

Table 39. Training of Employees Involved in Functioning and Maintenance of Nuclear and Radiation-Hazard Facilities in NRS Standards at the Enterprises of TVEL FC in 2013

Enterprise	Total hours of training	Average hours per employee
NRDC LLC	819	41
Centrotech-SPb	1,512	72
JSC AECC	1,328	69.9
JSC UEIP	2,847	23.5
Uralpribor Ltd.	105	5.5
EDB-Nizhniy Novgorod	120	40
Total in TVEL FC	26,540	54.28

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

Environmental Impact (Natural Capital)

Ecological Policy

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

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

Main strategic goals 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. Excerpt from the TVEL JSC Environmental Policy

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

Environmentally important enterprises of TVEL FC issue annual public reports on environmental safety, to inform the stakeholders, partners, public, citizens and local self-government

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

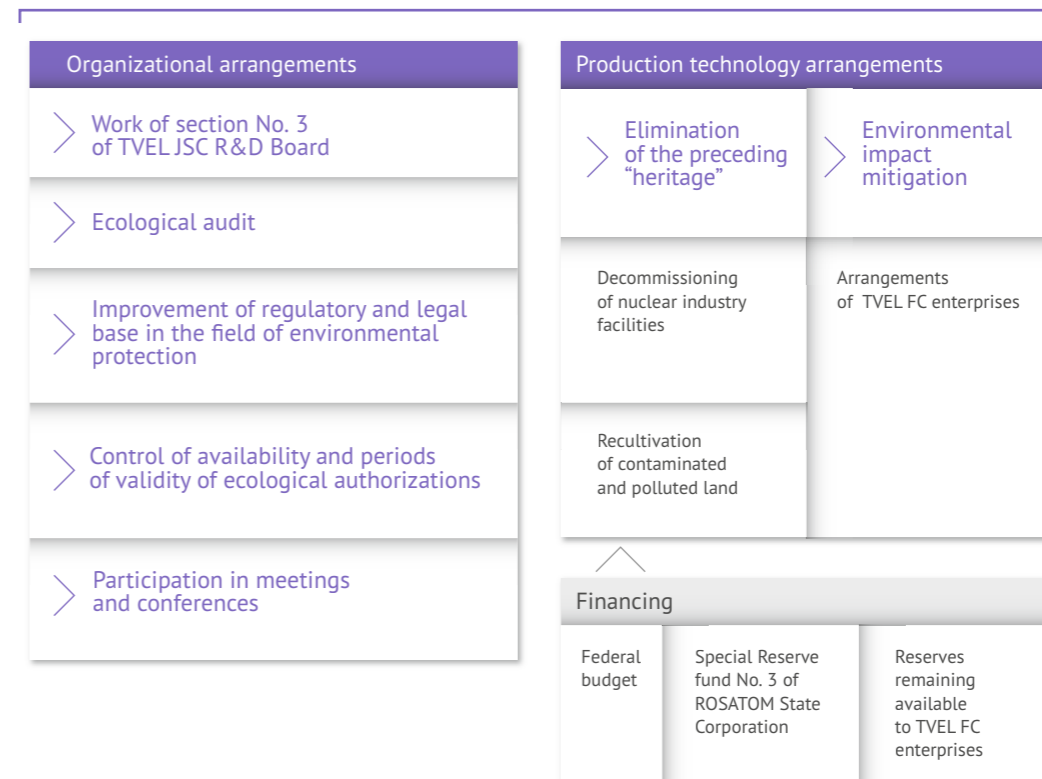
bodies, and publish them on Websites of the enterprises and ROSATOM State Corporation in Section "Customers and Partners" – "Environmental Management".

TVEL JSC Environmental Policy is the key corporate document that regulates the activities of TVEL FC in the sphere of environment protection and safety. TVEL JSC Environmental Policy is harmonized with the Principles of Environmental Policy of ROSATOM State Corporation and its organizations.

Policy outlines the principles of Company's activity on the sphere of environment protection and serves as the basis for setting the environmental goals and generating the Environmental Policy of Fuel Company for 2010-2015, including organizational, production and engineering arrangements with respect to environment protection.

Fig. 31. TVEL FC Environmental Policy Implementation in 2013

Plan of TVEL FC Ecological policy implementation for 2010-2015



In response to great attention paid to environment protection within the regions of presence, TVEL FC is continuously interacting with Stakeholders on the matters of environmental impact caused by the enterprises of the Company.

The following public hearings were held in 2013:

- May 16, 2013 – public hearings at JSC SGChE with discussion of the data for substantiation of the license to conduct activities involving the use of nuclear power (including records of the environmental impact assessment study (EIAS) for the establishment of a new conversion plant;
- May 24, 2013 (Angarsk) – public hearings dedicated to decommissioning followed by dismantling of vacant buildings No. 802 and No. 804 on the site of JSC AECC;
- July 17, 2013 – public hearings at JSC SGChE with discussion of the data for substantiation of the license to conduct activities involving the use of nuclear power (including records of the EIAS) for the project "Creation of the Experimental Demonstration Complex Comprising of the Power Unit with Fast Reactor for SNF Conversion, Fabrication and Refabrication of Dense Fuel";
- August 6, 2013 – public hearings at JSC VNIINM with discussion of the data for substantiation of the license to conduct activities involving the use of nuclear power (including records of the EIAS) for decommissioning of the research Unit B.

GRI G3.1: EN26

In 2013, the enterprises of TVEL FC conducted the following operations in order to reduce environmental impact caused by their current production activities:

- JSC CMP completed reconstruction (reinforcement) of the existing tail storages No. 2 and No. 3 for safe storage of radioactive waste;
- JSC NNCP makes preparations for the construction of nuclear waste disposal facility for Shop 6;
- JSC SGChE completed reconstruction of Site 18 and Site 18a for deep storage of liquid radioactive waste;
- JSC AECC installed metering devices at hot water transfer coupling and service and industrial water supply pipelines;
- JSC UEIP optimized water disposal system thereby reducing the amount of waste water by 3 mln m³;
- JSC PA ECP modernized one refrigeration machine, etc.

Environmental Impact

GRI G3.1: EN23

No emergencies and incidents resulting in negative environmental impact occurred in 2013 at the enterprises of the Fuel Company.

Use and Processing of Materials

The quantity of materials necessary for manufacture of products at TVEL FC enterprises is determined by the production program.

Enterprises of separation-sublimation complex are using uranium and synthetic materials. Enterprises of fabrication block are using raw materials represented by enriched uranium product obtained at the enterprises of separation-sublimation complex. Synthetic materials, ferrous and non-ferrous metals are basically used in manufacturing of gas centrifuges.

All raw materials used by the enterprises of TVEL FC are purchased. No renewable materials are used in production. For examples of the used materials see Table 40 below.

Table 40. Use of Materials in Main Production by TVEL FC Enterprises, tons

Material	2011	2012	2013	Enterprises
Sulfuric acid	2,150	1,604	1,092.1	JSC AECC
Nitric acid	1,856	1,308	850	MSZ JSC, JSC NNCP
Hydrochloric acid	326	360	360	JSC NNCP
Ferrous metals	1,082	1,706.5	1,311	Uralpribor Ltd., UGCMP Ltd., EDB-Nizhniy Novgorod;
Non-ferrous metals	747.8	557.3	444.9	Centrotech-SPb

GRI G3.1: EN1

Industrial and Consumer Waste Disposal

In 2013, the enterprises of TVEL FC reduced total amount (297.3 thousand tons) of industrial and consumer waste by 19.2%.

GRI G3.1: EN22

Table 41. Waste Generation and Recycling at the Enterprises of TVEL FC in 2011-2013

Enterprise	Waste generated, tons a year			Waste recycling, tons a year		
	2011	2012	2013	2011	2012	2013
JSC SGChE	310,337.3	296,677.9	235,608	62.4	18	88.3
JSC AECC	12,394	10,012.9	12,820.8	52	188.1	110.9
Uralpribor Ltd.	8,325.1	9,138.3	9,445.1	1.4	1	0.7
JSC PA ECP	4,798.6	15,949.8	9,031.6	28.2	2	0
JSC CMP	20,732.5	10,635	6,501	3,394	2,739.3	3,608.3
MSZ JSC	5,588.3	5,139.2	6,311.6	848.6	1,640.9	1,541.7
JSC UEIP	8,249.1	5,401.5	4,445.2	311.2	556.8	119.1
KMP OJSC	4,644.6	3,867	4,376.1	0	0	0
JSC VPA Tochmash	3,471.1	2,732.6	2,475.2	137.8	83.2	29.5
JSC NNCP	780.6	910.2	1,021.7	0	0	0
UGCMP Ltd.	806.1	1,160.5	901.5	1.1	1.2	0.7
JSC VNIINM	465.7	564.8	528.3	0	0	0.6
JSC MZP	873	867.7	479.9	0	0	0
NRDC LLC	50.5	75.7	83.3	0	0	0
Centrotech-SPb	23.8	38.8	39.1	0	0	0

Table 41. Waste Generation and Recycling at the Enterprises of TVEL FC in 2011-2013

Enterprise	Waste generated, tons a year			Waste recycling, tons a year		
	2011	2012	2013	2011	2012	2013
EDB-Nizhniy Novgorod	26.4	21.9	24.5	0	0	0
Other	2,553	4,866.5	3,201.3	0	0	0
Total	384,119.81	368,060.34	297,294.22	4,836.7	5,230.4	5,499.7

The bulk of waste (86.6%) was represented by Hazard Class 5 (virtually non-hazardous) waste, such as ash slag resulting from solid fuel burning at the TPPs. Ash slag are dumped by the TPP and the bulk of other waste is forwarded to specialized organizations.

Waste reduction was caused by:

- scrapping the JSC PA ECP equipment dismantled in 2012; by the early 2013, all that scrap was forwarded to the third parties;
- fewer amounts of coal burned at the TPP due to the warm winter of 2012-2013, hence the fewer amounts of ash.

Table 42. Waste Generated at the Enterprises of TVEL FC by Hazard Class, thousand tons

Description	2011	2012	2013	Δ 2013/2012. %
Total waste, including:	384.1	368.1	297.3	-19.2
Hazard Class I	0.07	0.07	0.03	-57.1
Hazard Class II	8	8.6	8.9	3.6
Hazard Class III	1.3	0.9	1.1	18.9
Hazard Class IV	31.8	30.3	29.8	-1.5
Hazard Class V	342.9	328.3	257.5	-21.6

In 2013, the volume of generation of wastes that are the most hazardous for the environment and population was decreased at the TVEL FC's enterprises by more than 2 times as compared to previous years.

GRI G3.1: EN2

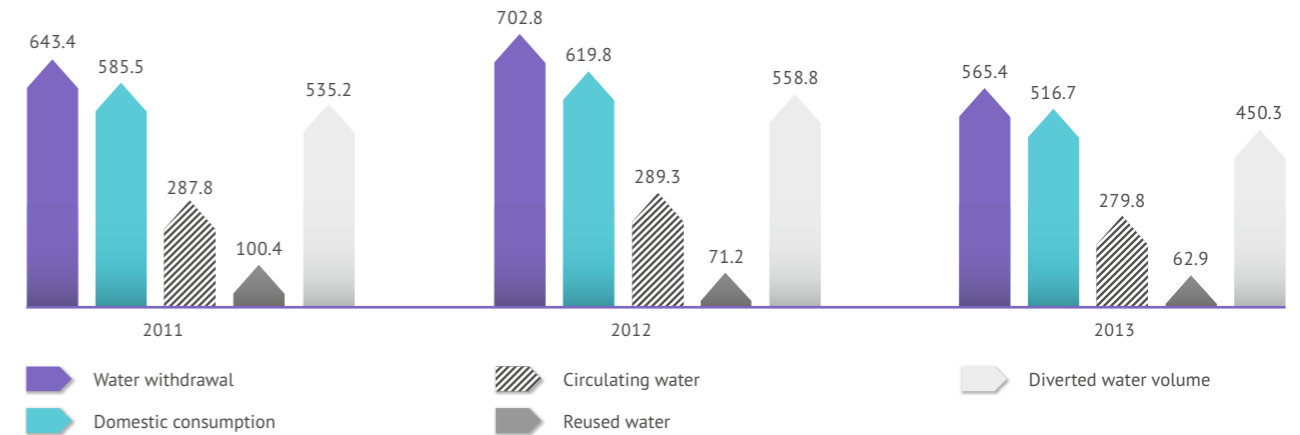
In 2013, 5.5 thousand tons of materials that are recycled or reused wastes (5.2 thousand tons in 2012, 4.8 thousand tons in 2011) were used. The use of wastes is mainly organized at enterprises of JSC CMP, MSZ JSC and JSC UEIP, which in 2013 used in their production 55.5%, 24.4% and 2.7% of their wastes respectively.

Water consumption and water disposal

In 2013, abstraction of by TVEL FC enterprises decreased by 19.5% as compared to the previous year and was 565.4 mln m³. The main source of water abstraction is natural sources from which 533.4 mln m³ were abstracted, 32 mln m³ were abstracted from public and other water supply systems. The organization's water abstraction has no material impact on natural water sources.

GRI G3.1: EN8
EN9

Fig. 32. Water Consumption in 2011-2013, mln m³ & water disposal in 2013, mln m³



The decrease in volumes of water abstraction by the Fuel Company is mainly caused by the following:

- a decrease in water abstraction by JSC AECC, JSC SGChE and JSC CMP due to reduction of the electric supply program of JSC Irkutskenergo, the HPP of JSC SGChE and the HPP of JSC CMP;
- a decrease in water consumption by water consumers of the Fuel Company's enterprises;
- restructurisation of the enterprises relating to the transfer of water abstraction facilities from the balance of the enterprises to the Fuel Company;
- reduction of water consumption for cooling equipment of the HPP of JSC CMP in connection with a reduction of the outside air temperature in quarter 2 and 3, as well as shifting two turbines to cooling condensers with return system water.

In 2013, the standard of water abstraction was set at 831.3 mln m³, the actual volume of abstraction was 68% of the set standard.

About 98% of consumed water is used by the TVEL FC's enterprises for cooling the equipment.

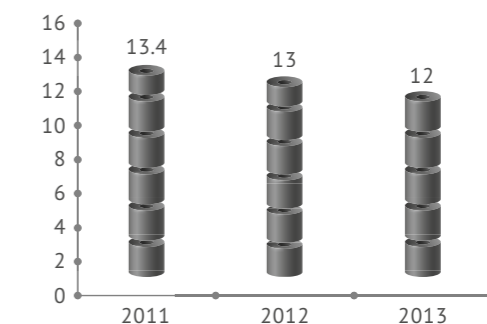
In 2013, the volume of return water was 279.8 mln m³. The share of return water of the total amount of abstracted water was 49.5%, the share of reused water of the total volume of abstracted water was 11.1%.

There have been small fluctuations in water consumption in return water supply systems at the TVEL FC's enterprises over the last few years.

In 2013, 450.3 mln m³ of water were disposed by the TVEL FC's enterprises, while

the standard is 732.5 mln m³. All water was disposed into natural water bodies. The volume of water disposal directly depends on water consumption.

Fig. 33. Disposal of Pollutant Effluents by Enterprises of TVEL FC, mln m³



GRI G3.1: EN10

In 2013, the volume of disposal of polluted wastewater by the TVEL FC's enterprises decreased by 8%.

The change in the volume of wastewater is directly related to reduction of water abstraction by the enterprises of the Fuel Company. In addition, activities aimed at improvement of water resources accounting are carried out at the enterprises, which makes it possible to track parameters of impact on the environment more accurately and plan activities for protection of water bodies more accurately. At present, collection of information on total volumes of planned and unplanned disposals of wastewater, as well as on the quality of wastewater is not carried out.

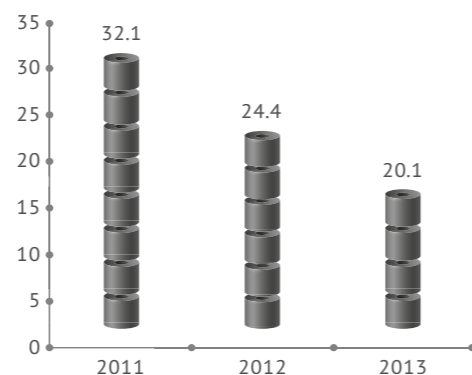
Pollutant emissions

In 2013, total pollutant emissions into the atmosphere by the TVEL FC's enterprises were 20.1 thousand tons (26% of the standard set by the TVEL FC for 2013), which is 18% less than in 2012.

The decrease in emissions was mainly caused by a decrease in the volume of fuel (coal and fuel oil) combusted at the HPPs of JSC SGChE, JSC CMP and JSC UEIP.

The difference between the set standards and actual emissions is explained by the fact that the main volume of permitted emissions is set for the HPPs based on their operation using hard fuel (coal) for the entire heating season. For purposes of minimization of the adverse impact, the TVEL FC resorts to using natural gas taking into account annual quotas of its consumption.

Fig. 34. Total Emission of Pollutants, thousand tons



GRI G3.1: EN21

GRI G3.1: EN19

Emissions of ozone-depleting substances at the TVEL FC's enterprises decreased in 2013 by 4% and amounted to 267.1 tons*. The decrease in emissions was caused by modernization of equipment at the enterprises of the Fuel Company.

* From 2013, the gas Freon-13 has been included in calculation of the indicator. Indicators of past years have been recalculated using the new method.

Table 43. Total pollutant emissions by enterprises of the TVEL FC, thousand tons

Enterprise	2011	2012	2013	The share of emissions of the enterprise of the total volume of the FC's emissions in the reporting year, %
JSC SGChE	27.2888	21.0019	16.7084	83.0356
JSC CMP	3.0608	1.9829	1.9378	9.6302
JSC UEIP	1.0349	1.0158	0.9372	4.6575
JSC VPA Tochmash	0.2216	0.1654	0.1209	0.6006
JSC NNCP	0.0663	0.0666	0.0993	0.4935
JSC PA ECP	0.0408	0.0327	0.0367	0.1824
JSC AECC	0.0748	0.0226	0.0288	0.1434
KMP OJSC	0.0166	0.0205	0.0177	0.0881
MSZ JSC	0.2065	0.015	0.0179	0.0891
JSC VNIINM	0.0158	0.0142	0.0062	0.0307
JSC MZP	0.0031	0.0068	0.0063	0.0311
Uralpribor Ltd.	0.017	0.0563	0.1294	0.643
UGCMP Ltd.	0.0335	0.0276	0.0276	0.137
NRDC LLC	0.0198	0.0457	0.0457	0.2273
EDB-NN	0.0019	0.0019	0.0019	0.0092
Others	0.0003	0.0003	0.0003	0.0013
Total	32.1023	24.476	20.122	100

Table 44. Emissions of ozone-depleting substances with a breakdown by the TVEL FC's enterprises and types of substances, tons

Name of the substance	2011	2012	2013	Enterprises
freon-113	0.1	0	0.1	JSC AECC
	0.8	0.8	0	JSC SGChE
	6.9	6.9	4	JSC UEIP
freon-12	6.6	6.6	6.6	JSC SGChE
	3.5	2.7	2.7	JSC PA ECP
	72.2	72.2	72.2	JSC CMP
freon-13	164.2	164.2	164.2	JSC CMP
freon-22	0.9	2.6	2.4	JSC AECC
	4.3	4.3	4.3	JSC SGChE
	17.6	17.6	9.8	JSC UEIP
	0.3	0.5	0.6	JSC PA ECP
	0.1	—	—	MSZ JSC
—	0	0	UGCMP Ltd.	

Table 44. Emissions of ozone-depleting substances with a breakdown by the TVEL FC's enterprises and types of substances, tons

Name of the substance	2011	2012	2013	Enterprises
Total	277,5	278,6	267,1	
In equivalent to CFHC-11	253,9	253,2	249,9	

Fig. 35. Emission of Ozone Depleting Substances, tons

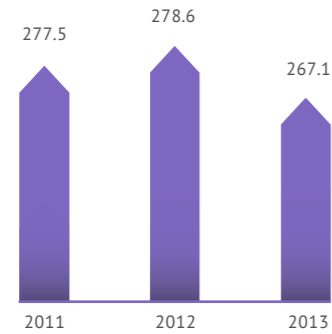


Fig. 36. Emission of Specific Pollutants, thousand tons*

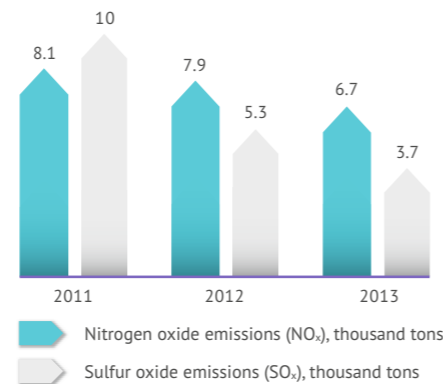
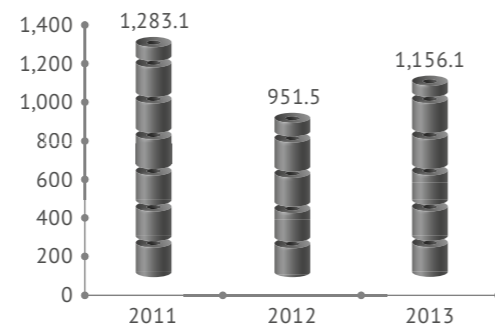


Fig. 37. Carbon Dioxide Emissions, tons**



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 for scheduled replacement of morally and physically obsolescent motor vehicles with

modern ones that meet exhaust toxicity standards, as well as for replacement of motor vehicles that have gas engines with motor vehicles that have diesel engines have been taken.

In the operation of the rolling stock, routes, working hours have been constantly adjust-

ed and optimized, kilometers traveled and the complement of vehicles in the motor vehicle fleet have been cut down, which has resulted in reduction of total kilometers traveled and, therefore, reduction of the total consumption of fuel and adverse impact on the environment.

The relative impact of the Fuel Company's enterprises on the environment in the regions of presence

The TVEL FC's enterprises are located on lands that are owned by the enterprises, as well as on lands that are used on a leasehold basis and are owned by the Russian Federation. Industrial sites of the enterprises and adjacent areas are not areas which biodiversity is of high value, since they are not inhabited by animals and plants included in the IUCN Red List and the national list of protected species. In accordance with the RF Russian Federation nature protection laws, standards of admissible impact on the environment that ensure the quality of the environment are set for the TVEL FC's enterprises.

Strict compliance by the Fuel Company's enterprises with the standards of admissible impact on the environment ensures the absence of threats to the existence of animals and plants which habitats are in the area adjacent to the TVEL FC's enterprises.

The impact of the enterprises on the environment of regions where they are located is in general less than 5% of the total impact of industry on the environment of corresponding regions. Figures of JSC PA ECP (4.8% of the total disposal of wastewater in Krasnoyarsk Territory), JSC CMP (4.3% of the total disposal in the Udmurt Republic), JSC AECC (3.3% of the total disposal in the Irkutsk Region) are close to the said impact. The 5% level has been exceeded by JSC SGChE (17.3% of total wastes, 65.6% of the total disposal of wastewater in the Tomsk Region). The share of the rest of the TVEL FC's enterprises in the total impact of economic activities on the environment of regions

where they are located is insignificant. The TVEL FC's enterprises have no material impact on water bodies from which water abstraction is carried out. Water bodies that are sources of water supply of the Fuel Company's enterprises have not been recognized to be especially vulnerable and are not included in the Ramsar List*.

In the river Tom, at the water use area of JSC SGChE, there is diverse ichthyofauna: salmon, sturgeon, cisco, cyprinid fish and spiny-finned fish, of which taimen, spotted sculpin, Siberian sculpin are included in the Red Book of the Tomsk Region. The highest category of fishery use has been assigned to the water use area of JSC SGChE by the Tomsk branch of

* Determined using a computational method, concurrently an instrumental verification was performed.

** Determined using an estimative and computational method.

* The list of wetlands made in accordance with Convention on wetlands of international importance especially as waterfowl habitat (1971).

GRI G3.1: EN20

GRI G3.1: EN16

GRI G3.1: EN18
EN29

GRI G3.1: EN11
EN12 EN13 EN14
EN15

GRI G3.1: EN25

Verkhneobrybvod Federal State Enterprise. To avoid adverse impact, in accordance with the regulatory and legal framework, the limit of water abstraction from this water body is set for the enterprise. Thus, water abstraction by JSC SGChE from the river Tom is limited and has no material adverse impact on this surface water body.

JSC AECC which is located in the Baikal nat-

ural area and is in the zone of atmospheric influence on the lake Baikal, understanding its responsibility for the preservation of the unique wildlife, monitors component of the natural environment as a part of industrial environmental control. No exceedence of controlled parameters within and beyond the sanitary protection zone has been detected in the reporting year.

GRI G3.1: EN30

Expenses of the TVEL FC related to the impact on the environment

In 2013, operating expenses of the TVEL FC's enterprises for environment protection were 2,213.3 mln RUB. These expenses were used for financing both technical and organizational measures.

Table 45. Expenses of the TVEL FC related to environment protection, mln RUB

Item of expenses	2011	2012	2013
Radiation safety assurance	*	973.1	1,059.2
Collection and purification of wastewater	1,313.8	427.5	335.1
Atmospheric air protection	342.9	209.1	187.7
Waste treatment	542.5	187.5	131.4
Land resources protection	12.5	83.2	28.4
Others	0.01	342.9	471.5
Total	2,211.7	2,223.3	2,213.3

The bulk of expenses are related to carrying out activities for environment radiation safety assurance (RUB 1,059.2 mln). Considerable expenses are also related to protection and rational use of water resources (RUB 335.1 mln) and atmospheric air protection (RUB 187.7 mln).

The bulk of environment protection expenses of the TVEL FC fall on JSC SGChE, JSC UEIP and JSC CMP.

The total amount of payments for the adverse environmental impact decreased in 2013 by 10% as compared with the previous year and was RUB 24.9 mln

* A change in the structure of expenses for environment protection in 2012 as compared to the previous year was caused by implementation of a new expenses accounting methodology.

GRI G3.1: EN28

In 2013, there were no material fines or collections for compensation of damage caused by the environmental impact in respect of enterprises that are within the control circuit of the TVEL FC, no damage was inflicted on the environment.

Fig. 38. TVEL FC Environment Protection Costs Outlay in 2013

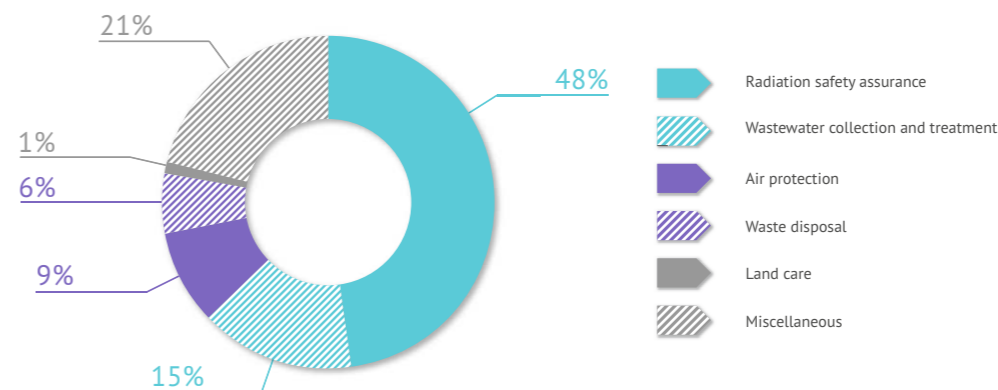


Fig. 39. Structure of Payments for Negative Environmental Impact in 2013

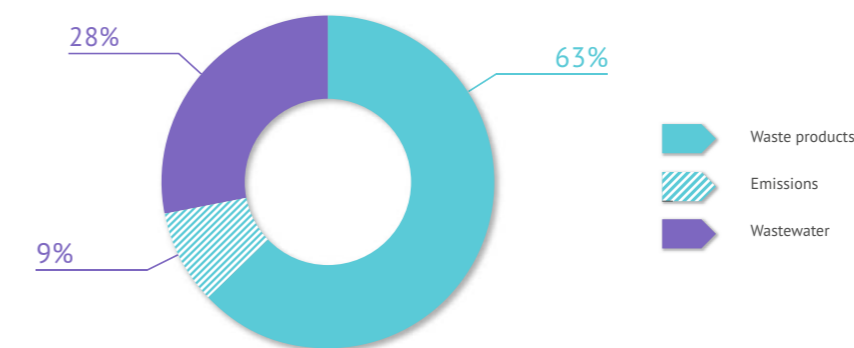


Table 46. Environmental expenses of TVEL FC, mln RUB

Enterprise	2011	2012	2013
JSC SGChE	634.7	665.5	913.5
JSC UEIP	739	751.7	702.8
JSC CMP	199.4	205.4	209
MSZ JSC	174.8	123.8	114.6
JSC NNCP	81.6	204.6	110
JSC AECC	228.1	55.9	43.5
JSC VNIINM	4.9	7.3	39.3
JSC PA ECP	89.2	136.8	26.7

Table 46. Environmental expenses of TVEL FC, mln RUB

Enterprise	2011	2012	2013
JSC VPA Tochmash	27.1	24.5	24
KMP OJSC	14.5	23	23
JSC MZP	1	4.5	2.7
Uralpribor Ltd.	12.8	15.3	0.9
NRDC LLC	0.1	0.1	0.3
UGCMP Ltd.	0.7	1.3	0
EDB-Nizhniy Novgorod	0.6	0	0
Others	3.1	3.8	3
Total	2,211.7	2,223.3	2,213.3

Nuclear and Radiation Safety

GRI G3.1: 1.2
SO9 SO10

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

At the Company's enterprises, systematic work for prevention and exclusion of radiation accidents, improvement of the stability of hazardous production facilities, training of personnel and special formations for accidents and emergencies.

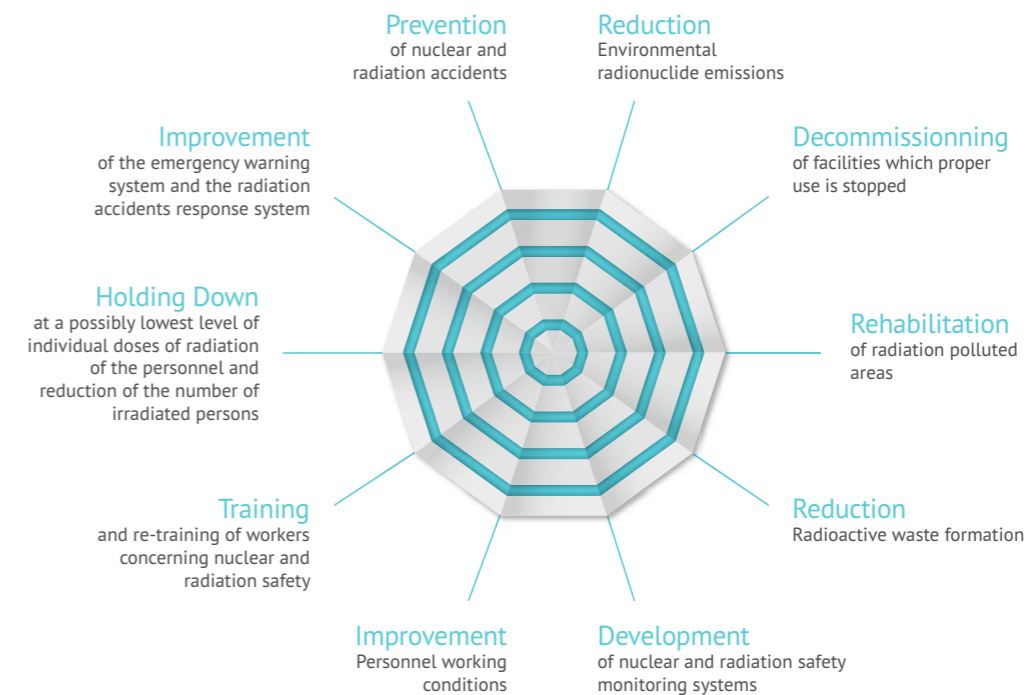
Activities of the TVEL JSC and the Fuel Company's enterprises are carried out in accordance with the laws of the Russian Federation pertaining to the use of nuclear power taking into account IAEA requirements.

The main program documents providing for realization of activities in the area of NRS are the Federal Target Program "Nuclear and Radiation Safety Assurance For 2008 and For the Period Until 2015" (FTP NRS) and "Principles of the state policy in the area of assurance of the nuclear and radiation safety of the Russian Federation for the period until 2025".

In accordance with FTP NRS, carrying out of 38 activities at the Fuel Company's enterprises has been planned for the period until 2015 in the amount of RUB 12.4 bln, including RUB 9.5 bln at the expense of the federal budget and RUB 2.9 bln at the expense of other sources.

Liquidation of 56 nuclear and radiation hazardous sites (NRHS), putting into operation 1.71 thousand m³ of capacities of radioactive wastes (RAW) repositories, putting 4.46 RAW power blocks into an environmentally safe state, as well as rehabilitation of 1,225.4 thousand m² of radiation contaminated areas are planned.

Over the period of 2008-2013, works under 22 activities were accomplished. The total volume of works amounted to RUB 7.0 bln, including RUB 4.6 bln at the expense of the federal budget and RUB 2.6 bln at the expense of other sources. 46 NRHS were liquidated, 1.71 thousand m³ of capacities of RAW repositories were put into operation, 2.74 RAW power blocks were put into an environmentally safe state, and 55,28 thousand m² of radiation contaminated areas were rehabilitated.

Fig. 40. TVEL FC Nuclear and Radiation Safety Principles**Table 47. Accomplishment of activities under the FTP "Nuclear and Radiation Safety Assurance For 2008 and For the Period Until 2015" at the sites of the Fuel Company's enterprises at the expense of the federal budget**

Enterprise	Volume of financing, mln RUB		
	2012	2013	2014 (plan)
JSC SGChE	818.2	783.5	1,171.7
JSC CMP	27.8	11.1	144
JSC NNCP	30	27.2	24.8
JSC VNIINM	0	300	200
Total	876	1,121.8	1,540.5

GRI G3.1: EC4

In 2013, works under the following 3 activities were accomplished:

- s. 32 of the FTP "Reconstruction of sites 18 and 18a in connection with prolongation of the operational lifetime of deep liquid radioactive waste repositories of JSC SGChE";
- s. 157 of the FTP "Deep burial of liquid radioactive wastes with an increased content of the solid phase using the hydraulic fracturing method at JSC SGChE;
- s. 217 of the FTP "Reconstruction (reinforcement) of operational tailing dumps 2 and 3 for safe storage of RAW at JSC CMP".

Works under the rest of the activities are still in progress.

In 2013, at the expense of special reserve fund 3 "Decommissioning and R&D" of ROSATOM State Corporation for 2011, 2012, 2013, works under 30 activities were accomplished in the amount of RUB 904.7 mln, including under 23 activities that are not included in FTP NRS in the amount of RUB 468.5 mln

In addition, in 2013 works were accomplished under 19 activities in the amount of RUB 70.36 mln at the expense of funds in reserve 3 "Decommissioning and R&D" that remained available to the TVEL FC's enterprises. As a result of accomplishment of works, planned target indicators determined for activities under FTP NRS for 2008-2015 were achieved for year 2013.

In 2014 and subsequent years, works for liquidation of the nuclear "legacy" will be carried on.

Table 48. Pollution of the environment with radionuclides (RN)

Indicator	2011	2012	2013
Emission of alpha-active RN into the atmosphere, Bq	8.32×10 ⁹	7.81×10 ⁹	7.54×10 ⁹
Presence of areas contaminated with RN, thousand m ²	13,205.4	13,601.4	13,600.3
Disposal of wastewater containing RN, Bq	5.64×10 ⁹	4.78×10 ⁹	5.15×10 ⁹

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

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

Table 49. Pollution of the environment with radionuclides as of December 31, 2013, by enterprises of the TVEL FC, thousand m²

Enterprise	Volume of areas contaminated with radionuclides, thousand m ²			
	Total	including:		
		Sanitary protection zone	Professional responsibility zone	Industrial site
MSZ JSC	1,375	0	1,235.5	139,5
JSC NNCP	418.5	0	127,5	291
JSC CMP	1,413.8	0	0	1,413.8
JSC SGChE	10,393	300	0	10,093
Total:	13,600.3	300	1,363	11,937.3

As at the end of 2013, the total area of the TVEL FC's enterprises that was contaminated with radionuclides and was to be rehabilitated was 13,600.3 thousand m².

In 2013, JSC NNCP carried out rehabilitation of 4,365.0 m² of a radiation contaminated area (of which 3,131.0 m² are newly discovered areas of contamination). Financing of these works was carried out at the expense of special reserve fund 3 (Decommissioning and R&D) of ROSATOM State Corporation.

At the Fuel Company's enterprises, an Automated Radiation Monitoring System (ASKRO) has been successfully functioning and has been constantly improved.

The enterprises' ASKROs are a part of the Industry Radiation Situation Control Automated System (OASKRO) of ROSATOM State Corporation. OASKRO is linked to the Unified State Radiation Situation Control Automated System (EGASKRO).

ASKRO control station function at all NRHS of the Fuel Company and are located at production sites, sanitary protection zones and monitoring zones (professional responsibility zones) of the enterprises.

The radiation situation is measured in real-time mode, data from monitoring sensors of the enterprises' ASKRO is transmitted to the Situation and Crisis Management Centre of ROSATOM State Corporation and are reflected at <http://www.russianatom.ru/>.

More information on assurance of the nuclear and radiation safety the TVEL FC's facilities is available in the online version of the 2013 annual report.

In 2013, 73 inspections by state control (oversight) authorities were carried out at the TVEL FC's enterprises, of which 51 inspections were carried out by the Federal Service for Environmental, Technological and Nuclear Oversight of Russia, 10 inspection – by FMBA, and 12 inspections – by the the Ministry for Emergency Situations (with respect to fire safety). It was noted in the opinions of the oversight authorities that, in general, radiation and nuclear safety at the Fuel Company's enterprises complied with the requirements of standards and rules pertaining to the use of nuclear power.

GRI G3.1: PR2

There were no cases of forfeiture from the TVEL FC of licenses in the sphere of the use of nuclear power.

Energy Saving and Efficiency Improvement

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

In 2013, power consumption at the TVEL FC's enterprises was reduced by 20.2% (787 mln kWh or 2.8 mln GJ), heat energy – by 32.7% (1,339 thousand Gcal or 5.6 mln GJ) as compared to the base 2009 under comparable conditions*. The reduction in energy resources consumption (under conditions comparable with 2009) in monetary terms was 24.4% (RUB 1,951 mln), while the target indicator was 20%.

GRI G3.1: EN5

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

Fig. 41. Electric Power Consumption, mln KW*h

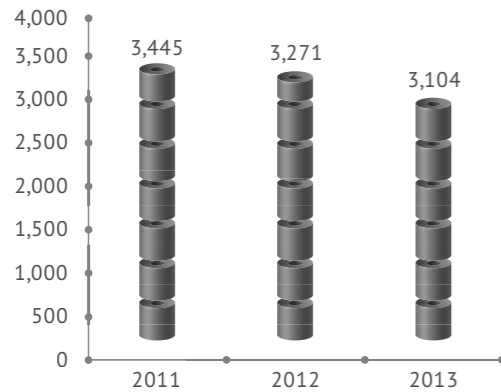
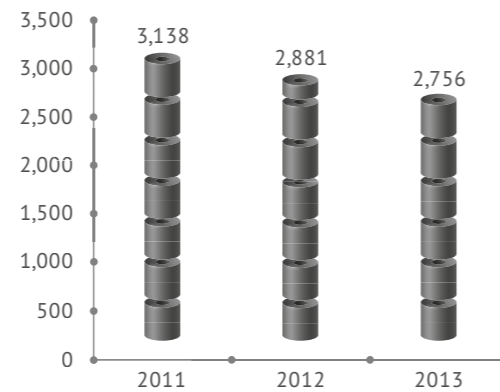


Fig. 42. Thermal Energy Consumption, thousand Gcal



GRI G3.1: EN4

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

GRI G3.1: EN6

The main activities that were conducted by the TVEL FC's enterprises and made it possible to achieve the planned target of reduction of energy resources consumption in 2013 were:

- creation of automated systems of commercial and technical accounting of various energy carriers;
- installation of variable frequency drives in various systems;
- modernization of lighting systems with transition to energy-saving equipment;
- replacement and modernization of energy-intensive technological and power equipment;
- decentralization of the compressor park;
- winterization of enclosure structures of buildings and structures.

Additional activities that were realized over the period of 2012-2013 and made it possible to considerably reduce the consumption of energy resources by the TVEL FC:

- modernization (replacement) of technological and power equipment: transition from gas centrifuges of the eighth generation to gas centrifuges of the ninth generation; replacement of induction caking furnaces with induction casting machines and resistance furnaces; change-over of gas centrifuges power supply to lower voltage by changing the magnetization algorithm in frequency transformers; change-over of cooling machines to a different type of coolant (freon 314A); replacement of thermal insulation in heat supply systems; liquidation of steamlines and other activities made it possible to reduce power consumption by 4%, heat energy consumption – by 5.7%;
- organizational and technical activities: deloading of ventilation and upper (ceiling) lighting during peak hours of power consumption; optimization of operation of the industrial pump plant; optimization of the equipment load; implementation of closed water circulation schemes in sublimate production plants and other activities made it possible to reduce power consumption by 5.1%, consumption of heat energy – by 0.2%;
- optimization (conservation) of production areas made it possible to reduce power consumption by 5.9%, consumption of heat energy – by 2.8%.

In 2013, realization of the project of ROSATOM State Corporation for implementation of an automated energy efficiency control system at the TVEL FC's enterprises was completely accomplished, which makes it possible to solve a range of the most important tasks of achieving real economic indicators of reduction of expenses for energy resources and improvement of the efficiency of activities in the medium term.

In 2013, as a part of activities for development and expansion of the Integrated Management System, the TVEL JSC and its enterprises entered into agreements for creation, implementation and certification of an energy management system on the basis of requirements of the international standard ISO 50001, which makes it possible to apply a system approach in the assurance of continuous improvement of energy characteristics, energy efficiency and energy saving.

In 2013, 55.5 mln GJ of primary energy sources were consumed at the TVEL FC's enterprises in total, of which with a breakdown by sources: natural gas – 27.2 mln GJ; coal – 28.0 mln GJ; fuel oil – 0.3 mln GJ.

The TVEL FC's enterprises purchase primary sources of energy from third party suppliers.

In 2013, the volume of consumption of electric power and heat energy by the Company's enterprises in money terms was RUB 3,925 mln and RUB 1,321 mln respectively (under comparable conditions of 2009)*.

Fig. 43. Primary Energy Consumption by the Sources, mln GJ

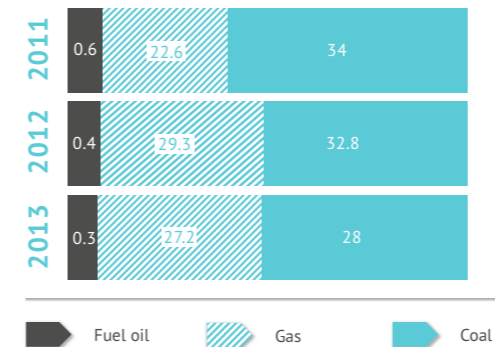
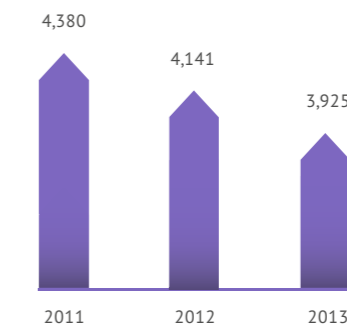


Fig. 44. Electric Power Consumption by TVEL FC Enterprises in Monetary Terms, mln RUB



GRI G3.1: EN3

* No accounting of energy consumption in money terms with a breakdown by primary sources is carried out by the Fuel Company.

GRI G3.1: EN4

In 2013, there was practically no change in indirect energy consumption* at the TVEL FC's enterprises, and it amounted to 17,148 mln GJ.

Fig. 45. Thermal Energy Consumption by TVEL FC Enterprises in Monetary Terms, mln RUB**

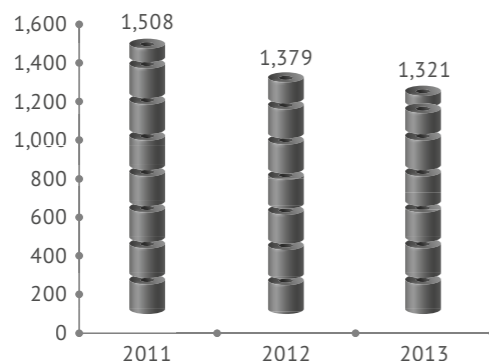
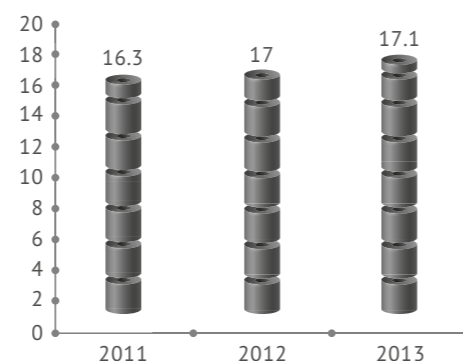


Fig. 46. Indirect Power Consumption by Enterprises of TVEL FC, mln GJ***



In 2014, as a part of activities for improvement of energy efficiency, the following is planned:

- reduction of energy resources consumption by the TVEL FC's enterprises (under conditions comparable with year 2009) by 23%;
- creation, implementation and certification of an energy management system on the basis of requirements of the international standard ISO 50001;
- continuation of realization of the Program "Energy Saving and Efficiency Improvement" at the TVEL FC's enterprises;
- conduct of a new energy study in accordance with the requirements of article 16 of Federal Law dated 23 november, 2009 No. 261-FZ "On energy saving and improvement of energy efficiency and on amending certain enactments of the Russian Federation".

Social Capital

Summary information

Direct economic value generated and distributed****, mln RUB.

Indicator	2011	2012	2013
Direct economic value generated	151,081	137,913.8	162,788.6
Economic value distributed incl.:	125,285.3	124,772	142,265.1
Operational costs	73,404.9	63,875.2	84,316.4
Salaries and other payments and benefits to the employees	32,512	24,727.3	21,957.5
Payments to capital providers	3,606.4	20,054.2	19,710.7

* Indirect energy consumption, according to guideline GRI G3.1, shows the volume of energy spent for production of electric power, steam, heat energy and other types of intermediate energy consumed that are consumed by the reporting company and are purchased from third parties (i.e. are not produced within the company).

** Under comparable conditions of 2009.

*** No accounting of indirect energy consumption with a breakdown by primary sources is carried out at the TVEL FC's enterprises due to the absence of statutory requirements with respect to maintaining such accounting and due to the fact that the benefit from obtaining such information is materially less than the cost of obtaining it.

**** For the purpose of calculation, data of consolidated statement reports of the Fuel Company that were prepared in accordance with Russian Accounting Standards were used. Statements in accordance with IFRS are prepared within a longer time period.

Indicator	2011	2012	2013
Investments in communities and charity	791.8	560.5	170.3
Gross tax payments*	14,970.2	15,554.8	16,110.2
Economic value retained	25,795.5	13,141.8	20,523.51

GRI G3.1: EC1

Development of the Regions of Presence

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

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

GRI G3.1: 1.2
EC9 SO1

For the purpose of realization of projects for development of areas of presence, the TVEL FC maintains constant and complex coordination with all stakeholders, mainly with public authorities and local self-governing bodies.

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

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

Agreements on cooperation with the regions

In 2012, the TVEL JSC initiated the drawing up and signing of Agreements on cooperation between ROSATOM State Corporation and public authorities of Russian Federation constituent

* The amount of principal tax liabilities accrued for payment to budgets of various levels for the reporting period, including:

- taxes included in costs;
- contributions to non-budget funds;
- profit tax of organizations.