvar there was formed the Target Architecture of Information System of VNIINM and technical project for VNIINM Engineering and Experimental Development.
6. Target Values 2015 for engineering data management in ACS DEP were fulfilled by the enterprises.

1,812 intellectual property items owned by TVEL Fuel Company, as of end-2015.
Publicity Capital (public image property, reputation capital) is qualitative and quantitative totality of all information related to communications space. Growth of the publicity capital volume means increase public confidence, strengthening of a positive public image property, escalation of political weight, etc.

14,214 mentions of TVEL Fuel Company in the Russian mass media in 2015

INCREASE OF PUBLICITY CAPITAL

Publicity capital provides a means for TVEL Fuel Company, TVEL JSC and 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:

• with the assistance of the Russian Public Relations Association the performance appraisal was carried out of all employees involved in the communications sector (totally — 91 persons) for compliance with the Professional Standards;

• proposals were submitted for reorganization of the Public Relations Department of TVEL JSC into Information Policy and Communications Department, centralization of communication functions, transfer of public relations departments in the subsidiaries (totally — 11) into immediate subordination of Director General;

• for the convenience of coordinated delivery to the media and target audiences the information concerning the activities of TVEL JSC and subsidiaries, ensuring public acceptance and openness for wide public, TVEL JSC and its subsidiary companies developed and introduced the Uniform Information Policy of TVEL Fuel Company, the basic principles of which are as follows:
  • regularity,
  • promptitude,
  • availability,
  • reliability,
  • completeness,
  • balance,
  • equal rights,
  • security of corporate information resources;

• the technology of target communi- cation support of specific business object- ives and commercial projects. Totally TVEL Fuel Company enterprises elaborat- ed and implemented more than 20 transient target communication programs, in- cluding 8 ones on non-nuclear products.

• following the results of strategic ses- sions of top-management it was decided to include into the Tree of Objectives of TVEL Fuel Company as an independent objective “Increase of Publicity Capital”, to adopt the metrics in the form of target communication strategy for the period up to 2020 and the “information favored index” (the indicator was measured in a pilot mode, FI monitoring and index calculation on a permanent basis is assumed to begin from 2016–2017);

• in 2015 the target communication pro- gram was realized to confirm by the international and Russian public attitudes the reputation of TVEL as the “company of continuous improvement” and the “company of advanced technological development”, according to which program there were published more than 1,500 information materials in foreign and domestic media. The balance of positive and negative assessments of the programs to develop nuclear power industry, that were formed by the RF population under the influence of various factors, increased in 2015 by 4.4% (2014 — 55.8%, 2015 — 60.2%), thus ensuring the growth of the publicity capital of the Russian nuclear power industry and proving the operating efficiency of communication subdivisions of TVEL Fuel Company.

4. EFFICIENCY IN RESULTS 2015

Media References to TVEL Fuel Company in 2015

References to TVEL JSC and its Subsidiaries in the Russian Media

The number of publications in 2015 increased by 27% against 2014, including the publications with “TVEL” brand in headings — by 65%. The number of pub- lications covering with the production re- sults of TVEL Fuel Company increased by 85%.

Totally 14,214 references to TVEL JSC and enterprises of TVEL Fuel Company were recorded in the Russian media in 2015. Dynamics of the activity of the infor- mation field is characterized as smooth, without strong outbursts and critical slowdowns.

The following tendencies were revealed: regardless of the number and specificity of the newsworthy information, the most popular format of information presentation was news, and while in distribution by media types in the leading role took federal web-based media and the sectoral media. Toneality of the major number of messages was positive and neutral. Negative references were relat- ed to staff reduction as part of restructur- ing and identified thefts within TVEL Fuel Company (regarding the circumstances five years ago).

The growth of public (information) pop- ularity of the Company in 2015 is directly dependent on the Uniform Information Policy adopted by TVEL JSC, according to which standards for information gen- eration and promotion were introduced; the course of increasing the share of pro- duction news in the structure of the infor- mation content was defined, all informa-
Participating in international events creates a positive image and helps maintain a good business reputation.

13,000
Starting from the year 2008 about 13,000 children and almost 1,000 teachers took part in the “First Step to the Nuclear Project” program, more than 400 excursions to the museums, information centers and similar events were organized.

“First Step to the Nuclear Project” Program
TVEL JSC and its subsidiaries have been cooperating with ANO “Nuclear Power Information Centers” since 2010. Within the framework of cooperation TVEL JSC provides continual charitable support for educational initiatives in the field of nuclear energy.

One of the main directions of such cooperation is the information and training program “First Step to the Nuclear Project” that is being accomplished in regions of presence of the Company since 2008. Program organizers and participants: TVEL JSC, SCs, educational and public agencies in regions of presence of TVEL Fuel Company’s enterprises, Nuclear Power Information Centers, the community.

Goals and objectives of the program:
- achieving public acceptance of nuclear technology development;
- strengthening the positive image and reputation of TVEL JSC in presence regions and partner countries;
- demonstration of TVEL Fuel Company and its enterprises as innovative and high-tech safe facilities that are attractive to employment by young people;
- development of social partnership for improving the system of professional orientation of pupils;
- increasing the prestige of the Russian nuclear technologies and scientific knowledge.

The second closing ceremony of TVEL Fuel Company information and training program “First Step to the Nuclear Project” was held in December 2015. The program overview the framework of municipal educational event and became interregional, uniting schoolchildren from more than 5 regions. 19 teams participated in the game: winners of municipal stages from six cities of presence of the Company (Novosibirsk, Seversk (Tomsk region), Zelenogorsk (Krasnoyarsk territory), Novouralsk (Sverdlovsk region), Vladimir and Kovrov (Vladimir region)). Contests were held online in regional Nuclear Power Information Centers, in a teleconference bridge format. The organizers of the game TVEL JSC and enterprises of the Fuel Company: SGCHE JSC, UEP JSC, KMZ JSC, VPA Tomchash JSC, PA ECP JSC. The partners were Autonomous Non-Profit Organization “Nuclear Power Information Centers” and Information Centers in Novosibirsk, Tomsk, Krasnoyarsk, Vladimir, Ekaterinburg and Ulyanovsk, that ensured reliable technical support in the event organization.

Complaints and Appeals Handling
Complaints and appeals handling in TVEL JSCs performed in conformity with the Federal Law “On procedure for handling the appeals from citizens of the Russian Federation” No. 59-FZ d/d February 2, 2006. Feedback is compulsory: every appeal shall be registered, as well as every response.

To establish direct communication between an employee and President of TVEL JSC, in all subsidiaries of the Company the so-called “post boxes” were installed, thus any employee may address the top management of TVEL Fuel Company confidentially.

Awards Obtained by TVEL Fuel Company
Numerous awards and letters of appreciation granted to the subsidiaries in 2015 prove public recognition of TVEL Fuel Company’s active position in this regard. These are awards for environmental safety, occupational culture and labor safety, charitable activities and social programs in the regions of presence, work with young people and participation in exhibitions. Within the reporting period the Company’s subsidiaries won more than 50 various awards.

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 (see also Section Risk Management).
Monitoring social and political situation in the cities of presence:

- Level of registered unemployment;
- Measures taken by the Job Center;
- The city's most pressing social issues;
- Potential risks related to the Company's strategy.

TVEL JSC developed strategic initiatives and target projects on social and economic development of the regions, territories of presence and ensuring their social stability. TVEL JSC and its subsidiaries elaborated and approved the Program “Formation and preservation of social accord environment in the regions of TVEL Fuel Company’s presence” which systematizes the Company’s experience in this area and includes three groups of projects:

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

Since 2014 the Company carries out weekly monitoring of social and political situation in CATU (Zelenogorsk, Seversk, Novouralsk) and Glazov providing for 29 scenarios of social and political crises and their relevant indicators:

- inter-elite conflict;
- emergency situations;
- growth of social strain.

TVEL JSC, local and regional authorities.

IDP are aimed at consistent, stage-by-stage sustainable development of CATU economics and social sphere, rational use of production and technological potential for city-forming enterprises, social and economic, potential as well as natural resource potential of cities.

At the end of 2014 the Federal Law No. 473-FZ “About the territories of advanced social and economic development in the Russian Federation” was adopted. IDP will form the basis of the concept of the Territory of Advanced Social and Economic Development (TASED) of nuclear industry in CATU.

Work groups of TVEL JSC and ROSATOM considered the following:

- appraisal of the projects being offered to include into the concept of TASED creation;
- scheme of industrial organizations’ lands transfer to TASED Management Company in CATU;
- possible financing schemes for the projects being planned within TASED;
- suggestions in terms of considering within the investment process of ROSATOM of the specific nature of projects implementation in TASED.

Within the framework of TASED creation in CATU, TVEL JSC Management organized meetings with representatives of regional authorities: representatives of the Government in Sverdlovsk region, with the Governor of Tomsk region Sergey Zhvachkin, the Governor of Krasnoyarsk territory V.A. Tolokonnikov, with the authorized representative of Presidential Plenipotentiary Envoy to the Siberian Federal District.

In December 2015 the work groups met the representatives of the Government in Sverdlovsk and Tomsk regions and Administrations of Novouralsk and Sever sk cities. The examined concept projects of TASED creation within Closed Administrative Territorial Units (CATU) were approved and directed for expert consideration to the RF Ministry of Finance and the RF Ministry of Economic Development. As of the beginning of 2016 these projects are to be finalized taking into account the comments of the ministries, the proposals (applications) to create TASED will be formulated and directed to the authorized federal executive authority.

Goals and objectives of IDP are focused on:
- economic and social development;
- municipal administration improvement;
- urban environment development.

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

Direct economic value generated and distributed , RUB mln

<table>
<thead>
<tr>
<th>Indicator</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct economic value generated</td>
<td>162,789</td>
<td>159,539</td>
<td>222,908</td>
</tr>
<tr>
<td>Economic value distributed, including:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Operating costs</td>
<td>84,316</td>
<td>89,224</td>
<td>106,200</td>
</tr>
<tr>
<td>• Employee wages and benefits</td>
<td>21,958</td>
<td>20,632</td>
<td>26,000</td>
</tr>
<tr>
<td>• Payments to providers of capital</td>
<td>19,711</td>
<td>17,021</td>
<td>18,101</td>
</tr>
<tr>
<td>• Community movements</td>
<td>170,3</td>
<td>245,3</td>
<td>139,3</td>
</tr>
<tr>
<td>• Gross tax payments**</td>
<td>16,170</td>
<td>15,020</td>
<td>23,688</td>
</tr>
<tr>
<td>Economic value retained</td>
<td>20,524</td>
<td>17,597</td>
<td>51,080</td>
</tr>
</tbody>
</table>

*The data from the Consolidated Financial Statement of the Fuel Company prepared under the Russian Accounting Standards were used for estimations. IFRS reporting shall be prepared later.

**Amount of main tax liabilities due and payable to the budgets of different levels for the reporting period, including taxes included in expenses; payments to extra-budgetary funds; corporate profit tax.

<table>
<thead>
<tr>
<th>City (enterprise)</th>
<th>Region</th>
<th>% of working-age population employed by subsidiaries of TVEL FC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Angarsk (AECC JSC)</td>
<td>Irkutsk region</td>
<td>0.71</td>
</tr>
<tr>
<td>Vladimir (SPA Technimash JSC)</td>
<td>Vladimir region</td>
<td>0.66</td>
</tr>
<tr>
<td>Komsomol (KMP JSC)</td>
<td>Vladimir region</td>
<td>1.34</td>
</tr>
<tr>
<td>Glazov (ICM P JSC)</td>
<td>The Udmurt Republic</td>
<td>5.75</td>
</tr>
<tr>
<td>Zelenogorsk (PA ECP JSC)</td>
<td>Krasnoyarsk territory</td>
<td>6.13</td>
</tr>
<tr>
<td>Novouralsk (UPE JSC)</td>
<td>Sverdlovsk region</td>
<td>4.09</td>
</tr>
<tr>
<td>Severk (SOCH JSC)</td>
<td>Tomsk region</td>
<td>6.01</td>
</tr>
<tr>
<td>Elektrostal (MSZ JSC)</td>
<td>Moscow region</td>
<td>4.46</td>
</tr>
</tbody>
</table>

*Program for social and economic development of the cities of presence of TVEL Fuel Company, 2015
The Effect of TASED Creation in CATU

The enterprises prepared a preliminary list of projects for TASED, the experts and employees of the TASED Project Office of ROSATOM State Corporation re-evaluated the quality of actualized materials, the Regional Relations Department of ROSATOM State Corporation analyzed the projects proposed.

The Effect of TASED Creation in CATU

In three cities: CATU Seversk, CATU Zelenogorsk and Glazov, the TASED projects were initiated with the help of co-funding with the local authorities and government bodies of the Russian constituent entities.

Creation and development of Physics and Mathematical Lyceums

One of the primary areas of TVEL Fuel Company’s charitable activity is creation and development of Physics and Mathematics Lyceums for training of future skilled specialists for the nuclear industry.

This project is designed to create conditions for children’s self-expression, to reveal and support talented schoolchildren, bring up of the prospective scientists.

Presently the project is implemented in three cities: CATU Seversk, CATU Zelenogorsk and Glazov under the terms of co-funding with the local authorities and government bodies of the Russian constituent entities.

The Coordination Board for physics and mathematics lyceums development coordinators their work and serves a site where teaching stuff and managers of TVEL Fuel Company can exchange ideas. All-Russian Training Conference for Physics and Mathematics Lyceums is held on a quarterly basis, the teachers discuss essential problems of education in the sphere of physics and mathematics and possible ways to solve them in an actual teaching practice.

On September 11, 2014 the Coordination Board formulated plans for further realization of the project throughout 2016, particularly School Technoparks will appear.

Atomclasses

The cities of the Company’s presence have the so called “atomclasses” (Angarsk, Glazov, Zelenogorsk, Kovrov, Zhnyu Novgorod, Novouralski, Seversk, Elektrostal). The Atomclasses are specialized classes in the best schools of the cities with advanced teaching of physics and mathematics. The specific feature of such classes is the profound study of nuclear physics and nuclear technologies.

The Effect of TASED Creation in CATU

The Effect of TASED Creation in CATU

Tax incentives

• Income tax and mineral extraction tax — 0% to the Federal budget, no less than 5% (in the first 5 years) and no less than 10% (in the following 5 years) to the budget of the federal entity of the Russian Federation;
• VAT — 0% (full deduction of the VAT);
• Property tax, transport tax and land tax — at the discretion of municipal structures;
• Insurance contributions — 7.6%.

Special conditions for business activities

• Reduced tax rates for immovable property items;
• Custom-free procedure of a free tax zone;
• Infrastructure with all utilities included;
• Economic and social stability in the cities of presence;
• Higher control over the performance of contracts;
• Preserving the workforce capacity that is required for the development of the nuclear industry;
• Taxes reduced by 50%;
• Reduction of procurement costs of up to 12%;
• Attracting external investment to new businesses;
• 15% reduction of lead time for non-military products;
• Attracting federal and regional financing to the preparation of the production location in the amount of up to 80% of the infrastructure development costs.

The Effect of TASED Creation in CATU

The Effect of TASED Creation in CATU

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 budget income base, but also realization of the whole body of social and charity programs.

Since 2012 the Charity Council has been working within TVEL JSC; its functions include to determine purposes and priority areas of charitable activity, approve the budget and charity events, assess the efficiency of charitable activity in TVEL Fuel Company, etc.

The Charity Council comprises managers of TVEL JSC in charge of economics, finance, HR, regional and social work, public relations. Scheduled meetings of Charity Council are held on a monthly basis and consider appeals on financial assistance from individuals and organizations.

The principles of charitable activity:
• Support for charitable programs and projects in the cities of the Company’s subsidiaries presence (social projects contests);
• backing-up common values (promotion of business environment, creation of new jobs, development of the education,
• health-care, culture and sports infrastructure);
• co-funding of charitable programs jointly with the local authorities and central government bodies of the Russian constituent entities.

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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.

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 specialists 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.

GENNADY N. LISAVKIN
Director for the Program for Regional Development and Social Projects

Public Reporting System of TVEL Fuel Company

In accordance with the Policy of ROSATOM State Corporation applicable to public reporting, TVEL JSC generated the system of public reporting which represents the combination of elements, processes and connections between them ensuring the activity with regard to public reporting and its development. The details in Annual Report of TVEL JSC for 2014 http://www.tvel2014.ru/en/sec tion. 4/4.

The KPI card of the Head of PR Department includes the index “Awards inFederal Contests” the KPI indicator was on the top level during the last three years — Annual Reports of the Company obtained more than 3 awards.

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TVEL JSC Annual Report 2014 Awards

• Four-time Platinum winner in the International Competition MarCom Awards 2015 (USA) in the following categories:
  - State Company;
  - Corporate Social Responsibility;
  - Integrated Annual Report of the state company;
  - Annual Report (Design and Printwork).

• The title “Leader of Corporate Transparency of the Largest Russian Companies-2015” formed by the Russian Regional Networks on Integrated Reporting.

• Winning places in categories “For Best Business Model Disclosure Practice in the Industry” and “For Qualitative Disclosure of the Information about Innovative Activity” within the contest of annual reports held by the Rating Agency “Expert RA” (RAEX).

• Winner in the category “Best Public Annual Report of ROSATOM State Corporation Division” and “Efficiency of Public Reporting” in the industry-specific contest of annual public reporting of ROSATOM SC.

TVEL JSC Stakeholders Rank Chart

Annual Reports of the Company obtained more than 3 awards.

Stakeholders engagement events during the preparation of the Report 2015:

While preparing the Report the principles of Standard AA1000SE5 were adhered to, in particular, there was ensured the compliance of the published information with the requests of the involved stakeholders. Two on-site dialogues and one off-site dialogue were held for the implementation of this principle while preparing this Report.

Participants of these dialogues were the representatives of ROSATOM, industry partner organizations, subsidiaries, environmental, public, trade union organizations, higher educational institutions, local governmental authorities, mass media, consultants and auditors.

In November 2015 TVEL JSC organized the off-site dialogue on the concept of the Annual Report for 2015. The concept developed by the Company with account of the proposals of stakeholders committee was presented; the participants advanced recommendations which allowed finalizing and specifying the concept of the Report.

Results of the reporting campaign 2014 were summed up during the public dialogue held on February 19, 2016. The participants of the dialogue discussed the matters of preparation of TVEL JSC Public Annual Report for 2015, summarized some outcomes of the reporting year, marked the priority issues to be disclosed in the Report.

Efficiency Based Development Strategy of the Fuel Company.

The draft annual report of TVEL JSC for 2015, prepared subject to the comments of the stakeholders in the course of the dialogues, was presented during the public consultations on April 29, 2016. Following the events, the proposals were made on improvement of the text of the Report and the process of interaction. The tables specifying the comments of stakeholders are given in the interactive version of the annual report.

1. Taking into account objective industry-specific limitations.
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.

**HR POLICY**

Main long-term goals of HR Policy:
- balancing employer and worker interests;
- development of workers’ consent to effective development of their own professional and managerial capacities;
- increase of personnel engagement to promote the company’s sustainability;
- sustained growth of labor efficiency;
- personnel adhering to corporate values in the course of their work;
- development of strategically important personnel competencies and skills in order to comply with requirements to the personnel stated by international global companies;
- engagement of each employee in solving the problems of strategic development and appealing to “collective intelligence”;
- ensuring social acceptability of the changes made.

**STAFF COMPOSITION**

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.

In 2015 TVEL Fuel Company hired 1,478 employees, including TVEL JSC — 50 employees. About 61.9% of the hired employees are men, around 73.7% — persons under 45 years old. Among the hired employees the largest part of the new employees is from Moscow region and the city of Moscow (40.0%), the smallest part — from Krasnoyarsk territory and Irkutsk region (2.1% and 0.8% respectively).

Payments and benefits provided to the employees of TVEL Fuel Company are based on the provisions of the Labor Code of the Russian Federation, the Collective Agreements of the companies, as well as on local regulatory documents concerning social support of the employees, subject to the principles and approaches of the Uniform Industry-Specific Policy of ROSATOM and its organizations.

In 2015 TVEL Fuel Company hired 2,508 persons terminated their employment. The retirement rate1 by the business regions of the Company varies from 20.4% in Irkutsk region and 19.8% in Moscow region and in the city of Moscow up to 4.1% in Krasnoyarsk territory. The retirement rates vary by gender as well: men — 19%, women — 6%. Overall retirement rate for TVEL Fuel Company is 11.0%. The greatest retirement rate (62%) for the reporting period is registered at the age group 55–64. Turnover rate2 by the business regions of the Company varies from 6.0% in Moscow and Moscow region up to 0.6% in Sverdlovsk region. Overall personnel turnover rate for TVEL Fuel Company is 1.5%.

**Key indicators, persons**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>TVEL FC headcount at the year end</td>
<td>27,162</td>
<td>23,717</td>
<td>22,724</td>
<td>-4.0</td>
<td>22,240</td>
</tr>
<tr>
<td>Average headcount of TVEL FC staff</td>
<td>29,238</td>
<td>25,169</td>
<td>22,527</td>
<td>-13.9</td>
<td>22,240</td>
</tr>
<tr>
<td>Candidates and Doctors of Science</td>
<td>312</td>
<td>281</td>
<td>235</td>
<td>-16.4</td>
<td>239</td>
</tr>
<tr>
<td>Holders of MBA degree</td>
<td>12</td>
<td>16</td>
<td>15</td>
<td>-8.3</td>
<td>16</td>
</tr>
<tr>
<td>Employees that have been employed by TVEL FC more than 5 years</td>
<td>76</td>
<td>81</td>
<td>82</td>
<td>1.7</td>
<td>83</td>
</tr>
</tbody>
</table>

**HR POLICY**

All subsidiaries of the Company (except for TVEL JSC) have collective agreements that cover 100% of these subsidiaries’ employees (98% of average headcount). If any considerable changes are introduced in the business, the Company shall notify their employees at least 2 months prior to the effective date of any such changes. This provision is stipulated by labor laws of the Russian Federation and by the Collective Agreement of each subsidiary.

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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.

The most mobile age group (turnover rate is 5.6%) is comprised of employees up to 24 years old; male employees are more mobile than female (3.0% against 1%).

As of December 31, 2015, TVEL Fuel Company headcount was 23,724 persons. Overall majority of subsidiaries’ employees (over 98%) work under the open-term labor contracts and during normal business hours (40 hours a week). As of the end of 2015 the headcount of employees under civil law contracts, external part-timers and women on maternity and childcare leave was 763 persons.

The Company upholds the principle of equality and tolerates no gender discrimination: male and female employees working in the Company get the same salary, regardless of categories.

Average age of employees of the Company is 43.6. The employees under 35 years old comprise 25% of total staff.

TVEL Fuel Company mostly hires the local residents, and attracts specialists from other regions only if and when no properly qualified candidates to the vacancy are available at the local labor market.

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.

Engagement study is conducted under the unified industrial slogan: “ROSATOM cares about your opinion”. Arrangement plans aimed at increase and retention of personnel engagement are approved and implemented at the annual management meetings on study findings analysis in 12 enterprises of the division. In general, annual surveys allow to estimate the employee satisfaction with work conditions according to 19 factors, as well as to determine the share of employees who:

• recommend their company as a good employer to their relatives and friends;
• attempt to make the most of their opportunities while fulfilling their obligations, improve enterprise processes and come up with improving proposals;
• intend to keep being employed by the Company in future.

Comprehensive efforts within the year research project are made both through local plans of activities implemented by the subsidiaries, and through execution of the unified divisional projects. Thus, in 2015 TVEL Fuel Company accomplished the projects in the following key directions:

• Career development and employee involvement in enterprise management and development;
• Remuneration subject to personal contribution to the enterprise economic growth;
• Remuneration for team progress;
• Internal competition of small groups1 small groups that show rapid results in the established goals achievement get a higher rating and remuneration.

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• Remuneration for team progress;
• Internal competition of small groups1 small groups that show rapid results in the established goals achievement get a higher rating and remuneration.
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.

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 enterprise, has no desire to leave 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 to 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.
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.

**MOTION AND REWARD**

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.

- Salary indexation in all subsidiaries of TVEL Fuel Company, except for TVEL JSC (scheduled indexation % — not less than consumer price index, scheduled indexation term — September 1, 2016);
- There might be increase of annual premium rate in certain enterprises (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;
- Updating of local salary and benefits disclosure documents to improve efficiency (reconsideration of annual premium calculation, approaches to PAI identification following the results of the assessment, etc.);
- Elaboration and implementation of measures aimed at increase of variable part of total remuneration depending on personal and collective labor efficiency.

<table>
<thead>
<tr>
<th>Average Wages in TVEL FC Subsidiaries, rub.</th>
<th>2015</th>
<th>2014</th>
<th>2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>MZP JSC</td>
<td>86,358</td>
<td>86,095</td>
<td>86,095</td>
</tr>
<tr>
<td>SGCHE JSC</td>
<td>75,308</td>
<td>65,237</td>
<td>54,636</td>
</tr>
<tr>
<td>PA ECP JSC</td>
<td>74,963</td>
<td>62,310</td>
<td>52,352</td>
</tr>
<tr>
<td>UGCMP LLC</td>
<td>84,719</td>
<td>88,830</td>
<td>73,352</td>
</tr>
<tr>
<td>SIEJ JSC</td>
<td>80,118</td>
<td>80,577</td>
<td>78,371</td>
</tr>
<tr>
<td>NDCP FISC</td>
<td>70,494</td>
<td>62,176</td>
<td>59,000</td>
</tr>
<tr>
<td>AECC JSC</td>
<td>77,368</td>
<td>70,494</td>
<td>67,157</td>
</tr>
<tr>
<td>CMP JSC</td>
<td>73,700</td>
<td>67,578</td>
<td>65,384</td>
</tr>
<tr>
<td>VNEMK JSC</td>
<td>75,211</td>
<td>63,771</td>
<td>58,368</td>
</tr>
<tr>
<td>KMP FISC</td>
<td>83,477</td>
<td>62,176</td>
<td>52,352</td>
</tr>
<tr>
<td>NIPS JSC</td>
<td>80,981</td>
<td>80,981</td>
<td>70,494</td>
</tr>
<tr>
<td>VPS JSC</td>
<td>68,462</td>
<td>64,594</td>
<td>58,075</td>
</tr>
<tr>
<td>VPIL Technavah JSC</td>
<td>54,374</td>
<td>29,269</td>
<td>23,254</td>
</tr>
</tbody>
</table>

Ratios of average wage in the subsidiaries of TVEL Fuel Company compared to average wage in regions of operations*

<table>
<thead>
<tr>
<th>Region</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Moscow</td>
<td>2.5</td>
<td>2.6</td>
<td>2.6</td>
</tr>
<tr>
<td>Moscow region</td>
<td>1.6</td>
<td>1.7</td>
<td>1.7</td>
</tr>
<tr>
<td>Vladivostok</td>
<td>1.5</td>
<td>1.5</td>
<td>1.6</td>
</tr>
<tr>
<td>The Udmurt Republic</td>
<td>1.8</td>
<td>1.8</td>
<td>1.8</td>
</tr>
<tr>
<td>Novosibirsk region</td>
<td>2.1</td>
<td>2.1</td>
<td>2.2</td>
</tr>
<tr>
<td>Krasnoyarsk region</td>
<td>2.2</td>
<td>2.4</td>
<td>2.4</td>
</tr>
<tr>
<td>Tomsk region</td>
<td>1.8</td>
<td>2.0</td>
<td>2.0</td>
</tr>
<tr>
<td>Krasnoyarsk territory</td>
<td>2.3</td>
<td>2.6</td>
<td>2.4</td>
</tr>
<tr>
<td>Irkutsk region</td>
<td>2.2</td>
<td>2.4</td>
<td>2.4</td>
</tr>
</tbody>
</table>

* Including TVEL JSC.

**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.

Achievements of the employees of the Company were marked with state awards, awards of ROSATOM and TVEL JSC in accordance with the Uniform Industry-Specific Award Policy. During the year 2015 in celebration of commemorative days and anniversaries more than 2,900 workers and veterans of TVEL FC received rewards and bonuses for work achievements, contribution to development of enterprises, the Fuel Company and nuclear industry, in particular:
- National awards — 2 employees,
- Awards of ROSATOM — more than 1,700 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” — 401 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.

**Remuneration Scheme**

<table>
<thead>
<tr>
<th>Fixed salary</th>
<th>Personal additional incentive</th>
<th>Supplemental payments for dealing with the information classified as state secret</th>
<th>Regional benefits and margins (where applicable)</th>
<th>Annual remuneration in accordance with KPI</th>
</tr>
</thead>
</table>

1. Average annual remuneration of all TVEL FC employees was calculated including TVEL JSC.
HR DEVELOPMENT AND TRAINING

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

The development and training mission is focused on creation of an environment for employees to achieve the business goals while increasing the level of their professionalism, corporate culture and personnel management technologies.

The purpose of HR development program is to support business priorities of ROSATOM.

Priority development programs at the Company’s enterprises:

Program on Succession Pool Formation and Development: “ROSATOM Heritage”, “ROSATOM Capital” and “ROSATOM Talents”;

creation of teaching resource centers for further training of the personnel to manage the improvements;

development of the Institute of Internal coaches;

development of professional societies, as the points of growth for the TC leadership in the market, technology, efficiency growth rates;

Safety culture development.

Personnel Training

According to HR Development and Training Provisions, the Company’s subsidiaries regularly implement training programs to enhance competencies of their managers, as well as ordinary workers.

In 2015 the number of the employees satisfied with opportunities of training and development in TVEL Fuel Company increased by 8 pp. (up to 71%).

Investments into employees training increased by 84% (which is 30% more than 2014). Average length of training in 2015 for each employee of the Company was 51 hours.

In 2015 the number of the employees satisfied with opportunities of training and development in TVEL Fuel Company increased by 8 pp. (up to 71%).

Key priorities for 2015 in the sphere of HR training and development:

• personnel recruitment and development;
• efficiency management,
• culture management;
• HR processes management.

Formation and development of succession pool and succession plans

TVEL FC pays great attention to development of succession pool and training of managers. Training in this sphere is built on the following principles:

• Correlation with business strategy and industry development;
• Focus on the most advanced international leadership development practices;
• Analysis of the uniform industry-specific development system for managers.

Development measures aimed at increasing the qualification of the employees are implemented both by the Company’s internal coaches and by external providers of training services.

Employees’ satisfaction with the possibilities of training and development ensured by TVEL FC, %

<table>
<thead>
<tr>
<th>Category</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Managers</td>
<td>78%</td>
<td>63%</td>
<td>71%</td>
</tr>
<tr>
<td>Specialists and office employees</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Workers</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Scope of training per one employee by category and gender in the reporting year

- TVEL FC founded the Institute of Internal Coaches in 2011. The Internal Coaches are the Company’s employees who provide on-the-job training to their colleagues. To become an Internal Coach, the employee needs to pass the selection procedure, take additional training and be properly certified. By the end of 2015, 84 employees of TVEL FC were qualified as the Internal Coaches (in 2014 — 73 employees).
Leader Forums are unique practices for Russia

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 “brain-storming” and searching for optimal solutions to real industrial problems based on TRIZ methodology (Theory of Inventive Problem Solving).

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

2015 was the year of obtaining the approvals on the regulatory documents for formation of succession plans, formation and development of managerial personnel reserve (MPS); Uniform Industry-Specific Procedure for Career Planning and Succession to Managerial Positions in ROSATOM and its organizations; Uniform Industry-Specific Guidelines to Create and Develop Managerial Succession Pool in ROSATOM and its organizations.

The succession planning and MPS formation are based on the results of Annual Performance Assessment “RECORD”. The key instrument to formulate and approve the succession plans for the Company’s managerial positions shall be the review of personnel capacity in the form of round tables held at all levels of management. The decision to include an employee in the MPS list is taken following the results of an independent evaluation, which contains the assessment of potential, motivation and compliance with corporate values. An employee may be included into the succession plans on the basis of his/her manager’s decision taken with due regard for his/her achievements in the past period.

Preparation of reservists of senior, middle and entry-level managers to career development is carried out in accordance with industry-specific development MPS programs “ROSATOM Assets”, “ROSATOM Capital” and “ROSATOM Talents”. The development programs are focused on raising the level of corporate and managerial competencies of the MPS participants.

**Personnel Efficiency Assessment**

In 2015 the Company continued to successfully apply the annual personnel efficiency assessment system.

All together about 14,500 men and 8,000 women were covered by the assessment.

**Interaction with Educational Institutions**

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

Cooperation with educational institutions is carried out on the basis of the communication plan on work with universities and graduates which is continuously updated on an annual basis.

With a view of occupational guidance for schoolchildren the Company’s enterprises organize excursions, meetings with young specialists, various information and educational activities.

**TVEL FC Succession Pool and Succession Plans**

<table>
<thead>
<tr>
<th>Indicator</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
<th>2016 (plan)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of employees included to succession pool</td>
<td>153</td>
<td>151</td>
<td>215</td>
<td>237</td>
</tr>
<tr>
<td>Number of employees included to succession pool and running for major posts</td>
<td>153</td>
<td>151</td>
<td>138</td>
<td>103</td>
</tr>
<tr>
<td>Number of employees included to succession pool and transferred to major posts</td>
<td>26</td>
<td>50</td>
<td>89</td>
<td>76</td>
</tr>
</tbody>
</table>

**Elements of annual personnel efficiency assessment system applied in TVEL FC**

<table>
<thead>
<tr>
<th>Assessment type</th>
<th>Target group</th>
<th>Results of the reporting period</th>
</tr>
</thead>
<tbody>
<tr>
<td>“RECORD” assessment</td>
<td>Managers, specialists, employees (MSE)</td>
<td>98% of MSE headcount was assessed; this figure corresponds to target indicators. All TVEL FC subsidiaries took part in the assessment. Following the results of assessment there were made recommendations concerning alteration of personal additional incentives, choice of training program and recruitment of employees to succession pool.</td>
</tr>
</tbody>
</table>

**Corporate employee assessment system**

Following the results of assessment there were made recommendations concerning reconsideration of personal additional incentives. The average grade for professional competences grew by 2% as compared to the previous year.

In 2015 4.2% of employees were not covered by the assessment. These are women, who were on parental leave, the employees, who worked at the Company for less than 3 months, the employees, who were withdrawn from subsidiaries under the restructuring processes.

**Employee satisfaction with the carrier possibilities ensured by TVEL FC**

- 64% in 2015
- 43% in 2014
- 34% in 2013

Staff

95.8% of staff headcount was assessed; following the results of assessment there were made recommendations concerning reconsideration of personal additional incentives.
The major areas of cooperation with educational establishments of higher and secondary education are the following:

1. Long-term planning of demand for specialists in terms of industry-specific training (for 2016–2026).
2. Ensuring the awareness among students and graduates on possibilities of professional growth in the enterprises of TVEL Fuel Company, as well as TVEL FC and ROSATOM brand promotion.
3. Arrangement of educational and on-the-job trainings at the premises of the Company's enterprises.
4. Implementation of joint education programs, special courses within the Company's enterprises.

In 2015 the enterprises of TVEL Fuel Company offered a training study course for 679 students of higher educational institutions and vocational secondary schools. In 2016 the Company expects 657 students to take their practical training.

Over the reporting period the Company employed 102 graduates of the higher educational institutions and vocational secondary schools, 6 of which took target preparation classes for employment by TVEL Fuel Company.

### Personnel selection and assessment

- **College students**
  - Attracting college students
  - Opportunities offered:
    - ROSATOM career days;
    - "TeMP" young professionals tournaments;
    - Regional job fairs.

- **Practical training**
  - Assessment:
    - Business conduct;
    - Professional skills and achievements;
    - Employee's motivation assessment.

- **Professionals**
  - Talent development programs of ROSATOM and TVEL FC.
  - Assessment center
  - Interview with manager
  - Professional skills and achievements
  - Recruitment and employment
  - Analyzing the experience
  - Aptitude
  - HR interview
  - Compliance with the industry values
  - Interview with manager
  - Professional skills
  - Reference checking
  - Medical check-up
  - Security clearance

### Employee management

- **Employee's motivation**
  - Factor 3.2.2.4 (an employee spends more than 50% of the time working on a computer);
  - Factor 3.1 (radiation);
  - Regional Secret Clearances;
  - Psychological and physical check-up.

- **Basic facts**
  - Voluntary health insurance (VHI) 158.0
  - 99% of TVEL FC employees are insured under VHI policy
  - Accident and health insurance: 10.2
  - 86% of TVEL FC employees are covered by accident and health insurance
  - Sanitary and resort treatment, recreation of children: 152.0
  - 371 employees got vouchers to sanitary and rehabilitation resorts in 2015, where 1,085 persons working in harmful conditions and 1,783 are children. Maximum amount of each voucher in 2015 was equal to RUB 52,400 for 21 days leave.
  - Assistance in improvement of housing conditions: 95.1
  - 739 employees have improved their housing conditions under the program, including 383 young specialists under 30.
  - Benefits to employees in difficult situations: 58.4
  - The amount of benefits does not depend on the official position. Types and criteria of benefits provision are unified.
  - Sports and cultural events: 115.4
  - The enterprises of TVEL FC held more than 622 corporate and sports competitions in 2015. Total number of participants—over 18,500 of workers and members of their families.
  - Assistance to non-working pensioners: 494.4
  - There are over 40,000 non-working pensioners registered in the organizations (personal service, veterans' council, trade unions) of TVEL Fuel Company. Average amount of assistance per 1 pensioner is RUB 12,400 per year. 1,520 pensioners got vouchers to sanitary resorts.
  - Non-state pension provisions (NPO): 151.0
  - By the end of 2015, 16% of TVEL FC workers were involved in the non-state pension program; the highest rate was achieved at FA ECP JSC (33.3%), UEIP JSC (31.1%) and MSZ PJSC (28.1%). The major part of pension accruals under the NPO program was accumulated at Non-State Pension Fund "Atomgarant".

- **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.

TVEL FC social programs represent a strong motivating factor. According to personnel engagement surveys, up to 65% of employees find their social package satisfactory.

Total amount spent by the Company on its social programs in 2014 is RUB 1,340.5 mln or RUB 59,000 per worker.

- **Interaction with Trade Unions**
  
  BThe Fuel Company interacts with trade unions under the social partnership program. The management acknowledges the important role of trade union in implementation of corporate social programs and in employees' awareness raising. Social stability at the enterprises and in the cities of presence of TVEL Fuel Company is the result of cooperation between TVEL JSC and the Russian Union of Nuclear Power and Industry Workers (RUNPIW), subsidiaries of the Company and primary trade unions, veteran councils and other workers' associations.

On December 17, 2014 in Moscow the Industrial Agreement on Nuclear Energy, Industry and Science for 2015-2017 was signed between ROSATOM, All-Russian Industrial Association of Employers "Employers’ Association for Nuclear Energy, Industry and Science of Russia" and RUNPIW. This agreement stipulates general concept of social and labor relations regulation in the nuclear industry, including mutual commitments of the parties concerning remuneration, labor condi-
tions and safety, work and rest schedules, employment, social guarantees, benefits and privileges for employees. Pursuant to the Industrial Agreement and Collective Agreements the social programs are applicable to all subsidiary companies’ employees, whether an employee is a member of any trade union or not.

**OCCUPATIONAL HEALTH AND SAFETY**

Health and Safety Management System

The main directions, directives and commitments in the sphere of safety and health of the Company’s workers are recorded in the TVEL JSC Health and Labor Protection Policy.

Responsibilities of managers, professionals and other labor protection workers are regulated by TVEL JSC Health and Safety Management System (HSM S). Local regulatory documents on labor protection include instructions, lists, logs. The company organizes trainings and assessment of knowledge, inspections, briefings, including for representatives of contracting organizations.

On an annual basis TVEL JSC holds meetings of technical directors and managers for nuclear and radiation safety, occupational safety and environmental protection. During such meetings participants exchange their thoughts, share best practices with the colleagues and report on the measures taken to address the problems. All participants are notified about the occurred accidents, causes of such accidents and the adopted measures of organizational and technical nature. Following the meeting results the participants adopt the respective decision including the instructions for further reduction of accidents and the measures to improve working conditions. In 2015, within the framework of the meeting a special attention was paid to assessment of working conditions, including the issue of benefits and compensation.

The complex and special-purpose inspections on security assurance are held and in the course of such inspections the functioning of OSH management system and implementation of measures is assessed. The inspections also cover enterprises’ subsidiaries and contracting organizations rendering their services in the territory of the enterprises included into the management system of TVEL Fuel Company.

**Employees satisfaction with working conditions**

<table>
<thead>
<tr>
<th>Year</th>
<th>Satisfaction with working conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013</td>
<td>72%</td>
</tr>
<tr>
<td>2014</td>
<td>74%</td>
</tr>
<tr>
<td>2015</td>
<td>82%</td>
</tr>
</tbody>
</table>

**Dynamics of the indicators on occupational health and industrial safety in TVEL FC**

<table>
<thead>
<tr>
<th>Indicator</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Industrial Injuries Frequency Rate (IFR)**</td>
<td>0.17</td>
<td>0.12</td>
<td>0.23</td>
</tr>
<tr>
<td>Injury Rate (IR)**</td>
<td>0.03</td>
<td>0.01</td>
<td>0.03</td>
</tr>
<tr>
<td>Occupational Diseases Rate (ODR)****</td>
<td>0.01</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Absentee Rate (AR)*****</td>
<td>5.958</td>
<td>5.527</td>
<td>4.680</td>
</tr>
<tr>
<td>Lost Day Rate (LDR)******</td>
<td>1.50</td>
<td>0.11</td>
<td>1.90</td>
</tr>
</tbody>
</table>

* Data on CFR-3 contour.
** Accidents per 1,000 employees per year.
**** ODR = [total number of accidents / total hours worked over the same period] x 200,000
***** AR = [total days lost due to absence due to disability of any nature] / total days worked over the same period) x 200,000.
****** LDR = [total days lost due to injuries / total hours worked over the same period] x 200,000.

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.

System-based application of the guiding principles of the Policy, being the uniform methodology for identification and assessment of occupational risks, allows the Company to reduce the impact of harmful and hazardous production factors in the workplace, to allocate targeted funds to solve the most important labor protection problems. Priority goals and objectives aimed at reducing occupational risks are an integral part of the planning process; they are included in Occupational Safety and Health Objective Achievement Program. The Program is updated annually and it includes tasks and measure to improve the activities in the sphere of occupational safety with the implementation of permanent control and monitoring processes. 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.

TVEL JSC and AECC JSC were announced as winners in “Occupational Safety and Health Management” at the Russian National Competition “Russian Business Leaders: Dynamics and Responsibility 2015”, organized by the Russian Union of Industrialists and Entrepreneurs.
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.

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 of 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 doses 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.
For managers responsible for cooperation with contracting organizations there was introduced the new KPI in 2015. “Absence of falls from height”, which is aimed at encouraging the actions on prevention of falls from height by workers of TVEL Fuel Company and of the contracting organizations. The indicator “Absence of accidents and incidents at hazardous production facilities” is applied for industrial safety.

In 2015 the industrial injury rate as compared to 2014 increased due to the fact that starting from 2015 the calculation of the injury rate includes also injury cases happening not only in the CFP 3 enterprises, but also in their subsidiaries (CFR 4). CFR 3 and CFR 4 comprise 71 organizations in total.

In 2015 one person from contracting organizations was injured in the production (MC TechService LLC).

Most industrial injuries occurred due to organizational faults, such as failure of managers and specialists to ensure labor safety in accordance with the requirements of the regulating documents, as well as failure of the injured persons to observe labor and production discipline, labor protection rules and regulations.

There occurred no mass accidents and emergencies at hazardous facilities.

Within the Occupational Safety and Health Objective Achievement Program for 2015 the following actions were fulfilled: technology and equipment modernization, improvements in working conditions, awareness and competence of personnel, development and improvements of the safety culture focusing on reduction of injuries.

The results of occupational hazards evaluation outlined the priority goals and objectives for operational health and safety to be included into the Program 2016.

On February 08, 2015 the molder-press operator of research and technological facilities of SGCHE OJSC fulfilled transportation of a reservoir of 8.5 litres. In carrying out this work depressurization happened to the reservoir and the contents being transported was set on fire. The worker suffered burns of varying degrees. The injured person received required medical care.

Following this accident there was held an investigation with elaboration of compensatory measures, as well as undisclosed inspections were carried out in the enterprises of TVEL Fuel Company, including technological processes review for safety.

SGCHE JSC fulfilled all its obligations in the event of an accident. In addition, the company rendered financial assistance to the injured and his family in order to ensure the treatment. At the end of 2015 the employee returned to work.

In 2015 the enterprises of TVEL Fuel Company elaborated action plans to improve the working conditions and safety taking into account the General (Combed) Action Plan for the Prevention of Accidents. The General plan was prepared by TVEL JSC on the basis of the analysis of the main causes of injuries for the period 2014 — beginning 2015 and it provided measures to equipment maintenance, storage organization, training and admission to independent work, documentation. Action plans monitoring in the enterprises was done on a quarterly basis. Following the results 2015 the actions were fulfilled with due account of the Industrial Agreement at the level exceeding 0.5% of production costs.

The main task for 2015 was also a special assessment of the working conditions (SAWC), the implementation of which will continue in 2016. The annual industrial monitoring is scheduled for September 2016, in the framework of which there will be examined the SAWC results and proposals for the future.

In each TVEL Fuel Company’s organization, operating hazardous production facilities, there were adopted industrial safety measures within the year 2015. The basic industrial safety measures include the following: industrial safety expertise, making the schedules and executing maintenance of technical devices, buildings and structures of hazardous industrial facilities, ensuring functionality of the production control and supervision. Implementation of such measures allowed reducing volumes of hazardous chemicals, thus lowering the hazard class of the production facilities.

There were 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.

All production enterprises of the Fuel Company operate within the approved effective dose limits applicable to the personnel, no Group A personnel is available in the enterprises, ensuring functionality of the production control and supervision. Action plans monitoring in the enterprises was done on a quarterly basis. Following the results 2015 the actions were fulfilled with due account of the Industrial Agreement at the level exceeding 0.5% of production costs.

The following limits of the efficient dose are set in accordance with the Radiation Safety Standards 99/2009: Group A personnel — 20 mSv a year (on the average) over any 5 successive years, but not more than 50 mSv a year; population — 1 mSv a year (on the average) over any 5 successive years, but not more than 5 mSv a year.

![Graph](image-url)

**Accidents per 1,000 employees per year.**

**Data for 2015 are given on CFR-4 contour.

**Accidents per 1,000 employees per year.**
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.

The subsidiaries of TVEL Fuel Company implement programs of voluntary health insurance, accidents and sickness insurance, and health resort treatment.

The investments into improvement of working conditions and occupational safety of the workers were equal to more than RUB 180 mln in 2015.

Benefits for Working in Unfavorable Labor Conditions*, including: medical and preventive meals, compensations, extra leaves, etc.

Industrial sites of the Company’s subsidiaries are subject to regular control of the content of harmful chemicals in waste water, emissions from ventilation systems, radiation and chemical status monitoring, organization and performance of all kinds of supervision in accordance with the production control programs. A special assessment of working conditions serves to carry out the assessment of conditions and labor safety at the work places, while determining the extent of deviation from the parameters of the production environment and work process; following the results of such assessment the arrangements are scheduled for improvement of the labor conditions.

All subsidiaries provide regular labor safety training to their workers in accordance with GOST 12.0.004-90 and fire safety training in accordance with the Federal Law No. 69-FZ “On Fire Safety”, as well as all types of briefings and tests with respect to the above mentioned spheres. The Company takes preventive measures to mitigate industrial injuries and occupational illness. In 2015 each employee of the Company involved in functioning of the production environment and work process; following the results of such assessment the arrangements are scheduled for improvement of the labor conditions.

The Company spent grand total of RUB 1.2 bln or RUB 56,100 per each employee on labor protection arrangements in 2015.

“TVEL JSC acknowledges that the engineering processes ensuring the production of items, including the use of nuclear, radioactive and other dangerous materials therein, shall not cause any negative impact on environment and human health.

Main strategic goals of TVEL JSC in the sphere of environment include promotion of environmental safety that is vital to sustainable growth of TVEL JSC and its subsidiaries and reduction of negative impact of production and the supplied products on environment to the minimum acceptable level”.

ENVIRONMENTAL POLICY
TVEL Fuel Company in its environmental activities is committed to promotion of environmental, nuclear and radiation safety, as well as implementation of strategic objective of the Company to provide social and ecological acceptability.

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 connected with decommissioning of the nuclear industry facilities and rehabilitation of the contaminated territories;
One of the priority directions in the field of environmental protection and ecological safety is involvement in the functioning of the Integrated Management System, where a Corporate Environmental Management System is a constituent.

Environmentally important organizations of TVEL Fuel Company (AECC JSC, PA ECP JSC, SGCHE JSC, NCCP PJSC, UEP JSC, CHMP JSC, MSZ PJSC) annually publish annual reports on environmental safety on their official sites. The Reports contain information about impact of production enterprises on the environment of the regions of presence, as well as about the executed monitoring and control of natural environments and its results.

The main objective of the corporate IMS is to identify the environmental aspects and potential environmental risks that affect the environment, safety and health of employees, and to set tasks for improvement of these activities and development of programs to address these tasks subject to constant monitoring.

System-based application of guiding principles of the Policy — the unified methodology of environmental aspect identification and environmental risk evaluation — allows to allocate funds to solve the most important problems, which leads to improved performance in the field of ecology. Priority goals and objectives aimed at reducing environmental risks are an integral part of the planning process; they are included in the Environmental Objective Achievement Program of the Company.

Production and Technical Arrangements in 2015

<table>
<thead>
<tr>
<th>Enterprise</th>
<th>Arrangement</th>
</tr>
</thead>
<tbody>
<tr>
<td>AECC JSC</td>
<td>• Works of refrigerating station reconstruction were continued with installation of 9 refrigerating machines in building B05;</td>
</tr>
<tr>
<td>NCCP PJSC</td>
<td>• Works for decommissioning of buildings 22, 65 and 11 for FE production for UGR were completed;</td>
</tr>
<tr>
<td>CHMP JSC</td>
<td>• Works for decommissioning of building 7/Earlier used for production of fuel for UGR were completed;</td>
</tr>
<tr>
<td>PA ECP JSC</td>
<td>• Modernization was conducted with transition to ozone-safe from 34 of the refrigerating machine in building No. 10A;</td>
</tr>
<tr>
<td>PA ECP JSC</td>
<td>• Work on modernization of general and gas-cleaning ventilation systems in building No. 3 were continued;</td>
</tr>
<tr>
<td>MSZ PJSC</td>
<td>• Completion of works on water supply systems reconstruction.</td>
</tr>
<tr>
<td>CHMP JSC</td>
<td>• Completion of works on decommissioning of building 210 earlier used for production of depleted uranium for civil production of the Industry Center of Metallurgy</td>
</tr>
<tr>
<td>SGCHE JSC</td>
<td>• Continuation of works on preservation of 8.1-9 and 8.2-5 basins and solid radioactive waste storage facility No. 305 of site No. 16</td>
</tr>
<tr>
<td>AECC JSC</td>
<td>• Beginning of works on creation of return water supply systems on the basis of the existing hydraulic structures</td>
</tr>
<tr>
<td>UEP JSC</td>
<td>• Commissioning of the grinding complex (shredded “VIKMAN-400” in universal demountable building of radioactive waste (RW) processing site No. 2) of the shop No. 70</td>
</tr>
<tr>
<td>PA ECP JSC</td>
<td>• Modernization of the following refrigerating machine with transition to ozone-safe from 34 of building No. 10A</td>
</tr>
</tbody>
</table>

**NCCP PJSC** became the winner in nomination “For environmental responsibility” of All-Russian Contest “Russian Business Leaders: Dynamics and Responsibility — 2015”, organized by Russian Union of Entrepreneurs and Industrialists.

The Reports include the results of measures taken by TVEL Fuel Company enterprises for improvement of the environmental situation and decrease in 2015:

- increase in 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 plants (HP) of SGCHE JSC and decrease in the amount of coal use as fuel at HP of CHMP JSC which also generate thermal and electrical energy for the population of nearby settlements;
- cessation 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 and consumer waste of the Company. The use of wastes is mainly organized at MSZ PJSC, CHMP JSC and NCCP PJSC, which in 2015 used in their production 31.3%, 66.4% and 32.1% of their wastes respectively.

Use of Materials in Main Production by TVEL FC enterprises, tons

<table>
<thead>
<tr>
<th>Material</th>
<th>2015</th>
<th>2014</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sulfuric acid</td>
<td>4,239.9</td>
<td>1,962.7</td>
<td>1,520.7</td>
</tr>
<tr>
<td>Technical sulfuric acid</td>
<td>8,878.1</td>
<td>10,848.3</td>
<td>1,201.9</td>
</tr>
<tr>
<td>Nitric acid</td>
<td>12,055.8</td>
<td>14,167.5</td>
<td>14,313.9</td>
</tr>
<tr>
<td>Hydrochloric acid</td>
<td>8,370.73</td>
<td>8,256.08</td>
<td>8,146.85</td>
</tr>
<tr>
<td>Ferrous metals</td>
<td>6,308.01</td>
<td>4,990.73</td>
<td>4,629.04</td>
</tr>
<tr>
<td>Non-ferrous metals</td>
<td>13,263.6</td>
<td>5,105.69</td>
<td>1,810.56</td>
</tr>
</tbody>
</table>

Share of used waste to the extent of their formation per year, %

<table>
<thead>
<tr>
<th>Enterprise</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>MSZ PJSC</td>
<td>24</td>
<td>31</td>
<td>36</td>
</tr>
<tr>
<td>CHMP JSC</td>
<td>16</td>
<td>32</td>
<td></td>
</tr>
<tr>
<td>NCCP PJSC</td>
<td>0</td>
<td>6</td>
<td>1</td>
</tr>
<tr>
<td>AECC JSC</td>
<td>1</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>VPFA Technfl JSC</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

Total for TVEL FC 1.9 1.2 2.6
One pellet of nuclear fuel weighing 4.5 g substitutes:

- 360 m³ of natural gas
- 400 kg of bituminous coal
- 640 kg of fuel wood
- 350 kg of oil
- 1,400 kWh of electric power

**Water Consumption and Water Disposal**

- **Water withdrawal** by the enterprises of TVEL FC in 2013–2015, mln m³
  - 2013: 655.4
  - 2014: 547.5
  - 2015: 450.2

- **Usage for own needs**
  - 2013: 450
  - 2014: 441
  - 2015: 338

- **Volume of disposed water**
  - 2013: 12
  - 2014: 11
  - 2015: 10

**Structure of Waste Generation by the Enterprises, %**

- 2013: 79.2% SGCHE JSC, 2.2% ChMP JSC, 3.2% Others
- 2014: 83.5%, 3.9%, 14.2%
- 2015: 87.0%, 3.2%, 26.8%, 1.6%

**Waste Generation and Recycling in 2013–2015, tons**

<table>
<thead>
<tr>
<th>Year</th>
<th>Total</th>
<th>Waste Generation within the system of the Company</th>
<th>Transfer to outside organizations for usage</th>
<th>Usage inside the system of the Company</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013</td>
<td>297,294</td>
<td>19,490</td>
<td>16,900</td>
<td>5,500</td>
</tr>
<tr>
<td>2014</td>
<td>306,415</td>
<td>18,682</td>
<td>3,608</td>
<td></td>
</tr>
<tr>
<td>2015</td>
<td>210,053</td>
<td>10,046</td>
<td>5,399</td>
<td></td>
</tr>
</tbody>
</table>

**Notes:**
- 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.
- The Company is not engaged in waste transportation across international borders.
- 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;
No emergencies and incidents resulting in negative environmental impact occurred in 2015 at the enterprises of TVEL Fuel Company.

The largest volumes of emissions were reported at the enterprises of the Fuel Company that are directly related to the emissions generated in the production of electricity and heat power at the HPPs of GSCHE JSC and ChMP JSC. It should be noted that these HPPs supply heat and electricity to the settlements in areas of location of the enterprises.

Pollutant Emissions

In 2015 total pollutant emissions into the atmosphere by the Company’s enterprises amounted to 16,400 tons (24.4% of the set standard). The volume 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 GSCHE JSC and ChMP JSC.

Carbon monoxide emitted into the atmosphere from anthropogenic sources is oxidized to carbon dioxide.

Transportation of hazardous cargoes and transport.

In operation of the rolling stock, the routes and working hours are constantly complement of vehicles in the motor vehicle fleet are cut down, which result in reduction of total mileage and, therefore, reduction of the total consumption of fuel and adverse impact on the environment.

Pollutant Emissions

Emission of specific pollutants, thous. tons

\[
\begin{array}{cccc}
\text{Enterprise} & \text{2013} & \text{2014} & \text{2015} \\
\text{GSCHE JSC} & 16.7 & 17.0 & 13.8 \\
\text{ChMP JSC} & 1.9 & 2.6 & 1.8 \\
\text{SEIP JSC} & 0.9 & 0.6 & 0.5 \\
\text{Other} & 0.5 & 0.5 & 0.3 \\
\text{Total} & 20.1 & 20.7 & 16.4 \\
\end{array}
\]

Share of emissions of the enterprise of the total volume of the TVEL FC’s emissions, %

\[
\begin{array}{cccc}
\text{Enterprise} & \text{2013} & \text{2014} & \text{2015} \\
\text{GSCHE JSC} & N/A & N/A & 41.3 \\
\text{ChMP JSC} & 10.8 & 10.8 & 10.8 \\
\text{SEIP JSC} & 5.1 & 5.1 & 5.1 \\
\text{Other} & 1.8 & 1.8 & 1.8 \\
\text{Total} & 100.0 & 100.0 & 100.0 \\
\end{array}
\]

The share of return water of water was disposed into natural water while the standard was 622 mln m³. All water is used by the enterprises for equipment cooling systems.

In 2015 the volume of return water of water was disposed by the Company’s enterprises, while the standard was 622 mln m³. All water was disposed into natural water bodies. The volume of water withdrawal directly depends on the water consumption.

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. Difference in percent decrease as compared to 2014 of water withdrawal volume and polluted waste water volume is conditioned by the fact that a range of TVEL Fuel Company enterprises execute acceptance of waste water from outside organizations.

Wastes generated at TVEL FC enterprises by Hazard Class, tons

<table>
<thead>
<tr>
<th>Indicator</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
<th>∆2014/ 2015, %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Waters in total, including:</td>
<td>307,300</td>
<td>306,415</td>
<td>210,053</td>
<td>-31.4</td>
</tr>
<tr>
<td>Hazard Class I</td>
<td>30</td>
<td>53</td>
<td>210</td>
<td>285.2</td>
</tr>
<tr>
<td>Hazard Class II</td>
<td>8,880</td>
<td>5,614</td>
<td>4,079</td>
<td>-30.3</td>
</tr>
<tr>
<td>Hazard Class III</td>
<td>1,071</td>
<td>1,046</td>
<td>490</td>
<td>-52.8</td>
</tr>
<tr>
<td>Hazard Class IV</td>
<td>29,810</td>
<td>20,736</td>
<td>10,801</td>
<td>-47.9</td>
</tr>
<tr>
<td>Hazard Class V</td>
<td>253,500</td>
<td>218,724</td>
<td>164,469</td>
<td>-30.2</td>
</tr>
</tbody>
</table>

Water consumption in the systems of redistribution of water was 256 mln m³. The share of return water was disposed into natural water during 2015 was 59.1%, the share of reused water in the total volume of withdrawn water was 40.9%. All water is used by the enterprises for equipment cooling systems.

The largest volumes of emissions were reported at the enterprises of the Fuel Company that are directly related to the emissions generated in the production of electricity and heat power at the HPPs of GSCHE JSC and ChMP JSC. It should be noted that these HPPs supply heat and electricity to the settlements in areas of location of the enterprises.

In 2015 greenhouse gas emissions caused by transportation associated with the activity of the Company’s enterprises and workforce transportation. Transportation of hazardous cargoes and special cargoes is carried out by transport of the enterprises or third parties pursuant to licenses and taking into account requirements to organization of transportations.

For the purpose of reduction of the adverse impact on the environment, measures were taken for scheduled replacement of morally and physically obsolescent motor vehicles with modern ones complying with the exhaust toxicity standards, as well as for replacement of motor vehicles that have gasoline engines with motor vehicles that have diesel engines.

In operation of the rolling stock, the routes and working hours are constantly adjusted and optimized, mileage and the

Emission of specific pollutants, thou. tons*

\[
\begin{array}{cccc}
\text{Year} & \text{2013} & \text{2014} & \text{2015} \\
\text{Emission of nitrogen oxide, thou. tons} & 4.7 & 4.7 & 4.7 \\
\text{Emission of sulphur oxides, thou. tons} & 4.0 & 4.0 & 4.0 \\
\text{Emission of carbon dioxide, thou. tons} & 602 & 1,010 & 1,156 \\
\end{array}
\]

\* 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.

No emergencies and incidents resulting in negative environmental impact occurred in 2015 at the enterprises of TVEL Fuel Company.

Wastes in total, including: 297,300 306,415 210,053 -31.4

Water consumption in the systems of redistribution of water was 256 mln m³. The share of return water was disposed into natural water during 2015 was 59.1%, the share of reused water in the total volume of withdrawn water was 40.9%. All water is used by the enterprises for equipment cooling systems.

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Pollutant Emissions

In 2015 total pollutant emissions into the atmosphere by the Company’s enterprises amounted to 16,400 tons (24.4% of the set standard). The volume 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 GSCHE JSC and ChMP JSC.

Decrease of nitrogen and sulphur oxide emissions by 2015 by 20.6% and 15.5% was caused by overall emissions decrease in TVEL Fuel Company.

Emission of specific pollutants, thou. tons*

\[
\begin{array}{cccc}
\text{Year} & \text{2013} & \text{2014} & \text{2015} \\
\text{Emission of nitrogen oxide, thou. tons} & 4.7 & 4.7 & 4.7 \\
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No emergencies and incidents resulting in negative environmental impact occurred in 2015 at the enterprises of TVEL Fuel Company.

The largest volumes of emissions were reported at the enterprises of the Fuel Company that are directly related to the emissions generated in the production of electricity and heat power at the HPPs of GSCHE JSC and ChMP JSC. It should be noted that these HPPs supply heat and electricity to the settlements in areas of location of the enterprises.

In 2015 greenhouse gas emissions caused by transportation associated with the activity of the Company’s enterprises and workforce transportation. Transportation of hazardous cargoes and special cargoes is carried out by transport of the enterprises or third parties pursuant to licenses and taking into account requirements to organization of transportations.

For the purpose of reduction of the adverse impact on the environment, measures were taken for scheduled replacement of morally and physically obsolescent motor vehicles with modern ones complying with the exhaust toxicity standards, as well as for replacement of motor vehicles that have gasoline engines with motor vehicles that have diesel engines.

In operation of the rolling stock, the routes and working hours are constantly adjusted and optimized, mileage and the

Emission of specific pollutants, thou. tons*

\[
\begin{array}{cccc}
\text{Year} & \text{2013} & \text{2014} & \text{2015} \\
\text{Emission of nitrogen oxide, thou. tons} & 4.7 & 4.7 & 4.7 \\
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\end{array}
\]

\* 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.
The Company’s total environmental protection expenditure in 2015

**2,318**

**RUB mln**

<table>
<thead>
<tr>
<th>Expenditure Items</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
<th>2016 (plan)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Radiation safety assurance</td>
<td>1,059</td>
<td>1,123</td>
<td>817</td>
<td>1,000</td>
</tr>
<tr>
<td>Waste water collection and treatment</td>
<td>335</td>
<td>374</td>
<td>512</td>
<td>510</td>
</tr>
<tr>
<td>Atmosphere air protection and prevention of climate change</td>
<td>186</td>
<td>176</td>
<td>283</td>
<td>290</td>
</tr>
<tr>
<td>Waste disposal</td>
<td>132</td>
<td>153</td>
<td>173</td>
<td>182</td>
</tr>
<tr>
<td>Protection and rehabilitation of lands, surface and ground water</td>
<td>28</td>
<td>42</td>
<td>41</td>
<td>70</td>
</tr>
<tr>
<td>Other activities in the sphere of environment protection</td>
<td>472</td>
<td>482</td>
<td>418</td>
<td>490</td>
</tr>
<tr>
<td>Total</td>
<td>2,213</td>
<td>2,371</td>
<td>2,318</td>
<td>2,530</td>
</tr>
</tbody>
</table>

**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.

Planning of production and technical measures aimed at ensuring of environmental protection by the enterprises included in the management system of the Company is carried out in the framework of the investment and project activities of TVEL Fuel Company and ROSATOM. Prior to its inclusion in investment projects, each action is subject to justification and assessment from the view point of the final result effectiveness at the meeting of the Investment Committee of TVEL JSC.

The share of expenses is related to the activities for environment radiation safety assurance (RUB 816 mln). Considerable expenses are related to collection and treatment of waste water (RUB 512 mln).

In 2015 total amount of payments for negative impact on the environment increased by 4.5% as compared to the previous year and amounted to RUB 30.5 mln.

**Structure of payments for negative environmental impact, %**

<table>
<thead>
<tr>
<th>2013</th>
<th>2014</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>63%</td>
<td>75%</td>
<td>9%</td>
</tr>
<tr>
<td>9%</td>
<td>9%</td>
<td>9%</td>
</tr>
<tr>
<td>12%</td>
<td>7%</td>
<td>9%</td>
</tr>
<tr>
<td>35%</td>
<td>22%</td>
<td>21%</td>
</tr>
</tbody>
</table>

**Environment protection costs outlay of TVEL FC in 2015, %**

<table>
<thead>
<tr>
<th>2015</th>
<th>2014</th>
<th>2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>71%</td>
<td>16%</td>
<td>9%</td>
</tr>
<tr>
<td>23%</td>
<td>9%</td>
<td>6%</td>
</tr>
<tr>
<td>6%</td>
<td>6%</td>
<td>6%</td>
</tr>
</tbody>
</table>

**Environment protection costs outlay of TVEL FC in 2015, %**

16%  9%  71%

23%  9%  6%  6%  6%

**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.

The Company subsidiaries undertake systematic efforts for prevention and elimination of radiation accidents, improvement of the stability of hazardous production facilities, training of personnel and special formations in conditions of accidents and emergency situations.

Prevention of radiation accidents requires constant monitoring of compliance with the rules, regulations, instructions, observance of technological discipline.

General management of the works ensuring the NRS in the Company’s enterprises is imposed on Technical Directors (Chief Engineers).

Lists of nuclear hazardous sections are elaborated for all nuclear-hazardous facilities having the conclusions on the nuclear safety issued by the Department of Nuclear Safety of IPPE RF SSC FSUE. All nuclear-hazardous sections are equipped with emergency alarm systems in the case of self-sustaining fission chain reaction.

Units of the enterprises for processing, storage, production involving nuclear materials and radioactive substances, radioactive wastes treatment have sanitary-epidemiological certificates of conformance stating that the work with radiation sources is in compliance with sanitary rules.

According to the conclusions made by the territorial departments of the State Sanitary and Epidemiological Service of the Russian Federation, the radiation situation at the Company’s enterprises, within their sanitary protection areas and control areas (areas of professional responsibility) is estimated as satisfactory.
Nuclear and Radiation Safety Principles in TVEL FC

**Prevention**
- of nuclear and radiation accidents

**Decommissioning**
- of facilities that are no longer operated

**Improving**
- working conditions

**Developing**
- nuclear and radiation safety control systems

**Perfecting**
- the emergency prevention and nuclear disaster response systems

**Reducing**
- routine and incidental releases of radionuclides into the environment

**Maintaining**
- lowest possible levels of personal irradiation dose of the personnel while reducing the number of persons exposed to radiation

**Reducing**
- the amount of radioactive waste

**Training**
- and retraining of personnel on nuclear and radiation safety

**Rehabilitation**
- of radiologically contaminated areas
Activities of TVEL Fuel Company are carried out in accordance with the laws of the Russian Federation pertaining to the use of nuclear power with due account to IAEA requirements.

Federal Target Program “Nuclear and Radiation Safety Assurance for 2008 and for the Period up to 2015”

The First Federal Target Program “Nuclear and Radiation Safety Assurance for 2008 and for the Period up to 2015” was completed, which enable to solve the problems of the nuclear “heritage,” including but not limited to the following:

- decomposition of the research building (liquidation of the building and rehabilitation of the surrounding area) of the nuclear facility belonging to VNIINM JSC (Moscow) and which was previously used for works with uranium, plutonium, americium and other radionuclides;
- commission of conservation (total isolation) of the RW storage facility in SOCHE JSC (Seversky) B-2 storage bay of total area 51,400 m² with 35,000 m³ pulp volume;
- decommissioning (liquidation) of the nuclear facility in KNYM JSC (Krasnoyarsk) to a state of “green lawn”;
- decommissioning (construction of conservation storage facility for special RW) of the industrial uranium-graphite reactor EI-1 in SOCHE JSC (Seversky) reactor plant.

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 2,740 RW power blocks;
- rehabilitation of 155,500 m² of radiation-tainted territories.

In 2015 the total volume of works on FTP NRS activities amounted to RUB 1.4 bln, including 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”.

The Reserve No. 3 “Decommissioning of R&D” was created in order to eliminate the negative environmental impacts of economic activities that will be accomplished the rehabilitation measures program for contaminated areas within the area of professional responsibility of MSZ PJSC, NCCP JSC, CMNP JSC and SOCHE JSC. No industrial activity is carried out at the said areas, the access is highly restricted.

Activities under the FTP “Nuclear and Radiation Safety Assurance for 2008 and up to 2015” at the sites of TVEL Fuel Company subsidiaries at the expense of the Federal Budget

<table>
<thead>
<tr>
<th>Subsidiary Company</th>
<th>Scope of finance, RUB mln</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>VNIINM JSC</td>
<td>918</td>
<td>430</td>
<td>230</td>
<td></td>
</tr>
<tr>
<td>NCCP JSC</td>
<td>11</td>
<td>135</td>
<td>1311</td>
<td></td>
</tr>
<tr>
<td>CMNP JSC</td>
<td>27</td>
<td>25</td>
<td>335</td>
<td></td>
</tr>
<tr>
<td>SOCHE JSC</td>
<td>152</td>
<td>350</td>
<td>574.8</td>
<td></td>
</tr>
<tr>
<td>TOTAL</td>
<td>1,146</td>
<td>940</td>
<td>1,221.2</td>
<td></td>
</tr>
</tbody>
</table>

Sources of financing for liquidation of the Nuclear “Heritage” in 2015

<table>
<thead>
<tr>
<th>Sources</th>
<th>Number of activities</th>
<th>Scope of Financing, RUB mln</th>
<th>List of major activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Special Reserve Fund No. 3 “Decommissioning of R&amp;D” of ROSATOM</td>
<td>22</td>
<td>392.15</td>
<td>1. Decommissioning of hot boxes in the Building 1-3 belonging to VNIINM JSC; 2. Advance preparation to decommissioning of the buildings and facilities of the site No. 3 in the Radiochemical Plant of SOCHE JSC; 3. Conservation of the tailings pond No. 1 in CMNP JSC; 4. Decommissioning of the research building B in VNIINM JSC</td>
</tr>
<tr>
<td>The Reserve No. 3 “Decommissioning of R&amp;D” remaining at the disposal of the organization</td>
<td>8</td>
<td>29.29</td>
<td>1. Creating a mobile installation for preparation and application of film-forming decontaminating and localizing compound mixtures; 2. Creating an installation of control and pulse deactivation in VNIINM JSC; 3. Liquidation of the diffusion equipment in the building 8 and site 115-a of SOCHE JSC</td>
</tr>
</tbody>
</table>

Plan of the activities under the FTP “Nuclear and Radiation Safety Assurance for the period of 2016–2020 and up to 2030”

<table>
<thead>
<tr>
<th>Subsidiary Company</th>
<th>Funding in 2016, RUB mln</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOCHE JSC</td>
<td>394.2</td>
</tr>
<tr>
<td>NCCP JSC</td>
<td>756.5</td>
</tr>
<tr>
<td>CMNP JSC</td>
<td>398.3</td>
</tr>
<tr>
<td>TOTAL</td>
<td>1,501</td>
</tr>
</tbody>
</table>

Pollution of the Environment with Radionuclides (RN)

<table>
<thead>
<tr>
<th>Indicator</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emission of RN into the atmosphere, Bq</td>
<td>7.54*10⁹</td>
<td>9.49*10⁹</td>
<td>8.73*10⁹</td>
</tr>
<tr>
<td>Presence of areas contaminated with RN, thous. m²</td>
<td>30,889</td>
<td>16,081.4</td>
<td>16,081.4</td>
</tr>
<tr>
<td>Discharge of waste water containing RN, Bq</td>
<td>5.15*10⁹</td>
<td>1.56*10⁹</td>
<td>2.09*10⁹</td>
</tr>
</tbody>
</table>

* at the sites of the Company’s subsidiaries at the expense of the Federal Budget.
The emissions of all subsidiaries of TVEL Fuel Company are within the permissible limits.

As of the end of 2015 the total area of territories contaminated with radionuclides subject to rehabilitation amounted to 116,081,400 m².

In conformity with the Federal Law of July 11, 2011 No. 190-FZ “About Radioactive Waste Management and Modifications to Certain Legislative Acts of the Russian Federation. It implies the transition from long-term storage of radioactive waste to its disposal, i.e. safe disposal of radioactive waste at the point of radioactive waste storage facilities without the intention of subsequent recovery.

To manage the radioactive waste disposal facilities in the Russian Federation a specialized organization was created — the National Operator for Radioactive Waste Handling (NCCP JSC) — a new system for radioactive waste handling is formed in the Russian Federation. It implies the transition from long-term storage of radioactive waste to its disposal, i.e. safe disposal of radioactive waste at the point of radioactive waste storage facilities without the intention of subsequent recovery.

In order to reduce the costs of waste transportation and locate in a safe way the radioactive waste generated by production activities of SGCHE JSC, as well as the waste generated while decommissioning the nuclear and radiation hazardous facilities of SGCHE JSC (liquidation of nuclear “heritage”).

The enterprises of TVEL Fuel Company generating radioactive waste in the course of their operations are responsible for safety while handling the radioactive waste until transferring such waste to the national operator for RW management. The enterprises are working to reduce the amount of radioactive waste generated, the corresponding plans and programs have been developed. In order to reduce the costs of RW disposal, improve safety and efficiency for RW management, the enterprises develop and introduce new technologies and methods for recycling radioactive waste.

PA ECP JSC accomplished the project on the creation of the centrifugal method based pulp separation unit, which allowed eliminating the disposal of radioactive waste in the pulp depository of the enterprise.

UEIP JSC accomplished the project on creation of the crushing plant (shredder) for gridding the decommissioned aerosol filters of various types and other bulky waste. NCCP JSC works on the project of creating a liquid and solid waste processing complex, being at the stage of design engineering details.

Pollution of the Environment with Radionuclides as of the End of 2015

<table>
<thead>
<tr>
<th>Subsidiary Company</th>
<th>Areas contaminated with radionuclides, thou. m²</th>
</tr>
</thead>
<tbody>
<tr>
<td>MSZ PJSC</td>
<td>884.9</td>
</tr>
<tr>
<td>NCCP PJSC</td>
<td>372.3</td>
</tr>
<tr>
<td>CHMP JSC</td>
<td>210</td>
</tr>
<tr>
<td>SGCHE JSC</td>
<td>14,604.2</td>
</tr>
<tr>
<td>Total</td>
<td>16,084.1</td>
</tr>
</tbody>
</table>

A large portion of RW located in the sites of TVEL Fuel subsidiaries is placed in long-term RW storage facilities (39.6% of the total volume in m3) and RW special disposal sites (60.3%). In the reporting year, 390,000 m3 of RW was delivered to specialized organization for disposal.

The Unified State Automated Radiation Monitoring System of the Russian Federation

The enterprises of TVEL Fuel Company (MSZ PJSC, CHMP JSC, VNIIM JSC, SGCHE JSC, UEIP JSC, AECC JSC, PA ECP JSC) were introduced into the Unified State Automated Radiation Monitoring System (USARMS).

The data obtained from the control stations are real-time recorded on websites of ROSATOM and the Emergency Center of the Russian Ministry of Nuclear of Nuclear Energy (Saint-Petersburg). ARMS stations are located at industrial sites, within their sanitary protection areas and control areas (areas of professional responsibility) of the enterprises.

In 2015 all enterprises developed and started to implement the Fire Safety Policy of TVEL JSC. In 2015 all enterprises developed and started to implement the Fire Safety Policy of TVEL JSC.
Key works on ensuring emergency preparedness and response by the Fuel Company’s subsidiaries

| 1. | Development of radiation, chemical and environmental situation monitoring systems and local warning systems |
| 2. | Formulation, training and performance review of emergency response teams |
| 3. | Updating of emergency response plans at major industrial facilities |
| 4. | Emergency response drills under accident and emergency plans |
| 5. | Setting up and maintaining the emergency preparedness and response packages at hazardous industrial facilities |
| 6. | Introduction of corrective and compensatory measures to prevent industrial accidents |
| 7. | Interaction with Emergency Center 911’s and its affiliates to ensure emergency preparedness during transportation of dangerous goods and industrial safety |
| 8. | Maintenance of on-duty dispatching service system |

In terms of nuclear terrorism threat countermeasures, anti-terrorism security certificates were developed at all nuclear hazardous facilities and approved in the prescribed manner. The facilities are subject to departmental inspections and inspections by the State Regulatory Authorities.

Emergency Preparedness and Response

Work to ensure emergency preparedness and response of the Fuel Company subsidiaries is carried out in the following key areas.

Physical Protection of Nuclear Facilities

- The state of physical protection in subsidiaries of TVEL Fuel Company is assessed as complying with the rules and departmental normative documents.
- In 2015 no stealing and sabotage in relation to the objects of physical protection was registered, there was no case of failure to prevent unauthorized actions; the deficiencies identified by departmental and technical inspections were eliminated completely and promptly; performance of technical equipment and preparedness of personnel and security teams were at acceptable level.
- Physical protection systems were improved in accordance with the approved plans. Works were financed mainly at the expense of the funds of Reserve No. 2 of ROSATOM and own funds of the subsidiaries of TVEL FC. All activities were performed in a timely manner.

Due to the focused efforts there was no recorded emergency situation of natural and technogenic nature at the industrial site of TVEL FC during the reporting period.

Company continued to improve the EMS, including communication system, the EMS warning and information systems. Holding organizational and technical activities aimed at increasing fire safety allowed:
- to reduce the number of violations identified by the State Fire Supervision bodies of the EMERCOM of Russia by 22% in comparison with 2014;
- to improve the timeliness of compliance with the proposed instructions up to 99%;
- to prevent fire at industrial sites of the enterprises and continue the positive tendency of their number reduction beginning from 2011;
- to complete equipping of the facilities with automatic fire fighting systems to 94%;
- to organize in 2016 the implementation of investment projects aimed at re-equipment of facilities with automatic fire fighting systems to 100%;
- to improve the quality of training of managers and specialists responsible for fire safety in specialized training centers, and to upgrade the system of fire safety briefing of employees;
- to ensure continuous monitoring of the fire situation in forests on industrial sites and surrounding areas and the complex of preventive measures that would prevent wildfires;
- to ensure the further development of the volunteer fire-fighter movement with engaging them in contests and competitions.
Where do you see the Company in 10 years from now?

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 Data) 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.

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.
This Annual 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.

The purpose of this Report is to present comprehensive account of:
- performance of TVEL Fuel Company over the reporting year;
- strategic directions and development potential;
- the inherent risks and risk mitigation procedures;
- management philosophy.

This Report is prepared in compliance with the following regulatory documents:
- Federal Law No. 208-FZ d/d December 26, 1995 “On Joint-Stock Companies”;
- RF Government Regulation No. 1214 d/d December 31, 2010 (as revised on November 10, 2015) “On improving management procedure of open joint stock companies, the shares of which are under federal ownership and owned by federal state unitary enterprises”;
- The Policy of ROSATOM applicable to public reporting and Public Annual Reporting Standard of the Key Organizations included into ROSATOM;
- Corporate Governance Code (recommended by letter of the Central Bank of the Russian Federation d/d April 10, 2014);
- Global Reporting Initiative Sustainability Reporting Guidelines, version G4;
- Standard AA1000 API 2008 of Accountability;
- International Integrated Reporting Framework, version 1.0.

The integrated format of the Report provides detailed description of the Company’s performance in the context of the external environment and shows the impact it makes on the stakeholders.

Specific aspects of TVEL JSC that were not assessed in survey but were automatically included into the list of aspects to be disclosed in the Report:
1. Meeting the Demand of Power Grids
2. Position in the Global Market
3. Business Continuity
4. Provision of Qualified Personnel
5. Nuclear and Radiation Safety Systems Management
6. Compliance with Requirements of Nuclear and Radiation Safety
7. Decommissioning of Nuclear Facilities
8. RW and SNF Treatment, Rehabilitation of Contaminated Areas
9. Intellectual Capital
10. Innovation Activities
11. Support for Innovative and Technological Potential Development
12. Improvement of Control Mechanisms
13. Enhancement of Information Transparency of the State Administration within the Scope of Nuclear Industry
15. Improvement of Regulatory Framework in the Sphere of Nuclear Power Projects
16. Implementation of Certain Functions of the State Administration within Specified Activities
17. Provision of Qualified Personnel
18. Social Welfare of Workers

The integrated format of the Report provides detailed description of the Company’s performance in the context of the external environment and shows the impact it makes on the stakeholders.

The Report discloses material information which is important to those who use this Report to assess the performance of the Company. Survey of internal and external stakeholders was conducted, the map of material matters was drawn up while preparing this Report (for details refer to the Appendices to interaction version of the Report at www.tvel.ru the Section “Finance”, “Annual Report”).

Aspect boundaries and content of the Report were determined by the Committee on Public Annual Reporting involving the Committee of Stakeholders, and agreed on by TVEL JSC subdivisions. Disclosed matters (aspects) are material for all subsidiaries from the Report profile, unless otherwise is specified herein. As compared to the previous reports, certain changes covered disclosure limits for industrial injuries rates (see p. 148). Moreover, KMK JSC was withdrawn from the Company’s management profile due to its shares sale.

The scope of matters (aspects) had no changes as compared to the previous periods. No significant reformulations of the indi-
TVEL Fuel Company, the map of significant aspects (issues) un-
Following the 2015 reporting campaign 40 suggestions of
Stakeholders’ suggestions were taken into account while pre-
paring the Report, as well as the analysis of the best Russian and
international practices of disclosure in annual reports.
• The following 2015 reporting campaign 40 suggestions of
stakeholders were received: 26 of them have been taken into
account while preparing the Report, 5 — partially considered,
8 — will be taken into account while preparing the nextreports; 1
suggestion pertaining to the Company’s activities is submitted
to the department in charge.

The map was prepared in axes of “materiality for TVEL FC” (av-
erage assessment made by managers of the Fuel Company who
took part in survey) and “materiality for stakeholders” (external
stakeholders’ assessments). Materiality threshold at which an
aspect becomes sufficiently important (material) to be disclosed
in Annual Report is “above-average”. The proposed rating scale
includes “high”, “average”, “low” (materiality), “not meaningful”.
In figures these stand for “3”, “2”, “1”, “0”. “Above-average” stands
for “above 2.”

RATIONAL FOR CHOOSING PRIORITY MATTERS OF THE REPORT
The priority theme in this Report is the Efficiency Based Devel-
opment Strategy of the Fuel Company. Under the conditions of
market threats and increased competition and in order to perform
most important tasks assigned by ROSATOM, TVEL Fuel Company
sets itself the long-term and operational goals to improve
the efficiency.
Under current conditions on the markets of the front end NFC,
as well as with restricted investment resources, the continuous
efficiency improvement is a key condition of leadership positions
in the department in charge.

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The Statement of the audit organization FAC LLC, confirming
the reliability of non-financial data published in the Report.

The Organization that renders services of independent assur-
ance of non-financial data of the Report was selected through
costive procurement practices.
The Report was approved by the Board of Directors of TVEL JSC.
This year the Report of 2015. All prior and future peri-
ods are mentioned herein in description of corporate strategy,
collation of performance indicators and results, forecasts
and risk assessments. In the 2015 Annual Report, this Report
describes and assesses potential and probable events. Any state-
ments herein other than statement of facts shall be construed as
forecasts. Forecasts of this kind are relevant only at the time of
publishing. TVEL JSC (unless otherwise specifically provided for
by applicable legislation) is not obliged to review or update the
said forecasts or factors in any new pieces of information. Actual
performance results may differ from the forecasted ones.

The Company appreciates the employees who took part in
preparation of this Report, and all participants of public consulta-
tions and dialogues. We hope you will find this Report interesting
and informative in terms of the new information about TVEL Fuel
Company. Under current conditions on the markets of the front end NFC,
as well as with restricted investment resources, the continuous
efficiency improvement is a key condition of leadership positions
in the department in charge.

Enrichment (isotopic) — the content of atoms of a certain isotope in the isotopic mixture of the same element, if this exceeds the share of the given isotope in a naturally occurring mixture (expressed as a per-
centage); b) process resulting in an increased content of a certain isotope in the isotopic mixture.

Enriched Nuclear Fuel — nuclear fuel where the con-
tent of fissionable nuclides is higher than in natural
raw material.

Enriched Uranium — uranium which contains more
U-235 isotope than the U-235 in the U-235 isotope.

Fast Neutrons — neutrons with kinetic energy higher
than certain definite value. In Nuclear Reactor Physics
fast neutrons are those with energies above 0.1 MeV.

Financial Capital — according to the International In-
tegrated Reporting Framework, the pool of funds
that is:
- available to an organization for use in the produc-
tion of goods or the provision of services;
- obtained through borrowings, equity or grants, or
generated through operations or investments.

First Nuclear Project — the nuclear project of the USSR aimed at creating weapons of mass destruction
with the use of nuclear energy.

Fuel Assembly — a package of fuel elements (rods, bars, plates and others) held together with the aid of
spacer grids and other structural elements, which are
integral during transportation and in-pile irradiation.
Assemblies are loaded into the nuclear reactor core.

Fuel Pellet — a pellet of compacted uranium dioxide is
the basis of nuclear fuel and is contained inside fuel
elements.

Fuel-Element Cladding — metal tubes in the active
zone of the reactor containing oxide fuel pellets.

Fuel Production — nuclear fuel production, generally
in the form of ceramic pellets enclosed in metal tubes
(fuel elements), which are subsequently assembled in
fuel assemblies (FA).
Fuel Recharging — operations by material-handling machines to replace the spent fuel; the fuel exposure degree required for recharging depends on the fuel composition after exposure, allowable work duration and on the reactivity change.

Gas Centrifuge — equipment intended to obtain enriched uranium required for operation of nuclear reactors of nuclear power plants.

Gas Diffusion Technology — gas-diffusion method for separating uranium isotopes, based on phenomenon of molecular diffusion through the micropores in a membrane (barrier).

Global Reporting Initiative, GRI — an international reporting system concerning economic, environmental and social performance, based on the Sustainability Reporting Guidelines.

Heat Carrier — liquid or gas used for heat transfer from the active zone of the reactor to steam generators or directly to the turbines.

Highly Enriched Uranium — uranium with uranium-235 isotope equal or higher than 20%.

Human Capital — according to the International Integrated Reporting Framework, people's competencies, capabilities and experience, and their motivations, including:
- alignment with and support for an organization's governance framework, risk management approach, and ethical values.
- ability to understand, develop and implement an organization's strategy.
- loyalties and motivations for improving processes, or directly to the turbines.
- management, activities and prospects in the context of an organization's strategy.

Integrated Report — integrated report represents brief overview that reveals how strategy, corporate engagements other than audits and reviews of historical financial information.

ISAE 3000 International Standard on Assurance En- gagements — the Standard of the International Federation of Accountants "The performance of assurance engagements other than audits and reviews of historical financial information".

Low-Enriched Uranium — uranium that contains the isotope U-235 in a concentration of less than 20%.

Manufactured Capital — according to the International Integrated Reporting Framework, manufactured physical objects (as distinct from natural physical objects) that are available to an organization for use in the production of goods or the provision of services, including:
- buildings and structures;
- equipment;
- infrastructure.

Maximum Permissible Dose — the maximum value of the individual equivalent radiation dose per year, which does not cause unfavorable changes in health after 50 years of uniform exposure.

Natural Capital — according to the International Integrated Reporting Framework, these are:
- renewable and non-renewable environmental resources and processes, including air, water, land, minerals and forests;
- biodiversity and eco-system health.

Neutron — an elementary particle with no net electric charge, which can be found in each atomic nucleus except for hydrogen. Single neutrons moving with different speeds are released during the fission reaction. Slow (thermal) neutrons, if they can, can easily cause fission of nucleus of "fissionable" isotopes, e.g., U-235, Pu-239, U-233; fast neutrons can cause fission of "fertile" isotope nuclei, e.g. U-238. Sometimes atomic nuclei can capture neutrons.

Nuclear Fuel Depletion — reduction of any nuclide concentration in nuclear fuel due to nuclear transformations of this nuclide during the reactor operation.

Nuclear Energy — internal energy of atomic nuclei released by nuclear fission or nuclear reactions.

Nuclear Facility — any facility that generates, processes or handles radioactive or fissionable materials.

Nuclear Fuel — a material containing fissionable nuclides which, being placed in the nuclear reactor, makes it possible to sustain a nuclear chain reaction.

Nuclear Fuel Cycle — the sequence of manufacturing processes for ensuring the operation of nuclear reactors from uranium production to the disposal of radioactive waste.

Nuclear Power — branch of power engineering that uses nuclear energy for electricity and heat supply purposes.

Nuclear Reactor — a unit wherein a controlled chain nuclear reaction with energy release takes place. Reactors are classified according to their purpose, carrier type, design and other characteristics.

Nuclear Waste — radioactive materials generated on various stages of the nuclear fuel cycle, including development of uranium deposits, enrichment, fuel production, reactor operation, fuel processing, etc.

Ozone-Depleting Substances — any substance with an ozone-depleting potential higher than 0 that can deplete the stratospheric ozone layer. Most of ozone-depleting substances, including chlorofluorocarbons, halons and methylbromide, fall under the Montreal protocol as amended.

Phase Gate Approach to Investment — the principle of planning and carrying out investments applied to divide investment processes into phases, where each phase is preceded by Gate Review of the results achieved and the further project implementation plans and risk, and a decision is made on the further project implementation phase to be proceeded to.

Pilot Production — a stage in the nuclear plant commissioning process, from the power start-up to the plant's acceptance for commercial operation.

Primary Energy Sources — initial form of energy used to satisfy energy requirements of the reporting organization. Examples of primary sources include non-renewable energy sources, e.g. coal, natural gas, oil and nuclear energy. They also include such renewable sources as biomass, sun and wind energy, geothermal and hydraulic energy.

Power Unit — one of the NPP reactors with necessary equipment.

Production Localization — organization of production outside the Russian Federation.

Production Placement Topology — plan of territorial location of production facilities.

Radioactive Discharge — radioactive waste into the atmosphere resulting from operation of a nuclear facility.

Radionuclides — radioactive materials and radioactive substances that cannot be used any longer.

Radioactive Waste — radioactive waste generated by the use of nuclear energy for electricity and heat supply purposes.

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

Radiation Exposure — the total of individual exposure doses received or planned in the operations on de-commissioning, maintenance, repair, replacement or dismantling of nuclear facility components.

Radiation Monitoring — acquisition of information on the radiological conditions in the organisation and in the environment and on human exposure levels (includes dose control and radiometric monitoring).

Radioactive Isotopes — isotopes with unstable nuclei undergoing radioactive decay.

Radioactive Waste — radioactive waste generated by the use of nuclear energy for electricity and heat supply purposes.

Radionuclides — radioactive materials and radioactive substances that cannot be used any longer.

Radioactive Waste Treatment — general term that covers all activities related to the processing, condi- tioning, transportation, storage and burial of radioactive waste.

Radiation Safety — a set of arrangements seeking to limit the exposure of personnel and the public to the lowest possible radiation dose values in a socially acceptable way, as well as to avoid the early effects of exposure and keep the delayed radiation effects within tolerable limits.

Reconstituted Uranium — uranium separated from spent nuclear fuel in the process of radio-chemical reprocessing for repeated use in nuclear fuel (recon- structed fuel).

Regenerated Uranium — uranium separated from spent nuclear fuel in the process of radio-chemical reprocessing for repeated use in nuclear fuel (recon- structed fuel).
Rehabilitation of Contaminated Areas — reduction of the extent of radioactive contamination to the level ensuring the maximum protection of population and recovery of all elements of the ecosystem (water, soil, air) to the applicable normative level.

Research Reactor — a nuclear reactor designed to be used as research object with a view to obtain data on reactor physics and technology required for design and development of a reactor of the same type or of components thereof.

Small group — primary limited (6 to 10 persons) industrial formations responsible for various tasks aimed at products manufacturing and works execution in their divisions.

Social (Relationship) Capital — according to the International Integrated Reporting Framework, the institutions and relationships within the Company and between the Company and different groups of stakeholders and other communities aimed to enhance collective well-being.

Social Partnership — a system of institutes and mechanisms of coordination of the interests of the production process participants (workers, employers, state authorities, local self-government) based on equal cooperation.

Spent Nuclear Fuel Reprocessing — complex of chemical processes intended to remove fissile products from spent nuclear fuel and fissile material recovery for reuse.

Sublimation Production — uranium hexafluoride production.

Tailing Dump — complex of special structures and equipment intended for storage or burial of radioactive, toxic and other tailings materials called tails.

Top Management — directors General, Deputies Director General.

Triflate Production Waste — waste of salts of hazard class III (precipitated sulphate and barium fluoride).

Uranium-233 — artificial uranium isotope with half-life period of 1.6 x 10^5 years obtained by transmutation of thorium-232 after neutron capturing, classified as a fissionable nuclide.

Uranium-235 — natural uranium isotope with atomic mass 235 and half-life of 73 x 10^8 years; the only existing fissionable material.

Uranium-238 — natural uranium isotope with atomic mass 238 and half-life of 4.5 x 10^9 years, can be used as fertile material to obtain plutonium-239.

Uranium Conversion — chemical engineering process of uranium-containing materials transformation into uranium hexafluoride.

Uranium Hexafluoride — chemical compound of uranium and fluorine (UF6). This is the only highly volatile uranium-fluorine compound (when heated to 53°C, uranium hexafluoride passes from solid into gas), it is used as raw material for separation of uranium-238 and uranium-235 isotopes using a gas-diffusion technology or a gas-centrifuge technology, and for production of enriched uranium.

Uranium Ore Enrichment — combination of processes for the primary treatment of uranium-bearing mineral raw material to separate uranium from other minerals contained in the ore. This does not involve any changes in the content of minerals, but only mechanical separation thereof with the resultant production of an ore concentrate.

VVER — water-water energetic reactor with water used as heat carrier and decelerator. The most common type of Russian NPP reactors has two modifications: VVER-440 and VVER-1000.

VVER Production Waste — salt of hazard class III (precipitated sulphate and barium fluoride).

AMSIEM — Automated Measuring System of Industrial And Ecological Monitoring.

ANO NPO PIC — Autonomous Non-Commercial Organiza-

tion “Nuclear Power Information Centers”.

JSC — Joint-Stock Company.

ARMS — Automated Radiation Monitoring System.

ACS DEP — Automated Control System for Design Engineering Pre-Production.

APCS — Automated Process Control System.

Emergency Center SPb FUSE — Federal State Unitary Enterprise “Emergency Center of the Ministry of Nu-

clear Energy of Russia” (Saint-Petersburg).

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

DB — Database.

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.

VVER — Water-water power reactor.

HEU — Highly Enriched Uranium.

PT — Process time.

DG — Director General.

CD and ES — Civil Defence and Emergency Situations.

GOST — State Standard.

HHCS — Hyper heat-conductive sections.

UF6 — Uranium Hexafluoride.

GC — Gas Centrifuge.

GCC — Gas Centrifuge Complex.

DICA — Director for Internal Control and Audit.

ODDS — On-duty Dispatching Service System.

VH — Voluntary Health Insurance.

SC — Subsidiary Company.

UIPS — uniform Industrial Procurement Standard of ROSATOM.

SWU — Separate unit work.

CATU — Closed Administrative And Territorial Unit.

DDO — Deputy Director General.

SH — Stakeholders, parties concerned.

IA — Investment Activities.

IFI — Information favoured index.

RR — Research Reactor.


IMSD — Integrated Management System for Design.

IT — Information Technologies.

ITER — International Thermonuclear Experimental Reactor built on basis of tokamak by international group of scientists under the aegis of IAEE. It is sup-

posed to be a pilot version of the world’s first DEMO thermonuclear power plant.

IC — Information Center.

CMDS& — Control and measuring devices & automat-

equipment.

IDP — Integrated Development Planning.

KPI — Key Performance Indicators.

CRMS — Corporate Risk Management System.

CEFA — Combined Experimental Fuel Assembly.

LIC — Lithium-ion cells.

LHM — High purity lithium-7 hydroxide monohydrate.

LNA — Local normative acts.

LWS — Local Warning Systems.

IAEA — International Atomic Energy Agency — inter-
national regulatory body that monitors nuclear safety performance and non-proliferation of nuclear weap-

ons in the world.

MIA — Ministry of internal Affairs.

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 heater.

(e.g., full thermal power of the reactor itself is general-

ly three times higher than the electric power).

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

CU — Conversion unit.

IBRF — International Integrated Reporting Framework.

IUCN — International Union for Conservation of Na-
ture and Natural Resources.


FRM — Fabrication / Refabrication Module.

EMERCOM — The Ministry of the Russian Federation for Affairs of Civil Defence, Emergencies and Elimina-
tion of Consequences of Natural Disasters.

VAT — Value added tax.

IP — Incomplete production.

R&D — Research and Development.

NCO — Non-commercial organization.

LEU — Low enriched uranium.

SPA — Scientific-Production Association.

NPF — Non-state Pension Fund.

FE NFC — Front End of Nuclear Fuel Cycle.

STO — Scientific and Technical Council.

EDEC — Experimental Demonstration Energy Com-

plex.

LCC — Limited Liability Company.

CFSRB — Control and Protection System Regulatory Body.

EUP — Enriched uranium product.

SNF — Spent nuclear fuel.

PSCIC — Public Joint Stock Company.

SFI — Suggestions for Improvement.

RPS — ROSATOM Production System.

IUGR — Industrial uranium-graphite reactor.

AL — Absorber element.

RW — Radioactive waste.
RBMK — High-power channel-type reactor — type of single-cycle energetic reactor with water as heat carrier, and graphite as decelerator.
RN — Radionuclide.
RUNPIW — Russian Union of Nuclear Power and Industry Workers.
SSC — Separation and Sublimation Complex.
RUEI — Russian Union of Entrepreneurs and Industrialists.
MSE — Managers, specialists, employees.
RU — Reactor unit.
ICS — Internal Control System.
BPR — Burnable poison rod.
SPZ — Sanitary protection zone.
MM — Mass media.
MNUP — Mixed nitride uranium-plutonium.
SDIC — Special Department for Internal Control.
SFCL — Superconducting fault current limiter.
JV — Joint Venture.
AFCF — Adjusted free cash flow.
SFC — Standard of Fuel Company.
HSE MS — Health, Safety and Environmental Management System.
EMS — Emergency Management System (Facility Level).
TEA — Technical and Economic Audit.
FA — Fuel Assembly.
TVSA (FAAD) — Fuel assembly of alternative design.
TVS-KVADRAT — Name of fuel assembly for PWR reactors developed in Russia.
FE, FEG — Fuel element.
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.
TASED — Territory of Advancing Social and Economic Development.
HPP — Heat and Power Plant.
NPIB — Nuclear-powered icebreaker.
MPS — Managerial Personnel Reserve.
CFHC — Chlorofluorohydrocarbons.
FSUE — Federal State Unitary Enterprise.
FMBA — Federal Medical and Biological Agency.
FSEC — Federal Service for Export Control of the Russian Federation.
FTP — Federal Target Program.
CR — Center of Responsibility.
UEC — Russian-Kazakhstan Project “Uranium Enrichment Center”.
CFR — Center of Functional Responsibility.
ECM — Electronic Computing Machines.
EGR — Energy channel-type graphite reactor with steam overheat, used on Bilibino NPP.
NRS — Nuclear radiation safety.
NMR — Nuclear magnetic resonance.
NF — Nuclear fuel.
NRHF — Nuclear and radiation hazardous facilities.
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.
BWR — Boiling water reactor — a reactor that uses boiling water as heat carrier.
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.
ESA — Euratom Supply Agency.
HR — Human resources.
INES — International Nuclear Event Scale.
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.
PR — Public relations.
PHWR — Pressurised heavy water reactor — type of foreign reactors with heavy water (D₂O) as reactor coolant.
PWR — Pressurized water reactor — type of foreign reactors with pressurized water, analogue of VVER reactor.
WANO — World Association of Nuclear Operators.
Chapter 5.

Appendices
Auditor's Report on Financial Statements

We have performed the audit of the attached financial statements of TVEL JSC consisting of the Balance sheet as of December 31, 2015, Profit and Loss Statement, Capital Statement and Cash Flow Statement for the year 2015, other appendices to the Balance sheet and Profit and Loss Statement.

LIABILITY OF THE AUDITED ENTITY FOR FINANCIAL STATEMENTS

The Management of the Audited Entity shall be liable for execution and reliability of the mentioned financial statements in accordance with the Russian regulations on preparation of the financial statements, as well as for internal control system required for preparation of the financial statements free from material misstatements due to unfair practices or errors.

AUDITOR'S RESPONSIBILITY

Our liability lies in expression of opinion on reliability of annual financial statements on the basis of conducted audit. We have conducted audit in accordance with the Federal Auditing Standards. These standards require compliance with applicable ethical practices, as well as planning and conduction of audit in such a way to get reasonable assurance that financial statements contain no material misstatements.

The audit included auditing procedures aimed at obtaining of audit evidence to confirm index numbers in financial statements and disclosure of information therein. Choice of audit procedures is the subject of our judgement which is based on assessment of risk of material misstatements due to unfair actions or errors. In the course of this risk assessment we have considered internal control system ensuring execution and reliability of financial statements with the view to select appropriate audit procedures, but with no view to express opinion on efficiency of internal control system. The audit also included assessment of appropriate applicable accounting policy and validity of estimated figures obtained by management of the Audited Entity, as well as assessment of financial reporting in whole.

We believe that audit evidence obtained in the course of the audit provides reasons enough to offer an opinion on reliability of the financial statements.

OPINION

In our opinion the financial statements give true and fair to all intents view of the financial situation of TVEL JSC as of December 31, 2015, its business and financial performance and cash flow for the year 2015 in accordance with Russian regulations on financial reporting.

Shapiguzov S.M.
President of FAC LLC

Date of the auditor's report
March 2, 2016

Appendix 2.
Financial Statements For The Year 2015

BALANCE SHEET AS AT DECEMBER 31, 2015

<table>
<thead>
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PROFIT AND LOSS STATEMENT FOR THE YEAR 2015

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<th>As on December 31, 2014</th>
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<td>BALANCE</td>
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<td>356,877,032</td>
</tr>
</tbody>
</table>

LIABILITIES

III. Capital and Reserves

Equity capital (gazelle capital, collective capital, contribution of partners) 1310 | 22,962 | 22,962 | 22,962 |

Additional capital (without revaluation) 1330 | – | – | – |

Additional capital (without revaluation) 1330 | 181,732,335 | 181,734,382 | 181,524,792 |

Reserve capital 1350 | 125,886 | 103,393 | 8,972 |

Reserve formed in accordance with legislation 1361 | 124,738 | 102,245 | 1,148 |

Reserve formed in accordance with founding documents 1362 | 1,148 | 1,148 | 1,148 |

Undistributed profit (uncovered loss) 1370 | 105,197,731 | 89,984,042 | 89,984,042 |

Total III 1500 | 387,078,914 | 384,318,779 | 371,430,763 |

IV. Long-Term Liabilities

Borrowed funds 1410 | 12,751,384 | 7,993,031 |

Deferred tax liabilities 1420 | – | – |

Estimated liabilities 1430 | – | – |

Other liabilities 1450 | 925,753 | 901,345 | 981,324 |

Total IV 1500 | 925,753 | 13,652,729 | 9,098,370 |

V. Short-Term Liabilities

Borrowed funds 1510 | 63,008,851 | 48,464,746 | 33,732,904 |

Suppliers and contractors 1521 | 20,874,830 | 22,127,329 | 22,100,035 |

Advances received 1522 | 18,249,393 | 15,487,422 | 16,663,672 |

Accounts payable to employees 1523 | 1,356 | 1,369 | 191 |

Accounts payable to state non-budget bodies 1524 | 70 | 58 |

Accounts payable in respect of taxes and taxes 1525 | 11,472 | 7,440 | 16,624 |

Other creditors 1526 | 3,084,747 | 2,401,618 | 2,709,643 |

Deferred income 1530 | 912 | 863 | 1,087 |

Estimated liabilities 1540 | 1,089,043 | 817,560 | 817,893 |

Provisions 1546 | 4,758 | 5,987 |

Accounts payable to customers 1547 | – | – | – |

Other liabilities 1550 | 26,115 | 26,115 | 312,475 |

Total V 1700 | 106,352,789 | 89,339,288 | 76,359,540 |

BALANCE 1800 | 394,357,456 | 387,310,796 | 356,877,032 |

Index description | Code | As on December 31, 2015 | As on December 31, 2014 | As on December 31, 2013 |
|------------------|------|-------------------------|-------------------------|-------------------------|

Director (signature) Yu. A. Olenin (name) 2 March 2016

Chief accountant (signature) V. P. Bobkovskiy (name)
## CAPITAL STATEMENT FOR THE YEAR 2015

### 1. Flow of capital

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<thead>
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<th>Index description</th>
<th>Code</th>
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<th>Over 12 months of 2014</th>
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<td></td>
</tr>
<tr>
<td>Expenses on charitable purposes and voluntary contributions</td>
<td></td>
<td>(244,695)</td>
<td>(1,865,843)</td>
</tr>
<tr>
<td>Income (loss) before tax</td>
<td>2300</td>
<td>46,420,587</td>
<td>9,984,825</td>
</tr>
<tr>
<td>Current profit tax</td>
<td>2410</td>
<td>(9,710,895)</td>
<td>(2,427,195)</td>
</tr>
<tr>
<td>including permanent tax liabilities (assets)</td>
<td>2421</td>
<td>(119,631)</td>
<td>(105,318)</td>
</tr>
<tr>
<td>Variation of deferred tax liabilities</td>
<td>2430</td>
<td>41,831</td>
<td>293,594</td>
</tr>
<tr>
<td>Variation of deferred tax assets</td>
<td>2440</td>
<td>631,432</td>
<td>724,672</td>
</tr>
<tr>
<td>Other</td>
<td>2460</td>
<td>(24,365)</td>
<td>20,344</td>
</tr>
<tr>
<td>Redistribution of profit tax within consolidated group of taxpayers</td>
<td>2485</td>
<td>693,254</td>
<td>338,026</td>
</tr>
<tr>
<td>Net profit (loss)</td>
<td>2490</td>
<td>38,035,789</td>
<td>8,850,837</td>
</tr>
</tbody>
</table>

### Value of the capital as of December 31, 2012

<table>
<thead>
<tr>
<th>Code</th>
<th>Equity capital</th>
<th>Own shares redeemed from shareholders</th>
<th>Share capital payment before recording changes to constituent documents</th>
<th>Additional capital</th>
<th>Reserve capital</th>
<th>Undistributed profit (accumulated loss)</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>3100</td>
<td>22,382</td>
<td>–</td>
<td>–</td>
<td>181,524,792</td>
<td>8,972</td>
<td>89,864,036</td>
<td>271,420,762</td>
</tr>
</tbody>
</table>

### 2014

<table>
<thead>
<tr>
<th>Code</th>
<th>Equity capital</th>
<th>Own shares redeemed from shareholders</th>
<th>Share capital payment before recording changes to constituent documents</th>
<th>Additional capital</th>
<th>Reserve capital</th>
<th>Undistributed profit (accumulated loss)</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>3170</td>
<td>22,382</td>
<td>–</td>
<td>–</td>
<td>181,734,382</td>
<td>103,393</td>
<td>82,458,042</td>
<td>264,318,779</td>
</tr>
</tbody>
</table>

### Changes in the additional capital

<table>
<thead>
<tr>
<th>Code</th>
<th>Equity capital</th>
<th>Additional capital</th>
<th>Undistributed profit (accumulated loss)</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>3210</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>3220</td>
<td>–</td>
<td>(16,256,830)</td>
<td>(16,256,830)</td>
<td>(16,256,830)</td>
</tr>
</tbody>
</table>

### Change in the reserve capital

<table>
<thead>
<tr>
<th>Code</th>
<th>Equity capital</th>
<th>Additional capital</th>
<th>Undistributed profit (accumulated loss)</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>3240</td>
<td>(19,927,768)</td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
</tbody>
</table>

### Change in the reserve capital

<table>
<thead>
<tr>
<th>Code</th>
<th>Equity capital</th>
<th>Additional capital</th>
<th>Undistributed profit (accumulated loss)</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>3250</td>
<td>(16,256,830)</td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
</tbody>
</table>

### Change in the reserve capital

<table>
<thead>
<tr>
<th>Code</th>
<th>Equity capital</th>
<th>Additional capital</th>
<th>Undistributed profit (accumulated loss)</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>3260</td>
<td>(16,256,830)</td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
</tbody>
</table>

### Change in the additional capital

<table>
<thead>
<tr>
<th>Code</th>
<th>Equity capital</th>
<th>Additional capital</th>
<th>Undistributed profit (accumulated loss)</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>3270</td>
<td>(16,256,830)</td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
</tbody>
</table>

### Change in the reserve capital

<table>
<thead>
<tr>
<th>Code</th>
<th>Equity capital</th>
<th>Additional capital</th>
<th>Undistributed profit (accumulated loss)</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>3280</td>
<td>(16,256,830)</td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
</tbody>
</table>

### Change in the reserve capital

<table>
<thead>
<tr>
<th>Code</th>
<th>Equity capital</th>
<th>Additional capital</th>
<th>Undistributed profit (accumulated loss)</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>3290</td>
<td>(16,256,830)</td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
</tbody>
</table>
# CAPITAL STATEMENT FOR THE YEAR 2015 (CONTINUE)

## 1. Net assets

<table>
<thead>
<tr>
<th>Index description</th>
<th>Code</th>
<th>As of December 31, 2013</th>
<th>As of December 31, 2014</th>
<th>As of December 31, 2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>Net assets</td>
<td>3600</td>
<td>22,962</td>
<td>287,078,914</td>
<td>271,420,762</td>
</tr>
</tbody>
</table>

## 2. Corrections due to change in the accounting policy and elimination of errors

### 2.1. Capital — total

<table>
<thead>
<tr>
<th>Index description</th>
<th>Code</th>
<th>As of December 31, 2013</th>
<th>Changes in the capital for 2014</th>
<th>As of December 31, 2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increase of the capital — total</td>
<td>3310</td>
<td>814</td>
<td>3,067,705</td>
<td>38,035,769</td>
</tr>
<tr>
<td>including:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>net profit</td>
<td>3311</td>
<td>x</td>
<td>38,035,769</td>
<td>38,035,769</td>
</tr>
<tr>
<td>realisation of property</td>
<td>3312</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>income charged directly to increase of capital</td>
<td>3313</td>
<td>814</td>
<td>3,067,705</td>
<td>3,068,519</td>
</tr>
<tr>
<td>additional emission of shares</td>
<td>3314</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>increase in the par value of shares</td>
<td>3315</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>reorganization of the legal entity</td>
<td>3316</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>use of industry-based reserves for investment purposes</td>
<td>3317</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>share capital payment before recording changes to constituent documents</td>
<td>3318</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Reduction of the capital — total</td>
<td>3320</td>
<td>(2,861)</td>
<td>(3,048,072)</td>
<td>(18,344,153)</td>
</tr>
<tr>
<td>including:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>loss</td>
<td>3321</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>realisation of property</td>
<td>3322</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>expenses charged directly to decrease of the capital</td>
<td>3323</td>
<td>(2,861)</td>
<td>(3,048,072)</td>
<td>(18,344,153)</td>
</tr>
<tr>
<td>decrease in the par value of shares</td>
<td>3324</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>increase in the number of shares</td>
<td>3325</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>reorganization of the legal entity</td>
<td>3326</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>dividends</td>
<td>3327</td>
<td>(15,296,080)</td>
<td>(15,296,080)</td>
<td>(15,296,080)</td>
</tr>
<tr>
<td>share capital payment before recording changes to constituent documents</td>
<td>3328</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Change in the additional capital</td>
<td>3330</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Change in the reserve capital</td>
<td>3340</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

## 3. Net assets

<table>
<thead>
<tr>
<th>Index description</th>
<th>Code</th>
<th>As of December 31, 2013</th>
<th>As of December 31, 2014</th>
<th>As of December 31, 2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>Net assets</td>
<td>3600</td>
<td>287,078,914</td>
<td>264,318,779</td>
<td>271,420,762</td>
</tr>
</tbody>
</table>
## CASH FLOW STATEMENT FOR THE YEAR 2014

### CASH FLOW ASSOCIATED WITH FINANCIAL ACTIVITIES

<table>
<thead>
<tr>
<th>Index description</th>
<th>Code</th>
<th>Over 12 months of 2015</th>
<th>Over 12 months of 2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>Receipts — total</td>
<td>4310</td>
<td>37,548,499</td>
<td>57,096,558</td>
</tr>
<tr>
<td>including:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>getting credits and loans</td>
<td>4311</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>owners’ (participants’) money deposits</td>
<td>4312</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>from issue of shares, increase in participation shares</td>
<td>4313</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>from issue of bonds, promissory notes and other debt securities and etc.</td>
<td>4314</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>budgetary provisions and other targeted financing</td>
<td>4315</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>other receipts</td>
<td>4319</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Payments — total</td>
<td>4320</td>
<td>(53,266,652)</td>
<td>(67,187,345)</td>
</tr>
<tr>
<td>including:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>to owners (participants) due to repurchase their shares or their resignation</td>
<td>4321</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>for payment of dividends and other payments under distribution of profit in favour of owners (participants)</td>
<td>4322</td>
<td>(15,296,080)</td>
<td>(16,256,830)</td>
</tr>
<tr>
<td>associated with payment (repurchase) of promissory notes and other debt securities, repayment of credits and loans</td>
<td>4323</td>
<td>(37,970,572)</td>
<td>(50,930,515)</td>
</tr>
<tr>
<td>other payments</td>
<td>4329</td>
<td>(5,313,466)</td>
<td>(5,566,887)</td>
</tr>
<tr>
<td>Balance of cash flow associated with financial operations</td>
<td>4300</td>
<td>(15,718,153)</td>
<td>(10,090,787)</td>
</tr>
</tbody>
</table>

### CASH FLOW ASSOCIATED WITH DAY-TO-DAY OPERATIONS

<table>
<thead>
<tr>
<th>Index description</th>
<th>Code</th>
<th>Over 12 months of 2015</th>
<th>Over 12 months of 2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>Receipts — total</td>
<td>4110</td>
<td>107,583,521</td>
<td>92,583,521</td>
</tr>
<tr>
<td>including:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>from sale of products, goods, works and services</td>
<td>4111</td>
<td>100,905,929</td>
<td>100,905,929</td>
</tr>
<tr>
<td>from lease payments, license payments, royalty and other similar payments</td>
<td>4112</td>
<td>86,507</td>
<td>-</td>
</tr>
<tr>
<td>from re-sale of financial investments</td>
<td>4113</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>other receipts</td>
<td>4119</td>
<td>6,591,491</td>
<td>3,597,118</td>
</tr>
<tr>
<td>Payments — total</td>
<td>4120</td>
<td>(97,451,892)</td>
<td>(86,456,357)</td>
</tr>
<tr>
<td>including:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>to suppliers (contractors) for raw materials, materials, works, services</td>
<td>4121</td>
<td>(83,765,626)</td>
<td>(86,456,357)</td>
</tr>
<tr>
<td>associated with remuneration of employees labour</td>
<td>4122</td>
<td>(2,074,234)</td>
<td>(2,274,553)</td>
</tr>
<tr>
<td>interest on debt obligations</td>
<td>4123</td>
<td>(2,261,396)</td>
<td>(4,893,835)</td>
</tr>
<tr>
<td>corporate profit tax</td>
<td>4124</td>
<td>(3,483,365)</td>
<td>(5,369,643)</td>
</tr>
<tr>
<td>other payments</td>
<td>4139</td>
<td>(5,566,887)</td>
<td>(5,313,466)</td>
</tr>
<tr>
<td>Balance of cash flow associated with day-to-day operations</td>
<td>4100</td>
<td>10,131,629</td>
<td>45,412,929</td>
</tr>
</tbody>
</table>

### CASH FLOW ASSOCIATED WITH INVESTMENT ACTIVITIES

<table>
<thead>
<tr>
<th>Index description</th>
<th>Code</th>
<th>Over 12 months of 2015</th>
<th>Over 12 months of 2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>Receipts — total</td>
<td>4210</td>
<td>21,589,521</td>
<td>21,534,575</td>
</tr>
<tr>
<td>including:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>from sale of non-current assets (except for financial investments)</td>
<td>4211</td>
<td>16,786</td>
<td>2,526</td>
</tr>
<tr>
<td>from sale of shares (participation shares) in other organizations</td>
<td>4212</td>
<td>-</td>
<td>371,593</td>
</tr>
<tr>
<td>from return of loans granted, from sale of debt securities (rights of funds claim from third parties)</td>
<td>4213</td>
<td>18,295,938</td>
<td>37,772,446</td>
</tr>
<tr>
<td>Dividends, interest from long-term financial investments and similar revenues from share interests in other companies</td>
<td>4214</td>
<td>3,314,837</td>
<td>2,586,575</td>
</tr>
<tr>
<td>other receipts</td>
<td>4219</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Payments — total</td>
<td>4220</td>
<td>(18,773,196)</td>
<td>(805,683)</td>
</tr>
<tr>
<td>associated with acquisition, creation, modernization, reconstruction and preparation for current assets operation</td>
<td>4221</td>
<td>-</td>
<td>(1,330,876)</td>
</tr>
<tr>
<td>associated with acquisition of shares (participation shares) in other organizations</td>
<td>4222</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>associated with acquisition of debt securities (rights of funds claim from third parties), loans provision to third parties</td>
<td>4223</td>
<td>(18,773,196)</td>
<td>(37,553,283)</td>
</tr>
<tr>
<td>interest on debt obligations included in the value of investment asset</td>
<td>4224</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>other payments</td>
<td>4229</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Balance of cash flow associated with investment activities</td>
<td>4200</td>
<td>3,589,688</td>
<td>5,679,868</td>
</tr>
</tbody>
</table>

### Organization

- **Name:** TVEL Joint Stock Company
- **Taxpayer Identification Number:** 7706123550
- **Type of business:** Production of nuclear fuel
- **Form of incorporation/form of ownership:** Joint Stock Company
- **Measurement unit:** in thous. RUB
- **Location (address):** Bld.24, Bolshaya Ordynka st., Moscow, 119017

### Directors

- **Director:** Yu. A. Olenin
- **Chief accountant:** V. P. Slobodyan

### Date

2 March 2016
Appendix 3. Report of The Internal Control and Audit Department of TVEL JSC Following the Results of “Public Annual Reporting Preparation” Audit Process

The internal audit of the process of preparing the public annual report of TVEL JSC (further — the Report) for 2015 was executed in compliance with “The Procedure for Planning and Conducting Internal Audits of Business Processes Carried out by TVEL JSC and the Companies Included in the Management System of the Fuel Company”, to be approved by the Order No.271 of the President of TVEL JSC dated December 14, 2011.

In conformity with the Regulation of Public Annual Reports (Order of the President d/d February 10, 2016 No. 4/32-P), TVEL JSC approved the order d/d October 28, 2015 No. 4/346-P “Concerning preparation of Annual Report of TVEL JSC for 2015”, which defines the basic stages and dates of the Report generation, including preparation of the Concept for the Report, information accumulation, the draft Report, obtaining the conclusions from the permanent technical commission, expertise of the draft Report of the public reporting working group of ROSATOM, conducting public events (dialogues, public consultations) with the stakeholders, ensuring public approval of the Report by the Board of Directors of TVEL JSC and the annual meeting of shareholders.

The auditing covered the following:

• Assessment of efficiency of the internal control system for the process of rendering the public annual reporting (including the analysis of regulations and formalization of the key processes related to generation of the public annual report; analysis of effective implementation of key control procedures ensuring the accuracy of the public annual reports);
• Assessment of conformity of the public annual reporting generation procedure with the requirements of applicable laws and internal statutory requirements regulating the business process of public annual reporting preparation.

The audit results proved the effectiveness of the internal control system for the process of making the public annual reporting and the compliance of the annual public reporting generation procedure of TVEL JSC with the applicable laws, Policy of ROSATOM in the sphere of public reporting and the requirements of internal statutory documents of TVEL JSC regulating the process of public annual reporting preparation.

Director for Internal Control and Audit
G. V. Gonso


INTRODUCTION
The subject of assurance is Public annual report of TVEL Joint Stock Company (hereinafter referred to as the Report) for the period from January 1 to December 31, 2015. Our statement is addressed to the management of TVEL Joint Stock Company (hereinafter referred to as TVEL JSC).

RESPONSIBILITIES
The management of TVEL JSC bears full responsibility for the preparation and accuracy of the Report. We are responsible for the results of independent assurance of the Report only to TVEL JSC within the engagement and do not assume any responsibility to any third party.

SCOPE, CRITERIA AND LEVEL OF ASSURANCE
The subject of assurance is the Russian version of the Report, including information on including information on TVEL JSC and key enterprises of TVEL Fuel Company within the declared consolidation perimeter. The Report was evaluated considering the following criteria:

• Nature and level of compliance with the principles of the AA1000 Accountability Principle Standard 2008 — inclusivity, materiality, responsiveness;
• Compliance of the Report with the GRI Sustainability Reporting Guidelines G4 (Comprehensive option);

The engagement was planned and performed in accordance with AA1000 Assurance Standard 2008 (moderate level of assurance) and International Standard on Assurance Engagement ISAE 3000 “Assurance engagements other than audits or reviews of historical financial information” (limited level of assurance). The statement corresponds to type 2, as defined by AA1000AS 2008, in accordance with the limitations specified in section “Limitations of the engagement” of the present statement.

We have performed the following procedures:

• Selective verification of information in the Report performed under aforementioned levels of assurance does not claim to provide a high level of assurance. The work was based on the supporting materials provided by the management of the entity and its employees, publicly available information and analytical methods of confirmation. In relation to the quantitative information contained in the Report the work performed cannot be considered sufficient for identification of all possible deficiencies and misstatements. However, the collected evidence is sufficient for expressing our conclusion in accordance with the above levels of assurance.

METHODOLOGY OF ASSURANCE
In our engagement, we have performed the following procedures:

• Study and selective testing of systems and processes implemented by TVEL JSC to ensure and analyze the compliance of the activities with AA1000APS 2008 principles; collection of evidence confirming practical implementation of these principles;
• Interviewing the management and employees of TVEL JSC and obtaining documentary confirmation;
• Performing assurance procedures in subsidiaries of TVEL JSC: MSZ PJSC and VNIINM JSC;
• Participation in the Report public presentation, study of minutes of public dialogues;
• Study of information available on the websites of TVEL JSC and its subsidiary companies related to their activities in the context of sustainable development;
• Study of public statements of third parties concerning economic, environmental and social aspects of the TVEL JSC activities, in order to check validity of the declarations made in the Report;
• Analysis of non-financial reports of foreign companies working in the similar market segment for benchmarking purposes;
• Analysis of the current system of internal audit of non-financial reporting in TVEL JSC;
• Selective review of documents and data on the efficiency of the management systems of economic, environmental and social aspects of sustainable development in TVEL JSC;
• Study of the existing processes of collection, processing, documenting, verification, analysis and selection of data to be included into the Report;
• Analysis of information in the Report for compliance with the aforementioned criteria.
LIMITATIONS OF THE ENGAGEMENT
The assurance is limited to the period from January 1, 2015 to December 31, 2015. The evaluation of reliability of the information on performance in the Report was conducted in relation to compliance with the criteria to be applied to prepare sustainability report ‘in accordance’ with the G4 Guidelines and nonfinancial information referred to in the GRI Content Index. In respect to the quantitative performance indicators the conformity assessment to external and internal reporting documents provided to us is performed.
Assurance does not apply to forward-looking statements, as well as statements expressing the opinions, beliefs and intentions of TVEL JSC to take any action relating to the future. The assurance on the statements which are based on expert opinion is not performed. Assurance is performed only in relation to the Russian version of the Report in the MS Word format which includes information to be published in a hard-copy form as well as in digital form.
This statement is the translation of the Russian original. The Russian version prevails.

CONCLUSIONS
The following conclusions are based on the assurance work performed within the limitations of the engagement specified above.

Nature and extent of compliance with AA1000 APS 2008 principles
As a result and within the scope of our work, we did not identify material non-compliance with criteria of AA1000APS 2008 in respect to adherence to the principles (Inclusivity, Materiality, and Responsiveness).

Compliance of the Report with the GRI Sustainability Reporting Guidelines G4 (Comprehensive option)
In order to form an opinion on this issue, we have performed analysis implementation of GRI G4 Guidelines concerning principles and standard disclosures for the chosen option to prepare a report ‘in accordance’ with the Guidelines.
• General standard disclosures are reported mainly in compliance with the requirements of GRI G4 for the chosen ‘in accordance’ option;
• The Report discloses general information on impacts that make the aspects material, the company's approach to managing the material aspects, as well as evaluation of the management approach for some material aspects;
• Indicators required for the Comprehensive option are reported mainly in accordance with guidance contained in GRI G4. If it is not possible to disclose required information the Report identifies the information that has been omitted. The reasons for omissions and explained for all indicators except G4-LA3. Remeasurement of historical data on G4-EC1 in view of change in measurement method was not performed.

As a result and within the scope of our work, we did not identify any material misstatements in the Report information referred to in the GRI Content Index.

Overall assessment of the Report
• As a result and within the scope of our work, we did not identify material non-compliance with requirements to the report prepared ‘in accordance’ with the Comprehensive option of the G4 Guidelines.

Compliance of the Report with the requirements of the International Integrated Reporting Framework
Based on the procedures performed and evidence obtained, we did not identify material non-compliance with the guiding principles of the International Integrated Reporting Framework and with requirements to the structure of content elements of integrated reports.

Compliance of the Report preparation process with the Unified Sectoral Policy of the Rosatom State Corporation
Based on the procedures performed and evidence obtained, we did not identify material non-compliance of the Report preparation process with the Unified Sectoral Policy of the Rosatom State Corporation.

RECOMMENDATIONS
1. It is reasonable to disclose GRI indicators in relation to target values.
2. Increase the extent of disclosure of indicators in relation to which GRI guidance is not fully taken into account (disclosures with omissions).
3. In case of disclosure with omissions due to absence of a recording system provide more specific information about plans to obtain data in future.
4. Take into account remarks in the foregoing sections of the statement.

STATEMENT OF COMPETENCE AND INDEPENDENCE
JSC "NP Consult", an independent audit firm, professionally rendering assurance services, is a licensed provider of assurance services in accordance with AA1000AS. JSC "NP Consult" is a member of self-regulated organization Nonprofit Partnership "Institute of Professional Auditors" and acts in accordance with the IFAC Code of Ethics. The company employs a system of quality control of audit services, including control of compliance with ethical norms.
JSC "NP Consult" states that the present statement is an independent auditor's assessment. JSC "NP Consult" and its staff have no relations with TVEL JSC, or its subsidiaries and affiliates that could result in the conflict of interest related to the independent assurance of the Report.

General Director
JSC "NP Consult"
Moscow, July 8, 2016

V. Y. Skobarev
Appendix 5. Statement on Public Assurance of the Report

INTRODUCTION
TVEL JSC management (main company of the Fuel Company with ROSATOM) contacted us with an offer to assure the 2015 Annual Report of the Fuel Company (hereinafter “the Report”) in terms of completeness and relevance of information disclosed therein, and to assess the performance of management in response to recommendations and remarks of stakeholders.

DRAFT REPORT EVALUATION PROCEDURE
We are sufficiently competent and skilled in the sphere of corporate social responsibility, sustainable development and non-financial reporting.

We hereby confirm that we are acting independently and undertake to be objective in our evaluation, thereby expressing our personal expert opinion rather than the opinion of organizations we represent. No remuneration has been received from TVEL FC for our efforts and time invested in this project.

Our conclusion is based on the study of the Report and the analysis of information obtained in the course of dialogues and public consultations, where we and our representatives were allowed to participate and freely express our opinion on the matters under discussion.

We are not aware of any facts that compromise reliability of data set forth in this Report. However, checking of the data collection system and verification of reliability and completeness of information is not the subject matter of public assurance.

The results of our work are formalized in this Statement on Public Assurance wherein the opinions we all agreed upon are presented.

ESTIMATES, COMMENTS AND RECOMMENDATIONS
We all share positive opinion about the Report and note the endeavors of TVEL FC management to apply advanced international standards. Another characteristic feature of the Report 2015 is disclosure of all key performance indicators under the GRI G4 Sustainability Reporting Guidelines (comprehensive option), public reporting indicators of ROSATOM and TVEL FC, and compliance with International Integrated Reporting Framework recommendations.

TVEL FC has prepared an informative and well-structured document that meets our expectations. It is our opinion that the priority topic of the Report — “Effectiveness in the of TVEL FC strategy” is fully disclosed.

The Report sums up the results for 2015 and demonstrates the dynamics over the period of three years. Detailed description of the value creation process, new more clear scheme of the business model, disclosure of information about contribution of the reporting period into strategy implementation definitely contribute to the merit of this Report. We would like to point out the constructive nature of stakeholders engagement demonstrated by the management in the course of preparation hereof and during the dialogues and public consultations, as well as top quality organization of these events.

COMPLETENESS AND MATERIALITY OF INFORMATION
In our opinion, the Report covers all spheres of core activity of the company, as well as social, environmental and economic aspects of its sustainable development, material for stakeholders. The Report contains relevant information that is sufficiently complete for proper understanding of the current state and prospects of the Company.

COMPANY’S RESPONSE TO COMMENTS AND RECOMMENDATIONS OF STAKEHOLDERS
The Company has duly noted recommendations of the stakeholders in the minutes of dialogues and public consultations, conducted thorough analysis and used most of them in the Report, some of the recommendations to the Company activities were forwarded to the responsible departments. Hereby we confirm that all our suggestions and comments are set forth in the Table of Comments of Stakeholders.

Therefore, TVEL FC has demonstrated a responsible approach to implementation of requirements set forth in Public Reporting Policy of ROSATOM, and showed constructive attitude to wishes and suggestions of stakeholders.

We voice confidence that traditionally high quality of interaction of TVEL FC and stakeholders will be preserved in the future.
Contact Details

TVEL Joint Stock Company
49 Kashirskoe Shosse, Moscow 115409
Tel: +7 (495) 988-82-82
Fax: +7 (495) 988-83-83 (ext. 6956)
E-mail address: info@tvel.ru
Official web-site: www.tvel.ru

Public Relations Department
Alexander Evgenievich Uzhanov
Head of Public Relations Department
Tel: +7 (495) 988-82-82 (ext. 6290)
E-mail address: AEUzhanov@tvel.ru

Design and layout:
:OTVETDESIGN communications agency
www.otvetdesign.ru

Consultant for preparation of the Report
Nexia Pacioli Consulting
www.pacioli.ru