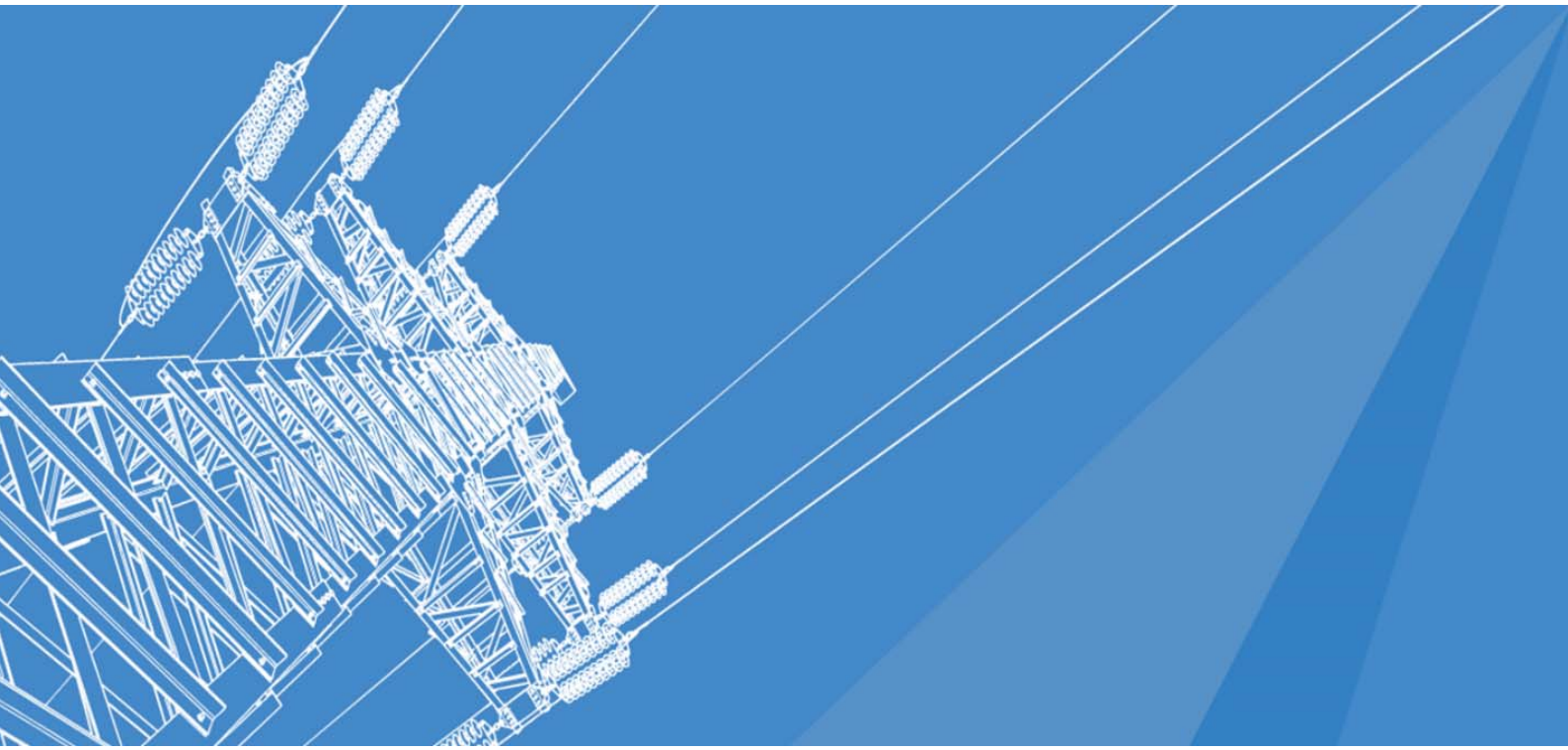
Tyumenenergo JSC 2017 Annual Report, pre-approved by the Board of Directors of Tyumenenergo JSC
«11» may 2018 and
approved by decision of the sole shareholder of Tyumenenergo JSC, Rosseti PJSC
«26» june 2018
Management Board Meeting Minutes No. 733pr/1

Printing _____signatur_____
Director General
Tyumenenergo JSC
S.Yu. Savchuk

TYUMENENERGO JSC 2017 ANNUAL REPORT



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INTRODUCTION

REPORT INFO

Report Drafting Principles

Tyumenenergo Joint-stock Energy and Electrification Company (hereinafter — "Tyumenenergo JSC" or "the Company") presents the second Comprehensive Annual Report (hereinafter — "the Report") describing the performance of the Company from January 1, 2017 to December 31, 2017.

The Report has been prepared in compliance with the Russian legislation on securities, the annual reporting recommendations for Rosseti PJSC subsidiaries, and the Sustainability Reporting Guidelines of the Global Reporting Initiative, GRI, v. G4.

When drafting the Report, Tyumenenergo JSC sought to fully adhere to the GRI requirements. Such adherence enables a comprehensive assessment of the Company's performance in the context of sustainable development while taking into account interested-party interests.

Tyumenenergo JSC uses annual reporting. The previous annual report was issued in 2017 and was based on the results of 2016. No indicators presented in the previous reports have been restated.

Significant Activities

Tyumenenergo JSC seeks to ensure a high level of openness and transparency of its activities by implementing the principle of intensive interaction with the stakeholders. The company actively communicates with all the stakeholders by timely providing all essential information on all aspects of its activities as well as by responding to the stakeholders' requests and needs.

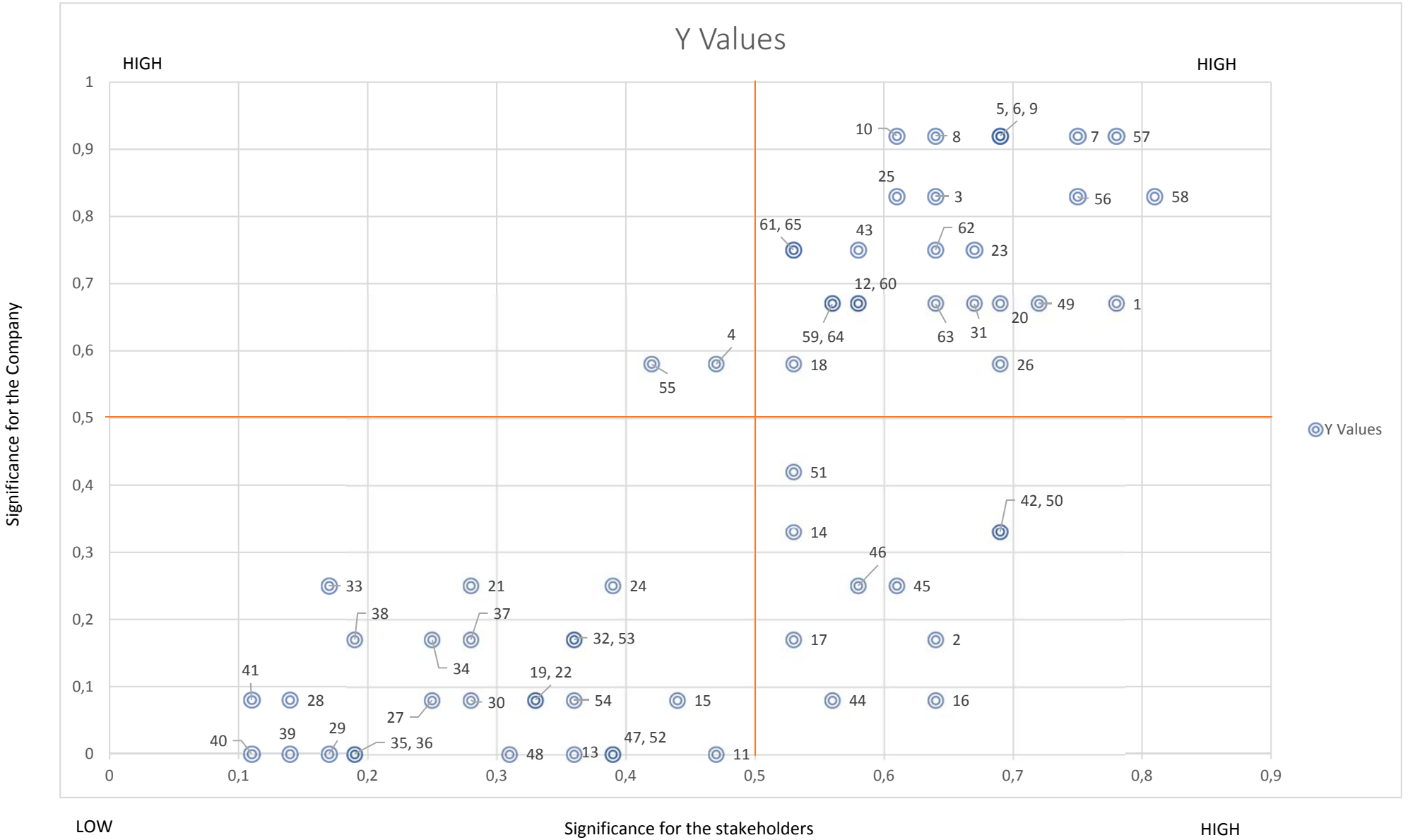
Following the GRI G4 Guidelines, Tyumenenergo JSC has started cooperating with the stakeholders to determine the Company's key activities to further disclose information thereon in the Report.

While drafting the Report, the Company developed a questionnaire including the list of 65 activity aspects. Each respondent could answer "yes" or "no" to determine whether this or that aspect had an effect on Tyumenenergo JSC's sustainable development. Persons surveyed included the Company's management and the stakeholders.

Based on this survey, the Company created the materiality for the Company's various activities. The vertical axis of the matrix reflects the significance of each aspect for the Company (as responded by the management), whereas the horizontal axis reflects the significance of the same for the stakeholders. For each axis, the significance level was calculated on the basis of the positive-answer share in the total number of answers. For each axis, the threshold coefficient was set to 0.2. Aspects equal to, or above the threshold value were deemed significant while being additionally reviewed by the working group.

The Report has not been subject to public hearings or external approval.

The Index of standard GRI reporting components as presented in the Report is attached.


Y Values
HIGH
HIGH
LOW
HIGH
Significance for the Company
Significance for the stakeholders
Y Values
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		Compared to the 2016 Report value
Economy		
1	Economic Performance	-
2	Market Presence	↓
3	Indirect Economic Impacts	↑
4	Procurement Practices	-
5	Tariff Policy*	-
6	Production Results*	-
7	Investment Activities*	-
8	Ensuring Reliability and Safety*	-
9	Innovation*	-
10	Process Optimization and Operating Efficiency Enhancement*	-
Environment		
11	Materials	-
12	Energy	-
13	Water	↓
14	Biodiversity	↑
15	Emissions	-
16	Effluents and Waste	-
17	Products and Services	-
18	Compliance	-
19	Transport	↓
20	General Information	-
21	Environmental Assessment of Suppliers	-
22	Environmental Complaint Mechanisms	-
Social		
Labor Relation Practices and Decent Labor subcategory		

23	Employment	-
24	Personnel and Management Relations	↓
25	Occupational Health and Safety	-
26	Training and Education	-
27	Diversity and Equal Opportunities	-
28	Equal Remuneration for Men and Women	-
29	Assessment of Suppliers' Labor Relations	-
30	Labor Relation Complaint Mechanisms	-
31	Remuneration	-
Human Rights Subcategory		
32	Investments	-
33	Non-Discrimination	-
34	Freedom of Association and Collective Bargaining	-
35	Child Labor	-
36	Forced or Compulsory Labor	-
37	Safety Practices	↓
38	Rights of Indigenous Peoples and Ethnic Minorities	-
39	Rating	-
40	Human Rights Rating of Suppliers	-
41	Human Right Violation Complaint Mechanisms	-
Community Subcategory		
42	Local Communities	↑
43	Anti-Corruption	-
44	Public Policy	-
45	Non-Competition	-
46	Compliance	↓
47	Assessment of Suppliers' Impact on The Company	-
48	Impact-On-The-Company Complaint Mechanism	-
49	Social Responsibility	-

50	Charity	-
Product Liability Subcategory		
51	Consumer Health and Safety	↓
52	Product and Service Labeling	-
53	Marketing Communications	-
54	Consumer Privacy	-
55	Product Conformity to Regulatory Requirements	↓
Other Aspects		
56	Strategy	-
57	Priority Areas of Activity	-
58	Development Prospects	-
59	Organizational Management Model	-
60	Governance Bodies	-
61	Internal Control and Audit	-
62	Risk Management	-
63	Equity	-
64	Dividend Policy	-
65	Corporate Communications	-

COMPANY GENERAL INFO AND BRIEF HISTORY

Tyumen district energy directorate, or Tyumenenergo, was founded May 3, 1979 by order of the USSR Ministry of Energy and Electrification, through merging five energy companies based in Tyumen Oblast:

- Tyumen Electric Grids (now Tyumen-based local production unit of Tyumen Distribution Grids), founded March 1, 1964;
- Ishim Electric Grids (now Ishim-based local production unit of Tyumen Distribution Grids), founded January 3, 1968;
- Surgut Electric Grids, founded October 5, 1970;
- Tobolsk Electric Grids (now Tobolsk-based local production unit of Tyumen Distribution Grids), founded July 1, 1978;
- and Nizhnevartovsk Power Grid Company, founded February 13, 1979.

This was the beginning of Tyumenenergo JSC, a company whose establishment was an imperative of the time, dictated by the need to develop oil and gas fields, to transport oil and gas to European Russia, to quickly improve and expand the fuel and energy sector in Western Siberia.

In 1998, DED Tyumenenergo was renamed Tyumen Production Association of Energy and Electrification Tyumenenergo by the Order of the USSR Ministry of Energy and Electrification.

In March 1993, pursuant to the state privatization program, they founded Tyumenenergo Public Joint-Stock Energy and Electrification Company, the legal successor of the Tyumen Production Association of Energy and Electrification Tyumenenergo.

Until 2005, Tyumenenergo JSC had been a vertically integrated company that dealt with the production, transmission, and distribution of electric power. After the industrial reform of March 2005, generating and distribution enterprises were separated from the Company, whereas Tyumenenergo JSC itself became a distribution grid company.

Since 2007 and to this day, Tyumenenergo JSC is an interregional distribution grid company acting in three of Russia's constituent entities: Tyumen Oblast, the Khanty-Mansi Autonomous Okrug — Yugra, and the Yamalo-Nenets Autonomous Okrug. The company serves an area exceeding 1.4 million sq. km, which is home to about 3.6 million people.

Today, Tyumenenergo JSC's nine branches have 648 35 to 220 kV substations and 6 860 6-10/0.4 kV substations with a total transformer capacity of 29 310.91 MVA; the length of power lines the Company services totals 50.4 thousand km. The annual delivered electricity output is 63.3 billion kWh.

2015–2017 KEY PERFORMANCE INDICATORS

Indicator	Unit	2015	2016	2017	Deviation in 2017/2016	
					abs.	%
Financial Performance						
Revenue from Sales of Products (Services)	million rubles	53.511	57.390	57.893	503	1
Net Profit	million rubles	3.696	2.301	23	–2 278	–99
Net Assets	million rubles	117.740	123.902	125.503	1.601	1.29
EBITDA*	million rubles	12.268	11.560	9.386	–2.174	–19
EBITDA/%		14.74	23.79	40.15	16.36	68.77
Effect of Reducing per-unit Operating Expenses**	%	-17.24	-18.35	-23.73	-5.38	–
Per-unit Expenses in 2012 Prices	thousand rubles/c.u.	18.22	17.98	16.79	-1.19	-7
Total Debt to EBITDA Ratio		0.71	0.35	0.30	-0.05	-14.29
Financial Independence Coefficient		0.83	0.86	0.85	-0.01	-1.16
Operating Indicators						
Power Released to the Grid	million kWh	71.552.7	71.373.6	65.022.0	-6.351.6	-8.90
Power Released from the Grid	million kWh	69.734.6	69.560.2	63.322.1	-6.238.1	-8.97
Power Losses	million kWh	1.818.1	1.813.4	1.699.9	-113.5	-6.26
Losses	%	2.55	2.54	2.61***	0	0
Investment Indicators						
Capital Investment Implementation	million rubles, VAT excluded	10.373.54	7.188.60	10.492.41	3.303	45.96
Capital Investment Financing	million rubles, VAT included	10.733.03	8.980.61	12.275.76	3.295	36.69
Fixed Assets Put into Operation	million rubles, VAT excluded	19.748.39	8.699.15	6.983.63	-1.715	-19.72
Transformer Capacity Put into Operation	MVA	645.33	336.78	281.24	-56	-16.49
Power Lines Put into Operation	km	1.606.19	619.67	504.60	-115	-18.57

**EBITDA stands for earnings before interest, taxes, depreciation and amortization.*

*** Pursuant to the Grid Complex Development Strategy approved by the Order of the Government of the Russian Federation dd. April 3, 2013 no. 511-p, per-unit operating expenses must be reduced by 15% by 2017 given inflation to the 2012 price levels (calculated per unit of electrical equipment served).*

**** Relative power losses are due to the exclusion of electricity contracts with "last-mile" consumers from July 1, 2017 on.*

FOCUS OF EFFICIENCY: MILESTONE EVENTS OF 2017

JANUARY

Acting Director General of Tyumenenergo JSC Sergey Savchuk met Natalya Komarova, the Governor of the Khanty-Mansi Autonomous Okrug — Yugra, as she was on a business visit to Surgut. During the meeting, the Director and the Governor discussed the Company's results of 2016 and plans for 2017, as well as the region's grid complex development prospects.

Environmental rating agency Interfax — ERA recognized Tyumenenergo JSC as a leader in terms of environmental transparency among the energy enterprises of Russia and Kazakhstan in 2016.

Noyabrsk Electric Grids, a branch of Tyumenenergo JSC, finished its investment project to reconstruct the Signal 110/10/10 kV substation, a key facility supplying power to the town of Gubkinsky in Yamalo-Nenets Autonomous Okrug, YNAO.

FEBRUARY

Tyumenenergo JSC's specialists were among the winners of the ***17th All-Russian Engineer of the Year*** contest in the *Professional Engineers* category. Ilyar Urazaliyev, Head of the Production Laboratory of Surgut Electric Grids, and Elena Lopatina, an Engineer of the Electric Metering and Thermotechnical Laboratory of Nefteyugansk Electric Grids, were awarded Professional Engineers of Russia certificates and honorary titles in categories *Power Engineering* and *Chemistry*. The award ceremony was held by the Russian Union of Scientific and Engineering Public Organizations (RosSNIO).

MARCH

The Company was among the winners in the Human Potential Development category of the ***All-Russian Contest Russian Business Leaders: Dynamics and Responsibility***, held under the auspices of the Russian Union of Industrialists and Entrepreneurs.

Tyumenenergo JSC's environmental protection specialists were named among the Top 10 Environmental Engineers of the ***Glory to the Workman!*** professional contest held in, and by, the Ural Federal District.

APRIL

Tyumenenergo JSC's subdivisions responsible for the sale and development of services, as well as the Internal Audit and Control Unit were recognized as the best in Rosseti PJSC in 2016.

The ***From Light in People to Light in Windows*** project presented by Tyumenenergo JSC at the Press Service of the Year 2016 contest won the 1st prize in the *Best Printed Corporate Media* category.

Nefteyugansk Electric Grids, a branch of Tyumenenergo JSC, won the regional ***Golden Support*** contest in the ***Zero Waste Electricity*** contest organized by the Tyumen Power Supply Company.

MAY

Azat Bikinin from the Surgut Electric Grids and Vyacheslav Panin from Nizhnevartovsk Electric Grids won the 1st and the 3rd prize of the ***All-Russian Best Relay Master 2017*** professional contest.

JUNE

Tyumenenergo JSC won in three categories of the ***VII Russia's Best Electric Grids*** contest: *Reliable Power Supply, Efficient Power Saving*, and *Innovative Project of the Year*. The contest was organized and held by the industrial website EnergoNews.

Noyabrsk Electric Grids, a branch of Tyumenenergo JSC, completed the overhaul of its Novogodnyaya—Mayak and Vyngapur—Mayak 110 kV overhead lines involved in powering the oil extraction facilities of JSC Gazpromneft-NNG and Vyngapur Gas Refinery.

JULY

Kogalym Electric Grids, a branch of Tyumenenergo JSC, celebrated its 30th anniversary.

Tyumenenergo JSC's team won the bronze prize of the ***All-Russian Professional Contest for Distribution Grid Repair and Maintenance Teams***, organized by Rosseti PJSC. Artyom Kostennikov, a wireman of the Yalutorovsk RES, Yuznoye production unit of Tyumen Distribution Grids, was recognized as the best worker. He also won the 2nd prize of the ***All-Russian Best-in-Profession*** contest in the *Best Distribution Grid Operation Wireman* category; the contest was co-organized and co-held by Rosseti PJSC and the Russian Ministry of Labor and Social Protection.

AUGUST

Heads of Ishimsky and Abatsky Districts of Tyumen Oblast thanked the Ishim local production unit of Tymen Electric Grids, Tyumenenergo JSC for their excellent job in restoring the power supply to settlements affected by the thunderstorm.

Aleksandr Semagin, a driver at Noyabrsk Electric Grids (a branch of Tyumenenergo JSC), won the bronze prize of the regional stage of ***Energy***, a corporate music contest for Rosseti Company Group's employees.

SEPTEMBER

Sergey Savchuk, Director General of Tyumenenergo JSC, met Dmitry Kobylkin, Governor of the Yamalo-Nenets Autonomous Okrug, to discuss the development of the regional power system; the discussion covered the issues of energy security, fail-safe and reliable power supply to the Northern Power District of the Okrug. The meeting took place in Salekhard, the region's center.

The Company hosted the ***All-Russian Conference on Communication Systems and Dispatching. New Generation Solutions and Standards***. The event was a platform for sharing experience in the implementation of information technology in the power industry as well as in energy efficiency and energy saving enhancements; conference participants presented state-of-the-art IT solutions.

Uray Electric Grids, a branch of Tyumenenergo JSC, completed its scheduled reconstruction of the Khvoynaya 110/10 kV substation that powers the industrial facilities as well as the residential sector in the town of Yugorsk, KhMAO-Yugra. The project was implemented as a part of fixed-asset anti-aging program aimed at ensuring the compliance of energy facilities with the modern reliability standards.

Tyumenenergo JSC's ***Project for Modernization of Branch Facility Illumination Systems by Means of Energy Service Contracts*** was presented at the regional (Tyumen Oblast-wide) stage of the Fou***rth All-Russian Contest for Implemented Energy-Efficiency and Energy-Saving Projects ENES-2017*** and won the 1st prize in the *Best LED Illumination of Office Facilities category*.

OCTOBER

As a part of the **Russian Energy Week**, Tyumenenergo JSC and its partners (SAP CIS, LLC, Forenergo Production Association, LLC, MN Consulting, LLC, EnergoData, LLC, JSC Vols-VL Directorate, LLC Alageum Electric) signed five cooperation agreements to qualitatively improve the partnership and positively affect the investment attractiveness of the regions of Tyumenenergo JSC's operations.

Tyumenenergo JSC's **Project for Modernization of Branch Facility Illumination Systems by Means of Energy Service Contracts** was presented for the Russia-wide stage of the **Fourth All-Russian Contest for Implemented Energy-Efficiency and Energy-Saving Projects ENES-2017** and won the 1st prize in the *Best LED Illumination of Office Facilities* category.

Student team *Energetik*, which represented Tyumenenergo JSC, was ranked the 2nd best of the student teams working at Rosseti PJSC's grid complex facilities in the summer.

Noyabrsk Electric Grids, a branch of Tyumenenergo JSC, was the winner in the *Reduction in the Occupational Injuries and Morbidity at Industrial Enterprises* category of the regional (YNAO-wide) stage of the **Russian Organization of High Social Efficiency** contest.

Stepan Bovan, Director of Noyabrsk Electric Grids, a branch of Tyumenenergo JSC, received a letter of gratitude from the Deputy of the Russian State Duma Vladimir Pushkaryov for taking part in the **Future of the Arctic** volunteer project.

The grid facility safety video presented by Tyumenenergo JSC for the **Say YES to Occupational Safety** video contest won the 3rd prize in the productive sector category. The contest was organized by the Economic Development Committee of the Surgutsky District, KhMAO-Yugra. The video is used as a part of the Company's tours for university and school students and as a tutorial for lectures and presentations on electric injury prevention, hosted by educational institutions in Tyumenenergo JSC's area of responsibility.

NOVEMBER

Tyumenenergo JSC organized the **First Technology Forum of Power Equipment Manufacturers**, held in Surgut on November 23-24, 2017. The forum involved 80 companies, 28 of which presented their new developments and equipment. 500 people attended the event, the lists say.

On November 24, the Company opened KhMAO-Yugra's first Russian-design quick-charging station for electric cars. The commencement ceremony was attended by Igor Kholmanskikh, an authorized representative of the President of the Russian Federation in the Ural Federal District, Yugra Governor Natalya Komarova, and Mayor of Surgut Vadim Shuvalov.

Tyumenenergo JSC was thanked by the Ministry of Energy of the Russian Federation for its contribution to organizing and holding the All-Russian **#BrighterTogether-2017** festival.

DECEMBER

Tyumenenergo JSC launched three electric-car charging stations in Tyumen.

Director General of Tyumenenergo JSC Sergey Savchuk became a member of three sections of the Expert Council under the Energy Committee of the Russian State Duma and Federal Assembly.

Tyumenenergo JSC's team won the 1st prize of the All-Russian **Energo Billiards Cup**.

Tyumenenergo JSC's team won the 3rd prize of the **6th FES Volleyball Cup**.

JANUARY 2018

The Company won the Politics and Business prize of the **XI Interregional Ural and Siberia's Results 2017 Award** in the *Strategy of the Year* category; the award-winning project was the Company's Memorandum on launching Russia's first Center for Innovations in Energy in Surgut (the award is granted for the most competent, effective, and promising company development strategy in the Ural Federal District).

SPEECH OF THE CHAIRMAN OF TYUMENENERGO JSC'S BOARD OF DIRECTORS VALENTIN YEFIMOVICH MEZHEVICH

Ladies and gentlemen!

Tyumenenergo JSC is one of Russia's major distribution grid companies; it supplies power to users in Tyumen Oblast, the Khanty-Mansi Autonomous Okrug — Yugra, and the Yamalo-Nenets Autonomous Okrug. Tyumen's power system lays the foundations for the industrial development of Western Siberia and other regions of the Company's operations. In the modern economy, the Company ensures reliable energy operations and shows stable production performance.

Speaking of corporate governance, the Board of Directors held 34 meetings in 2017, whereby the Board has discussed 167 questions regarding implementing the Company's strategic plans. Those included priority areas: developing the Company's grid complex, keeping the Company's lead in the power transmission service market, ensuring the Company's financial and economic stability.

To that end, the Company adopted a number of program documents covering the modernization of grid complex and the long-term development of electricity metering systems for the retail market. The Company is carrying out systemic action to reduce power losses and improve energy efficiency.

The Company is continuously enhancing its technological connection services provided to new electric grid users. Those include major users and oil-and-gas companies that develop potentially significant fields, as well as socially significant facilities.

Tyumen's power system is at the cusp of major transformations in the industry, attributed to the implementation of the 2030 Russian Strategy of Digital Grid Complex Development. During 2017, Tyumenenergo JSC was developing the program for digitalizing own grids, scheduled for approval and implementation in 2018. The Company is actively searching for innovative grid-complex solutions, seeking to further cooperation with domestic power equipment developers and manufacturers.

In the framework of Rosseti PJSC's unified communication policy, the Company is taking systemic measures to enhance its investment attractiveness and information transparency.

Another priority the Company accentuates is relations with business partners, built upon the equality, non-discrimination, and no unfounded restrictions of competition. Judging from the objective procurement indicators, Tyumenenergo JSC is the leading Rosseti PJSC's subsidiary in terms of procurement from small and medium-size enterprises.

I hereby express my gratitude to the Board of Directors, to the management of the Company for their efficient cooperation and affirmative approach to significant decision-making.

I am sure that implementing our investment and production programs, innovations, and grid digitalization will ensure reliable power supply to our customers, high quality of our services, and fulfillment of financial and economic targets of Tyumenenergo JSC.

SPEECH OF THE DIRECTOR GENERAL OF TYUMENENERGO JSC SERGEY YURIEVICH SAVCHUK

Ladies and gentlemen!

When speaking of Tyumenenergo JSC's results of 2017, this can be noted fairly that the Company continues to strengthen its presence in the electric grid complex. The situation the Company had to work in was not as favorable compared to previous years. However, financial stability Tyumenenergo JSC's timely measures enabled us to maintain the Company's financial stability, to keep the lowest losses in our grid complex, to carry out our repair programs in full, and, for the first time in several years, to fully implement our investment program as planned, even despite a slight decrease in the productive supply level. Besides, the Company was able to assert itself in new markets by finding and grasping opportunities to develop its activities in promising new areas.

Tyumenenergo JSC's main task as a grid company is to reliably supply power to its users and to maintain high quality of power delivery. To that end, the Company's dedicating all necessary effort to reduce the accident rate. In 2017, the Company approved the Tyumenenergo JSC Power Grid Facility Renovation Program for 2017–2026. As of today, the Company still keeps one of the lowest equipment deterioration rates; however, the equipment aging trend and the tendency to have ever more equipment beyond service life expiry are common for the electric grid complex. The program uses the existing financial sources to optimize renovation efforts and to selectively renovate high-priority facilities where equipment replacement is imperative.

Our annual repair program, which in 2017 was carried out in full and as scheduled, does contribute to reliability enhancement. Over 4 billion rubles has been invested to maintain and repair the equipment of substations, power lines and production facilities, as well as the machinery, to clean and widen the clearcuts that the overhead power lines (OPL) are laid through.

The Company’s second priority is to ensure the availability of grid infrastructure to our users. To that end, the Company is sticking to road maps made to implement models on (a) simplifying business processes, (b) enhancing the investment attractiveness related to the program for technological connection to power grids in Tyumen Oblast.

In 2017, the Company entered into more than 4,700 technological connection contracts with a total capacity of 588 MW; the Company has taken all necessary actions to fulfill our duties under 5,900 technological connection contracts with a total capacity of 537 MW. A considerable part of the required capacity is to actualize the regions' oil-and-gas complex, i.e. to ensure the sustainability and prosperity of those areas, to expand the taxable base, and ultimately, to improve the quality of life. Technological connection operations keep the power transmission volume high and mitigate the consequences of terminating the last-mile contracts. The Company continuously improves the efficiency of consumer interaction by facilitating and speeding up the technological connection procedure.

Thanks to Tyumenenergo JSC's efforts, the Company is ready to supply power to the major infrastructure projects proposed for the Arctic zone of the Yamal Peninsula. The need to develop the Arctic territories consistently, which was stated by the Government of the Russian Federation in 2017, opens up new opportunities to expand our area of operation and to attract new customers – something the Company is fully ready for. The Company has carried out a large-scale investment program, the financing of which in fact amounted to about 12.28 billion rubles, 4.7 billion of which were spent on new construction projects. As a result, the Company commissioned over 281 MVA of transformer capacity and 504 km of power lines. Construction of new power grid facilities and reconstruction of fixed assets are aimed at the stable development of the regions of Tyumenenergo JSC's operations.

In the message to the Federal Assembly of the Russian Federation, The President of the Russian Federation Vladimir Putin, noted the need to build digitally-enabled state-of-the-art infrastructure in the country. Pursuant to Rosseti PJSC's 2030 Strategy of Digital Grid Complex Development, all of the Company's activity areas are to be digitalized. Digitalization opens up limitless opportunities, as expanding the functional options of the grid complex will attract

investors and stimulate the development of high-tech equipment, which will noticeably affect various economy sectors. Tyumenenergo JSC is being active in this respect: the Company has entered into numerous agreements with IT companies, and prepared a project to open an Innovation Center in Surgut, which will be tasked to create a comprehensive model and full-fledged infrastructure for latest-generation digital power enterprises.

Tyumenenergo JSC's figures prove that the Company is taking large-scale efforts to improve efficiency, to contribute to the investment attractiveness of Tyumen Oblast, Yugra, YNAO, and the grid complex in general, while acting in compliance with the state policy to solve the problems stated by the Government.

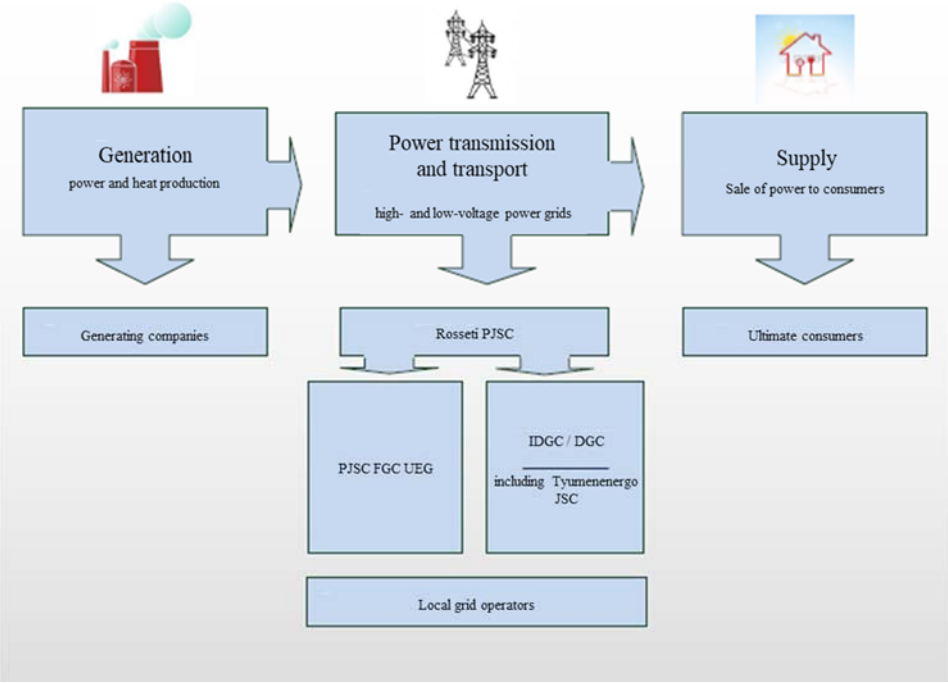
1. Business Model and Development Strategy

1.1. Company's Industrial and Regional Positions

Power engineering is one of the basic sectors of Russia's economy, which covers the internal industrial needs in electric power while also exporting it to CIS and non-CIS countries. Reliable operation of this industry is imperative for energy security and successful economic development of the state.

The modern power complex of Russia has a three-component structure: power generation, transmission, and sale. Rosseti PJSC is involved in power transmission and transport. Being the country's largest grid company, Rosseti PJSC combines a main-line grid complex, interregional distribution grid companies (including Tyumenenergo JSC), and regional distribution grid companies.

Structure of Power Industry in Russia



Rosseti PJSC, the sole shareholder of Tyumenenergo JSC

Tyumenenergo JSC is one of the major interregional distribution companies in Russia, ranked 2nd in terms of power supplied from the grid to the end users and related LGOs.

Among all the grid companies belonging to the Tyumen Power System located in three of Russia's constituent entities (the Yamalo-Nenets Autonomous Okrug, the Khanty-Mansi Autonomous Okrug — Yugra, and Tyumen Oblast), Tyumenenergo JSC takes the lead in terms of power transmission to end users; being the largest grid company of the Ural Federal District.

Today, grid companies are divided into three levels based on technological, administrative, and territorial attributes:

– Level 1: the federal grid company owning 220 kV + main power transmission lines and forming the UNPG. This company operates across Russia and has branches in all state regions;

– Level 2: interregional distribution grid companies established as a result of reforming Energo JSC. Tyumenenergo JSC belongs to this level. These companies own 110-0.4 kV grids and provide power transmission and technological connection services in the territories where they are based;

– Level 3: local grid operators mostly owning 0.4 to 10 kV grids. Most often, these companies were established in the framework of wholesale resellers created as municipal enterprises, each serving consumers within a single municipal entity; some companies were based on the grids formerly operated by industrial enterprises.

Tyumenenergo JSC comprises nine branches in three of Russia's constituent entities:

– Northern and Noyabrsk Electric Grids in YNAO;

– Kogalym, Nizhnevartovsk, Surgut, Nefteyugansk, and Uray Electric Grids, as well as Energocomplex in KhMAO-Yugra;

– Tyumen Distribution Grids in Tyumen Oblast, comprising four local production units: Tyumen, Tobolsk, Ishim, and Yuzhnoye.

Tyumenenergo JSC contributes to the growing industrial potential of Russia's most important region while improving the energy security of the country in general, enhancing the quality and safety of its power transmission and distribution services in accordance with the global standards, while also continuously and steadily improving and developing the grid complex in Tyumen Oblast, KhMAO-Yugra, and YNAO. Systematic efforts in grid renovation and commissioning new facilities is still a relevant task and Tyumenenergo JSC's priority.

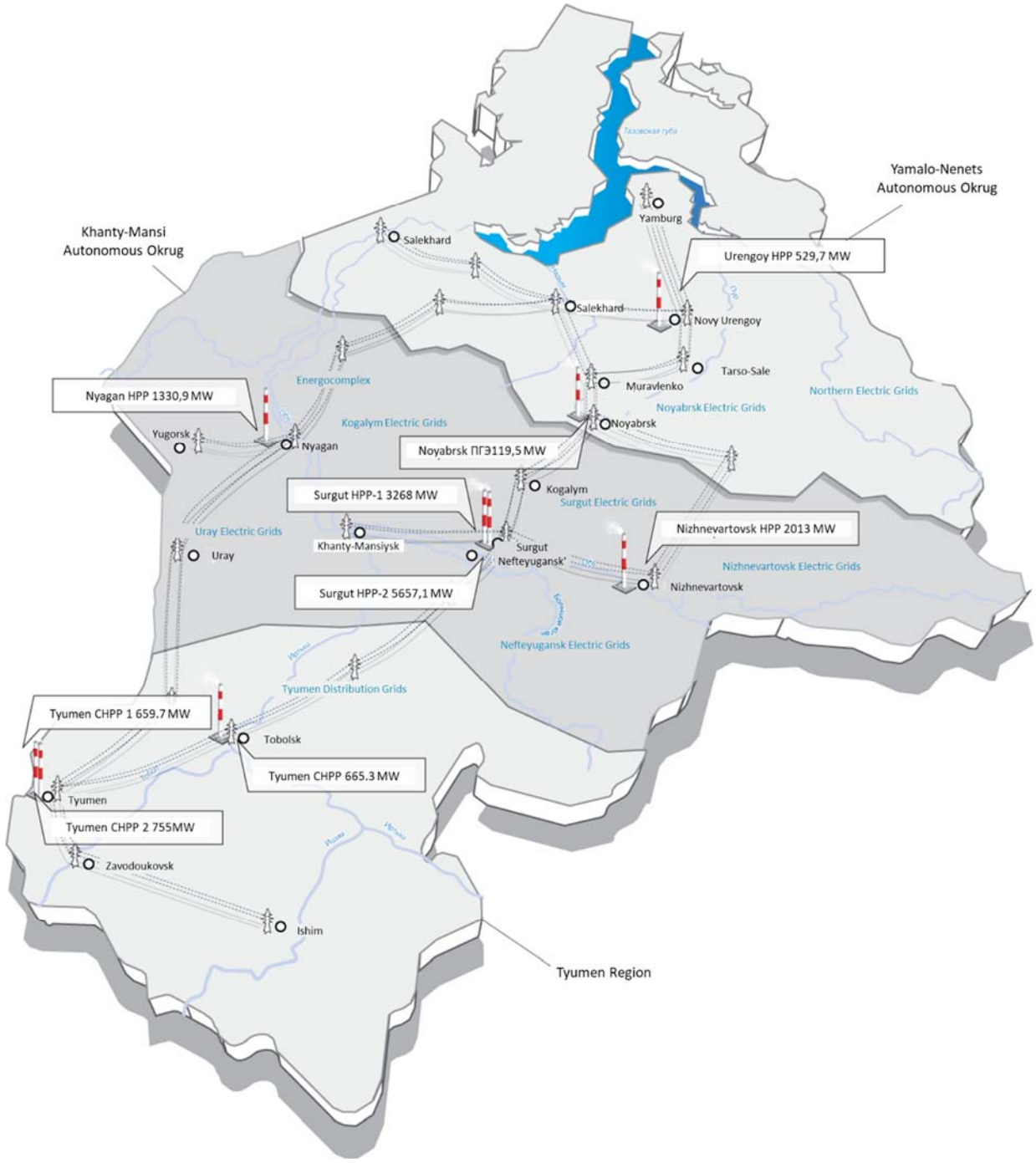
Today, more than 50 local grid operators operate in Tyumen Oblast beside Tyumenenergo JSC; these operators provide such services as power transmission technological connection within their localities or serve specific industrial enterprises. Such grid operators mostly have np direct access to the UNPG and supply power of low-to-medium voltage (0.4 to 10 kV); they are connected to Tyumenenergo JSC's grid as the latter has higher voltage.

In accordance with the Decree of the Russian Government dd. December 27, 2004 No. 861 "On the approval of: Rules for non-discriminatory access to, and provision of power transmission services; Rules for non-discriminatory access to, and provision of operational dispatch services in power engineering; Rules for non-discriminatory access to, and provision of wholesale-market trade system administration services; and Rules for technological connection of user power receivers, power generation facilities, and power grid facilities belonging to grid operators and other parties", Tyumen Oblast uses a uniform tariff scheme meaning that power transmission services are charged at the same rate for all the users in the region, regardless of which grid they are connected to.

Local grid operators in the region do not pose any significant risks for Tyumenenergo JSC, as all the power they transmit is supplied from Tyumenenergo JSC's grid.

Given that the energy service market is boosting now, and emergence of competition seems quite possible, Tyumenenergo JSC prioritizes the expansion of its grid; expansion efforts include the development and enhancement of the technological connection procedures for the power receivers of Tyumenenergo JSC's grid users.

1.1.1. GEOGRAPHIC FOOTPRINT OF TYUMENENERGO JSC



1.1.2. MARKET SHARE AND ENERGY CONSUMPTION STRUCTURE

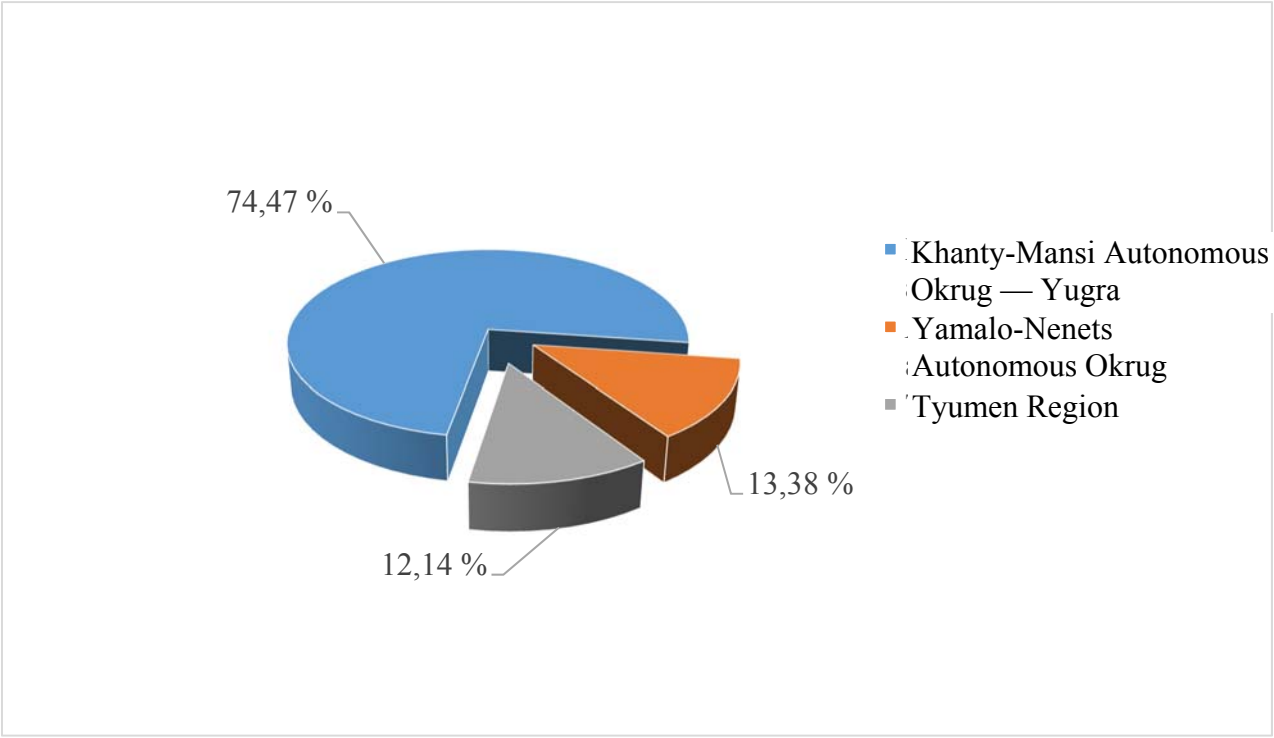
Tyumenenergo JSC provides power delivery services in the three major oil-and-gas regions of Russia: KhMAO-Yugra, YNAO, and Tyumen Oblast. In this territory, the Company has a 69.7% power transmission service market share[1].

[1] Since 2017, Tyumenenergo JSC has been using a new method to calculate the Company's share in the power transmission market; the method uses the Tyumenenergo JSC required amount of gross revenue (RGR) net of paid losses, as well as the RGR of the grid operators net of paid losses; the RGR values used in calculations are equal to

63,322.09 million kWh	Power transmitted in 2017
12,508 MW	Annual maximum load of the Tyumen Power System recorded January 19, 2017 at 10 am (Ural Time)

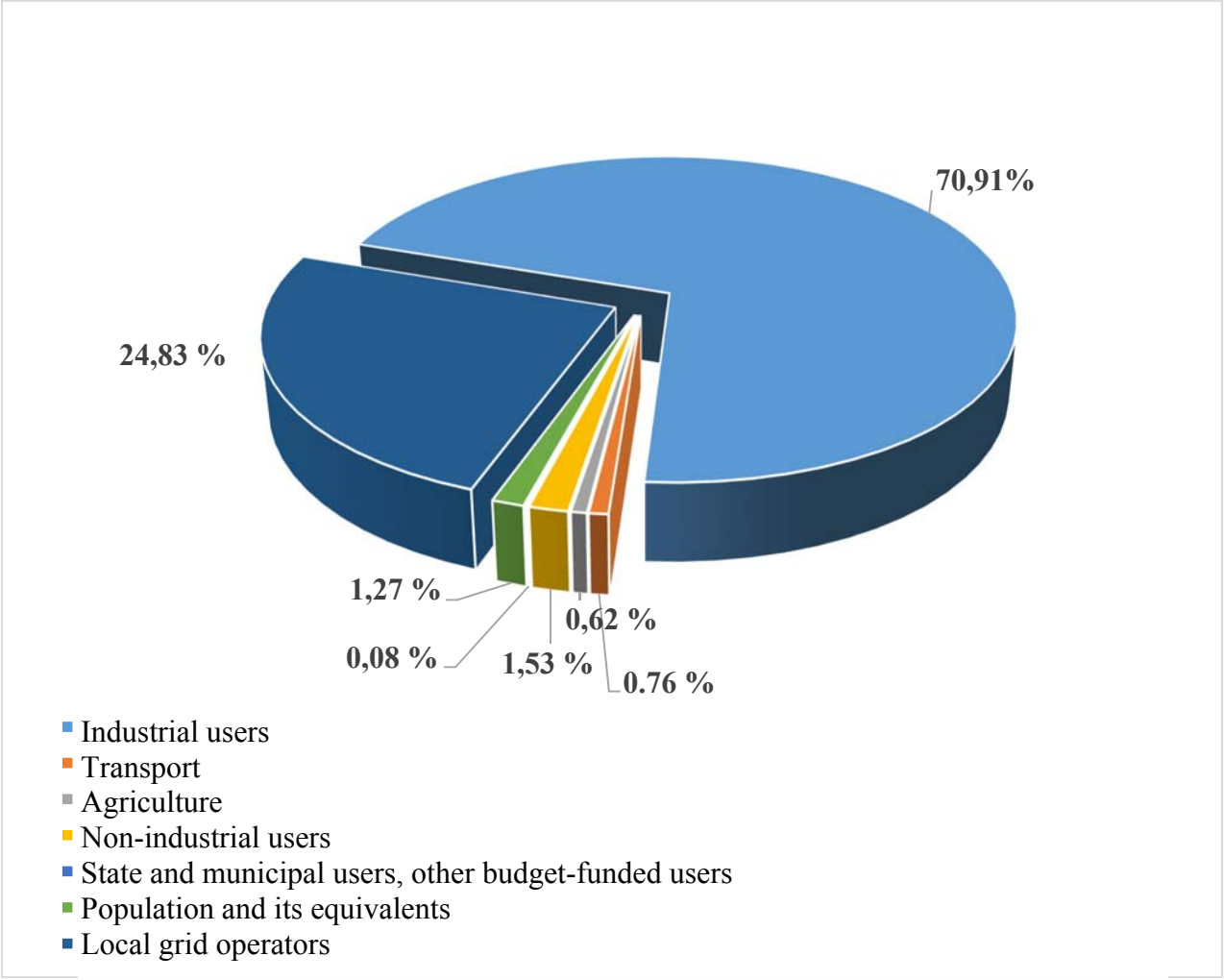
Power Consumption by Region

Productive supply to the grid in 2017	63,322.09 million kWh	
Khanty-Mansi Autonomous Okrug – Yugra	47,158.09 million kWh	74.47%
Yamalo-Nenets Autonomous Okrug	8,474.62 million kWh	13.38%
Tyumen Oblast	7,689.38 million kWh	12.14%



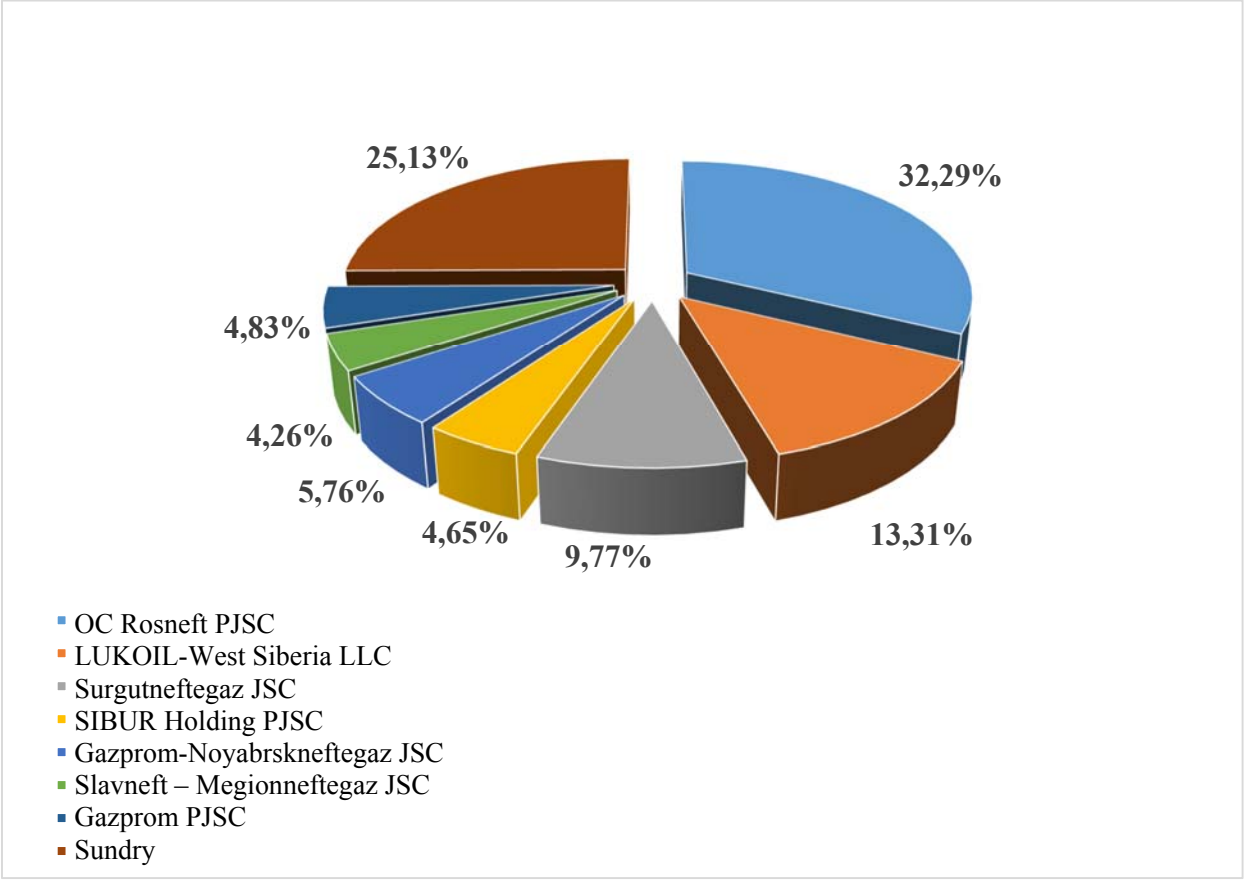
the RGR values accounted when approving the region-specific uniform power transmission tariff and reflected in the Decree of Approval of Uniform Power Transmission Tariff as approved by an executive body of the Russian Federation's entity responsible for the state regulation of tariffs in 2017. While this change has not affected the production figures of Tyumenenergo JSC, the Company's conditional-unit figures are on the rise as the Company is consolidating the power grid assets of the region.

Power Consumption by User



Major Industrial User

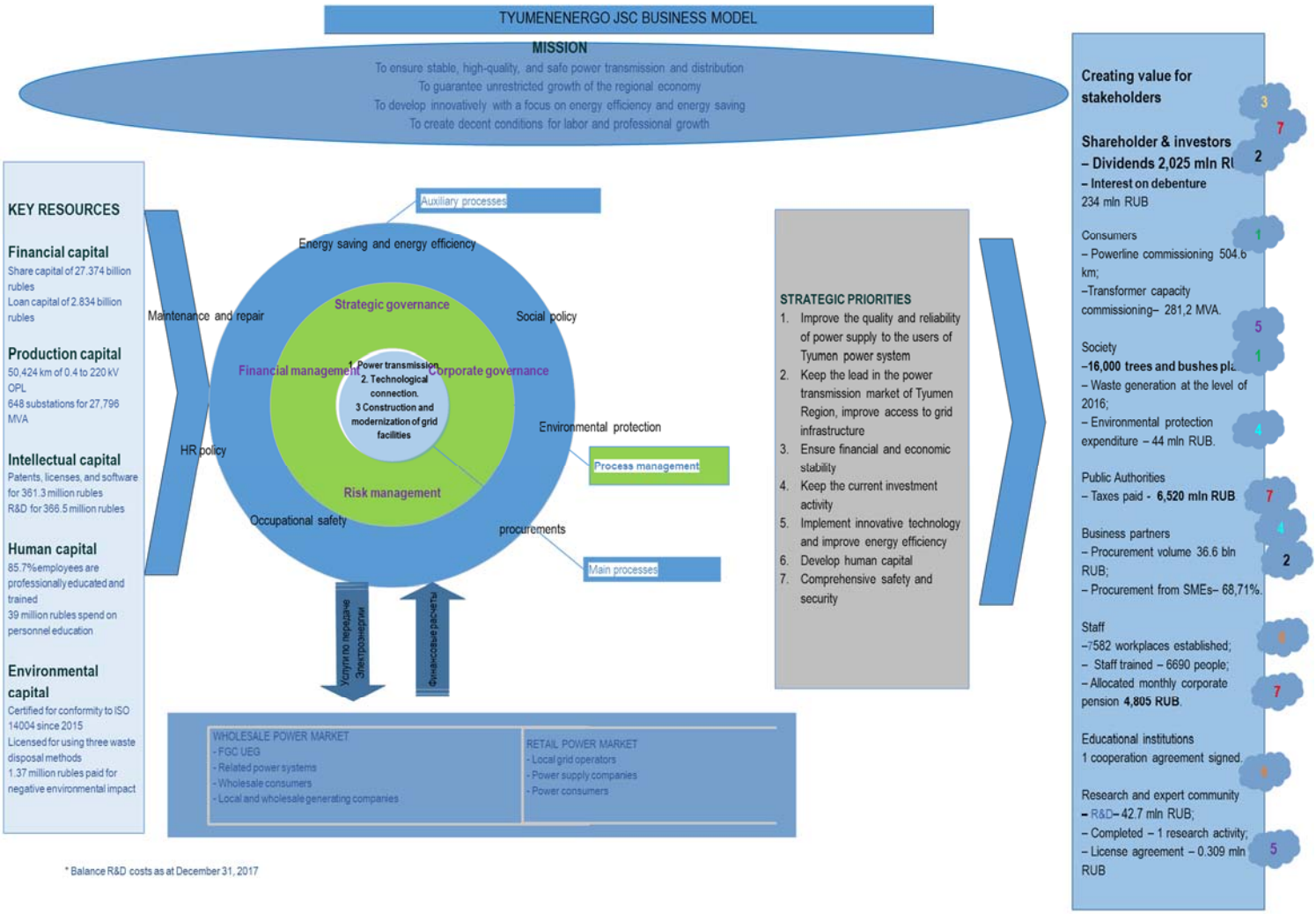
OC Rosneft PJSC	20,445.33 million kWh	32.26%
LUKOIL-West Siberia LLC	8,429.43 million kWh	13.34%
Surgutneftegas OJSC	6,185.23 million kWh	9.76%
Gazpromneft-Noyabrskneftegaz JSC	3,648.15 million kWh	5.89%
Gazprom PJSC	3,055.88 million kWh	4.80%
SIBUR Holding PJSC	2,944.71 million kWh	4.65%
Slavneft-Megionneftegaz OJSC	2,698.32 million kWh	4.26%



2017 Tyumenenergo JSC Power Balance Sheet

<table>
<tr><td>Generation</td><td>6,619.3 million kWh</td><td rowspan="5">Supply to grid 65,022.0 million kWh</td><td rowspan="5">Supply from grid to users and related LGOs 63,322.1 million kWh</td><td>Agriculture</td><td>392.4 million kWh</td></tr>
<tr><td>FGC</td><td>13,920.8 million kWh</td><td>Major Cities</td><td>6,707.1 million kWh</td></tr>
<tr><td>FGC 220</td><td>42,899.7 million kWh</td><td>Other Users</td><td>6,301.6 million kWh</td></tr>
<tr><td>Related Grid Companies</td><td>-386.6 million kWh</td><td rowspan="2">Major Industrial Users</td><td rowspan="2">49,921.0 million kWh</td></tr>
<tr><td>Station Unit</td><td>1 970,8 million kWh</td></tr>
<tr><td colspan="6">Power Loss
1,699.9 million kWh (2.61%)</td></tr>
</table>

1.2. BUSINESS MODEL

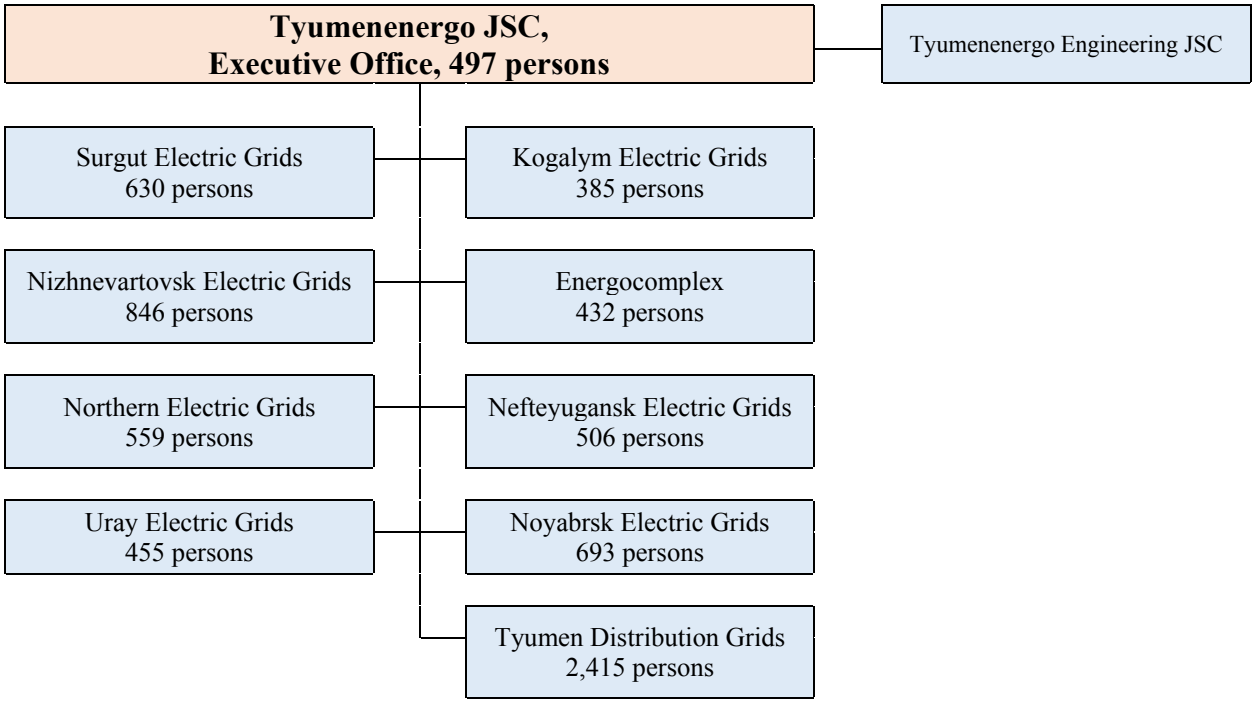


* Balance R&D costs as at December 31, 2017

Over the reporting period, Tyumenenergo JSC has not had any major changes in its supply chain.

1.3. COMPANY STRUCTURE

Average number of persons employed at Tyumenenergo JSC in 2017 was 7418, 497 of whom were members of the Company's executive bodies.



Over the reporting period, Tyumenenergo JSC's branches have not had any major changes in their supply chain.

1.4. STRATEGY AND PRIORITY AREAS

The Company's priorities and targets are set in the Grid Complex Development Strategy of the Russian Federation, as approved by the Decree of the Government of the Russian Federation dd. April 3, 2013 no. 511-p On the Approval of the Grid Complex Development Strategy of the Russian Federation.

As of today, strategic governance of the industry is based on the 2030 Energy Strategy of Russia, as approved by the Decree of the Government of the Russian Federation dd. November 13, 2009 no. 1715-p On the 2030 Energy Strategy of Russia; this Strategy is to maximize the efficiency of using natural energy sources and energy sector potential to ensure stable economic growth, to improve the state-wide quality of life, and to strengthen economic positions in foreign trade.

Tyumenenergo JSC is to act in compliance with the Strategy in the long term.

Mission

The Company provides reliable, high-quality, and safe power transmission and distribution services to every customer, being guided by the best-in-industry standards.

The Company guarantees an opportunity for the regional economy to grow freely while building and developing an efficient, resource-saving, and safe grid complex.

The Company leads public energy and housing utility services towards innovative development, energy efficiency, and energy saving.

The Company care about each and every employee by creating conditions for decent work and professional growth.

PRIORITIES[2]:

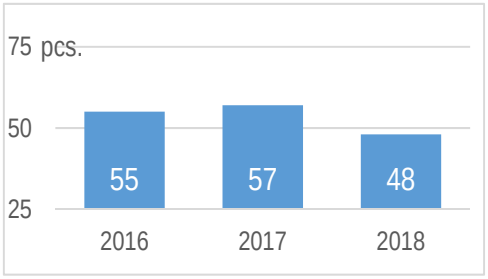
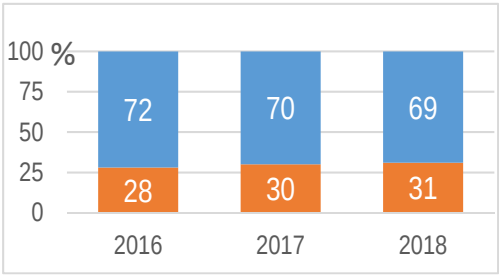
<table>
<tr><td colspan="3">1.4.1. BETTER RELIABILITY AND QUALITY OF POWER SUPPLY TO TYUMEN POWER SYSTEM USERS</td></tr>
<tr><td>OBJECTIVE</td><td colspan="2">1.4.1.1. RECONSTRUCTION AND TECHNIAL RE-EQUIPMENT</td></tr>
<tr><td>What was achieved in 2017</td><td colspan="2">The most significant activities to conduct at Tyumenenergo JSC's facilities in 2017 to ensure reliable power supply to cities, settlements, and industrial users:
<table>
<tr><td>Substation Equipment</td></tr>
<tr><td>111 outdated 35-to-110 kV oil circuit breakers, isolators, and short-circuiters replaced with newer hexafluoride (SF) ones</td></tr>
<tr><td>1,428 pcs of porcelain insulation in 35-to-110 kV rods and supports replaced with new polymer-porcelain insulation</td></tr>
<tr><td>133 oil-filled power transformer bushings replaced with solid-insulation bushings</td></tr>
<tr><td>167 6-to-10 kV oil circuit breakers replaced with vacuum circuit breakers</td></tr>
<tr><td>Power Line Equipment</td></tr>
<tr><td>35-to-110 kV OPL: 144 damaged or defective reinforced-concrete supports replaced</td></tr>
<tr><td>641 support foundations reinforced
Foundations replaced for 89 supports</td></tr>
<tr><td>72 km of ground wire replaced</td></tr>
<tr><td>2,875 sets of spiral reinforcements and multi-frequency vibration absorbers installed on wires/ground wires</td></tr>
</table></td></tr>
<tr><td>What is planned for the future</td><td colspan="2">For 2018, the Company plans the following significant activities:
35-to-110 kV power lines
<table>
<tr><td>Emergency point, "bottleneck"</td><td>Interventions for 2018</td></tr>
<tr><td>Destruction of r/c support stands</td><td>64 defective r/c support stands to be replaced in 35-t 110 kV OPL</td></tr>
<tr><td>Frost heaving of support foundations. Partial damage to foundations, reduced bearing capacity of foundations in soft soils</td><td>988 support foundations to be reinforced
Foundations to be replaced for 103 supports</td></tr>
<tr><td>Ground wire wear due to multiple lightning strikes, vibration wear, and "dancing"</td><td>126 km of ground wire to be replaced</td></tr>
<tr><td rowspan="2">Vibration wear of wires</td><td>4,437 sets of spiral reinforcements and multi-frequen vibration absorbers to be installed on wires/ground wires</td></tr>
<tr><td>80 km of wires to be replaced</td></tr>
</table>
Besides, to address the "bottlenecks" in specific types of substation equipment, the following activities are planned:
– 1,428 pcs of support and rod insulation to be replaced in 35-to-110 kV lines;
87 bushings of 35-to-110 kV power transformers to be replaced.</td></tr>
<tr><td>OBJECTIVE</td><td colspan="2">1.4.1.2. REPAIR PROGRAM</td></tr>
<tr><td>What was achieved in 2017</td><td colspan="2">2017 M&R program was carried out in full. Related financing totaled 4,138.5 million rubles, 2,266.5 million of which were spent on repairs.
The autumn and winter periods were completed routinely.</td></tr>
</table>

[2] The Priority Report of Tyumenenergo JSC's Board of Directors can be found in Section 6.2.2 of this Annual Report.

What is planned for the future	In 2018, M&R financing is planned to total 4,673.6 million rubles, 2,355.3 million of which are to be spent on repairs.
1.4.2. KEEPING THE LEAD IN THE POWER TRANSMISSION MARKET OF TYUMEN OBLAST AND MAKING GRID INFRASTRUCTURE MORE AVAILABLE	
OBJECTIVE	1.4.2.1. CONNECTION OF NEW USERS
What was achieved in 2017	As of January 1, 2018, 93% new TC contracts were made with preferential applicants (benefit receivers). The backlog was reduced by 79%. More than 60% of applications were made via the Personal Account Service of Tyumenenergo JSC. The organization's Technological Connection Standard was fully re-made. The Personal Account got new functionality: – online payment for services with no additional fees or charges; – submission of meter readings; – submission of specification conformity or termination notices. TC contracts can now be signed digitally. Tyumenenergo JSC is Russia's only company that has implemented a simple digital signature technology that uses the authorization center of the e-document operator. The Company has implemented functionality to enable digital signature of power supply contracts. Tyumenenergo JSC Call Center now provides additional services, namely: – a hotline with dispatch services to quickly inform customers on scheduled maintenance works or emergency blackouts; – an auto-informing system to notify customers on technological connection contract status (also warning on the expiration of the compliance time per TC contracts). The Copany has set an even lower target threshold of overdue TC contracts for 2018 (the backlog). Timely monitoring of the market enabled Tyumenenergo JSC to make strategically important and mutually beneficial agreements with the region's largest power users (OC Rosneft PJSC and Gazprom PJSC) regarding the long-term development of the grid complex in the light of ever greater loads. As of today, the Company has entered into technological connection contracts that are, if fulfilled, to cover a total capacity growth of 700 MW, to bring a TC revenue of about 7.7 billion rubles (VAT excluded), to enable us to keep the power transmission volume at the same level, and to mitigate the effect of terminated last-mile contracts. The Company is soon to sign more technological connection contracts with OC Rosneft PJSC for another 81 MW and 3.7 billion rubles, VAT excluded.
What is planned for the future	The Personal Account Service will be advanced in the following areas: – integration of the information systems used by Tyumenenergo JSC (SAP EPR) and Rosseti PJSC (портал-ТП.рф); – developing a mobile version of the Personal Account; – promotion of the service in media, on the corporate website, and at Customer Service Centers;
OBJECTIVE	1.4.2.2. DEVELOPING THE GRID INFRASTRUCTURE
What was achieved in 2017	In 2017, Tyumenenergo JSC cooperated with a specialized design company to develop new Comprehensive Programs for Long-Term Development of 35 kV+ Grids in Tyumen Oblast, the Khanty-Mansi Autonomous Okrug — Yugra, and the Yamalo-Nenets Autonomous Okrug in 2018–2022 (hereinafter, "the CPDG"); these programs imply a basic scenario (based on the existing obligations) and a moderately optimistic scenario (based on development plans of the regions and generating companies). The CPDG have been agreed upon with the SO UES Tyumen RDC and are

	fundamental to the measures Tyumenenergo JSC has proposed for the regional Power Engineering Development Schemes and Programs (hereinafter, "the DS&P") for the following 5 years; the CPDG also help synchronize the various measures taken in main-line and distribution grids. Measures included in the CPDG are selected and designed based on the techno-economic comparison of various options to ensure cost efficiency and lower tariffs. The CPDG also serve as the basis for Tyumenenergo JSC's proposals regarding the amendments to the regional Territorial Planning Schemes (hereinafter, "the TPS"). Measures and actions must be presented in the DS&P and the TPS for Tyumenenergo JSC to include them in the Company's Investment program, as stipulated by the Decree of the Government of the Russian Federation dd. December 1, 2009 No. 977. Tyumenenergo JSC follows the Rules of Drafting and Approval of Long-Term Power Engineering Development Schemes and Programs, as approved by the Decree of the Government of the Russian Federation dd. October 10, 2017 No. 823 On Long-Term Power Engineering Development Schemes and Programs; pursuant the latter, the Company has taken an active part in the regional power engineering development schemes and programs prepared by the governments of Tyumen Oblast, the Khanty-Mansi Autonomous Okrug — Yugra, and the Yamalo-Nenets Autonomous Okrug. As a result, the Governors of Tyumen Oblast, the Khanty-Mansi Autonomous Okrug — Yugra, and the Yamalo-Nenets Autonomous Okrug have approved the regional power engineering development schemes and programs through to 2022. Pursuant to the Road Map to Improve the Availability of Power Infrastructure as approved by the Decree of the Government of the Russian Federation dd. June 30, 2012 No. 1144-p On the Approval of the Road Map to Improve the Availability for Power Infrastructure, Tyumenenergo JSC actively uses state-of-the-art technology to create an Internet-based information source. In 2017, the Company continued work to update data on 35 kV + power centers owned by Tyumenenergo JSC and LGOs (with whom the Company had agreed on information exchange); these data cover changes in power center loads, in substation coverage and specifications, etc., and are presented on the interactive load visualization map of Tyumenenergo JSC power centers, which can be found on the Company's corporate website. This map is widely public, so it is easy and possible to find out the location and unused capacity of each power center, to optimize the location of their own facilities being planned, thus minimizing project costs and time consumption.
What is planned for the future	In 2018, Tyumenenergo JSC shall continue to collect and update source data on the long-term loads of users in Tyumen Oblast, the Khanty-Mansi Autonomous Okrug — Yugra, and the Yamalo-Nenets Autonomous Okrug with subsequent adjustment (update) of measures in the comprehensive long-term development programs for 35 kV+ power grids in these regions through to 2023; the Company is taking an active part in drafting power engineering Development Schemes and Programs for Tyumen Oblast, the Khanty-Mansi Autonomous Okrug — Yugra, and the Yamalo-Nenets Autonomous Okrug through to 2023. In 2018, the Company continues to update data on 35 kV+ power centers owned by Tyumenenergo JSC and various LGO with which it has entered into information exchange agreements; updated data are shown on the map that visualizes the loads of Tyumenenergo JSC power centers to improve the transparency of all grid companies involved in the project while making the power infrastructure more available in general.
OBJECTIVE	1.4.2.3. CONSOLIDATION OF POWER GRID ASSETS
What was achieved in 2017	To achieve the objectives related to the consolidation of power grid assets as approved by the Russian Grid Complex Development Strategy (see the Decree of the Russian Government dd. April 3, 2013 No. 511-p), Tyumenenergo JSC has taken the following measures: 1. Meeting with the Governor of KhMAO-Yugra. 2. Meeting with the Governor of YNAO. 3. Meeting with the Governor of Tyumen Oblast. 4. Signing a Cooperation Agreement with the Government of KhMAO-Yugra. The local self-government bodies of Russia's constituent entities (KhMAO-Yugra, YNAO, and Tyumen Oblast) have established special committees to carry out the inventory measures, each involving the municipal officials and Tyumenenergo JSC's representatives. Since 2008, Tyumenenergo JSC has been annually participating in competitive procedures for the right to lease the municipal power grid property on a contractual basis so as to provide power transmission services to users in Tyumen Oblast and to carry out the technological connection of power receivers. In 2017, consolidated power grid property totaled 8,175.3 c.u., which comes to 3.67% of the total volume of power grid facilities Tyumenenergo JSC uses for power transmission services.

What is planned for the future	As a part of the Rosseti Company Group's Road Map for Consolidation of Power Grid Assets Owned by LGOs and Third Parties, the Company shall draft and enter into/approve various cooperation agreements / road maps to consolidate power grid assets, with the regional executive bodies. The Company shall take part in competitive procedures on acquiring municipal power grid assets by lease or purchase.

OBJECTIVE	1.4.2.4. REDUCTION IN THE RGR OF OTHER GRID ORGANIZATIONS
What was achieved in 2017	Tyumenenergo JSC's RGR share in 2017 came to 70% (according to the Decree of the REC of KhMAO-Yugra, YNAO, and Tyumen Oblast dd. December 28, 2016 No. 95 On the Establishment of Uniform Tariffs on Power Transmission Services in the Grids of Tyumen Oblast, the Khanty-Mansi Autonomous Okrug — Yugra, and the Yamalo-Nenets Autonomous Okrug) of the total RGR of grid companies in 2017 net of paid losses (including payments for FGC UES PJSC services). *Number of Grid Companies*  *Tyumenenergo JSC RGR Market Share* 
What is planned for the future	Reducing the RGR share of third-party LGOs by taking the functions of former LGOs that have lost their LGO status; such function transfer was stipulated by the Decree of the Russian Government dd. February 28, 2015 No. 184 On the Recognition of Grid Facility Owners as Local Grid Operators
1.4.3.	ENSURING FINANCIAL AND ECONOMIC STABILITY
OBJECTIVE	1.4.3.1. REDUCING OPERATING EXPENSES
What was achieved in 2017	Tyumenenergo JSC-developed Program to Improve the Operating Efficiency and Reduce Expenses in 2017–2021 was updated in 2017 by including new measures and their effects, based on the independent audit of costs; the Program was approved by the Board of Directors of the Company, Minutes No. 21/17 dd. July 18, 2017. Taking all the measures per this Program enabled the Company in 2017 to reduce its operating expenses by 23.73% compared to the 2012 figures, which was far ahead of the target values (the Russian Grid Complex Development Strategy stipulates a 15% reduction in operating expenses). In accordance with the Directive of the Government of the Russian Federation dd. April 16, 2015 No. 2303п-П13, PJSC Rosseti shall reduce its operating expenses by at least 3% every year. In fact, the Company achieved 7.1-percent reduction in 2017, significantly exceeding the target value.
What is planned for the future	In 2018, the measures to be taken per the Program to Improve Operating Efficiency and Reduce Expenses in 2018–2022 are expected to reduce the operating expenses by at least 3%.
OBJECTIVE	1.4.3.2. ENSURING AVAILABLE LOAN FINANCING
What was achieved in 2017	As of January 1, 2018, Tyumenenergo JSC has an unused loan limit sufficient to finance its investments and current activities.
What is planned for the future	In 2018, tendering procedures to open new lines of credit will be carried out pursuant to the Company's needs in loan financing.
1.4.4. MAINTAINING THE COMPANY'S INVESTMENT ACTIVITIES	
OBJECTIVE	KEEPING THE CURRENT IP FIGURES
What was achieved in 2017	The reconstruction and re-equipment programs, carried out as a part of the Company's Investment Programs aimed to ensuring reliable power supply, acquired financing of 7.590.605 million rubles in 2017.

	The investment-program measures carried out in 2017 enabled accident-free survival of the winter peaks in 2017–2018. For details on the Investment Program, see Section 4.1 of this Report.
What is planned for the future	When drafting the Investment Program for 2017, the Company was still prioritizing the main problem, that is, to reduce the equipment aging, to improve the reliability and quality of power supply to the existing consumers, and to enable the connection of new consumer loads. One of the priorities is creating a digital grid given at least 20% volume of investment activities from 2019 onwards. Planned financing of the Investment Program in 2018 totals 19,377 million rubles (VAT included), which is 58% higher than the actual financing in 2017.
1.4.5. IMPLEMENTATION OF INNOVATIVE TECHNOLOGIES AND IMPROVED ENERGY EFFICIENCY	
OBJECTIVE	1.4.5.1. ENERGY EFFICIENCY AND ENERGY SAVING
What was achieved in 2017	– adjusting measures were taken based on the energy analysis of Tyumenenergo JSC's activities; measures developed and carried out to reduce the in-house power expenditures; five measures developed and included in the amended Energy Saving Programs for 2018–2022, aimed at reducing the costs of heating the branch offices and facilities from the Company's own heat supply sources; – to meet the requirements of FZ-261 dd. November 23, 2009, the Company entered into a contract to provide mandatory energy inspection services. Based on the inspection results, the Company issues an energy data sheet and report in compliance with the Order of the Russian Ministry of Energy dd. June 30, 2014 No. 400; – Based on the re-certification audit, the Company's had its energy management system certified for conformity to ISO:50001; – pursuant to the Decree of the Management Board of Rosseti PJSC dd. August 3, 2016 No. 503пр/2 to develop charging infrastructure, six electric vehicle charging stations were constructed in 2017, three of which are located at Tyumen Distribution Grids and three more in Surgut, with some stations mounted at the parking lot of Tyumenenergo JSC Executive Office. Three electric cars were purchased.
What is planned for the future	– further fulfillment of energy service contracts aimed at energy saving and improved energy efficiency of using energy resources; – carrying out the inspection audit of the Company to ensure the conformity of the EMS to ISO:50001; – developing an automated energy saving management system (AESMS). The AESMS will be integrated into the SAP R3 system to account the planned and the actual consumption of fuel and energy resources in real time to enable quality planning of energy consumption while detecting the facilities that consume the bulk of energy. The system will use energy sheet data including standard energy saving measures to compute potential energy saving, to enable the reproduction of such measures, and to automate the scheduling of energy-saving and energy-analysis activities; – further development of the electric vehicle charging infrastructure. In accordance with the Resolution of the Management Board of Rosseti PJSC dd. December 22, 2018 No. 665пр/1, five more charging stations have to be installed
OBJECTIVE	1.4.5.2. INNOVATIVE DEVELOPMENT
What was achieved in 2017	– Tyumenenergo JSC carried out its Innovation-Driven Growth Program for the reporting period in full; – all the target figures per the Innovation-Driven Growth Program for 2017 were attained; – financing of the Tyumenenergo JSC Innovation-Driven Growth Program in 2017 from the Company's own sources totaled 475.3 million rubles, of which: – 80.5 million rubles were spent on the transition to digital substations of various voltage classes (35-to-110 (220) kV)) ; – 239.3 million rubles were spent on the transition to digital active-adaptive grids with a distributed smart automation and control system;

	– 76.6 million rubles were spent on the transition to comprehensive business process efficiency and automation of control systems; – 30.6 million rubles were spent on new technologies and materials in power engineering; – 45.5 million rubles were spent on improving the systems for the development and implementation of innovative products and technologies, including R&D; - 2.8 million rubles were spent on HR development and educational partnership.
What is planned for the future	– carrying out the Innovation-Driven Growth Program of the Company in 2018 in full; – implementing cutting-edge innovative equipment and new efficient innovative industrial designs; – commercializing the R&D products; – pilot operation, reproduction, and implementation of R&D products; – cooperation with higher-education institutions, small and medium-size enterprises, research and production associations, research and design institutions to carry out joint projects in research, design, development, and technology. These projects are aimed to improving energy efficiency, optimizing operational costs, and reducing losses.
1.4.6. HUMAN CAPITAL DEVELOPMENT	
What was achieved in 2017	For further optimization of activities and improving the labor productivity, Tyumenenergo JSC took measures in the following areas: – enhancing financial incentives for the staff while ensuring competitive wages (compared to other companies in the regions of the Company's presence) and better employee motivation; – cooperating with the All-Russian Industrial Association of Power Engineering Employers and the Tyumen Interregional Organization of the All-Russian Electricity Trade Union Public Organization to ensure a social partnership dialogue so as to come to a single stance regarding the collective agreement and the implementation of the Industrial Tariff Agreement in Power Engineering therein; – improving the standard organizational and functional structure of Tyumenenergo JSC, including the optimization and substantiation of the production structure with an optimal number of administrative levels; – improving the Key Performance Indicator system to bring it in line with the Rosseti Company Group's targets and to ensure better motivation of the personnel to perform their job duties in a timely and appropriate manner; – introduction of professional standards; – prevention of social tensions in labor collectives through transparent and direct communication between Tyumenenergo JSC management and employees; information support of the Company's changes; monitoring the personnel's satisfaction with occupational conditions, income, benefits, and compensations. Taking these measures helped us better motivate our employees, keep social stability sufficiently high, improve the Tyumenenergo JSC Management System, and attain the indicator targets as per the Long-Term Development Program of Rosseti PJSC and the HR and Social Policy of the Company. To further the HR potential of Tyumenenergo JSC, the following problems were solved: – development of cooperation with educational institutions that provide training in grid-related areas, which cooperation shall include: – measures to be taken as a part of cooperation agreements with higher educational institutions (HEI) and vocational-training institutions (VTI), implementing the Plan of Cooperation with the National Research University Moscow Energy Institute as a part of the General Partnership Agreement and the Memorandum of Cooperation in HR Training, as concluded between the Rosseti Company Group and the universities of the Educational Consortium for Energy; – arranging summer jobs for student teams at Tyumenenergo JSC facilities; – arranging guaranteed pre-graduation and year-round internships at Tyumenenergo JSC for students in the energy-related areas of training; — contributing to the arrangement of the All-Russian Diploma Thesis Contests for Technical-Field Bachelors studying power and electric engineering; — arranging appropriate professional training and re-training of personnel for the use of the existing and new technology and equipment, whereby the obligatory training requirements must be met unconditionally; — switching to a more active cooperation with educational partners in order to increase targeted student enrollment quotas. This will enable more students to gain state-funded education in grid complex-related areas

What is planned for the future	Solving specific problems to enable Tyumenenergo JSC to attain its indicator targets as specified in the HR and Social Policy of the Company, related to: personnel training and development, talent pool, hands-on training of young specialists, employee training quality improvements. Taking these measures will enable all the employees appropriately qualify for their jobs whereas management positions will be filled with appropriately-qualified personnel, timely and exclusively. Designing such an organizational and functional structure of Tyumenenergo JSC and drafting such proposals on the amendments to the professional standards in the key grid complex-related areas so as to facilitate the transition to digital grid technology
1.4.7. COMPREHENSIVE SECURITY	
OBJECTIVE	1.4.7.1. ECONOMIC SECURITY AND ANTI-CORRUPTION MEASURES
What was achieved in 2017	21 cases of economic damage to the Company were submitted to law enforcers. For 18 cases, perpetrators have been identified and brought to justice in accordance with the effective legislation; 3 more cases are under procedural check now.
What is planned for the future	One of the priorities of the Company consists in collecting its receivables, both on the Company's own as well as in cooperation with the Company's interested departments functioning in the following areas: — controlling generation and status of receivables; — carrying out a set of measures to recollect the receivables by locating the debtors, their assets, accounts, etc.; — cooperation with the Directorate of the Federal Bailiff Service, filing complaints with law enforcers and further cooperating with them
OBJECTIVE	1.4.7.2. INFORMATION SECURITY AND PROTECTION OF THE COMPANY'S FACILITIES
What was achieved in 2017	— the Company's has prepared itself to take a set of measures to protect critical infrastructures within the framework of the Federal Law dd. July 26, 2018 No. 187-FZ On the Security of Critical Information Infrastructures of the Russian Federation; — 26 of the Company's facilities had their physical security systems improved within the framework of the Anti-Terror 2015–2020 Target Program.
What is planned for the future	— updating the facility safety data sheets in accordance with the Federal Law dd. July 21, 2011 No. 256-FZ On the Security of Fuel and Energy Sector Facilities; — taking a set of measures to protect critical infrastructures within the framework of the Federal Law dd. July 26, 2018 No. 187-FZ On the Security of Critical Information Infrastructures of the Russian Federation; — creating and implementing the Security Control System (CSS) project on the grounds of the Company's branch Surgut Electric Grids.
1.4.8. DIGITALIZATION OF GRID FACILITIES	
What was achieved in 2017	In 2017, Tyumenenergo JSC carried out the planning and drafting of the Grid Digitalization Program for 2018–2023 in accordance with its Investment Program for 2018–2023.
What is planned for the future	For 2018, Tyumenenergo JSC plans to approve and carry out its Grid Digitalization Program for 2018–2023, which will bring about: – a 25% shorter design time by virtue of standardization of circuitry and functional solution, a lower number of functional circuits and terminal rows in the relay compartments of cells; – a 50% shorter installation and commissioning time thanks to pre-fabrication, whereby manufacturers supply parts with switchgear already mounted on main and auxiliary circuits, with pre-made inter-cabinet control-current system links, with pre-assembled process control systems and ACPMS, as well as with preliminary parametrization, configuration, and testing of relay protection and automation (RPA) systems; – a 15% reduction in maintenance costs by virtue of the transition from scheduled maintenance to status-based maintenance enabled by real-time online diagnosis of the equipment, which reduces the number of worker visits to the facilities; – 100% of routine switching operations must be done remotely and controlled by video surveillance, as simple integration of all systems into a single digital space will enable fast and safe substation control and integration with the process control systems at other levels.

Developing Tyumenenergo JSC in the priority areas will provide every consumer in the regions of the Company's footprint with high-quality power by means of reliable operations and timely development (including the consumers in the new markets), efficient and safe power

complex that makes use of innovative solutions, and transition to a new power system organization type; it will involve all the players, including the consumers, in creating the power system of the future and will contribute to the sustainable development of the regional economy and to a better life of the locals.

1.5. RISK MANAGEMENT

The Company uses a Risk Management System (hereinafter, "the RMS") designed to ensure sustainable and continuous operation and development of the Company by means of the timely identification, assessment, and efficient management of risks threatening the efficient business operations and reputation of the Company, the health of its employees, the environment, and the property interests of the Company's shareholders and investors.

To develop the Company's RMS, the Board of Directors has approved a Risk Management Policy, see the Minutes of the Tyumenenergo JSC Board of Directors Meeting dd. March 21, 2016 No. 06/16.

RMS Participants

Below are the main participants of the risk management process:

— Board of Directors of the Company;
– Authorized Committee of the Tyumenenergo JSC Board of Directors;
— Director General;
— risk owners;
— risk management officers;
— Risk Management and Internal Control Department;
— Internal Audit Service.

Main Functions of RMS Participants

Name of the participant	Main RMS functions
Board of Directors	— approves the internal documents of the Company that determine the organization and functioning of the Company's Risk Management System; — analyzes the Company's Director General's reports on the organization, functioning, and efficiency of the Risk Management System, assesses the functioning of the system, and drafts recommendations on the enhancement thereof
Strategy and Development Committee of the Board of Directors	Controls the efficiency of risk management procedures, assesses the efficiency of risk management measures and RMS improvements
Director General	— specifies the risk data format and completeness requirements; — directs and plans the RMS development and enhancement; — analyzes the risk portfolio and develops the Strategy of Response Actions, and measures for redistribution of the resources related to the risk-specific management
Risk Owners	Risk owners are responsible for: • timely identification and assessment of risks • selecting a risk response method • timely development and arrangement of risk management actions • regular risk monitoring
Risk Management Officers	Risk management officers are responsible for the timely identification and/or minimization of risks, as well as for the timely and complete implementation of risk management measures
Risk Management and Internal Control Department;	Coordinates the risk management processes in general

Internal Audit Service	Carries out an internal independent assessment of the RMS efficiency and offers recommendations on how to improve it

Primary Risk Factors

Risk Significance is the combination of the risk occurrence probability and the magnitude of its consequences for the Company in monetary or other terms. Risk significance assessment is based on the existing risk data sheets or an expert assessment; it is carried out on the following reference scale:

Significance level	
Critical	
Significant	
Moderate	

The risk significance changes compared to 2016 levels and over the course of 2017 are based on the existing risk data sheets or expert assessments and are signified by arrows: ↑ (significance increase) ↓ (significance decrease).

Risk Significance Assessment

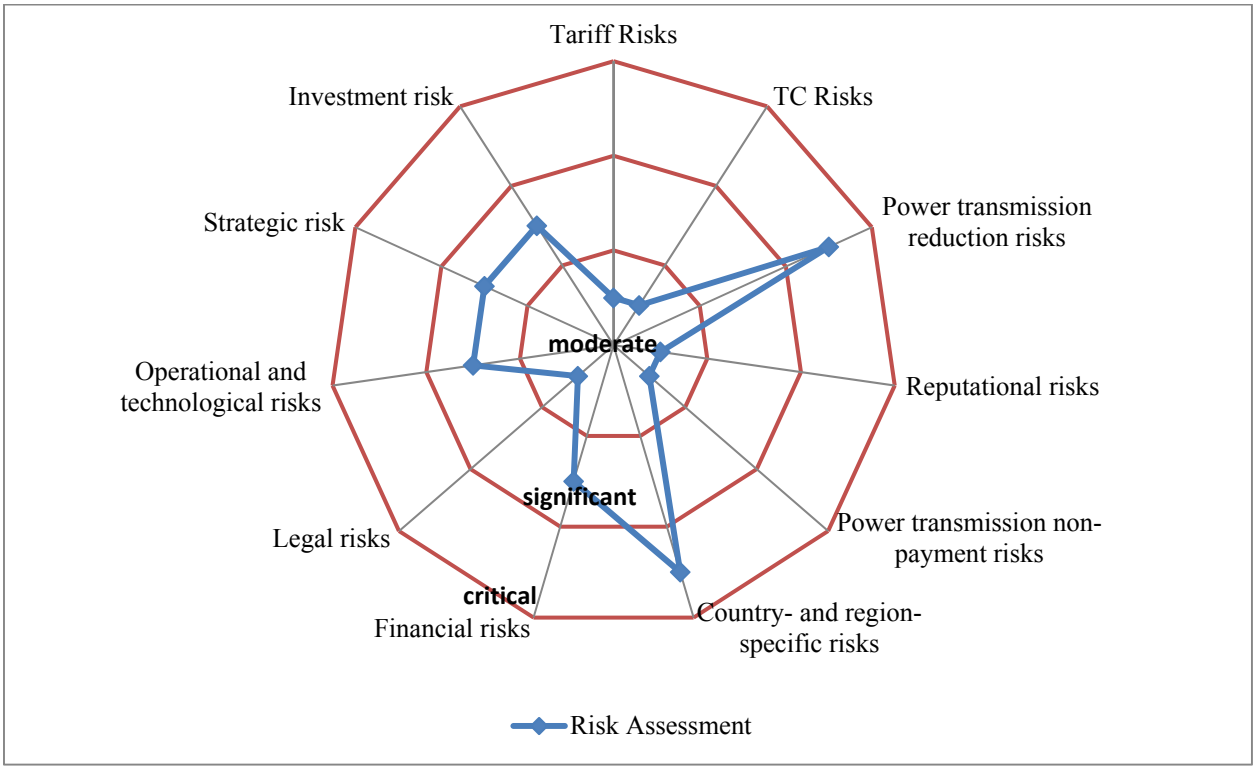
No. p/p	Risk Name	Risk Description	Risk Aftereffect Minimization Measures	Risk Significance Assessment and Dynamics
Industrial Risks				
1	Tariff risks	The state's tariff policy is based on inflation control and stipulates such changes in the controlled grid companies' tariffs in 2017–2019 that the tariff increases stay below the actual inflation despite a faster growth of prices in the wholesale market; the risk is that the regulatory bodies might impose such tariffs that will not ensure a sustainable reasonable revenue performance	1. Preparing and submitting materials to the Russian regional executive bodies responsible for state regulation of tariffs — these materials are to prove the necessary tariff rates and the value of the Company's required gross revenue in the tariff, whereby the reduction of revenues from the regulated activities must be taken into account. 2. Implementing a balanced policy to improve investment and operating efficiency so as to reduce expenditures and optimize planning of financial source structure.	(no changes)
2	Power transmission service volume reduction risk	This risk is due to the possible reduction in demands for power and to the optimization of external power supply schemes used by major consumers	1. Cooperating with power transmission service users to harmonize the planned transmission volumes, including the declared capacities, which must be stated in the corresponding power transmission service contracts and further submitted to the state tariff regulation bodies.	

			2. Monitoring and forecasting power consumption, improving the accuracy and reliability of power demand planning. 3. Carrying out the energy saving and energy efficiency improvement programs, including programs to reduce power losses and programs for the long-term development of metering systems. 4. Analyzing the approved regional power engineering Development Schemes and Programs to identify plans to construct new generation facilities.	
3	Technological connection service risks	These risks are due to: 1. Possible deficit of financing for technological connection contracts. 2. Applicants' default on their respective technological connection contracts. 3. Applicants' non-use of capacities gained by such technological connection. These factors might reduce the Company's revenue from such technological connections	1. Monitoring and timely adjustment of the investment programs; any changes must be taken into account in the business plans for the coming year. 2. Monitoring the applications and forecasting the technological connection demand (including the geography of growth) so as to predict the number of applications and the grid company's liabilities for the coming year. 3. Improving the consumers' confidence in Tyumenenergo JSC by better explaining the entire technological connection process, which can be done through publishing the necessary information on the official website, developing an awareness-raising methodology, and establishing a Customer Service Center	(no changes)
4	Risk associated with non-payment for power transmission services on the part of service users (i.e. the emergence of contestable and non-contestable overdue receivables)	The mechanisms in place that aim at incentivizing timely payments for power transmission services are not sufficient; coupled with macroeconomic factors (the ever-lower purchasing power of consumers), this factor causes a risk.	1. Resolving any emerging disputes with the consumers, reducing the contested and overdue receivables, cooperating with the federal authorities on the optimization of retail market rules. 2. Forming a judicial practice and creating positive precedents. 3. Carrying out the Board of Directors-approved Program for the Long-Term Development of Power Metering Systems in the retail market of distribution grid power	(no changes)
Country- and Region-Specific Risks				
5	Risks related to the political and economical situation in the country and in the region	These risks are due to the lower economic activity in the Russian regions of the Company's footprint and increased costs of credit, which might in their turn be related to the volatility of external conditions, international sanctions, lower credit ratings, and greater inflation loads. These factors might reduce the Company's	1. Implementing a set of measures to optimize the share of loans in the total capital structure. 2. Attracting long-term loans at fixed interest rates. 3. Improving operational efficiency and investment-related expenses of the Company. 4. Including a Force Majeure article in the Company's agreements with counterparties to reduce the Company's financial losses in case of force majeure.	(no changes)

		revenue and shareholder value.		
6	Risks related to possible conflicts and their manifestations, strikes, and emergencies	These risks are due to possible unlawful interference with the Company's activities, which includes terror attacks (including those by international terrorist cells and the nationalists in some countries). Such acts might have a negative impact on the Company's activities.	1. Physical security measures and procurement of technological means to ensure the security of the Company's facilities 2. Arrangement and supervision of information security measures: - enforcement of commercial and professional secrecy; - compliance with the personal data processing requirements; - taking measures to prevent leaks of confidential information via technical channels.	
7	Risks due to the state or regional geography, including higher probability of natural disasters and possible interruption of transport communications	These risks are due to natural and climatic disasters (hurricanes, heavy rains, floods, snow blockages, icing, power outages due to fires, explosions, etc.). These might disrupt power supply and transport communications in the region	1. Climate- and geography-specific facility design. 2. Insuring the distribution grid facilities against natural disasters. 3. Managing the reserves of raw materials, supplies, and fuel necessary for the Company's primary activities. 4. Including a Force Majeure article in the Company's agreements with counterparties to reduce the Company's financial losses in case of force majeure.	(no changes)
Financial Risks				
8	Risks related to changes in exchange rates	Negative impact on the financial and business performance of the Company due to changes in currency exchange rates	1. Import substitution policies. 2. Long-term contracts that do not involve any rise in procurement prices	(no changes)
9	Risks related to changes in interest rates	Possible increase in the Company's credit costs associated with investment program financing	1. Attracting long-term loans at fixed interest rates. 2. Planning the financial and business activities with due consideration of interest-rate risks. 3. Monitoring the debt capital market and using such sources of loan funds that are economically viable in terms of interest rate and terms. 4. Early repayment of debts to avoid commissions and penalties under the existing loan agreements and tariff restrictions	(no changes)
10	Inflation-related risks	The impact of consumer price index increases on the interest expenditures, costs, profitability, and thus on the Company's financial status and ability to perform its obligations	1. Planning the financial and business activities of the Company with due consideration of the inflation. 2. Considering inflation-related risks when drafting the tariff proposal. 3. Optimization of costs as a part of the Cost Management Program	(no changes)
Legal Risks				
11	Legal risks	These risks are related to changes in	1. Monitoring the regulative documents. 2. Improving the ICS.	(no changes)

		legislation, judicial practices regarding the Company's activities, and/or balance of interests with other power industry players	3. Preventing, current, and follow-up control of the Company's compliance with the legislation and the local regulations. 4. Monitoring the effective legislation and judicial practices.	
12	Compliance risk	These risks are related to the sanctions of regulatory bodies, imposed on the grounds of the Company's non-compliance with the legislation, local regulations, and other mandatory regulations	5. Ensuring the compliance of the TC process with the effective legislation. 6. Monitoring and adjusting the Investment Programs to control the performance timings. 7. Monitoring the applications and forecasting the technological connection demand (including the geography of growth) so as to predict the number of applications and the grid company's liabilities for the coming year. 8. Controlling the technological connection contract and specifications drafting timings. 9. Implementing software to efficiently control the technological connection performance timings	
Business Reputation Risks				
13	Reputational risk	This risk is related to the possible default on obligations to customers and counterparties.	1. Considering reputation when making decisions; early measures on forming public opinion. 2. Media planning for the year. 3. Regular media monitoring. 4. Targeted PR programs to create a positive public image (for the target audience) with respect to crucial and potentially negative topics. 5. Proactivity/activity in the information field, information saturation and transparency	(no changes)
Strategic Risk				
14	Strategic risk	Risk of non-fulfillment of the Company's strategic goals and objectives due to the potential changes in the Company's internal and external situation	1. Collection and update of source data on the long-term loads of consumers in Tyumen Region, the Khanty-Mansi Autonomous Okrug — Yugra, and the Yamalo-Nenets Autonomous Okrug with subsequent adjustment (update) of measures in the comprehensive long-term development programs for 35 kV+ power grids in these regions through to 2022; taking an active part in drafting power engineering Development Schemes and Programs for Tyumen Oblast, the Khanty-Mansi Autonomous Okrug — Yugra, and the Yamalo-Nenets Autonomous Okrug through to 2022. 2. Updating data on 35 kV+ power centers owned by Tyumenenergo JSC and LGOs (with which it has entered into information-exchange agreements) on the Interactive Power Center Load Visualization Map of Tyumenenergo JSC.	(no changes)

			3. Reduction in equipment aging and improving the reliability and quality of power supply to the existing consumers. 4. Mandatory energy inspections of Tyumenenergo JSC	
Risks Related to the Company's Activities				
15	Operational and technological risk	1. Less reliable power supply to the consumers due to natural and technogenic disasters, which might result in the failure of power grid equipment. 2. High share of equipment with expired service life. 3. Failure to comply with the regulatory technical requirements regarding the maximum permissible values of power grid equipment operating parameters	1. Outage analysis based on the automated system data; detection of bottlenecks. 2. Renovation of the grid and the implementation of reliability enhancement programs to improve the conditions of the grid. 3. Repairing facilities on an as-needed basis with due consideration of risks and outage data. 4. HR-related measures: training and re-training. 5. Population-wide awareness-raising and drafting PR programs to reduce injury occurrence rates, to promote an energy-saving lifestyle, and to popularize power engineering jobs. 6. Carrying out emergency response trainings, including specialized trainings on Blackout Schedule implementations. 7. Developing and updating special provisions on the technological cooperation with related electric power entities (REPE). 8. Taking measures to improve the reliability of grid equipment	(no changes)
16	Investment risk	1. Reduction in the Company's Investment Program financing due to deterioration in its financial and economic situation, which results in lower tariff revenues in case such Investment Programs are not carried out in full. 2. Untimely commissioning of Investment-Program facilities due to the non-performance or untimely performance of the contractors' and suppliers' obligations.	1. Drafting the Investment Programs with due consideration of the following key performance criteria: – making the grid infrastructure more available; – reducing the wear of, and modernizing the grid facilities; – commissioned capacities must be subject to maximum load. 2. Monitoring the implementation of the Investment Program and its financing; analyzing reasons of deviation of the actual Investment Program figures from the planned figures. 3. Taking measures to improve the quality of project implementation and the efficiency of investments into the existing grids; reducing the specific construction costs; maximizing the load of commissioned capacities; developing and implementing a system for the comparative analysis of specific construction, installation, and material costs	(no changes)



As a part of reporting on the Company's business plans, the Board of Directors discusses the risk identification, assessment, and management questions on a quarterly basis.

To improve the risk management actions, the Company has approved plans to manage the key operational risks and the operational risks of the primary and secondary business processes for 2018.

The Risk Management System is integral to the decision-making process at Tyumenenergo JSC.

2. PRODUCTION RESULTS

2.1. PRODUCTION CAPACITY

Today, Tyumenenergo JSC's overhead power lines have a total length of 50,423.5 km (including 2,650 km of leased lines), cables lines total 684 km (including 122 km of leased lines).

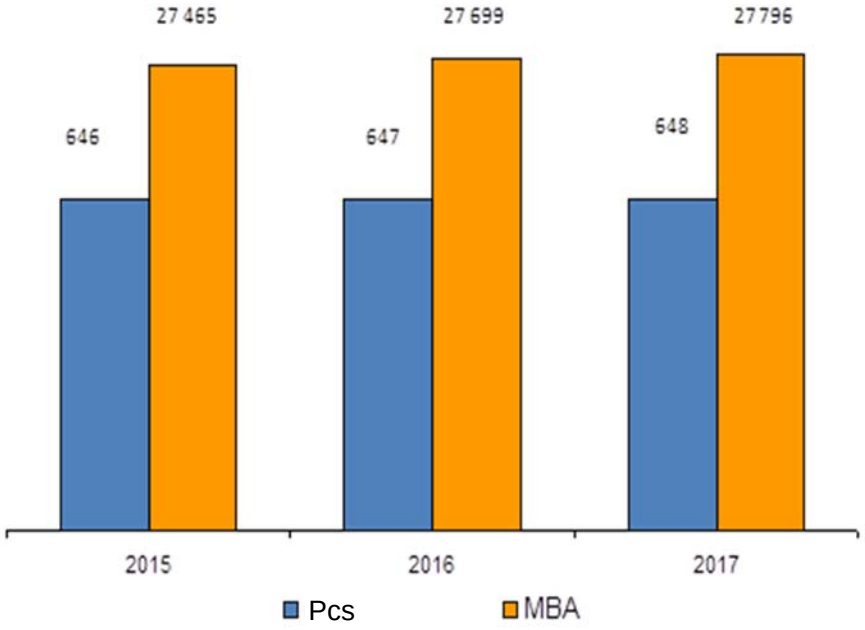
The Company has the following operating assets:

– 648 35-to-220 kV substations with an installed transformer capacity of 27,796.1 MVA, including 3 leased 35-to-110 kV substations with an installed transformer capacity of 31.3 MVA;

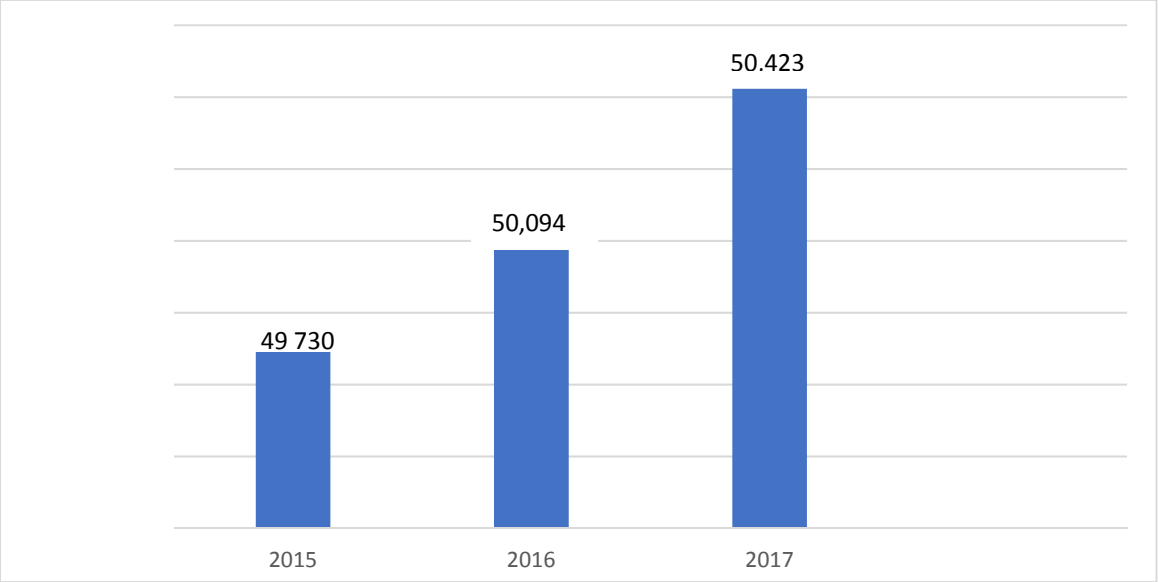
– 6,860 10(6)/0.4 kV transformer substations with an installed transformer capacity of 1,514.81 MVA, including 1,193 leased transformer substations with an installed transformer capacity of 320.62 MVA.

The charts below present data on the numbers and capacities of 35-to-220 kV substations and on the length of the 0.4-to-220 kV OPL, leased property included.

35-to-220 kV Substation Number and Capacity Dynamics



0.4-to-220 kV OPL Length Dynamics (Circuit Length), km

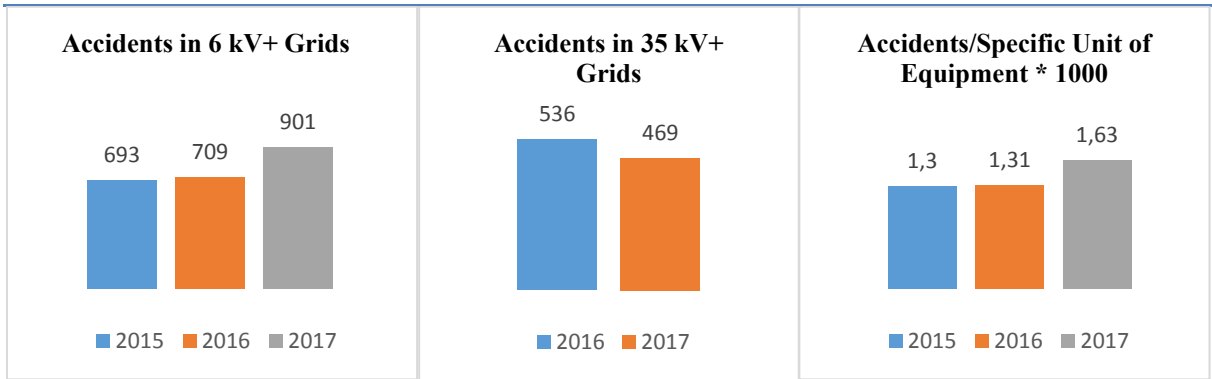


2.2. TECHNICAL STATUS OF GRIDS

The Board of Directors has approved a Production Assessment Management System (hereinafter, "PAMS") Development Plan.

As a part of the PAMS Development Plan, the Company has implemented the algorithm to calculate the equipment status index. When scheduling the operating measures, Tyumenenergo JSC branches are guided by the the prioritized equipment lists (calculated equipment status indices and computed failure consequences taken into account) contained in the PAMS operating as a part of the SAP ERP system; they also refer to (i) the specified periodicity of overhauls, medium and current repairs per the yearly and multi-year grid equipment maintenance and repair schedules; (ii) the technical status of the equipment; (iii) the preventive test results; (iv) the need to comply with the requirements of the supervisory authorities; and (v) the measures taken to investigate technological disturbances.

Accident Rate

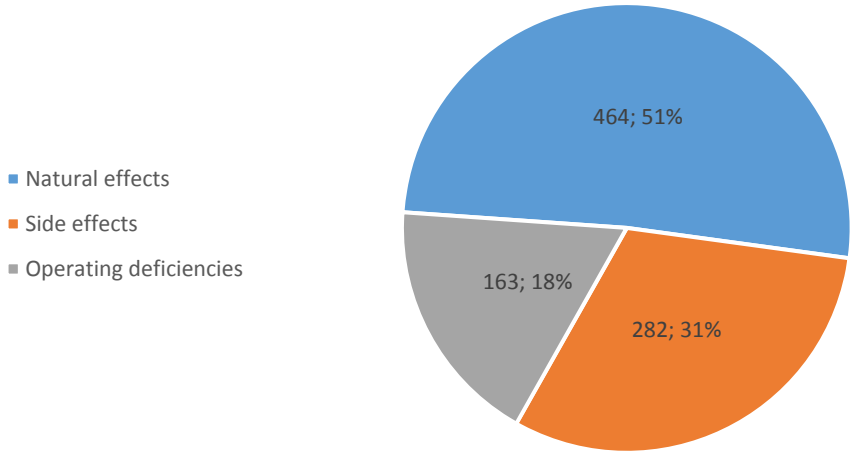


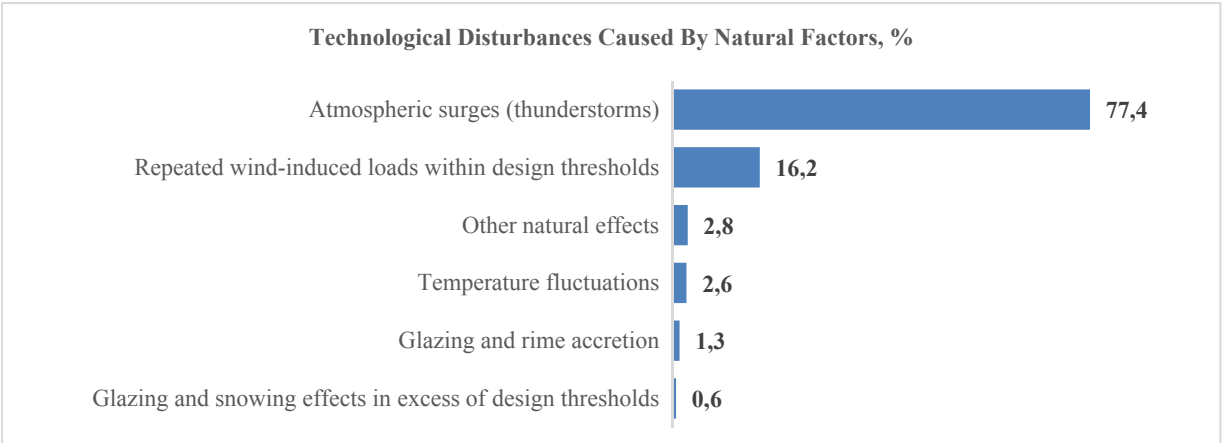
Primary Causes of Accidents in 2017

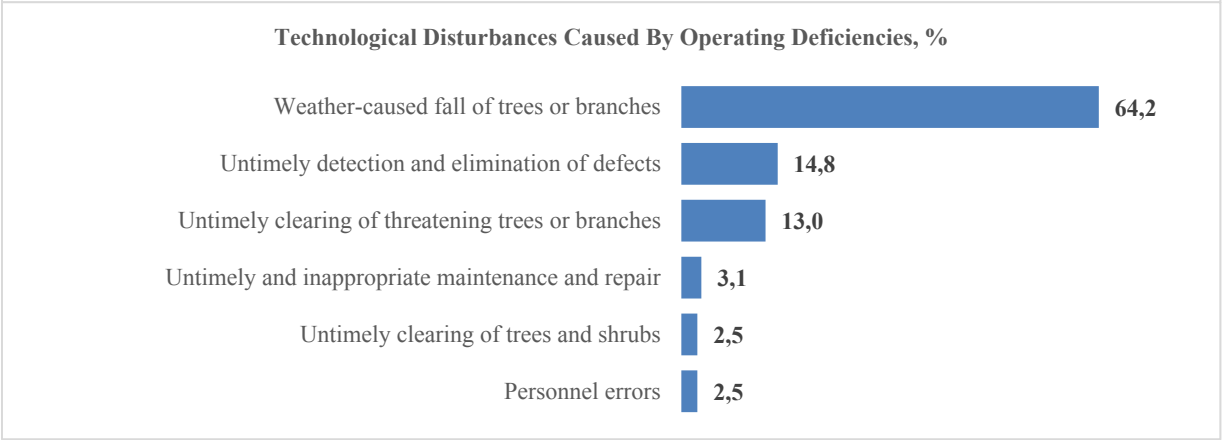
Over the reporting period, most technological disturbances were caused by acts of nature typical for the Siberian climate, such as the frost heaving of foundations, elevated vibration and "galloping" of wires, the thunderstorm-caused outages due to the back-flashover of insulation

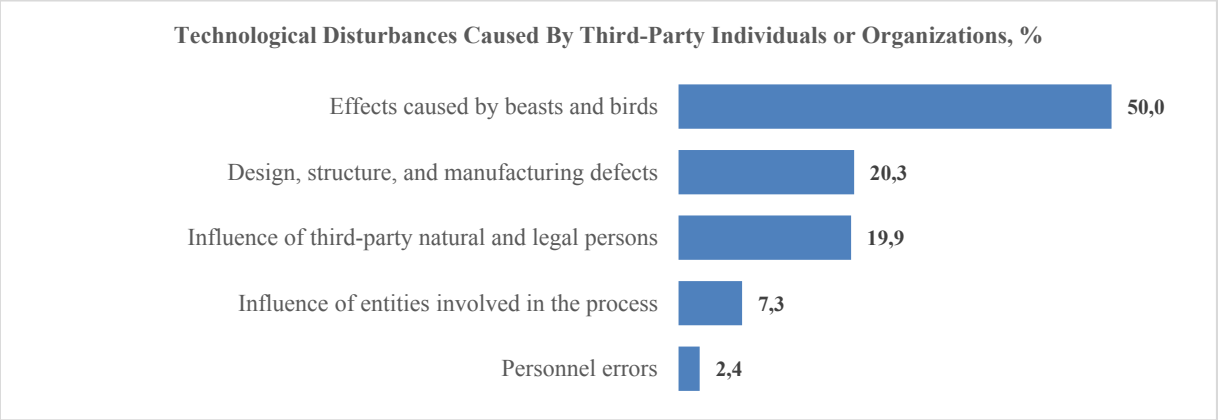
strings caused by poorly conductive soils, frosting and its discharge, sharp changes in the weather, squally winds, extreme cold, etc. All these factors lead to occurrences such as emergency sites and "bottlenecks".

A Long-Term Program to Clear and Widen the OPL Clearcuts (hereinafter, "the Long-Term Program") has been prepared so that fewer trees would fall on the OPL wires. According to the Long-Term Program for 2018, it is planned to widen clearcuts for a total 1,853.5 ha of area expansion and to clear 6,312 ha of the existing clearcut area.









Reliability Improvement Measures and Their Efficiency

The replacement of rod-and-support insulation in 2018–2017 minimized damage to disconnecting devices. Thanks to the replacement of 110 kV transformer bushings, no bushing-related damage was caused to power transformers in 2017.

Repair of ground loops reduces equipment damage from lightning surges. In 2017, no substation equipment was damaged by lightning surges.

Installation of spiral reinforcements since 1999 and of multi-frequency vibration absorbers since 2002 has so far drastically reduced the occurrence of wire and lightning wire damage and breakages caused by fatigue fractures conditioned by vibrations, as those are reliably controlled by spiral reinforcements; virtually no damage has been caused since then by these factors.

The widening of the existing 110 kV OPL clearcuts to the standard buffer zone width reduced the rates of technological disturbances caused by wind-induced fall of forest trees and branches; for comparison, there were 92 such cases in 2012, 25 in 2013, 15 in 2014, 4 in 2015, 3 in 2016 and only 2 in 2017.

To exclude any wind-caused OPL outages that might have been caused by moving the polymer insulators too close to the support structure, the Company has prepared and is carrying out a target program for 2017–2022 to replace polymer insulation with glass-insulation strings. 885 strings were replaced in 110 OPLs in 2017. To reduce the rate of accidents caused by lightning surges, the Company has prepared and is carrying out a target program for 2017–2022 to equip OPLs with surge protectors (SP). In 2017, the Company installed 1,983 SPs. Besides, to improve the lightning resistance of the OPLs, lightning wires are replaced and additional earthing rods are installed as a part of overhauls to normalize the OPL support ground-loop resistance.

Reaching the Reliability Objectives

Power transmission service reliability and quality targets are specified for Tyumenenergo JSC by the decision of the Regional Energy Commission of Tyumen Oblast, KhMAO, and YNAO dd. March 13, 2012 No. 26 (No. 71 in the June 25, 2013 version, or No. 112 in the September 12, 2013 version). The REC-specified service reliability and quality objectives have been fully achieved and by the Company, whereby the reliability objectives have been exceeded by a margin. The average power outage (PO) duration in 2017 was 0.0066 with a target value of 0.0299.

2.3. Power Transmission

In 2017, the Federal Grid Company, the power producers, and the related grid companies supplied to Tyumenenergo JSC's grid a total of 65,055.0 million kWh. The end users and the local grid operations gained 63,322.1 million kWh from the grid. Power losses came to 1,699 million kWh or 2.61% of the power supplied to Tyumenenergo JSC's grid.

Supply to the Grid, million kWh	Supply from the Grid to the Users and Related LGOs Within the Balance/Operational Responsibility Boundaries, million kWh	Losses	
		million kWh	%
65,022.0	63,322.1	1,699.9	2.61

Supply from the grid to the users and related LGOs within the balance/operational responsibility boundaries came to 63,322.1 million kWh, which is 6,238.1 or 8.97% less than in 2016 (69,560.2 million kWh).

Power Transmission Service Dynamics in 2016–2017

Power Transmission Service Volume						
2016		2017		Change		
million kWh	million rubles.	million kWh	million rubles.	million kWh	million rubles.	%
61,780.9	56,773.4	55,705.5	56,665.4	-6,075.4	-108.0	-3.9

As a result of Tyumenenergo JSC's operations in 2017, transmitted power came to 55,705.5 million kWh, which is 6,075.4 million kWh or 9.8% less than in 2016 (61,780.9 million kWh).

Below are the factors that contributed to such reduction in 2017:

– productive supply reduced due to termination (since the 2nd half of 2017) of the grid facility lease agreements concluded between Tyumenenergo JSC and FGC UES PJSC, see Federal Law dd. October 30, 2013 No. 308-Fz, Section 8-9;

– As SIBUR Tobolsk LLC was reorganized by merger with Tobolsk-Polymer LLC and Tobolsk CHPP LLC, the wholesale supply point groups were transferred to SIBUR Tobolsk LLC by right of succession. As a result of the termination of contractual relations for the point-of-sale groups exploited by SIBUR Tobolsk LLC and Tobolsk-Polymer LLC, Tyumenenergo JSC supplied 497 million kWh less over the year, which amounted to a loss of 565 million rubles;

– As a result of JSC Gazpromneft-Noyabrskneftegaz switching to the grids of FGC UES PJSC in the 2nd half of 2017, productive supply was reduced by 414 million kWh or 496 million rubles;

– major oil-and-gas companies reduced their hydrocarbon production pursuant to an OPEC decision, which decreased the oil-and-gas transportation volume.

Actual Power Losses in 2018–2017

Power Losses					
2016 Actual Value		2017 Actual Value		Change*	
million kWh	%	million kWh	%	million kWh*	%
1,813.4	2.54	1,699.9	2.61	-113.5	0.07

** Calculated as the difference between the 2017 value and the 2016 value.*

By the end of 2017, Tyumenenergo JSC gained 6,351.6 million kWh less power to its grid and supplied 6,238.1 million kWh less power from its grid (within the DGC), compared to 2016. Given the reduction in power losses caused by lower supply to the grid and by various physical

processes observed in power transmission (i.e. a reduction in load losses), the actual power losses in 2017 came to 113.5 million kWh lower than in 2016. The relative loss level increased by 0.07% against 2016. Such relative increase in power losses is due to the loss of "last-mile" volumes from the 2nd half of 2017 onwards. In comparable terms, the reduction equals 0.12%.

Power Loss Reduction Measures

Tyumenenergo JSC has prepared and is implementing a Power Loss Reduction Program for its grids. By virtue of taking comprehensive measures under the existing programs, power losses in Tyumenenergo JSC's grids were reduced by 34.8 million kWh in 2017. The factors that contributed to such improvements are:

– organizational measures, which reduced losses by 13.2 million kWh;

— Program for Long-Term Development of Power Metering Systems in the retail power market, which reduced Tyumenenergo JSC's losses by 1.7 million kWh;

— Technical Re-Equipment and Modernization Program, which reduced losses by 19.9 million kWh.

Structure and Dynamics of the Company's Power Transmission Service Revenue and Expenditures

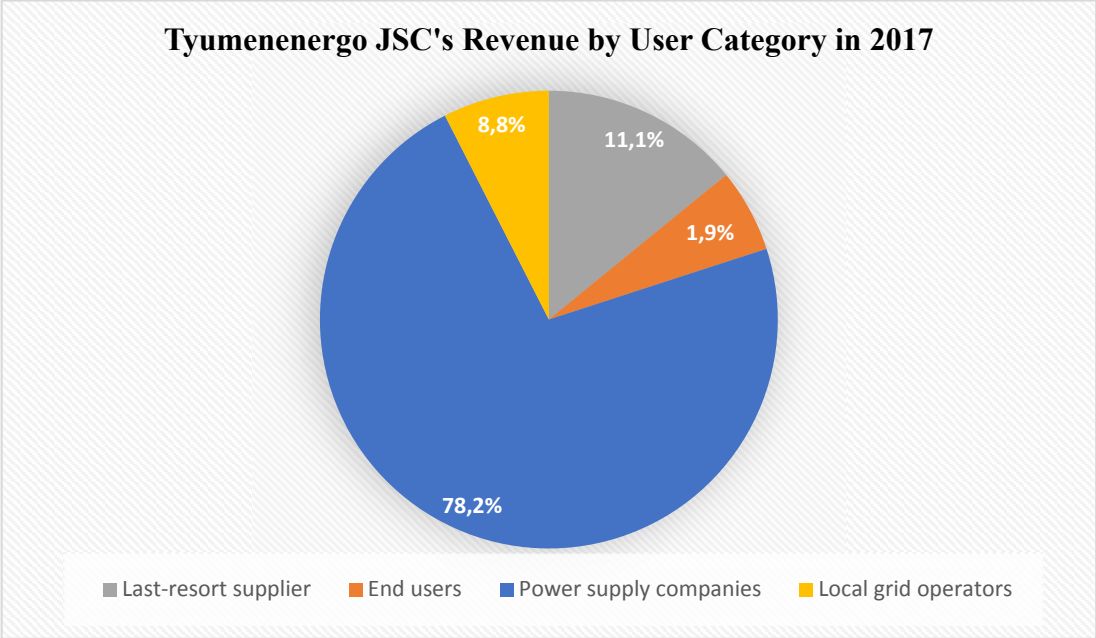
One of the major power transmission service users in Tyumen Oblast is Tyumen Power Supply Company JSC, which is a last-resort supplier. The share of Tyumen Power Supply Company JSC in the power transmission service revenue amounts to 11.1%. Over the reporting period, the users of Tyumen Power Supply Company JSC received 5,775.5 million kWh, which totaled 7,445.2 million rubles.

The share of power supply companies amounted to 78.2%. With a total transmitted power of 40,934.5 million kWh, the cost of service totaled 52,280.5 million rubles. The users include companies purchasing power in the wholesale power market (hereinafter, "the WPM") and in the retail power market (hereinafter, "the RPM").

WPM Entities	RPM Entities
Unified Power Supply Company JSC (for OC Rosneft PJSC)	MagnitEnergo LLC (for Tander CJSC)
Rusenergoresurs LLC (for Transfneft-Siberia JSC)	
RUSENERGOSBYT LLC (RZhD JSC)	
RN-Energo LLC (for RN-Purneftegaz LLC, RN-Yuganskneftegaz LLC, and Tomskneft Eastern Oil Company JSC)	
Surgutenergosbyt LLC (for Surgutneftegaz JSC)	
Lukoil-Energoservis LLC (for LUKOIL-West Siberia JSC)	
Mezhregionenergosbyt JSC (for Gazprom PJSC)	
TEK-Energo LLC (for LUKOIL-AIK CJSC, Yugra Forestry Holding JSC, and Tyumenvodokanal LLC)	
Suburenergomanagement JSC (for SiburTyumenGaz JSC and NOVATEK LLC)	
Vostok JSC (for EnergoGazNoyabrsk JSC)	
Belkam Contract LLC (for OC RussNeft PJSC)	
Transneftenergo LLC (Transneft-Siberia JSC)	

End users accounted for 1.9% of the Company's revenue. With a total transmitted power of 884.8 million kWh, the cost service totaled 1,241.4 million rubles. Key users of this category are:	**Local grid operators accounted for 8.8% of the Company's revenue. With a total transmitted power of 8,107.7 million kWh, the cost of service totaled 5,898.1 million rubles. Key users of this category are:**
GazpromDobychaYamburg LLC	Gazpromenergo LLC
Surgutneftegas JSC	Varyeganenergoneft JSC
RN-Yuganskneftegaz LLC	Surgut City Electric Grids LLC

Gazpromneft-Khantos LLC	Lukoil-Energoseti LLC
Subur Tobolsk LLC	Urengoygorelektroset JSC
	Energo-Gaz-Noyabrsk JSC



The revenue for Tyumenenergo JSC-provided power transmission services totaled 56,665.4 million rubles in 2017. The actual revenue reduction was 0.2% or 107.9 million rubles against the 2016 actual value.

2.4. Technological Connection

The technological connection of the user power receivers to Tyumenenergo JSC's grid is carried out in full compliance with the effective legislation of the Russian Federation.

Tyumenenergo JSC's users are served physically by means of their personal contact with the Company's employees at the Customer Service Centers.

Such physical servicing is organized across the territory of Tyumenenergo JSC's footprint (Southern Tyumen Oblast, KhMAO–Yugra, and YNAO) at the Customer Service Centers and Custumer Service Points located at the nine offices of the Company in Tyumen, Surgut, Nizhnevartovsk, Nefteyugansk, Kogalym, Noyabrsk, Novy Urenguy, Uray, and Nyagan.

The Personal Account Service has been in operation since January 2017 and is available at http://www.lkk.te.ru; it can be used to apply for technological connection and to monitor the application status. In 2017, legally relevant documents can be exchanged by means of electronic signature. The Personal Account Service can be used to pay for the Company's services online.

For more details on Tyumenenergo JSC's Customer Service Center, see Section 2.6 Cooperation with Customers.

In accordance with the Payment Calculation Guidelines approved by the Order of the Federal Antimonopoly Service dd. August 29, 2017 No. 1135/14, Tyumenenergo JSC has calculated, and the Regional Energy Commission of Tyumen Oblast, KhMAO, and YNAO has approved (see Decree dd. December 28, 2017 No. 50-тп) uniform tariff schemes, rates per unit of maximum capacity, and formulas for calculating the fees for the technological connection of the user power receivers to Tyumenenergo JSC's grid.

Connection of New Users

OC Rosneft PJSC

10 New Substations for RN-Yuganskneftegaz LLC

As a part of the agreements with OC Rosneft PJSC, Tyumenenergo JSC will construct 10 new 110 KV substations in 2017–2020 to supply 274 MW more power to OC Rosneft PJSC.

Novy Urengoy License Area (Rospan)

To supply power to the facilities in the Novy Urengoy License Area with a maximum capacity of 7 MW, Tyumenenergo JSC and ROSPAN INTERNATIONAL JSC have entered into a technological connection contract, under which Tyumenenergo JSC is to construct a 110/6 kV substation (2 x 10 MVA) using 110-4N circuitry, as well as two single-circuit 110 kV OPL with an expected total length of 11 km, using AC-150 wire; those OPLs will go from the Urengoy to Limbya-Yakha OPL` to the newly constructed 110 kV substation.

Kondinskaya Deposit Group

PJSC OC Rosneft has launched its oil cluster in the Khanty-Mansiysk District at the Kondinskaya Deposit Group, which consists of Erginskoye, Zapadno-Erginskoye, Kondinskoye, Novoendyrskoye, and Chaprovskoye Deposits. The five deposits of the Kondinsky District that the Group comprises, have an estimated reserve of 259 million tons.

Tyumenenergo JSC, JSC OC Kondaneft, and RN-Yuganskneftegaz, LLC have agreed that Tyumenenergo JSC shall construct 110 kV+ facilities, which will be co-financed by all the parties.

As of today, technological connection contracts are being concluded for the Erginskaya, Chaprovskaya, and Nevskaya 110 kV SS (the Company has received the corresponding requests, has prepared the specifications thereof, which have been approved by the System Operator).

1. Construction of a 110 kV User Station (US) next to the Vykatnaya 110/35/10 kV SS with two 1-dimensional 110 kV cells, whereby the 110 kV US shall be connected to the branching 110 kV Snezhnaya to Fominskaya-1,2 OPL of the 110/35/10 kV Vykatnaya SS by an AC-120 or thicker wire.
2. Construction of a dual-circuit 110 kV OPL with an expected length of 36 km and wire cross-section of at least 120 sq.mm from the 110 kV US in the vicinity of the Vykatnaya 110/35/10 kV SS to the newly constructed 110/35/6 kV SS of the Erginskoye Deposit.
3. Construction of the 110/35/6 kV SS for the Erginskoye Deposit with 2 x 40 MVA transformers.
4. Construction of a 110 kV US in the vicinity of the Batovo 110/10 kV SS with two 1-dimensional 110 kV cells, with the 110 kV CS being connected to the 110 kV outdoor switchgear (OS) of the Batovo 110/10 kV SS.
5. Construction of a dual-circuit 110 kV OPL with an expected length of 17 kM using AC-120 wire from the 110 kV US in the vicinity of the Batovo 110/10 kV SS to the newly constructed Chaprovskaya 110/35/10 SS at the Chaprovskoye Deposit.
6. Construction of the Chaprovskaya 110/35/10 kV SS with 2 x 25 MVA transformers.
7. Construction of the Nevskaya 110/35/10 kV SS with 2 x 25 MVA transformers.
8. Construction of a dual-circuit 110 kV OPL with an expected length of 50 km, using AC-120 wire, branching from the Batovo to Chaprovskaya-1,2 110 kV OPL to the newly constructed Nevskaya 110/35/10 kV SS.

Mayskoye Deposit Gas Refinery

To connect the Mayskoye Deposit Gas Refinery with its total power of 20 MW, Tyumenenergo JSC and RN-YuganskGazPererabotka are entering into a technological connection contract, under which Tyumenenergo JSC shall:

1. Construct 110/10 kV substations for the Maysky Gas Refinery, with a total transformer capacity of 2 x 25 MVA.

2. Construct a 110 kV dual-circuit OPL of approximately 2.5 km, using AC-120 wire, branching from the 110 kV Krater to Sredniy Balyk-1, 2 OPL (between the 220 kV Sredny Balyk SS and 110 kV Promyslovaya SS) to the newly constructed Maysky Gas Refinery 110/10 kV SS.

Gazprom PJSC

Urengoy Pumping Station

Tyumenenergo JSC and Gazprom Invest LLC have entered into a technological connection contract to connect a max. 40 MW 110 kV substation, under which Tyumenenergo JSC shall construct two single-circuit 110 kV OPL sections from Limbya-Yakha to Urengoy Pumping Station-1, 2 (2 x 67 km).

As of today, the construction works are close to completion.

Urengoy — Pur-Pe Oil Condensate Line

Tyumenenergo JSC and Gazprom Invest LLC have entered into a technological connection contract to connect a 110 kV user substation (USS), under which Tyumenenergo JSC shall construct 110 kV OPL sections from Kirpichnaya to USS-1 (40 km) and from Kirpichnaya to USS-2 (20 km).

The 110 kV USS shall be launched as the applicant completes its own procedures in Q2 2018.

BCS of the Yety-Purovskoye Deposit

To connect the Booster Compressor Station (BCS) of the Yety-Purovskoye Gas Deposit with its maximum power of 35 MW, Tyumenenergo JSC and Gazprom dobycha Noyabrsk LLC have entered into a technological connection contract, under which Tyumenenergo JSC shall:

– construct a 110/10 kV SS 2 x 40 MVA. 110 kV outdoor switchgear uses 110-4N circuitry (two circuit-breaker blocks and a non-automatic jumper on the line side); 10 kV switchgear uses a single partitioned bus system with 6 1D cells;

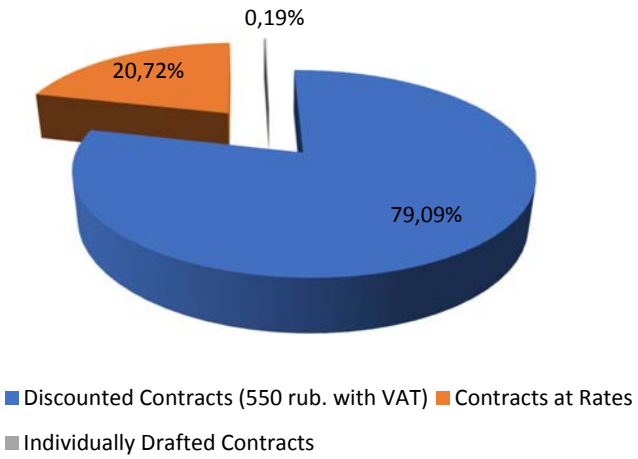
– construction of two single-circuit 110 kV OPL, each of an expected length of 60 km;

– construction of a 110 kV US at the Severny Switching Station (SwS), whereby the SwS is to be expanded by adding two more 110 kV cells.

As of today, the Company has entered into technological connection contracts which will cover about 700 MW of the additional power that users in the oil-and-gas industry demand, to ensure stable operations of the existing and newly developed oil and gas fields. These actions help keep the power transmission volume high and mitigate the consequences of terminating the last-mile contracts.

Over the 12 months of 2017, Tyumenenergo JSC entered into 4,713 technological connection agreements for a total capacity of 588 MW.

Contract Distribution by Tariff Type



Technological Connection Demand (temporary TC excluded)

Over the 12 months of 2017, Tyumenenergo JSC received 5,173 technological connection applications for a total capacity of 667 MW. Compared to the similar period of 2016, it is 8% fewer connection applications and 3.9% less requested capacity.

Technological Connection Demand and Met Demand

Power Ranges by Voltage	Up to 15 kW	15 kW to 150 kW	150 kW to 670 kW	> 670 kW	Power Generation Facilities	Total
2015						
Technological Connection Requests	**5,270**	**299**	**83**	**108**	**0**	**5,760**
For a total capacity of, kW	69,544	18,078	28,385	549,398	0	665,405
TC Contracts Concluded	**4,936**	**215**	**41**	**66**	**2**	**5,260**
For a total capacity of, kW	66,709	12,413	12,258	470,540	34,700	596,620
2016						
Technological Connection Requests	**5,240**	**237**	**71**	**97**	**0**	**5,645**
For a total capacity of, kW	70,506	15,000	25,806	581,598	0	692,910
TC Contracts Concluded	**4,787**	**154**	**42**	**77**	**0**	**5,060**
For a total capacity of, kW	64,047	9,537	13,385	359,220	0	446,189
2017						
Technological Connection Requests	**4,718**	**293**	**62**	**100**	**0**	**5,173**
For a total capacity of, kW	62,420	17,868	20,399	566,521	0	667,208

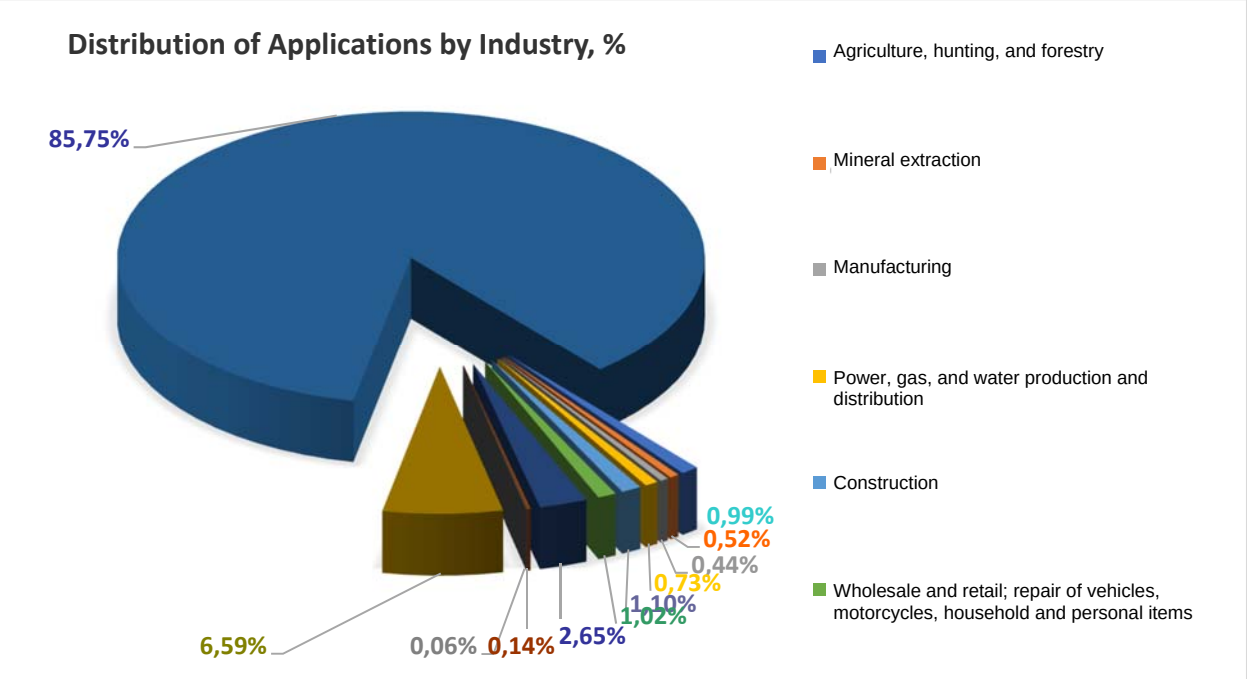
TC Contracts Concluded	**4,393**	**191**	**34**	**79**	**0**	**4,697**
For a total capacity of, kW	58,132	11,547	11 114	506,717	0	587,509

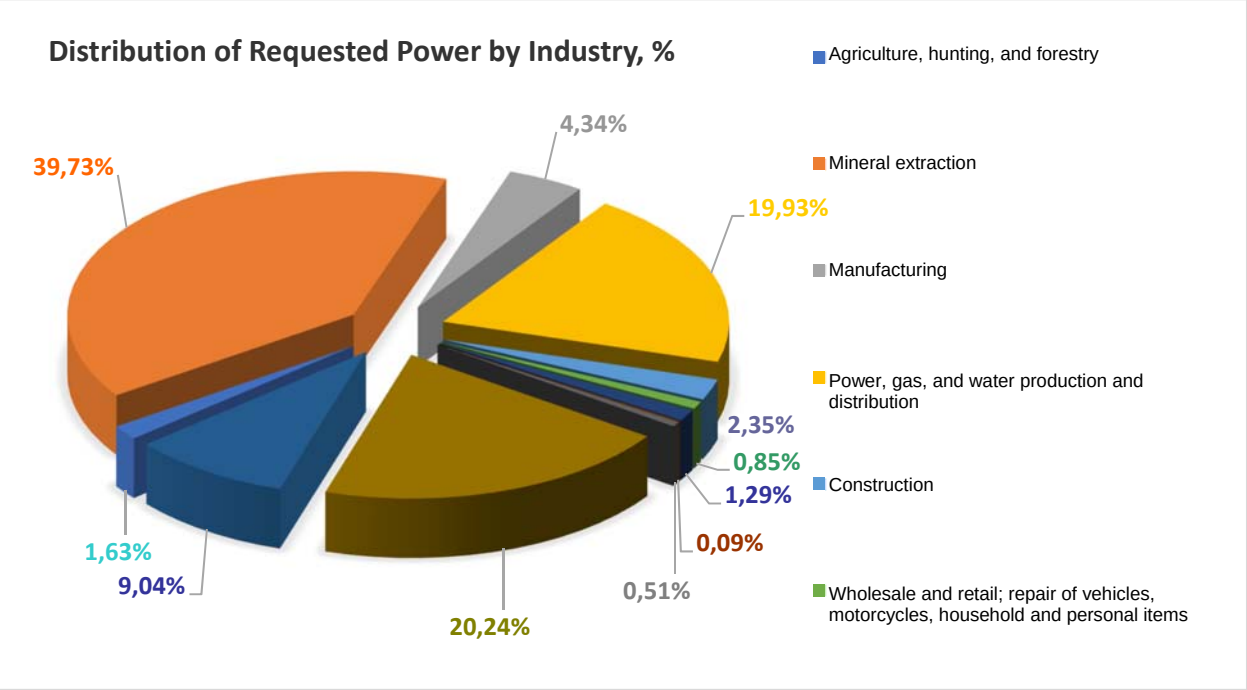
Technological Connection Requests Fulfilled

Over the 12 months of 2017, the Company fully completed the technological connection under 5,895 contracts for a total capacity of 535 MW. The number of completed contracts was 17% greater than in the same period of 2016, but the newly connected capacities totaled 12% less.

Power Ranges by Voltage	Connection Statistics					
	2015		2016		2017	
	TC Requests Fulfilled	For a total capacity of, kW	TC Requests Fulfilled	For a total capacity of, kW	TC Requests Fulfilled	For a total capacity of, kW
Up to 15 kW, total	5,105	65,006	4,676	60,954	5,598	72,469
Of those, connections requested by individuals	4,924	63,409	4,475	59,351	5,345	70,896
15 kW to 150 kW	204	11,507	197	11,549	177	8,690
150 kW to 670 kW	49	14,580	44	13,882	45	13,213
> 670 kW	75	717,024	102	523,721	75	440,427
Total	**5,433**	**808,117**	**5,019**	**610,106**	**5,895**	**534,799**

Activities Held to Reduce the Contract Backlog Helped Reduce Such Backlog by 79% and the Number of Overdue Contracts by 59%.





Financial and Economic Performance of Technological Connections in 2017

Indicators	Thousand RUB, VAT excluded
TC Revenue	1,005,849
TC Costs	142,820
TC Gross Profit	863,029
TC Net Profit	782,389
Advances Received	3,057,111

2.5. Tariff Policy

2.5.1. General Information

The Company's Tariff Policy is mainly based on the timely protection of its power transmission and technological connection service rates, which keeps the Company financially stable and helps it develop to ensure reliable and high-quality power supply.

One of the Tyumenenergo JSC management's priorities consists in cooperating with the regional and federal executive bodies of the Russian Federation, including the Federal Antimonopoly Service, the Ministry of Energy, the Regional Energy Commission of Tyumen Oblast, KhMAO-Yugra, and YNAO, the Regional Tariff Service of KhMAO-Yugra, the YNAO Department of Tariff Policies, Energy, and Public Utilities, the Tariff and Pricing Policy Department of Tyumen Oblast; such cooperation helps establish economically viable prices (tariffs) of the Company's regulated services. Over the entire Tariff Campaign, the Company's specialists are monitoring the changes in the regulatory framework, in the wholesale and retail power market participants, as well as in the buyers included in, or excluded from the consolidated (forecast) power generation and supply balance of the FAS of Russia.

In Tyumen Oblast (Southern Tyumen Oblast, the Khanty-Mansi Autonomous Okrug — Yugra, and the Yamalo-Nenets Autonomous Okrug), tariff regulation is uniform, as power

transmission tariffs are the same for all the same-voltage grid users in all these three constituent entities of the Russian Federation.

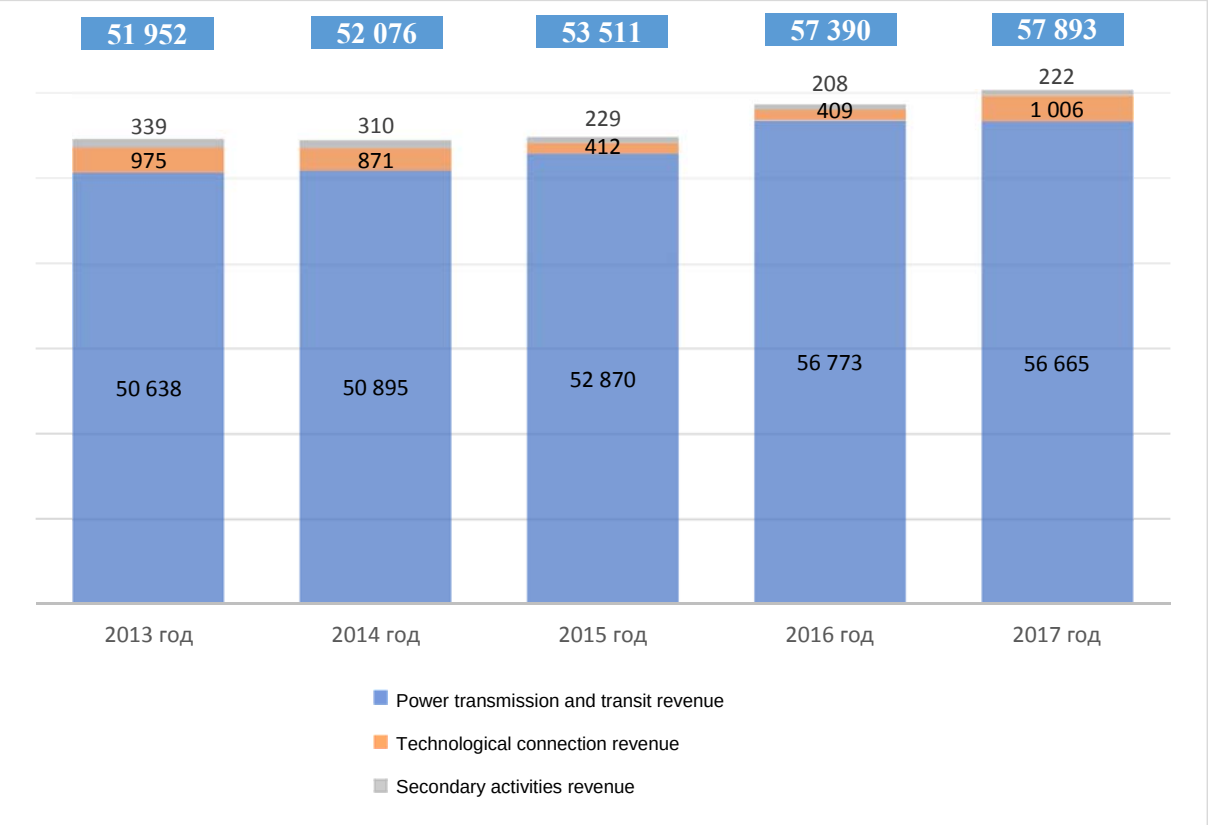
Tyumenenergo JSC is primarily engaged in the provision of power transmission and technological connection services. Tariffs on such services are state-regulated in accordance with the Federal Law dd. March 26, 2003 No. 35-FZ On Power Engineering. Power transmission and technological connection service tariffs for the users in the three regions are subject to approval by the Regional Energy Commission of Tyumen Oblast, KhMAO-Yugra, and YNAO.

Regulated power transmission and technological connection activities, as well as tariff regulations on the same, are regulated by the following regulatory legal acts:

- Federal Law dd. March 26, 2003 No. 35-FZ On Power Engineering'
- Decree of the Russian Government dd. December 27, 2004 No. 861 On the approval of: Rules of non-discriminatory access to, and provision of, power transmission services; Rules of non-discriminatory access to, and provision of, operational dispatch services in power engineering; Rules of non-discriminatory access to, and provision of, wholesale-market trade system administration services; and Rules of technological connection of user power receivers, power generation facilities, and power grid facilities belonging to grid operators and other parties;
- Decree of the Russian Government dd. December 12, 2011 No. 1178 On the Pricing of Regulated Power Engineering Tariffs;
- Decree of the Russian Government dd. May 4, 2012 No. 442 On the Operations of Retail Power Markets, Complete and/or Partial Restrictions on Power Consumption;
- Decree of the Russian Government dd. February 28, 2015 No. 184 On the Recognition of Grid Facility Owners as Local Grid Operators;
- Guidelines on Calculating the Regulated Tariffs and Prices of Electric (Thermal) Energy in the Retail (User) Market, as approved by the Order of the FTS of Russia dd. August 6, 2004 No. 20-э/2;
- Guidelines on Calculating the Power Transmission Service Tariffs Established by Long-Term Indexing of the Gross Revenue Requirements, as approved by the Order of the FTS of Russia dd. February 17, 2012 No. 98-э;
- Technological Connection Payment Calculation Guidelines, as approved by the Order of the FAS of Russia dd. August 29, 2017 No. 1135/17;
- Guidelines on Calculating the Reduction in Technological Connection Revenues, as approved by the Order of the FTS of Russia dd. September 11, 2011 No. 215-э/1.

Revenue from regulated activities is predominant in the total product revenue structure. In 2017, revenue from the power transmission services accounted for 97.9 of the Company's total product revenue, which was 1% less than in the previous year; at the same time, revenue from technological connection services accounted for 1.7% of the Company's total product revenue, which was 1% more than in the previous year.

Revenue Structure by Activity in 2013–2017, million rubles



2.5.2. Power Transmission Service Tariffs

Tyumenenergo JSC uses a tariff regulation method based on the long-term indexing of the required gross revenue. The long-term regulation period is from 2012 to 2017. Long-term regulation parameters are set in the Decision of the Regional Energy Commission of Tyumen Oblast, KhMAO-Yugra, and YNAO dd. May 30, 2012 No. 109 (No. 366 in the October 15, 2012 version, No. 3 in the February 26, 2014 version, No. 73 in the June 25, 2013 version, No. 114 in the September 12, 2013 version, No. 165 in the December 19, 2013 version, No. 17 in the March 31, 2014 version, No. 100 in the November 28, 2014 version, No. 38 in the June 29, 2015 version, No. 145 in the December 28, 2015 version, and No. 99 in the December 28, 2015 version).

In accordance with the Guidelines on Calculating the Power Transmission Service Tariffs Established by Long-Term Indexing of the Gross Revenue Requirements, as approved by the Order of the FTS of Russia dd. February 17, 2012 No. 98-э, gross revenue requirements of a regulated organization include:

– "controllable costs", calculated on the basis of the regulatory body-specified baseline level of such expenses , with account of user price indices, changes in assets, and the efficiency of such controllable costs;

– "uncontrollable costs", which include depreciation, all kinds of taxes, insurance deductions from the payroll, regulatory service charges and feeds, credit and loan costs, etc.;

– costs of financing capital investments from the profits, including expenditures on repaying the credits and loans invited earlier to finance Investment programs, which may not exceed 12% of the gross revenue requirements.

The annual calculation of the gross revenue requirements accounts the adjustments made due to the deviations of the following paramteres from the values used in tariff regulations: actual

inflation rate, actual uncontrollable costs, actual productive supply, losses, and prices of power, actual implementation of the Investment program, and actual service reliability and quality.

Tyumenenergo JSC's adjusted REC-approved required gross revenue for 2017 totaled 48,373 million rubles (including payment for the services of FGC UES PJSC) and was approved by the decision of the REC of Tyumen Oblast, KhMAO, and YNAO dd. December 28, 2016 No. 99 On Amendments to Some Decisions of the Regional Energy Commission of Tyumen Oblast, the Khanty-Mansi Autonomous Okrug — Yugra, and the Yamalo-Nenets Autonomous Okrug; the figure is 0.9% higher than in the previous year.

Tyumen Oblast uses a contractual "down-top" uniform tariff model, under which supply companies pay for the power transmission services at uniform rates; such payments are received by grid companies to whose grids the power receivers of the end users are connected. Thus, the Company's product revenue from power transmission partially consists of the revenue from the power transmitted to the end users — this value is based on the tariff rates paid by the supply companies); the rest of the revenue is based on the power transmission tariffs established for other local grid operators. Product revenue from power transmission is what covers Tyumenenergo JSC's expenditures on paying for the services of FGC UES PJSC and on buying power to compensate losses occurring at last-resort suppliers[3]; the Company has to pay for LGO services as well as to maintain and develop its own grid complex (internal RGR) to ensure reliability and quality of power supply to users while meeting the prospective demands for power.

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Uniform power transmission service tariffs for 2017 were approved by the Decree of the Regional Energy Commission of Tyumen Oblast, KhMAO-Yugra, and YNAO dd. December 28, 2016 No. 95 (No. 7 in the January 26, 2017 version, No. 26 in the July 27, 2017 version, No. 28 in the August 31, 2017 version). Individual power transmission service tariffs for 2017 were approved by the Decree of the Regional Energy Commission of Tyumen Oblast, KhMAO-Yugra, and YNAO dd. December 28, 2016 No. 96 (No. 6 in the January 26, 2017 version, No. 13 in the February 17, 2017 version, No. 33 in the October 13, 2017 version).

Uniform tariff rates for the 1st half of 2017 do not exceed the rates for the 2nd half of 2016; the rates for the 2nd half of 2017 are 3% higher. Tariffs for the VN1 voltage category, set for the 1st half of 2017, do not exceed the rates for the 2nd half of 2016; "last-mile" contracts have been terminated in Tyumen Oblast since July 1, 2017 pursuant to the Federal Law dd. November 16, 2013 No. 308-FZ, which is why no tariffs have been set for the 2nd half of 2017 for the VN1 voltage category.

Power transmission tariffs for population and population-equivalent consumers have been approved by the REC with the following categorization: population and population-equivalent

[3] LGOs can have compensations at individual tariffs by Tyumenenergo JSC if their RGR is not fully compensated by the product revenue generated by the power supply companies when supplying power to the end users at the uniform tariffs.

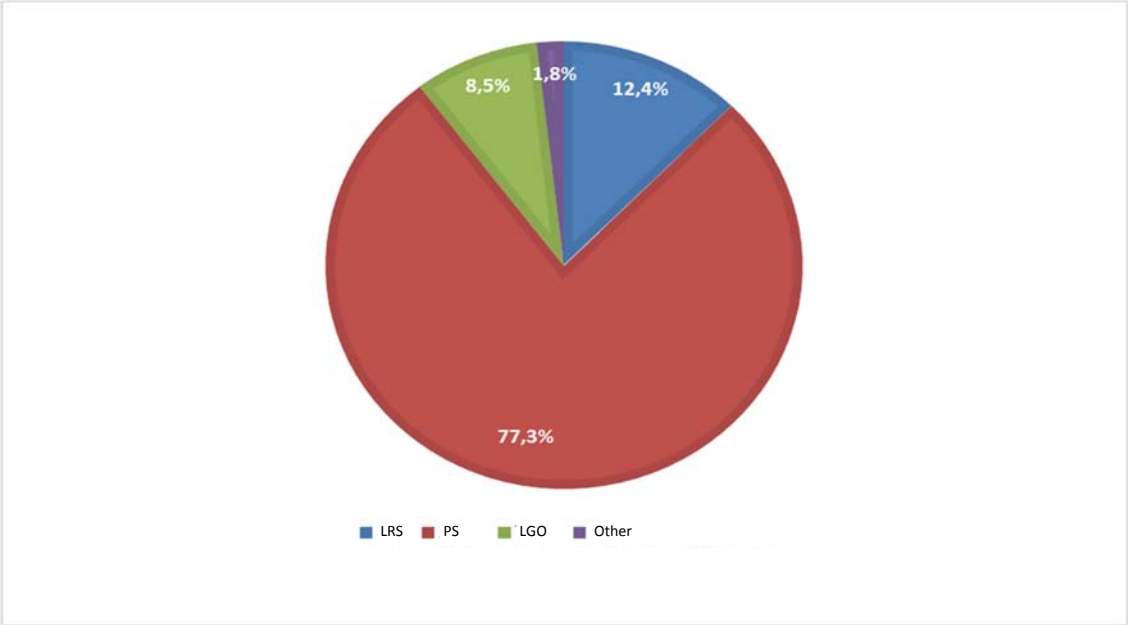
[4] LGOs can have compensations at individual tariffs by Tyumenenergo JSC if their RGR is not fully compensated by the product revenue generated by the power supply companies when supplying power to the end users at the uniform tariffs.

consumers not granted a reduction factor; population and population-equivalent consumers granted a reduction factor of 0.7.

The sales premiums of the last-resort power suppliers that supply power in the retail market, whose customers include grid operators purchasing power to compensate power losses, are set by the Order of the Regional Energy Commission of Tyumen Oblast, KhMAO-Yugra, and YNAO dd. December 22, 2016 No. 46.

The figure below presents Tyumenenergo JSC's revenue from power transmission, distributed by consumer categories.

Tyumenenergo JSC's Power Transmission Revenue Structure by Consumer, 2017



Uniform-tariff revenue gained from power supply companies and their consumers who purchase power in the retail power market has the largest share of the power transmission revenue (77%). The remaining revenue is gained from last-resort suppliers: Tyumen Power Supply Company JSC, PSC Vostok JSC (12%); as well as from LGOs using individual tariffs (9%) and other uniform-tariff consumers (2%).

Changes in the Average Power Transmission Tariffs of Tyumenenergo JSC

Indicator	2013	2014	2015	2016	2017
Average Tariff, kopecks/kWh	84.0	85.1	91.0	98.5	106.3
Advance, %	10.2%	1.3%	7.0%	8.2%	7.9%

In 2017, the average power transmission tariff (calculated as the ratio of Tyumenenergo JSC's gross revenue from power transmission under the approved tariffs to power supply from the grid) was 13.1% higher than in 2016. This change is due to the increase in the uniform power transmission tariffs since July 1, 2017, the increase in the Company's RGR compared to 2016, as well as the termination of the last-mile contracts since July 1, 2017 pursuant to the Federal Law dd. November 16, 2014 No. 308-FZ.

Tyumenenergo JSC Power Transmission GRR Dynamics

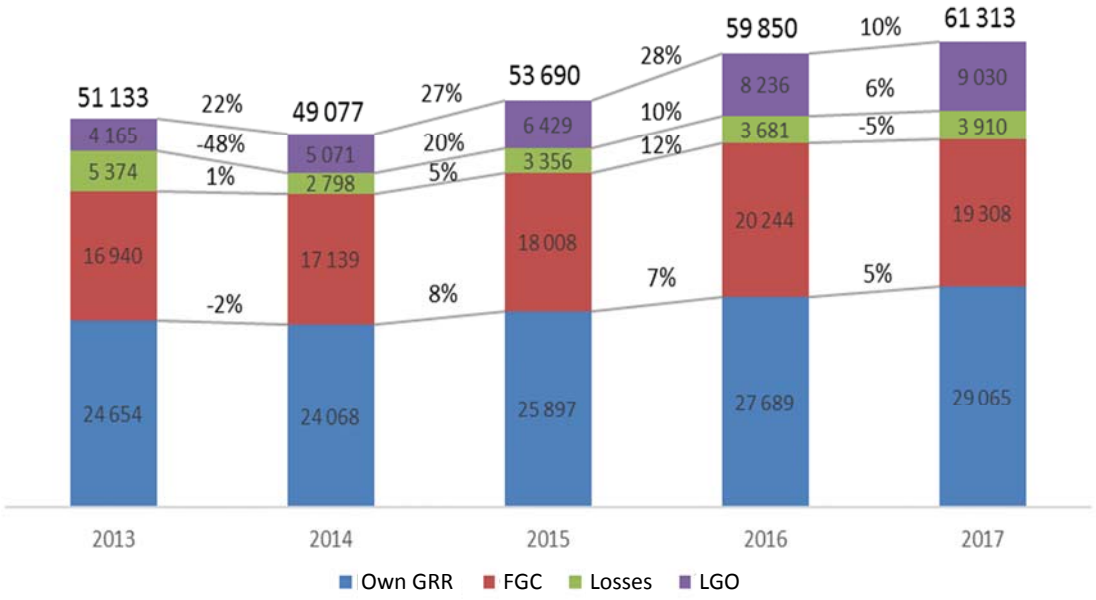
million rubles.

Indicator	2013	2014	2015	2016	2017
Total Gross Revenue from Power Transmission, including	51,133	49,077	53,690	59,850	61,313
Internal RGR	24,654	24,068	25,897	27,689	29,065

Power transmission RGR was 1,463 million or 2.4% higher in 2017 than in 2016. Such advance of the gross revenue from power transmission implies an increase in the tariff-stipulated payments for the power transmission services provided by FGC UES PJSC and other local grid operators, an increase in the costs of purchasing power to compensate power losses in grids, as well as in the costs of maintaining the grid equipment to ensure necessary quality and reliability of power supply, as well as further development of the grid.

The chart below shows the dynamics of power transmission RGR components for Tyumenenergo JSC.

Tyumenenergo JSC Power Transmission RGR Structure Dynamics, million rubles



2.5.3. TECHNOLOGICAL CONNECTION FEES

Technological connection fees are calculated for the connection of the newly-commissioned devices, or previously commissioned devices the maximum capacity of which is to increase; they are also calculated for the previously commissioned devices that have their power supply,

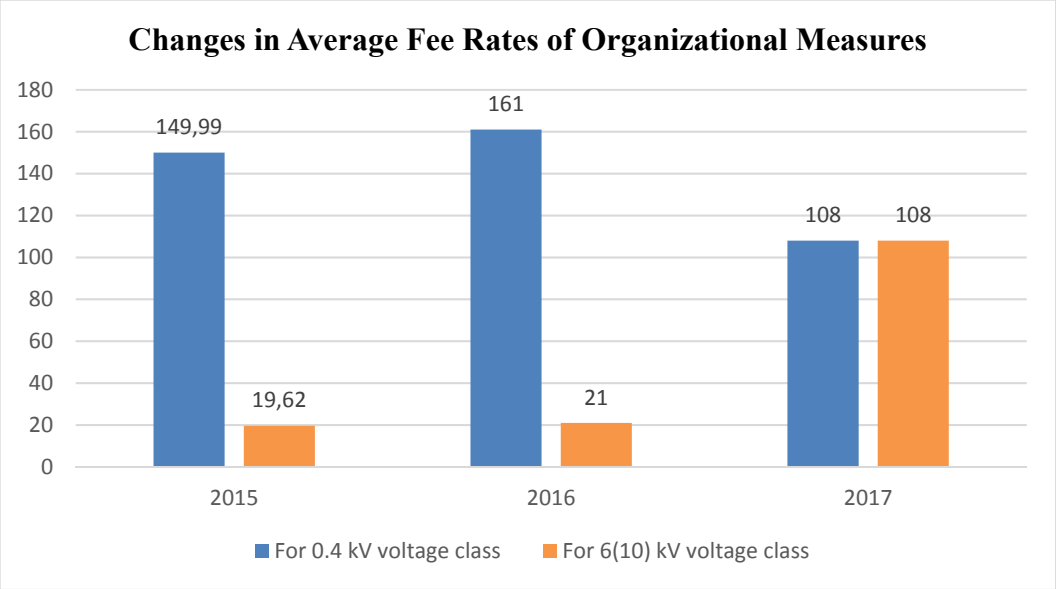
connection points, or related production activities altered without changing the maximum capacity but causing a change in the external power supply circuitry.

Technological connection fees can be calculated on the basis of the approved standard rates or rates per unit of maximum capacity; otherwise, such calculations can be case-specific. The rates are selected by the applicant when entering into a technological connection contract.

According to the Payment Calculation Guidelines as approved by the Order of the FTS of Russis dd.September 11, 2012 № 209-э/1, the Regional Energy Commission of Tyumen Oblast, KhMAO, and YNAO has set (by virtue of its Directive dd. December 28, 2016 No. 64-тп) uniform tariff schemes, rates per unit of maximum capacity, as well as formulas for calculating fees for the technological connection of the applicant power receivers to Tyumenenergo JSC's grids, see Appendix 1. In accordance with the amendments made to Section 23.2 of the Federal Law dd. December 30, 2015 No. 450-Fz On Power Engieering, these rates are approved uniformly for all the local grid operators that provide technological connection services in Tyumen Oblast.

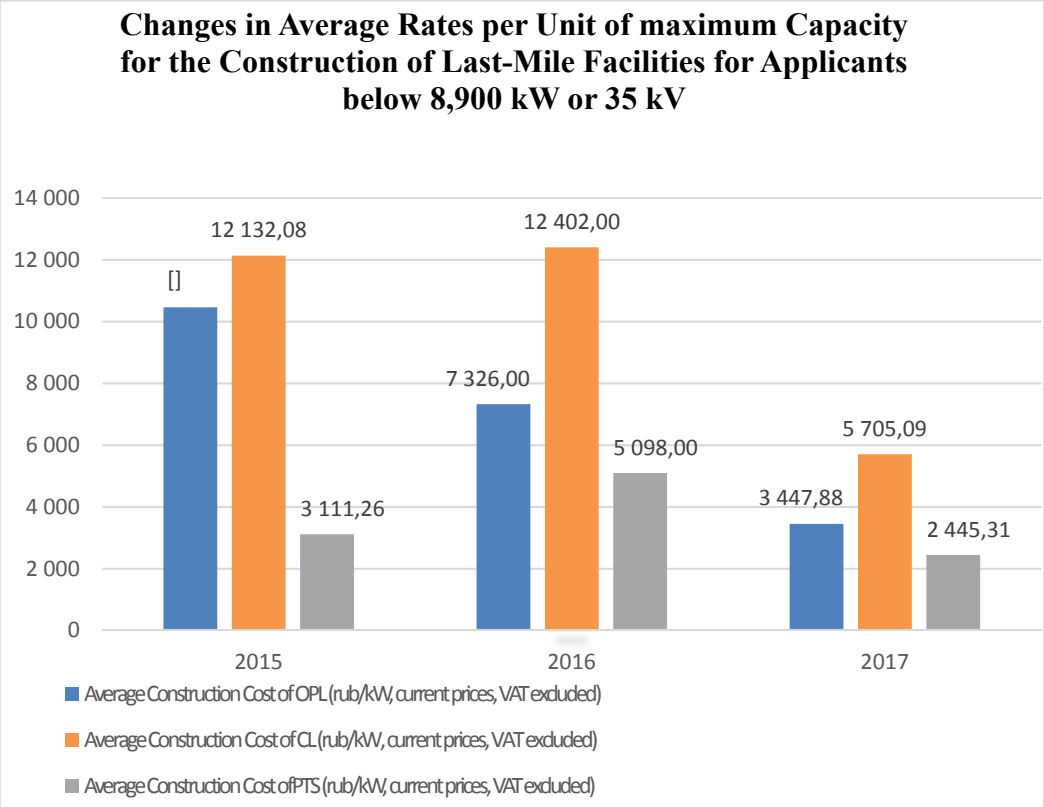
Pursuant to Section 26 of the Payment Calculation Guidelines, the rate per unit of maximum capacity, charged for organizational measures (issuance of specifications, applicant's validation of specifications, and actual connection of the applicant's machinery) depend on the uniform R1 rate.

Speaking of organizational measures, fees for connecting devices with total power of less than 8,900 kW and voltage of less than 35 kV are set by the Regional Energy Commission of Tyumen Oblast, KhMAO, and YNAO at 108 rubles per kW.



For 2017, the uniform C1 rate was established for Tyumen Oblast and was the same for both the 0.4 kV voltage class and for the 6(10) kV voltage class.

If it was necessary to construct a 0.4 to 10 kV last mile or take any measures relating thereto, construction costs were included in the technological connection fees at the approved rates (see Appendix 4); for 35-to-110 kV voltages, such rates had to be specified by the regulating body for each case specifically.



Rates per unit of maximum power, charged for the construction of OPL and CL, were set:

– to equal the 6(10) kV rates for all the Tyumenenergo JSC consumer categories in 2015;

– to equal the 0.4 kV rates for the preferential consumers of Tyumenenergo JSC using up to 150 kW of power in 2016 (only applicable if the distance from the applicant's land to grid facilities of the applicant-requested voltage class (up to 20 kV), belonging to a grid operator which had received the application, was at max. 300 m in urban locations or 500 m in rural locations);

– to equal to the 0.4 to 10 kV rates for the preferential consumers of Tyumenenergo JSC using up to 150 kW of power in 2017 (only applicable if the distance from the applicant's land to grid facilities of the applicant-requested voltage class (up to 20 kV), belonging to a grid operator which had received the application, was at max. 300 m in urban locations or 500 m in rural locations).

Rates per unit of maximum power, charged for the construction of PTS (package transformer substations), were set:

– for non-preferential consumers using more than 200 kW of power in 2015;

– for preferential consumers using no more than 150 kW of power in 2016;

– for the applicants of all the local grid operators providing technological connection services in Tyumen Oblast, with connected capacity not exceeding 150 kW, in 2017.

Over the course of 2017, following the materials submitted by Tyumenenergo JSC , the Regional Energy Commission of Tyumen Oblast, KhMAO, and YNAO has made thirteen decisions to set a specific technological connection fee; these fees totaled 8,432.336 million rubles (VAT excluded) for a total capacity of 276.3 MW.

For applicants applying for a capacity of no more than 15 kW (including already-connected capacities), the Decisions of the Regional Energy Commission of Tyumen Oblast, KhMAO, and YNAO dd. March 31, 2014 No. 22-тп and May 14, 2014 No. 23-тп set a technological connection fee amounting to 550 RUB, VAT included.

Order dd. December 28, 2016 No. 64-тп sets a shortfall of revenue for this category of applicants that amounts to 189.560 million rubles (VAT excluded); this shortfall is compensated by increasing the power transmission tariffs.

New Technological Connection Fee Calculation Guidelines came into force October 31, 2017, approved by the Order of the FAS of Russia dd. August 29, 2017 No. 1135/7. Those determine the new procedure for calculating rates per unit of maximum capacity, uniform rates, and the recommendations for calculating case-specific fees. For 2018, fees for the technological connection to the local grid operators have been calculated and set by the Regional Energy Commission of Tyumen Oblast, KhMAO, and YNAO in accordance with the new Guidelines; the rates are uniform for Tyumen Oblast.

In 2017, Tyumenenergo JSC performed its duties under 5,909 technological connection contracts, of which:

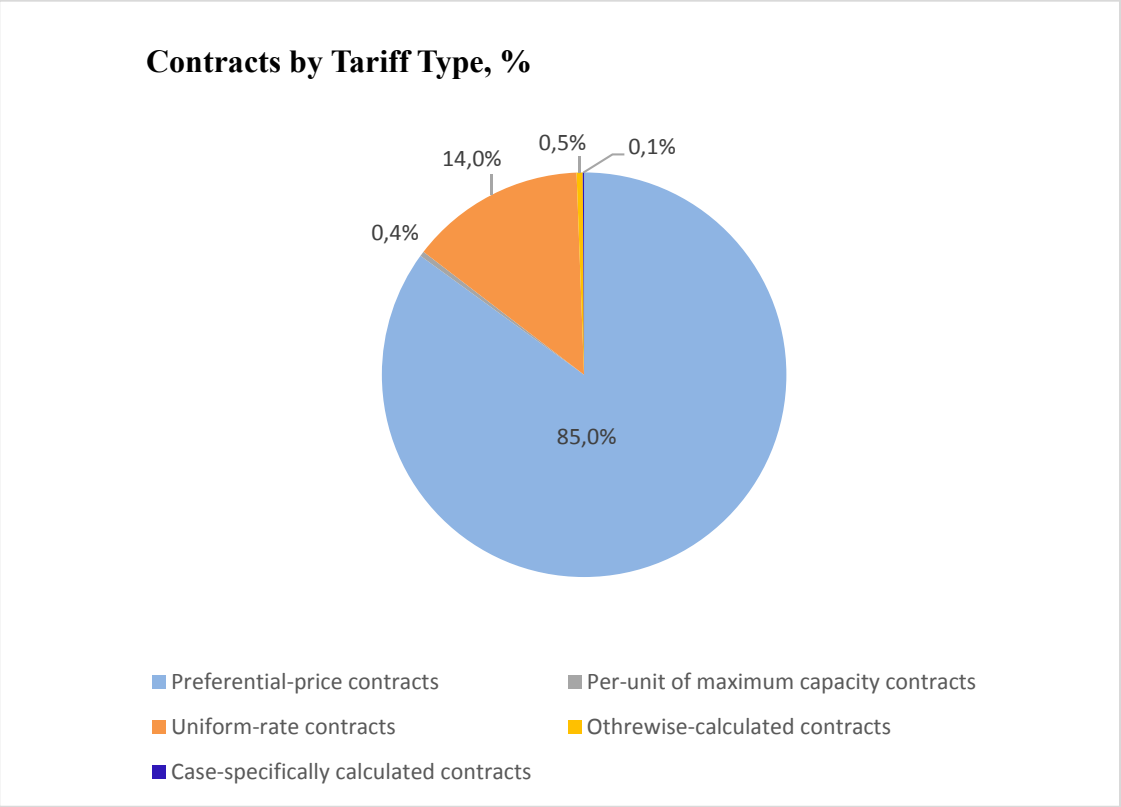
– 5,042, or 85% contracts were made with applicants to connect a maximum capacity of 15W, charged a reduced fee of 466.10 rubles;

— 801, or 14% contracts using a uniform rate;

— 24, or 0.4% contracts using a per-unit of maximum capacity rate;

— 11, or 0.10% contracts using specifically calculated fees;

— 31, or 0.5% calculation-based contracts.



2.6. CUSTOMER RELATIONS

Tyumenenergo JSC's customer relations policy consists in pursuing a customer-oriented approach in its activities. The main purpose of the customer-oriented approach is to ensure the consumers' loyalty by high-quality service and short- and long-term satisfaction.

Such customer-oriented approach of Tyumenenergo JSC is achieved by creating and operating a customer service system based on the following principles:

1. Customers must be sufficiently aware of the Company and its services. Tyumenenergo JSC provides complete and trustworthy information on its customer relations to the public in the form of mass-media publications, on its corporate website and information stands.

2. Territorial Accessibility and Comfortable Personal-Visit Service. The personal-visit service infrastructure makes the Company accessible in a large territory; customers are serviced

by personal contact with the Company's employees at the Customer Service Centers (hereinafter, "the CSC") and customer service points.

Personal-visit services are provided across the entire area of Tyumenenergo JSC's operation: Southern Tyumen Oblast, KhMAO-Yugra, and YNAO, at all of its offices.

The Tyumen Distribution Grid branch provides personal-visit service at its CSC; the other branches of the Company, located in Surgut, Nizhnevartovsk, Nefteyugansk, Kogalym, Noyabrsk, Novy Urengoy, Uray, and Nyagan, use customer service points instead.

3. Accessibility and Efficiency of Remote and Interactive Services. The Company provides customer support via the Call Center. As of today, the Call Center uses two toll-free hotline numbers: 8 800 200 55 02 (Technological Disturbance Hotline) and 8 800 200 55 04 (Single Call Center).

These numbers can be found on the homepage of Tyumenenergo JSC; this information is regularly updated and published in mass media related to the field of the Company operation.

Tyumenenergo JSC's Call Center provides automatic notifications on technological connections by means of automatic calls and SMS notifications; in particular, it informs the customers on: overdue activities under technological connection contracts, readiness of technological connection contracts, overdue obligations under technological connection contracts, as well as the expiry of specifications and readiness to perform the technological connection activities. Besides, the Company has developed a software suit to control and register scheduled and emergency outages that enables Tyumenenergo JSC's hotline to quickly exchange outage data between hotline operators and field-operations control centers of the Company's branches.

The corporate website has a Report an Outage button that enables consumers to quickly inform us on outages and get a hotline reply on reasons of the latter and estimated power supply restoration time.

The website also offers the Personal Account Service. Users are able to submit their applications for technological connection online by filling out online forms and attaching document scans thereto. Besides, one can use the website to ask a question to an expert, to report something, to complain, to review the Company's activities, and to share their opinion on the Company by filling out a questionnaire.

The website also offers the so-called Online Reception, where everyone can ask their questions to the specialists of the Company or make a complaint; this service enables the Company to advise quickly or to solve any user problem.

The Company website shows the visual map of 110 kV power center loads.

Users can also find the technological connection fee calculator. These fees are indicative only, as final calculations are made only after submitting an application for tehnological connection — while preparing the relevant contract.

The corporate website also offers customers an interactive survey to let them share their opinion on the quality of the Company's services. This service enables us to get regular feedback and to improve customer satisfaction.

Customers can freely choose any of the communication channels: personal-visit service (by personal visit to the CSC), or remote service (by phone, fax, mail, Internet, or email communication) — depending on their preferences and situation.

4. Efficiency Service. Tyumenenergo JSC ensures that customer service specialists are competent and properly qualified.

5. Customer Service Business Process Transparency and Unbiased Review of Customer Complaints. The customer service business processes are fully transparent to ensure the controllability of customer service procedures. Tyumenenergo JSC seeks to ensure objective, unbiased, and timely review of complaints; thus it provides an opportunity to appeal against Company’s decisions; customers are made fully aware of the appealing procedures in accordance with the sufficient-information principle.

The year of 2017 continues the trends of the previous years. More than 27,000, or over the half of all customer questions concern the technological connection matters.

The Call Center is still the most important communication channel for the Company. Compared to 2016, the Call Center received almost 9 times as many questions. This is due to the technological disturbance hotline having switched to 24-hour operation. The Personal Account interface was remade to become more accessible and convenient; as a result, 15 times as many technological connection applications were made via the Personal Account as in 2016.

Yet another steady trend is the very low number of complaints. At the end of 2017, only 0.06% customer service cases were complaint-related.

Most requests were filed with Tyumen Distribution Grids, which received 80%, or 80,288 requests, which is due to the population density and consumer population structure. This region is dominated by individuals as well as small and medium-size enterprises.

All the requests are registered by the IS-U Power Data Management for Contacts module of Tyumenenergo JSC's SAP ERP automated management system.

Specifics of Tyumenenergo JSC-Received Requests in 2017

Indicator	Number of Requests		Growth Rate
	2016	2017	
	pcs.	pcs.	%
Requests Received by Subsidiaries	37,740	99,163	262.8
1. Requests by Category	**37,740**	**99,164**	**262.8**
1.1. Complaint	102	62	60.8
1.2. Reference Information or Advice Request	4,751	6,901	145.3
1.3. Service Applications	6,479	6,042	93.3
1.4. Document Submission or Issuance	15,735	17,058	108.4
1.5. Reporting	1,850	37,518	2,028.0
On Emergency Outages	1,315	26,713	2,031.4
1.6. Payments	372	511	137.4
1.7. Consumer Feedback	14	3	21.4
1.8. Service Quality Proposals	87	0	0.0
1.9. Sundry	8,350	31,069	372.1
2. Requests by Communication Channels	**37,740**	**99,164**	**262.8**
2.1. Visits to CSC or Service Points	22,620	19,922	88.1
2.2. Remote Service via Call Center	7,261	66,736	919.1
Via Hotline	1,312	42,072	3,206.7
2.3. Requests in Writing via Office	2,607	2,568	98.5
2.4. Remote Requests via Internal Reception / Personal Account / Online Customer Service / Email	2,013	6,964	346.0
2.5. Other	3,239	2,974	91.8
3. Requests by Beason (Topics)	**37,740**	**99,164**	**2.627**
3.1. Technological Connection	22,333	27,153	121.6
3.2. Power Transmission	4,133	4,056	98.1
3.3. Power Outages	1,870	37,813	2,022.1
3.4. Grid Facility Maintenance	12	48	400.0
3.5. Power Metering	2,215	2,131	96.2
3.6. Additional Services	371	278	74.9
3.7. Service Quality	4,138	6,115	147.8

3.8. Contact Information	199	235	118.1
3.9. Other	2,469	21,335	864.1

In 2017, Tyumenenergo JSC received 60 complaints. Most of them concerned power quality and technological connection. Of those, 13 complaints were substantiate and concerned technological connection problems that required corrective measures. Corrective measures were taken for 12 complaints.

Complaint-handling procedures used by the Company are described in the Complaint Handling Regulations of Tyumenenergo JSC, approved by the Order of Tyumenenergo JSC dd. January 16, 2015 No. 2p; these Regulations contain standard requirements for handling of complaints concerning Tyumenenergo JSC and recieved by the Company via personal-visit or remote service channels from customers, regulatory authorities, Russian regional executive bodies and local self-governments, including State Tariff Regulation authorities, the Federal Antimonopoly Service and its local branches; the document defines how structural units and branches of the Company should cooperate to handle such complaints, regulates the timeframes for complaint handling and corrective measures.

Tyumenenergo JSC-Received Complaints

Indicator	Total number of complaints		Growth rate
	2016	2017	
	pcs.	pcs.	%
	1	2	3
1. Complaints by Topic, pcs.	**102**	**62**	**60.8**
1.1. Technological Connection	14	10	71.4
1.2. Power Transmission	53	36	67.9
1.3. Power Outages (Exclusing Outage Reports)	31	15	48.4
1.4. Grid Facility Maintenance	0	0	–
1.5. Power Metering	2	0	0.0
1.6. Additional Services	0	0	–
1.7. Service Quality	1	1	100.0
1.8. Contact Information	0	0	–
1.9. Power Supply	0	0	–
1.10. Other	1	0	0.0

Consumer relations are regulated by the Customer Service Quality Standards of Tyumenenergo JSC (hereinafter, "the CSQS") as approved by the Meeting Minutes of the Tyumenenergo JSC Board of Directors dd. June 29, 2015 No. 11/15r. The CSQS specify requirements for arranging centralized customer service, for personal-visit and remote customer service business processes, for customer service etiquette, for customer service quality assessment and analysis. Tyumenenergo JSC's customers and other stakeholders are made aware of the CSQS by publishing the latter on the Company's website, by placement at the customer service points, and in other ways to make the document accessible.

Since the CSQS came into force, Tyumenenergo JSC has developed the Customer Service Quality Standard Implementation Plan, see Order of Tyumenenergo JSC dd. October 15, 2015 No. 439. Ensuring the compliance of the personal-visit customer service system with the CSQS requirements is one of the steps as per this Plan. To that end, the Company has analyzed the existing CSC in terms of their categorization and location optimality as per the CSQS. The Customer Service Center at the Tyumen Distribution Grids office was relocated and had its infrastructure improved to better comply with the Tyumenenergo JSC CSQS requirements. The

Customer Service Center was thus moved to a business center in Tyumen. After this, customer service area was nearly doubled.

In 2017, the CSC office opened a playroom for children and two more scanner-equipped workstations with Internet access for our customers to be able to submit their technological connection applications with the Personal Account Service. The Company arranged an operating room, a waiting room with queue seats, and put in place a display and an e-queue ticketing system.

To improve the quality of customer services and to better solve the issues of power supply and power transmission, as well to to coordinate our customer relations, all of the Company's branches conduct annual survey of their consumers. This helps us obtain "first-hand" information that can be used to design and carry out corrective measures for a better quality of service.

Surveyed are legal persons that receive the questionnaires by mail. In 2017, the Company surveyed 3,441 customers, or 54% of the legal entities served by Tyumenenergo JSC.

Survey Results by Years

Year	Customers That Received the Questionnaire	Customers Surveyed	Customers Satisfied	Quality Satisfaction Percentage	Quality Satisfaction Improvement
2016	3,802	3,770	3,658	97.03%	1.4%
2017	3,635	3,441	3,387	98.43%	

Compared to 2016, 1.4% more customers were fully satisfied in 2017.

The respondents spoke well about quality of our services: 98% were satisfied with the service quality in general, which is a better figure than it was in the previous year. Surveying also revealed customer awareness of the self-services: 87% of them knew about the Personal Account Service, and almost 82% knew about the Call Center, the hotlines, and the helpline. Most of our customers (87% of the respondents) received timely outage notices and knew where to get help in various situations.

Tyumenenergo JSC provides an additional free service referred to as the personal Manager; this service provides background for long-term mutually-beneficial cooperation between the customers and the Company, while maximizing the efficiency of using the entire spectrum of Tyumenenergo JSC's services. The service has the wide set of functions: it shall quickly respond to customer requests and solve their problems, arrange the ongoing client relationships for the Company, maintain regular customer contact, provide information and advisory services, develop and implement individual service terms and conditions, provide additional services, and communicate any new relevant information to the customers. The Personal Manager Service is a component of the structure that is, on the one hand, a client-oriented system; on the other hand, it is the tool that Tyumenenergo JSC uses to generalize and analyse data necessary for its own activities and development. Since 2013, the service has been provided by all the branches of the Company; since 2015, it's been available in the Personal Account for legal entities.

Besides, according to the Guidelines for Assessing the Reliability and Quality of Goods and Services, designed for the management of the unified national grid and local grid operators and approved by the Order of the Russian Ministry of Energy dd. October 14, 2013 No. 718 (No. 779 in the October 27, 2014 version), one of the most important components of the generalized service reliability and quality is the comprehensive assessment of the actual grid-operator service quality, which is used to adjust the prices (tariffs) set for a long-term regulatory timeframe. The Company provides personal-visit, remote, and interactive services as a part of its customer relations, which enables it to improve the quantitative parameters regarding information content, promptness, and efficiency of feedback, all of which are taken into account when assessing the quality of Tyumenenergo JSC's services. As of the end of 2017, Tyumenenergo JSC's service quality

matched the regulatory standards.

To reach the planned service quality figures as well as to improve customer service quality, Tyumenenergo JSC took relevant measures in 2017.

The Company optimized the Call Center operations to include an alternative incoming call handling scenario; optimized procedures included informing consumers on large-scale power outages as well as auto-notification of applicants by means of automatic calls and SMS notifications on their overdue duties under technological connection contracts.

The Call Center was optimized in 2017:

– the voice menu of the numhber 8 800 200 55 04 was updated;

– applicant auto-informing on technological connection contracts was re-designed to submit its results to the SAP ERP system;

– an alternative scenario was developed to enable special records that could be added to the Call Center voice menu. These records are to inform customers on outage causes and expected power supply restoration time in case of large-scale outages;

– the technological disturbance hotline was swithced to 24-hour operation;

– a software suit was developed and implemented to control and register scheduled and emergency outages; the tool is used by the Tyumenenergo JSC hotline (Order dd. December 11, 2017 No. 169p.);

– the staff passed basic training on using the software for scheduled and emergency outage registration and control;

– as a part of migrating the corporate website of Tyumenenergo JSC, the Company updated the structure and contents of the *For Consumers* section to ensure its compliance with the customer service quality standards and the effective legislation. The updated *For Consumers* section has a more convenient and informative Internet Reception interface as well as better survey interfaces and more optimal visualization of the Customer Service Center contacts for the entire area serviced by Tyumenenergo JSC.

In 2017, there appeared an opportunity for signing technological connection contracts between Tyumenenergo JSC and an applicant digitally (with further sending an electronic copy to the applicant); power supply contracts can also be issued electronically (signed digitally via the authorization center of the e-document operator); the Personal Account Service can be used for such digital issuance as well. The Personal Account now allows to pay for the technological connection services without any extra charges or fees.

The following Personal Account services have been updated:

– Order a Call. This service was updated to transfer data from the website to the Call Center;

– Book an Appointment. Available on the website and in the Personal Account; was integrated into the e-queue ticketing system at the Tyumen-based CSC;

– Unmetered Consumption Reporting;

– Meter Readings Reporting;

– Submission of notices of specification conformity and termination notices;

– Power Outages. The Power Outages service of the Personal Account displays information on the scheduled and emergency outages. Power outage data are shown for the grid facilities to which a consumer is connected. Besides, it can be used to request information on, or report a power outage.

As a part of the Road Map to Improve Access to Power Infrastructure as approved by the Decree of the Government of the Russian Federation dd. June 30, 2012 No. 1144-p, the Company has taken measures to improve service quality, namely:

– Technological Connection Standard was fully revised;

– New targets regarding reduction of the technological connection backlog (the number of contracts where either party has overdue obligations) in 2018 were set.

To build the efficient customer service system, Tyumenenergo JSC is continuously improving its customer relations by optimizing, integrating, and streamlining business processes.

To improve the service quality pursuant to the CSQS requirements, Tyumenenergo JSC has planned the following measures for 2018:

1. Improving remote services, expanding the Call Center functionality to include automatic calls for survey purposes and auto-notification on scheduled and emergency outages.
2. Expanding Personal Account functionality:

– to provide even more information on request processing/performing status (including complaints and TC applications);

– to control handling of complaints that require corrective measures;

To improve the service quality pursuant to the CSQS requirements, Tyumenenergo JSC has planned the following measures for 2018:

3. Improving remote services, expanding the Call Center functionality to include automatic calls for survey purposes and auto-notification on scheduled and emergency outages.
4. Expanding Personal Account functionality:

– to provide even more information on request processing/performing status (including complaints and TC applications);

– to control handling of complaints that require corrective measures;

– to integrate the Personal Account and the E-Document (**SVOYuZ ED**) systems used by Tyumenenergo JSC to manage technological connection-related electronic documents, to provide power transmission services, and to enter into power supply contracts remotely by using electronic signatures;

– to integrate the Personal Account and портал-тп.рф so as to automatically register customers' requests submitted to Tyumenenergo JSC via портал-тп.рф in the Company's SAP ERP;

– to notify customers on request status by email and SMS;

– to implement functions for making electronic offers;

– to implement Personal Account authorization by SMS code;

– to implement Personal Account sign-up via the Government Services (esia.gosuslugi.ru (ESIA));

– to move the Personal Account service to a new tech platform to ensure comfortable use on mobile devices (tablets and smartphones);

– to bring the design of all Personal Account services in line with the new design of the Company's website;

– to create video tutorials on the Personal Account AIS.

5. To provide information support to all the structural units of the Company that are involved in customer relations, the Company plans to implement solutions based on SAP CRM (Customer Relationship Management).
6. To increase the number of technological connection applications submitted via the Personal Account on the grid services portal (портал-тп.рф) or on the Company's website, the Company plans to inform CSC visitors on how to submit such applications digitally via the Personal Account, including the one available at портал-тп.рф.
7. To reduce the technological connection time, the Company plan to offer another paid service consisting in taking technological connection measures that are part of the applicants' obligations.

2.7. GRID COMPLEX DEVELOPMENT IN THE REGIONS OF TYUMENENERGO JSC OPERATION

Tyumenenergo JSC is a member of the coordinatory bodies established to develop the Development Schemes and Programs (DS&P) for three Russian regions (Tyumen Oblast, the

Khanty-Mansi Autonomous Okrug — Yugra, and the Yamalo-Nenets Autonomous Okrug) and is actively involved in developing the DS&P for these regions.

In 2017, three DS&P were approved in time, which helped defend and approve the Tyumenenergo JSC Investment Program for 2018–2022 (Order of the Russian Ministry of Energy dd. November 8, 2017 No. 12@):

– DS&P for Tyumen Oblast was approved by the Order of the Government of Tyumen Oblast dd. April 28, 2017 No. 24-p;

– DS&P for KhMAO-Yugra was approved by the Order of the Governor of KhMAO-Yugra dd. April 28, 2017 No. 234-рп;

– DS&P for YNAO was approved by the Decree of the Governor of YNAO dd. April 26, 2017 No. 48-ПГ.

In 2017, Comprehensive Programs for the Development of KhMAO-Yugra, YNAO, and Tyumen Oblast in 2018–2022 were developed, agreed upon with Tyumen RDC (a branch of SO UES), and then approved by the Tyumenenergo JSC Order dd. December 18, 2017 No. 124p; these Programs substantiate the measures Tyumenenergo JSC has proposed for integrating into the regional DS&P for the next 5 years and help synchronize the measure schedules for main-line and distribution grids.

2.8. Consolidation of Power Grid Assets

For the purpose of consolidating power grid assets, Tyumenenergo JSC:

– monitors data on power grid assets and ownerless grid facilities, including those belonging to municipal entities or regional government bodies in Tyumen Oblast, KhMAO-Yugra, and YNAO, so as to identify power grid assets subject to consolidation;

– cooperates with the local self-governments and other owners on power grid asset consolidation;

– makes up the inventory of all the power grid assets found in the Company-served territories and involved in the transmission and distribution of power so as to identify their legal owners, classify such assets, and list them;

– identifies how such power grid assets could be transferred (including lease, transfer of ownership, entitlement to operation, etc.).

For the purpose of consolidating power grid assets, Tyumenenergo JSC's corporate website offers an interactive Personal Account Service.

To transfer a power grid facility, a customer (applicant) can submit an electronic application via the Personal Account or at any Customer Service Center of Tyumenenergo JSC provided that the customer has the required documents.

The Company's branches take the following steps to inform potential customers in the regions served by Tyumenenergo JSC on how to use the Grid Facility Transfer section of the Company's website:

– placing grid property consolidation guidelines and FAQ on the CSC info stands;

– arranging round-table conferences with public organizations and business communities.

Before 2016, 74 LGOs had been involved in power transmission and technological connection services in Tyumen Oblast. In 2016, there were considerably fewer (-26%) such organizations as the Decree of the Government of the Russian Federation dd. February 28, 2015 No. 184 On the Recognition of Grid Facility Owners as Local Grid Operators came into force, which was why it was found some LGOs had not met the criteria to be recognized as LGOs.

Prior to losing the LGO status, these companies combined their LGO power transmission activities with their primary production activities. As they stopped providing power transmission services, they started using their grid property to supply power to their own production facilities, which rendered it non-subject to consolidation. Besides, after losing the LGO status, power

transmission services to consumers connected to such companies are paid by the power supply companies to the Company (these payments for mediated connection to the Tyumenenergo JSC grids are done via persons who do not provide power transmission services).

As a result, these LGOs had not been given any power transmission tariffs from 2016 on, and that fact forced them to leave the market. 57 LGOs still operate in the Company-served territories in 2017.

The Tyumenenergo JSC Power Grid Consolidation Program for 2018–2018 was prepared and approved at the meeting of the Company's Board of Directors (Minutes dd. December 29, 2016 No. 28/16).

The similar Program for 2016–2018 covered projects and facilities planned for consolidation by acquisition or lease; 87% of such projects are to be leased under new or prolonged grid-property lease contracts.

In 2017, the Power Grid Asset Consolidation Program was mainly carried out by leasing the municipal grid property through prolonging the existing lease contracts. In 2017, the Company consolidated 8,175.3 c.u. of grid property, or 3.67% of the total equipment of facilities that Tyumenenergo JSC uses to provide power transmission services.

The Tyumenenergo JSC Power Grid Asset Consolidation Program was carried out in full in 2017.

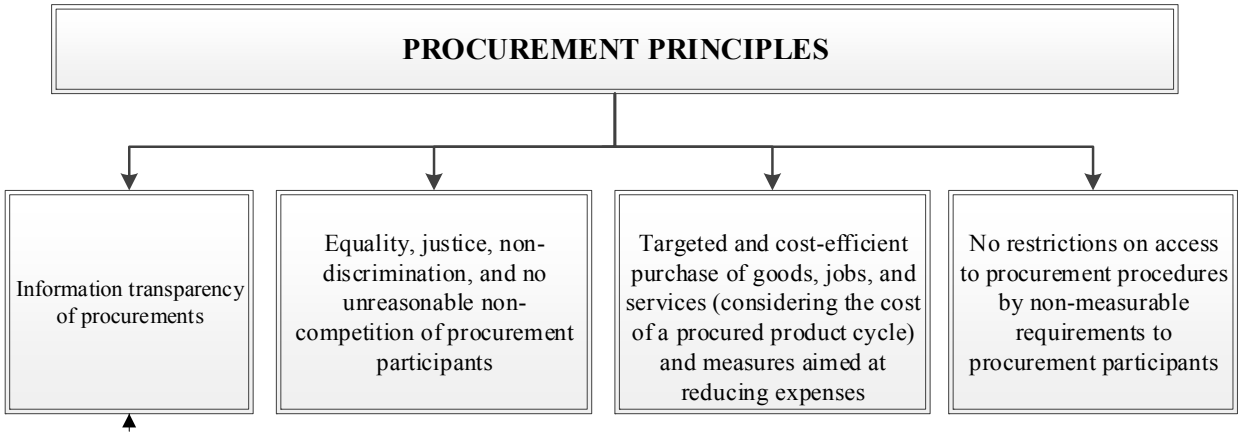
Power Grid Asset Consolidation Figures

Measures Taken	2015			2016			2017		
	Power Grid Assets Consolidated			Power Grid Assets Consolidated			Power Grid Assets Consolidated		
	MVA	km	c.u.	MVA	km	c.u.	MVA	km	c.u.
Grid Facilities Acquired	0	0	0	0	0	0	0	0	0
Grid Facilities Leased	335	2,741	8,206	333	2,759	8,051	333	2,769	7,853
Other (permanent ownership and use rights)	0	0	0	0	0	0	0	0	0
Other (temporary ownership and use rights)	20	0	306	20	0	306	20	6	322
TOTAL	**355**	**2,741**	**8,512**	**353**	**2,759**	**8,357**	**353**	**2,775**	**8,175**

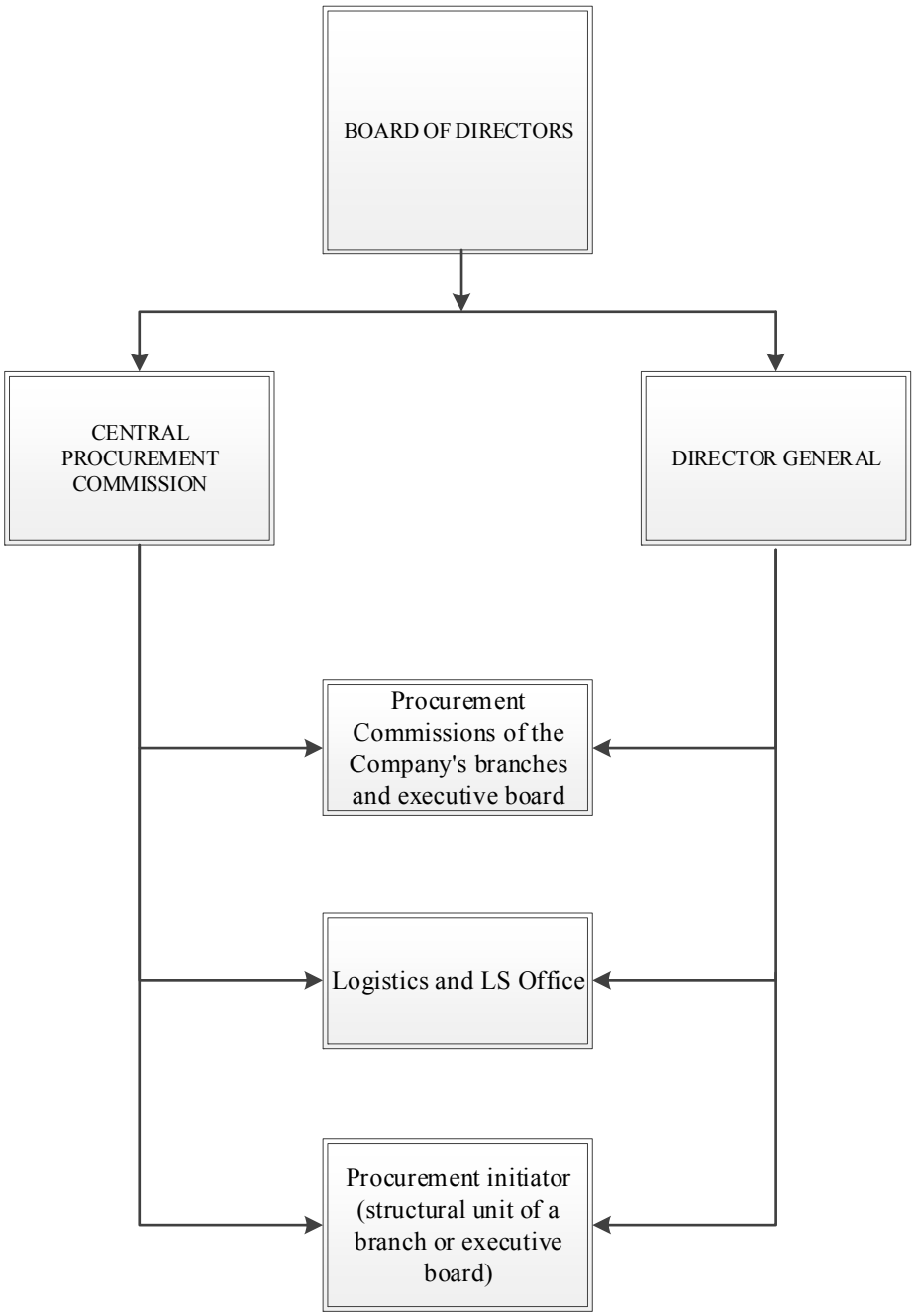
2.9. PROCUREMENTS

Procurement Regulation and Principles

In 2017, Tyumenenergo JSC procurements were regulated by the Uniform Procurement Standard of Rosseti PJSC (the Procurement Regulation) as approved by the Board of Directors of Tyumenenergo JSC (Minutes dd. December 22, 2015 No. 22/15 (No. 239 in the August 19, 2016 version of the Rosseti PJSC Central Procurement Commission Minutes; No. 244 in the November 8, 2016 version, No. 247 in the December 16, 2016 version, No. 265 in the May 19, 2017 version, and No. 269 in the May 31, 2017 version); the Standard was used by the Company as an internal document. The Uniform Standard was developed further to the Rosseti PJSC Procurement Policy and is compliant with the Federal Law dd. July 18, 2011 No. 223-Fz On the Procurement of Goods, Jobs, and Services by Specific Types of Legal Persons. The Procurement Regulation normalizes procurement procedures regardless of their cost.



Procurement Management System of the Company



The Procurement Regulation stipulates the following procurement methods: tender, auction, proposal request, quotation request, simple procurement, small procurement, procurement from a single supplier, and procurement by participation in the seller-arranged procedures.

The Procurement Regulation stipulates the following procurement formats and special procedures:

- open and closed;
- digital or paper-based;
- with or without bidding;
- with prequalification or without it;
- with an option for alternative proposals or without it;
- single-, double-, or multi-stage procurement;
- with postqualification or without it;
- special procurement procedures for sophisticated products;
- with an option to choose multiple bid winners for a single lot (if the procurement method is other than tendering);
- procurement with a right to enter into a framework agreement with one or more procurement parties.

To comply with the Federal Law dd. July 18, 2011 No. 223-FZ, Tyumenenergo JSC publishes the following information in the Unified Procurement Information System (www.zakupki.gov.ru) as well as on its corporate website (www.te.ru):

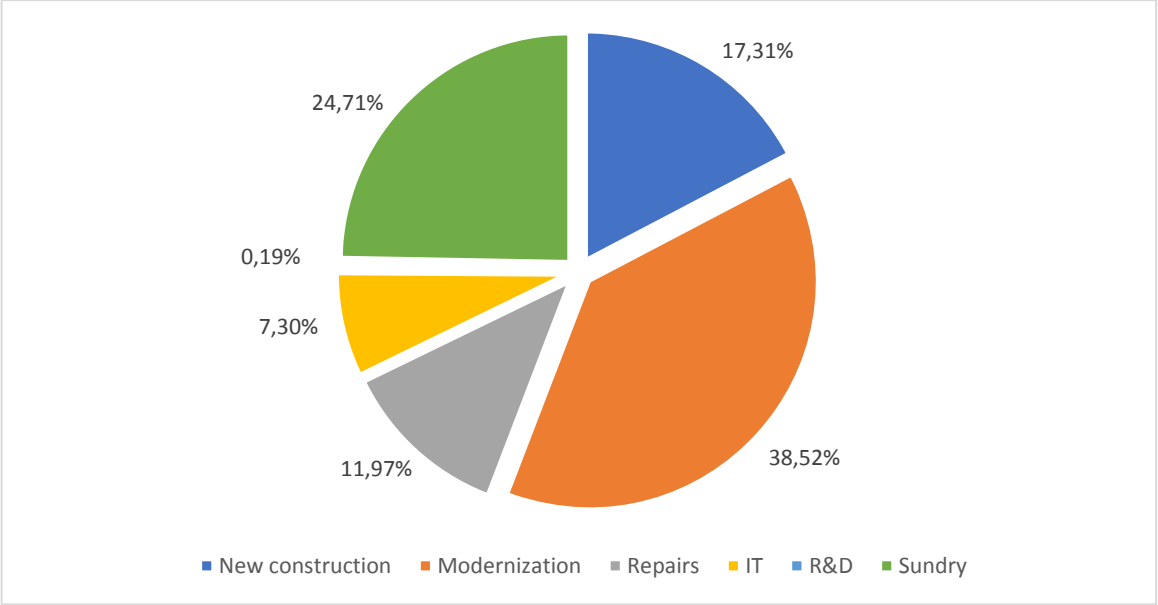
- Goods, Jobs, and Services Procurement Regulation;
- Goods, Jobs, and Services Procurement Plan;
- Innovative and High-Tech Product Procurement Plan;
- procurement details;
- details on the number and total cost of the contracts the Company has entered into as a result of procuring goods, jobs, and services;
- details on the number and total cost of the contracts the Company has entered into as a result of procuring from a single supplier (contractor);
- details on the number and total cost of the contracts the Company has entered into as a result of procuring from small and medium enterprises, specifying the number and total cost of the contracts regarding the procurement of innovative and high-tech products from such enterprises by specific customers from the Russian Government's list;
- annual report on the procurement of goods, jobs, and services by specific types of legal persons from small and medium-size enterprises;
- annual report on the procurement of innovative and high-tech products (suppliers including small and medium-size enterprises).

Main Figures of the Procurement Plan

The Company's Procurement Plan for 2017 was approved at the meeting of the Tyumenenergo JSC Board of Directors December 29, 2016 (Minutes No. 24/15) and stipulates 235 procurements for a total of 15,338.56 million rubles, VAT included. Over the reporting period, the Plan was subject to adjustments pursuant to Section 6.2.6 of the Procurement Regulation.

The Tyumenenergo JSC Procurement Plan for 2017 was implemented in full. All procurements were in compliance with the Procurement Regulation.

Procurements by Activity

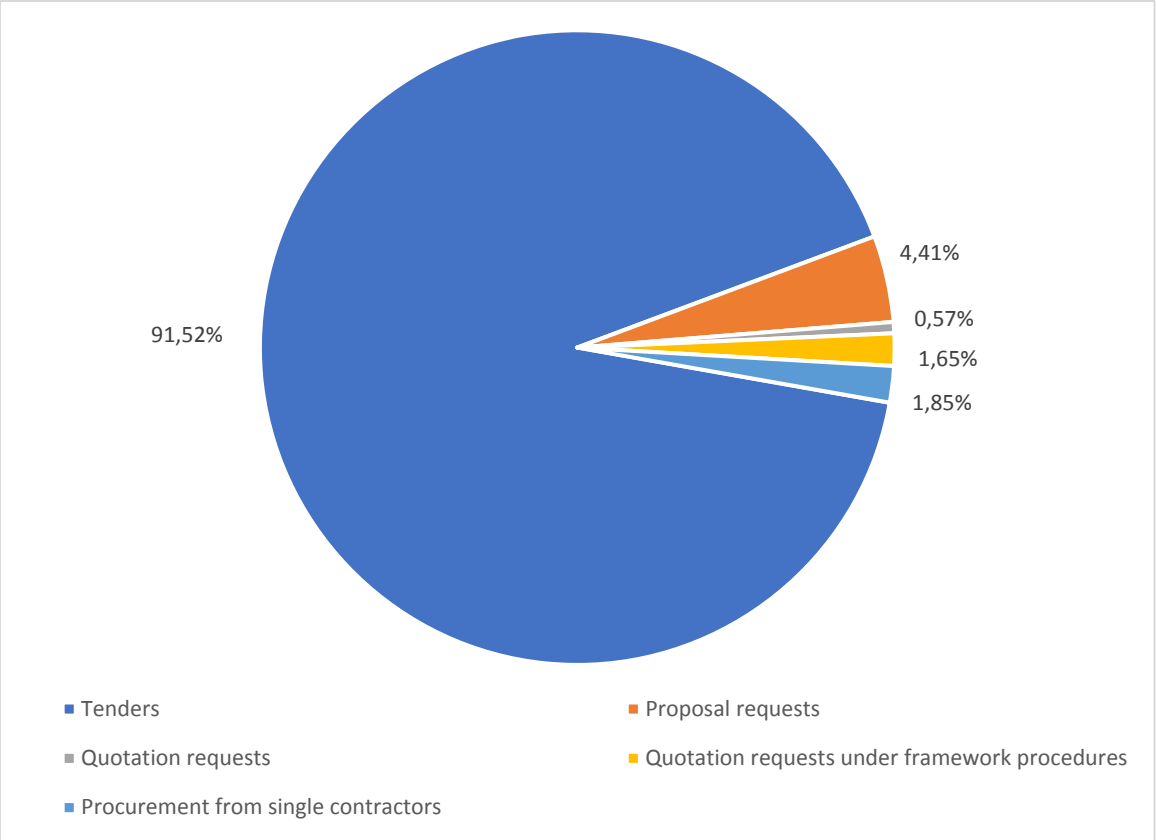


In 2017, procurements totaled 26,031.5 million rubles, VAT included. Open procedures accounted for 25,549.2 million rubles (VAT included) or 98.15% of those. Procurements from a single source totaled 482.3 million rubles (VAT included) or 1.85%. Besides, 149 procurements from a single supplier were made in 2017 pursuant to Section 5.11.1.10 (rental of movable and immovable property for the main production and business activities) and Section 5.11.1.11 (procurement of water supply, gas supply, power supply, heat supply, connection to engineering grids under at regulated tariffs/prices, and/or procurement of power transmission (transit) over related grids, as well as procurement of sundry goods, jobs, and services at legally regulated tariffs/prices) of the Procurement Regulation, which totaled 10,553.7 million rubles, VAT included.

100% of competitive procurement procedures in 2017 were carried out using e-commerce tools.

The efficiency of these procedures amounted to 725.8 million rubles (VAT included) or 2.71% of the declared value of procurement.

Procurements by Method



Products for the needs of Tyumenenergo JSC were procured in 2017 by trained specialists of Tyumenenergo JSC as well as by the Procurement Department of Rosseti PJSC on behalf of Tyumenenergo JSC under the Agreement on the Arrangement and Development of the Unified Energy System of Russia in Its Distribution Complex Aspect dd. December 19, 2014 No. 2418, and by IDGC Research and Engineering Center JSC under the contract dd. November 6, 2015 No. 17/1 On Arranging the Procurement of 35-to-220 kV Power Transformers for Tyumenenergo JSC.

Company's Partnership Program and Procurements from Small and Medium-SIze Enterprises

The Company has its own Program for Partnership with Small and Medium-Size Enterprises, the purpose of which is to contribute to the state's Small and Medium Enterprise Development Policy by means of procurements.

The Program has been developed in response to the Order of the Government of the Russian Federation dd. May 29, 2012 No. 867-p On the Approval of the Road Map to Improve the Access of Small and Medium-Size Enterprises to the Procurements of Infrastructural Monopolies and State Participation Companies.

The Tyumenenergo JSC Program for Partnership with Small and Medium-Size Enterprises specifies a set of measures to be taken to form and support a stratum of reliable, qualified, and responsible suppliers (contractors) among small and medium enterprises. The Partnership Program sets specific requirements to such enterprises and specifies rules and conditions for joining it.

The Company actively promotes its Program for Partnership with Small and Medium-Size Enterprises, the purpose of which is to contribute to the state's Small and Medium-Size Enterprise Development Policy by means of procurements.

Tyumenenergo JSC is on the list of legal persons, approved by the Order of the Government of the Russian Federation dd. March 21, 2016 No. 475-p, which are obliged to procure innovative and high-tech products from suppliers including small and medium-size enterprises. Pursuant to Sections 8 and 9 of the Regulation of Small and Medium-Size Enterprise Involvement in the Procurement of Goods, Jobs, and Services by Specific Types of Legal Persons, as approved by the Decree of the Government of the Russian Federation dd. December 11, 2014 No. 1352, Tyumenenergo JSC has approved a List of Goods, Jobs, and Services (including innovative and high-tech products) which shall be procured from small and medium enterprises (hereinafter, "the List"); the List is based on the All-Russian Classification of Products by Economic Activity (OKPD 2) OK 034-2014 (КПЕС 2008). Pursuant to Section 10 of the Regulation of Small and Medium Enterprise Involvement in the Procurement of Goods, Jobs, and Services by Specific Types of Legal Persons, the List has been published on the Tyumenenergo JSC corporate website as well as in the unified procurement information system.

May 18, 2017 Tyumenenergo JSC held a Doors Open Day to meet with the representatives of small and medium-size enterprises, the OPORA RUSSIA Association, the All-Russian People's Front, the Surgut Chamber of Commerce, the SME Corporation, and other organizations that contribute to the development of entrepreneurship.

During the meeting, entrepreneurs thanked the Company for the timely payment of services, for its attention to the partners, for assistance and cooperation.

During this meeting, the Management of Tyumenenergo JSC supported OPORA RUSSIA's proposal on arranging technical presentations for manufacturers to demonstrate their equipment. As a result, the Company organized the First Technology Forum of Power Equipment Manufacturers.

The Forum took place at Tyumenenergo JSC November 23 and 24, 2017. It was attended by more than 500 people representing FES companies and LGOs, equipment manufacturers, leaders of SME-related public organizations such as OPORA RUSSIA, BUSINESS RUSSIA, and the SME Corporation, as well as by power engineering teachers and students of Surgut-based higher and vocational education institutions, and by the guests of the V All-Russian Forum of Working Youth.

As a part of the Forum's business program, the Company held meetings and panel discussions on the construction and operation of grids, on the use of new remote-control, communication, and RPA developments, as well as on the innovative solutions for the construction and modernization of overhead and power lines in the Arctic.

Ekra, Obninsk Power Equipment Company, SVEL Group, Siemens Transformers, Uralelektrotyazhmash and other manufacturers presented their latest developments for power equipment defect monitoring.

By the end of 2017, 145 small and medium-size enterprises had joined the Company's Partnership Program.

According to the Annual Report on the Procurement of Goods, Jobs, and Services from Small and Medium-Size Enterprises for 2017, which Tyumenenergo JSC published on the official website of the Unified Procurement Information System, the annual cost of SME contracts totaled:

– 17,061.7 million rubles (VAT included), or 68.71% of the cost of contracts completed in 2017 (excluding the procurements that are to be excluded from such calculations pursuant to Section 7 of the Regulation of Small and Medium-Size Enterprise Involvement in the Procurement of Goods, Jobs, and Services by Specific Types of Legal Persons, and of the Annual Cost of Such Procurements and Its Calculation, as approved by the Decree of the Government of the Russian Federation dd. December 11, 2014 No. 1352);

– procurements from small and medium-size enterprises exclusively totaled 12,952.1 million rubles (VAT included), or 52.16% of the total procurements completed in 2017 (excluding the procurements that are to be excluded from such calculations pursuant to Section 7 of the Regulation of Small and Medium-Size Enterprise Involvement in the Procurement of Goods, Jobs,

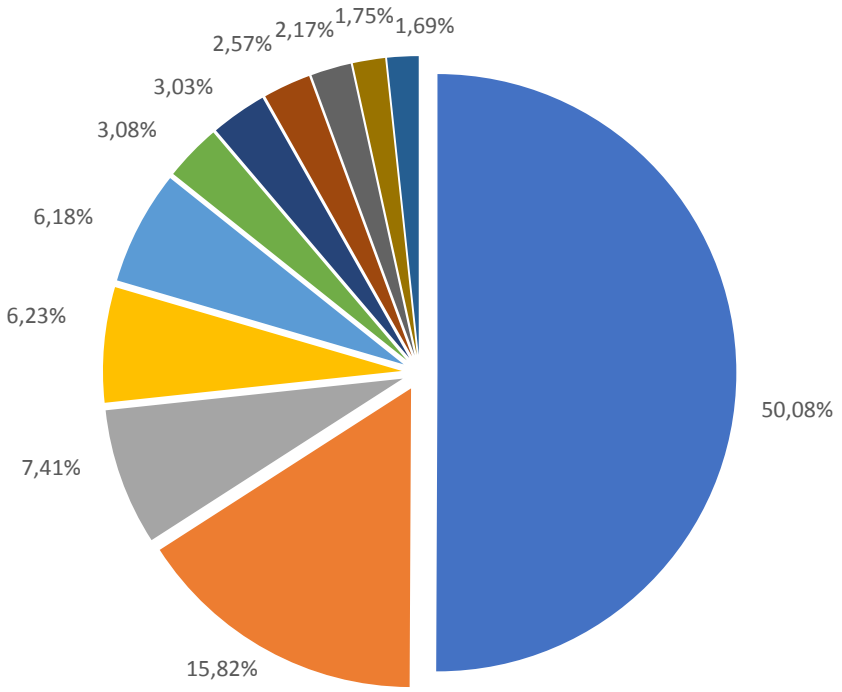
and Services by Specific Types of Legal Persons, and of the Annual Cost of Such Procurements and Its Calculation, as approved by the Decree of the Government of the Russian Federation dd. December 11, 2014 No. 1352).

According to the Annual Report on the Procurement of Goods, Jobs, and Services from Small and Medium-Size Enterprises, Tyumenenergo JSC paid to small and medium-size enterprises in 2017 a total of:

– 6,993.2 million of rubles (VAT included), or 83.98% of the total payments made in 2017 (excluding the procurements that are to be excluded from such calculations pursuant to Section 7 of the Regulation of Small and Medium-Size Enterprise Involvement in the Procurement of Goods, Jobs, and Services by Specific Types of Legal Persons, and of the Annual Cost of Such Procurements and Its Calculation, as approved by the Decree of the Government of the Russian Federation dd. December 11, 2014 No. 1352);

– payments for procurements from small and medium enterprises exclusively totaled 5,574.4 million rubles (VAT included), or 63.34% of the total costs of procurements completed in 2017 (excluding the procurement payments that are to be excluded from such calculations pursuant to Section 7 of the Regulation of Small and Medium-Size Enterprise Involvement in the Procurement of Goods, Jobs, and Services by Specific Types of Legal Persons, and of the Annual Cost of Such Procurements and Its Calculation, as approved by the Decree of the Government of the Russian Federation dd. December 11, 2014 No. 1352).

Procurements from Small and Medium-Size Enterprises by OKPD2 Codes



- 43. Specialized construction works (50.08 %)
- 42. Civil engineering structures and works (15.82 %)
- 27. Power equipment (7.41 %)
- 80. Security services (6.23 %)
- Sundry goods, jobs, and services (each OKPD2 accounts for less than 1% of the total cost of MSE contracts) (6.18 %)
- 26. Computer, electronic, and optical equipment (3.08 %)
- 41. Buildings and building construction (3.03 %)
- 71. Engineering design services (2.57 %)
- 33. Power equipment repairs (2.17 %)
- 62. IT services (1.75 %)
- 29. Vehicles (1.69 %)

Details on the Procurement of Innovative and High-Tech Products

In accordance with the Order of the Government of the Russian Federation dd. March 21, 2016 No. 475-p, Tyumenenergo JSC is on the List of Legal Persons Obliged to Procure Innovative and High-Tech Products from suppliers including small and medium-size enterprises.

Based on the criteria of recognizing goods, jobs, and services as innovative and/or high-tech products to prepare the procurement plan for such products, which criteria are approved by the Order of the Russian Ministry of Energy dd. December 25, 2015 No. 126, Tyumenenergo JSC has developed and approved the List of Goods, Jobs, and Services Recognizable as Innovative and High-Tech Products.

According to the 2017 Annual Report on the Procurement of Innovative and High-Tech Products from suppliers including small and medium-size enterprises, which Tyumenenergo JSC has published on the official website of the Unified Procurement Information System, the annual cost of procured innovative and high-tech products totaled

– 60.8 million rubles, which is 198.7% higher than the same value for 2016. The share of innovative and high-tech products in the total annual goods, jobs, and services procurement contracts the Company has entered into in 2017, amounted to 0.21%;

– 60.4 million rubles were spent on such procurement from small and medium-size enterprises, which is 196.9% higher than the same value for 2016. Thus, the share of innovative and high-tech products procured from SMEs in the total annual goods, jobs, and services procurement contracts the Company has entered into in 2017, amounted to 0.73%.

Share of Payments to Local Suppliers in Significal Company Operation Regions

Tyumenenergo JSC serves a territory of more than 1.4 million sq. km, which comprises Tyumen Oblast, the Khanty-Mansi Autonomous Okrug — Yugra, and the Yamalo-Nenets Autonomous Okrug, with a total population of 3.5 million people.

Companies registered in these three Russian constituent entities served by Tyumenenergo VAT (or "local suppliers") won 706 of the Company's procurement contracts for a total of 25,411.5 million rubles (VAT included), which is 69.46% of the total procurements made in 2017.

Total Number of Legal Actions Against the Companies Due to Anti-Corruption and Breach of Antitrust Laws; Outcomes of Such Actions

In 2017, parties involved in Tyumenenergo JSC-arranged procurements filed two complaints with the Federal Antimonopoly Service of Russia, whereby they complained against the procurement commissions of Tyumenenergo JSC. However, the Federal Antimonopoly Service of Russia considered these complaints ungrounded.

Thus, no complaints considered by the FAS of Russia resulted in binding regulations or Administrative Code-stipulated fines imposed on the Company.

Registry of Complaints Filed by the Tyumenenergo JSC Procurement-Involved Parties with the Federal Antimonopoly Service of Russia in 2017

No.	Name of the Complainant	Procurement Subject	Subject of Complaint	Decision	Document Date and No.
1	Engineering Company of Siberia LLC	Open single-phase non-prequalification tender to a contract to perform design and survey works so as to modernize the KC-6 110 kV substation (its 110-kV outdoor switchgear, 10-kV package outdoor switchgear, and the substation control room) for Nefteyugansk Electric Grids (Tyumenenergo JSC's subsidiary)	Ungrounded rejection	Complaint considered ungrounded	Decision of the FAS Directorate in KhMAO dd. April 3, 2017 No. 05/TB-1974
2	Engineering Company of Siberia LLC	Open single-phase non-prequalification tender to a contract to perform design and survey works so as to modernize the Ugutskaya 110/35/6 kV substation (its 110kV outdoor switchgear, 35-kV outdoor switchgear, 6-kV package outdoor switchgear, fences, technical security equipment, and the substation control room) for Nefteyugansk Electric Grids (Tyumenenergo JSC's subsidiary)	Ungrounded rejection	Complaint considered ungrounded	Decision of the FAS Directorate in KhMAO dd. April 6, 2017 No. 05/ИП-2095

Share of New Suppliers Assessed As Per Labor Relations Criteria

Procurement parties were not assessed on the basis of labor relations criteria.

Suppliers Whose Rights to Freedom of Associations and Collective Bargaining Might Be Violated or Put at Significant Risk; Actions Taken to Protect Such Rights

Tyumenenergo JSC does not take any measures to check its suppliers for any violation and risk-exposure of rights to freedom of association and collective bargaining.

Significant Actual and Potential Negative Impact on Human Rights in the Supply Chain; Actions Taken

Tyumenenergo JSC does not check its procurement parties for any significant actual and potential negative impact on human rights in the supply chain that might manifest itself in using child, compulsory, or forced labor, in discrimination, or in violating rights to freedom of association and collective bargaining, or the rights of indigenous peoples and ethnic minorities.

The human resources of procurement-involved parties are only analyzed for qualification and sufficiency with respect to the contract. Besides, such staff must be trained in occupational safety and pass tests on the general requirements of industrial safety, have an electric-safety qualification and personal protective equipment necessary for their respective contractual jobs.

The Company also evaluates the reliability of procurement parties by analyzing them for absence of tax debts, which is based on the statements of absent unpaid taxes, duties, insurance premiums, fines, and tax sanctions in accordance with the effective legislation of the Russian Federation.

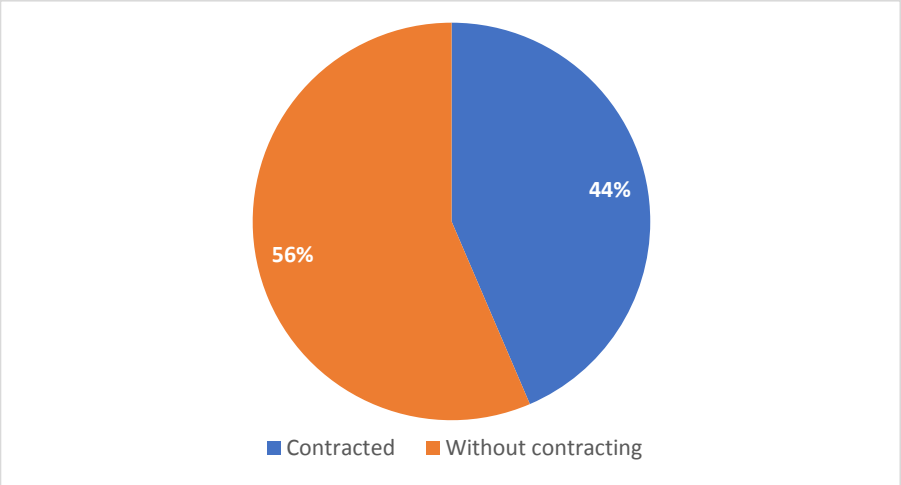
3. Ensuring Reliability and Auality

3.1. Repairs and Operations

To ensure fail-safe power supply to our customers, it is important to keep the existing equipment fully operational. Accident-free power supply is enabled by strict compliance with repair and maintenance deadlines and regulations, by timely diagnosis and assignment of repair scopes and deadlines.

In 2017, the Company's M&R Program was carried out in full. Actual M&R spending on the fixed production assets totaled 4,138 million rubles in 2017 for the Company in general. Jobs performed without contracting totaled 2,336 million rubles; contracted jobs totaled 1,802 million rubles.

Maintenance and Repair Costs



Repair of Basic Power Equipment of Tyumenenergo JSC's Substations and OPLs in 2017, million rubles

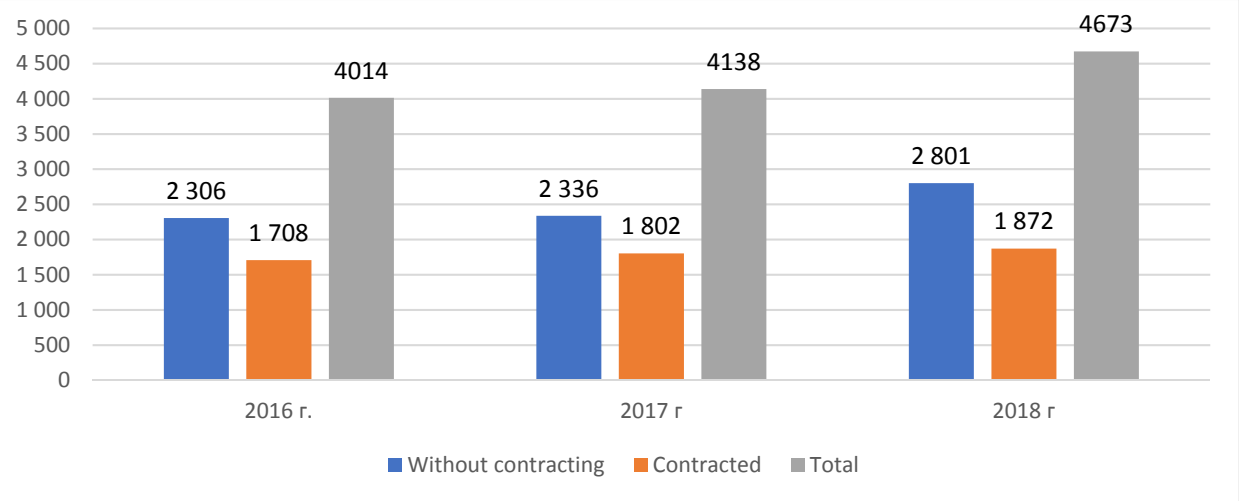
No.	Equipment Type	Actual Spending In 2017		
		Total	Including	
			Repairs Without Contracting	Contracted Repairs
1	PL Repairs	788	149	639
2	Substation Equipment Repairs	725	308	417
3	Buildings and Structures	383	47	336
4	Other Facilities	370	230	140
	Total	2,267	733	1,533

Repair of Basic Power Equipment of Tyumenenergo JSC' Substations and OPLs in 2017, units of equipment

No.	Equipment Type	Units	Planned for 2017	Actual Value for 2017
1	35-to-110 kV Power Transformer Repairs	pcs.	87	90
2	Circuit Breaker Repairs	pcs.	206	213
3	Disconnecting Device Repairs	pcs.	263	263
4	0.4-to-110 kV Overhead Power Line Repairs	km	2,507	2,540
5	Route Clearing	ha	6,120	6,158
6	10/0.4-kV Transformer Substation Repairs	pcs.	86	86

Analysis of M&R Expenditures in 2016—2018, million rubles

No.	Type of work	Actual Value for 2016	Actual Value for 2017	Planned for 2018
1	Repairs Without Contracting	2,306	2,336	2,801
2	Contracted Repairs	1,708	1,802	1,872
	Total	4,014	4,138	4,673



3.2. ENERGY EFFICIENCY AND SAVING

Energy saving and efficiency improvement measures of Tyumenenergo JSC in 2017 were taken in accordance with (i) the Federal Law dd. November 23, 2009 No. 261-FZ On Energy Saving and Improving Energy Efficiency and on Amendments to Certain Legislative Acts of the Russian Federation; (ii) the Decree of the Government of the Russian Federation dd. May 15, 2010 No. 340 On the Procedure of Establishing the Energy Saving and Energy Efficiency Improvement Requirements to Companies Involved in Regulated Activities; (iii) the Decree of the Government of the Russian Federation dd. December 1, 2008 No. 977 On the Investment Programs of Power Engineering Actors (No. 484 in the June 30, 2010 version of the Government's decrees; or No. 1178 in the December 29, 2011 version); (iv) decrees of the Russian regional executive bodies involved in the state regulation of tariffs for power transmission companies; and (v) the Tyumenenergo JSC Energy Saving and Energy Efficiency Improvement Program for 2017–2022 as approved by the Board of Directors of Tyumenenergo JSC, decision dd. October 12, 2017 (Minutes dd. October 16, 2017 No. 27/17).

To carry out this Program, the Executive Office of Tyumenenergo JSC and its branches followed the Order of Rosseti PJSC dd. September 9, 2013 No. 561 On Energy Saving and Energy Efficiency Improvement Measures at Rosseti PJSC, and thus assigned managers responsible for controlling the implementation of the program; working groups were further created to analyze such implementation.

Pursuant to the Company's Order dd. October 11, 2017 No. 90p, the Tyumenenergo JSC Energy Management System (hereinafter, "the EMS") was re-certified for compliance with ISO 50001:2011; as a result of this audit, the Company obtained a new certificate valid through December 15, 2020.

The results of this recertification audit confirm the effectiveness of the EMS and its full operability, as it is capable of ensuring compliance with legislative requirements while improving energy efficiency (energy performance).

In March 2017, eight employees of the Company's branches and Executive Office underwent re-training at the Petersburg Energy Institute of Advanced Training of the Ministry of Energy of the Russian Federation; the subject of their training was Fundamentals of Engineering Training for Power Company Managers; besides, eight branch employees underwent re-training and were granted certificates for the subject Internal Energy Management System Audit per ISO50001:2011.

Tyumenenergo JSC in general and its branches underwent energy inspection. As a result, the Company prepared target programs to replace conventional lights with LEDs as well as to replace non-adjustable heaters at substations with adjustable ones. These measures are now in the Energy Saving Program for 2017–2022.

To implement the Energy Saving Program, Tyumenenergo JSC complies with its Order dd. March 5, 2013 No. 103. In terms of energy saving and energy efficiency improvements, the target indicators under the Program are:

– reduced power losses in power transmission and distribution over grids;

– use of energy resources for production and economic needs;

– using state-of-the-art meters in the retail market pursuant to the Program for Long-Term Development of Power Meter Systems.

Planned and Actual Reporting-Year Target Values

No.	Targets	Units	For 2017	
			Planned	Actual
1	Overall Power Losses	million kWh	1,823.23	1,699.96
		%	2.73	2.61
2	Power Used for Substation Operations	million kWh	85.24	82.05
		% of p/p 1	4.68	4.83
3	Total Energy Resources Used for Office and Production Facility Operations, Including:	thousand T.O.E.	17.94	16.63
3.1	Electric Power	million kWh	74.37	68.95
3.2	Thermal Energy (Building Heating Systems)	GCal	40,642.34	37,840.37
3.3	Natural Gas (Including LNG)	thousand cu.m	2,065.85	1,922.65
3.4	Other Types of Fuel and Energy Resources (Oil)	thousand tons	0.57	0.51
4	Cold Water Consumption for Internal Needs	thousand cu.m	66.00	69.01
5	Total Fuel Consumed by Vehicles and Special Equipment	thousand l	5,052.93	4,596.07
6	Modern Meters Installed	pcs.	13,926	7,488

As a result of comrehensive measures taken in 2017:

— power losses in Tyumenenergo JSC grids were reduced by 34.80 million kWh or 86.24 million rubles;

— 0.21 thousand T.O.E. or 6.21 million rubles were saved thanks to the reduced use of fuel and energy resources for production and in-house needs of Tyumenenergo JSC;

— smart metering devices made up for 55.62% of meters in total;

— LED lights made up for 54.67% of lamps in total.

The Energy Saving Program thus helped saved 4.39 thousand T.O.E. or 92.45 million rubles in 2017.

The Energy Saving Program comprises sections and subprograms (measures) with "direct effects" as well as related measures which fall into multiple categories: measures to reduce power transmission and distribution losses; and measures to reduce the use of energy resources for production and in-house needs. All measures are also subdivided into organizational and technical.

Direct-effect measures are selected by the following criteria:

– reduction of energy use and power losses must account for 80% of the measure-related economic effect;

–simple payback period may not exceed 10 years.

Organizational measures aimed at grid power loss reduction are to keep the existing power loss level from increasing and do not affect the Company's power palance figures.

Table below details the planned and actual savings contributable to "direct-effect" measures taken in 2017.

Planned and Actual Savings Contributable to Direct-Effect Measures

No.	Measures taken	To be Taken (number)		Saving Quantification, million kWh	Saving Quantification, thousand T.O.E.	Saving Quantification, million rubles	Saving Quantification, million kWh	Saving Quantification, thousand T.O.E.	Saving Quantification, million rubles
		Planned for 2017	Actual Value for 2017	Planned for 2017			Actual Value for 2017		
1	Power Loss Reduction Measures	1,595	2,786	9.284	1.114	19.317	15.979	1.917	38.091
2	Measures to Reduce Energy Resource and Water Use for In-House Needs of Offices and Production Facilities	6,454	6,481	1.843	0.221	6.684	1.677	0.201	6.125
			Total	–	1.335	26.001	–	2.118	44.216

There are additional measures aimed at optimizing consumption related to production and in-house needs, or at reducing power losses in general; these additional measures have a positive effect but do not meet the "target measure" criteria. These include:

- Technical Re-Equipment and Modernization Program;
- Program for Long-Term Development of Power Metering Devices;
- other programs and measures.

Energy Management System

Pursuant the Integrated Management System policy, Tyumenenergo JSC performs measures to reduce the in-house fuel and energy resource consumption. The baseline consumption level is the one registered in the first mandatory energy inspection year. The target is to reduce such consumption by 15% compared to 2012.

To determine the energy baselines and to calculate the energy efficiency indicators, the following energy performance indicators (in specific terms) were used:

- technological power losses (% of the total power transmission-to-the-grid volume);
- specific consumption of power for substation operations per conditional unit of substation equipment (kWh/c.u.);
- specific consumption of power for buildings and structures (kWh/m²);
- specific consumption of thermal energy for buildings and structures (GCal/m³);
- specific consumption of gasoline per 100 km (l/100 km);
- specific consumption of diesel per 100 km (l/100 km).

The energy baselines are based on the actual consumption of fuel and energy resources as well as on the energy performance indicators as recorded in the baseline year of 2012. The actual energy performance indicators can be adjusted for climatic factor, the calculation of which is described in the Tyumenenergo JSC Energy Analysis Guidelines as approved by the Order dd. October 20, 2015 No. 447. The climatic factor is calculated as follows:

$$\text{ИЭРто} = \frac{Qo}{Vo} * K\text{п},$$

Where:

Qo stands for energy resources used for production and in-house needs over the reporting period (kWh or GCal);

Vo is the physical volume of equipment / buildings or structures over the reporting period, (c.u., m², or m³);

Кп is the weather adjustment factor calculated as follows:

$$Кп = \frac{ГСОПб}{ГСОПо},$$

Where:

ГСОПб is the number of degree-days of the heating period for the baseline period;

ГСОПо is the number of degree-days of the heating period for the reporting period.

The number of degree-days of the heating period is calculated as follows:

$$ГСОП = (Tv - Tф) * Z,$$

Where:

Tv is the indoor-air design temperature, assumed equal to 18 °C;

Tф is the average temperature for when the average daily air temperature is equal to, or below 8 °C;

Z is the number of days when the average daily air temperature is equal to, or below 8 °C.

For calculations, the Company used the average values of the average daily temperature at the Tyumenenergo JSC branch.

In 2017, ГСОП equaled to 6,127 (the 2012 baseline value was 6,519); therefore, the climatic factor used for comparing specific energy performance indicators equaled 5%.

The annual implementation of comprehensive energy-saving measures produced the following energy-efficiency results as of the end of 2017:

Indicator	**Absolute Deviation**	**Unit**	**Relative Deviation of Specific Values, %**	**Unit**
Technological Power Losses	-108.85	million kWh	-4.17	% of power supplied to the grid
Power Consumption for SS Operations	–15,29	million kWh	-15.80	kWh/c.u.
Power Consumption for Buildings and Structures	–17,70	million kWh	-5.31	kWh/m²
Thermal Energy Consumption for Buildings and Structures	+2,712.69	GCal	-3.36	GCal/m³
Gasoline Consumption of Vehicles	-520.01	thousand l	-16.99	l/100 km
Diesel Consumption of Vehicles	-260.67	thousand l	-5.53	l/100 km
Water Consumption	-36.34	thousand cu. m		–

Compared to 2012, the reduction in the use of fuel and energy resource for the production and in-house needs of Tyumenenergo JSC totaled:

Indicator	2012 thousand T.O.E.	2017 thousand T.O.E.	Deviation	
			Absolute	%
Total Energy Resources Used for Office and Production Facility Operations	19.23	16.63	2.60	-13.55

3.3. INTEGRATED MANAGEMENT SYSTEM

The Company has implemented and operates the following management systems:

1. Quality Management System (QMS).

The QMS is a component of the Company's general management system and is in place to carry out continuous improvements in the quality of services pursuant to regulative documents and the customers' needs and expectations; it is there to satisfy all the concerned parties including employees, shareholders, investors, and partners of the Company.

2. Environmental Management System (EMS).

The EMS is part of the Company's general management system and comprises an organizational structure, activity planning, responsibility assignment, practical tasks, as well as procedures, processes, and resources for preparing, implementing of environmental policies, goals, and objectives, as well as for evaluating the progress and improvement thereof.

3. Energy Management System (EnMS).

The EnMS is part of the Company's general management system that enables continuous research that provides data on the distribution and consumption of energy resources by the Company, as well as on optimizing the use of such resources for production and non-production needs.

4. Occupational Safety and Health Management System (OSHMS).

The OSHMS is part of the Company's general management system used for risk management and improvements in such areas as occupational safety and health.

The Company's management systems comply with international standards such as ISO 9001 (GOST R ISO 9001), ISO 50001 (GOSR R ISO 50001), ISO 14001 (GOST R ISO 14001), and OHSAS 18001 (GOST R 54934).

Certification Information

No. p/p	Unit/branches	Management System / Certificate Validity Period				Certification Body
		ISO 9001	ISO 50001	ISO 14001	OHSAS 18001	
1	Executive Office	November 5, 2020	December 15, 2020	November 5, 2020	January 4, 2021	DQS-Russia
2	Tyumen Distribution Grids					
3	Kogalym Electric Grids					
4	Nefteyugansk Electric Grids					

5	Nizhnevartovsk Electric Grids					
6	Noyabrsk Electric Grids					
7	Northern Electric Grids					
8	Surgut Electric Grids					
9	Uray Electric Grids					
10	Energocomplex					

Note:
ISO 9001 stands for the Quality Management System;
ISO 14001 stands for the Environmental Management System;
ISO 50001 stands for the Energy Management System;
OHSAS 18001 stands for the Occupational Safety and Health Management System.

The main participants of the management systems include:
– Company's Board of Directors;
– Company's Director General;
– Company's Integrated Management System Officer;
– Company's system-specific officers;
– Risk Management and Internal Control Department is responsible for the QMS;
– Environmental Safety Department is responsible for the EMS;
– Energy Saving and Energy Efficiency Department is responsible for the EnMS;
– Occupational Safety and Production Control Service is reponsible for the OSHMS;
– other structural units of the Company involved in the operation of management systems.

Main results of management system operations:

a) improved power supply reliability and quality, see 2.2 Technical Status of Grids for details;

b) improved occupational safety and health in production activities and ever lower accident rates with a total compliance with occupational safety and environmental protection legislation, see 8.3 Occupational Safety and Health for details;

c) greater energy efficiency, see 3.2 Energy Saving and Energy Efficiency for details;

d) environmental safety, see 10 Environmental Policy for details;

e) better technological connection service quality, see 2.4 Technological Connection for details.

In general, management systems had a positive impact over the past year.

3.4. Safety Practices

Economic Security and Anti-Corruption Measures

The Economic Security Department of Tyumenenergo JSC acts to detect and minimize the possibility of risks that could cause economic or reputational damage to the Company, including risks of illegal actions by legal entities and individuals.

In 2017, the Department carried out 682 financial and economic audits within the Company and at its power facilities; 427 of those audits involved the Internal Audit Service and the relevant units. In total, they revealed 96 cases of illegal actions on the part of the Company's personnel and third-party legal entities and individuals that harmed the Company's interests. 92 perpetrators were identified, disciplinary actions were taken against 82 of the Company's employees, and 10 employees were fired. 21 cases of economic damage to the Company were submitted to law enforcers. For 18 case, perpetrators were identified and brought to justice pursuant to the effective

legislation; 3 more cases are under procedural check now. One of the priorities of the Company consists in collecting its receivables, both on the Company's own, as well as in cooperation with the Company's interested departments. The actions related to receivables include the following:

— control over the generation and status of receivables;
— carrying out a set of measures to recollect the receivables by locating the debtors, their assets, accounts, etc.;
— cooperation with the Directorate of the Federal Bailiff Service, filing complaints with law enforcers and further interaction with them.

Pursuant to the Regulations on Overdue Receivables for Power Transmission Services, as approved by the Company's Order dd. June 29, 2017 No. 363, the Security Department took, or was involved in taking 209 actions to collect overdue receivables for a total of 213 million rubles in 2017.

Information Security and Protection of Facilities

The following measures regarding information security were taken in 2017:
— protection of the corporate information system which comprises more than 4.5 thousand automated workplaces (AWP);
— operation of 13 information-security software/software+hardware systems;
— prevention of information-security incidents;
— ensuring the security of personal data processing in 14 information systems;
— ensuring the protection of trade secrets in 5 information systems.

With regard to information security, 417 technological infrastructure facilities and branch user AWPs were checked for compliance with information-security regulations.

The following measures regarding facility protection were taken in 2017:
— 26 facilities were timely and appropriately equipped with security equipment provided by the Company's investment and repair programs;
— physical security services were established for 237 facilities;
— 58 counter-terrorism training sessions were carried out, 26 of which involved the Russian Ministry of Internal Affairs, FSB, and EMERCOM;
— 18 on-site inspections of branches were carried out to examine 137 power grid facilities.

3.5. EMERGENCY PREVENTION

No emergencies occurred in the Tyumenenergo JSC grid-complex facility service areas in 2017.

In 2017, Tyumenenergo JSC took the following actions to reduce the timings of rescue and recovery operations:

– developing and approving the schedule of emergency power supply restrictions for the Company's operation area (KhMAO-Yugra, YNAO, and Southern Tyumen Oblast);
– arranging 12 counter-emergency exercises for personnel, which simulated autumn and winter conditions;
– completing the tasks of the SO UES JSC Branch of the Tyumen RDC relating to AUFLS (automatic under-frequency load shedding), SLSAE (special load-shedding automatic equipment), and emergency electrical energy (power) supply restriction schedules;
– AUFLS amounted to 71.43% (the goal was 70%);
– electrical energy supply limitation schedules accounted for the 25% of the power consumption figures of Tyumenenergo JSC (the goal was 25%);

– power supply limitation schedules and temporary outage schedules accounted for 20% (the goal was 20%).

Pursuant to the Tyumenenergo JSC Order dd. June 9, 2017 No. 331 On Preparing for the Autumn and Winter Period 2017–2018, the Company revised the lists and quantities of its equipment and material emergency backup. The backup reserves are 100% ready.

Pursuant to the Regulations on Backups for Massive Power Outages (regarding outages which might take place in Tyumenenergo JSC-served settlements), the branches routinely checked their diesel generators for being fully functional. Backup power sources for the branch-specific areas were recognized ready for use, which was stated in relevant certificates.

34 Cooperation and Actions for Emergency Prevention and Post-Emergency Recovery Agreements were made with various contractors, including airlines. These contracts involve the contractors' resources: a total manpower of 856 people, and a total of 551 units of equipment.

69 Cooperation and Actions for Emergency Prevention and Post-Emergency Recovery Agreements were entered into by the Tyumenenergo JSC branches and municipal administrations, Rosgidromet offices, Civil Defense and Emergency departments in cities, rural districts, and municipalities; as well as by related companies (MPTL, IDGC) and power consumers' companies.

To prevent and eliminate consequence management of complex technological disturbances (accidents), Tyumenenergo JSC has formed 151 emergency crews consisting of 758 persons in total. Those include 13 mobile teams that can travle over 1000 km and consist of 88 persons; they are equipped with off-road vehicles and special machinery as well as all the necessary tools, tooling, and equipment.

Tyumenenergo JSC’s were not involved in assisting other Rosseti PJSC subsidiaries in post-emergency recovery.

Causative analysis of technological disturbances helps Tyumenenergo JSC identify "bottlenecks" at power grid facilities and plan future actions. Based on the emergency outage statistics, the Company plans a series of measures for 2018 that are aimed at improving the reliability and stability of grids and power equipment.

The Call Center, via the 24-hour hotline, informs the customers on technological disturbances and projected power supply restoration timings.

The Company-provided protection of personnel and facilities from natural and technogenic emergencies is reliable and compliant with regulative documents.

3.6. Product Conformity to Regulatory Requirements

To provide consumers with requirements-compliant power, the Company regularly measures and analyzes the quality of the power it supplies for compliance with regulative documents.

In 2017, the Company received 62 complaints from its users. All of those were timely handed; 10 of the 62 complaints were recognized reasonable and requiring corrective measures; for 9 of them, such measures were taken within the reporting period. No cases of non-compliance that resulted in a fine or a fee.

3.7. Information Technology and Communication

General information

Tyumenenergo JSC is a state-of-the-art power company whose activities greatly depend on information technology and automation.

The Company develops its IT and automation systems as per the Information Technology, Automation, and Telecommunications Strategy approved by the Board of Directors.

Business Process Automation Development Results in 2017

Business process automation in 2017 — key aspects and priorities:

- developing an automated production asset management system;
- implementing a service for exchanging legally-significant documents of Tyumenenergo JSC.

No. p/p	Project	Goal	Result
1	Developing an automated production asset management system	Optimizing the planning and implementing operational controls for every stage of developing a repair program. Managing the production assets in a single SAP ERP-based environment	Equipment inspection process fully automated. Calendar-based production scheduling fully automated. PAMS integrated with the Accidents software. Repair cost planning and accounting fully automated. Equipment wear calculations automated. Functionality developed to create OPL and SS electronic data sheets. Electronic defect logging functionality developed. Functionality developed to calculate maintenance scope in conventional units
2	Introducing a service to exchange legally-significant electronic documents	Reducing direct document printing and submission costs. Improving the Company's counter-parties' loyalty by simplifying the processing of incoming and outgoing documents. Using simple (non-qualified) digital signatures as a part of technological connection processes and power supply contracts, as well as in related documents. Reducing approval and processing time for incoming and outgoing documents. Prevention of document compromising and loss. Improved access to energy infrastructure	Tyumenenergo JSC has been registered with the Synedocs e-document exchange service. E-documents can now be exchanged with the legal persons (the Company's counterparties) via the Company's Synedocs account. Synedocs has been integrated with the Company's FEA AMS and Personal Account AIS. Customers can now enter into power supply contracts with the supply company by means of the Personal Account. Technological connection-related e-documents can now be exchanged by using simple (unqualified) digital signatures (individuals only).

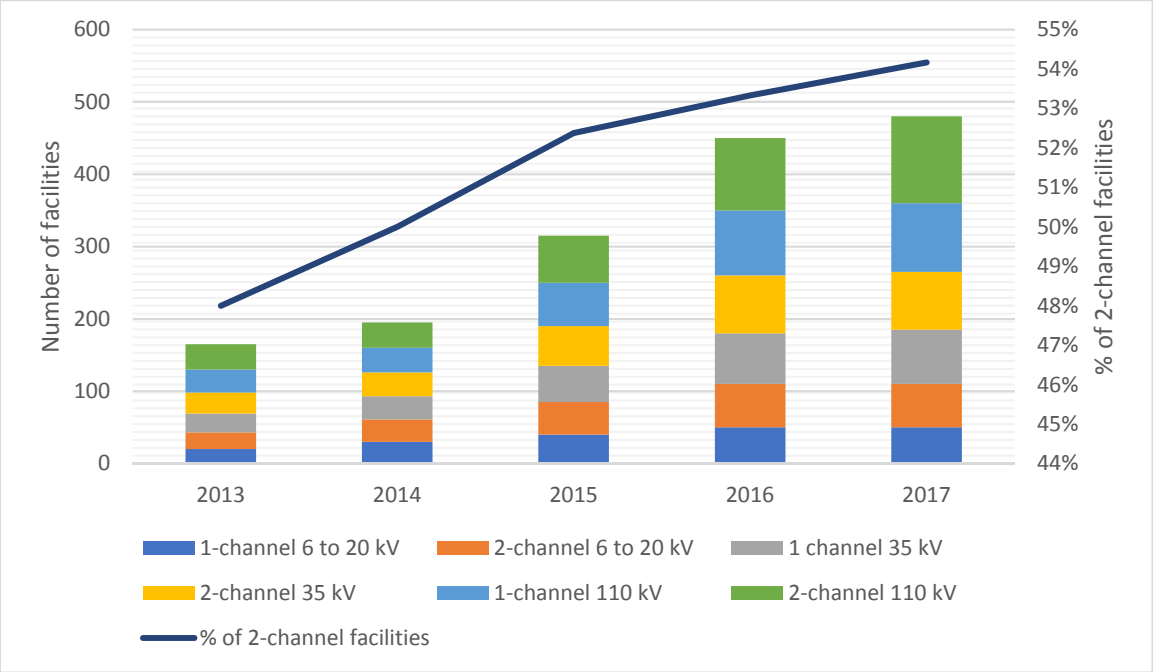
APCS Development Results for 2017

In 2017, Tyumenenergo JSC took the the following measures with respect to the automated process control system:

— telemetry systems at Tyumenenergo JSC substations got updated and expanded data collection and transmission functionality;

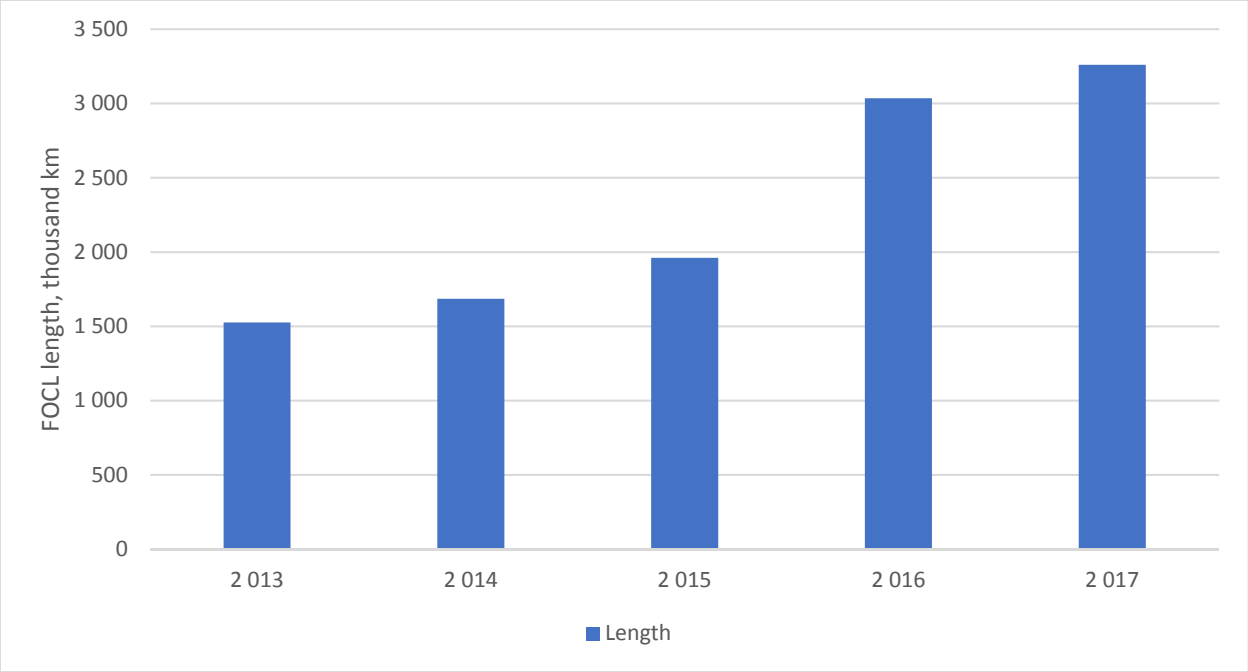
— communication channels at Tyumenenergo JSC substations got updated and expanded data collection and transmission functionality.

Over 2017, the Company was developing its communication networks. The focus was made on enabling reliable and fail-safe inter-facility communications. 11 new power facilities were equipped with communication channels, which meant the number of facilities with two communication channels was increased by 1.23%.



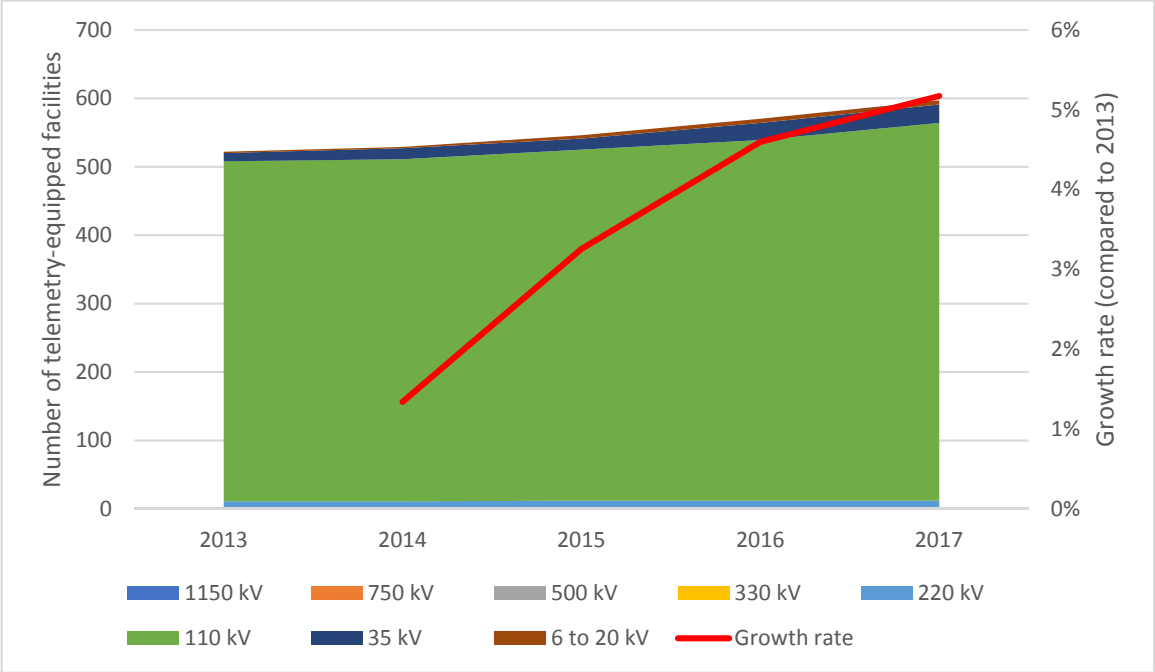
6 to 20 kV → 6-to-20 kV (for other points as well)

The key focus with respect to the Company's networks in 2017 was made on developing the fiber-opic communication lines (FOCL). The FOCL length totaled 3,260 km, (7.41% increase_. FOCL development enabled the Company to connect 10 35-kV and 15 110-kV substations.



The key accent was made on laying the fiber optic cables, installing the baseband equipment, commissioning new channels using the existing FOCL, replacing the outdated HF communication systems, and designing wireless data transmission systems for the Company's energy facilities.

In 2017, the Company continued to equip its facilities with telemetry devices. The corresponding measures were taken as a part of the approved Data Reporting System program, in accordance with the local development programs. The total number of telemetry-equipped facilities was increased to 597, 392 of which were in compliance with the modern requirements. The share of telemetry-equipped facilities in the 35-kV+ voltage class rose to 83%.



The focus was made on designing new telemetry systems for power facilities; all the telemetry solutions designed and implemented were based on Russian equipment.

Key IT, Automation, and Telecommunication Areas for 2018 As Per the ITT Policy

No. p/p	Goals	Objectives
1	Creating an Automated Energy-Saving Management System for Tyumenenergo JSC	
	– enabling power reliability and quality data collection; – meeting the requirements of the Federal Law dd. November 23, 2009 No. 261-FZ On Energy Saving and Improving Energy Efficiency and on Amendments to Certain Legislative Acts of the Russian Federation.	– creating an automated tool for: — controlling the collection and up-to-dateness of power facility data for the purpose of planning and controlling energy efficiency and energy saving actions; — forming the Company's energy passport; — preparing and controlling the implementation of energy saving programs; — forecasting and evaluating the effects of energy-saving actions; — internal and external reporting on energy efficiency and energy saving

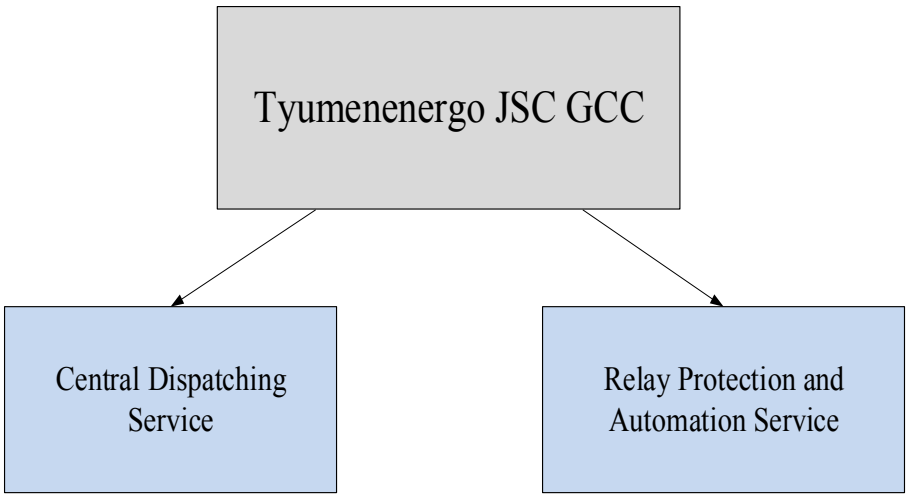
2	Developing the Tyumenenergo JSC Website	
	Meet the demands of the online audience by improving the quality and convenience of browsing, as well as by using state-of-the-art communication media	− developing and rolling out new interactive pages on the Company's website; − improving the contents of the website in terms of implementing a state-of-the-art communication channel that uses the latest information and communication developments; − improving informative visuals; − improving the website search by applying special event tags to website-published info
3	Developing the Personal Account	
	− improving customer service and satisfaction as well as shortening the technological connection time by developing automated systems for physical and remote customer service; − optimizing client relations processes and systems	− enabling electronic document management for technological connection and power supply contracts to be concluded electronically by means of digital signature; − integrating the Personal Account and портал-тп.рф; − notifying customers on request status by email and SMS; − implementing functions for making offers in an electronic format; − implementing Personal Account authorization by SMS code; − enabling users to sign up for the Personal Account service by means of the State Services; − move the Personal Account service to a new tech platform that employs Java libs to ensure comfortable use on mobile devices (tablets and smartphones); − bringing the Personal Account interface design in line with that of the Company's website
4	Developing the Tyumenenergo JSC Production Asset Management System	
	− improving grid observability and controllability; − reducing accident rates and accelerating emergency recovery operations; − enabling power reliability and quality data collection; − improving the security and safety of grid facilities and infrastructure in general, which should include information security improvements; − transition to condition-based asset management and M&R operations, which applies to power grid facility repairs	− automating M&R reporting and enabling the export of business plan reports from the M&R AMS; − automating the technical condition evaluation and reporting for renovated facilities, which will contribute to preparing the TRE&M Program; − integrating the Tyumenenergo JSC PAMS with the Unified Automated Management System (UAMS). Preparing and optimizing the forms of reporting; − automating the procedures for arranging and carrying out efficiency and maturity evaluations regarding the production activity management system; − improving formation of electronic data sheets for OPLs and substations; − automating the standard test/measurement protocols by tested facilities, equipment groups and types; − integrating the PAMS software with the Company's GIS and the Unified Automated Information System for Power Transmission; − bringing the Tyumenenergo JSC M&R AMS functionality in line with the Regulation on M&R Planning and Accounting
5	SD Transition to Naumen	
	Optimizing the business processes and facilitating the inter-unit and inter-branch communications; ensuring access to, and use of the Unified Information System of	Developing and improving the unified Service Desk of Tyumenenergo JSC on the basis of the ITIL/ITSM approach, which should include: − implementing a licensing subsystem to automate software license accounting;

	Information and Communication Resources of the Rosseti Company Group	– improving the SURSYS subsystem to automate migration to new computers and operating systems; – optimizing the performance, interfaces, and procedures of OEMS; – developing a design solution to create software for centralized status monitoring, control, and inventory of data transmission and communication networks, which should be based on software listed in the Unified Register of Russian Computer and Database Programs
6	Modernizing the Corporate Landlines	
	Optimizing business processes and providing easy communication between the units, the branches, and the Companies of the Rosseti Group, as well as with external parties	– making the corporate landlines less vulnerable to hardware and software failures, or to human errors; recovery of data (subscriber numbering, inter-station connection configurations, databases, and PABX VMs) by means of backups; – providing backup communication channels, unloading the communication backbones, providing support of state-of-the-art protocols such as SIP, H.323, and E1; – preparing a unified Landline Management Policy; – providing additional phone services (caller number and name identification, ID photos, subscriber status, answering machines, conferencing, and call transfer)
7	Modernizing the dispatching HW and SW of the Grid Control Center(s) (hereinafter, "the GCC) of the Tyumenenergo JSC Executive office	
	– improving grid observability and controllability, as well as power supply reliability; – improving the telemetry equipment of substations; – developing inter-facility communications; – developing GCC/DG/DDG HW and SW; – creating and maintaining computational infrastructure to enable the functioning of automated operational and technological control systems	– optimizing power distribution and consumption management to make power supply more reliable; – create an information model of 35-110-220-500 kV grids for the GCC-served area; – improving the reliability and efficiency of power equipment as well as the timing of implementing operational solutions by improving the quality and promptness of management as well as by creating better labor conditions for the operating personnel; – providing the personnel with retrospective technological data (event registration, indicator calculations, equipment diagnostics, etc.) for analyzing, optimizing, and planning equipment operations and repairs; – improving the service life and the operational reliability of equipment; – reducing damage from human error; – reducing grid maintenance and repair costs by analyzing and optimizing grid parameters and mobile team management subsystems; – improving the training of GCC personnel by creating a training facility based on an actual grid model

3.8. Operational and Technological Management

To centralize operational and technological management, the Company operates a Grid Control Center tasked to coordinate all the structural units responsible for the Company's operational and technological management.

Organizational Structure of the Tyumenenergo JSC GCC:



Distribution Grid Complex Operational and Technological Management System: uses the basic operational and technological management target model No. 4, which is a three-level model approved by the Minutes dd. July 31, 2015 No. 13/15 of the Board of Directors meeting:

— Level 1 is the Grid Control Center, which is part of the Tyumenenergo JSC Executive Office and has non-operational functions;

— Level 2 consists of twelve branch-based operational dispatching services that are responsible for the operational and technological management in branch-specific areas;

— Level 3 consists of operational dispatching groups (ODG/DDG) functioning in specific power distribution zones/districts.

The Grid Control Center performs non-operational functions aimed at addressing the challenges of:

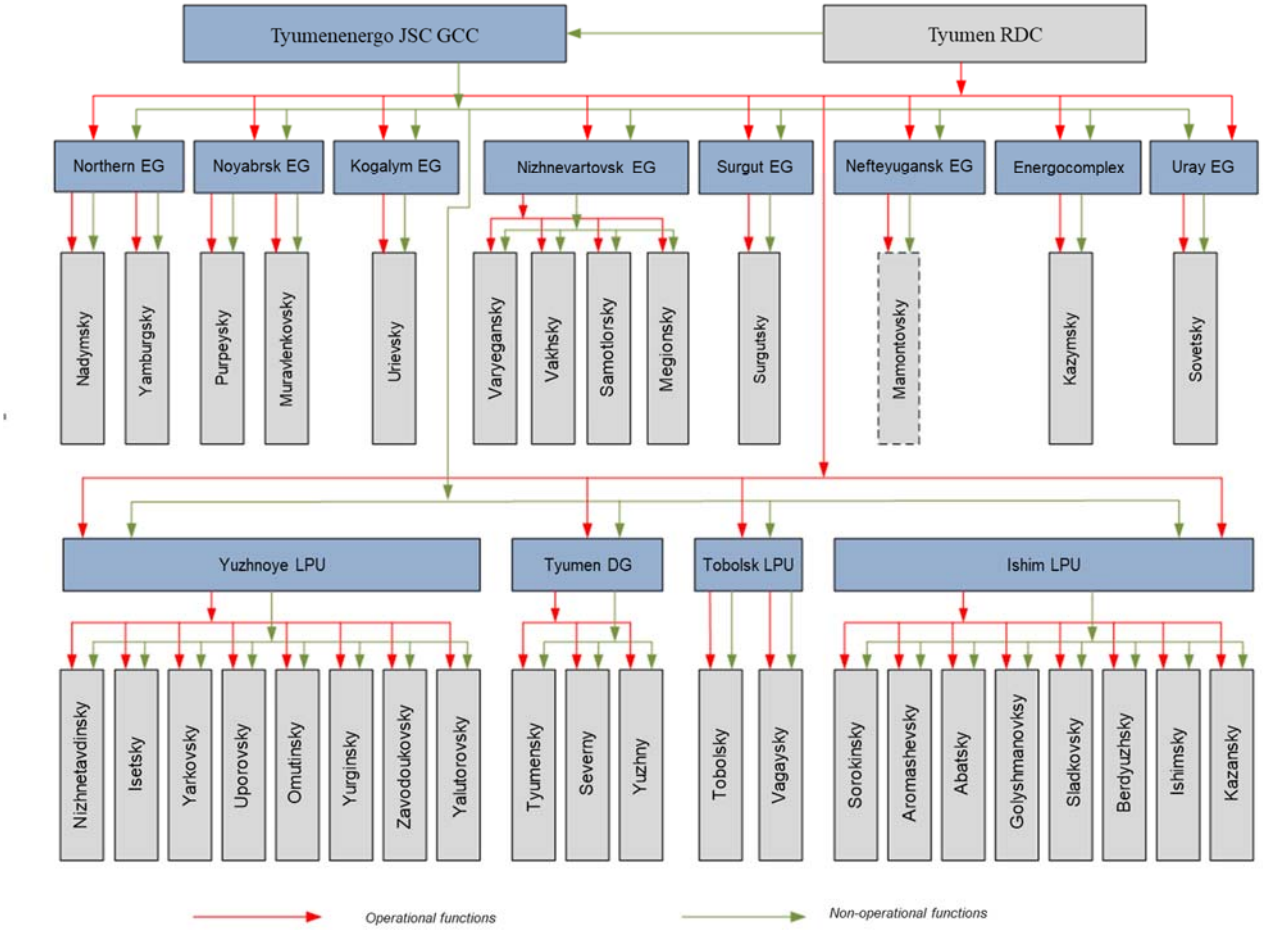
- optimizing business processes of operational process control;
- planning and optimizing operation modes of power grid facilities;
- improving the quality of maintenance planning and management within the power grid facilities;
- coordinating all the structural units of the operation and technological control of the Company;
- coordinating the implementation of organizational and technical activities in the course of operation of power grids in the high alert mode (HAM), the special operating mode (SOM), the high-risk mode (HRM);
- interacting with the regional headquarters for provision of power supply to the Yamalo-Nenets Autonomous Okrug, the Khanty-Mansi Autonomous Okrug – Yugra, and Tyumen Oblast.

Operational and dispatching services/groups (district dispatching groups) of Tyumenenergo JSC branches are responsible for the operational and technological management in accordance with the dispatched-facility PL, equipment, and device lists as distributed by management approach within the branch-specific areas of operation. Operational personnel perform 24/7 real-time operational functions to control the Company's grid complex, to carry out emergency (technological disturbance) recovery operations, and to prepare the grid complex for repairs.

The operational and technological management process of the Company is subject to continuous improvement; the existing structure is being continually brought in line with the basic target model in terms of principles and criteria for the power-line, equipment, and SS device

distribution by technological management approach, as approved by the Order of Rosseti PJSC dd. July 10, 2014 No. 291p.

Tyumenenergo JSC Operational and Technological Management Structure



4. INVESTMENTS AND INNOVATIONS

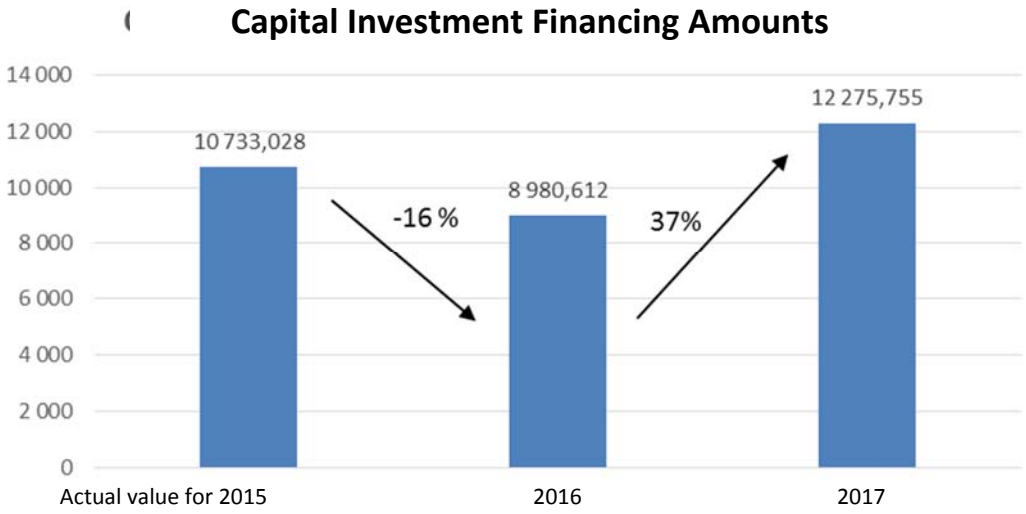
4.1. INVESTMENT ACTIVITIES

Investment Activity Indicators

Table below presents the basic indicators of implementing the Tyumenenergo JSC Investment Program for 2017 as approved by the Order of the Ministry of Energy of Russia dd. November 8, 2017 No 12@ On the Approval of the Tyumenenergo JSC Investment Program for 2018–2022, and on the Amendments to the Tyumenenergo JSC Investment Program; the Program itself was approved by the Order of the Ministry of Energy dd. November 30, 2015 No. 896:

2017						
Disbursement	**New Fixed Assets Commissioned**	**Financing**	**Capacity Commissioning**		**Capacity Increase**	
million rubles, VAT excluded	million rubles, VAT excluded	million rubles, VAT included	MVA	km	MVA	km
10,492.405	6,983.631	12,275.755	281.236	504.601	137.408	363.686

The histogram below shows the dynamics in the Company's capital investments in 2015—2017 (million rubles, VAT included):



Analysis of the Company's investment activities reveals that capital investments were 16% lower in 2016 than in 2015, but 37% higher in 2017 than in 2016. This investment dynamics reflects the actual implementation of the Tyumenenergo JSC Long-Term Investment Program, the plans under which are annually adjusted according to the Company's financial capacities as well as to Russia's economic situation.

Areas and Structure of Capital Investment Financing

In 2017, Tyumenenergo JSC invested into the fixed assets in the form of investments including expenditures for new construction, expansion, modernization and re-equipment of the existing facilities, purchase of equipment and other fixed expenditures.

Construction of new grid facilities and modernization of the fixed assets of Tyumenenergo JSC is aimed at the sustainable development of three Russian regions: YNAO, KhMAO-Yugra, and Tyumen Oblast, for which the Company is responsible. Modernization projects do improve the reliability of power supply and Tyumenenergo JSC is recognized as a reliable business partner by its customers.

The table below shows the key areas of the Company's investment activities in 2017:

Key Areas of Capital Investments, million rubles	Actual Value for 2017
Investment Program, including	**12,275.755**
New Construction, Including:	***4,685.149***
Technological Connection	3,431.047
Technical Re-Equipment and Modernization, Including:	***7,590.605***
Technological Connection	81.120
Long-Term Financial Investments	
Fixed Asset Acquisition	***0***
For Reference:	
Technological Connection	3,515.167

Investment-program activities are to improve the reliability of power supply to the existing consumers as well as to eliminate power deficit.

investment program 2017 priority facilities commissioned in 2017:

– Modernization of the Fyodorovskaya 110/35/6-kV SS. Fixed assets commissioned totaled 314.846 million rubles (136.954 million at the first stage and 177.893 million at the second stage). The Fyodorovskaya 110/35/6-kV SS modernization project meant a significant improvement in the power supply to the Fyodorovskoye Oil Field (equipment failures had been recorded prior to the project implementation). By considerably improving power supply reliability, the Company minimized power undersupply;

– 110-kV OPL feeders to Vector SS. Fixed assets commissioned totaled 190.150 million rubles. Increase in the power balance amounted to 29.088 km. This facility was created to supply power for the potentially heavy-power projects of RN-Yuganskneftegaz, LLC. Technological connection of consumers, optimization of 110-kV operations in normal and repair modes, hence timely withdrawal for repair without imposing any limits or restrictions on the consumer;

— 110-kV OPL from Kirpichnaya to CS 1,2 (section from the Pur SS to the CS). Fixed assets commissioned totaled 273.825 million rubles. Increase in the power balance amounted to 38.761 km. As a part of the project, the Company constructed a 19.408-km single-circuit 110-kV OPL from Kirpichnaya to CS 1 with a branching to the Pur SS (the section from the Pur SS to the CS); and a 19.353 110-kV OPL from Kirpichnaya to CS 2 with a branching to the Pur Condensate Refinery and Limbey (the section from the Pur SS to the CS). Technological connection of Tyumenenergo JSC grids to PJSC FGC UES grids; and technological connection of Gazprom PJSC power receivers to Tyumenenergo JSC grids. This investment project enabled the technological connection of a 110 kV consumer station to the 110 kV OPL grid;

— 110-kV OPL from Kirpichnaya to CS 2ц. (the section from the Kirpichnaya SS to the Pur SS). Fixed assets commissioned totaled 245,831 million rubles. Increase in the power balance amounted to 40.995 km. Technological connection of Tyumenenergo JSC grids to PJSC FGC UES grids; and technological connection of Gazprom PJSC power receivers to Tyumenenergo JSC grids. This investment project enabled the technological connection of a 110-kV consumer station to the 110-kV OPL grid;

– Single-circuit 110-kV OPL section from the Talanga SS to the Kirpichnaya-Purpeyskaya 110-kV OPL takeover. Fixed assets commissioned totaled 44.930 million rubles. Increase in the power balance amounted to 4.533 km.

– Reconstruction of 110-kV feeders at the Kirpichnaya SS. Fixed assets commissioned totaled 22.234 million rubles.

Besides, in 2017 the Company commissioned such facilities as:

– Modernization of the Severo-Pokurskaya 110/35/6-kV SS (110 kV outdoor switchgear, 35-kV outdoor switchgear, APCS/.../RPA equipment replacement). Fixed assets commissioned totaled 183.032 million rubles. The existing-35 kV switchgear had to be replaced as its switching resource had been depleted. The project was carried out as a part of the program to prevent the aging of fixed assets at Tyumenenergo JSC.

– Modernization of the Martovskaya 110/35/6-kV SS (35 kV outdoor switchgear, APCS/.../RPA equipment replacement). Fixed assets commissioned totaled 129.399 million rubles. The existing 35-kV switchgear had to be replaced as its switching resource had been depleted. The project was carried out as a part of the program to prevent the aging of fixed assets at Tyumenenergo JSC.

– Modernization of the Kachalka SS. Fixed assets commissioned totaled 173.254 million rubles (70.890 million in the first stage and 102.364 million in the second stage). The project was aimed at improving the operations and the personnel safety as well as creating better labor conditions and environmental protection. Improving the technical and economic indicators,

including the capitalization of the substation. Improving the power supply reliability for consumer categories I, II, and III. Improving counter-terrorism and counter-sabotage measures to prevent unauthorized access to the protected area, hacking, and other criminal attacks;

– Modernization of the Inga SS with the replacement of B-110-kV, B-35-kV, P-35-kV, and TH 35-kV RPA devices. Fixed assets commissioned totaled 109.769 million rubles. The project was aimed at improving the power supply reliability for for consumer categories I, II, and III. Replacing worn-out and obsolete circuit breakers to improve their functionality and increase the overhaul interval while also optimizing the maintainability. Improving the reliability of SS relay protection. Improving the environmental protection. Improving the SS equipment specifications;

–Re-equipment of the Meridian to Uzlovaya 1,2 Circuit 110-kV OPL. Fixed assets commissioned totaled 133.604 million rubles. As a part of this investment project, the Company replaced the defective foundations to reduce the heaving of pile foundations while also installing additional supports to reduce the slack and to increase the clearance at other facilities. New high-frequency vibration absorbers were installed to protect from wire vibrations in open-air and flood-plain areas per the project documentation;

– Buran 110-kV SF (construction of a 110-kV sectionalization facility with two 110-kV 1D cells installed). Fixed assets commissioned totaled 141.820 million rubles. The project was carried out for the purpose of technological connection of the newly constructed 110/35/6-kV SS with 110-kV power lines at Arktikgaz JSC;

– Modernization of the 110-kV OPL of the Yamburg PDZ. Fixed assets commissioned totaled 173.246 million rubles. This project improved the reliability of power supply to the existing consumers, advanced the facility's tech, raised the technical and economic performance, increased the service life, and made OPL operations safer;

– Modernization of the Ulyanovskaya 110/35/10-kV SS (replacing 10, 35, and 110-kV power equipment with 6.3 and 10-MVA transformers being replaced with 2x10-MVA). Fixed assets commissioned totaled 318.449 million rubles. Capacity commissioned totaled 20 MVA and 0.5 km, with the power balance being raised by 3.7 MVA and 0.254 km. Modernization of this SS enabled technological connection of new consumers while also reducing power transmission losses and ensuring reliable power supply; greatly improved reliability and quality of dispatching and technological connection with the Ulyanovskaya 110/35/10-kV SS of the Tobolsk production unit of Tyumenenergo JSC helped minimize the power undersupply risks;

– Modernization of the Velizhany 110/35/10-kV SS. Fixed assets commissioned totaled 124.325 million rubles. Capacity commissioned totaled 16 MVA, an increase of 6 MVA. The project improved the reliability of power supply to the existing customers and made possible the technological connection of new ones while improving the safety of the SS maintenance personnel;

— Modernization of the Kulakovo 110-kV SS of the Tyumen production unit. Fixed assets commissioned totaled 246.732 million rubles. Capacity commissioned totaled 32 MVA, an increase of 25.7 MVA. The project improved the reliability of power supply to the existing customers and enabled technological connection of new ones while improving the safety of the SS maintenance personnel. New customers can now be connected under the agreements with Novaya Zemlya LLC and Podushkino DNT (Non-profit Suburban Partnership) concluded in 2011;

– Modernization of the Michurino 110/35/10-kV SS. Fixed assets commissioned totaled 177.075 million rubles. Capacity commissioned totaled 32 MVA, an increase of 12 MVA. The project improved the reliability of power supply to the existing customers and made possible the technological connection of new ones while improving the safety of the SS maintenance personnel;

– Modernization of 0.4-to-10-kV grid-complex distribution grids for preferential consumers. As a result of modernizing the 0.4-to-10-kV grid-complex distribution grids for preferential consumers served by the Tyumen, Tobolsk, Ishim, and Yuzhnoye production units, the Company commissioned 90.972 km and 9.616 MVA of capacity;

– Construction of 0.4-to-10-kV grid-complex distribution grids for preferential consumers. As a result of constructing 0.4-to-10-kV grid-complex distribution grids for preferential consumers served by the Tyumen, Tobolsk, Ishim, and Yuzhnoye production units, the Company commissioned 98.661 km and 12.401 MVA of capacity;

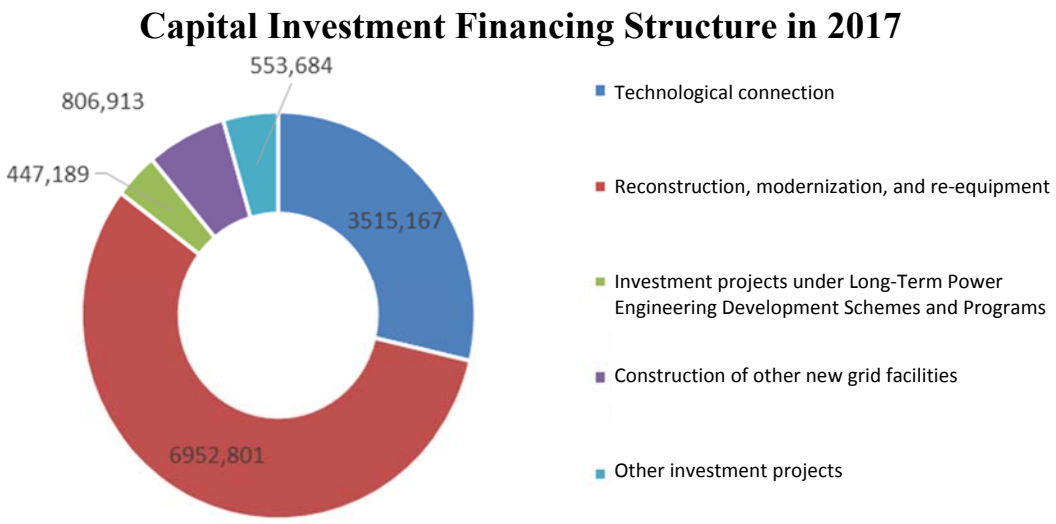
Tyumenenergo JSC Capital Investment Financing Structure

million rubles, including VAT

Tyumenenergo JSC	Actual Value for 2015	Actual Value for 2016	Actual Value for 2017
Total	10,733.028	8,980.612	12,275.755
Technological Connection	2,701.699	1,359.691	3,515.167
Reconstruction, Modernization, and Re-Equipment	3,635.402	5,159.401	6,952.801
Investment Projects Under Long-Term Power Engineering Development Schemes and Programs	998.392	850.718	447.189
Construction Of Other New Grid Facilities	3,056.903	805.208	806.913
Purchase of Power Grid Assets, Land Plots, and Other Facilities	0.000	2.569	0.000
Other Investment Projects	340.633	803.025	553.684

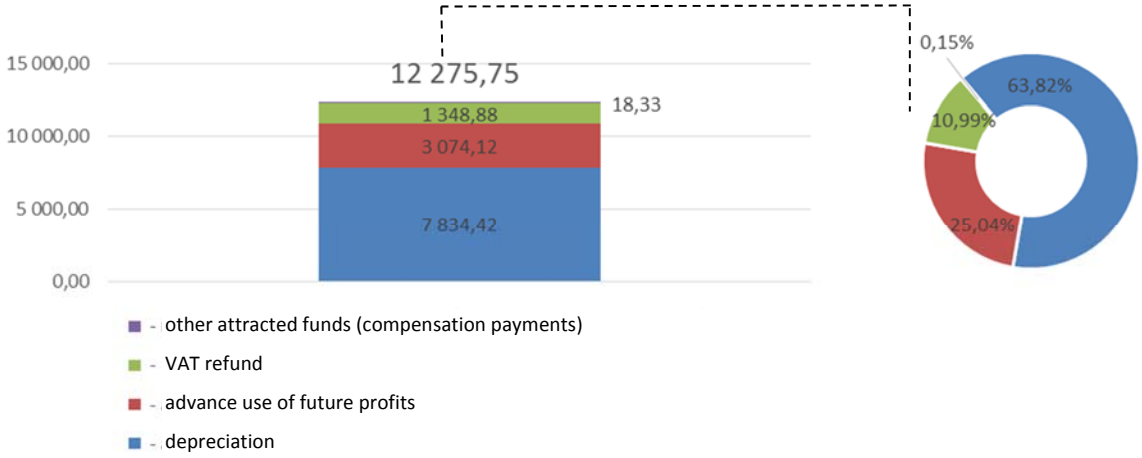
The financing targets of the Tyumenenergo JSC Investment Program for 2017 were adjusted and approved by the Order of the Ministry of Energy of Russia dd. November 8, 2017 No 12@ On the Approval of the Tyumenenergo JSC Investment Program for 2018–2022, and on the Amendments to the Tyumenenergo JSC Investment Program; the Program itself was approved by the Order of the Ministry of Energy dd. November 30, 2015 No. 896.

Tyumenenergo JSC Capital Investment Financing Structure by Area in 2017



In 2017, actual financing totaled 12,275.755 million rubles, 4,685.149 million or 38% of which was spent on new construction whereas the rest (7,590.605 million or 62%) was spend on technical re-equipment and modernization.

Investment Program Financing by Source, million rubles (VAT included)



Pursuant to the Order of the Ministry of Energy of Russia dd. November 8, 2017 No. 12@, the Company planned multiple sources of a total 11,423.473 million rubles of financing for 2017, of which: 11,344.145 million would be drawn from the Company's own funds, comprising 8,223.919 million rubles from depreciation, 1,649.416 million from the advance use of technological connection profits, and 1,470.809 million from VAT refunds; 79.329 million rubles would be drawn from attracted funds (compensatory payments). In fact, the Company spent 12,275.755 million rubles, of which: 12,257.421 million were drawn from the Company's own funds, comprising 7,834.417 million rubles from depreciation, 3,074.124 million from the advance use of technological connection profits, and 1,348.880 million from VAT refunds; 18.334 million rubles were drawn from attracted funds (compensatory payments). Excess advance use of future profits was due to the technological connection of power receivers operated by RN-Yuganskneftegaz LLC.

In 2017, no measures planned or carried out under the Tyumenenergo JSC Investment Program were funded from the federal budget.

Investment Program Implementation Results for 2017

Evaluation of changes in the share of the productive power supply, the value of which is generated by the meters included in the Data Reporting System

	Total Productive Supply, million kWh	Productive Supply As Metered by the Data Reporting System Meters, million kWh	Percentage	Percentage Xhange, %
2014	71,535.03	64,244.06	89.81	
2015	69,734.63	62,704.49	89.92	0.11
2016	69,560.16	62,644.29	90.06	0.14
2017	63,322.09	57,473.15	90.76	0.71

Evaluation of the Average Power Outage Duration

Indicator		Actual value for 2017
Power Outage Duration	saidi (REC-identified)	0.8558
	Δsaidi (planned under the Investment Program)	-0.005053

Evaluation of Changes in the Average Frequency of Power Outages

Indicator		Actual value for 2017
Average Frequency of Power Outages	saifi	0.3516
	Δsaifi (planned under the Investment Program)	-0.00209

Total Technological Connections Made under the Investment Program, Maximum Capacity of Connected Power Consumers, Power Generation Facilities, and Power Grid Facilities Owned by Other Grid Companies or Third Parties

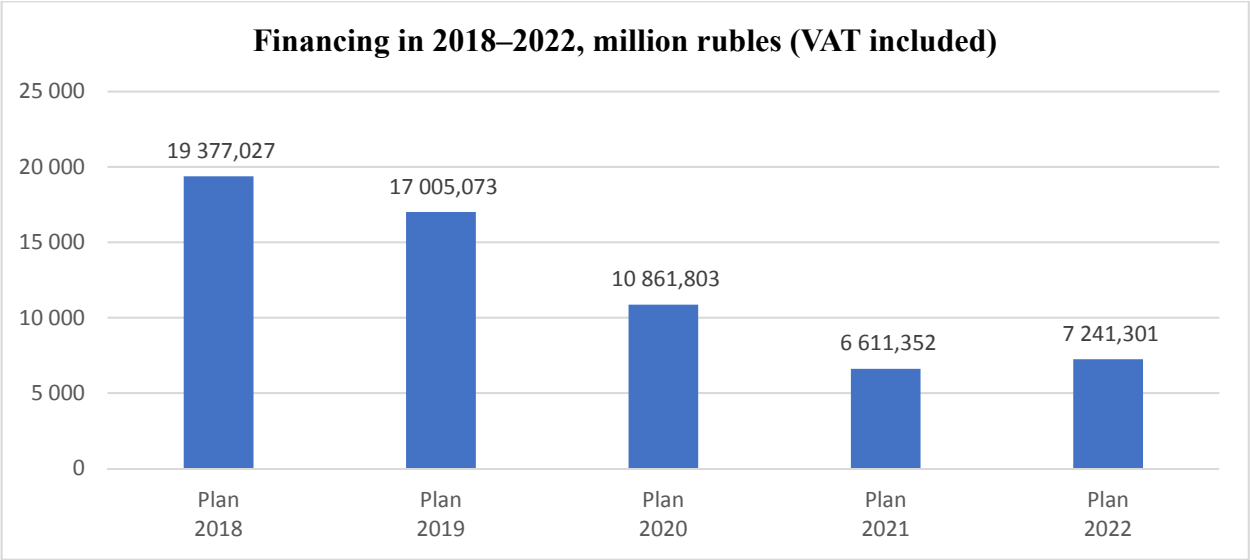
Over 2017, Tyumenenergo JSC performed work under 1,469 technological connection contracts for a total connected capacity of 173.28 MW.

Long-Term Investment Program

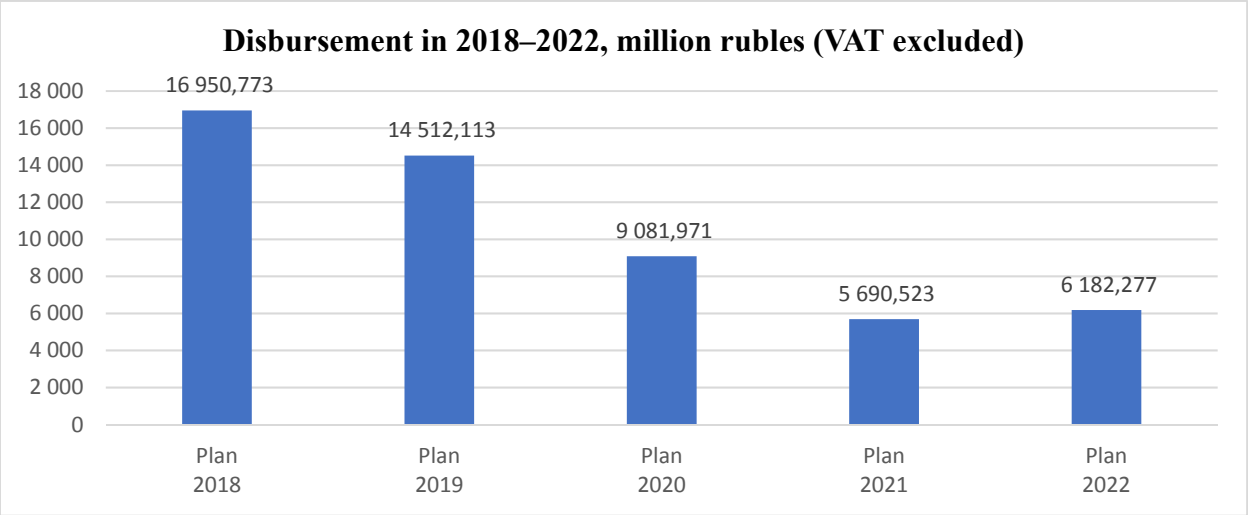
The Tyumenenergo JSC Investment Program for 2018–2022 was approved by the Order of the Ministry of Energy of Russia dd. November 8, 2017 No 12@ On the Approval of the Tyumenenergo JSC Investment Program for 2018–2022, and on the Amendments to the Tyumenenergo JSC Investment Program as approved by the Order of the Ministry of Energy dd. November 30, 2015 No. 896.

The Investment Program for 2018–2022 was prepared in accordance with the Tyumenenergo JSC Investment Program Scenarios for 2018–2022 with due account for the current situation in the Russian economy as well as the Company's financial capacities. When preparing the Investment Program for 2018–2022, the Company prioritized reduction in equipment aging. One of the key problems to solve is to make possible the connection of new consumer loads as well as to improve the quality and reliability of power supply to the existing consumers.

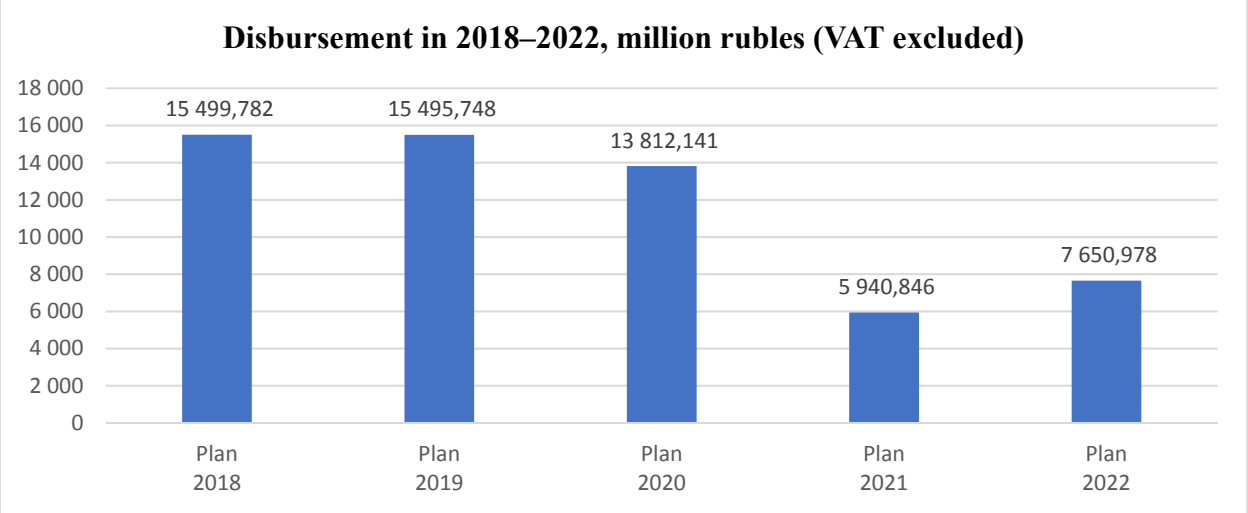
The histogram below shows the financing of the Company's capital investments for 2018–2022:

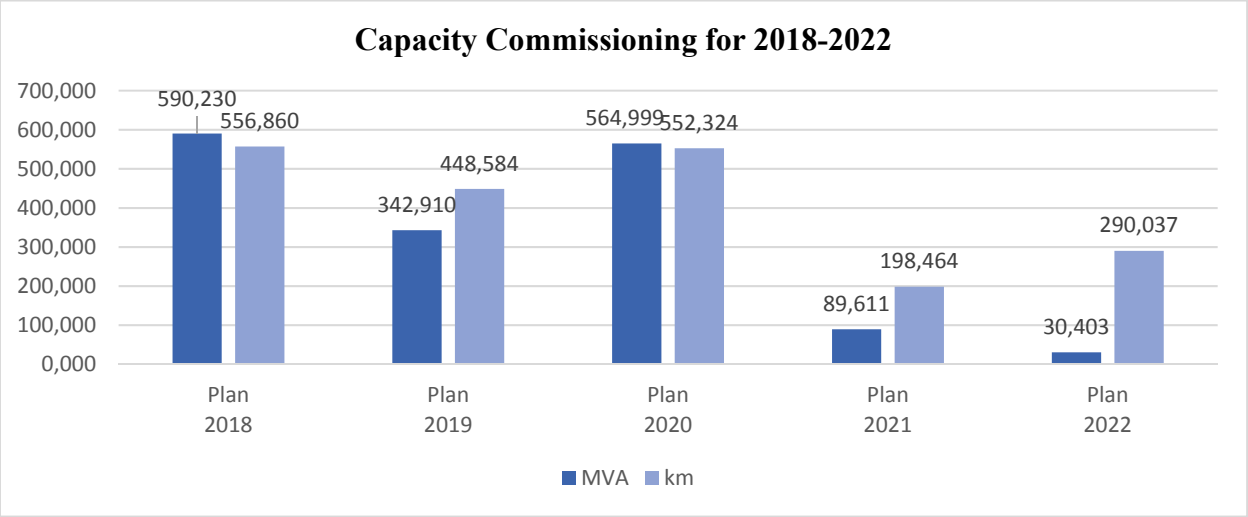


The histogram below shows the planned amounts of the Company's capital investments for 2018–2022:



The histograms below show the Tyumenenergo JSC fixed assets planned for commissioning in 2018–2022, in monetary and physical terms:





For 2018–2022, Tyumenenergo JSC has planned a total of 52,417.658 of capital investments.

The financing for the Tyumenenergo JSC Investment Program planned for 2018–2022 totals 61,096.555 million rubles (VAT included).

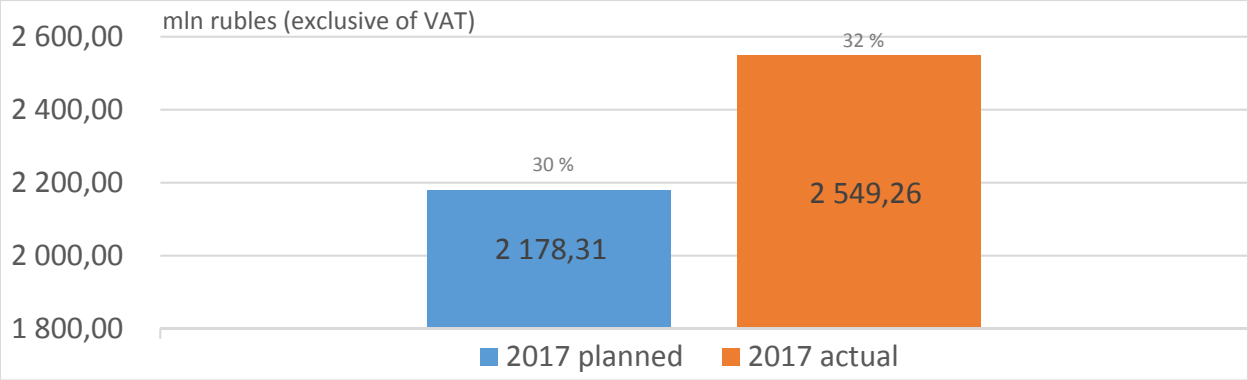
For 2018–2022, the Company plans to commission fixed assets for 58,399.494 million rubles, with the total transformer capacity of 1,618.153 MVA, and a total 2,046.267 km of power lines.

4.1.1. Effects of Using Methods for Reduction of Specific Investment and Construction Costs

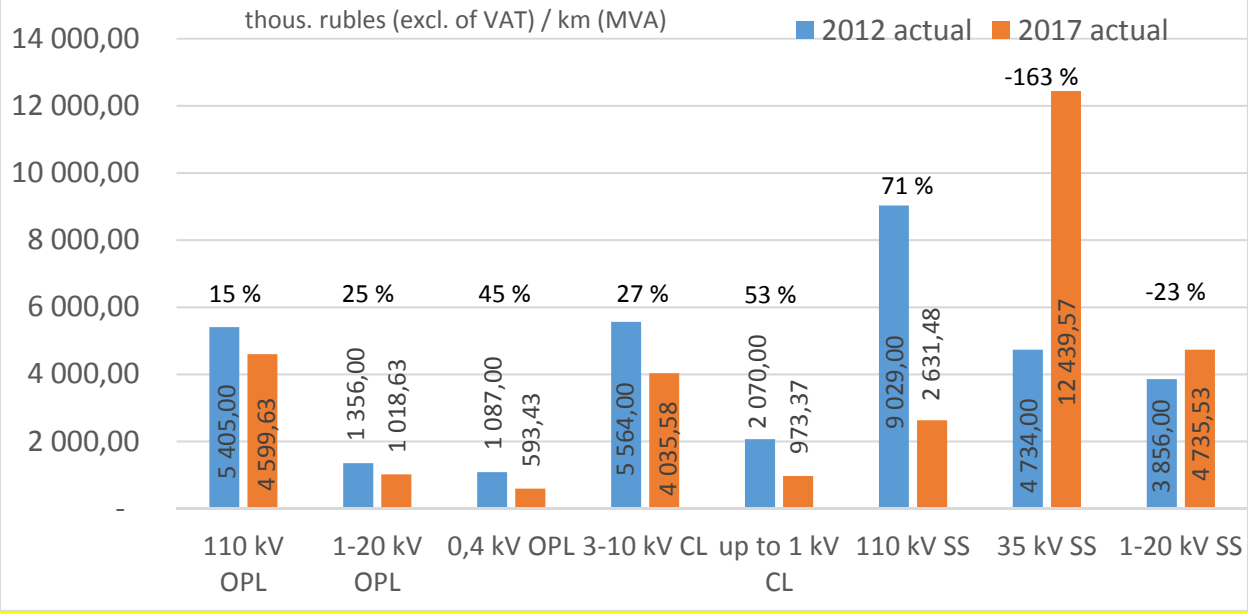
The charts below present the actual effect of using the Methodology For Reducing Investment Costs by 30% Compared to 2012; Appendix 5 to this Report contains the Report on Using the Methodology to Reduce Investment Costs by 30% Compared to 2012 (figures reported apply to facilities commissioned in 2017).

The actual effect of using the Methodology ror Reducing Investment Costs by 30% Compared to 2012 totaled 2,549.26 million rubles (VAT included).

Investment Cost Reduction



Reduction in Specific Construction Costs (Against 2012)



Reduction in the specific construction costs of facilities commissioned in 2017

Name	Actual Value for 2012, thousand rubles VAT excluded /(km/MVA)	Actual value for 2017				
		Physical Parameters, km/MVA	Fixed Assets Commissioned, thousand rubles VAT excluded	Specific Value, thousand rubles VAT excluded/(km/MVA) Gr. 4 / Gr. 3	Specific Value in 2012 Prices, thousand rubles VAT excluded/(km/MVA) (Gr. 5/1,06/1,049/1,143/1,063/1,053)	Reduction Relative to 2012, % (1 — Gr. 6 / Gr. 2)
1	2	3	4	5	6	7
OPL						
110-kV OPL (HV)	5,406.00	117.28	767,424.79	6,543.53	4,599.63	15 %
1-to-20 kV OPL (MV2)	1,356.00	103.54	150,042.80	1,449,13	1,018,63	25 %
0.4-kV OPL (LV)	1,087.00	54.99	46,424.19	844.23	593.43	45 %
CL						
3-to-10 kV CL (MV2)	5,564.00	17.18	98,632.12	5,741.10	4,035.58	27 %
1-kV or below CL (LV)	2,070.00	3.38	4,680.40	1,384,73	973.37	53 %
SS						
110-kV input SS (HV)	9,029.00	221.00	827,335.76	3,743.60	2,631.48	71 %
35-kV input SS (MV1)	4,734.00	6.00	106,180.74	17,696.79	12,439,57	-163 %
1-to-20 kV input SS (MV2)	3,856,00	14.62	98,493.06	6,736.87	4,735.53	-23 %

The report on reduction of specific construction costs of the facilities commissioned in 2017 actually cites a higher specific value when given in 2012 prices, which is due to the following factors:

1. The figure for the 35-kV input SS (MV1) is 163% higher due to installing low-capacity transformers, which applies to: 5 MVA transformers at the Supra 35/10 kV SS and 1 MVA transformers at the Shishkino 35/10 SS.

2. For 1-to-20 kV SS (MV2), the figure is higher as commissioned facilities include distribution stations combined with transformer substations.

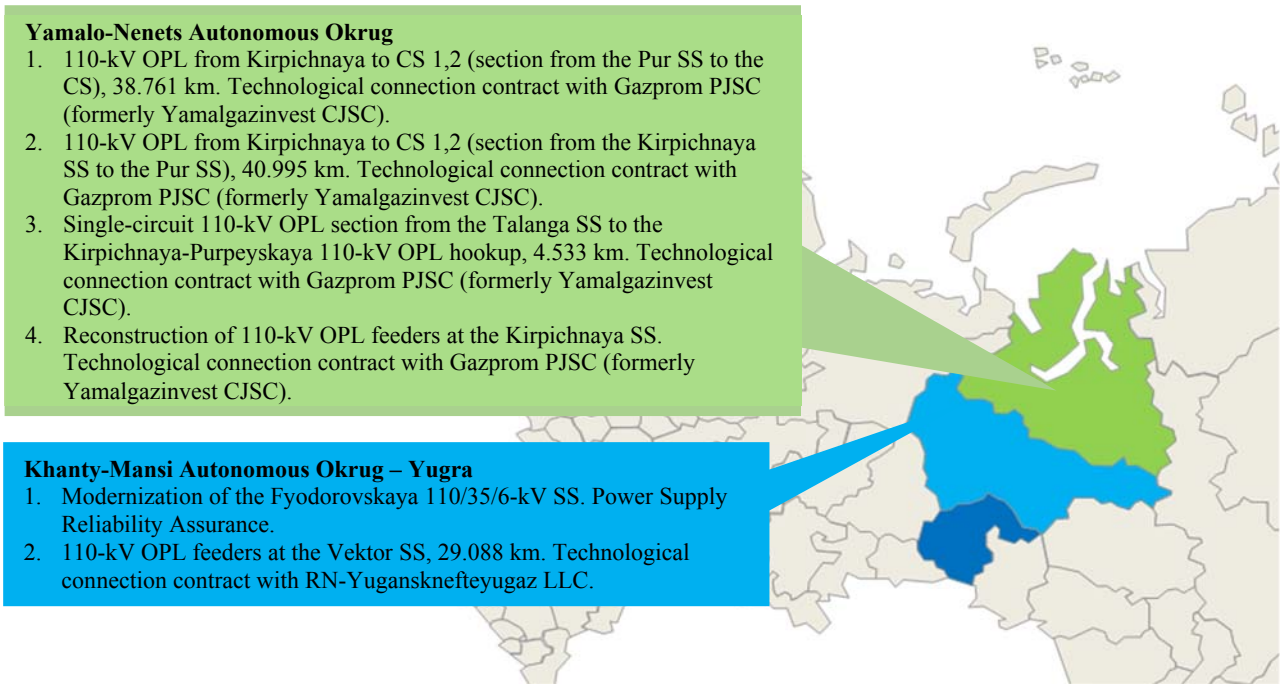
4.2. Capital Construction Quality Control and Pricing

Pursuant to the Order of the Government of the Russian Federation dd. June 21, 2010 No. 468 On the Construction Control in Capital Construction, Reconstruction, and Overhauls, the Company performs construction control to check construction, reconstruction, and overhaul works

for compliance with the project documentation, technical regulations, the town-planning plans of the land plot, and the results of engineering surveys.

In 2017, independent construction control covered 22.7% of the capital construction projects under the Company's Investment Program.

Key Investment Projects: Construction Complete in 2017



4.3. R&D AND INNOVATION-DRIVEN GROWTH

Key Goals and Objectives of the Company to be Achieved by the Innovation-Driven Growth Program. Economic, Technological, and Socioeconomic Targets

Tyumenenergo JSC is an advanced energy company that seeks innovation-driven growth. The Tyumenenergo JSC Innovation-Driven Growth Policy aims at creating a set of methods, technologies, and tools to improve the reliability and quality of power supply. To that end, the Company seeks to use state-of-the-art hardware and technology to maximize the reliability of its grids as well as the efficiency and safety of its processes.

Innovation-Driven Growth Program specifies what has to be done for the innovative development of the Company's grid complex.

The Tyumenenergo JSC Innovation-Driven Growth Program for 2016–2020 with an outlook for 2025 (hereinafter, "the Program") is an internal document of Tyumenenergo JSC that was prepared as a part of the Innovative Development, Energy Saving and Energy Efficiency Promotion Policy of PJSC Rosseti as approved by the Company's Board of Directors, Minutes dd. June 24, 2014 No. 08/14 (hereinafter, "the Policy"); the Program is the main tool for implementing the Policy.

The Program enumerates measures aimed at creating a new value by improving the existing production and technology system as well as the Company's business processes, by implementing new technologies, by developing the science and engineering potential, creating an appropriate infrastructure and talent pool.

The Program is aimed at creating grids of a new technological structure with a whole new

level of reliability, efficiency, availability, controllability, and customer focus of the grid complex managed.

A grid of a new technological structure is a power system that features the following:

– automated grid control based on distributed (multi-agent) control principles;

– real-time parametric self-diagnostics of the power system, its individual facilities and equipment units to improve the system-wide and consumer-specific reliability, to reduce operating costs, etc.;

– flexible self-reconfiguration of the grid as a response to changes in parameters and topology, including accident prevention / post-emergency self-recovery;

– provision of specialized services to various consumer categories; these services must be classified by timing, scope, power quality and pricing (including such services as electric vehicle charging, etc.).

To that end, the Program defines the following main problems to solve:

– reaching the global-average values of power supply reliability, safety, quality, efficiency, and availability by implementing new equipment, technology, and practices;

– improving the Company's customer focus by enhancing the existing services and creating new ones, including high-tech services;

– developing, testing, and enabling an appropriate environment for the mass implementation of innovative equipment and practices with due account for integrated efficiency factors and principles of controlling facility and system life-cycle;

– enhancing the cooperation with the agents in the industrial innovative ecosystem, such as small and medium-size enterprises, universities, R&D institutions, premier manufacturers in Russia and abroad, etc.;

– enhancing the innovation activity management system and creating an intellectual property management system;

– optimizing the Company's activities on a new technological and methodological basis;

– creating a talent pool of employees qualified to meeting objectives regarding the Company's innovation-driven growth;

– reducing the negative environmental impact of the grid complex facilities.

What is expected from the Program:

– achieving production parameter values to match those of comparable state-of-the-art grid companies;

– closing the technical and technological gap between the Company and comparable state-of-the-art grid companies;

– establishing the foundation for smart distribution grids;

– improving energy efficiency, which includes a decrease in power transmission losses.

In 2017, work under the Innovation-Driven Growth Program was done in the following areas:

– transition to digital substations of various voltage classes (from 35 to 110/220 kV);

– transition to digital active-adaptive grids with a distributed intelligent automation and control system;

– transition to integrated efficiency of business processes and management system automation;

– using new technologies and materials in power engineering;

– advancing the system for the development and implementation of innovative products and technologies, including R&D products;

– development of the talent pool and educational partnerships.

Financing of the Program from the Company's own sources totaled 475.3 million rubles in 2017.

In 2017, the Innovation-Driven Growth Program was carried out at 98%.

Key Areas of R&D, Pilot Testing, Design, and Technology Efforts Taken Under the Tyumenenergo JSC R&D Plan

One of the main components of the Innovation-Driven Growth Program is the R&D, Pilot Testing, Design, and Technology Effort Plan (the R&D Plan) adjusted as a part of the Mid-Term D&S Plan for 2017–2019 approved as a part of the Tyumenenergo JSC Annual D&S Report for 2016.

The Company's business plant stipulates a single source of R&D financing: using its own research funds under the Operating Activities item. R&D costs are included in controllable costs.

The R&D Plan is based on the actual grid complex problems and promising R&D-enabled innovations, for which the Company takes action to develop breakthrough technologies to create fundamentally new developments, technologies, and methods; another direction consists in applied research to improve the existing technologies.

The R&D Plan is prepared to cover the following R&D areas:

- transition to digital substations of various voltage classes (from 35 to 110/220 kV);
- transition to digital active-adaptive grids with a distributed intelligent automation and control system;
- transition to integrated efficiency of business processes and management system automation;
- using new technologies and materials in power engineering.

The main purpose of the R&D Plan is to ensure sustainable innovative development of the grid complex by creating technologies and components for power grids of a new technological structure with a whole new level of reliability, efficiency, availability, controllability, and customer focus.

Pursuant to the R&D Plan, Tyumenenergo JSC carried out work under three contracts in 2017, one of which is now complete, whereas the two others are still work-in-progress.

Tyumenenergo JSC R&D Progress in 2017:

- planned R&D costs totaled 42.73 million rubles (VAT excluded) in 2017;
- actual R&D costs totaled 42.73 million rubles (VAT excluded) in 2017.

Tyumenenergo JSC R&D Financing in 2017:

- planned R&D financing totaled 9.97 million rubles (VAT included) in 2017;
- actual R&D financing totaled 9.97 million rubles (VAT included) in 2017.

Key R&D Activities in the Reporting Period

Research Effort 1 (complete): Developing a Set of Measures to Reduce Accident Rates at Tyumenenergo JSC OPL Under Severe Engineering, Geological, Climatic, and Geocryological Conditions. Researcher: FGC UES JSC R&D Center

Research Effort 2 (WiP): Research and Development of a Standard Methodology for Evaluating the Efficiency of Innovative Projects in the Light of the Industrial Specifics of Power Engineering. Researcher: FSBI Russian Energy Agency of the Russian Ministry of Energy.

Research Effort 3 (WiP) Core Digital Protection Complex with Centralized Backup for 110/35/10(6)-kV Substations (with a Pilot Project). Researcher: Research and Production Association Bresler LLC.

Primary Technological Results, Equipment, Technology, and Materials Gained and Developed by the R&D Efforts in the Reporting Period

The R&D project Developing a Set of Measures to Reduce Accident Rates at Tyumenenergo JSC OPL Under Severe Engineering, Geological, Climatic, and Geocryological Conditions was completed.

During the first stage of the R&D project (from January 1, 2017 to October 31, 2017), Tyumenenergo JSC branches (Uray Electric Grids, Energocomplex, Nefteyugansk Electric Grids, Surgut Electric Grids, Nizhnevartovsk Electric Grids, Kogalym Electric Grids, Noyabrsk Electric Grids, and Northern Electric Grids, hereinafter, "the Branches"):

– had an ArcGIS-based project that was based on a relational database designed for mapping the OPLs on a basic map, for storing the spatial and technical data on such OPL, as well as for recording operation of OPLs and the spatial data thereon;

– were analyzed for 35/110/220-kV OPL accidents caused by climatic and other phenomena (such as thunderstorms, icing, frosting, winds, third-party influences, bird-induced effects, wire galloping, aging, wear, construction and installation defects, structural and manufacturing defects, fires, and frost heaving); this analysis showed that most outages at 35/110/220-kV OPLs operated by the Branches were due to climatic effects such as lightning surges, icing, frosting, and winds. Analysis of lightning-caused outages at the Tyumenenergo JSC 35-to-220 kV OPLs helped identify the lines with low thunderstorm resistance. Analysis of the frost heaving of tower foundation piles identified the OPLs that were affected by this factor the most;

– the designed climatic loads sustained by the existing 35/110/220-kV OPLs were compared to the PMS-7 requirements; this comparison identified that for some OPLs, higher accident rates were due to the inconsistency of the rated climatic loads as per PMS-7 with the loads the OPL were designed to endure;

– the existing 35-to-220-kV OPL of the Tyumenenergo JSC branches were mapped on a basic map;

– for all the OPLs of each branch of Tyumenenergo JSC, there was prepared a set of maps which specified the locations of all thunderstorm-caused outages, icing- and wind-caused outages, and technological disturbances due to other factors (third-party influences, birds, etc.), as well as the locations of frost heaving of OPL tower foundation piles; the climatic loads the existing 35/110/220-kV OPLs had been designed to sustain were compared in the context of the PMS-7 requirements;

– specific 35/110/220-kV OPLs of Tyumenenergo JSC branches were listed; a set of measures on reducing the accident rates observed at such existing 35/110/220 kV OPL was developed;

– Development of Technological Solutions for the Design Modernization of Standardized 35-to-110-kV OPL Steel Lattice Towers and Foundations Used in the Northern Parts of Western Siberia was a research project done by Institute ENERGOSETPROEKT JSC, which underwent thorough evaluation as a part of the research effort above. Experts concluded that the project matched the Statement of Work it had been done under. The practical value of this project consisted in developing basic approaches to, and solutions for the modernization of steel lattice towers used as supports for 35-to-110-kV OPLs; these approaches and solutions were based on a comprehensive analysis of factors that caused accidents at the power lines operated in the northern parts of Western Siberia; the analysis also covered such factors as the efficiency of design solutions in OPL construction, the foundation-building technology used, and the effectiveness of repairs. The design and structure of the standardized 35-to-110-kV OPL steel lattice towers used in the northern parts of Western Siberia, as well as their foundations, were modernized and standardized in full accordance with the effective regulative documents and with due account for climatic factors. Analysis of 35-to-110-kV OPL tower drawings revealed those drawings could be used to manufacture tower prototypes. The new design solutions regarding the reinforcement of the pile ends must be tested by experimental pile driving in West Siberia.

During the second stage of the research effort (from July 1, 2017 to December 29, 2017):

– various OPL tower foundation designs and structures using various types of piles were compared against each other in permafrost soils as well as in highly and excessively heaving soils; pile types tested included conical tubular piles with longitudinal blades, cross piles, and bored piles). Results were computationally verified;

– a method was developed for calculating the tangent force of frost heaving as well as the forces that prevent the buckling of piles. The method takes into account the cross-section shape as well as the use of anti-heaving coatings, if any;

– recommendations were made on how to use OPL tower foundation designs and structures with various types of piles in permafrost soils (including open-profile cruciform-section metal piles designed earlier as a part of the Tyumenenergo JSC R&D Program), in highly and excessively heaving soils. These recommendations help improve the OPL reliability and take into account the negative natural and climatic factors of KhMAO-Yugra and YNAO;

– recommendations (new solutions) were made on how to improve the reliability of the existing 35/110/220-kV OPL operated by Tyumenenergo JSC, which are applicable to the structural elements of the existing 35/110/220-kV OPLs operated by Tyumenenergo JSC;

– a method was developed for moving the 35-to-110-kV OPL tower poles onto three-point surface foundations without dismantling wires, cables, and the tower itself;

– solutions were made on the design of three-point foundations to ensure continuous operation of towers in design conditions even in case an individual foundation is deformed;

– a method was developed for reinforcing the OPL tower foundations by using additional anchoring devices;

– a method was proposed for in-field restorating of the bearing capacity of reinforced-concrete foundations by using repair compositions based on nano-modified concrete (ISTAVA dry mix, TU 5745-015-98593931-2015). The technological solution was developed on the basis of research efforts and experience in introducing a method for restoring damaged reinforced-concrete structures at heavy-duty facilities. The service life of repaired reinforced-concrete structures in West Siberia is comparable to that of concrete OPL structures; hence no further repair is required. The costs of repair-and-protection compositions is comparable to that of repair compositions based on traditional concrete;

– various options on improving the thunderstorm resistance of OPLs were proposed;

– a method was proposed that consisted in using sectionalized centrifuged reinforced-concrete stands to repair and re-equip 35-to-500-kV OPLs. The research effort produced a regulatory framework for implementing such sectionalized stands. The researchers described how old towers were replaced with new ones at the Rosseti PJSC facilities;

– proposals were made on how to design 35/110/220-kV OPL towers and foundations with due account for the natural and climatic conditions of KhMAO-Yugra and YNAO; these measures are to reduce the OPL accident rate and bring about all the necessary protections;

– it was proposed to use OPL tower foundations based on conical tubular piles with longitudinal blades. This new design minimizes the pile-soil contact surface in the areas where the soil freezes and thaws alternately, which helps reduce the frost-heaving forces while ensuring the reliable sealing of pile bottoms situated below the soil freezing level. One specific feature of such foundations is that they can be bolt-assembled at the construction site and minimize the need for picket welding. These foundations are also 15% to 25% lighter than known similar structures;

– recommendations were made on improving the durability of foundations and reducing the costs of using them: to that end, it was proposed to procure uniformly-designed structures of more durable concretes for facility construction;

– proposals were made on using reinforced-concrete intermediate and anchor-angular 110-kV OPL towers made of centrifuged sectionalized stands;

– design documentation was prepared that described the foundational structures of OPL towers for heaving soils. These structures were designed to resist tangent frost-heaving forces and employed anti-heaving tubular conical piles with longitudinal blades.

List of IP Titles (Patents, Certificates) Related to R&D Results

In 2017, the Company was awarded three R&D titles:

– utility-model patent dd. January 18, 2017 No. 168114, titled Centralized Relay Protection and Substation Control Device with a Highest-Voltage Distribution Device Using a Circuit-Breaker Bridge in Line Circuits and a Repair Jumper on the Line Side. Applicants: Tyumenenergo JSC and Relematika LLC (formerly R&D Center Bresler LLC);

– invention patent dd. March 23, 2017 No. 2614180, titled Prefabricated Lightweight Towers for the Emergency Recovery of Power Lines. Applicants: Tyumenenergo JSC and FENIX-88 CJSC;

– invention patent dd. June 21, 2017 No. 2622895 Method for Remote Power Line Protection. Patent holders: Tyumenenergo JSC and Relematika LLC (formerly R&D Center Bresler LLC).

In 2017, the Company completed the pilot operation of the following R&D-produced projects:

R&D Title	R&D Product	Pilot Operation Results	Pilot Operation Facility	Pilot Operation Timeframe
R&D project: Development, pilot production, and testing of lightweight single-chain and dual-chain intermediate composite-material towers using insulating crossarms, designed for high-voltage OPLs (up to 110-kV)	Single- and dual-chain composite-material towers with insulating crossarms type ПК-110-1 and ПК-110-2	Pilot operation results are to be discussed at a meeting of the Tyumenenergo JSC Technical Board in Q3 2018, which is to decide whether further replication of this technology is feasible.	Kazanka to Dubynki 110-kV OPL of the Ishim LPU; Berkut to Dekabristov and Dekabristov to Krivoluzhskaya 110-kV OPL of the Yuzhnoye LPU, Tyumen Distribution Grids	July 1, 2013 to December 31, 2017
R&D project: Developing Wireless System for Monitoring the Condition of Composite-Material Towers Used for Overhead Power Lines (up to 110-kV)	A wireless system for monitoring the condition of composite-material towers used for overhead power lines (up to 110-kV)	Pilot operation results are to be discussed at a meeting of the Tyumenenergo JSC Technical Board in Q3 2018, which is to decide whether further replication of this technology is feasible.	Kazanka to Dubynki 110-kV OPL of the Ishim LPU; Berkut to Dekabristov and Dekabristov to Krivoluzhskaya 110-kV OPL of the Yuzhnoye LPU, Tyumen Distribution Grids	November 30, 2015 to December 21, 2017
R&D project: Developing a System for Monitoring the Insulation Conditions and Lightnings, and for	A system for monitoring the insulation conditions and lightnings and for	Pilot operation results are to be discussed at a meeting of the	Gubkinskaya to Novogodnyaya-2 110-kV OPL, Gerashchenko to Pyaku Pur-1 110-kV	December 1, 2016 to December 31, 2017

Locating Damage Points in 110-kV OPL	locating damage points in 110-kV OPL	Tyumenenergo JSC Technical Board in Q3 2018, which is to decide whether further replication of this technology is feasible.	OPL, Severny SwS to Kharampurskaya-2 110-kV OPL, with a branching to the Yuzhno-Kharampurskaya SS of Noyabrsk Electric Grids	

The Following R&D Products Were Implemented over 2017:

R&D Title	R&D Product	Facility where Implemented	Scope of Implementation	Implementation Effect
Pilot testing-based optimization of surge protectors against earth fault for 6-to-35-kV OPL and cable lines	ТОР 110-ИЗН	Slava 110/35/6-kV SS of Kogalym Electric Grids; Novourengoyaskaya 110/10-10 SS of Northern Electric Grids; Quartz 110/10 SS of Energocomplex; Sobolinaya 110/10 SS of Uray Electric Grids	52 pcs.	Reduction in power outage (undersupply) durations Reduced operating costs of locating SPEF. Faster elimination of SPEF. Lower or nullified chance of SPEF dual-phase earth fault. Lower CL insulation wear.
Development, production, and implementation of digital relay protection devices not using operating current sources.	TOP-120	Kalman 110/10 SS and Armizon 110/35/10 SS of Yuzhnoye LPU, Tyumen Distribution Grids	18 pcs.	Reduction in modernization costs as a result of a smaller range of equipment units in use; faster equipment commissioning; improved functionality; functions for the registration and subsequent analysis of emergency events; telemetry and remote control; better reliability as a result of shorter secondary commutation circuits.
Production, testing, and certification of prototype uniform tower foundations for 35-to-220-kV OPLs, based on open-profile cruciform-section metal piles	Open-profile cruciform-section metal piles	Iskonnaza to Limbya-Yakha 1,2 110-kV OPL of Northern Electric Grids	32 pcs.	Reduced material costs as a result of using optimized circuitry and OPL tower foundation parameters; lower OPL operating costs as a result of zero heaving of tower foundation piles.

License Agreements Entered Into in 2017

In 2017, the Company entered into one license agreement: Agreement dd. May 25, 2017 No. ЛД-26/17-01. Licensee: NKT LLC. Under a simple license, Tyumenenergo JSC entitles NKT LLC to use know-how to produce, offer for sale, and sell 110-kV composite towers and foundation structures, ordered by third parties and manufactured by the licensee within the territory on the basis of Technical Documentation; for each unit of Product thus manufactured, Tyumenenergo JSC charges 2% of its cost.

Payments Received in 2017 Under the License Agreement

In 2017, the Company received 0.309 million rubles under Agreement No. 26/15-01 (TOP 110-ИЗН) dd. December 31, 2016 for its Invention patent No. 2480882 dd. April 27, 2013 Surge Protectors Against OPL and CL Single-Phase Earth Faults in 6-to-35-kV Distribution Grids (for the sale of TOP 110-ИЗН devices in 2016).

Performance Indicators

Performance Indicator	UNITS	2017
Costs of research and development performed by third parties (including a presentation by contractor, which might be a university, a research institution, or an innovative small/medium-size enterprise)	thousand rubles	42,726
Of that, for projects carried out by or as a part of:		
technology platforms	thousand rubles	0
universities	thousand rubles	0
research institutions	thousand rubles	42,726
Procurement costs of innovative products (technologies, solutions, goods, jobs, and services under the Company's Innovation-Driven Growth Program)	thousand rubles	426,991

Results of the Company's Innovation-Driven Growth Program in 2017

In 2017, Tyumenenergo JSC implemented a number of new technologies mainly aimed at improving the power supply reliability, the controllability and the informativeness of the grid complex.

Completion of Important Projects and Activities Under the Tyumenenergo JSC Innovation-Driven Growth Program in 2017

No. p/p	Project	Measures Taken	Funds to be Disbursed, million rubles.	Funds Disbursed
1	Transition to digital substations of various voltage classes (from 35 to 110/220-kV)			
1.1	Phased digitalization of data collection and processing; control and automation systems for future construction of digital substations	Creating a comprehensive automated control system for 110-kV SS of Tyumenenergo JSC that would feature a vertically integrated information exchange structure using an IEC 61850 process bus, with possible integration of RPA terminals and digital meters in the future	71.4	80.5
		Total for Section 1	71.4	80.5
2	Transition to digital active-adaptive grids with a distributed intelligent automation and control system			
2.1	Creating power metering systems that feature automated data collection and load control with a single data center	8,984 metering points modernized	205.8	187.3
2.2	Implementing a system for remote access to microprocessor-based RPA devices using Egida HW/SW at 110-kV SS of Nizhnevartovsk Electric Grids	The Company implemented a system for remote access to microprocessor-based RPA devices using Egida HW/SW at ten 110 kV SS of Nizhnevartovsk Electric Grids	11.6	10.4

No. p/p	Project	Measures Taken	Funds to be Disbursed, million rubles.	Funds Disbursed
2.3	Creating electric vehicle charging infrastructure	The Company built two charging station at Surgut Electric Grids and three at Tyumen Distribution Grids. Three electric cars were purchased	35.8	29.8
2.4	Creating an automated 10-kV grid at the Tyumen LPU of Tyumen Distribution Grids	Five reclosers were installed at the Tyumen LPU of Tyumen Distribution Grids	0.0	11.8
		Total for Section 2	253.2	239.3
3	Transition to integrated efficiency of business processes and management system automation			
3.1	Developing an integrated business-process management system	— Automating calendar scheduling. — Automating repair cost planning and accounting. — Integrating the PAMS and the Accidents software. — Automating the technical inspection of the equipment. — Automating the generation of SS and PL e-passports for use in the Emergency Recovery Distributed-Resource Management System. — Certification of production warehouses and emergency backup storages. — Certification of production facilities and structures. — Certification of vehicles. — Automating the calculations of physical equipment wear. — Developing a function for generating OPS and SS e-passports. — Developing a function for electronic defect logging. — Developing a function for calculating maintenance scope in conventional and bulking units	71.5	71.56
3.2	Using unmanned aerial vehicles to inspect the Tyumenenergo JSC facilities	Inspecting the 110-kV OPL of Nefteyugansk Electric Grids by means of a UAV	0.0	5.08
		Total for Section 3	71.5	76.64
4	Using new technologies and materials in power engineering			
4.1	Implementation of surge protectors against single-phase earth fault for overhead and cable lines of 6-35 kV distribution grids (TOP 110-*И*3H) Implementing an R&D-based innovative solution	52 TOP 110-*И*3H devices were purchased and installed at Tyumenenergo JSC branches: six at Energocomplex; six at Uray Electric Grids; four at Kogalym Electric Grids; 36 at Northern Electric Grids	2.6	5.4

No. p/p	Project	Measures Taken	Funds to be Disbursed, million rubles.	Funds Disbursed
4.2	Implementation of TOP-120 relay protection devices that do not use a source of operating current. Implementing an R&D-based innovative solution	18 TOP-120 devices were purchased and installed at 110 KV SS of Tyumen Distribution Grids: five at the Kalmak SS; 13 at the Armizon SS	1.1	1.3
4.3	Modernization of the 110-kV OPL from Krasnoleninskaya to Vandmtor 1,2 with branching to the Chulcham SS and Khugor SS; modernization included installation of open-profile cruciform-section metal piles	Design and survey works	4.5	4.5
4.4	Comprehensive implementation of innovative solutions in the construction of the new 110-kV OPL from Iskonnaya to Limbya-Yakha 1,2 of Northern Electric Grids	АСВП 197/55 non-insulated steel-aluminum wire was purchased along with open-profile cruciform-section metal piles. 32 open-profile cruciform-section piles were installed	33.7	18.6
4.5	Implementation of Sirius-TN-I4 (“Сириус-ТН-И4”) transformer voltage regulators	Two Sirius-2-PH transformer voltage regulators were installed at the Sarymskaya SS and two more at the Pokachevskaya SS of Kogalym Electric Grids	0.0	0.5
4.6	Implementation of Sirius-TN-I4 (“Сириус-ТН-И4”) microprocessor RPA device	Two Sirius-TN-I4 (“Сириус-ТН-И4”) microprocessor RPA devices were implemented at the Barsukovskaya SS of Noyabrsk Electric Grids	0.0	0.3
		Total for Section 4	41.9	30.6
5	Advancing the system for the development and implementation of innovative products and technologies			
5.1	Pilot Testing, Design, and Technology Effort Developing standard design solutions for IDGC digital substation on the basis of a centralized protection and control software and hardware complex as a modular software complex. Pilot implementation at a 110-kV SS. Preparing proposals to amend the documentation for the industrial implementation of digital substation technology	Works under the contract are carried out at the Olimpiyskaya 110/10 kV SS of Surgut Electric Grids. Three stages have been completed so far. Two more stages are in progress.	16.7	0.0
5.2	R&D. Developing a set of measures to reduce OPL accident rates in severe engineering-geological, climatic, and geocryologocal conditions of West Siberia and the Far North.	A set of OPL accident reduction measures was developed for Uray Electric Grids, Energocomplex, Nefteyugansk Electric Grids, Surgut Electric Grids, Nizhnevartovsk Electric Grids, Kogalym Electric Grids, Noyabrsk Electric Grids, and Northern Electric Grids	20.0	20.0
5.3	R&D. Preparing the Guidelines on the Evaluation of the Product Life-Cycle Costs	No contract	3.0	0.0

No. p/p	Project	Measures Taken	Funds to be Disbursed, million rubles.	Funds Disbursed
5.4	R&D. Preparing the Guidelines on the Efficiency Evaluation of Innovative Projects	Guidelines on the Efficiency Evaluation of Innovative Projects (Ed. 1) were prepared, which covered R&D reporting and risk mitigation for projects planned under the Innovation-Driven Growth Program	3.0	3.0
5.5	R&D. Core Digital Protection Complex with Centralized Backup for 110/35/10(6)-kV Substations (with a Pilot Project)	Structure, some components, and algorithms were developed for a core digital protection complex with centralized backup for 110/35/10(6) kV substations; core protection complex created	0.0	19.73
	Developing an Information and Analytical Support System			
5.6	Developing and using a software complex of regulatory documentation and technical literature databases	Developing and using a software complex of regulatory documentation and technical literature databases	2.1	2.73
		Total for Section 5	44.8	45.46
6	Developing talent pools and educational partnerships			
6.1	University-provided advanced courses for the Company's employees	381 employees passed advanced training	0.9	2.4
6.2	University-provided retraining courses for the Company's employees	122 employees were retrained	0.4	0.4
		Total for Section 6	1.3	2.8
	Total for the Innovation-Driven Growth Program		484.1	475.3

4.4. TECHNICAL POLICY

Pursuant to the decision of the Rosseti PJSC Board of Directors (Minutes dd. February 22, 2017 No. 252) the Tyumenenergo JSC Board of Directors (Minutes dd. April 5, 2017 No. 13/17) approved the Rosseti PJSC Regulation On Uniform Technical Policy in the Grid Complex as the Company's internal document. Tyumenenergo JSC Order dd. May 2, 2017 No. 274 On Enabling the Rosseti PJSC Regulation On Uniform Technical Policy in the Grid Complex enabled the Rosseti PJSC Regulation On Uniform Technical Policy in the Grid Complex (hereinafter, the Regulation).

The Regulation defines the main activities:

- to improve the functional reliability and efficiency of grid complex in short- and mid-term provided that the appropriate level of industrial and environmental safety will be ensured on the basis of innovative development principles
- to enable all the market players to have non-discriminatory access to grids.

Technological priorities:

- using energy-efficient maintenance-free equipment;
- reducing the total cost of operation of Company-owned equipment and technologies;
- building an intelligent power system with an active-adaptive grid (Smart Grid);
- implementing "digital" components of power grids;
- developing multi-agent control technologies;
- using "active" grid components (FACTS, GES, etc.).

The implementation of the Regulation is monitored by specialized structural units of the Tyumenenergo JSC Executive Office and branches in accordance with their respective functions, and is carried out by the following stages:

- monitoring the regional Power Engineering Development Schemes and Programs (of the Khanty-Mansi Autonomous Okrug — Yugra, the Yamalo-Nenets Autonomous Okrug, and Tyumen Oblast) for compliance with the Regulation;
- preparing strategic documents (policies, strategies, and concepts for technology-related activities) as described in the Regulation;
- preparing technical regulatory documentation (standards, manuals, operating instructions, guidelines, rules, and regulations);
- monitoring the production, repair, and target programs relating to grid facility modernization and construction for conformity with the Company's strategic objectives;
- monitoring the Innovation-Driven Growth Program for conformity with the Company's strategic objectives;
- monitoring the design projects and design and survey works (D&S) relating to grid facility modernization and construction for compliance with the Regulation;
- monitoring the grid facility modernization and construction design documentation for compliance with the Regulation;
- monitoring the technical requirements to, and statements of work for the supply and production of equipment to be used for grid facility modernization and construction, for compliance with the Regulation;
- monitoring the technical and functional requirements to newly procured equipment and materials for compliance with the Regulation;
- monitoring the implementation of power service projects; the Board reviews quarterly reports on the progress and results of activities under such projects;
- monitoring construction, installation, and commissioning works (CI and Commissioning) performed as a part of grid facility modernization and construction, for compliance with the Regulation;
- monitoring production activities as well as the use, maintenance, and repair of grid facilities and equipment, for compliance with the Regulation;
- monitoring the D&S, CI, and power equipment procurement tender documentation relating to grid facility modernization and construction, for compliance with the Regulation;
- confirming the equipment, material, and system allocations.

4.5. Technology Development and Implementation of New Equipment

Tyumenenergo JSC prioritizes equipment reliability in its reconstruction, modernization, and technical re-equipment efforts, where the crucial method consists in using newer and better equipment.

In 2017, Tyumenenergo JSC implemented five new technologies mainly aimed at improving the power supply reliability, the controllability and the informativeness of the grid complex.

Implementation of Surge Protectors Against Single-Phase Earth Fault for Overhead and Cable Lines of 6-35-kV Distribution Grids (TOP 110-ИЗН)

In 2017, Tyumenenergo JSC branches commissioned 52 TOP 110 ИЗН-01 anti-SPEF terminals:

- 36 at the Novourengoyskaya 110/10-10-kV SS of Northern Electric Grids;
- six at the Sobolinaya 110/10-kV SS of Uray Electric Grids;
- six at the Quartz 110/10-kV SS of Energocomplex;
- four at the Slava 110/35/6-kV SS of Kogalym Electric Grids.

ТОР 110-ИЗН is a device designed for selective alarm or shutdown in case of stable or unstable earth faults in overhead or cable power lines of 6-to-35-kV grids, and functions regardless of how the neutral works.

What makes this device unique is that the relay protection equipment does not use any pre-configured setpoints; instead, it reacts to the transient response in case of single-phase earth fault and controls wave propagation by the instantaneous-power sign.

A SPEF always causes an industrial-frequency zero-sequence voltage $3U_0$ to emerge, which is what is used to pick up the device trigger. For substations that lack voltage transformers, microprocessor devices provide centralized anti-SPEF protection with signal exchange functionality.

Economic effect of implementing surge protectors against single-phase earth faults:

- reduction in power outage (undersupply) durations;
- reduced operating costs of locating SPEF;
- faster elimination of SPEF;
- lower or no chance of a SPEF becoming a dual-phase earth fault;
- lesser CL insulation wear.

Implementation of TOP-120 Relay Protection Devices That Do Not Use A Source of Operating Current

TOP-120 relay protection devices that do not use a source of operating current were implemented at the Kalmas SS (five devices) and the Armizon SS (13 devices) of Tyumen Distribution Grids.

TOP-120 RPA kit is intended for use at power stations and substations and can be installed in complete 6-to-35-kV switchgears, where it is used for protection, automation, control, and signaling. The main feature of this device is that it can be operated at SS that do not have operating current sources; the circuit breakers are shut down by deshunting (the device and the circuit-breaker circuits are powered from the current circuits when the connection point short-circuits).

The device is intended for use as the main or backup protector for various connections; it can be used as a standalone device or in combination with other RPA devices using different components.

TOP-120 contains microprocessor components to ensure consistent performance and high measurement accuracy, as well as to be able to run various automation, control, and protection algorithms.

Each device can function as a combined power supply (powered from the current circuits of the protected connection) and a deshunting relay for emergency circuit-breaker shutdown, which enables a user:

- to use fewer equipment items;
- to improve operation reliability and uptime by reducing the secondary commutation circuits, which, if damaged, can cause a protection failure;
- to ensure normal operation of protection in case of a current outage.

Besides, the device is capable of running various communication protocols, which enables integration with the SS monitoring system and the APCS. RS-485 ports are used to transmit data regarding the device and facility status. as well as event logs and emergency oscilloscope readings.

The device is used to protect sectionalized circuit breakers, cable or overhead power lines, lines connected to 10/6-kV or 6 to 10/0.4-kV auxiliary transformers, whereby it can fully protect 6-to-10-kV connections.

Implementing a Smart Metering System

When it comes to energy efficiency and energy saving, Tyumenenergo JSC continues its efforts in creating smart electric-energy (power) metering systems for the distribution grids in the retail market, as stipulated in the Program for Long-Term Development of Power Metering Systems.

A smart metering system is a set of hardware and software and comprises power meters, data reporting devices, data collection centers, and user workplaces.

From meters to data reporting devices, data is transmitted directly via the power circuits or wirelessly, hence no interface lines are needed. Data is further transmitted to the collection center via GSM/GPRS channels.

Creating a smart electric-energy (power) metering system for retail-market distribution grids enables timely and reliable provision of correct and legitimate electric-energy (power) flow data to all the power market participants, which is necessary for the functioning of wholesale and retail power markets.

The implemented smart metering systems have a wide range of functions:

- power profile;
- load management;
- built-in data transmission and reception modules;
- power quality control;
- multi-tariff functionality.

Creating a comprehensive automated control system for 110 kV SS of Tyumenenergo JSC that would feature a vertically integrated information exchange structure using an IEC 61850 process bus, with possible integration of RPA terminals and digital meters in the future

Creating a comprehensive automated control system for the Tyumenenergo JSC 110 kV SS that has a vertically-integrated data exchange structure and uses IEC 61850 process buses, with possible integration of RPA terminals and digital meters in future, is the first stage of digitalizing data collection and processing, control and automation systems for future construction of digital substations.

Key features:

- Enabling a transition in operational-dispatching and technological management of power systems from monitoring the current state to proactive control methods with event forecasts and preventive changes. This is achieved by:
  - drastic reduction in computing time for parameter planning, which accelerates and qualitatively improves decision-making in power system management;
  - considerably higher parameter calculation accuracy as a result of using data on actual physical power facilities;
  - staffing new-class personnel and training them to use applications for online modeling of the current processes and for the automatic proactive reliability analysis in addition to the SCADA subsystem and real-time telemetry data.
- A distributed information infrastructure capable of connecting various control-center Automated Dispatching Control Systems (ADCS) in various configurations, e.g. a hierarchical configuration for branches or a peer-to-peer configuration for related organizations.
- Status evaluation for a more stable performance of online grid analysis applications used in power systems that might lack telemetry equipment.
- Automatic equivalenting of "complete" physical power system models to working models.
- An open platform for application integration on the basis of international standards and technologies to avoid user dependence on a single software company.
- Enabling the simultaneous use of applications that are based on different CIM versions.

o A state-of-the-art uniform GUI for all applications: from one-line diagrams and trends to videos and 3D animation; from high-definition video screens to mobile devices.

Innovative project objectives:

– integrating the metering and control systems of all 110-kV power facilities;
– improving the observability and controllability of power facilities;
– improving occupational safety and reducing injury rates at automated SS;
– reducing M&R costs by means of monitoring- and diagnostics-based repair scheduling.

Extension of equipment service life by reducing control error rates and by considering the equipment monitoring and diagnostics results.

The Company's Key Projects

No.	Branches	Facility	Key Technical Parameters
1	Tyumen Distribution Grids, Uray Electric Grids, Energocomplex	Creating smart electric-energy (power) metering system for the retail-market grids of Tyumenenergo JSC. 8,984 metering points enhanced	Creating a smart electric-energy (power) metering system for retail-market distributed grids enables timely and reliable provision of correct and legitimate electric-energy (power) flow data to all the power market participants, which is necessary for the functioning of wholesale and retail power markets
2	All the Tyumenenergo JSC branches: Uray Electric Grids, Energocomplex, Nefteyugansk Electric Grids, Surgut Electric Grids, Nizhnevartovsk Electric Grids, Kogalym Electric Grids, Noyabrsk Electric Grids, Northern Electric Grids, and Tyumen Distribution Grids	Developing a Production Asset Management System (PAMS)	The PAMS is a multi-level long-term effort. The Company's Board of Directors defines the implementation of the Production Asset Management System as a high priority. It is planned to use the PAMS as a basis for implementing uniform principles of reporting standardized-format details on the fixed assets; this data is used by various management, technology, and accounting units, systems, and databases of Rosseti PJSC, Tyumenenergo JSC, and other Rosseti PJSC subsidiaries
3	Olimpiyskaya 110/10-kV SS of Surgut Electric Grids	Developing standard IDGC digital substation design solutions on the basis of a centralized protection and control software and hardware complex as a modular software complex. Pilot implementation at a 110-kV SS. Preparing proposals to amend the documentation for the industrial implementation of digital substation technology.	As a part of the project, the Company tests digital substation technology as a key Smart Grid component in an in-field setting. Here are the problems to solve: – optimizing the general and system-specific digital substation structure while also finding the best way to switch from conventional substations to their digital counterparts; – preparing proposals on amendments to Russian regulatory frameworks; – metrological certification of automation systems (including the Automated Commercial Power Metering System, ACPMS) with a full support of IEC 61850-9-2; – collecting statistics on digital substation reliability;

No.	Branches	Facility	Key Technical Parameters
			– accumulating implementation and operation experience, personnel training, and establishment of competence centers

5. FINANCIAL AND ECONOMIC PERFORMANCE

5.1. ANALYSIS OF FINANCIAL AND ECONOMIC INDICATORS

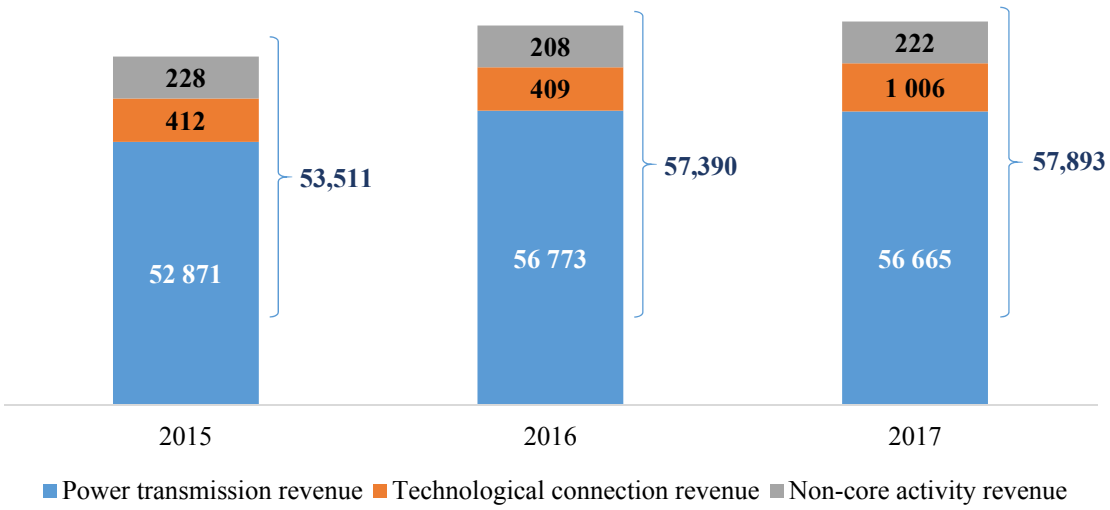
This section of the Annual Report details the Company's assets, liabilities, and financial-economic indicator analysis for 2015–2017.

Revenue

The revenue of Tyumenenergo JSC totaled 57,893 million rubles in 2017 — 503 million rubles or 1% higher against 2016.

Most of that revenue (98%) came from power transmission services.

Revenue Mix, million rubles



Changes in Revenues by activity:

– power transmission revenue totaled 56,665 million rubles in 2017, a 108 million rubles or 0.2% lower decrease against 2016. This revenue drop was due to reduction in power transmission volumes resulting from the reorganization of SIBUR Tobolsk LLC and Gazpromneft-NNG JSC entering into a direct contract with PJSC FGC UES, as well as due to lower power consumption of oil-and-gas companies;

– as of the end of 2017, revenue from technological connection to Tyumenenergo JSC grids totaled 1,006 million rubles — 597 million or 146% higher than in 2016;

– revenue from non-core activities totaled 222 million rubles — 14 million or 7% higher than in 2016. This increase was due to higher revenues from repair and maintenance services.

Cost

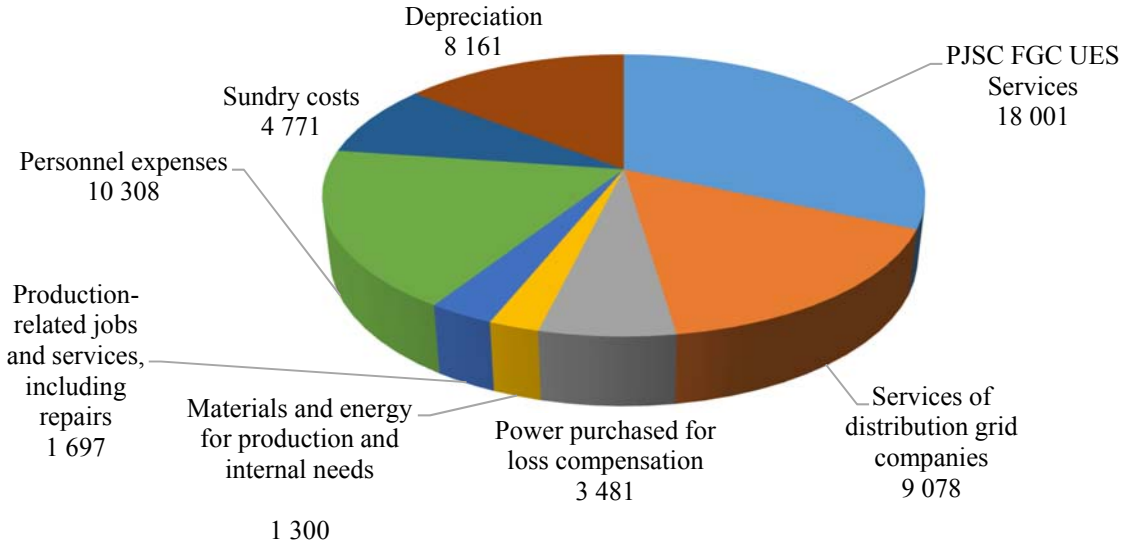
The cost of Tyumenenergo JSC-sold goods, jobs, and services totaled 56,797 million rubles in 2017 — 2,621 million rubles or 5% higher than in 2016. The cost increase in 2017 was mainly due to an increase in infrastructure payments, depreciation, and property tax.

The table below presents the dynamics of cost components.

million rubles

No. p/p	Cost Items	2015	2016	2017	2017-to-2016 Deviation	
					Abs.	%
1	**Infrastructure Costs:**	**25,562**	**28,387**	**30,560**	**2,173**	**8**
1.1	FGC UES PJSC services	16,598	17,200	18,001	801	5
1.2	Services of distributed grid companies	6,391	8,206	9,078	872	11
1.3	Power purchased to compensate losses	2,573	2,981	3,481	500	17
2	**In-House Costs**	**16,320**	**17,905**	**18,076**	**171**	**1**
2.1	Materials and power for production and internal needs	1,157	1,258	1,300	42	3
2.2	Production-related works and services, including repairs	1,499	1,826	1,697	-129	-7
2.3	Personnel expenses	9,875	10,520	10,308	-212	-2
2.4	Other costs	3,789	4,301	4,771	470	11
2.4.1	Taxes and duties	1,055	1,453	1,822	369	25
3	**Depreciation**	**7,075**	**7,884**	**8,161**	**277**	**4**
	TOTAL COST	**48,957**	**54,176**	**56,797**	**2,621**	**5**

Cost Structure 2017



Key Cost-Change Factors:

– infrastructure costs increased due to higher wholesale prices of power and the approved purchased-power marketing allowance for loss compensation, as well as due to higher individual tariffs for LGSs and the load-loss elimination mechanism terminated on August 1, 2017;

– depreciation increase was due to the revaluation of fixed assets as of December 31, 2016;

– higher other costs were mostly due to the property tax rate being increased by 0.3% pursuant to the Tax Code of the Russian Federation, Ch. 31, Art. 380.

Financial Performance

million rubles

No. p/p	Name	2015	2016	2017	2017-to-2016 Deviation	
					Abs.	%
1	**Revenue from Sales of Products (Services), including:**	**53,511**	**57,390**	**57,893**	**503**	**1**
1.1	Revenue from power transmission	52,871	56,773	56,665	-108	0
1.2	Revenue from technological connections	412	409	1,006	597	146
1.3	Non-core activities	228	208	222	14	7
2.	**Cost of Products (Services)**	**48,957**	**54,176**	**56,797**	**2,621**	**5**
3.	Gross profit	4,554	3,214	1,096	-2,118	-66
4.	Administrative expenses	16	10	12	2	16
5.	Selling expenses	–	–	–	–	–
6.	Sales profit (loss)	4,538	3,204	1,084	-2,120	-66
7.	Interest receivable	1,206	768	333	-435	-57
8.	Interest payable	–	43	234	191	444
9.	Revenue from stakes in other organizations	2	3	5	2	74
10.	Other revenues total	2,238	1,023	2,492	1,469	144
11.	Other expenses total	2,792	1,322	2,689	1,367	103
12.	**Profit (loss) before tax**	**5,192**	**3,633**	**991**	**-2,642**	**-73**
13.	Profit tax and other payments	1,496	1,332	968	-364	-27
14.	**Net Profit**	**3,696**	**2,301**	**23**	**-2,278**	**-99**
15.	**EBITDA***	**12,268**	**11,560**	**9,386**	**-2,174**	**-19**

**EBITDA stands for earnings before interest, taxes, depreciation and amortization*

As of the end of 2017, the net profit of Tyumenenergo JSC totaled 23 million rubles — 2,278 million lower than in 2016. Net profit was lower due to the following:

– lower revenue from power transmission;

– increased infrastructure payments;
– decreased interest receivable due to a reduction in available funds.

Financial Status and Funding Sources of the Company

million rubles.

Indicator	December 31, 2015	December 31, 2016	December 31, 2017	2017 to 2016 deviation	
				Abs.	%
Total Assets	**141,777**	**143,406**	**147,816**	**4,410**	**3**
Value of non-current assets	128,890	136,173	142,577	6,404	5
Value of current assets	12,887	7,233	5,239	-1,994	-28
Total Liabilities	**141,777**	**143,406**	**147,816**	**4,410**	**3**
Equity capital	117,740	123,902	125,503	1,601	1
Long-term liabilities	11,817	9,985	14,522	4,537	45
Short-term liabilities	12,220	9,519	7,791	-1,728	-18

Assets Side of the Balance

As of the end of 2017, assets totaled 147,816 million rubles — 3% increase against 2016. Given the specifics of Tyumenenergo JSC, the asset structure is dominated by *non-current, or fixed assets (> 95%)*. As of December 31, 2017 those totaled 142,577 million rubles — 5% increase against 2016. This deviation was due to the revaluation of the Company's fixed assets as of December 31, 2017. The residual value of fixed assets as of December 31, 2017 increased by 3,751.3 million rubles as a result of this revaluation. A revaluation surplus of 3,602.7 million rubles was attributed to Capital Surplus; additional 247.2 million rubles were attributed to Other Revenue, and total 98.6 million rubles were attributed to Other Expenses in the Financial Statement. Completion, outfitting, and modernization of the existing facilities increased the value of fixed assets by 1,725.2 million rubles.

The Company's *current assets* totaled 5,239 million rubles in the reporting period (a 28% decrease against 2016). The largest current-asset categories were receivables (44% — 27% decrease against 2016) and cash (17% — 36% decrease against).

Such negative dynamics in the value of current assets was due to a number of objective factors:

– reduction in the actual value of receivables due to a change in the power transmission payment scheme since 2017 (power transmission services are now paid in advance at 50% to 70% of their full cost, as prescribed by the Decree of the Government of the Russian Federation dd. December 21, 2016 No. 1419 On Amendments in the Rules of Non-Discriminatory Access to, and Provision of, Power Transmission Services Regarding the Synchronization of Power Transmission Payments), as well as due to the termination of last-mile connection consumers and contracts with SIBUR Tobolsk LLC (was reorganized) and Gazpromneft-NNG (entered into a direct contract with FGC UES PJSC);
– reduction in cash and cash equivalents available caused by: (i) payment of 2,025 million rubles in dividends on July 24, 2017, (ii) repayment of 2,167 million rubles of principals under the effective loan agreements, and (iii) financing the Company's Investment Program for 2017;
– reduction in financial investment value due to repaying the bonded loan of Northern Caucasus IDGC PJSC on October 31, 2017, which totaled 1,350 million rubles.

Liabilities Side of the Balance

As on December 31, 2017, the charter capital of the Company complies with its constituent

documents and amounts to 27,373.9 million rubles.

Long-term liabilities totaled 14,522 million rubles as of the end of 2017 — 45% increase against 2016. This deviation was due to receiving considerable advance payments for technological connection in the reporting year (4,682 million rubles for NC Rosneft PJSC) as well as due to changing the status of some liabilities for advance TC payments from "short-term liabilities" to "long-term liabilities", as the corresponding contracts were prolonged.

Short-term liabilities totaled 7,791 million rubles as of the end of 2017 — 18% decrease against 2016. This section demonstrates the following dynamics:

– *borrowed funds* (line 1510 f. 1) totaled 1,834 million rubles (15% decrease against 2016) due to the attraction of credit resources in the reporting year, as well as due to the scheduled repayment of loans under the effective loan agreements of the Company;

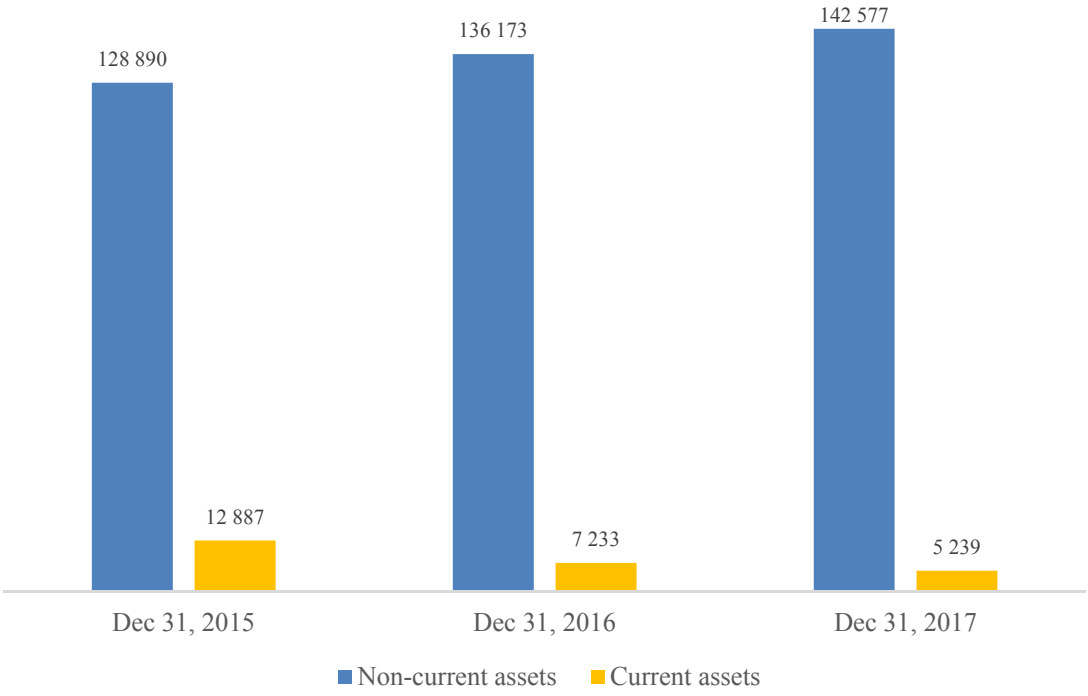
– *accounts payable* (line 1520 f. 1) totaled 4,599 million rubles (24% decrease against 2016) due to (i) changing the status of liabilities for advance TC payments from "short-term liabilities" to "long-term liabilities", (ii) closure of technological-connection operations, and (iii) reduction in accounts receivable for power transmission services, which was caused by a change in the corresponding payment procedure as effected by the Decree of the Government of the Russian Federation dd. December 21, 2016 No. 1419 On Amendments in the Rules of Non-Discriminatory Access to, and Provision of, Power Transmission Services Regarding the Synchronization of Power Transmission Payments.

Net Assets

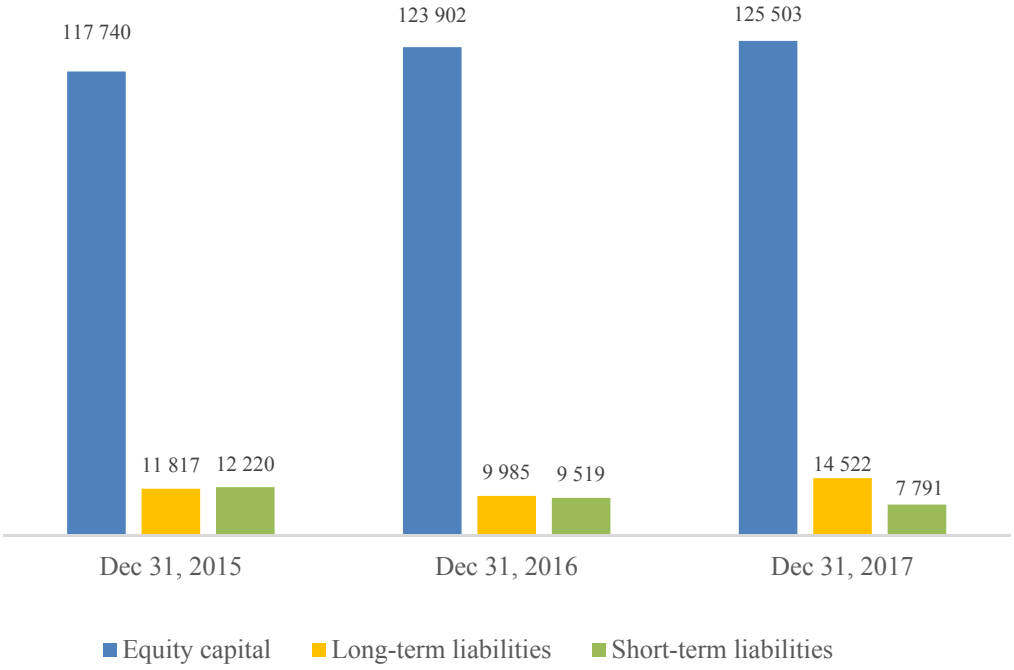
Tyumenenergo JSC shares are not traded in organized securities markets, which is why the Company calculates ***net assets*** instead of market capitalization.

Net assets totaled 125,503 as on December 31, 2017, which was in excess of the Charter Capital, proving the Company's financial stability.

Assets Structure Dynamics, million rubles



Liabilities Structure Dynamics, million rubles



Analysis of the Company's Receivables and Payables

million rubles.

Indicator	Periods			2017-to-2016 Deviation	
	2015	2016	2017	Abs.	%
Receivables (line 1230 f. 1) including:	**3,521**	**3,127**	**2,286**	**-841**	**-27**
Long-term receivables (line 1231 f. 1)	173	195	213	18	9
Short-term receivables (line 1232 f. 1) including:	3,348	2,932	2,073	-859	-29
buyers and customers, including	*2,499*	*2,713*	*1,681*	*-1,032*	*-38*
for power transmission	*2,452*	*2,681*	*1,631*	*-1,050*	*-39*
advances paid	*250*	*79*	*57*	*-22*	*-28*
Other receivables	*599*	*140*	*335*	*195*	*139*

The Company's receivables as at December 31, 2017 totaled 2,286 million rubles (-27% YTD). Most of the receivables (91%) were short-term, the remaining 9% was long-term.

As at December 31, 2017 overdue receivables accounted for 1.8% (40.9 million rubles, of which 10.7 million were overdue debts for power transmission services minus doubtful-debt allowance) of total receivables (3.1% or 96.3 million rubles as on December 31, 2016, of which 56.4 million rubles were overdue debts for power transmission services minus doubtful-debt allowance).

The Company tackles its overdue receivables by both pre-trial settlement and in court, observing the terms of claim-making approved at Tyumenenergo JSC.

As a result of the Company's claims to collect overdue receivables for power transmission services, positive court rulings were made under 116 cases for a total 165.4 million rubles of principal debt and 13.9 million rubles of penalty in 2017. 100% of claimed principal debt and 99.5% of claimed penalty was granted.

Over the same period last year, positive court rulings were made in respect of claims totaling 183.7 million rubles (52 cases), while a negative ruling was made in respect of one case for 2.6 million rubles.

In 2017, the Company received under such court rulings 32 warrants of executions for a total 47.8 million rubles, 43.3 million or 90% of which were paid. Over the same period last year, the Company received 11 warrants of execution for a total 12.3 million rubles, 3.7 million or 30% of which were paid. As on December 31, 2017 action against overdue receivables had been consistently covering 100% of such receivables. Over the reporting year, no overdue receivables for power transmission services was written off.

million rubles.

Indicator	Periods			2017-to-2016 Deviation	
	2015	2016	2017	Abs.	%
Payables (line 1520 f. 1 + line 1450 f. 1), including:	**8,012**	**7,876**	**10,968**	**3,092**	**39**
Long-term payables (line 1450 f. 1), including	1,686	1,813	6,369	4,556	251
advances received for TC	*1,626*	*1,619*	*6,226*	*4,607*	*285*
Short-term payables (line 1520 f. 1), including:	6,326	6,064	4,599	-1465	-24
to suppliers and contractors	*2,903*	*3,002*	*2,533*	*-469*	*-16*
advances received	*1,660*	*1,140*	*163*	*-977*	*-86*
including advances received for TC	*1,395*	*1,076*	*134*	*-942*	*-88*
Other payables	*1,763*	*1,922*	*1,903*	*-19*	*-1*

Short- and long-term payables of the Company totaled 10,968 million rubles as on December 31, 2017 (+39% YTD). Most of the payables (91%) were long-term, the remaining 42% were short-term.

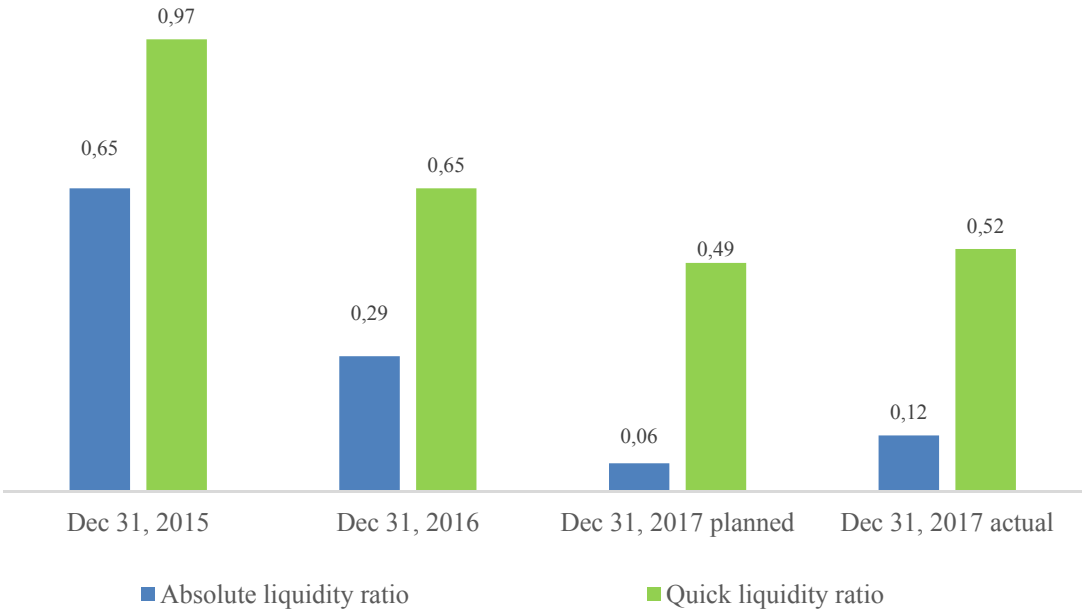
Overdue payables totaled 0.6% or 64.2 million rubles as of the end of 2017.

To prevent any increase in overdue payables and control the current payables, Tyumenenergo JSC established a Payables Commission in 2017.

In general, the Company's payables and receivables are monitored in real time by means of SAP ERP software.

Financial and Economic Indicators

Liquidity Dynamics in 2015-2017



As of the end of 2017, liquidity ration was higher than planned but tended to decline due to objective reasons associated with the reduction in the value of liquid assets (cash and receivables) and of the Company's short-term liabilities.

To manage the liquidity risks, the Company maintains a sufficient amount of cash for covering its liabilities, which is maintained by careful planning and analysis of the Company's cash flows in general.

Financial Stability and Business Activity Indicators

Tyumenenergo JSC comprehensively analyzes and monitors financial indicators to evaluate its progress in relation to strategic priorities and long-term objectives, including the Company's sustainable development.

Indicator	Method for Calculating		December 31, 2015	December 31, 2016	December 31, 2017
Financial Soundness Indicators					
Coefficient of financial independence	Equity capital / Total liabilities	line 1300 f. 1 / line 1700 f. 1	0.83	0.86	0.85
Total debt to EBITDA ratio	(Long-term borrowings + Short-term borrowings) / (Profit before tax + Interest payable + Depreciation)	(line 1410 f. 1 + line 1510 f. 1) / EBITDA	0.71	0.35	0.30
EBITDA/%	(Profit before tax + Interest payable + Depreciation) / Interest on debt liabilities	EBITDA / (line 4123 f. 4 + line 4224 f. 4)	14.74	23.79	40.15

Business Activity Indicators					
Total receivables to payables ratio	Total receivables as at the end of the reporting period / Total payables as at the end of the reporting period	line 1230 f. 1/ (line 1450 f. 1 + line 1520 f. 1)	0.44	0.40	0.21
Share of receivables in the revenue	Total receivables at the end of the reporting period / Revenue / 1.18	line 1230 f.1 / line 2110 f.2 /1.18	0.06	0.05	0.03
Payables turnover ratio	Cost of sales / Avg. value of payables	line 2120 f. 2 / ((line 1450 f. 1 rep. + line 1520 f. 2 rep. + line 1450 f. 1 bas. + line 1520 f. 1 bas.)*0.5)	7.54	6.82	6.03

The Company's financial activities are aimed at ensuring orderly smooth cash inflows and outflows, a good payment discipline, optimal debt-to-equity ratios, and efficient use of capital.

Analysis of the Tyumenenergo JSC statements and calculated coefficients prove the Company a reliable borrower following an efficient monetary policy.

5.2. Operational Efficiency Increase and Cost Reduction Program

The Operational Efficiency Increase and Cost Reduction Program (OEICRP) is a key tool for increasing the internal operational efficiency of the Company and is therefore a core component of the strategic development plan.

The Operational Efficiency Increase and Cost Reduction Program contains a set of measures aimed at improving the internal efficiency and profitability by optimizing the internal business processes.

Below are the OEICRP priorities:

- controllable and uncontrollable costs of the Company;
- equipment maintenance and repair management;
- working capital management;
- fixed-asset management;
- procurement and supply chain management;
- personnel motivation and remuneration system;
- principles of forming organizational and functional structure and optimizing the number of staff;
- energy saving and loss reduction system;
- other enhancements.

Tyumenenergo JSC-developed Operational Efficiency Increase and Cost Reduction Program for 2017–2021 was updated by including new measures and their effects, based on an independent audit of costs. The updated Program for 2017–2021 was approved by the Board of Directors of the Company, Minutes No. 21/17 dd. July 18, 2017.

Priorities under the Program are as follows:

- to reduce specific operating expenses by 15% by 2017 (adjusted for inflation) as calculated per unit of power equipment, in accordance with the Grid Complex Development Strategy approved by the Order of the Government of the Russian Federation dd. April 3, 2013 No. 511-p. The efficiency improvements measures taken in 2017 reduces the specific operating expenses of Tyumenenergo JSC by 23.73% (the goal was 15%);

– to reduce operating expenses (costs) by at least 3% annually in accordance with the Directive of the Government of the Russian Federation dd. April 16, 2015 No. 2303п-П13. The specific operating expense reduction effect amounted to 7.1% in 2017, while the annual goal was 3%.

5.3. Profit Distribution

million rubles.

	For 2014 (AGSM 2015)	For 2015 (AGSM 2016)	For 2016 (AGSM 2017)
Total Undistributed Net Profit, including	**2,669**	**3,696**	**2,301**
Reserve fund	133	185	115
Profit for development	1,869	275	161
Dividends	667	3,236	2,025

Dividend Payment	million rubles	667	3,236	2,025
	% of NP	25	88	88
Dividend size per share, rubles		2.4378	11.8214598	7.39835

* Profit distribution in accordance with the Annual General Shareholder Meetings (AGSM) decisions

AGSM 2015 (for 2014) — AGSM Minutes dd. June 30, 2015 No. 361пр/9.
AGSM 2016 (for 2015) — AGSM Minutes dd. June 29, 2015 No. 491пр/9.
AGSM 2017 (for 2016) — AGSM Minutes dd. June 28, 2017 No. 620пр/3.

In accordance with the Charter of the Company, decision on the distribution of profits for year-end 2017 will be made on the basis of the AGSM decision in 2018.

6. Corporate Governance

6.1. Corporate Governance System

The Company defines corporate governance as a system of relations between the Executive Office, the Board of Directors, the shareholder, and other stakeholders. Corporate governance is a tool that helps set goals and achieve them while also enabling the shareholder and other concerned parties to monitor and control the Company's activities.

Tyumenenergo JSC is a member of the Rosseti Company Group; making up for a significant portion of Rosseti PJSC assets, it understands the importance of voluntary informational disclosure pursuant to the Russian securities-market legislation and accordingly seeks to apply the provisions of the Corporate Governance Code (hereinafter, "the Code") as approved by the Board of Directors of the Bank of Russia March 21, 2014.

The specific corporate-governance feature of Tyumenenergo JSC is that the Company has a sole shareholder, that is Rosseti PJSC that owns 100% of the Company's shares. All the corporate processes of the Company are in accordance with the interests of this shareholder.

Tyumenenergo JSC has a Board of Directors, a collegial governance body responsible for the strategic management of the Company and controlling the Sole Executive Body of the

Company while also performing other duties per the Company's Charter and the current legislation.

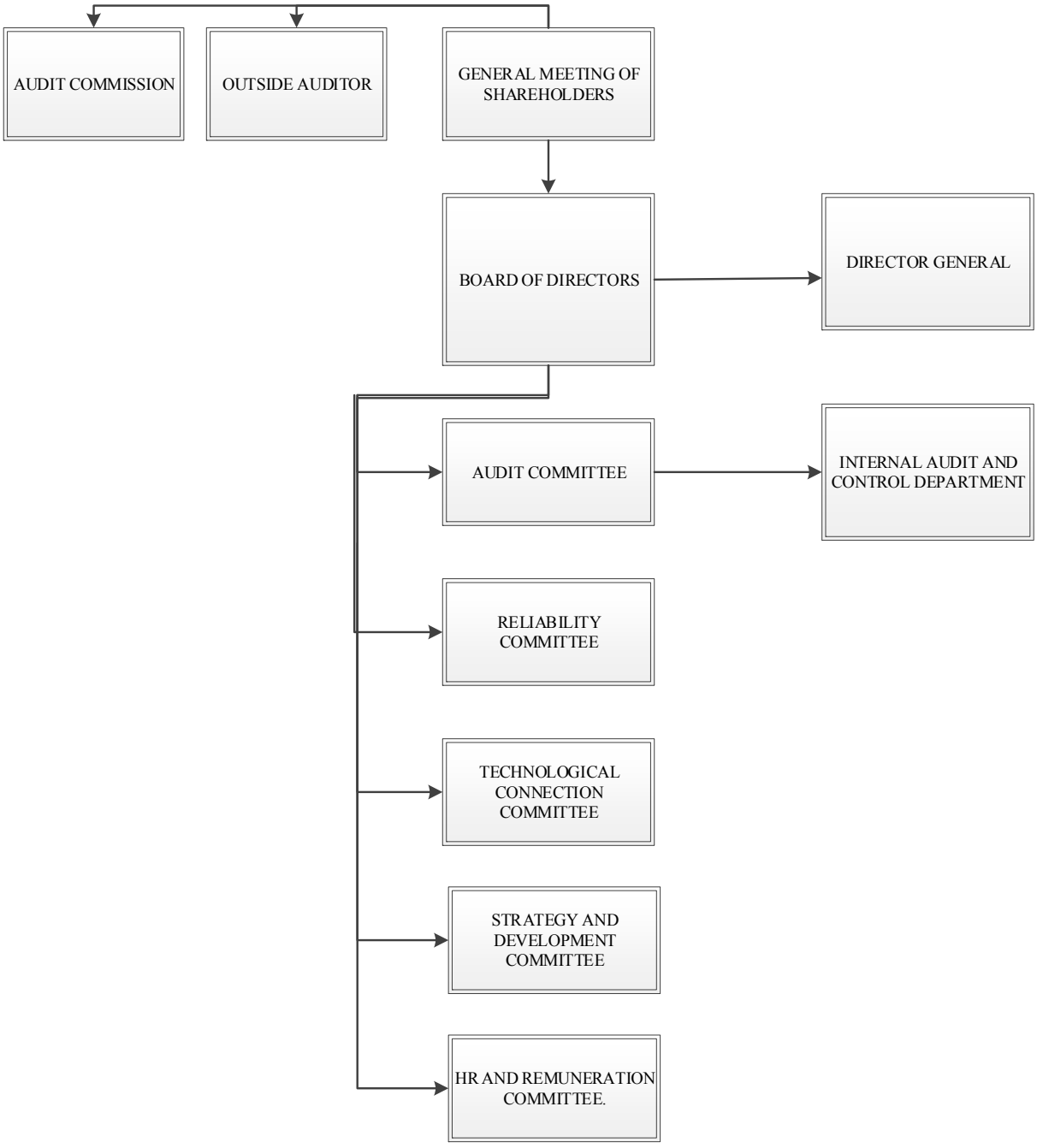
The Corporate Secretary of Tyumenenergo JSC is to ensure efficient Board of Directors work and cooperation with the shareholder.

The remuneration for the members of the Board of Directors is established to match the market situation so as to attract highly-qualified specialists and motivate them to act fairly and efficiently as a part of the Company.

Tyumenenergo JSC has an information policy in place that is aimed at disclosing full, relevant, and accurate information about the Company to all the concerned parties.

The Company does not exclude possible future actions to ensure better compliance with the Code and to enhance its corporate governance.

Tyumenenergo JSC Corporate Governance Structure



Specific structures, procedures, and practices of corporate governance are controlled by the Charter and the internal documents of the Company that can be found in the About the Company section of the website: http://www.te.ru/about/vnutrennie_dokumenty.

6.1.1. Corporate Governance Efficiency Evaluation

Corporate governance efficiency has been evaluated on the basis of the Work Plan 2018 of the Tyumenenergo JSC Internal Audit and Control Department (hereinafter, "the IACD"), as approved by the Audit Committee of the Tyumenenergo JSC Board of Directors (Minutes dd. November 21, 2017 No. 8/17) and by the Tyumenenergo JSC Board of Directors (Minutes dd. December 27, 2017 No. 33/17). Corporate Governance Efficiency Evaluation Guidelines were approved by Order dd. October 24, 2017 No. 574.

For Tyumenenergo JSC, corporate governance evaluation was done by the criteria set for the companies that Rosseti PJSC owns 100% capital of. Evaluation was done by comparing each corporate governance component against the criteria specified in the Tyumenenergo JSC Corporate Governance Efficiency Evaluation Guidelines, including:

- rights of shareholders;
- Board of Directors;
- executive management;
- transparence and informational disclosure;
- risk management, internal control, and internal audit;
- corporate social responsibility, business ethics, compliance.

The current corporate governance efficiency has been graded as Efficient with Reservations, as some aspects of it could be improved.

6.2. Governance and Control Bodies

According to the Charter of Tyumenenergo JSC, the Company's governance bodies are:

- General Meeting of Shareholders;
- Board of Directors;
- Director General (sole executive body).

The Audit Commission is responsible for control over the financial and economic activities of the Company.

6.2.1. GENERAL MEETING OF SHAREHOLDERS

In accordance with Section 11.11.1 of the Charger of Tyumenenergo JSC, if all the voting shares are held by a single shareholder, all decisions on matters within the competence of the General Shareholders Meeting shall be made by the shareholder or its authorized governance body in writing, and further communicated to the Company.

In respect of Tyumenenergo JSC, pursuant to Section 13.2.3 of the Charter of Rosseti PJSC, the authorized governance body is a collegial executive body, the Management Board of Rosseti PJSC, which functions as the General Shareholders Meeting of Tyumenenergo JSC.

In June 2017, the Management Border of Rosseti PJSC, acting as the Annual General Shareholders Meeting, made the following decisions:

– to approve the Annual Report and the Annual Financial Statements of the Company for 2016;

– to approve the distribution of the Company's profits for 2016;

– to pay the dividends on ordinary shares of the Company for 2016;

– to re-elect the Board of Directors;

– to re-elect the Audit Commission;

– to approve the Company's auditor;

– to approve the new revision of the Company's Charter;

– to approve the new revision of the Company's Board of Directors Regulation;

– to approve the new revision of the Company's Audit Commission Regulation;

– to approve the Company's withdrawal from SOYUZ ENERGSTROY;

– to approve the Company's participation in the SGO Union of Builders of Yugra.

The competences of the General Shareholders Meeting include various matters as specified in the Federal Law dd. December 26, 1995 No. 208-FZ On Joint-Stock Companies and in Section 10.10.2 of the Company's Charter. The Charter of Tyumenenergo JSC is available in the About the Company / Internal Documents section of the Company's official website: http://www.te.ru/about/vnutrennie_dokumenty.

Matters within the competence of the General Shareholders Meeting cannot be resolved by the Board of Directors or the Director General of the Company.

The resolutions of the General Shareholders Meeting are also available in the For Shareholders and Investors / Corporate Governance section of the Company's official website: http://www.te.ru/investors/korporativnoe_upravlenie/obshchee_sobranie_akcionerov/resheniya_obshchego_sobraniya_aktsionerov.

6.2.2. BOARD OF DIRECTORS

The Board of Directors is responsible for the general management of the Company's activities, except for matters that the Federal Law dd. December 26, 1996 No. 208-FZ On Joint-Stock Companies and the Company's Charter specifically refer to the competence of the General Shareholders Meeting.

Pursuant to Section 13.13.1 of the Charter of Tyumenenergo JSC, the Company's Board of Directors consists of eleven (11) members.

The procedure for electing the members of the Board of Directors is defined in the Company's Charter and complies with the legislation of the Russian Federation. Persons elected to the Board of Directors can be re-elected for an unlimited number of terms.

Competences of the Board of Directors

The competences of the Board of Directors include various matters as specified in the Federal Law dd. December 26, 1995 No. 208-FZ On Joint-Stock Companies and in Section

10.12.1 of the Company's Charter. The Charter of Tyumenenergo JSC is available in the About the Company / Internal Documents section of the Company's official website: http://www.te.ru/about/vnutrennie_dokumenty.

Matters within the competence of the Board of Directors cannot be resolved by the Director General of the Company.

The Board of Directors' operation is regulated by the Board of Directors Regulation of Tyumenenergo JSC as approved by the Resolution of the General Shareholders Meetnig of Tyumenenergo JSC dd. June 28, 2017 (Minutes No. 620пр/3) (hereinafter, "the Regulation").

Pursuant to Section 5.1 of the Regulation, the Board of Directors' meetings are held pursuant to the approved Agenda of the Board of Directors, or as necessary, but at least once a quarter. The Agenda for a corporate year shall be approved at the first meeting of the Board of Directors as re-elected by the Annual General Shareholders Meeting.

The Corporate Secretary of the Board of Directors shall comprehensively inform the Directors and notify them on meetings of the Board of Directors beforehand.

In 2017, the Company and its Board of Directors members did not enter into any transactions, and no member of the Board of Directors was claimed against.

In 2017, the Company did not fund the training of the Board of Directors members either by loan or in any other form.

Composition of the Board of Directors

June 28, 2017 the Management Board of Rosseti PJSC elected the following membership of the Tyumenenergo JSC Board of Directors **(positions specified herein were valid as on the election date):**

No.	Full Name	Brief Bio
1	Dmitry Mikhailovich Andropov Non-Executive Director First elected to the Board of Directors by the General Shareholders Meeting on June 30, 2016.	Year of birth: 1975. Education: Academy of National Economy of the Government of the Russian Federation, qualification of Manager, graduated in 1997. In 2012–2014 worked as Deputy Director General for (HR) Capital; In 2014–2015 worked as the Deputy Head of Department of Finance at Rosseti PJSC; From 2016 to present* has been a member of the Board of Directors of Karachayevo-Cherkesskenergo JSC; From 2016 to present has been a member of the Board of Directors of SKB VTI JSC; From 2015 to present has been working at Rosseti PJSC. **Title at Primary Workplace:** Head of the Credit and Structured Finance Directorate of the Finance Department at Rosseti PJSC

2	Oleg Leonidovich Bindar Non-Executive Director First elected to the Board of Directors by the General Shareholders Meeting on June 28, 2016.	Year of birth: 1978. Education: 1. Moscow State University of Railway Engineering, major in Accounting and Audit; 2. Russian Academy of National Economy and Public Administration under the President of the Russian Federation, major in Jurisprudence. In 2012–2013 worked at PJSC FGC UES as the Head of the Counterparty Risk Management Department; From 2013 has been working at Rosseti PJSC. **Title at Primary Workplace:** Director of the Equipment Manufacturer Relations Department
3	Yuri Vladimirovich Goncharov Deputy Chairman of the Board of Directors Non-Executive Director First elected to the Board of Directors by the General Shareholders Meeting on June 30, 2014.	Year of birth: 1977. Education: Moscow State Mining University, major in Management, graduated in 2000. From 2012 to April 2013 was the Head of the Corporate Governance Department, PJSC FGC UES; From January 2013 to April 2013 was the Acting Deputy Executive Director for Corporate Governance and Advisor of the Executive Director's Office, JSC IDGC Holding; From June 2014 to present has been the Chairman of the Board of Directors of JSC IDGC of the Urals; In June 2017 was the Deputy Chairman of the Board of Directors, PJSC IDGC of Siberia; From 04.2013 to present has been working at Rosseti PJSC. **Title at Primary Workplace:** Deputy Director General for Corporate Governance
4	Konstantin Sergeyevich Guselnikov Independent Director First elected to the Board of Directors by the General Shareholders Meeting on June 28, 2016.	Year of birth: 1966. Education: 1. Moscow Institute of Technology, qualification of Engineer-Technologist, graduated in 1990. 2. Moscow Institute of International Business, qualification of Operational Commercial Worker, graduated in 1992. 3. Academy of National Economy in Kiel, Germany, qualification of Marketing Specialist, graduated in 1994. From 2012 to present has been working at FinInvest Consulting LLC **Title at Primary Workplace:** Director General

5	Yuri Kazbekovich Zafesov Non-Executive Director First elected to the Board of Directors by the General Shareholders Meeting June 30, 2013 through to June 30, 2014.	Year of birth: 1975. Education: 1. Moscow State University of Food Industry (MGUPP), qualification of Engineer-Technologist, graduated in 1997. 2. Lomonosov Moscow State University, major in Management, graduated in 1999. 3. Russian Academy of State Service under the President of the Russian Federation, PhD of Economics, thesis defended in 2006. In 2012–2013 was working part-time as Head of the Consolidated Planning and Procurement Department; From 2013 to present has been working part-time as Director of the Procurement Department, Rosseti PJSC; From 2016 to present has been a member of the Board of Directors of ESSK UES JSC; From 2009 to present has been working at Energostroisnabkomplekt JSC. **Title at Primary Workplace:** Director General
6	Aleksandr Yuryevich Korneyev Non-Executive Director	Year of birth: 1980. Education: Moscow Energy Institute, qualification of Engineer majoring in Electric Factory Equipment. In 2012–2013 was the Deputy Head of the Technological Connection Department, FGC UES PJSC; From 2013 to present has been working at Rosseti PJSC. From 2017 to present has been a member of the Board of Directors of SKB VTI JSC. **Title at Primary Workplace:** Director of the Department for Long-Term Grid Development and Technological Connection
7	Marina Aleksandrovna Lavrova Non-Executive Director First elected to the Board of Directors by the General Shareholders Meeting on June 28, 2016.	Year of birth: Education: **Title at Primary Workplace:** Head of the Directorate for the Economy of Subsidiary and Dependent Companies of the Department for Economic Planning and Budgeting

8	Valentin Yefimovich Mezhevich Chairman of the Board of Directors First elected to the Board of Directors by the General Shareholders Meeting on June 30, 2015.	Year of birth: 1947. Education: Irkutsk Polytechnic Institute, major in Thermal Power Plants, graduated in 1970. Candidate of Technical Sciences. From 2012 to September 2013 was a member of the Council of Federation of the Federal Assembly of the Russian Federation, Interim Deputy Chairman of the Committee on Economic Security; From 2016 to present has been a member of the Board of Directors of IDGC of Volga PJSC; From October 2013 to present has been working at Rosseti PJSC. **Title at Primary Workplace:** member of the Board, Chief Advisor
9	Nikolay Borisovich Piotrovich Non-Executive Director First elected to the Board of Directors by the General Shareholders Meeting on June 30, 2016.	Year of birth: 1975. Education: 1. North-Caucasus Academy of State Service under the President of the Russian Federation, major in State and Municipal Administration, qualification of Manager-Economist, graduated in 1997. 3. North-Caucasus Academy of State Service under the President of the Russian Federation, Candidate of Economic Sciences, thesis defended in 1999. 3. Rostov State University, major in Jurisprudence, qualification of Lawyer, graduated in 2000. In 2012–2013 has been the Head of the Corporate Governance Department and Deputy Head of the Corporate Governance Department, PJSC FGC UES; From 2016 to present has been a member of the Board of Directors of Yekaterinburg Electric Grids Company JSC; From 2014 to present has been a member of the Board of Directors of JSC Energoservis of the South; From 2012 to present has been a member of the Board of Directors of Nurenergo JSC; From 2014 to October 20, 2017 was the Deputy Head of the Governance Bodies Directorate, Rosseti PJSC; no data available on employment since October 21, 2017. **Title at Primary Workplace:** no data available

10	Sergey Yuryevich Savchuk Executive Director First elected to the Board of Directors by the General Shareholders Meeting on June 28, 2016.	Year of birth: 1977. Education: Academy of the Federal Security Service, major in Jurisprudence, graduated in 1998. In 2012–2013 was the Acting Deputy Director General and Director General of JSC Yantarenergosbyt; In 2014–2015 was the Chairman of the Management Board of Elektoizolyatsiya, a Research Association of the Developers, Manufacturers, and Suppliers of Insulating Devices and Materials, Fittings, and Protective Devices for Power Grids; In 2015 was the Deputy Director for Distribution Grids (0.4 kV to 6 kV to 10 kV), State Unitary Enterprise of the Republic of Crimea Krymenergo; In 2015–2016 was the Acting Deputy Director General for Investments and Acting Deputy Director General of Tyumenenergo JSC; From October 11, 2016 to April 3, 2017 was Acting Director General of Tyumenenergo JSC; From April 4, 2017 to present has been working at Tyumenenergo JSC; From June 2017 to present has been the Chairman of the Board of Directors of Tyumenenergo JSC Engineering **Title at Primary Workplace:** Director General
11	Viktor Korneyevich Yavorsky Independent Director First elected to the Board of Directors by the General Shareholders Meeting on June 30, 2015.	Year of birth: 1955. Education: Moscow Energy Institute, major in Automated Control Systems, qualification of System Engineer, graduated in 1981. From 2012 to present has been the Director General of Technology Center LLC; From 2012 to June 2014 was the Director General of OSBI-M Audit Company LLC; From June 2014 to present has been working at TORI-AUDIT LLC. **Title at Primary Workplace:** Director General

* To present herein means "until December 31, 2017"

Members of the Board of Directors do not have a share in the charter capital of Tyumenenergo JSC and do not hold ordinary shares of the Company.

All the members of the Board of Directors have consented to the disclosure of this information in the Company's Annual Report and on the corporate website.

Over 2017, the Board of Directors also included the following persons (**positions specified herein were valid as on the election date, June 30, 2016):**

No.	Full Name	Brief Bio

1	Svetlana Aleksandrovna Balayeva	Year of birth: 1975. Education: State University of Management, qualification of Economist-Manager, graduated in 1995. Candidate minimum passed. **Primary Employment:** Deputy Director General for Investments of Rosseti PJSC
2	Roman Alekseyevich Belenko	Year of birth: 1983. Education: 1. Platonov South-Russian State Polytechnic University (NPI), major in Power Supply, qualification of Engineer, graduated in 2005. 2. Platonov South-Russian State Polytechnic University (NPI), major in Power Plant Economy and Management, qualification of Economist-Manager, graduated in 2009. **Primary Employment:** Deputy Head of the Grid Facility Construction Directorate, Rosseti PJSC
3	Dmitry Borisovich Gvozdev	Year of birth: 1974. Education: Kuzbass State Technical University, major in Power Supply. Candidate of Technical Sciences, Associate Professor. Prof. retraining: Company Development Management course at the Academy of National Economy under the Government of the Russian Federation, graduated in 2004. **Primary Employment:** Director of the Situation Analysis Center, Rosseti PJSC
4	Dmitry Dmitriyevich Mikheyev	Year of birth: 1983. Education: 1 Polzunov Altai State Technical University, major in Power Supply to Industrial Enterprises, graduated in 2005. 2. Altai Academy of Economy and Law, major in Management, Master's degree, graduated in 2008. **Primary Employment:** Deputy Director of the Power Engineering Department, Minenergo of Russia
5	Pavel Aleksandrovich Mikheyev	Year of birth: 1968. Education: Kirov Polytechnic Institute, major in Power Supply to Industrial Enterprises, Cities, and Agriculture, graduated in 1993. **Primary Employment:** until October, 2016 had been the Director General of Tyumenenergo JSC, no data available for the period from October 2016 to present

In 2017, the Board of Directors held 34 meetings, 30 of which consisted in absentee voting whereas four were held in joint presence. In total, 167 issues were discussed. Meeting Minutes available at the Company's corporate website:

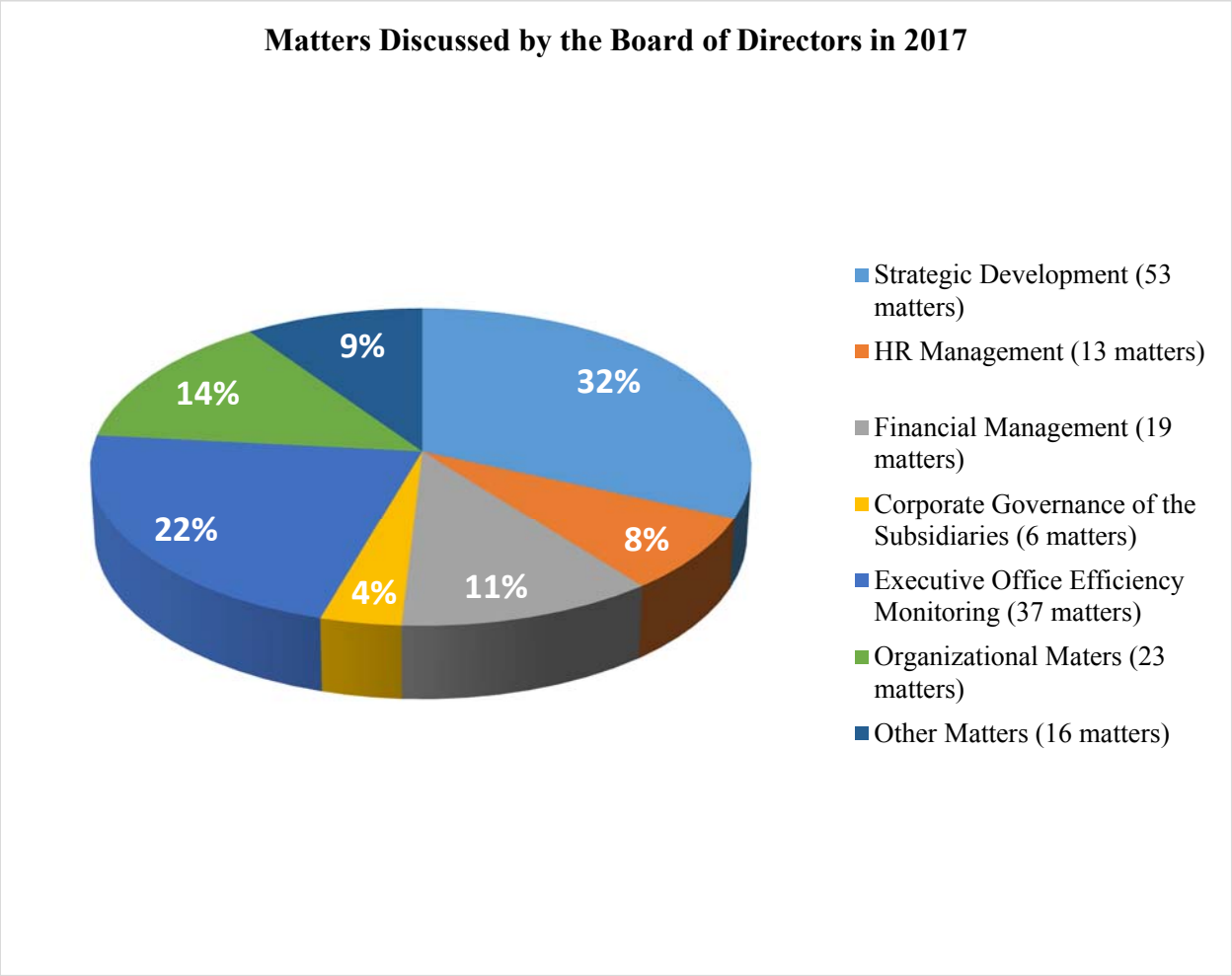
http://www.te.ru/investors/korporativnoe_upravlenie/sovet_direktorov/resheniya.

Attendance of the Tyumenenergo JSC Board of Directors Members in Meetings from January 1 to January 31, 2017

No.	Full Name	Number of Meetings the Director was Entitled to Attend	Number of Meetings Actually Attended	Activity of the Board of Directors member, %
1	Andropov Dmitry Mikhailovich	34	34	100
2	Svetlana Aleksandrovna Balayeva	19	16	84
3	Belenko Roman Alekseyevich	19	17	90
4	Bindar Oleg Leonidovich	15	13	87
5	Gvozdev Dmitry Borisovich	19	19	100
6	Goncharov Yuri Vladimirovich	34	34	100
7	Guselnikov Konstantin Sergeyevich	15	15	100
8	Zafesov Yuri Kazbekovich	34	32	94
9	Korneyev Aleksandr Yuryevich	15	15	100
10	Lavrova Marina Aleksandrovna	15	14	93
11	Mezhevich Valentin Yefimovich	34	34	100
12	Mikheyev Dmitry Dmitriyevich	19	16	84
13	Mikheyev Pavel Aleksandrovich	19	5	26
14	Piotrovich Nikolay Borisovich	34	34	100
15	Savchuk Sergey Yuryevich	15	15	100
16	Yavorsky Viktor Korneyevich	34	34	100

On the average, each member of the Board of Directors was active at **93%**.

The chart below shows the categories of matters discussed at Meetings:



Report of the Board of Directors on Priority Areas

In 2017, the Board of Directors of Tyumenenergo JSC made key decisions regarding strategic priorities. Section 1 of the Annual Report discloses such strategic priorities and actions at achieve them. In 2017, the Board of Directors did not determine priority areas.

The Company's Business Plan is an important management tool, a strategic planning component, and a guideline for the action-taking, control, and analysis of interim and final results. Mid-term business planning is based on plans, budgets, reports, KPIs, and target programs; actions taken on them affect production, investment, and repair activities and determine the need for resources required for achieving specific strategic objectives. This is why the Company's Board of Directors pays special attention to the matters of business planning and hence to the implementation of strategic plans.

In 2017, the Board of Directors made the following decisions:

– On December 15, 2016 the Board approved the Tyumenenergo JSC Business Plan for 2017, which included the investment program as well as key operational risks data; forecasts for 2018–2021 were taken into account;

– On December 23, 2016 the Board approved the IFRS-based Tyumenenergo JSC Business Plan; forecasts for 2018–2021 were taken into account;

– On April 6, 2017 the Board reviewed the Company's Business Plan Implementation Report for 2016, which covered the investment program as well as the actualization of key operational risks;

– approved the IFRS-based Business Plan Implementation Report for 2016;

– On June 26, 2017 the Board approved the Business Plan Implementation Report for Q1 2017, which covered the investment program as well as the actualization of key operational risks;

– On July 18, 2017 the Board approved the new revision of the Tyumenenergo JSC Business Planning Standards and Regulations;

– On July 27, 2017 the Board approved the Business Plan Scenarios for 2018 as well as the forecasts for 2019–2022;

– On September 4, 2017 the Board reviewed the Business Plan Implementation Report for the 1st half of 2017;

– On October 6, 2017 the Board reviewed the IFRS-based Business Plan Implementation Report for the 1st half of 2017;

– On February 12, 2017 the Board reviewed the Investment Program Implementation Report for the 1st half of 2017;

– On December 15, 2017 the Board approved the new revision of the Business Plan Scenarios for 2018 and of the forecasts for 2019–2022;

– On December 19, 2017 the Board reviewed the Business Plan Implementation Report for 9 months of 2017;

– On December 26, 2017 the Board approved the Business Plan for 2018 and the forecasts for 2019–2022;

– On December 27, 2017 the Board reviewed the IFRS-based Business Plan Implementation Report for 9 months of 2017. The Board reviewed the Investment Program Implementation Report for Q3 2017 and for 9 months of 2017.

For some strategic priorities, the following decisions were made:

Strategic Priority	Decisions of the Board of Directors
Power supply quality and reliability improvement	– The Board approved the Tyumenenergo JSC Grid Power Loss Reduction Program for 2017-2021; – the Board approved the new revision of the Tyumenenergo JSC Unified Communication Policy Implementation Regulations; – the Board Approved the new revision of the Rosseti PJSC Regulation On Uniform Technical Policy in the Grid Complex as the Company's internal document; – the Board approved the adjusted Tyumenenergo JSC Production Asset Management System Development Plan for 2016–2018; – the Board approved the adjusted Tyumenenergo JSC Hazardous Equipment, Locations, and Mechanisms Elimination Schedule for 2018–2021; – the Board approved the Tyumenenergo JSC Energy Saving and Energy Efficiency Enhancement Program for 2017–2021;

	– the Board Approved the Tyumenenergo JSC Grid Facility Modernization (Renovation) Program for 2017–2026; – the Board approved the Tyumenenergo JSC Comprehensive Program for Mitigating Industrial Injury Risks among Employees and Third Parties at Power Grid Facilities of the Company for 2018–2020.
Keeping the lead in the power transmission market of Tyumen Oblast and improving access to grid infrastructure	– The Board approved the Tyumenenergo JSC Program for Long-Term Development of Power Metering Systems in the Retail-Market Grid Facilities for 2017–2022; – the Board approved the new revision of the Tyumenenergo JSC Non-Core Asset Management Program; – the Board decided to join the effort to implement the grid-complex environmental policy approved by the Board of Directors of Rosseti PJSC dd. March 1, 2017
Ensuring financial and economic stability	– The Board approved the adjusted Tyumenenergo JSC Operational Efficiency Improvement and Cost Reduction Program for 2017 as well as the forecasts for 2018–2021;
Maintaining the Company's investment activities	– The Board approved the Tyumenenergo JSC Regulation on Investment-Program Development, Implementation Reporting, Investment Efficiency Improvement, and Cost Reduction
Implementation of innovative technologies and improved energy efficiency	– The Board approved the Tyumenenergo JSC Innovation-Driven Growth Program for 2016–2020 with an outlook for 2025;
Human capital development	– The Board approved the Tyumenenergo JSC Insurance Protection Program for 2018.
Comprehensive security	– The Board approved the new revision of the Anti-Corruption Policy of Rosseti PJSC and its subsidiaries as an internal document of Tyumenenergo JSC

To ensure the unity of approaches used by the Rosseti Company Group, the Tyumenenergo JSC Board of Directors approved the following internal documents that regulate various activities:

- Tyumenenergo JSC Procurement Plan for 2018;
- adjusted Tyumenenergo JSC Production Asset Management System Development Plan for 2016–2018;
- amendments to the Tyumenenergo JSC Internal Audit Policy;
- amendments to the Tyumenenergo JSC Regulation on the Audit Committee of the Board of Directors;
- the new revision of the Tyumenenergo JSC Central Procurement Committee Regulation;
- Guidelines for Calculating and Evaluation the Key Performance Indicators of the Director General of Tyumenenergo JSC;
- the Company's internal document: Code of Corporate Ethics and Official Conduct for the employees of Tyumenenergo JSC;
- Tyumenenergo JSC Internal Audit Development and Enhancement Plan for 2017–2019;
- Regulation on Remuneration and Compensations for the Members of the Strategy and Development Committee of the Tyumenenergo JSC Board of Directors;
- The new revision of the Tyumenenergo JSC Unified Communication Policy Implementation Regulations.

All the decisions made by the Tyumenenergo JSC Board of Directors are available at the Company's corporate website:

http://www.te.ru/investors/korporativnoe_upravlenie/sovet_direktorov/resheniya.

Board of Directors Membership Remuneration

Amounts of, and procedure for remuneration and compensatory payments for the Tyumenenergo JSC Board of Directors are defined by the new revision of the Regulation on Remuneration and Compensations for the Members of the Tyumenenergo JSC Board of Directors (see the Rosseti PJSC Management Board Meeting Minutes No. 361пр). These documents are disclosed on the Company's corporate website http://www.te.ru/about/vnutrennie_dokumenty as well as on the Internet: http://www.e-disclosure.ru/portal/company.aspx?id=5577.

Pursuant to the Regulation on Remuneration and Compensations for the Members of the Tyumenenergo JSC Board of Directors, such payments shall be made to the members of the Company's Board of Directors on the basis of the work they've done from being elected a member of the Board of Directors until the Board is re-elected. Remuneration shall be paid in a lump sum in Russian rubles within 60 days after holding an AGSM of Tyumenenergo JSC. The amount of remuneration depends on the number of meetings a Director has attended at, and is based on the revenue of the Company for a financial year (calculated on the basis of RAS).

Pursuant to the same Regulation, the following bonuses can be provided (in percent of the basic remuneration): 30% for the Chairman of the Board of Directors; 20% for the Chairman of specialized Committees of the Board of Directors; 10% for the members of specialized committees of the Board of Directors.

Remuneration and Compensation Paid to the Members of the Board of Directors Over 2017

rubles, kopecks

No.	Full Name	Expenditure Compensation	Remuneration Accrued (including an income tax of 13%)	Income Tax 13%	Remuneration Paid for 2017 (income tax withheld)
1.	Dmitry Mikhailovich Andropov	0	692,307.69	90,000,00	602,307.69
2.	Svetlana Aleksandrovna Balayeva	0	610,859.73	79,411,76	531,447.73
3.	Roman Alekseyevich Belenko	0	651,583.71	84,705,88	566,877.71
4.	Oleg Leonidovich Bindar	0	00.00	00.00	00.00
5.	Dmitry Borisovich Gvozdev	0	692,307.69	90,000,00	602,307.69
6.	Yuri Vladimirovich Goncharov	0	692,307.69	90,000,00	602,307.69
7.	Konstantin Sergeyevich Guselnikov	0	00.00	00.00	00.00
8.	Yuri Kazbekovich Zafesov	0	692,307.69	90,000,00	602,307.69
9.	Aleksandr Yuryevich Korneyev	0	00.00	00.00	00.00
10.	Marina Aleksandrovna Lavrova	0	00.00	00.00	00.00
11.	Valentin Yefimovich Mezhevich	0	900,000.00	117,000.00	783,000.00
12.	Dmitry Dmitriyevich Mikheyev	0	00.00	00.00	00.00
13.	Pavel Aleksandrovich Mikheyev	0	244,343.89	31,764,71	212,578.89
14.	Nikolay Borisovich Piotrovich	0	761,538.46	99,000,00	662,538.46
15.	Sergey Yuryevich Savchuk	0	00.00	00.00	00.00
16.	Viktor Korneyevich Yavorsky	0	692,307.69	90,000,00	602,307.69
	TOTAL	**0**	**6,629,864,25**	**861,882.35**	**5,767,981,24**

No other payments were made to the members of the Board of Directors in 2017.

Board of Directors Liability Insurance

The Tyumenenergo JSC Directors and Officials Liability Insurance Contract shall protect the property interest of the Company's shareholders, provide compensation of the possible damages affecting Company and/or the persons insured upon the occurrence of insurable events, as well as protect the property interests of the persons insured from third-party claims.

Persons insured under the contract are the Directors and officials of Tyumenenergo JSC.

"Director" shall mean any individual (including non-residents of the Russian Federation) that has ever been, is, or shall become during the insurance period:

– a member of the Board of Directors, Supervisory Board, or any other similar body of the Company, regardless of its name in any jurisdiction or country;

– a member of the Board of Directors of any of the Company's subsidiaries, elected to the Board of Directors of such subsidiary by the Company's vote(s).

"Official" shall mean any of the persons listed below:

– any individual (including non-residents of the Russian Federation) that has ever been, is, or will be occupied during the insurance period as, or has ever acted, is or will be acting as the sole executive body (Director General) of any company, the Deputy Sole Executive Body (Interim First Deputy Director, or Deputy Director General), or as the Chief Accountant of the Company;

– any other individual (including non-Residents of the Russian Federation) that has ever been, is, or will be entitled to sign documents and (or) give any assurances and (or) make statements on behalf of the Company.

"Director" or "official" shall also mean any individual specified as a potential Director or official in any security listing, issue prospectus, or private-placement memorandum, or any similar document issued by the Company.

* "Company" shall mean the Company and (or) any of its subsidiaries that: (a) had been a subsidiary at any moment before the start of the insurance period but was no longer such a subsidiary at the start of the insurance period, (b) is a subsidiary at the start of the insurance period, or (c) shall become a subsidiary at any moment during the insurance period. In case of insolvency proceedings being initiated in respect of any of the persons above, "company" shall also mean (shall such persons emerge under the applicable law) a debtor in possession, a liquidator, or any equivalent thereof.

The insurance is applicable globally.

The insurance period is from April 15, 2016 to April 14, 2018.

The retroactive period is from December 26, 1996.

Total aggregate limit of liability (amount insured) accounts for eight hundred million (800,000,000) rubles 00 kopecks against all insurable events, for all persons insured.

6.2.3. Committees of the Board of Directors

6.2.3.1 Audit Committee of the Board of Directors

The Audit Committee of the Board of Directors (hereinafter, "the Audit Committee") was established for the preliminary consideration of issues related to the control over the Company's financial and economic activities, see Minutes dd. October 2, 2013 No. 18/13.

The Audit Committee is regulated by the Tyumenenergo JSC Audit Committee of the Board of Directors Regulation as approved by the Company's Board of Directors March 21, 2016 (Minutes No. 06/16, No. 21/16 in the October 21, 2016 version, No. 07/17 in the March 10, 2017 version).

The Board of Directors assigned four persons as the members of the Audit Committee.

On July 18, 2017, the Board of Directors elected the following persons to the Audit Committee (positions specified herein were valid as on the election date):

Full Name	Position and Employer
Svetlana Anatolyevna Kim	Head of the Audit Activities Directorate, Department for Control and Auditing Activities, Rosseti PJSC
Konstantin Sergeyevich Guselnikov Member of the Board of Directors	Director General of FinInvest Consulting LLC
Marina Aleksandrovna Lavrova Member of the Board of Directors	Head of the Directorate for Economics in Subsidiaries and Affiliates, at the Department of Economic Planning and Budgeting of Rosseti PJSC
Nikolay Borisovich Piotrovich Member of the Board of Directors	Deputy Head of the Governance Bodies Directorate, Rosseti PJSC

Over 2017, the Audit Committee of the Board of Directors also included the following persons (**positions specified herein were valid as on the election date, June 30, 2016):**

Full Name	Position and Employer
Dmitry Aleksandrovich Chevkin	Director of the Department for HR Policy and Organizational Development, Rosseti PJSC
Tatyana Aleksandrovna Ivanova	Head of the Tariff Methodology Directorate, Tariff Policy Department of Rosseti PJSC
Irina Sergeyevna Gurenkova	Head of the Directorate for Settlement of Tariff-Related Disputes, Tariff Policy Department of Rosseti PJSC

Attendance of the Audit Committee Members at Meetings from January 1 to December 31, 2017

No.	Full Name	Number of Meetings the Member was Entitled to Attend	Number of Meetings Actually Attended	Member's Activity, %
1	Konstantin Sergeyevich Guselnikov	4	4	100
2	Irina Sergeyevna Gurenkova	5	5	100
3	Tatyana Aleksandrovna Ivanova	5	5	100
4	Svetlana Anatolyevna Kim	9	9	100
5	Marina Aleksandrovna Lavrova	4	4	100
6	Nikolay Borisovich Piotrovich	9	9	100
7	Dmitry Aleksandrovich Chevkin	5	5	100

On the average, each member of the Board of Directors was active at **100%**.

The Audit Committee is mainly tasked to:

– review the Company's accounting (financial) statements and control development of such documents;

- supervise the risk management, internal control, and corporate governance systems;
- supervise the external audit and the selection of the auditor;
- arrange and ensure the independence and objectivity of internal audit;
- monitor the system for combating fraud on the part of the Company's employees and third parties.

In 2017, the Audit Committee had nine meetings, five of which were at joint presence. In total, 41 matters were discussed.

Over 2017, the Company's Board of Directors analyzed, reviewed, and discussed the following issues regarding organization, functioning, and efficiency of the internal control and internal audit system:

1. Review and approval of the Internal Control System and Risk Management System sections of the Company's Annual Report (Minutes dd. March 14, 2017 No. 2/17).
2. Review of the Management's reports on the progress in corrective measures against deficiencies discovered by the Audit Commission of the Company in 2015, identified by internal audit or by external supervisory bodies, and on the implementation of measures taken upon reported potential fraud on the part of employees as well as based on the results of investigations, as of the end of 2016 (Minutes dd. March 24, 2017 No. 3/17).
3. Preliminary review of the Company's Director General's Report on the organization and functioning of the internal control system, including a report on measures taken to enhance the internal control system and the risk management system in 2016 (Minutes dd. March 24, 2017 No. 3/17).
4. Preliminary review of the Company's Internal Audit Report on the Efficiency of the Internal Control System and Risk Management System in 2016 (Minutes dd. March 24, 2017 No. 3/17).
5. Preliminary review of the Internal Audit and Control Department -submitted report on the Department's plan performance and internal audit results in 2016, including internal audit self-evaluation results and measures taken to enhance internal audit (Minutes dd. March 24, 2017 No. 3/17).
6. Review of the Internal Audit and Control Department's Internal Audit Report for Q1 2017, Minutes dd. May 23, 2017 No. 5/17.
7. Preliminary review of the Tyumenenergo JSC Internal Audit Enhancement and Development Plan for 2017–2019, Minutes dd. May 23, 2017 No. 5/17.
8. Review of the structure and contents of the data presented in the internal audit plan performance and results report (Minutes dd. August 9, 2017 No. 6/17).
9. Review of the Management's reports on the progress in corrective measures taken to combat deficiencies discovered by the Audit Commission of the Company/identified by internal audit or by external supervisory bodies, and on the progress in measures taken upon reported potential fraud on the part of employees as well as based on the results of investigations, for the six months of 2017 (Minutes dd. October 2, 2017 No. 7/17).
10. Review of the Management's reports on the Company's Internal Control Policy and its implementation, Minutes dd. October 2, 2017 No 7/17.
11. Review of the Internal Audit and Control Department's Performance-to-Plan and Internal Audit Results Report for the 6 months of 2017, Minutes dd. October 2, 2017 No. 7/17.
12. Review of the Internal Audit and Control Department's Performance-to-Plan and Internal Audit Results Report for the 9 months of 2017, Minutes dd. November 21, 2017 No. 8/17.
13. Preliminary review of the Internal Audit and Control Department's Plan for 2018, Minutes dd. November 21, 2018 No. 8/17.
14. Preliminary review of the Internal Audit and Control Department's budget for 2018, Minutes dd. November 21, 2018 No. 8/17.

The Company's Board of Directors discussed the efficiency of the Company's Internal Control System as of the end of 2016, Minutes dd. April 20, 2017 No. 15/17. The efficiency of the Company's Internal Control System as of the end of 2017 shall be preliminarily reviewed by the Committee on March 15, 2018 for further submission to the Board of Directors in April 2018. Section 6.3 Internal Control System presents the evaluation of its efficiency.

The Company's Audit Committee of the Board of Directors discussed the following essential matters in 2017:

1. January 30, 2017, Minutes No. 1/17:

– preliminary review of the Company's internal document: Anti-Corruption Policy of Rosseti PJSC and its subsidiaries and affiliates, a new revision;

– preliminary review of the amendments to the Tyumenenergo JSC Regulation on the Audit Committee of the Board of Directors;

– preliminary review of the Internal Audit and Control Department's Agenda for 2017;

– preliminary review of the Tyumenenergo JSC Internal Audit Policy.

Decisions were made on all these matters, and recommendations drawn were submitted to the Board of Directors.

2. March 14, 2017, Minutes No. 2/17:

– review of the Tyumenenergo JSC Anti-Corruption Monitoring Report for 2016.

3. April 21, 2017, Minutes No. 4/17:

– review of the Management-reported non-standard transactions and events, as well as on the reserves made for doubtful debts and estimated liabilities;

– review of the external auditor's written report on the key issues with the Company's RAS-based accounting (financial) statements and IFRS-based consolidated financial statements for 2016; review of the Management-provided information on essential corrections made on the basis of the external reporting audit;

– preliminary review of the Company's RAS-based accounting (financial) statements and IFRS-based consolidated financial statements for 2016;

– efficiency analysis of the external audit of the Company's accounting (financial) statements for 2016;

– preliminary review of the candidate external auditor selected to audit the Company's statements for 2017;

– preliminary decision to dismiss the Head of the Company's Internal Audit and Control Department.

Decisions were made on all these matters, and recommendations drawn were submitted to the Board of Directors.

4. May 23, 2017, Minutes No. 5/17:

– review of the Company's RAS-based interim accounting (financial) statements for Q1 2017;

– review of the Report on the Execution of Orders issued by the Company's Audit Committee of the Board of Directors in the corporate year 2016–2017;

– review of the Audit Committee's End-of-Assignment Report for the corporate year 2016–2017;

Decisions were made on all these matters, and recommendations drawn were submitted to the Board of Directors.

5. August 9, 2017, Minutes No. 6/17:

– Deputy Chairman of the Audit Committee of the Tyumenenergo JSC Board of Directors was elected;

– Secretary of the Audit Committee of the Tyumenenergo JSC Board of Directors was elected;

– consideration was given as to the possible expert involvement with the Audit Committee of the Tyumenenergo JSC Board of Directors;

– the Audit Committee's Agenda for the corporate year 2017–2018 was approved;

– preliminary review of the Audit Committee's budget for the corporate year 2017–2018;

– preliminary review of the auditor's charge for the audit of the Company's RAS-based accounting statements for 2017, and of the IFRS-based consolidated financial statements for as of December 31, 2017.

Decisions were made on all these matters, and recommendations drawn were submitted to the Board of Directors.

6. October 2, 2017, Minutes No. 7/17:

– review of the Company's RAS-based interim accounting (financial) statements for 6 months of 2017;

– review of the Management's reports on the implementation of the Company's Anti-Corruption Policy and Anti-Corruption Monitoring Results for 6 months of 2017.

Decisions were made on all these matters, and recommendations drawn were submitted to the Board of Directors.

7. November 21, 2017, Minutes No. 8/17:

– review of the Company's RAS-based interim accounting (financial) statements for 9 months of 2017;

– preliminary review of the Head of the Internal Audit and Control Department's KPIs for 2018.

Decisions were made on all these matters, and recommendations drawn were submitted to the Board of Directors.

8. December 12, 2017, Minutes No. 9/17:

– Secretary of the Audit Committee of the Tyumenenergo JSC Board of Directors was re-elected;

– review of the external auditor's written reports on the key issues regarding the Company's RAS-based accounting (financial) statements for an interim 9-month period of 2017, as well as of the Management's reports on corrections made on the basis of such external audit;

– review of the material aspects of the Company's Accounting Policy and amendments planned for 2018;

– preliminary review of the actions taken against the deficiencies and violations as identified by the Tyumenenergo JSC Audit Commission by auditing the Company's financial and economic activities in 2016.

In 2017, the members of the Audit Committee of the Company's Board of Directors were remunerated at 281,000 rubles, income tax withheld.

6.2.3.2. Reliability Committee of the Board of Directors

The Reliability Committee was established December 16, 2005. The Committee is regulated by the Tyumenenergo JSC Regulation on the Reliability Committee of the Board of Directors as approved by the Board of Directors December 16, 2005, Minutes No. 24/05.

The Reliability Committee consists of at least three (3) and at max. seven (7) persons.

The Board of Directors' meeting dd. September 16, 2015 (Minutes No. 15/15) approved a new revision of the Reliability Committee Regulation.

On August 5, 2016, the Board of Directors elected a 7-person Reliability Committee membership, Minutes dd. August 9, 2016 No. 16/16.

On July 18, 2017, the Board of Directors elected a 5-person Reliability Committee membership, Minutes dd. July 18, 2017 No. 21/17.

No.	Full Name	Position	Committee Member Since...
1	Shaydullin Farit Gabdulhakovich	Head of the Analytical Department, Situation Analysis Center of Rosseti PJSC, was elected the Chairman of the Committee	July 31, 2015 to present
2	Bragin Andrey Anatolyevich	Interim First Deputy Director General, Chief Engineer, Tyumenenergo JSC	February 13, 2017 to present
3	Petrova Tatyana Valerievna	Deputy Director General for Economics and Finance, Tyumenenergo JSC	August 7, 2012 to present
4	Petrov Sergey Aleksandrovich	Deputy Head of the Directorate and Head of the Technical Solutions Division of the Technical Directorate, Operating and Technological Management Department, Rosseti PJSC	July 18, 2017 to present
5	Akhtyrsky Andrey Borisovich	Head of the Methodology and Planning Department at the Center for Technical Supervision (a branch of Rosseti PJSC)	July 18, 2017 to present

Below is the member list of the Reliability Committee from January 1, 2017 through to July 16, 2017, Chairman included (positions specified herein were valid as on the election date):

No. p/p	Full Name	Position
1	Frolov Sergey Nikolayevich	Deputy Chief Engineer, Rosseti PJSC, was elected the Chairman of the Committee
2	Shaydullin Farit Gabdulhakovich	Head of the Analytical Department, Situation Analysis Center of Rosseti PJSC
3	Bragin Andrey Anatolyevich	Interim First Deputy Director General, Chief Engineer, Tyumenenergo JSC
4	Petrova Tatyana Valerievna	Deputy Director General for Economics and Finance, Tyumenenergo JSC
5	Pauyesov Sergey Mikhailovich	Deputy Chief Engineer and Head of the Industrial Safety and Production Control Service, Tyumenenergo JSC
6	Nasonov Aleksandr Arsentyevich	Head of the Occupational and Industrial Safety Separtment at the Center for Technical Supervision (a branch of Rosseti PJSC)
7	Korotenko Alekandr Vasilyevich	Deputy Head of the Sector for Long-Term Development of the Electric Power Industry of the Power Engineering Department of the Ministry of Energy of the Russian Federation

The Reliability Committee was mainly tasked with the following: prepare and submit recommendations (opinions) to the Company's Board of Directors related to the following activities of the Board of Directors:

– expertise of production programs, plans for technical re-equipment, reconstruction, new construction and repair of electric grid facilities, analysis of their development and execution in terms of ensuring the requirements for reliability of operation and technical condition of electric grids;

– assessment of the completeness and adequacy of measures based on the accident investigation results in accordance with the Rules of accident cause investigation in electric power industry approved by the Decree of the Government of the Russian Federation dd. October 28, 2009 No. 846, as well as monitoring the execution thereof;

– expertise of the quality of investigations of the causes of technological failures (accidents);

– expertise of the Company's activity in the field of emergency response (ensuring readiness, organization and carrying out emergency recovery operations at electric grid facilities);

– expertise of programs for prevention and reduction of risks of injuries to the Company's personnel and third parties at the Company's electrical facilities, as well as control over their execution;

– monitoring and assessment of the Company's technical services' activities for ensuring reliable operation of power grids and industrial safety;

– expertise of the Company's internal technical control system;

– expertise of the Company's occupational safety and health management system;

– expertise of the environmental policy implementation program;

– expertise of the fire and industrial safety system.

In 2017, the Reliability Committee had 10 meetings in presentia and absentia.

Within the framework of its competence, the Reliability Committee approved or gained the approval of the following regulatory documents:

– adjusted Operational Asset Management System Development Plan of Tyumenenergo JSC for 2016–2018 with due account for amendments to the Standard Operational Asset Management System Development Plan of Subsidiaries and Affiliates for 2016–2018, Rosseti PJSC Management Board Minutes dd. August 29, 2016 No. 513пр/2;

– proposals on the planned reliability and quality targets for the services of Tyumenenergo JSC for 2018–2022;

– adjusted Comprehensive Program for Mitigating Industrial Injury Risks Among Employees and Third Parties at Power Grid Facilities of the Company for 2017–2019;

– adjusted Tyumenenergo JSC Hazardous Equipment, Locations, and Mechanisms Elimination Schedule for 2018–2021;

– Tyumenenergo JSC Target Program for the Normalization of 35-kV+ OPL Clearcuts in 2018–2019. It was decided to recommend the Tyumenenergo JSC Board of Directors to approved the Target Program for the Normalization of 35-kV+ OPL Clearcuts in 2018–2019, which was subject to the preliminary approved of the Rosseti PJSC Investment Commission, Minutes dd. August 9, 2017 No. 06/17;

– Tyumenenergo JSC Grid Facility Modernization (Renovation) Program;

– Tyumenenergo JSC Environmental Policy Implementation Plan for 2017–2019;

– adjusted Power Line Reliability Enhancement Program of the Yamburg PDZ, Northern Electric Grids;

The following reports were approved:

– 2016 Implementation Report on the Tyumenenergo JSC Comprehensive Program for Mitigating Industrial Injury Risks among Employees and Third Parties at Power Grid Facilities of the Company for 2014–2017;

– 2016 Implementation Report on the Tyumenenergo JSC Program for Prevention of Tyumenenergo JSC Personnel's Errors Causing Technological Disturbances (Accidents);

– Implementation Report on the Tyumenenergo JSC Facility Reliability Enhancement Program for 2016 and for Q1–Q3 2017 (a standard Rosseti PJSC Program);

– Performance-to-Plan Report on the Tyumenenergo JSC Operational Asset Management System Development Plan for 2016;

– Implementation Report on the Tyumenenergo JSC Repair and Investment Program for 2016;

– Implementation Report on the Power Line Reliability Enhancement Program of the Yamburg PDZ, Northern Electric Grids, for the 1st half of 2017;

– Tyumenenergo JSC Reliability Indicators Report for 2016 (including the indicative ones);

– 2016 Performance-to-Plan Report on the Tyumenenergo JSC Branch Facility Injury Risk Mitigation Plan for 2017–2017;

– Performance-to-Plan Report on the Controllable Parameters (Actions) and Indicators of Tyumenenergo JSC Operational Reliability and Safety (the Reliability Passport) for Q1–Q3 2017;

– Report on the Technological Failure (Accident) Cause Investigation Failure and Sufficiency of Investigation-Based Actions for 2017;

– Report on the Readiness for Autumn and Winter 2017–2018;

– Reports on the Tyumenenergo JSC Performance in the Specific Periods of 2017 (the flood period, the fire-hazardous period, and the autumn and winter period in 2016–2017).

Remuneration of the Board of Directors Reliability Committee Members in 2017

thousand rubles

Indicator	Accrued	Income Tax Withheld	Paid
Remuneration for Committee membership	566.388	73.631	492.76

Attendance of the Tyumenenergo JSC Reliability Committee Members at Meetings from January 1 to December 31, 2017

No.	Full Name	Number of Meetings the Member was Entitled to Attend	Number of Meetings Actually Attended	Member's Activity, %
1	Frolov Sergey Nikolayevich	5	5	100
2	Shaydullin Farit Gabdulhakovich	10	10	100
3	Bragin Andrey Anatolyevich	10	10	100
4	Petrova Tatyana Valerievna	10	8	80
5	Pauyesov Sergey Mikhailovich	5	4	80
6	Nasonov Aleksandr Arsentyevich	5	5	100
7	Korotenko Alekandr Vasilyevich	5	4	80

8	Petrov Sergey Aleksandrovich	5	5	100
9	Akhtyrsky Andrey Borisovich	5	4	80

On the average, each member of the Committee was active at **91.1**%.

Planned for 2018:

Production analysis and evaluation in the following aspects:

– readiness of the Company for autumn and winter;
– the efficiency of M&R and TRE&M (methods, approaches, and procedures);
– performance with respect to the Tyumenenergo JSC Hazardous Equipment, Locations, and Mechanisms Elimination Schedule;
– Repair and Investment Program planning and implementation;
– implementation of the adjusted Comprehensive Program for Mitigating Industrial Injury Risks Among Employees and Third Parties at Power Grid Facilities of the Company for 2017–2019;
– performance with respect to the Operational Asset Management System Implementation Plan for 2017;
– taking action to prevent personnel's errors;
– withstanding autumn and winter 2016–2017;
– implementation of the Reliability Enhancement Program at Tyumenenergo JSC facilities;
– performance with respect to the reliability and quality of tariff-regulated services in 2017;
– changes in the target model of the Distribution Grid Complex Operational and Technological Management System as used by the branches of Tyumenenergo JSC;
– Implementation of the Power Line Reliability Enhancement Program of the Yamburg PDZ, Northern Electric Grids, in the 2nd half of 2017;

6.2.3.3 Committee for Technological Connection to Power Grids

The Tyumenenergo JSC Board of Directors Committee for Technological Connection to Power Grids (hereinafter, "the TC Committee") is regulated by the relevant Regulation as approved by the Company's Board of Directors July 18, 2017, Minutes No. 21/17. The latest membership of the TC Committee was elected by the same decision, a total of three persons:

No. p/p	Full Name	Position	Committee Member Since...
1	Yavorsky Viktor Korneyevich	Director General of TORI-AUDIT LLC	July 18, 2017 to present
2	Dmitry Nikolayevich Skripalshchikov	Head of the Long-term Grid Development Directorate, Department for Long-term Grid Development and Technological Connection of Rosseti PJSC	July 18, 2017 to present
3	Davydkin Vladimir Aleksandrovich	Head of the Directorate for Regulation of Technological Connection, Department for Long-term Grid Development and Technological Connection of Rosseti PJSC	July 18, 2017 to present

Until July 18, 2017 the TC Committee consisted of the following persons:

No. p/p	Full Name	Position	Committee Member Since...
1	Masaleva Irina Borisovna	Director of the Department for Long-term Grid Development and Technological Connection, Rosseti PJSC	August 9, 2016 to July 18, 2017
2	Korneyev Aleksandr Yuryevich	Head of the Directorate for Regulation of Technological Connection, Department for Long-term Grid Development and Technological Connection of Rosseti PJSC	August 9, 2016 to July 18, 2017
3	Mylnikov Yuri Petrovich	Chairman of the Board of the Regional Energy Commission in Tyumen Oblast, KhMAO-Yugra, and YNAO	August 9, 2016 to July 18, 2017
4	Pyadukhov Dmitry Olegovich	Deputy Director General for the Development and Realization of Services, Tyumenenergo JSC	August 9, 2016 to July 18, 2017
5	Savchuk Sergey Yuryevich	Director General of Tyumenenergo JSC	August 9, 2016 to July 18, 2017
6	Yavorsky Viktor Korneyevich	Director General of TORI-AUDIT LLC	August 9, 2016 to July 18, 2017
7	Pavlov Aleksandr Valeryevich	Chief Advisor, Division for Industry Regulatory Framework Development of the Department of Power Engineering Development, Ministry of Energy of the Russian Federation	August 9, 2016 to July 18, 2017

In 2017, the TC Committee had two meetings in absentia.

In 2017, the TC Committee discussed, analyzed, and reviewed the following matters:

– performance with respect to the target quality of technological connections to the grids of Tyumenenergo JSC in 2016;

– review of the Report on Developing the Plan to Reduce Contract Backlog, and on Preliminary Performance-to-Plan;

– review of the target quality of technological connections to the grids of Tyumenenergo JSC as set for 2018–2022;

The following decisions and recommendations were made:

– to recommend the Tyumenenergo JSC Board of Directors to approve the actual technological connection quality indicators as reached in 2016;

– to take note of the Report on Developing the Plan to Reduce Contract Backlog, and on Preliminary Performance-to-Plan;

– to recommend the Tyumenenergo JSC Board of Directors to approve the technological connection quality indicators as planned for 2018–2022.

6.2.3.4. Strategy and Development Committee of the Board of Directors

On December 8, 2016, the Board of Directors of Tyumenenergo JSC (Minutes dd. December 9, 2016 No. 24/16) decided to establish a Strategy and Development Committee to prepare and submit to the Board of Directors recommendations relating to the following activities:

– determination of the Company's priority areas, strategic goals and main strategic development principles;

– increasing the Company's investment attractiveness, improving investment activities and making informed investment decisions;

– financial planning and formulation of the Company's dividend policy;

– assessment of the Company's performance;

– control over the organization and functioning of the risk management system.

The Strategy and Development Committee is regulated by the Regulation on the Strategy and Development Committee of the Board of Directors of Tyumenenergo JSC as approved by the Company's Board of Directors (Minutes dd. December 9, 2016 No. 24/16).

July 18, 2017 the Board of Directors elected 7 persons to the Strategy and Development Committee (positions specified as of the election date):

No. p/p	Full Name	Position and Employer
1	Olkhovich Evgeniy Aleksandrovich	Deputy Director General for Strategic Development, Rosseti PJSC
2	Ivanova Olga Sergeyevna	Assistant of the Deputy Director General for Strategic Development, Rosseti PJSC
3	Hakobyan Dmitry Borisovich	Director of the Investment Department, Rosseti PJSC
4	Sedykh Nadezhda Vitalyevna	Deputy Head of the Directorate, Head of the Consolidated Business Planning Division of the Directorate for Economics in Subsidiaries and Affiliates, Department for Economic Planning and Budgeting of Rosseti PJSC
5	Sofyin Vladimir Vladimirovich	Director of the Technological Development and Innovations Department, Rosseti PJSC
6	Savchuk Sergey Yuryevich	Director General of Tyumenenergo JSC
7	Medvedev Mikhail Vladimirovich	Deputy Director General of Intra Tool Holding Company LLC

From March 10, 2017 until June 28, 2017 the Strategy and Development Committee of the Board of Directors consisted of the following members:

No. p/p	Full Name	Position and Employer
1	Petukhov Konstantin Yuryevich	Deputy Director General for the Development and Realization of Services, Rosset PJSC
2	Hakobyan Dmitry Borisovich	Director of the Investment Department, Rosseti PJSC
3	Kovalyov Sergey Alekseyevich	Deputy Head of the Grid Facility Construction Directorate, Capital Construction Department of Rosseti PJSC
4	Sedykh Nadezhda Vitalyevna	Deputy Head of the Directorate, Head of the Consolidated Business Planning Division of the Directorate for Economics in Subsidiaries and Affiliates, Department for Economic Planning and Budgeting of Rosseti PJSC
5	Ukolov Vladimir Anatolyevich	Head of the Information Analysis and Control Directorate, the Situation Analysis Center of Rosseti PJSC
6	Savchuk Sergey Yuryevich	Acting Director General of Tyumenenergo JSC

In 2017, the Strategy and Development Committee had 13 meetings, five of which were at joint presence. In total, 31 matters were discussed.

The following material matters were discussed at the meetings of the Strategy and Development Committee of the Board of Directors:

– review of the Tyumenenergo JSC Investment Program Draft for 2018–2022 and of the Investment Program Draft Amendments for 2016–2022;

– review of the Tyumenenergo JSC Director General's Key Operational Risks Management Report for 2016;

– implementation of the investment program and recognition of the key operational risks of the Company in Q4 2016 and in 2016;

– review of the Tyumenenergo JSC Director General's Report on the Organization, Functioning, and Efficiency of the Tyumenenergo JSC Risk Management System for 2016;

– approval of the Tyumenenergo JSC Non-Core Asset Register (Disposal Plan) as of March 31, 2017;

– withdrawal of Tyumenenergo JSC from the Self-Regulatory Organization Interregional Industrial Employer Association of Organizations Involved in the Construction, Modernization, and Overhaul of Power Facilities, Grids, and Substations ENERGOSTROY (SOYUZ ENERGOSTROY);

– participation of Tyumenenergo JSC in the Self-Regulatory Organization Union of Builders of Yugra (SRO Union of Builders of Yugra);

– implementation of the Tobolsk to Ishim 500 kV OPL project in Q1 2017 (dispatch name: Irtysh to Vityaz (Zarya) 220 (500) kV OPL);

– development prospects of ESCO Tyumenenergo JSC for 2017–2021;

– recommendations to the Board of Directors of Tyumenenergo JSC regarding the review of the Report on the Realization of the Company's Key Operational Risks in Q2 2017;

– recommendations to the Board of Directors of Tyumenenergo JSC regarding the review of the Tyumenenergo JSC Business Performance-to-Plan Report for Q2 and H1 2017;

– recommendations to the Board of Directors of Tyumenenergo JSC regarding the review of the Tyumenenergo JSC Investment Program Implementation Report for H1 2017;

– recommendations to the Board of Directors of Tyumenenergo JSC regarding the review of the Company's Priority Investment Projects Implementation Report for H1 2017;

– recommendations to the Board of Directors of Tyumenenergo JSC regarding the Performance Report on the Tyumenenergo Group IFRS-Based Consolidated Business Plan for H1 2017;

– review of the Tyumenenergo JSC Director General's Key Operational Risks Management Report for H1 2017;

– recommendations to the Board of Directors of Tyumenenergo JSC regarding the review of the Measures to Minimize Risks Adversely Affecting the Company's Financial Results in 2017 as Compared to the Approved Business Plan;

– recommendations to the Board of Directors of Tyumenenergo JSC regarding the approval of the Tyumenenergo JSC Non-Core Asset Register (Disposal Plan) as of September 31, 2017;

– recommendations to the Board of Directors of Tyumenenergo JSC regarding the review of the Measures to Minimize Risks Adversely Affecting the Company's Financial Results in 2017 as Compared to the Approved Business Plan;

– recommendations to the Board of Directors of Tyumenenergo JSC regarding the approval of the Tyumenenergo JSC Business Plan for 2018 and Forecast for 2019–2022;

– recommendations to the Board of Directors of Tyumenenergo JSC regarding the Tyumenenergo JSC Business Plan performance in Q3 2017 and nine months of 2017.

– recommendations to the Board of Directors of Tyumenenergo JSC regarding the review of the Tyumenenergo JSC Investment Program Implementation Report for nine months of 2017;

– recommendations to the Board of Directors of Tyumenenergo JSC regarding the Performance Report on the Tyumenenergo Group IFRS-Based Consolidated Business Plan for nine months of 2017;

– recommendations to the Board of Directors of Tyumenenergo JSC regarding the Approval of the RAS-Based Consolidated Business Plan and the IFRS-Based Consolidated Business Plan of the Tyumenenergo Group for 2018, and of the Forecasts for 2019–2022.

– changes in the Registers of Operational Risks related to core and non-core business processes.

6.2.3.5 Personnel and Remuneration Committee of the Board of Directors

On September 21, 2017, the Board of Directors of Tyumenenergo JSC (Minutes dd. September 21, 2017 No. 25/17) established its Personnel and Remuneration Committee consisting of three persons and approved the Regulation on the Personnel and Remuneration Committee of the Company's Board of Directors.

The Committee was mainly established to help the Board of Directors efficiently solve matters within its competence, as well as to prepare the necessary recommendations for the Board of Directors and the Company's executive bodies.

The Committee is tasked to prepare and submit recommendations (opinions) with respect to the following activities:

– preparing recommendations on the remuneration for the Board of Directors members;
– development of principles and criteria for determining the amount of remuneration for the Board of Directors members, members of the collegial executive body and the person performing the functions of Company's sole executive body;
– elaboration of proposals for determining the material terms of contracts with the Board of Directors members, members of the collegial executive body and the person exercising the functions of Company's sole executive body;
– defining criteria for nominating members of the Board of Directors, members of the collegial executive body, and to the Company's sole executive body, as well as preliminary assessment of these nominees;
– regular assessment of the activities of the person performing the functions of Company's sole executive body, members of the collegial executive body and preparing proposals for the Board of Directors on the possibility of their re-appointment.

On December 15, 2017, the Board of Directors elected 3 persons to the Personnel and Remuneration Committee (positions specified herein were valid as on the election date):

No. p/p	Full Name	Position and Employer
1.	Varlamov Nikolay Nikolayevich	Deputy Director General, Head of the Office of Rosseti PJSC
2.	Chevkin Dmitry Aleksandrovich	Director of the Department for HR Policy and Organizational Development, Rosseti PJSC
3.	Erpscher Natalya Ilyinichna	Head of the Organizational Development Directorate, Department for HR Policy and Organizational Development of Rosseti PJSC

6.2.4. Sole Executive Body — Director General

The Company's Director General's competences include all the matters related to managing the Company's ongoing activities except matters within the competence of the General Shareholders Meeting or the Board of Directors.

Director General is elected by the Company's Board of Directors by majority voting (only the directors present at a meeting are eligible to vote).

The terms and conditions of the Director's employment contract, including the term of their office, are determined by the Company's Board of Directors or by the person whom the Board of Directors has authorized to sign such employment contract in accordance with the Company's Charter.

The Board of Directors is entitled to terminate the Director General's office and to establish a new executive body at any time.

Director General's remuneration shall be defined by the Board of Directors. Such remuneration consists of a fixed part and a variable part, whereby the latte depends on the

executive body's KPIs and is linked to their personal contribution to the long-term development of the Company in the interest of its shareholders.

The KPIs form a system of financial and non-financial indicators that affect the qualitative or quantitative changes in the results relative to the Company's strategic objective.

On January 1, 2017, the Company's Board of Directors approved a new method for calculating and evaluating the Director General's key performance indicators so that the KPI system would stay up-to-date.

Sergey Yuryevich Savchuk was appointed acting Director General of Tyumenenergo JSC October 11, 2016; April 3, 2017 the Board of Directors elected Mr. Savchuk the Director General for a three-year term of office, starting April 4, 2017.

Sergey Yuryevich Savchuk was born in Grozny in 1977.

He graduated from the Federal Security Service Academy in 1998, majoring in Jurisprudence.

From 1993 to 2011, he was on military service as an FSB officer.

From November 2011 to November 2012 he served as the Acting Deputy Director General for Science and Innovations, as well as the Acting Director General of IDGC Research and Engineering Center JSC, Moscow.

From November 2012 to September 2013 he served as the Acting Director General, then as the Director General of Yantarenergosbyt JSC, Kaliningrad.

From April 2014 to January 2015 he chaired the Management Board of the Noncommercial Partnership of Elektrosetizolyatsiya, the Moscow-based Non-Commercial Partnership of the Developers, Manufacturers, and Suppliers of Insulating Devices and Materials, Fittings, and Protective Devices for Power Grids.

From February 2015 to May 2015 he served as the Deputy Director General for 0.4–6–10-kV Distribution Grids, State Unitary Enterprise of the Republic of Crimea Krymenergo, Simferopol.

In June 2015, he was appointed Acting Deputy Director General for Investments, then became the Interim First Deputy Director General of Tyumenenergo JSC.

Mr. Savchuk was acknowledged by Rosseti PJSC for his contribution to the ensuring reliable supply of power to consumers. Mr. Savchuk was awarded an Honorary Diploma of Rosseti PJSC. He was also awarded an Emercom of Russia Commemorative Medal "Marshal Vasily Chuykov". He was also acknowledged by the Ministry of Energy of the Russian Federation.

In 2017, he completed the following courses:

- Occupational Safety Course for managers, specialists, engineers, and technical personnel responsible for the arrangement, management, and conduct of operations at workplaces and production divisions, as well as for the control and technical supervision of operations. The course was provided by the Professional Training Center, an Autonomous Non-Commercial Organization of Vocational Education;
- Minimum Fire and Technical Hazard Course for managers and persons responsible for the fire safety of offices. The course was provided by the Professional Training Center, an Autonomous Non-Commercial Organization of Vocational Education;
- Course in State Secret Protection, Secret Proceedings, and Basic Matters of Information Security of FES Organizations. The course was provided by the Fuel and Energy Sector Advanced Training Institute, a Federal State Autonomous Educational Institution.

6.2.5. Corporate Secretary

The position of the Corporate Secretary was established at the Company in July 2015. The Corporate Secretary is an officer of Rosseti PJSC responsible for the Company's compliance with the Russian legislation, the Charter, and the internal documents that protect the rights and lawful

interests of the Company's shareholder, Rosseti PJSC. The Corporate Secretary is functionally subordinate to the Board of Directors of Tyumenenergo JSC

The Corporate Secretary's activities are regulated by the Regulation on the Corporate Secretary of Tyumenenergo JSC approved by the Board of Directors November 11, 2016 (Minutes dd. November 11, 2016 No. 22/16).

Andrey Nikolayevich Shaduyrov was elected the Corporate Secretary of Tyumenenergo JSC by the Board of Directors July 12, 2016 (Minutes dd. July 13, 2016 No. 15/16). Born in 1983. Graduated from the Surgut Institute of World Economy and Business Planeta in 2005 majoring in Finances and Credit, qualification of Economist. From March 10, 2015 to December 24, 2015 he studied and completed a retraining course titled Professional Board of Directors Member — Corporate Director, offered by the State University — Higher School of Economics.

From 2007 to present, Mr. Shaduyrov has been working at Tyumenenergo JSC as the Chief Specialist of the Corporate Relations and Reporting Division of the Corporate Policy Directorate. Mr. Shaduyrov does not have a share in the Company's Charter Capital and does not hold any of its ordinary shares.

The Corporate Secretary is mainly tasked to:

- partake in ensuring the Company's cooperation with regulatory bodies, trade organizers, the Registrar, and other professional participants of the securities market;
- immediately inform the Company's Board of Directors on all the identified breaches of (i) the Russian law, or (ii) any provisions of the Company's internal documents;
- be involved in the Company's relations with its shareholder as well as in the prevention of corporate conflicts while also assisting in the pursuit of all the procedures stipulated by the Russian law or the Company's internal documents that are intended to enforce the rights and lawful interests of the shareholder and to control the due execution thereof;
- be involved in the implementation of the Company's Informational Disclosure Policy while also keeping the Company's corporate documents;
- be involved in the enhancement of the Company's corporate governance systems and practices by submitting relevant proposal to the responsible structural units;
- assist the Board of Directors to enable their ongoing activities;
- arrange the Board of Directors' interaction and cooperation with the Company's executive bodies, the Board of Directors Committees, the Auditor, the Audit Commission, and the structural units of Tyumenenergo JSC.

6.2.6. Financial and Economic Activities Control Bodies

Audit Commission

The Audit Commission is a permanent body that monitors the Company's financial and economic activities for compliance with the Russian legislation, the Company's Charter and internal documents.

The Audit Commission shall protect the interests of the Company's shareholder and be held accountable to the General Shareholders Meeting. Pursuant to clause 19.19.1 of the Company's Charter, the Audit Commission consists of 5 members.

From June 29, 2016 to June 27 the Audit Commission of Tyumenenergo JSC consisted of the following persons (positions specified herein were valid as on the election date):

Full Name	Position and Employer
Marina Alekseyevna Lelekova	Director of the Department for Control and Auditing Activities, Rosseti PJSC; Chairwoman of the Audit Commission

Oksana Alekseyevna Medvedeva	Chief Expert of the Audit Activities Directorate, Department for Control and Auditing Activities, Rosseti PJSC
Sergey Vladimirovich Malyshev	Senior Expert of the Audit Activities Directorate, Department for Control and Auditing Activities, Rosseti PJSC
Yelena Stanislavovna Yerandina	Chief Expert of the Control and Expertise Directorate, Department for Control and Auditing Activities, Rosseti PJSC
Aleksandra Vladimirovna Charondina	Deputy Head of the Internal Audit Directorate, Rosseti PJSC

On June 28, 2017, the Management Board of Rosseti PJSC elected the following membership of the Tyumenenergo JSC Audit Commission (positions specified herein were valid as on the election date):

Full Name	Position and Employer
Marina Alekseyevna Lelekova Chairwoman of the Audit Commission	Year of birth: 1961. Education: Far Eastern Institute of Soviet Trade, qualification of Economist, graduated in 1982. Experience: In 2004–2013, she was the Head of the Control and Audit Department, Head of the Financial Control and Internal Audit Directorate, as well as Deputy Head, Senior Expert, and Chief Specialist of the Financial Control and Internal Audit Directorate, PJSC FGC UES; From 2013 to present*, she has been working at Rosseti PJSC as Director of the Department for Control and Auditing Activities
Sergey Vladimirovich Malyshev Member of the Audit Commission	Year of birth: 1965. Education: Yaroslavl Higher Military Financial School, major in Financial Security, qualification of Economist-Financier, graduated in 1986. Experience: In 2009–2010, he worked as a contract serviceman for the Ministry of Defense of the Russian Federation; In 2010–2011, he worked as a Senior Consultant at the Financial Inspectorate, Ministry of Defense of the Russian Federation, In 2011–2012, he worked as a Chief Specialist at Gazpromneft-AERO CJSC; In 2013, he was the Head of the Investment Audit Division, PJSC FGC UES; From 2013 to present, he has worked as a Senior Expert of the Audit Activities Directorate, Department for Control and Auditing Activities of Rosseti PJSC
Oksana Alekseyevna Medvedeva Secretary of the Audit Commission	Year of birth: 1978. Education: Russian Academy of Entrepreneurship, major in Accounting, degree in Analysis and Audit, graduated in 2005. Experience: In 2010–2011, he was the Head of the Internal Audit Department of Baikal-Servis TK LLC. In 2011–2014, he was the Head of the Control and Audit Department of PJSC FGC UES; From 2014 to present* he has worked as a Chief Expert of the Audit Activities Directorate, Department for Control and Auditing Activities of Rosseti PJSC

Anzhelika Aleksandrovna Zadorozhnaya Member of the Audit Commission	Year of birth: 1966. Education: 1. Kalmykov Taganrog University of Radio Engineering, major in Automated Control Systems, graduated in 1988. 1. Kalmykov Taganrog University of Radio Engineering, major in Organization of Entrepreneurship, graduated in 1995. 3. Russian State Academy of State Service under the President of the Russian Federation, major in Financial, Credit, and Tax Policy of the State, graduated in 2003. 4. Moscow Institute of Economics, Management, and Law, major in Jurisprudence, graduated in 2009. Experience: In 2001–2013, she worked at the Audit Chamber of the Russian Federation as a Senior Inspector, a Chief Inspector, Deputy Head of Inspectorate, Deputy Director of Department, and Head of Inspectorate; In 2013–2014, she was the Head of the Control Directorate-General, Moscow. In 2014–2016, she was the Deputy Head of a Department at RusHydro PJSC. From 2016 to present*, she has worked at Rosseti PJSC as Head of the Control and Analytics Directorate of the Department for Control and Auditing Activities, as well as Head of the Internal Audit Directorate
Yelena Yuryevna Slesareva Member of the Audit Commission	Year of birth: 1970. Education: Academy of Labor and Social Relations, Moscow, qualification of Economist, graduated in 1992. Experience: In 2009–2013, she worked as a Chief Specialist of the Internal Audit and Risk Management Department, JSC IDGC of the South; From 2013 to present*, she has worked at Rosseti PJSC as Chief Expert of the Internal Audit Directorate

* "To present" herein means through to December 31, 2017.

Members of the Audit Commission do not hold any shares of Tyumenenergo JSC. In 2017, they did not make any transactions with the Company. Tyumenenergo JSC did not make any claims against the members of the Audit Commission.

Audit Commission members are remunerated in accordance with the Regulation on the Remuneration and Reimbursements for the Tyumenenergo JSC Audit Commission Members dd. June 30, 2015 (Minutes No. 361пр/9).

Payments Received by the Tyumenenergo JSC Audit Commission Members in 2017

thousand rubles

Indicator	Accrued	Income Tax Withheld	Paid
Remuneration for the Audit Commission membership	796.10	103.50	692.60

Auditor

Pursuant to the legislation of the Russian Federation, Tyumenenergo JSC shall conduct an annual audit of its financial (accounting) statements. Pursuant to Clause 10.10.2.11 of the

Company's Charter, the General Shareholders Meeting shall annually appoint an Auditor to audit and verify the Company's annual financial (accounting) statements.

Pursuant to the Federal Law dd. December 30, 2008 No. 307-FZ On Audit, auditors shall be re-elected on the basis of an open-tendering procurement procedure at least once every five years. RSM RUS LLC won the open tender arranged by Rosseti PJSC to audit its financial (accounting) statements for 2015–2017.

On June 28, 2017, the General Shareholders Meeting of Tyumenenergo JSC approved RSM RUS LLC as the Auditor.

Details of the Auditor: RSM RUS Limited Liability Company

Location: 119285, 4 Pudovkina Street, Moscow, Russia.

Certificate dd. September 25, 2014 No. 6938 of Inclusion in the Register of Auditors and Auditing Organizations, which Register is maintained by the Self-Regulatory Auditors Organization Non-Commercial Partnership Audit Association Sodruzhestvo; the Auditor's entry in the Register is ОРНЗ 11306030308.

On September 21, 2017, the Company's Board of Directors set the remuneration payable to RSM RUS LLC for auditing the RAS-based accounting statements for 2017 and the IFRS-based consolidated financial statements for as on December 31, 2017, at 2,541,492.06 rubles, VAT included. Remuneration was paid in full.

The Auditor did not provide any non-audit services in 2017.

6.3. Internal Control System

The Company's Internal Control System (hereinafter, "the ICS") is a component of the Company's general management system, intended to provide reasonable assurance the goals and objectives in the following areas:

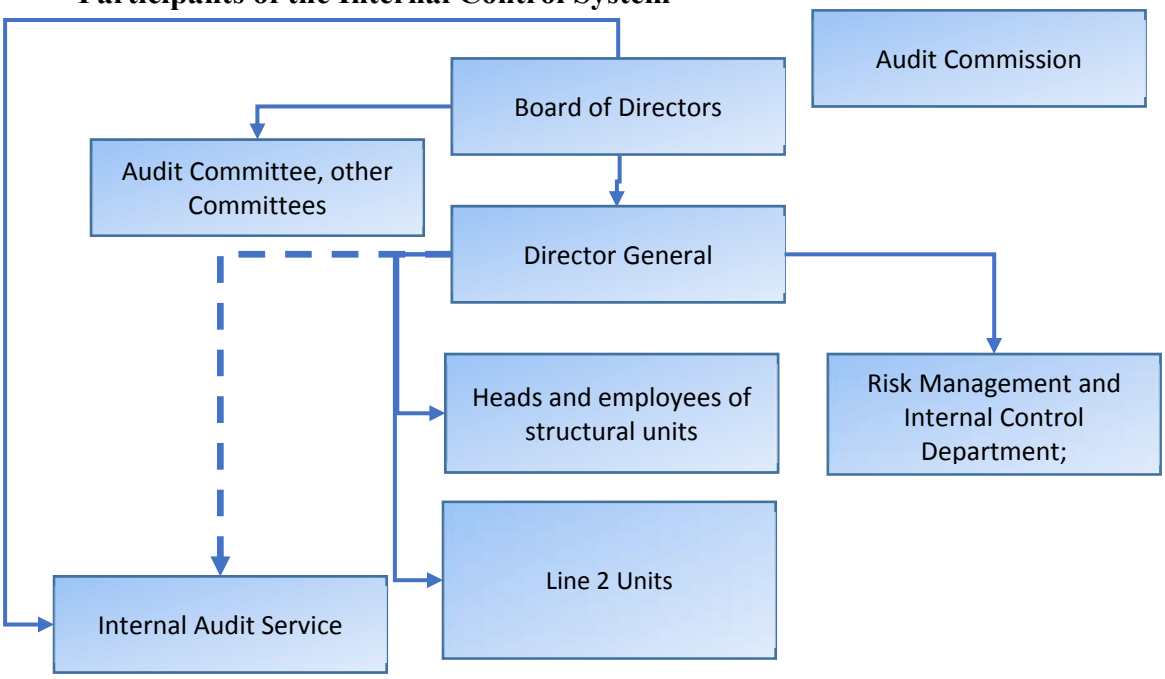
- the Company's efficiency and performance, including its financial and operational indicators as well as the security of its assets;
- compliance with the legal requirements applicable to the Company and with the internal policies and procedures, as well as in the course of economic operations and accounting;
- accuracy and timeliness of accounting (financial) statements and other reports.

The ICS encompasses all areas of the Company’s activities. Control procedures are implemented in all processes at all levels of management.

The Company's Internal Control System is based on a three-lines-of-defense model. This model means that the Company's internal control is implemented at three levels, see Figure 1:

- Line 1 comprises governance bodies (the sole and the collegial executive bodies), the Company's units and subdivisions responsible for control within their functional and job duties;
- Line 2 comprises the Company's special control units;
- Line 3 comprises the Internal Audit Unit.

Participants of the Internal Control System



Functions of the ICS Participants

Functions of the ICS Participants are established by the Company's Internal Control Policy approved by the Board of Directors March 21, 2016 (Minutes No. 06/16), as well as by the regulations specific to structural units.

Participant Name	Basic ICS Functions
Audit Commission	– monitors the Company's financial and economic activities to prepare proposals/recommendations on ICS enhancement; – independently evaluates the reliability of data presented in the Company's Annual Report and Annual Accounting Statements
Board of Directors	– defines the principles of and approaches to the organization of the Internal Control System, whereby it (i) approves the Company's internal documents stipulating the ICS organization and development and enhancement strategy, (ii) approves the Company's Internal Control Policy; – exercises control over the activities of the Company's executive bodies in the key (priority) areas; – reviews the Director General's on the organization and functioning of the Company's Internal Control System; – annually reviews the Internal Auditor's report on the efficiency of the Internal Control System; – reviews the external independent efficiency assessment of the Internal Control System

Audit Committee of the Board of Directors	– tasked with the preliminary review, prior to the approval by the Board of Directors, of the Company's internal documents stipulating the organization and the development and improvement strategy of the Company's Internal Control System, of the Internal Control Policy and subsequent amendments thereto; – tasked with the preliminary review, prior to consideration by the Board of Directors, of the results of assessment of the ICS efficiency based on the report of the internal auditor on the ICS efficiency, as well as reports on the results of external independent assessment of the ICS efficiency; prepares proposals / recommendations regarding the enhancement of the Company's ICS; – supervises the Internal Control System, in particular considers the issues related to control of the accuracy of the Company's accounting (financial) statements, selection of an external auditor and carrying out external audit, compliance with the regulatory requirements, considers the Management Board's report on organization and functioning of the Internal Control System, as well as considers the issues related to analysis and assessment of compliance with the Internal Control Policy.
Other Committees of the Board of Directors (Reliability Committee, Technological Connection Committee, Strategy and Development Committee)	– control the achievement of the established financial and operational targets, supervise compliance with the applicable laws, the rules and procedures stipulated by the local regulatory documents, as well as accuracy and timeliness of the Company's reporting
Director General	– ensures the creation and efficient functioning of the ICS: – responsible for fulfillment of decisions of the Board of Directors related to the ICS organization; – directs the enhancement of the ICS; – prepares reports on the Company's financial and economic activities, organization and functioning of the Company's Internal Control System; – reviews the results of external independent assessment of the ICS efficiency, prepares measures for the development and improvement of the ICS; – approves the Company's regulatory and methodological documents on organization and functioning of the ICS, except for the documents within the competence of the Board of Directors of the Company; – ensures that the Company performs to its action plans necessary for achieving its goals; – organizes accounting and management reporting, preparation of accounting (financial) statements and other reporting; – submits reports on the Company's financial and business performance and on the organization and functioning of the Company's Internal Control System to the Board of Directors for consideration
Collective Working Bodies Created by the Company's Executive Bodies for Specific Functions (commissions, work groups, etc.)	– perform control procedures and/or prepare recommendations for improving control procedures, certain components (elements) of internal control and the Internal Control System.

Heads of Units and Structural Subdivisions of the Company	– perform the functions for developing, documenting, implementing, monitoring and enhancing the Internal Control System in the functional areas of Company's activities, the organization and coordination / implementation of which are within their responsibility subject to the Company's regulatory documents / regulations on the structural units, in particular: – enforce compliance with the internal control principles; – arrange efficient processes (activities), including development and implementation of new control procedures or changes in the existing control procedures taking into account identified risks; – enforce the regulation of the supervised processes (activities); – arrange the implementation of the control procedures; – assess (monitor) the implementation of the control procedures; – assess the supervised processes (activities) for the need to optimize them in order to increase efficiency and meet changing external and internal conditions, arrange the development of proposals for improvement of the control procedures; – ensure the elimination of identified drawbacks in the control procedures and processes (activities).
Employees of the Company's Structural Units that Are Involved in Control Procedures as a Part O=of Their Job Duties	– perform control procedures; – timely inform their immediate superiors when implementation of the control procedures becomes impossible for some reasons, and/or it is necessary to alter the design of the control procedures due to changes in internal and/or external conditions of the Company's operation; – submit proposals for introduction of control procedures in relevant areas of activities to their immediate superiors for consideration
Line 2	
Risk Management and Internal Control Division	– prepares and ensures the implementation of baseline and guideline documents on the creating and enhancement of the Internal Control System; – assists the Management in creating the Internal Business Process Control System and preparing recommendations for describing and implementing control procedures in processes (activities), and for assigning responsibilities to the Company's officers; – prepares information regarding the state of the Internal Control System for the stakeholders; – collaborates with the state control and supervisory bodies on the internal control issues.
Economic Security Service	– protects the lawful interests of the Company and its branches, their material and intellectual resources, as well as their ordinary course of business from illegal action (inaction) of legal entities and individuals, from unfair competition, from other internal and external threats that cause or might cause material and (or) reputational damage to the Company; – elaborate and take action to prevent and combat corruption; – identify and prevent conflicts of interest or other abuse on the part of the Company's officers
Division for Anti-Corruption Compliance Procedures	– monitors all of the Company's employees' compliance with the Anti-Corruption Policy and the Company's internal documents adopted in furtherance thereof to minimize the risks of corruption
Directorate for Legal Support	• controls the Company's compliance with legislative requirements by legal review and approval of the drafts of contracts/agreements, organizational and administrative documents, resolutions of the Company's governance bodies, powers of attorney for the representation of the Company's interests before third parties, applications, letters, requests, and complaints submitted on behalf of the Company to legislative and executive authorities, to courts, to law and to enforcement agencies, legal review and approval of which follows the procedure stipulated by the Company's organizational and administrative documents. The

	Directorate also monitors, and informs the Company's Management on, the adoption of legal acts of the Russian Federation that could considerably affect the Company's activities, so as to minimize the risks of illegal non-compliance
Environmental Safety Division	• assists in the reduction of the environmental impact of the Company's branches while optimizing the use of natural resources
Industrial Safety and Production Control Service	• ensures the functioning of the occupational safety and production control mechanisms in the Company's general control environment with respect to the federal and regional laws, internal regulations, procedures, and standards, as well as the facility-specific regulatory documents
Administrative Department	• monitors the execution of instructions contained in the Company's orders, meeting minutes, orders of the Director General, so as to minimize the risks related to the untimely execution thereof
Line 3	
Internal Audit Service	– uses the internal audit results as a basis to prepare recommendations on enhancing the control procedures, specific internal control elements (components), and the Internal Control System in general; – carries out an internal independent assessment of the ICS efficiency and prepares recommendations on how to improve it

In order to implement the ICS Development and Improvement Strategy of Rosseti PJSC, its subsidiaries and affiliates, as approved by the decision of the Board of Directors of Rosseti PJSC dd. February 10, 2014 (Minutes No. 143) (hereinafter, "the ICS Development Strategy"), the Company approved the new revision of the Internal Control Policy of Tyumenenergo JSC by the decision of the Board of Directors dd. March 21, 2016 (Minutes No. 06/16). The Internal Control Policy specifies the objectives, functioning principles and components of the Company's ICS, primary functions and responsibilities of the ICS participants, as well as the procedure for assessment of the ICS efficiency.

The Company has an Internal Control Policy Compliance Procedure in place that defines the applied aspects of using the norms set by the Internal Control Policy.

The control procedures for the processes and subprocesses of primary and supporting activities, as well as for the Company's management processes, are documented in the control and risk matrices.

Pursuant to the decision of the Company's Board of Directors (Minutes dd. April 20, 2017 No. 15/17) and the Company's Order dd. April 29, 2017 No. 264 the Internal Control System Improvement Plans were approved and put in place.

To guarantee that the ICS is efficient and conforms to the objectively changing requirements and conditions, the Company tasks the internal auditor to evaluate the efficiency of the ICS: whether it is in its desired state and maturity.

The Company's internal auditor is responsible for the internal independent efficiency evaluation of the ICS; the ICS is not subject to external audit.

The issue of ICS efficiency as of year-end 2017 was discussed and reviewed at the Board of Directors meeting _____ (Minutes dd. _____ No. ___) while also being preliminarily discussed by the Audit Committee of the Board of Directors March 13, 2018 (Minutes dd. March 13, 2018 No. 04/18). It was therefore decided to approve the Tyumenenergo JSC Internal Audit Report on the Efficiency of the Internal Control System, Risk Management System, and Corporate Governance System of the Company for 2017.

By these decisions, the ICS was evaluated to be "optimally" mature at 79%, an upward trend YoY (the ICS maturity was between Moderate and Optimal as of year-end 2016).

Over the reporting year, the Company took the following key ICS improvement measures:

1. The Company approved the business-process risk and control procedure matrices, analyzed the effective local regulatory documents (hereinafter, the LGD), developed the LGD updating schedules so as to integrate the control matrices into the general system of process-regulating LGDs by adding the approved control matrices and charts as appendices.

2. The Company harmonized, approved, and published on an employee-accessible resource the Regulations on Structural Units, as well as job descriptions for employees.

3. The Company developed and approved key risk indicators while also adding the concept of Risk Manager and its definition to the Company's Operational Risk Assessment Guidelines.

4. The Company developed and introduced a preventive control form to be used when preparing information for weekly conference calls.

5. The Company implemented the reviewing of the typical audit-revealed infractions and breaches into the Internal Audit and Control Department's operations.

6. Information system *PAMS Development* was modified,.

The Internal Audit Service of the Internal Audit and Control Department is responsible for internal audit of the Company.

Internal Audit is functionally subordinate to the Company's Board of Directors, which means that the Board of Directors shall control and arrange the activities of the internal audit unit, approve its budget, Plans and Performance-to-Plan Reports, approve the decisions to appoint, dismiss, and set a remuneration for the Head of Internal Audit.

Internal audit is intended to assist the Board of Directors and the Company's executive bodies to optimize the management of the Company as well as its financial and economic activities by, among other means, a systemic and consistent approach to the analysis and evaluation of the Risk Management System, Internal Control System, and Corporate Governance System as tools for securing reasonable confidence in the accomplishment of the Company's objectives.

Objectives and goals, basic organizational and functional principles of internal audit, functions and powers of internal audit are defined in the Tyumenenergo JSC Internal Audit Policy as approved by the Company's Board of Directors (Minutes dd. March 21, 2016 No. 06/16, or No. 7/17 in the March 10, 2017 version).

In 2017, 5 persons were involved in internal audit.

The Company approved the following documents to regulate internal audit:

– Internal Audit Policy approved by the Company's Board of Directors (Minutes dd. March 21, 2016 No. 06/16, or No. 7/17 in the March 10, 2017 version);

– Regulation on the Company's Internal Audit and Control Department dd. November 1, 2016 No. 19 as approved by the Audit Committee of the Company's Board of Directors (Minutes dd. September 26, 2016 No. 32) and by the Company's Board of Directors (Minutes dd. October 21, 2016 No. 21/16);

– Internal Audit Quality Maintenance and Improvement Program, as approved by the Company's Board of Directors December 23, 2016 (Minutes No. 27/16);

– Internal Audit Standards and Practical Application Standards developed in accordance with the International Standards for the Professional Practice of Internal Auditing.

Feedback from the Audit Committee is received by the Head of Internal Audit in various forms as a part of their cooperation with the Audit Committee, which includes the analysis of the Audit Committee's decisions and recommendations on internal-audit matters; surveying the members of the Audit Committee is another feedback channel.

The Audit Committee of the Board of Directors assessed its satisfaction with internal audit at 11 points as of year-end 2017, which corresponds to a "meets the requirements" rating according to the Internal Audit Quality Maintenance and Improvement Program as approved by the Company's Board of Directors (Minutes dd. December 23, 2016 No. 27/16).

6.4. Ethics and Anti-Corruption Practices

The National Anti-Corruption Plan for 2016–2017, approved by the Decree of the President of the Russian Federation dd. April 1, 2016 No. 147, defines its main objective as the enforcement of Article 13.3 of the Federal Law dd. December 25, 2008 No. 273-FZ On Combating Corruption; the clause mandates that legal persons shall elaborate and take action to prevent and combat

corruption. At the same time, Article 13.3. of the Federal Law dd. December 25, 2008 No. 273-FZ On Combating Corruption specifies that Tyumenenergo JSC (hereinafter, "the Company") shall be obliged to combat and suppress corruption offenses as well as to prevent any such offense potentially committable by its employees or counterparties.

Clause 13.3.2.1 of the Federal Law dd. December 25, 2008 No. 273-FZ On Combating Corruption stipulates the necessity for creating subdivisions tasked exclusively to prevent corruption and other offenses. Pursuant to the Law, the Company's Management established its Division for Anti-Corruption Compliance Procedures. This subdivision is tasked to (a) reveal, identify and subsequently eliminate any possible cause of corruption (corruption prevention), (ii) reveal, prevent, suppress, solve, and investigate all cases of corruption (combat against corruption); (iii) minimize and (or) mitigate all the consequences of corruption and other offenses. The subdivision consists of two persons, the Head and a 2nd category specialist. This Division reports directly to the Director General of Tyumenenergo JSC.

Heads and employees of security divisions and divisions responsible for the prevention of corruption and other offenses are strongly encouraged to take part in trainings, seminars, conferences, and forums on preventing and combating corruption; in relation thereto, and as a part of advanced trainings, the employees of the Division for Anti-Corruption Compliance Procedures:

– completed advanced training as a part of the workshop titled Combating Corruption: Legislative Compliance. Development and Implementation of Anti-Corruption Measures (May 2017);

– attended the annual conference titled Compliance and Anti-Corruption in Russia and CIS: Status 2017 (Moscow, June 2017);

– took part in the seminar titled on Actual Problems of Preventing and Combating Corruption in the Grid Complex (Kaliningrad, December 2017) held by Rosseti PJSC.

The Company implements the Uniform Anti-Corruption Policy of Rosseti PJSC and its subsidiaries / affiliates as approved by the Company's Board of Directors (Minutes dd. February 6, 2017 No. 02/17) (hereinafter, "the Anti-Corruption Policy"), which defines the Rosseti Company Group's uniform approach to ensuring compliance with Article 13.3 of the Federal Law dd. December 25, 2008 No. 273-FZ On Combating Corruption.

Pursuant to the Federal Law dd. December 25, 2008 No. 273-FZ On Combating Corruption and to the Anti-Corruption Policy, the Company approved the Tyumenenergo JSC Anti-Corruption Program for 2017 (hereinafter, "the Program"). The approval of the Program enabled the Company to elaborate a plan of actions related to developing and updating of internal local regulatory documents, to assign persons responsible for anti-corruption measures, as well as to set the deadlines for some of such measures.

In 2017, a number of actions were taken to improve the legal regulation of the Company's anti-corruption measures, and a number of organizational and administrative documents were prepared to combat corruption, as a part of the Program. The regulatory framework was developed and (or) updated in the following areas:

– development and approval of the Code of Corporate Ethics and Official Conduct for the employees of Tyumenenergo JSC;

– formulating the procedures for corporate-ethics compliance and settlement of conflicts of interests in the Company;

– arranging the Tyumenenergo JSC Commission for corporate-ethics compliance and settlement of conflicts of interest;

– arranging measures to declare the Company's managers' property, income, and liabilities;

– arranging measures to declare employees' conflicts of interests on an annual basis;

– arranging measures to declare the conflicts of interests on the part of Tyumenenergo JSC job applicants/nominees;

– updating the Procedure for the Receipt, Review, and Resolution of Claims on Possible Corruption (claims can be submitted by the Company's employees, counterparties, other individuals and legal entities).

In 2017, the Company's activities were strictly in line with the principles of preventing and combating corruption as proclaimed by the parties to the Anti-Corruption Charter of Russian Business. By accepting the terms of the Charter (Certificate dd. July 1, 2015 No. 414), the Company ensured efficient financial control, rejection of illicitly-gained advantages, open tendering-based procurements, personnel training and control, assistance to law enforcement agencies on all matters relating to anti-corruption measures, as well as the publicity of the Company's anti-corruption measures. In 2017, the Chamber of Commerce of the Russian Federation reviewed the Company's Declaration of Compliance with the Anti-Corruption Charter of the Russian Business and confirmed the Company's compliance with the existing requirements to preventing and combating corruption; the Company's involvement in this public initiative to combat and prevent corruption was therefore prolonged.

To improve the efficiency of the ethical standards applicable to the Tyumenenergo JSC activities, to the official conduct of the employees of the Company and its subsidiaries / affiliates, to enforce compliance with the Russian legislation, and to maintain business reputation, the Company has a Code of Corporate Ethics and Official Conduct for its employees in place (approved by the decision of the Board of Directors dd. May 12, 2017 No. 16/7). The Code is a set of general principles, norms, and rules of professional ethics and corporate conduct which all the employees, regardless of their positions, as well as the Board of Directors members are obliged to follow.

Settlement of conflicts of interests is nowadays deemed one of the most importance mechanisms Rosseti PJSC and all of its subsidiaries/affiliates (including Tyumenenergo JSC) have in place. The relevance and importance of conflict of interests prevention measures are further supported by the effective federal legislation including the Federal Law dd. December 25, 2008 No. 273-FZ On Combating Corruption, which forces companies to take corruption prevention measures, to prevent conflicts of interest and pre-conflict situations in its activities, as well as to settle such conflicts of interest.

In 2017, the Company updated its Conflict of Interests Settlement Regulation and Regulation on the Tyumenenergo JSC Commission for Compliance with the Corporate Ethics and Settling Conflicts of Interest. The updated Regulations fully addressed the implementation of conflict of interests prevention procedures. Besides, the document regulated the procedure which the Company's employees may use to report conflicts of interest and measures to be taken to settle such conflicts of interest. Typical pre-conflict/conflict of interests situations were approved.

As a part of the conflict-of-interests declaration campaign, 1,642 Conflict of Interests Declarations submitted by the Company's employees were reviewed as of year-end 2016. 69 cases were identified where employees of the Company's Executive Office and branches were directly subordinate to or supervised by a relative; 1 case was identified, in which a Company's employee was controllable by their relative. These employees had their wages checked; HR-related and other decisions were analyzed for possible preference, as well as for the cause and timing of their emergence. These pre-conflict situations were reviewed by the Commission for Compliance with Corporate Ethics and Settling Conflicts of Interests on April 13, 2017, Minutes No. 01/2017.

In Q3 and Q4 2017, the Company took action to minimize the risk of escalating such pre-conflict situations as well as to find ways to resolve them. These measures helped reduce the number of pre-conflict situations identified in 2017 by 55% compared to 2014, as well as to improve the efficiency of conflict of interests settlement measures taken by the Company. As at December 31, 2017 Tyumenenergo JSC still had 42 pre-conflict situations.

In 2017, the Company also took measures to disclose conflicts of interests when hiring a person or changing an employee's position. The Company audited 381 Conflict of Interests Declarations submitted by candidates for vacant positions. This audit revealed 8 pre-conflict

situations; 3 candidates were rejected until the resolution of their respective pre-conflict situations; 1 situation was discussed by the Commission for Compliance with Corporate Ethics and Settling Conflicts of Interests (Minutes dd. August 29, 2017 No. 03/17).

The Tyumenenergo JSC Commission for Compliance with Corporate Ethics and Settling Conflicts of Interests was active in 2017. It had three meetings to address possible pre-conflict situations and conflicts of interests that emerged in the Company.

By the end of 2017, the Commission had audited 390 declarations of income, property, and liabilities submitted by the top managers and heads of the structural units of the Company and its subsidiaries / affiliates; as well as by their close relatives; these declarations were audited for authenticity, signs of affiliation, presence of conflict of interests, and other abuse of one's position within the Company. No breaches or violations revealed.

As a part of risk management activities related to preventing and combating corruption, the Company developed a standard Control Matrix for Combating Corruption in 2017; the matrix was formed as a part of the measures taken to improve the Tyumenenergo JSC Internal Control System. The Company also prepared Control Schemes for Combating Corruption and Related Subprocesses, which covered all the risks inherent with combating corruption and related subprocesses; operations (actions) and efficient control procedures for the efficient management of such risks were elaborated as well.

Over 2017, the Company was continually collecting, analyzing, and verifying data on the entire chain of counterparty owners, including the beneficiaries (also ultimate beneficiaries), as well as data on the membership of executive bodies, for the completeness, correctness of filling, and the accuracy of provided information so as to exclude any possible conflict of interests, affiliation, and other abuse related to the positions held at Tyumenenergo JSC and its subsidiaries / affiliates. Consolidated reported thereon were further submitted to Rosseti PJSC.

As a part of action to prevent and combat corruption, all the data was stored in the Automated Beneficiary Data Collection and Analysis System (hereinafter, "the ABDC AS") in 2017. Over the reporting period, the ABDC AS helped report 9,823 contracts made; 968 additional agreements made; 7,209 counterparties; 5,070 full chains of counterparty owners; 729 sub-contractors involved with jobs / services at the Company's facilities; all the reports were submitted to Rosseti PJSC and superior supervisory bodies.

Besides, in Q4 2017 the ABDC AS was used to report to Rosseti PJSC, Tyumenenergo JSC and superior supervisory bodies the details of the contracts entered into by Tyumenenergo Engineering JSC (a subsidiary of Tyumenenergo JSC), which included: 97 contracts, 68 counterparties, 35 full chains of counterparty owners, 9 additional agreements and contract termination agreements.

In 2017, the Economic Security Service and branch-specific security subdivisions checked procurement participants and counterparties 4,107 times for trustworthiness, affiliation, and interestedness. 680 of the audited procurement participants and counterparties were dismissed for negative reasons (non-disclosure or incomplete disclosure of information on the ultimate beneficiaries, affiliation with other procurement parties, submission of inaccurate information, tax arrears, losses in the previous year, etc.).

To improve the mechanisms for the receipt, review, and resolution of claims about possible corruption cases, the Company developed and approved a new revision of the Procedure for the Receipt, Review, and Resolution of Claims on Possible Corruption from the Company's employees, counterparties, other individuals and legal entities (hereinafter, "the Procedure"), see Order dd. November 14, 2017 No. 603 On the Approval of the Procedure for the Receipt, Review, and Resolution of Claims on Possible Corruption from the Company's Employees, Counterparties, Other Individuals and Legal Entities. The new revision contains the following amendments:

1. A formalized procedure for filing a claim by a hotline call.
2. A defined procedure for informing the employer on the inducement of an employee to commit a corruption offense, as well as on the employee-discovered corruption cases.

3. An established set of measures to protect corruption informants.

In 2017, the Company received and registered two claims regarding possible corruption or conflict of interests. The Division for Anti-Corruption Compliance Cases and the Economic Security Service did a detailed internal investigation into the materials and circumstances therein presented. No corruption revealed. The claimants received reasoned responses.

Besides, the Company continually examines its counterparties to reduce the risk of its own involvement in corruption and other unfair practices; such examination implies an analysis for trustworthiness, affiliation, and interestedness. The Company's counterparties and business partners receive procedures, policies, and rules intended to prevent and combat corruption (anti-corruption standards, clauses, etc.). In 2017, 7,209 of the Company's counterparties (100% contractors under the existing expenditure and revenue contracts) studied with the Anti-Corruption Policy and other Tyumenenergo JSC rules intended to prevent and combat corruption.

The Company continually trains its employees on legal matters and seeks to lay the foundations of law-abiding behavior. On an annual basis, the Company raises its employees' awareness on the local regulatory documents related to preventing and combating corruption; employees undersign to confirm being informed of such documents. To inform the Company's employees, the internal network storage of Tyumenenergo JSC contains documents that regulate anti-corruption activities, compliance with corporate ethics, and settlement of the conflicts of interests. Employees are annually made aware of the Rosseti Company Group's Anti-Corruption Brochure for Employees. In 2017, a total of 7,582 persons were made aware of the effective local anti-corruption regulations, which was 100% of the staff as on December 31, 2017. The Company also briefs its job candidates on the effective anti-corruption regulations; in 2017, 380 candidates were made familiar with the anti-corruption standards.

The Company broadly seeks to cultivate corruption prevention among its customers and counterparties by disseminating a set of materials under a common title Say No to Corruption! Regional and corporate media regularly publish information on Anti-Corruption Policy measures to be taken by the Company while also helping disseminate information materials on preventing and combating corruption.

The Company's official website has a regularly-updated section Anti-Corruption Policy accessible to all concerned parties. The website also provides a feedback features for claims about possible corruption. Employees, citizens, and representatives of legal persons can also use other channels to claim about corruption: hotline, email, a letter at the Company's address, or a visit to the Head of the Division for Anti-Corruption Compliance Procedures.

Complete, timely, and appropriate execution of anti-corruption measures on the part of the Company reflects its commitment to high ethical standards of transparent and fair business, of following the best practices of corporate governance, and maintaining an appropriate reputation as a grid-complex company.

7. EQUITY CAPITAL

7.1. EQUITY CAPITAL

Pursuant to the Charter of Tyumenenergo JSC, the Charter Capital of Tyumenenergo JSC amounted to 27,373,895,100 rubles as of December 31, 2017, divided into 273,735,951 ordinary registered shares each of a 100-ruble nominal value. The Charter Capital of Tyumenenergo JSC does not include any preferred shares.

The Company has authorized 3,121,409 additional ordinary shares each of a 100-ruble nominal value, for a total 312,140,900 rubles. Registered ordinary shares authorized by the Company entitle their holders to the same as the placed ordinary registered shares.

Public Joint-Stock Company Russian Grids (Rosseti) is the sole shareholder of Tyumenenergo JSC.

The Company's shares are not traded in the organized securities market

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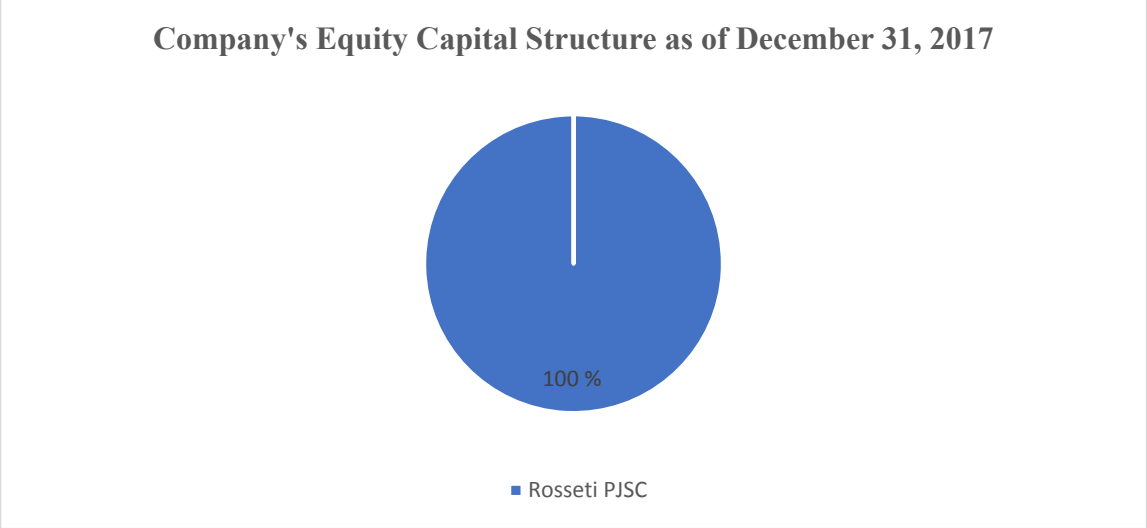


Tyumenenergo JSC holds preferred shares of Rosseti PJSC. Information on shares in cross-ownership as of December 31, 2017:

Name of the Issuer	CB Code	Nominal holder	Share of Tyumenenergo JSC, %	Nominal value per share, rubles
Rosseti PJSC	RSTIP	JSC "Sberbank CIB"	0.0031	1

7.2. Bonded Loans

On March 1, 2017 Moscow Exchange PJSC decided to assign ID 4-00159-F-001P-02E to the Exchange Bonds Series 001P Program of Tyumenenergo JSC, which totaled 25 billion rubles and had a maximum maturity of up to 10,920 days (30 years).

Documents on the issue of these securities are available at the Company's corporate website:
http://www.te.ru/aktsioneram_i_investoram/informatsiya_o_vypuske_tsennykh_bumag.

As on December 31, 2017, and the Annual Report approval date, no bonded loans of Tyumenenergo JSC were in circulation.

7.3. Dividend Policy

The Dividend Policy of Tyumenenergo JSC is defined in the Dividend Policy Regulation as approved by the Company's Board of Directors (Minutes dd. August 27, 2010 No. 10/10).

The Company's Dividend Policy is based on the following principles:

– dividends are based on the use of profits without considering the revaluation of financial investments;

– it is necessary to maintain the Company's certain financial and technical status (i.e. to carry out the Investment Program) while also supporting its development prospects;

– the Company's dividend calculation and payment practice must be compliant with the legislation of the Russian Federation and the best standards of corporate behavior;
– the Company's and the shareholders' interests must be optimally balanced;
– the Company's investment attractiveness and capitalization must be enhanced;
– dividend calculation and payment mechanism must be absolutely transparent.

In Q3 2017, 2,025,217 rubles were paid in dividends on ordinary shares (7.39835 rubles per ordinary share) for 2016.

Profits Paid as Dividends in 2012–2016*

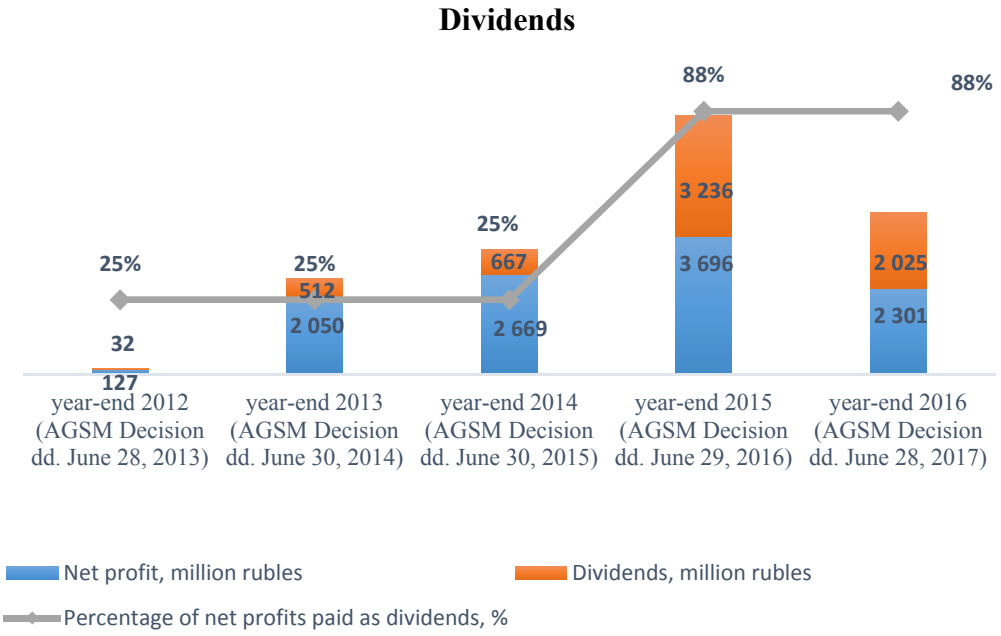
Payment period	Dividends, thousand rubles	Share of Net profit, %	Dividends per Share, rubles
for 2012 (AGSM 2013)	31,735	25	0.1159316198
for 2013 (AGSM 2014)	512,357	25	1.8716992892
for 2014 (AGSM 2015)	667,321	25	2.4378
for 2015 (AGSM 2016)	3,235,994	88	11.8214598
for 2016 (AGSM 2017)	2,025,217	88	7.39835

* Profit distribution in accordance with the Annual General Shareholder Meetings (AGSM) decisions

AGSM 2013 (for 2012) — AGSM Minutes dd. June 28, 2013 No. 187пр/14.
AGSM 2014 (for 2013) — AGSM Minutes dd. June 30, 2014 No. 242пр/14.
AGSM 2015 (for 2014) — AGSM Minutes dd. June 30, 2015 No. 361пр/9.
AGSM 2016 (for 2015) — AGSM Minutes dd. June 29, 2015 No. 491пр/9.
AGSM 2017 (for 2016) — AGSM Minutes dd. June 28, 2017 No. 620пр/3.

In accordance with the Charter of the Company, decision on the distribution of profits for year-end 2017 will be made on the basis of the AGSM decision in 2018.

The chart below presents dividend payments in detail.



7.4. Material Transactions

In 2017, Tyumenenergo JSC did not enter into any major transactions or interested-party transactions.

8. HR and Social Policy

The key goals of the Company's HR and Social Policy (hereinafter, "the Policy") intended to enable the Company to attain the targets of its Grid Complex Development Strategy, are as follows:

– planning of the staffing to ensure the availability of reliable information on the operational and forecast quantitative and qualitative personnel requirements that is necessary and sufficient to fulfill the tasks of the Company;
– timely meeting the Company's needs for personnel of required qualification;
– ensuring efficiency of personnel activities, labor productivity improvement.

These key HR and Social Policy goals are attained by means of a set of measures taken to reach certain targets in the areas of:

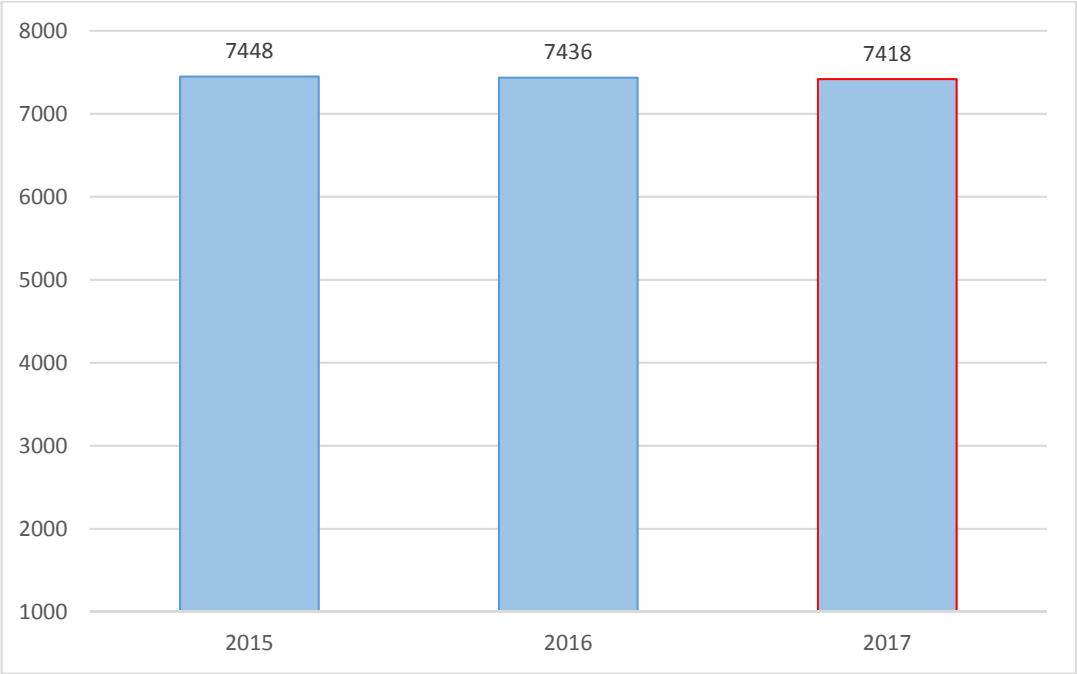
– organizational design;
– manpower management;
– staffing and staff development;
– personnel efficiency management (motivation);
– social benefits and guarantees;
– occupational safety and labor culture.

8.1. Manpower and Its Structure

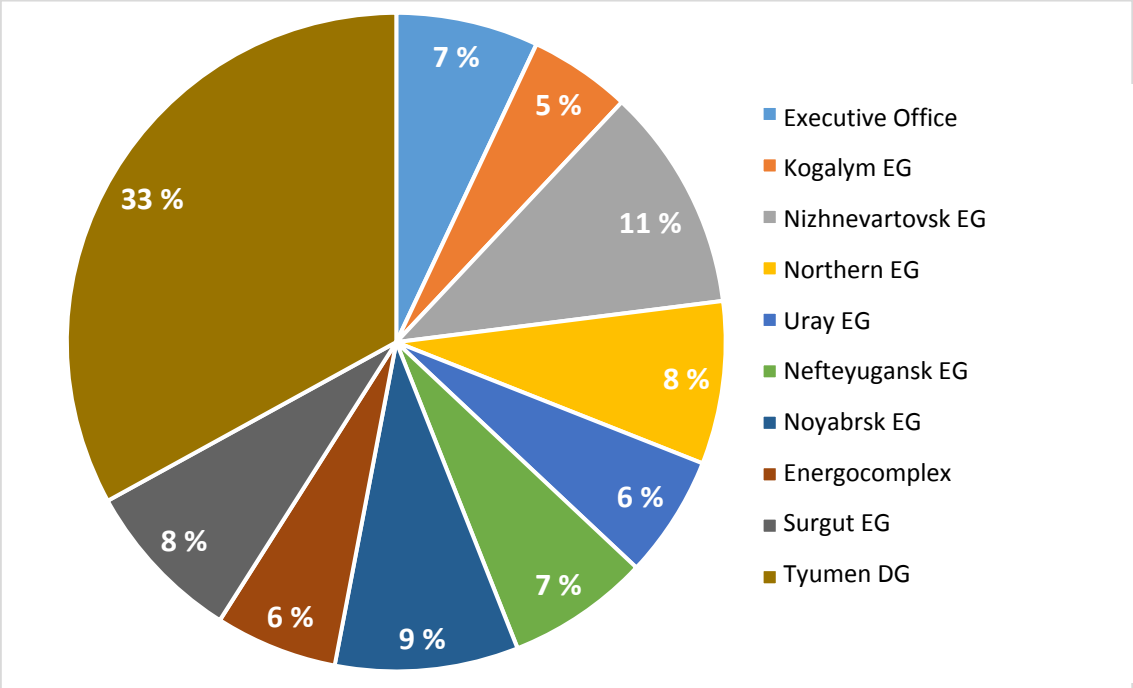
In 2017, the average headcount of Tyumenenergo JSC was 7,418 persons, 0.24% reduction against 2016.

Such decrease in the average headcount was due to the implementation of measures aimed to optimize the number of the administrative and management personnel.

Average headcount of Tyumenenergo JSC in 2015–2017, ppl.



Breakdown of the average headcount in 2017



The staffing level of the Company for three years has been maintained at a sufficiently high level of at least 97% (+4 p.p. compared to 2015).

The average age of employees increased and reached 42 years in 2017 (against 41 in 2016), which was mostly due to an increase in the number of employees aged 25 to 50 (+2.2 p.p.) as well as in the number of working pensioners (+0.5 p.p.).

Tyumenenergo JSC staff boasts a high level of qualification, as 85.7% of employees have professional education. This is a 4.7 p.p. increase over the last three years.

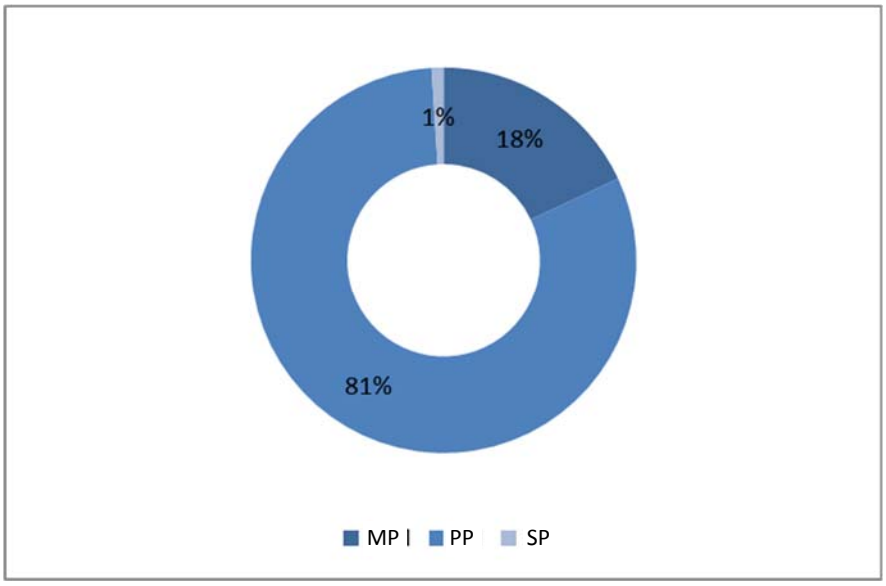
8.2. Personnel Training and Development

Training is a priority under the Company's HR and Social Policy and is regulated by the Personnel Training Regulation of Tyumenenergo JSC developed with due account of the HR Management Rules of Electric Power Industry Enterprises of the Russian Federation.

The share of employees who took part in full-time trainings in the reporting year totaled 47.7% (3,535 persons) of the average headcount, which was 5.7 p.p. (417 persons) more than in 2016.

Production personnel accounted for the highest share of employees who passed such training (81%, or 2,877 persons). In 2016, the same figure was 80%. Breakdown of trained staff by categories (management personnel, MP, production personnel, PP, and support personnel, SP) is presented below:

Categorial Breakdown of Personnel that Passed Full-Time Training, %



Key educational service providers:

– Non-Commercial Partnership Corporate Energy University, Moscow:

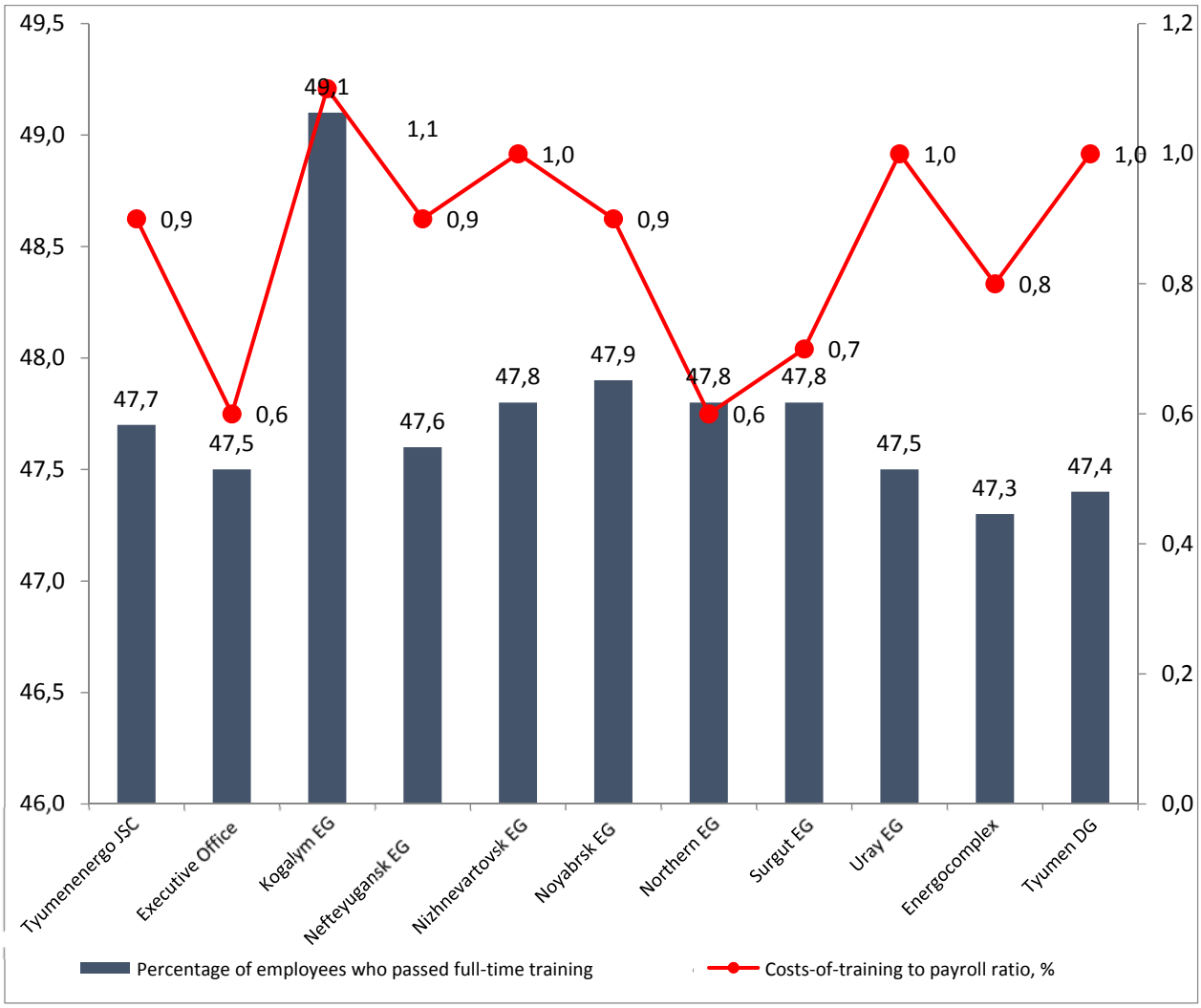
– Autonomous Non-Commercial Organization of Vocational Education Professional Training Center, Surgut;

– Federal State Autonomous Educational Institution of Supplementary Vocational Education Petersburg Energy Institute of Advanced Training, St. Petersburg;

– Federal Budgetary Institution Rostekhnadzor Education Office, Moscow.

Actual spending on personnel training totaled 39,187.20 thousand rubles (regardless of sources). In 2016, 35,086.83 thousand rubles were allocated for personnel training. In 2017, training costs (TC) totaled 0.9% of the payroll amount (0.8% in 2016).

Share of Employees Who Passed Full-Time Training and TC-to-Payroll Ratio in 2017, %



The Company's Management pays due attention to expanding the cooperation with higher and secondary educational institution that provide power engineering training in the areas of the Company's operations. Those include Surgut State University, Tyumen State University, State Agrarian University of Northern Urals, Omsk State Technical University, Yugra State University, etc.

As of today, the Company's has entered into cooperation agreements with 23 institutions of higher education that have departments specializing in power engineering, as well as with 12 institutions of vocational education that provide training in power engineering.

In 2017, 198 students had production and pre-diploma internships with the Company's Executive Office and branches, 42 of whom did it under fixed-term employment contracts and were paid.

Sergey Savchuk, Director General of Tyumenenergo JSC, is a member of the Board of Trustees of Surgut State University, which helps the university train engineers the region needs today.

Stroyotryad (student construction team) movement gained traction as well: 77 students studying power engineering were assigned this year to Student Team Energetik to work at the Company's facilities in the summer. The students had an active social life as well, taking part in sports competitions, contests, and events organized for the industry's veterans. Not Team members not only learned more about the professionals' work, but they also gained invaluable experience the veterans were glad to share. Energetik won the 2nd prize in the Grid Complex Stroyotryad Contest.

8.3. Talent Pool Support and Use

The Company has a systematic approach to supporting and involving its talent pool, a crucial task of HR management. It systematically seeks to form and develop managerial and youth talent pools at the level of branches and the Executive Office.

In order to meet the Company's demand for well-trained specialists, and do so promptly and appropriately, Tyumenenergo JSC has created managerial talent pools for the following positions:

1. In the Company:
– Deputy Directors General;
– Heads of Structural Units;
– Heads of Directorates and Divisions.
2. At branches:
– Deputy Branch Directors;
– Heads of Structural Units;
– Heads of Directorates, Divisions, and Services;
– Heads of Production Units.

Below are the key criteria for including an employee in the managerial talent pool:

1) high professional expertise;
2) high production performance;
3) personal and business potential necessary for professional development and career progress.

Candidates are assigned to the managerial talent pool on a competitive basis. In 2018, 465 persons were assigned to the managerial talent pool of the Company. 100% of management positions now have a talent pool behind them.

To involve young specialists in solving the acute problems of the grid complex, to improve their professional competence, and to assist in their professional growth, the Company actively engages in working with youth talent pools.

These talent tools of the Company are young specialists that boast a high potential of their professional and managerial competences. Enrollment preferences are given to the employees who are actively engaged in the Company's social life and have rationalization-, invention-, and innovation-related achievements.

Talent pools are reviewed and updated annually; vacated positions are filled additionally from the pool of the Company's young specialists.

As of the end of 2017, the Company's youth talent pools totaled 105 employees.

The efficiency of such talent pools directly depends on the conditions created for the professional development of candidates. For each person in the talent pool, the Company has approved target positions and individual development plans; it assigns mentors from the list of the Company's most competent employees to help these candidates master their target jobs.

To develop their professional and managerial competences, candidates take part in the advanced training programs of Russia's premier educational institutions: National Research University Higher School of Economics, Russian Academy of National Economy and State Service under the President of Russia, etc. Employees enrolled in the managerial talent pool of the Company take part in the Presidential Program of Management Training.

In 2017, members of the managerial and youth talent pools of the Company had a cycle of business trainings on such topics as Public Speaking Technique and Efficient Press Service Work. Those events were attended by 36 employees.

370 candidates underwent all the trainings in total in 2017.

Talent pool development measures are not limited to advanced trainings, seminars, and workshops; practical management experience is emphasized as well: candidates are actively

engaged in preparations for meetings, take part in the development of regulatory documents, are involved with work groups, and may even fill the role of an Acting Head at their target positions when the actual Head is temporarily absent.

Of all 221 candidates granted management positions in 2017 at the Company's branches and Executive Office, 100 (45.2%) were from the Company itself, of whom 82 (37.1%) were from the talent pools. By virtue of such systematic approach to talent pools, all the management positions in the staff have a talent pool to be drawn from.

8.4. Labor Conditions and Remuneration (including KPIs)

Tyumenenergo JSC remunerates its employees under the Collective Agreement, namely its Appendix, the Regulation on the Unified Remuneration System for the Workers, Managers, Specialists, and Officers of Tyumenenergo JSC.

The Regulation is compliant with legislative requirements, sectoral and departmental regulations, and the Industrial Tariff Agreement.

The Regulation defines a uniform value and calculation procedure for tariff rates and salaries for workers, managers, Specialists, and Officers, as well as the uniform value and calculation procedure for reimbursements and incentives payable on top of such rates, and a bonus and reward system.

The incentive system consists of multiple components that enable flexible remuneration on the basis of an employee's personal performance.

The labor market situation in the region does affect the Company's current policies applicable to social and labor relations.

The continual increase in the salaries of the Company's personnel enables retention of a stable and high-skilled team that is key to the successful development of the Company.

Employees and their elected representatives are notified of any material changes in the economic activities that could affect them significantly; the effective labor legislation of the Russian Federation stipulates a minimum period of such notice. The Collective Agreement does not restate such information.

Total Number of Discrimination Cases and Corrective Actions Taken

As the Company is socially responsible and strictly compliant with the law, it neither tolerates nor permits any kind of workplace discrimination and harassment, or any kind of behavior that could be deemed offensive or unacceptable. The Company respects the rights, personal freedom, and dignity of its employees, trusts them, and grants equal opportunity to everyone. The Company assumes that employees should build their business relationships on the basis of partnership, mutual respect, common goals and objectives, and teamwork. Under all and any circumstances and conditions, the acts and behavior of the Company's employees shall be in compliance with the highest professional standards and the generally accepted moral values. No discrimination cases were revealed in 2017.

Rights of Indigenous Peoples and Ethnic Minorities

Sometimes when performing design and survey work for specific facilities or at capital construction and reconstruction sites, the Company pays compensations to the indigenous peoples and ethnic minorities dwelling in the North, which is regulated by the agreements on the temporary occupation of land for purposes other than traditional economic activities. This applies to the construction of OPL routes, placement of newly constructed facilities, expansion of SS in the lands that were initially intended for traditional economic activities only. In June 2017, the Company entered into such an agreement with the Verkhne-Purovsky State Farm to modernize the following facilities of Noyabrsk Electric Grids:

1. 110-kV OPL from Kirpichnaya to CS 1,2 (section from the Pur SS to the CS).
2. 110-kV OPL from Kirpichnaya to CS 1,2 (section from the Kirpichnaya SS to the Pur SS).
3. Single-circuit 110-kV OPL section from the Talange SS to the Kirpichnaya-Purpeyskaya 110-kV OPL hookup.

Key Performance Indicators

Whether the Company attains its priority goals is validated by the Key Performance Indicator (KPI) System.

The Director General's KPI System was approved by the Company's Board of Directors April 4, 2017 (Minutes dd. April 4, 2017 No. 12/17).

In accordance with that decision of the Board of Directors, the following KPIs and KPI targets were set in 2017:

QUARTERLY INDICATORS

No.	List of indicators	Target in 2017
1	Consolidated profit from operating activities (EBITDA)	For Q1, half, and 9 months of the reporting year ≥ 0; for the year, ≥ 5.3 %
2	Consolidated net debt / EBITDA	For Q1, Q2, Q3, Q4, ≤ 3.0
3	Progress in the plans to reduce the accounts receivable of subsidiaries and affiliates	≥ 100.0 %
4	Zero increase in the number of major accidents	Zero increase
5	Prevention of an increase in the number of accident victims	Zero increase

ANNUAL INDICATORS

No.	List of indicators	Target in 2017
1	Consolidated net cash flow	≥ –176.0 million rubles
2	Reduction in unit operating costs (expenses)	≥ 3.0%
3	Increase in the power grid equipment capacity used	Done
4	Power losses level	≤ 2.73%
5	Reduction in unit investment costs	≤ 1.00
6	Increase in labor productivity	≥ 2.00%
7	Innovation activity efficiency	≥ 90 %
8	Compliance with the commissioning schedule	≥ 90 %
9	Observance of technological connection deadlines	≤ 1.1
10	Achievement of the service reliability level	≤ 1.00

Actual values of the indicators were not drawn up and were not approved by the Company's Board of Directors as of the moment of the Annual Report preparation, given the time period and the procedure for compiling the reporting that is the source of information for calculating those values.

Values of the current year are not compared to values in the previous years due to changes in the approaches to the procedure for establishing target KPIs and calculating actual KPI values.

The system of Key Performance Indicators used in the Company is interconnected with the amount of the management team's variable remuneration part — ratios are set for each of the indicators in the amount of paid bonuses; quarterly and yearly bonuses are paid upon achievement of relevant KPIs.

8.5. Occupational Health and Safety

The Tyumenenergo JSC Occupational Safety Policy is mainly aimed at saving the life and health of the employees, which is prioritized above the Company's economic activities.

The Company seeks to reduce the risk of occupational diseases and to prevent occupational injuries.

Share of total staff represented in the official joint committees for health and safety, with the involvement of managers and employees that monitor, and make recommendations on, occupational health and safety programs

Pursuant to Article 216 of the Labor Code of the Russian Federation, Tyumenenergo JSC has by virtue of organizational and administrative documents established committees (commissions) in its Executive Office and branches, which on a parity basis consist of persons representing the employer and the elective body of the Primary Trade Union Organization. 34% of the personnel is represented in the official joint committees for occupational safety.

Tyumenenergo JSC employs 128 trained occupational safety commissioners. In 2017, those carried out 1,528 inspections and made 425 proposals. All of these proposals were implemented by the employers.

On a quarterly basis, the Executive Office and branches of Tyumenenergo JSC hold the OS Commission meetings to review and discuss the results of inspections for compliance with the current occupational safety management system and internal technical control. A total of 303 matters were discussed in 2017, with 238 actions proposed and taken.

Occupational injury types and incidence, occupational disease incidence, ***lost-day and absenteeism coefficients****, total deaths: breakdown by regions and gender*

No occupational disease case was registered at Tyumenenergo JSC in 2017.

In 2017, two accidents occurred at Tyumenenergo JSC facilities, one of which involved multiple persons; a total of three employees were injured.

Region	Branch	Type of accident	Information on the number and nature of victims' injuries				
			Total	Including men	Mild	Severe	Death
KhMAO-Yugra	Nefteyugansk Electric Grids	Road accident	2	2	1	–	1
Southern Tyumen Region	Tyumen Distribution Grids	Electrical injury	1	1	–	1	–
Total for Tyumenenergo JSC:			**3**	**3**	**1**	**1**	**1**

General injury frequency rate in 2017 was 0.4.

Fatal injury frequency rate was 0.13.

Occupational accidents were investigated pursuant to Article 227 of the Labor Code of the Russian Federation, in full compliance with the Regulation on the Investigation of Occupational Accidents in Specific Industries and Organizations (approved by the Order of the Ministry of Labor and Social Development of the Russian Federation dd. October 24, 2002 No. 73, revision dd. February 20, 2014 No. 103н, dd. November 14, 2016 No. 640н).

Acts in a prescribed form were made as a result of such investigation.

Employment-Conditioned High-Injury and High-Morbidity Among Workers

Power engineering is one of the highest-risk industries, which is why Tyumenenergo JSC places a particular emphasis on the issues of occupational safety.

The Tyumenenergo JSC Occupational Safety Policy is mainly targeted at saving the life and health of the employees, which is prioritized above the Company's economic activities.

The Company seeks to reduce the risk of occupational diseases and to prevent occupational injuries.

Tyumenenergo JSC has developed, implemented, operates, and maintains an Occupational Health and Safety Management System that is compliant with OHSAS 18001:2007. As a part of the Occupational Health and Safety Management System (OHSMS), the Company implements its Program for Occupational Health and Safety Management, Reduction in Occupational Health and Safety Risks.

The occupational health and safety management of Tyumenenergo JSC performs the following risk management functions:

- arranging production control;
- provision of personal and collective protective equipment;
- OHSMS training, briefing, and testing;
- development and implementation of collective OHSMS measures.

Key collective measures aimed at improving occupational safety are as follows:

- special assessment of labor conditions at workplaces to bring such conditions in line with the effective rules and regulations;
- laboratory-enabled monitoring of compliance with sanitary rules and hygienic standards at workplaces; providing cleansing and protective agents as well as milk to employees exposed to hazardous substances; providing personnel with clean drinking water; purchase of medicines;
- equipping workplaces with certified state-of-the-art personal and collective protective equipment, including equipment sets resistant to electric arc;
- organizing an annual occupational safety and personnel interaction competition for the branches of Tyumenenergo JSC;
- organizing professional contests for the branches of Tyumenenergo JSC.

In 2017, the occupational safety and personnel interaction competition was won by the Tobolsk LPU of Tyumen Distribution Grids (a branch of Tyumenenergo JSC); Surgut Electric Grids and Nizhnevartovsk Electric Grids won the 2nd and the 3rd prize, respectively.

From June 5, 2017 to June 9, 2017 the training ground of Nizhnevartovsk Electric Grids hosted a professional contest for 10/0.4-kV grid repair and maintenance teams, which was partaken by the local production units of Tyumen Distribution Grids. All the participants demonstrated a high level of professional competence and knowledge at the arrangement and conduct of distribution grid repairs and maintenance while also proving themselves capable of complying with occupational safety requirements. The contest was won by Tyumen LPU; Ishim LPU and Yuzhnoye LPU won the 2nd and the 3rd prize, respectively.

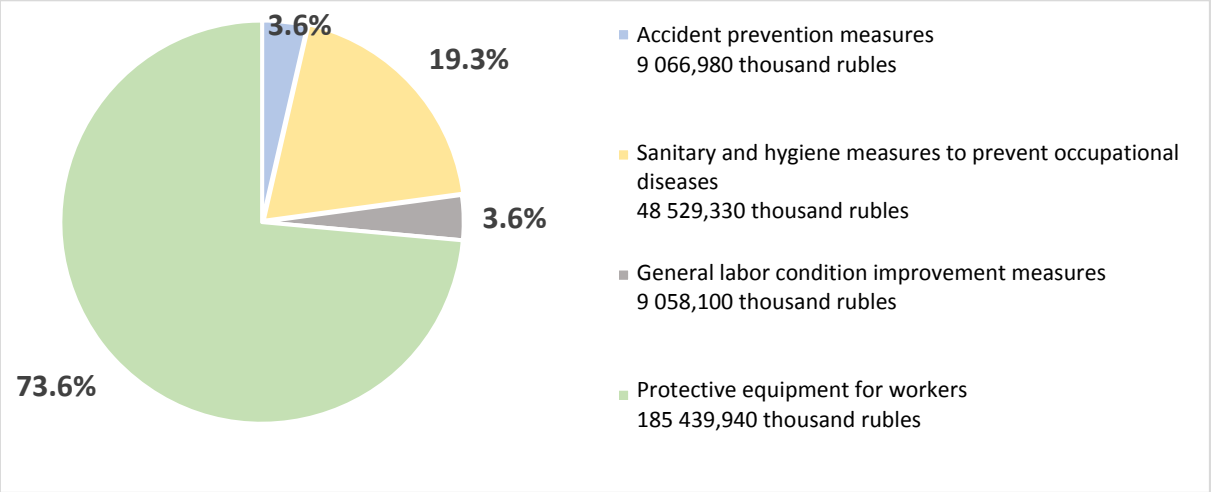
From July 19, 2017 to July 28, 2017 the training grounds of PJSC IDGC of Volga, Penza, hosted the All-Russian Professional Contest for Distribution Grid Repair and Maintenance Personnel, as well as the Corporate Open Professional Championship of Rosseti PJSC **Young Professionals** in the *Cable Power Line Operations* category.

Facing harsh competition from the best teams of Rosseti PJSC, the Tyumenenergo JSC distribution grid repair and maintenance team won the 3rd prize.

A.O. Kostennikov, a wireman of the Yalutorovsk RES, Yuzhnoye LPU of Tyumen Distribution Grids, was recognized as the best worker. He also won the 2nd Prize of the All-Russian Best-in-Profession Contest in the *Best Distribution Grid Operation Wireman* category.

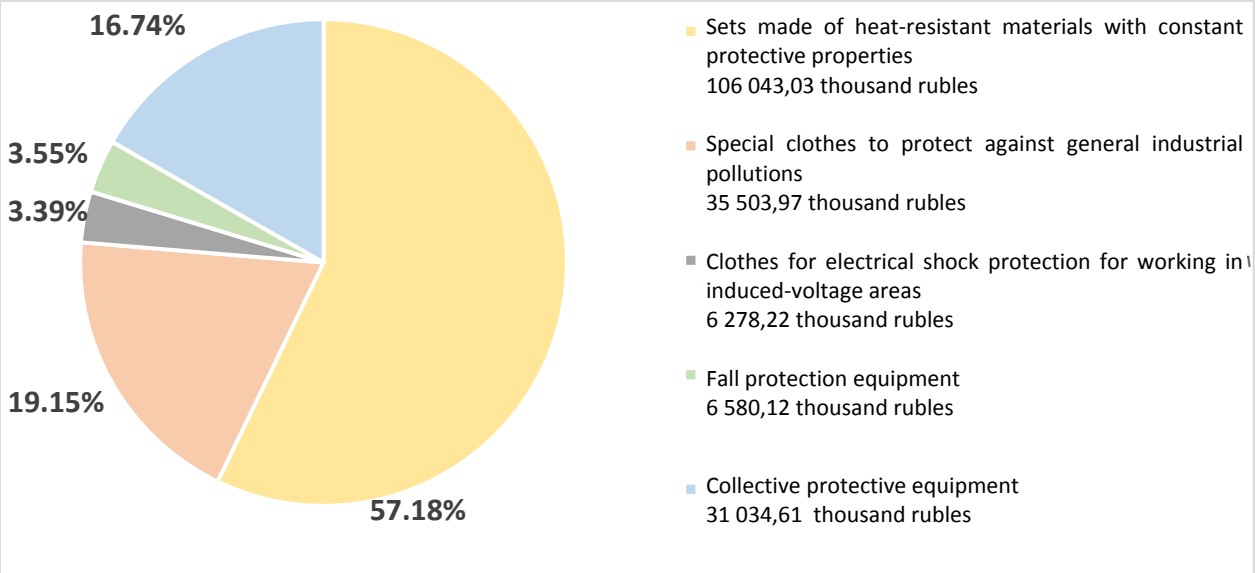
Funds spent on occupational safety totaled 252,094.350 thousand rubles in 2017.

Occupational Safety Spending:



Costs of protective equipment totaled 185,439.940 thousand rubles.

Protective Equipment for Workers



Occupational Health and Safety Matters in the Official Agreements with Trade Unions

Occupational health and safety matters are reflected in the Occupational Safety section of the Collective Agreement. The Section stipulates:

1. Mandatory social insurance against occupational accidents and diseases.
2. Ensuring that the safety and labor conditions of each workplace and each facility/site are compliant with the state occupational safety regulations.
3. Evaluating the labor conditions at workplaces to elaborate and take measures for occupational safety and labor condition improvement.
4. Training the workers employed for harmful and (or) hazardous jobs to use safe methods and techniques in their work, which is supplemented with workplace training and exams; training employees to provide first aid in case of an occupational accident, using state-of-the-art training technology and advice from qualified instructors.
5. Timely development of occupational safety rules and regulations with due account of the opinion submitted by the elected body of the primary trade union organization in due order.
6. Employees (i) working in harmful and (or) hazardous labor conditions or (ii) performing their work in special temperature conditions or conditions associated with pollutions that have

passed mandatory certification or declaration of conformity are provided with special clothes, special footwear, other personal protective equipment, special foods, as well as rinsing and (or) neutralizing agents in accordance with the established Standards and other regulations.

7. Workers undergo preliminary (at the start of employment) and periodic (during their employment) health checkups at the expense of the employer; for some positions, psychiatric examination is mandatory.

8. Measures to Improve Occupational Safety and Labor Conditions, Preserve Life and Health of Employees.

Besides, Tyumenenergo JSC trains its Occupational Safety Commissioners, provides them with technical literature, occupational safety rules and instructions. Occupational Safety Commissioners have four hours a week to perform their duties, paid at the same rate as their primary jobs.

The Company vaccinates its employees against tick-borne encephalitis and influenza on an annual basis.

The Company carries out systematic psychophysiological checkups of its branch-based operational personnel in order to improve their professional performance and to prevent errors that might be caused by psychophysiological status. Psychophysiological checkups are done by means of a computer-based Psycho-Diagnostic System (PDS) that evaluates the operator's performance, intelligence, and psychophysiological status.

Over the year, 1,841 employees of that category underwent psychophysiological checkup to determine their professionally important qualities (PIQ) and to identify risk groups (persons with a considerably lower PIQ level). Based on such checkups, persons with a low psychophysiological status are given recommendations on how to improve their professional performance, tailored to their peculiarities.

9. Social Responsibility

9.1. Effect on the Regions of Operation

Over the course of 2017, the Company transferred 6,520,328.09 thousand rubles as tax to the federal budget and the regional budgets, including:

thousand rubles

1	Federal Budget	3,063,154.64
2	Budget of Moscow	41,666.85
3	Budget of KhMAO-Yugra	1,820,849.99
4	Budget of YNAO	950,496.36
5	Budget of Tyumen Region	643,307.17
6	Budget of Sverdlovsk Region	729.86
7	Budget of Omsk	123.23

Over the course of 2017, the branches of Tyumenenergo JSC planted 22,782 plantlets for a total of > 464 thousand rubles.

In 2017, Surgut hosted the V All-Russian Forum of Working Youth. Tyumenenergo JSC joined the effort of the KhMAO-Yugra Government, Administration of Surgut, and Yugra Regional Youth Center to organize this event, as its goals and objectives coincided with one of the Company's: to educate a worthy new generation of workers that would develop digital energy.

Tyumenenergo JSC still emphasizes the promotion of (i) engineering professions (including power engineering), (ii) safe behavior of children and adolescents in the proximity of power facilities, (iii) energy-saving lifestyle.

The Company takes active preventive measures throughout the territory of its operation. In 2017, the Company's specialists organized 633 electrical injury prevention trainings attended by about 37.5 thousand children and adolescents. As a part of the All-Russian #BrighterTogether Festival and Energy-Saving Day in Yamal, the specialists of Tyumenenergo JSC arranged and hosted more than 50 events to promote energy-saving lifestyle and optimal use of energy resources.

In furtherance of the Company's cooperation with Surgut State University, Director General became a member of its Board of Trustees. Before the commencement of the student work season, the Company signed a cooperation agreement with Nizhnevartovsk State University to employ their students at the facilities of Tyumenenergo JSC.

9.2. Social Partnership

Being a socially-oriented Company, Tyumenenergo JSC adheres to the following basic principles:

- non-discrimination in labor relations;
- abolition of all forms of forced and compulsory labor;
- provision of a safe working environment;
- timely payment of wages;
- raising the employees' wages by indexing their tariff rates and salaries;
- having a system of material and moral incentives in place;
- ensuring that every employee of the Company has equal opportunities for personal and professional growth.

To maintain the social stability and develop social partnership, Tyumenenergo JSC has entered into a Collective Agreement with its employees represented by the Tyumen Interregional Organization of the Public Association All-Russian Elektroprofsouyz (Power Trade Union). This Collective Agreement does not worsen the employees' situation compared to the Russian legislation and the effective Industrial Tariff Agreement of Russian Power Engineering.

Tyumenenergo JSC also has a Non-State Pension Program in place to ensure a worthy standard of living for its retirement-age workers. The Company's participation in a non-station pension program strengthens the trust of its employees, helping stabilize it and make the average age lower.

Besides, Tyumenenergo JSC actively helps its employees to improve their housing. A long-term program has been adopted pursuant to the Tyumenenergo JSC Regulation on Corporate Assistance and Support for Housing Improvement. The program prioritizes high-skilled specialists that urgently need better housing.

Beside material incentives, Tyumenenergo JSC also has moral ones.

More than 1,100 of the Company's employees have been granted awards of various denominations. One employee was granted the Honorary Title of an Honored Power Engineer of the Russian Federation. Departmental awards were granted to 30 persons, with two of them gaining

the Honorary Title of an Honored Power Engineer. Six were awarded with the Honorary Diplomas of the Ministry of Energy. 12 were acknowledged by the Ministry of Energy. 137 were granted corporate awards of Rosseti PJSC, with 17 being granted the Honorary Title of a Grid Complex Veteran. 10 persons were awarded the badge For Professional Skills; 69 were awarded the Honorary Diploma of Rosseti PJSC; and one was named on the Roll of Honor of Rosseti PJSC. 32 persons were granted industry awards. 159 employees of the Company were granted regional awards from public authorities and local self-government. For their merits and many years of work in the power industry, 200 employees were granted the Honorary Diplomas and Letters of Appreciation from Tyumenenergo JSC; 27 were named on Company's Roll of Honor; more than 500 people were granted awards from their branches.

In summer 2017, the student construction teams continued working at Tyumenenergo JSC facilities. Such cooperation with educational institutions was proven useful for all parties.

Team Energetik organized a football match, a tennis tournament, and support for veterans. Team Energetik also won the 2nd prize in the Best Grid Complex Student Team contest in the working season 2017.

The Company hosts Brightest Christmas Tree, an annual New-Year event for children.

For employees living in the Far North or equivalent areas, the Company offers a Wellness Program for Children and Families to help them recover. A total of 428 persons (the Company's workers and their children) went to the recreation resorts of the Black Sea coast. The Company organized summer trips to health resorts for children, 115 of whom traveled to the Black Sea and 28 stayed in Tyumen Oblast.

9.3. Charity

Charity to individuals and legal entities is mainly provided in the following areas:

- assistance in education, science, culture, arts, and enlightenment;
- assistance in physical education and mass sports;
- social support and protection for citizen, including financial support for the impoverished, social rehabilitation of the unemployed, disabled, and other persons who are not capable of protecting their rights and lawful interests due to their physical, mental, or other conditions;
- protection and maintenance of buildings, sites, and territories of historical, cultural, religious, or environmental significance;
- social rehabilitation of orphans, children left without parent care, street children, and children in difficult life situations;
- assistance in disease prevention, treatment, rehabilitation, and health protection; promotion of healthy lifestyle and improvement of people's moral and psychological status;
- assistance for victims of natural disasters, environmental, industrial, and other catastrophes, social, national, and religious conflicts, repressions, as well as for refugees and internally displaced persons.

Over 2017, the officers of the Executive Directorate carried out charitable action to support the Giving the Good (Rus: Благо Дарю), Angel of the North (Rus: Северный Ангел) and April (Rus: Апрель) charity foundations that seep to help children having severe diseases; they also joined the efforts of the Shake! (Rus: Дай лапу) organization that raises funds to help homeless animals.

10. Environmental Policy

10.1. Compliance with Ecological Requirements

Operation of Tyumenenergo JSC's energy facilities has no considerable effect on the environment, either locally or globally.

Vigorous environment-control measures taken by Tyumenenergo JSC at Rosseti PJSC Group are being carried out pursuant to the dedicated Program aimed at environment protection and compliance with the environmental legislation of the Russian Federation.

Compliance with Ecological Requirements

Environmental responsibility comprises a set of principles. According to continuous improvement principal, the Rosseti PJSC's Environmental Policy (approved as the internal regulation for Tyumenenergo JSC by the Decision of the Board of Directors dd. October 6, 2017 No. 26/17) considered the most important principle, namely gradual limitation of the environmental effect of the fuel-and-energy complex by means of reducing emission of poisonous substances into the environment, as well as waste minimization.

The environmental policy of the electric grid complex is targeted on preserving environment for today's and future generations.

All the employees are aware of the environmental policy. Awareness procedures included:

- Compulsory studying;
- Staff training in company units;
- Visual campaign (Environmental Safety stands).

Financial and Non-Financial Penalties for Incompliance with Environmental Legislation and Corporate Regulations

No facts of violating environmental legislation that led to significant penalties were registered over 2017. No complaints from concerned parties regarding poor environmental conditions caused by company operation were received over 2017.

As for non-financial penalties, the Prosecution Service of Noyabrsk examined company subsidiary's compliance with legislative requirements regarding safe handling waste of Danger Class I and II. According to the examination results, 2 infractions were registered, namely:

- Mercury-filled lamp waste exceeded maximum tolerable values;
- No tolerable values were set on the amount of dead battery waste.

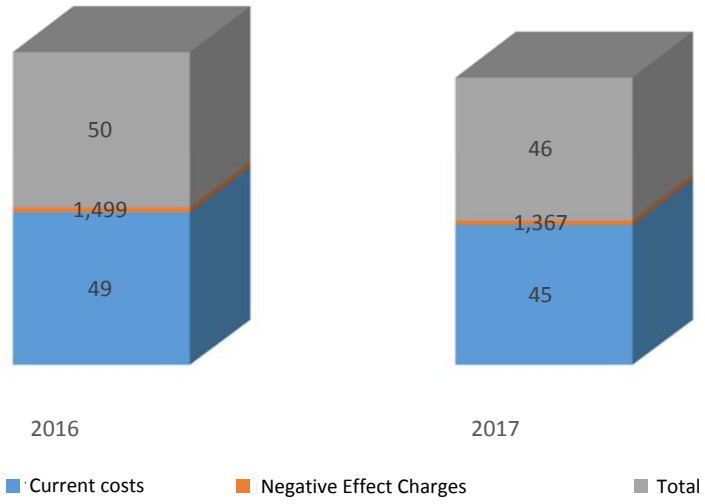
Tyumenenergo JSC has reviewed the report of the Prosecution service and submitted the reply stating grounds for the infractions found. Having initiated proceedings, the Prosecution Service of Noyabrsk, submitted it for further review to the Directorate of the Federal Service for Supervision in the Sphere of Natural Resource Use of the Yamalo-Nenets Autonomous Orkug. After reviewing the case papers, the Directorate of the Federal Service for Supervision in the Sphere of Natural Resource Use of the Yamalo-Nenets Autonomous Orkug issued the decree on the warning on the one infraction, while arguments of Tyumenenergo JSC on the other infraction (regarding collection and utilization of dead batteries) were recognized grounded.

Total Environment Control Costs

Environmental Charges

Pursuant to the stipulated order, Tyumenenergo JSC is being regularly charged for the negative effect its operation has on the environment. To that end, the charge value in 2016 totaled 1,499 thousand rubles, and 1,367 thousand rubles in 2017.

Environmental Costs, million rubles



Environmental program financing is mostly aimed at fulfilling requirements of the environmental legislation of the Russian Federation, as well as international and local corporate standards.

The costs of 2017 included:

– Waters control: 14.4 million rubles;
– Atmosphere control: 1 million rubles.

Environmental Management System

Tyumenenergo JSC considers developing and improving environmental management as one of the most significant tasks in the context of ensuring the sustainable growth. The environmental management system (EMS) of Tyumenenergo JSC is centered around ISO 14001:2015, Russian legislation, and regulations developed by Rosseti PJSC.

EMS was created in 2018 and certified by the outside auditor Bureau Veritas Certification pursuant to ISO 14001:2004. Down the line, EMS has been kept relevant in compliance with the responsibilities assumed during the certification.

In 2017, Tyumenenergo JSC's EMS was audited in compliance with ISO 14001:2015 by the German company DQS GmbH. The examination recognized the EMS complying with international standards. Such an audit first took place at Tyumenenergo JSC in 2008. Annual examinations help keep track on strengths and weaknesses of the EMS and develop the corrective measures on improving the system.

The auditors suggested the following ways of improving the system in 2017:

– Revising EMS documents for further optimization thereof;
– Double-checking the number of internal EMS auditors;
– When revising regulations on processing units, pay attention to their key functions considering environment-related objectives.

Company Operation Effect on Environment

For distribution and transmission of the electric energy of Tyumenenergo JSC, the following aspects of the environmental effects can be defined:

– Effects related to consumption (of water, heat energy, electric energy, oil, gas, ground, wood);
– Effects related to energy transmission services (energy losses);
– Effects related to poisonous emissions;
– Effects related to waste management;
– Physical effects (noise and electromagnetic fields);
– Effects against animals (Red-Book migrating birds).

All types and specifics of environmental effects are described below.

Energy Sources Involved

Severnye and Noyabrsk Electric Grids are equipped, according to the balance, with small-size boiler stations, fueled by natural gas. Kogalym and Nefteyugansk Electric Grids have oil-powered boiler stations.

By comparing the 2016-2017 dynamics, it can be clear about the decrease of natural gas and oil consumption over the reporting year 2017.

Protected Sanitary Zones of Company Facilities. Physical Effect of Process Operation (Noise, Electromagnetic Field)

Rationale for and arrangement of protected sanitary zones is the part of providing favorable living conditions for citizens. In this context, designing of protected sanitary zones is carried out at all stages of building and reconstruction. According to the projects of protected sanitary zones, field studies of Tyumenenergo JSC facilities, it was found that current hygienic requirements on chemical and physical factors are ensured on the boundaries of land allotments of production years and 110-kv electric substations.

Electric Field

Has dangerous and perceptible effect on human, animals, and plants at specific values and duration (for values over 5 kV/m human residence is not restricted, while protective equipment should be used for values over 25 kV/m).

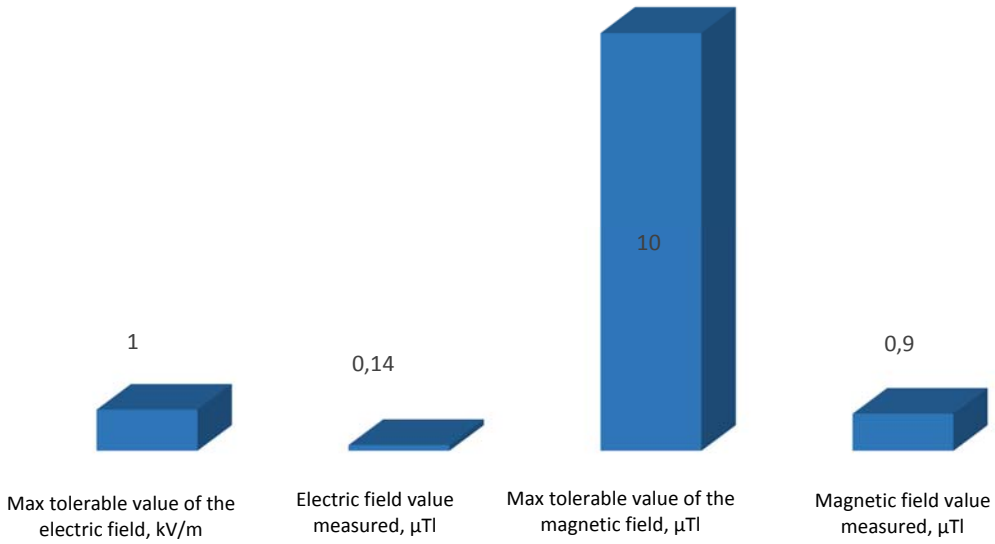
At a substation, electric field effect is manifested within the enclosed territory only.

Magnetic Field

According to current regulations, human residence is not restricted in the field with intensity of up to 8 A/m (10 μTl).

Results of measurements of electromagnetic field levels on the land allotment boundary of protected sanitary zones of Tyumenenergo JSC's substations.

Values of Primary Effects of OPLs and Substations on the Environment



For power lines not intersecting inhabited localities, Rules for Protection of Electric Grids stipulate the term of a protected zone. Lands of protected zones are not confiscated from land-users.

Acoustic Noise

In 2017, design and survey activities on reconstructing and building electric substations took place. By calculating, aggregate levels of noise effect of facilities, pursuant to sanitary regulations, were determined.

At Tyumenenergo JSC subsidiaries, the following activities were carried out on controlling noise effect of company facilities:

– Determining the noise effect on the boundary of protected sanitary zones of facilities;
– Implementation of practices for evaluating and optimizing standards regarding electromagnetic fields and noise effect in design works when building new electric substations.

Compliance with Environmental Requirements

The problem of electric danger for birds and power outages caused by birds is still acute and shall be solved systematically, with involving compassionate birdscarers. However, in order to ensure bird-safe operation of OPLs and reduce the number of outages caused by birds, Tyumenenergo JSC subsidiaries gradually transit from open lines to self-supporting and insulated ones, with installing bird-safety devices.

Red-book birds of the Khanty-Mansi Autonomous Okrug — Yugra, the Yamalo-Nenets Autonomous Okrug, and Tyumen Oblast, which can be found in areas of Tyumenenergo JSC operation are as follows:

WHITE CRANE

Dispersal. Two separate populations inhabit Russia. One of them can be found in tundra between the Yana and the Indigirka, and another in West Siberia taiga. Two nest groups are typical for West Siberia: kunovatskaya (basin of rivers Kunovat, Khashgort-Yugan, and Logas-Yugan) within the Yamalo-Nenets Autonomous Okrug, and kondoalymskaya on the border between Tyumen Oblast and the Khanty-Mansi Autonomous Okrug — Yugra in the interfluve of Konda and Alymka.

Population. In late 1970s, the population amounted to 70 species in the Yamalo-Nenets Autonomous Okrug; in 1987, the kunovatskaya group, according to air and ground studies, comprised 12 local pairs; in 1990s, no more than 20 species were registered in West Siberia (including nonbreeding birds. By 1994, the kunovatskaya group preserved the only pair that had been nesting up to 2001. Today's population of white crate in the okrug can count 10-15 species (including 4-5 nesting pairs).

FISH-HAWK

Dispersal. Worldwide, except for the Antarctica and some ocean islands.

Nests were found in the south of the Yamalo-Nenets Autonomous Okrug.

Along the Ob, river Synya, Kunovatsky sor, surroundings of Gorki, Parovat, and Pitlyar.

Population. Stable in Europe, decreasing in Russia. In north taiga of West Siberia, there are around 1.8 thousand species (based on routing; can be overstated as density values increase those of countries distinguished for high density.

Bird-safety measures taken in 2017 are as follows. This list can enable to assess efficiency of the activities:

– More than 3,087 bird-security devices (BSD) were installed, with models chosen correspondingly to structure of OPLs (in compliance with STO (Corporate Standard) 34.01-2.2-025-2017 of Rosseti PJSC). The volume of installation works is considered significant;

– Fair pace of modernizing electric grid facilities (technical re-equipment and transition to self-supporting insulated lines). 210-km length covered.

Environmental Responsibility of Staff

In 2017, employees passed off-the-job environmental education (0.5 million rubles of total cost):

– For managers and specialists: environmental training of people responsible for decision-making on environmental effects of operation. 30 people;

– For the staff involved in handling waste. Training under corresponding permissions. 60 people.

With a view to enhancing staff awareness of significant environmental aspects of Company operation, guides and notices were placed at Environmental Safety stands.

One of the primary lines of the Environmental Policy is enhancing knowledge at environment control and safety, of the staff serving electric grid complex facilities. Regulations of the Environmental Policy were formed and submitted for implementing in the Company subsidiaries in the form of the following documents:

- EMS Guidelines — aimed at arranging and supporting the system;
- Tyumenenergo JSC environmental safety standards;
- Environmental Policy Plan stipulating goals and objectives;
- Process Environmental Control Regulation. Used for controlling compliance with requirements of Russian environmental legislation;
- Regulation on Company Units specifying goals within the EMS;
- Job descriptions of the Company staff involved in the EMS. Used for arranging activities on fulfilling environmental requirements.

In 2017, more than 100 dedicated events were held in the Company subsidiaries. These events included environmental campaigns, lectures, excursions, conferences, contests, conferences on results of process environmental control, and round-table discussions.

Environmental safety specialists of Tyumenenergo JSC entered the TOP 10 (among 27 specialists) of the 2017 proficiency contest *Bless the Hardworking People!* of the Ural Federal District. The finals on engineering competences, for "Best Environment Engineer" category, took place in Yugorsk on March 1, 2017; among guests, there were Igor Kholmanskikh, an authorized representative of the President of the Russian Federation in the Ural Federal District, and Natalya Komarova, the Governor of the Khanty-Mansi Autonomous Okrug — Yugra. Ekaterina Malysheva, an environmental engineer of Tyumenenergo JSC's subsidiary Surgut Electric Grids took the second place at the regional stage of the contest in the Khanty-Mansi Autonomous Okrug — Yugra, while her colleague from Noyabrsk Electric Grids took the third place in his region.

Institutional Environmental Control

Process environmental control, as a complex of insights, environment state evaluations, is, on the one hand, the basis for rationalizing management decisions through minimizing risks; on the other hand, it is a system providing data regarding features of sources of Tyumenenergo JSC operation effects and environmental parameters.

More than 250 measurements were performed in 2017 within the process environmental control of Tyumenenergo JSC subsidiaries by involved analytical centers. Total costs amounted to 1.2 million rubles. Environmental control results are as follows:

- Gamma background in ferrous metal accumulation points does not exceed the natural background of the Yamalo-Nenets Autonomous Okrug and the Khanty-Mansi Autonomous Okrug;
- The level of poisonous emissions by small-size boiler stations and Forsazh thermal waste treatment stations does not exceed the prescribed max tolerable values;
- Annual evaluation of dust-collecting units (in wood treatment areas) speaks for sufficient efficiency of their operation;
- Results of field studies of the effect of electric substations' electromagnetic fields and noise speak for no excess of the max tolerable levels on the area boundaries;
- Actual findings on the quality of the atmosphere in areas of Tyumenenergo JSC operation speak for compliance with max tolerable concentrations prescribed by sanitary regulations;
- Quality of underground water of the Company-owned water wells is evaluated timely and for components prescribed in corresponding license agreements on using mineral resources.

10.2. Energy Resource Consumption

Values of energy resource consumption, including intensity values, are as shown in the table below:

No.	Goal	Unit	2015	2016	2017
1	Total energy loss	million kWh	1,818.09	1,813.,39	1,699.96
		% of power supplied	2.54	2.54	2.61
2	In-house needs of substations	million kWh	88.31	80.97	82.05
		% of power supplied	4.81	3.94	4.83
		kWh/c.u.*	565.16	483.81	487.04
3	Energy consumed for economic needs of administrative buildings, including:	Thousand TOE	17.93	17.60	16.63
3.1	Electric energy	million kWh	74.47	72.76	68.95
		kwH/sq. m.**	210.94	202.70	192.10
3.2	Heat energy (building heating systems)	Gcal	37,923.57	38,197.40	37,840.37
		Gcal/cu. m***	0.035	0.035	0.034
3.3	Natural gas (including liquified)	thousand cu. m	2,081.97	2,040.21	1,922.65
3.4	Other fuel resources (oil)	thousand tons	0.72	0.74	0.51
4	Cold water consumption for economic needs	thousand cu. m	60.17	60.49	69.01
5	Total consumption of motor fuel by vehicles	thousand l	4,511.11	4,681.77	4,596.07

*2017 value of substation currency units amounted to 168 460,44.
**Area of buildings and structures operated amounts to 358 952,41 sq. m.
***Volume of buildings and structures heated amounts to 1 097 327,5 sq. m.

The key parameter of the intensity of energy transmission and distribution across Tyumenenergo JSC grids remains stably low and comes to 2.61% of power supplied.

There is a positive trend of energy efficiency parameters of consuming fuel resources used for economic needs of the Company, which speaks for the effectiveness of the Tyumenenergo JSC energy-saving policy.

10.3. Waste

Natural Resources. Use. Water. Waste.

Tyumenenergo JSC subsidiaries are not major water-users gaining 50 cu.m. or more per day from water sources (criteria of water-user cover by planning and state reporting pursuant to the form 2 тп водхоз).

Technical water supply of Tyumenenergo JSC facilities is carried out through extracting own underground water, in compliance with the terms of the license agreement regarding use of wells.

Municipal institutions supply Tyumenenergo JSC subsidiaries with drinking water and accept waste.

Over 2017, the total volume of water use for Tyumenenergo JSC subsidiaries amounted to 86.13 thousand cu.m/year, which came to 88% of the 2016 value. Tyumenenergo JSC subsidiaries do not waste contaminated waters to surface water bodies; after using, waste waters are transferred to utility services on a contract basis. Subsidiaries now save more water. In 2017, water consumption per worker decreased by 13% against 2016.

Year	Water Consumed for Economic Needs, cu. m.	Water Consumed for Drinking, cu. m.	Total Water Extraction, cu. m.	Specific Water Consumption per Worker, cu. m.
2016	19,620	78,480	98,100	13.0
2017	17,230	68,900	86,130	11.3

Atmospheric Emission

Process and production sites are typical structures of the electric grids: an electric grid district, substations of various voltage, production yards.

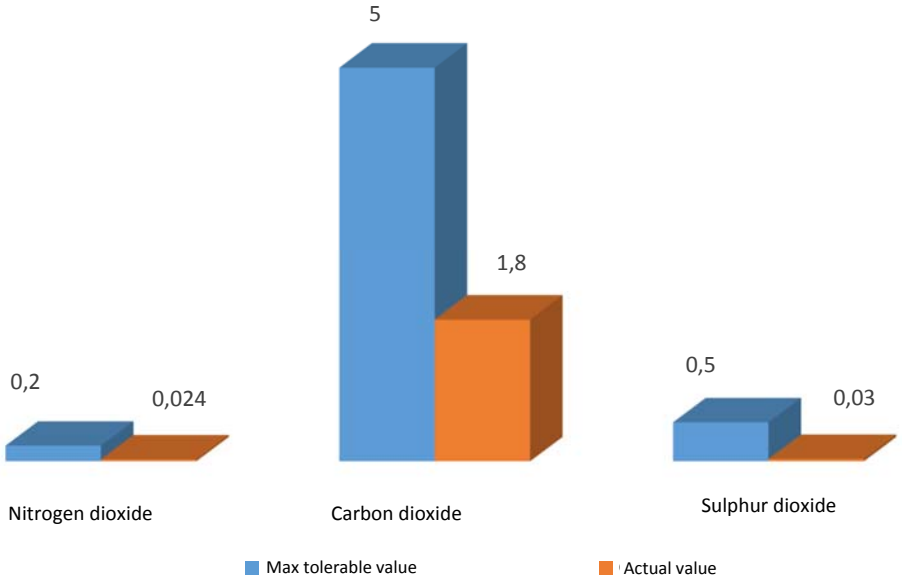
Emission sources are exhaust ventilation of production premises, welding and metal-treatment areas, vehicle maintenance and repairs areas, garages, carpentry and repair workshops, backup diesel generators, a pipe of thermal waste treatment stations Forsazh-1, paint work, four small-power boiler stations.

Poisonous Substances Emitted

Year	Poisonous Substances Emitted, tons					
	Total	Solid	gas			
			Nitrogen Dioxide	Sulphur Dioxide	Carbon Oxide	Other
2016	49.719	2.492	12.520	18.977	7.218	8.512
2017	41.681	3.596	9.167	11.153	6.291	11.474

In 2017, within the process environmental control, the lowest atmospheric layer in production areas was analyzed. Laboratory studies performed by Federal State-Funded Healthcare Institutions for Hygiene and Epidemiology of the Federal Supervision Agency for Customer Protection and Human Welfare speak for no technogenic effect on the atmosphere from the Company facilities.

Atmosphere Quality on Production Sites of Tyumenergo JSC, mg/cu.m



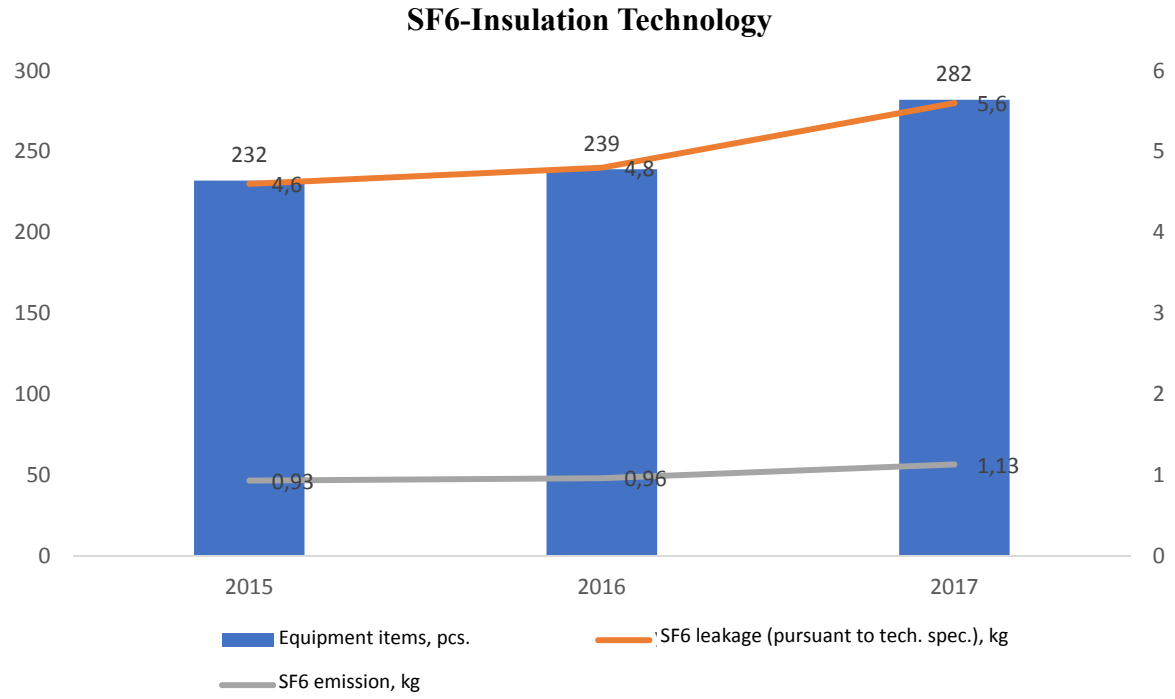
Max tolerable values prescribed by permissions of the regulating authorities (Federal Service for Supervision in the Sphere of Natural Resource Use) were exceeded in no periods (g/s, g/year).

SF6-Insulation Technology for Energy Transmission & Distribution. Greenhouse Gas

SF6 gas technology have been used in high-voltage distribution devices for long (for instance, in high-voltage automatic breakers) across the globe. Flame-resistant and insulating gas SF6 is not only a good dielectric, but also health-friendly and has no negative effect on the ozone screen. However, it belongs to gases causing the greenhouse effects (these gases are subject to volume reduction pursuant to relevant international agreements).

In the context of global warming, the specific potential of the gas SF6 is around 23,000 times higher than that of carbon dioxide, the primary greenhouse gas. By virtue of the leakproof construction, safe production, maintenance and service, and correct utilization, SF6-containing equipment, when discharged, contributes to forming a system having lowest possible effect on the environment.

Results of operation of distribution devices containing SF6 as insulation gas, show power loss reduction. This leads to reduction of carbon dioxide emission at power plants and enhances the overall environmental balance.



Waste Formation

Another favorable result of 2017's activities is the fact that waste collection and removal become more efficient at the Company's subsidiaries. Environment specialists note that the staff now pay more attention to the separate waste collection. More than 10 tons of paper and plastic were submitted for further recycling.

It should be noted that the quantitative data on waste formation do reflect corporate efforts on waste management. Waste disposal on polygons and waste removal have different post-effects. Tyumenenergo JSC prioritizes waste removal (and further recycling) over other methods of waste management.

In financial terms, submission of waste for further recycling as an environmental project can be subject to gaining revenues. By forwarding waste (ferrous metal, aluminum, copper — appearing during repairs and reconstruction of substations and power lines), the Company decreased the volume of waste by 20% and generate income (20 million rubles) from implementing recycled resources in 2017.

By analyzing waste formation and management over 2017, it was found that actual volumes of waste formation in 2017 turned out to be 2% higher than that in 2016. The volume of recycled waste of Danger Class V increased. The volume of waste submitted for disposal was reduced by 12% in 2017 against 2016.

Tyumenenergo JSC Waste Formed During Operation, tons

Waste Name	2016	2017
Danger Class I (dead mercury-arc lamps)	4.246	3.02
Danger Class II (dead batteries)	11.483	7.836
Danger Class III (discharged oils, vehicle oil filters)	190.132	149.035
Danger Class IV (accommodation space waste, discharged ties, office appliance waste, construction waste)	1,092.671	856.981

Danger Class V (ferrous and non-ferrous metal, wood waste, glass and porcelain insulation waste)	2,762.314	3,131.552
TOTAL	4,060.846	4,148.425
Waste Management		
Disposed	2,810.721	2,460.081
Utilized	1,516.278	1,776.749

10.4 TRANSPORTATION

Tyumenenergo JSC considers transportation when evaluating its effect on the environment. Though, transportation-caused effect is not significant as technical service and repairs of vehicles, as well as cargo carriage activities, are performed mostly by third-party companies. Vehicle effects are evaluated when entering into a transportation contract that contains compulsory terms such as informing on technical inspections including emission control. Contract terms shall also oblige a contractor to study the Guidelines for Environmental Aspects, Risks of Health & Labor Care, Energy Management designed for Tyumenenergo JSC's staff, contractors and other organizations. These Guidelines are to be studied when performing activities involving the Company's equipment, including involvement of mechanisms.

Within the framework of the Rosseti PJSC's All-Russian program on developing the electric vehicle charging infrastructure, Tyumenenergo JSC installs 6 home-produced electric vehicle charging stations (3 in Surgut, 3 in Tyumen).

In 2017, Tyumenenergo JSC purchase 3 electric cars to use as common-use vehicles.

11 CORPORATE COMMUNICATIONS

2017 Chart of Corporate Communication Between Tyumenenergo JSC and Concerned Parties

No.	Concerned Party	Concerned Party Interest	Forms of Communicating with Concerned Parties	Measures Taken to Serve Interests of Concerned Parties in 2017
1	**Shareholder**	1. Company's sustainable growth and efficiency. 2. Transparency of the Company's operation and management. 3. Dividend payout	1. General Shareholders Meeting. 2. Annual Report. 3. Federal and Regional Mass Media. 4. Corporate Website	1. 2016 Net Profit (IAS) came to 4,442,226 thousand rubles. The share of dividends (2,025,217 thousand rubles) came to 46%. The share of dividends in net profit came to 88% (2016, RAS). 2. Specific operational costs per 1 currency unit were reduced by 7.1% in 2017 against 2016. 3. Information voluntarily disclosed pursuant to the Russian securities market legislation.

2017 Chart of Corporate Communication Between Tyumenenergo JSC and Concerned Parties

No.	Concerned Party	Concerned Party Interest	Forms of Communicating with Concerned Parties	Measures Taken to Serve Interests of Concerned Parties in 2017
2	**Consumers**	1. Reliable, fail-safe and high-grade power supply. 2. High quality of service. 3. Transparency and availability of the information regarding Company operation. 4. Fulfilling demand for the Company's services.	1. Customer service offices. 2. Customer account. 3. Call center. 4. Technical disturbance hot line. 5. Surveying. 6. Tyumenenergo JSC corporate website (online reception). 7. Regional mass media.	1. Contract-based campaign of 2017 (Decree dd. September 5, 2016 No. 87p On Arrangement of the Contract-Based Campaign 2017). Resulted in 87 contracts concluded: 1 — SLRs, 23 — COs, 56 — LGOs, 1 — FGC UES PJSC, 6 — direct. 2. Compulsory information disclosure (according to the Decree of the Government of the Russian Federation dd. January 21, 2004 No. 24 On Approving the Standards for Information Disclosure by Entities of the Wholesale and Retail Power Markets).
3	**Public (citizens of the regions the Company operates within, public organizations, mass media)**	1. Reliable and sustainable operation of the power system. 2. Fail-safe power supply 3. Fulfilling demand for electric energy and power. 4. New workplaces. 5. Social-economic development of the regions of operation. 6. Transparency and availability of the information regarding Company operation. 7. Energy safety. 8. Energy saving. 9. Ecological safety and environment protection. 10. Implementation of social programs.	1. Interaction with mass media (digital, printed, TV, radio) of various levels (federal, regional, local). 2. Informing via the corporate website. 3. Social networks. 4. Support of social projects in regions of operation, implementation of own social projects. 5. Interaction of manager and specialists with public institutions, including meetings with students and veterans. 6. Electrical accident prevention. 7. Energy-saving lifestyle cultivation. 8. Electric energy profession popularization. 9. Congresses and exhibitions. 10. Contests and competitions.	1. 207 press releases, 153 TV spots. 3,414 Company mentions in mass media. 2. 633 events held at educational institutions of regions of operation within the framework of the project *Electricity is Good*. Events that involved 37,500 people were aimed at preventing electrical accidents among non-specialists. 3. More than 50 events cultivating energy-saving lifestyle held at educational institutions. 4. 22,782 trees and bushes planted. 5. Waste formation volume is 2% higher than that of 2016 (increased due to increase of the volume of Danger Class V waste submitted for recycling). The volume of waste to be disposed was decreased by 12% in 2017 against 2016. 6. 46 million rubles spent on environment protection. 7. First place in the category *Best Project for LED-Lighting of Administrative Buildings* of the regional stage (Tyumen Oblast) of the All-Russian Contest of Implemented Energy-Efficiency and Energy-Saving Projects (ENES 2017), second place at the federal stage of the contest
4	**Regulatory Bodies (federal constituents,**	1. Reliable and sustainable operation of the power system	1. Coordinating investment programs.	1. 2018-2022 Complex program for development of the electric energy industry of the Khanty-Mansi

2017 Chart of Corporate Communication Between Tyumenenergo JSC and Concerned Parties

No.	Concerned Party	Concerned Party Interest	Forms of Communicating with Concerned Parties	Measures Taken to Serve Interests of Concerned Parties in 2017
	municipal formations)	2. Participation in projects aimed at territory development. 3. Fulfilling demand for electric energy and power. 4. Tax payments. 5. New workplaces.	2. Work groups on developing and coordinating complex programs for development of the electric energy industry in regions. 3. Reporting and information disclosure to regulatory bodies. 4. Company representatives' membership in councils of regulatory bodies of various levels; including councils on professional education development. 5. Participation in operation of regional energy safety offices.	Autonomous Okrug — Yugra, the Yamalo-Nenets Autonomous Okrug, and Tyumen Oblast developed. 2. Taxes paid, including: 1,820,849,989.67 rubles paid to the budget of the Khanty-Mansi Autonomous Okrug — Yugra; 950,496,358.97 rubles paid to the budget of the Yamalo-Nenets Autonomous Okrug; 643,307,165.50 rubles paid to the budget of the Tyumen Oblast.
5	**Business Partners (suppliers and contractors)**	1. Mutually beneficial and long-standing cooperation. 2. Transparency of the Company operation. 3. Gaining profits from cooperation. 4. Timely and accurate fulfillment of contractual obligations. 5. Fair competition.	1. Procurement activities. 2. Negotiations. 3. Commercial offers. 4. Corporate website. 5. Federal and regional mass media. 6. Thematic seminars and conferences. 7. Advisory body to handle issues related to efficiency of procurement activities conducted by Tyumenenergo JSC, including procurement from small and medium-size enterprises.	1. 1,255 procurements for a total amount of 36,585.2 million rubles. 2. Information regarding procurements (including the Plan) was disclosed in the unified procurement information system and on the corporate website. 3. 100% competitive procurements were carried out at b2b-energo and etp.rosseti electronic trade platforms. 4. Efficiency of procurements came to 725.8 million rubles (2.71% of the declared procurement value). 5. Annual volume of contracts with small and medium-size enterprises came to 68.71% of the total procurement volume of 2017; including 52.16% of procurements involving small and medium-size enterprises only. 6. Doors-Open Day with the representatives of small and medium-size enterprises, public organizations Opora Rossii, All-Russia People's Front, Chamber of Commerce and Industry of Surgut, Small and Medium-Size Enterprise Corporation, and other organizations contributing to development of entrepreneurship. 7. First Technology Forum of Energy Equipment Manufacturers (November 23-24, 2017).

2017 Chart of Corporate Communication Between Tyumenenergo JSC and Concerned Parties

No.	Concerned Party	Concerned Party Interest	Forms of Communicating with Concerned Parties	Measures Taken to Serve Interests of Concerned Parties in 2017
6	**Staff (Company employees, labor union, Veteran Board, Youth Board)**	1. Adequate standard of living. 2. Social safety. 3. Labor safety. 4. Opportunities for personal and professional development. 5. Adequate pensions.	1. Collective agreement. 2. Regulation on financial motivation. 3. Regulation on corporate support of Tyumenenergo JSC employees in improving living conditions. 4. Labor union organization. 5. Youth Board. 6. Veteran Board. 7. Corporate website and newspaper. 8. Corporate portal. 9. Talent pool. 10. Child and family recreation programs. 11. Staff training plan. 12. Sports and cultural events.	1. Collective agreement for 2016-2018 signed. 2. Staff insured in 2017 (including voluntary medical insurance, voluntary insurance against accidents and diseases). 3. 24 corporate events organized and held by the Youth and Veteran Boards. 4. 428 Company employees and 143 enjoyed recreation. 5. Expenditures related to labor safety in 2017 (including costs of providing staff with protective equipment) came to 252,094.35 thousand rubles. 6. Total number of staff trained for various specialties came to 6,690 people. Related costs came to 39,187.2 thousand rubles. 7. 82 employees (from the talent pool) were appointed superior officials.
7	**Educational Institutions**	1. Supporting education development. 2. Training high-qualification staff for the Company. 3. Improving educational programs in order to implement professional standards. 4. Further training of staff.	1. Signing cooperation agreements with higher and professional secondary education institutions. 2. Holding scientific conferences. 3. Joint organization of electric-grid graduation project contests. 4. Organization of student teams. 5. Organization of practical training programs. 6. Participation in state examination boards of educational institutions. 7. Organization of excursions to electric-grid facilities for seniors, students, and professors of universities and professional education institutions.	1. The Concept of cooperation between Tyumenenergo JSC and educational institutions developed and implemented. 2. Cooperation agreements signed with 35 universities and professional education institutions. 3. Company directors enter the Board of Guardians of Tyumen State University and Surgut State University. 4. Company employees participates in science conferences of Surgut State University and Surgut Polytechnic College. 5. Company directors and specialists participated as experts at the contest of electric-grid and energy graduation projects of technical university bachelors. 6. 77 students joined the student team Energetik in the summer labor season of 2017. 7. Over the year, around 20 excursions to energy facilities and Company services were conducted for students and professors of universities and professional education institutions.

Corporate communications of Tyumenenergo JSC, as the system for internal and external information management, are aimed at forming and reinforcing the positive image and reputation of the Company both in the internal and external environment. Tyumenenergo JSC determines compulsory goals, objectives, and messaging; develops and approves documents regulating corresponding activities in this field.

External communications are significant and enable Tyumenenergo JSC to follow the principles of availability, transparency, and credibility of the information disclosed; contribute to enhancing investment attractiveness of the Company and improving its positive reputation as a reliable electric-grid enterprise and government partner in the context of developing regions of operation. Tyumenenergo JSC has been engaged in systematic and purpose work in this field, following the above-mentioned principles of the Rosseti PJSC Unified Communication Policy aimed at developing relations with various public institutes, namely: business, expert, professional, and scientific communities, state authorities and local governments, public organizations, mass media, consumers, and citizens.

Communication with State Authorities and Public Organizations

Efficient communication with state authorities and public organizations is one of Tyumenenergo JSC's key priorities.

By establishing strong relations with state authorities and local governments within the area of operation, the Company facilitates decision-making on implementing the investment program coordinated with regional programs for territory development and safety of the electric-grid complex of the Khanty-Mansi Autonomous Okrug — Yugra, the Yamalo-Nenets Autonomous Okrug, and Tyumen Oblast.

Tyumenenergo JSC Director General Sergey Savchuk entered three sections of the State Duma Expert Board on Energy Matters: state regulation on reducing administrative obstacles regarding subsurface use and investment activities in the fuel-and-energy industry; state regulation of the distributed energy (including renewable energy sources); state regulation of the economical and tariff policy, and payment discipline in the fuel-and-energy industry.

Specialists of the Tyumenenergo JSC public relations department support long-standing and regular contacts with press services of state authorities and local governments, agitation and PR departments of the Main Directorate of the Ministry of the Russian Federation for Civil Defense, Emergency Situations and the Rectification of the Consequences of Natural Disasters of the Khanty-Mansi Autonomous Okrug — Yugra, the Yamalo-Nenets Autonomous Okrug, and Tyumen Oblast, regional expert community, Chambers of Commerce and Industry, regional offices of All-Russian public organizations Delovaya Rossiya, Opora Rossii, and All-Russia People's Front.

Social Communications

Cultivating energy-saving lifestyle, popularization of energy-related professions, preventing electrical accidents among students of educational institutions within the Company operation regions are among the highest-priority social objectives of the Tyumenenergo JSC PR Department for 2017.

Experience in popularizing working professions (*Workwards* project) grows sustainably: Company specialists are frequently invited to schools, colleges, and universities of the region. Career guidance activities are conducted in cooperation with the Technopolis and Child Art Center in Surgut: seniors meet Tyumenenergo JSC specialists, while young people and veterans learn about the Company and its staff; Company representatives share their memories on coming to the profession and tell about their achievements.

Beside traditional excursions to services and energy facilities of the companies, energy-field students visit proficiency competitions of Tyumenenergo JSC subsidiary staff that are held on the training polygon of Tyumenenergo JSC in Nizhnevartovsk.

Prevention of electrical accidents among various groups of citizens remains one of the key lines of communicating with the public. Over the year, Tyumenenergo JSC staff held 633 preventive classes at schools, nursery schools, and camps. Around 37,500 children and teenagers looked into rules of electric safety and behavior nearby energy facilities.

In 2017, within the framework of the All-Russian festival #brightertogether, a number of events on careful treatment of energy resources and cultivation of energy-saving lifestyle were held at educational institutions of the Khanty-Mansi Autonomous Okrug — Yugra, the Yamalo-Nenets Autonomous Okrug, and Tyumen Oblast. The most significant of them were a Tyumen-based event that took place during the regional stage of the Worldwide Youth and Student Fest, and also support of the *Yamal Energy Saving Day* project that took place on November 11, 2017 as a part of the federal Edinaya Rossiya's project *Expert Consumer School*. Tyumenenergo JSC provided information, methodological, and organizational support to municipal educational authorities of the Yamalo-Nenets Autonomous Okrug that lies within the area of operation of Severnye Electric Grids and Noyabrsk Electric Grids.

Interaction with the Center for Patriotic Heritage of the Surgut Museum of Local Lore was proceeded in 2017, followed by several events including *Camping* (Rus: На привале) promotion that traditionally takes place on June 22 (the Memorial Day of the WWII), and events within the project *Homeland Soldier*. Company employees actively partake in events organized by state authorities for the Victory Day across the entire area of operation.

Work with young people and veterans remains a significant component of Tyumenenergo JSC's integrated communications. Youth Boards of the Company and its subsidiaries play high role in all fields of Tyumenenergo JSC operation, including sports, patriotic and environmental events; represent the Company at contests of various levels and themes.

Company employees are emphatic to problems of other people, and provide support even at their own expense and efforts to the rehabilitation center for handicapped children and teenagers *Kind Wizard*, regional charity center for children and teenagers having severe diseases *Giving the Good*, animal treatment center *Shake!*; partake in promotions and campaigns of public organizations.

Communications with Mass Media

The way how Tyumenenergo JSC interacts with mass media is aimed at fulfilling information demand of various audience, grounding on open-cooperation principles, compliance with business and professional ethics.

Tyumenenergo JSC, within the area of operation, implements the state policy in the electric energy field; pursuant to key principles of the Rosseti PJSC's Unified Communication Policy, it maintains the substantiate communication with target audiences such as consumers, public organizations, state authorities, and so-called unconcerned parties that have no specific relations with the Company but do belong to target audiences as a prevention group (within the framework of electric safety programs, crime prevention, etc.).

Mass media enables Tyumenenergo JSC to enhance energy-related awareness of consumers, let target audiences recognize key lines of the state policy, create the image of a primary, most reliable, and efficient market professional; cultivate safe and efficient behavior in the context of electric energy among citizens.

Also, mass media contributes to completing information, educational, and image-related objectives, including enhancing recognizability within the area of operation of the head company, Rosseti PJSC. Considering the wide range of communication-related objectives, Tyumenenergo JSC cooperates with all key types of mass media: industry-specific, business, public TV channels,

radio stations, publishing houses, and electronic resources — federal, regional, and municipal ones.

In 2017, activities were proceeded on career guidance, electrical accident prevention, energy facility safety, cultivation of energy-saving lifestyle and careful treatment of energy resources and system, and forming a positive image of an energy specialist. Proficiency contests were again reinforced with information content. Each year, on the threshold of professional competitions, a press center is formed; one of the competition-period days is devoted to meeting representatives of mass media and other interested visitors. Corporate website regularly provides full and comprehensive information support, dressed with lots of illustrations; social media and blog profiles of the Company are also kept up-to-date.

Tyumenenergo JSC maintains its status of an open-to-public company through organizing regular meetings between the Company management and mass media representatives. In 2017 they took place mostly as press releases on event results.

Over the year, the Company used traditional approach to publishing information on corporate resources and broadcasting it to external audiences. Thus, pursuant to Rosseti PJSC's recommendation, only process-related information can be found on the corporate website, which is subject to further coverage by mass media. In-house events are described on the internal corporate portal, newspaper, as well as in social media and blog profiles.

In quantitative terms, these activities can be evaluated as follows. 207 press releases are published on the corporate website, describing recent events and work done; on TV, 153 educational and preventive spots were released. In general, there were around 3,400 Company mentions over 2017. Corporate profile and Sergey Savchuk's Instagram profiles were created (more than 200 posts published since May, almost 2,000 subscribers). Social media activities are being carried out. In order to expand the audience and increase awareness of Tyumenenergo JSC operation, pursuant to Rosseti PJSC's recommendation, the number of copies of the regional annex to the corporate newspaper Rossiyskiye Seti was increased (the Company acquired a Roskomnadzor license). Now the corporate newspaper has rights of a public mass media resource.

Congresses and Exhibitions

Holding and participating in congresses and exhibitions are important activities regarding positioning the Company as one of the leading electric-grid companies in Russia.

In 2017, Tyumenenergo JSC specialists joined 41 events: All-Russian and regional exhibitions, conferences, forums dedicated to innovations, energy efficiency, energy safety, labor safety, operation area expansion. Within the framework of these events, Tyumenenergo JSC was introduced as one of the leading distribution electric-grid companies following the approach of innovative growth, social responsibility, and customer service.

The key events that Tyumenenergo JSC specialists participated in were International Arctic Forum Arctic is a Topic (March 29-30, 2017, Arkhangelsk), All-Russian Exhibition Forum GOSZAKAZ (April 5-7, 2017, Moscow), All-Russian Labor Safety Week (April 10-14, 2017, Sochi), St. Petersburg International Economic Forum (June 1-3, 2017, St. Petersburg), Russia-Kazakhstan Business Forum (September 8, 2017, Tyumen), First International Energy Efficiency and Development Form Russian Energy Week (October 7-10, 2017, Moscow), International Exhibition Electric Grids of Russia 2017 (December 5-7, 2017, Moscow).

Besides, Tyumenenergo JSC was an organizer of two events that are worth much for the industry and area of the Company operation. These events were First Technology Forum of Energy Equipment Manufacturers (November 23-24, 2017, Surgut) and the All-Russian Conference Connection Systems and Dispatching. The New Generation of Solutions and Standards (September 6-7, 2017, Surgut). The events not only became the platform for demonstrating advances of equipment manufacturers and software developers, but also enabled the participants to directly communicate with their target audiences (equipment manufacturers and software

developers — specialists of customer organizations). The organizational committee of the forum decided to make the forum traditional for the event calendar of Tyumenenergo JSC.

Participation of Tyumenenergo JSC specialists in congresses and exhibitions is of high importance for experience exchange, establishing relations with equipment manufacturers, software developers, representatives of state authorities, business community, mass media, and public organizations of various level.

Company's achievements of 2017 include the victory in the categories Reliable Power Supply, Efficient Energy Saving, and Innovative Project of the Year of the VII All-Russian Contest of Best Electric Grids of Russia; first place in the category Best Project for LED-Lighting of Administrative Buildings of the regional stage (Tyumen Oblast) of the All-Russian Contest of Implemented Energy-Efficiency and Energy-Saving Projects (ENES 2017), second place at the federal stage of the contest (the Company introduced the project of Modernizing lighting systems at Tyumenenergo JSC subsidiaries within the framework of energy service contracts); acknowledgement of the Ministry of Energy of the Russian Federation for contribution to organization and holding of events of the All-Russian Festival #BrighterTogether2017; victory in the category Talent Pool Development; acknowledgement of the Autonomous Organization of the Khanty-Mansi Autonomous Okrug — Yugra High-Tech Technopark for cooperation at Competence Show organized within the framework of the Yugra Industrial Forum.

In January 2018, Tyumenenergo JSC became the winner in the category Strategy of the Year of the Interregional Award 2017 Results of Ural and Siberia (organized by FederalPress Publishing House) for the memorandum on opening of Russia's first Center for Energy Industry Innovations in Surgut.

REFERENCE DATA

Full Company Name in Russian – Акционерное общество энергетики и электрификации «Тюменьэнерго».

Full Company Name in English – Joint Stock Company "Tyumenenergo".

Abbreviated Company Name in Russian – АО «Тюменьэнерго».

Abbreviated Company Name in English – Tyumenenergo JSC.

Company Place of Business: Russia, Tyumen Oblast, the Khanty-Mansi Autonomous Okrug — Yugra, Surgut.

Company Address: 628408, Russia, Tyumen Oblast, the Khanty-Mansi Autonomous Okrug — Yugra, Surgut, 4 Universitetskaya St. Company Address is listed in the Uniform State Register of Legal Entities.

State Registration Data

According to the information specified in the Certificate of State Registration of a Legal Entity registered before July 1, 2002:

Legal Entity State Registration Number	07-4784
Registration Date	March 12, 1993
Registered By	Administration of Surgut

According to the information specified in the Certificate of Entry in the Unified State Register of Legal Entities (about a legal entity registered before July 1, 2002):

Primary State Registration Number	1028600587399
Registration Date	October 14, 2002
Registered By	Tax Service of Surgut, Khanty-Mansi Autonomous Okrug

Bank Details and Other Information

Current Account: 40702810267170101719, West Siberia Bank of Sberbank PJSC, Tyumen

Correspondent Account: 30101810800000000651, West Siberia Bank of Sberbank PJSC, Tyumen

BIK (bank identification code): 047102651

INN (taxpayer ID): 8602060185

KPP (taxpayer record validity code): 860201001 (by address in Russia)

KPP (taxpayer record validity code): 997450001 (as a major taxpayer)

ORGN: 1028600587399 (assigned on October 14, 2002)

OKPO: 05770629

OKATO: 71136000000

OKTMO: 71876000001

OKOGY: 4210008

OKOPF: 12247

OKFS: 16

OKVED (main): 35.12

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Fax +7 (3462) 77-64-20

Registrar of Tyumenenergo JSC

A registrar keeps the share register.

Registrar Full Name	Limited Liability Company Reestr RN
Abbreviated Registrar Name	Reestr RN LLC
Registrar Address	109028, Russia, Moscow, 2/6 Unit 3-4 Podkopaevsky Per.
Mail Address	115172, Moscow, box 4
Telephone / Fax	(495) 411-79-11 / (495) 411-83-12
Email	support@reestrrn.ru
Website	http://www.reestrrn.ru
Certificate Number	10-000-1-00330
Issued On	December 16, 2014
License Expiry Date	None
Licensed By	Federal Financial Markets Service
Date of Registrar Involvement	December 6, 2010

Auditor of Tyumenenergo JSC

On June 8, 2017, the General Shareholders Meeting of Tyumenenergo JSC approved RSM RUS LLC (Moscow) as an auditor. An auditor is a member of the self-regulated organization Non-Commercial Partnership Sodruzhestvo Auditor Association (membership certificate No. 6938, PRNE (Rus: ОРНЗ) 11306030308; address: 119192, Russia, Moscow, 21 Unit 4 Michurinskiy Prospekt.

Auditor Full Name	Limited Liability Company RSM RUS «РСМ РУСЬ»
Auditor Registrar Name	RSM RUS LLC
Auditor Address	119285, Russia, Moscow, 4 Pudovkina St.
Telephone	(495) 363-2848
Fax	(495) 981-4121
Email	mail@rsmrus.ru

Fiscal year (years) for which an Auditor Examined accounting and reporting of the issuer	2016-2017 Annual Report (RAS) 2016-2017 Consolidated Annual Report (IAS)

APPENDICES

1. 2017 ACCOUNTING REPORT (RAS) + AUDIT REPORT

2. SHARES OF TYUMENENERGO JSC IN EQUITY CAPITALS AND VOTING SHARES OF OTHER COMPANIES AS ON DECEMBER 31, 2017

2.1. TYUMENENERGO JSC NON-CORE ASSET DISPOSAL IN 2017

3. KEY REGULATORY ACTS

4. TARIFFS RATES

5. ACTUAL EFFECT OF REDUCING INVESTMENT COSTS BY 30% AGAINST 2012

6. COMPANY PARTICIPATION IN NON-COMMERCIAL ORGANIZATIONS AS ON DECEMBER 31, 2017

7. TABLE OF THE REPORT CORRESPONDENCE TO THE REQUIREMENTS OF GRI G4 INTERNATIONAL STANDARD