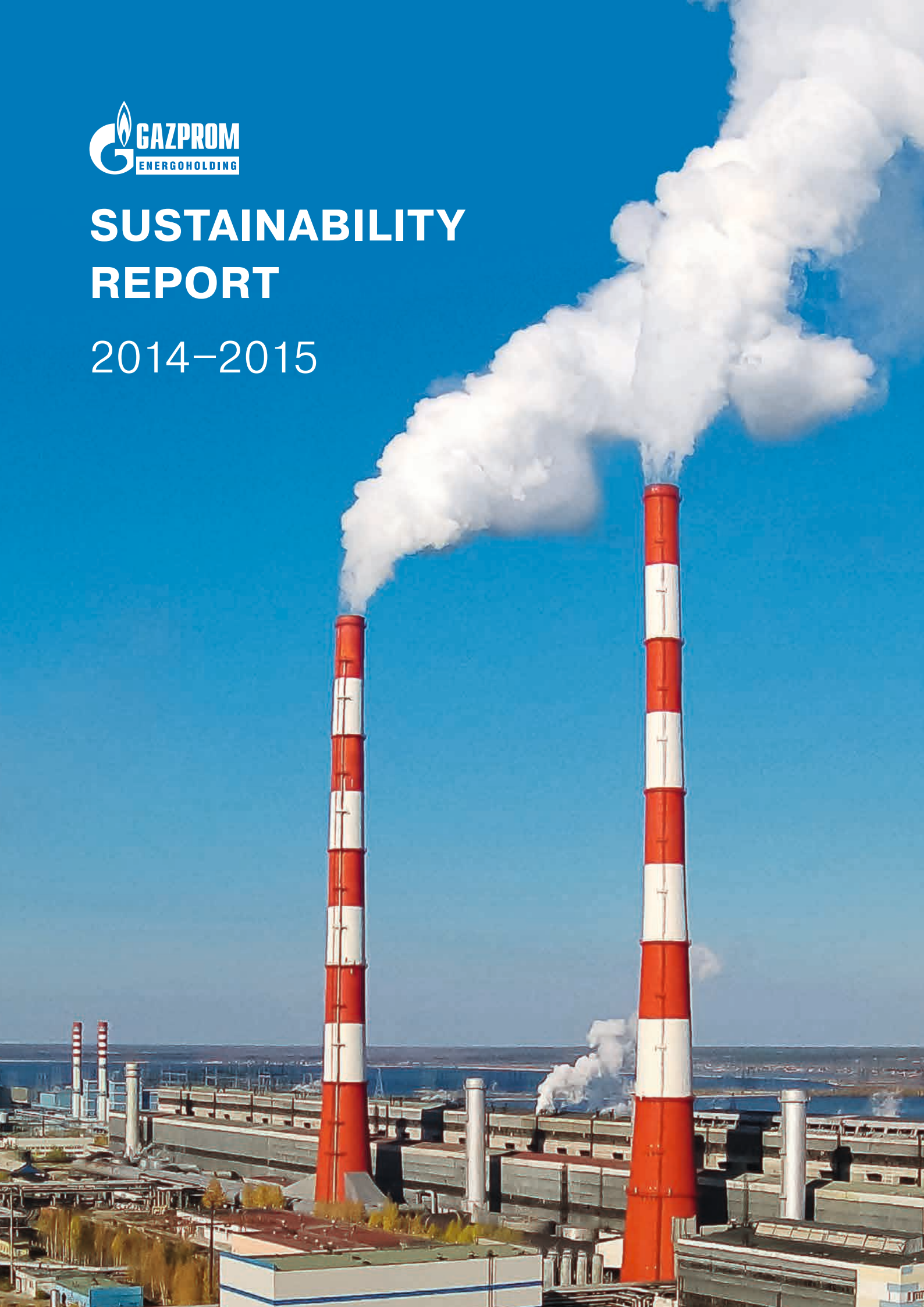
GAZPROM ENERGOHOLDING

SUSTAINABILITY REPORT

2014–2015



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REPORT PROFILE

This is the second sustainability report of Gazprom energoholding Group's production companies (the "production companies") for the calendar years 2014 and 2015.

In this report, PAO Mosenergo, PAO TGC-1, PAO OGK-2, and PAO MOEK are referred to as Mosenergo, TGC-1, OGK-2, and MOEK, respectively.

G4-32 **HOW DID WE PREPARE THIS REPORT?**

This sustainability report has been prepared following the principles and guidance set out in the Global Reporting Initiative Guidelines (GRI 4.0.), including the Electric Utility Sector Supplement, and is in accordance with the "Core" option in terms of disclosure.

Going forward, we plan to gradually expand the amount of information to be disclosed in our sustainability reports and move to the "Comprehensive" disclosure level. For this reason, this report provides wider disclosures of certain aspects than is required by the "Core" option.

For a full list of aspects covered by this report and the relevant page number in the report, please see the GRI Content Index section.

G4-33 This sustainability report has been reviewed by GRI's "Materiality Disclosures Service" experts. In preparing this report, we did not hold any public hearings involving representatives of relevant stakeholders, but we plan to consider this going forward.

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WHAT SCOPE AND BOUNDARIES HAVE WE CHOSEN FOR THIS SUSTAINABILITY REPORT?

We have chosen a biennial reporting cycle, in line with the current corporate practice of PJSC Gazprom, our parent company. This report focuses mostly on the data for the last two calendar years (2014 and 2015); however, we also disclose information about the more significant corporate events of 2016.

This report details the sustainable development performance of Gazprom energoholding Group's four production companies – generating companies Mosenergo, TGC-1[1], and OGK-2 [these companies are listed on the Moscow Exchange] and heat supply company MOEK [a non listed company][2]. Unlike the previous sustainability report of Gazprom energoholding Group's production companies, this report also covers MOEK in addition to Mosenergo, TGC-1, and OGK-2, as MOEK joined the Group in September 2013 and was among Gazprom energoholding Group's production companies throughout the reporting period (2014–2015).

G4-17 As with the previous sustainability report, the current report includes only some data for subsidiaries and affiliates of Mosenergo, TGC-1, OGK-2, and MOEK: all performance data, except financials, are provided excluding subsidiaries. All financials are given as per IFRS consolidated financial statements. We did not include non financial information for subsidiaries of Gazprom energoholding Group's production companies as our internal corporate data collection frameworks need further refinement. Going forward, we plan to gradually extend non financial reporting to include all subsidiaries of Mosenergo, TGC-1, OGK-2, and MOEK[3].

1. Including PAO Murmanskaya CHPP.

2. The names, corporate forms, and addresses of the companies covered in this report are given in APPENDIX 1 AND TABLE 1.1.

3. For a full list of subsidiaries included in consolidated financial statements of PAO Mosenergo, PAO TGC-1, PAO OGK-2, and PAO MOEK, please see APPENDIX 1 AND TABLE 1.2.

PRAVOBEREZHNAYA CHPP, PAO TGC-1

WHAT WERE THE SOURCES OF INFORMATION FOR THIS REPORT?

We used management reports and most recent audited IFRS financial statements as of the date of this report as the key source of information on performance by the production companies. The data reflecting the performance of our production companies on aspects not covered by management reports or financial statements were obtained through information requests to relevant units of the companies prepared in line with G4 Sustainability Reporting Guidelines.

Unless indicated otherwise, data for Gazprom energoholding Group provided in this report are aggregate totals of relevant amounts for the four companies – Mosenergo, TGC-1, OGK-2, and MOEK.

The report presents our mid-term and long-term plans. Their implementation is subject to inherent risks and uncertainties including factors beyond the control of Gazprom energoholding Group's production companies and parent company.

G4-1 CEO'S STATEMENT

DENIS FEDOROV, CHIEF EXECUTIVE OFFICER OF OOO GAZPROM ENERGOHOLDING

Dear colleagues and partners,

I am pleased to present the second sustainability report of Gazprom energoholding Group's companies for 2014–2015.

Industrial consumers and households in many Russian regions, including Moscow and Saint Petersburg, the country's two biggest cities, rely on our companies for uninterrupted heat and electricity supplies. This means that while focusing on maximising profits and seeking competitive advantage, we also see reliability and safety as our top priorities. To this end, we annually reduce the utilisation rates of worn out or outdated capacities, replacing them with modern, high efficiency generating units. These efforts not only enhance the reliability and energy efficiency of our generation fleet but also significantly reduce its negative environmental impacts. As part of our commitment to business openness and transparency, we have maintained an ongoing open dialogue with all stakeholders and see our sustainability report as an important part of this dialogue.

WHAT ARE OUR STRATEGIC SUSTAINABILITY GOALS AND PRIORITIES?

Our key strategic sustainability goals and priorities remain virtually unchanged from two years ago and include:

1) ensuring reliable, safe and efficient operation of power plants and heat distribution networks;
2) increasing the operating efficiency and market capitalisation of the Group's assets;
3) driving competitive edge in the electricity, capacity and heat markets;
4) building an optimal generation capacity mix through upgrades to fixed assets and phasing out inefficient capacity;
5) sustainable use of energy resources, achieved through the fuel mix optimisation, and the development and introduction of energy saving technologies;
6) improving environmental safety standards, and minimising the environmental footprint of our power plants;
7) maintaining our preferred employer status, which attracts committed and highly efficient people;
8) contributing to the social development of the regions where our companies operate;
9) acquiring strong assets and participating in attractive investment opportunities for the construction of generating capacity in Russia and abroad.

OUR ACHIEVEMENTS IN 2014–2015:

– **In increasing the efficiency of operating processes and management**

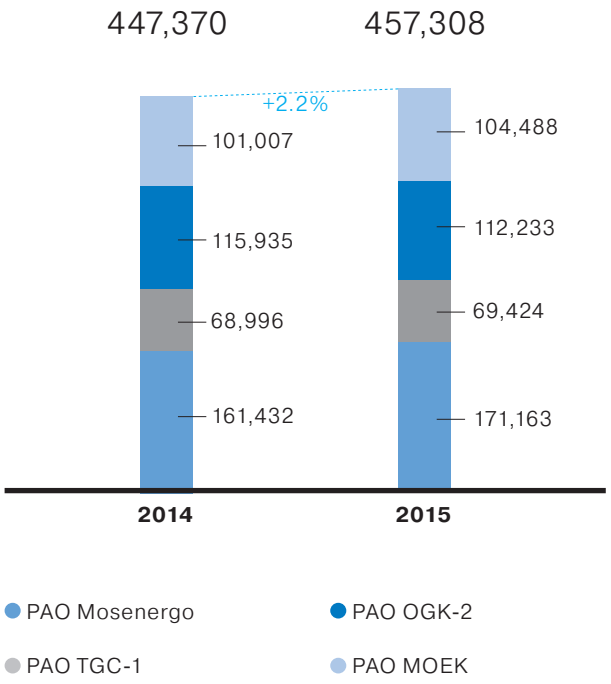
The most promising operational efficiency and corporate governance initiatives implemented in our companies in 2014–2015 include:

- consolidation of corporate governance functions of the Group's companies within OOO Gazprom energoholding;
- changes in the heat supply structure for Moscow (transfer of MOEK's heat generating facilities to Mosenergo, and hand over of heat distribution networks operated by Mosenergo to MOEK);
- the "Efficiency" project at OGK-2, offering rewards to employees who come up with ideas for the improvement of the company's existing production and management processes;
- OPEX optimisation initiative, operational restructuring of repairs and capital construction, and optimisation of emergency repair services at MOEK;
- "Business Opportunities" project at OGK-2 to engage SMEs on opportunities to locate new production facilities on idle premises of the company's power plants;
- transition to direct payment arrangements in certain regions covered by TGC-1's heat supplies (Petrozavodsk, the Murmansk Region, certain consumer groups in Saint Petersburg);
- wider engagement with Russian suppliers of generating equipment and components for power plants operated by the Group and joint projects with Russian research organisations.

The implementation of these optimisation initiatives has improved the economic sustainability of our companies. Despite challenging macro economic conditions in 2014–2015 and the resulting decline in the demand for electricity and heat, our timely measures have mitigated the adverse effects the external factors had on the Group's performance. In 2015, we succeeded in growing our total revenue by 5% from 2013 and in maintaining our total profits at the 2013 level.

– **Implementation of investment projects**

Mosenergo, TGC-1 and OGK-2 are implementing a mandatory investment programme under relevant Capacity Supply Agreements (CSAs) in line with agreed timelines. In 2007–2018, Gazprom energoholding Group is expected to commission a total of c. 8.9 GW of new build capacity under CSA projects. Our companies have already commissioned over 8.4 GW of new build capacity, of which c. 2.3 GW came online in 2014–2015 and c. 1 GW in 2016 (data as of 1 July 2016). The Group's remaining obligations total 0.5 GW (0.1 GW to be delivered in 2016 and 0.4 GW in 2018).



Revenue, RUB mm

In our 2012–2013 sustainability report, we presented our plans for delivering the Group's CSA obligations by 2017. Our current plans envisage the implementation of investment projects under CSAs by 2019, which is due to the adjustments made to the current CSA project portfolio in 2015–2016 by resolutions of the Russian Government. In particular, instead of three 360 MW gas turbines to be constructed by OAO TGC-2, OGK-2 will build two 180 MW combined cycle gas turbines in Grozny.

With new generating units at CHPP-16 (420 MW) and CHPP-9 (64.8 MW) coming online in 2014, and the commissioning of a 220 MW generating unit at CHPP-12 and a 420 MW generating unit at CHPP-20 in 2015, Mosenergo has fully completed its CSA investment programme.

In 2014–2015, TGC-1 continued the implementation of its final project under the CSA mandatory investment programme – the installation of new gas turbines at Tsentralnaya CHPP (100 MW), scheduled to become operational in 2016.

OGK-2 commissioned new build capacities at Cherepovetskaya GRES (420 MW) in 2014, Serovskaya GRES (420 MW) and Ryazanskaya GRES (330 MW) in

2015. During 2016, new generating units came online at Troitskaya GRES (660 MW) and Novocherkasskaya GRES (330 MW). This in effect means that we have successfully completed all CSA projects except for the Groznenskaya TPP project, which was included in our investment programme in 2015.

The new build capacity commissioned by our companies under the CSA mandatory investment programme has boosted the economic and environmental performance of relevant power plants and secured a stable cash flow to ensure payback on the investments.

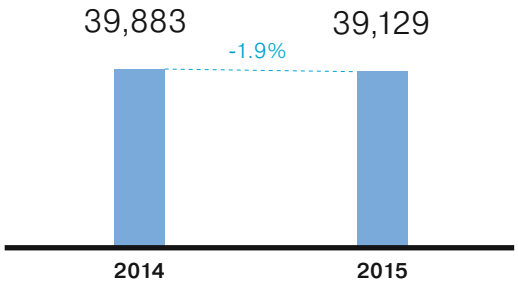
– **Reduction in the environmental impacts of our production facilities**

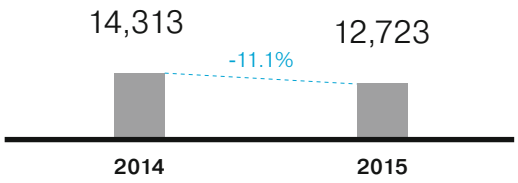
Environmental protection has always been a priority for Gazprom energoholding's companies. We are guided by the principles of sustainable use of resources and are committed to minimising our environmental footprint. We implement large-scale investment projects to replace outdated generating facilities with new high performance equipment. Our efforts to replace the ageing equipment significantly improve both economic and environmental performance of our generation fleet. In addition, we implement special measures to reduce emissions and improve wastewater treatment. Among other things, we install low-toxicity boiler burners, roll out the fuel staged combustion technology and a flue gas recirculation circuit, and construct new or upgrade existing treatment facilities. As a result, total pollution emissions of the Group's electricity generation fleet were reduced by 34% from 2010, with greenhouse gas emissions cut by 14%, and water consumption and disposal reduced by 30%.

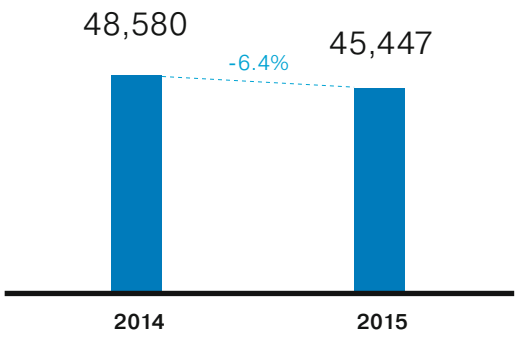
– **Labour and social relations**

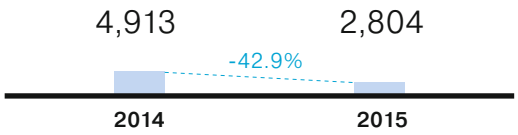
The performance of our companies relies heavily on the qualifications and skills of our people. In our labour practices, we pay specific attention to motivation, training, professional development, occupational safety and promotion of Gazprom Group's uniform corporate culture. Our key achievement here in 2014–2015 was the establishment of the Shared Staff Training Centre (SSTC), which pools resources across all training centres operated by Gazprom energoholding Group's production companies. The SSTC will enable the standardisation of personnel training and development processes within a common training environment.

Gazprom energoholding Group's production companies fully contribute to improvements in the quality of life in the regions where they operate not just through job creation and reliable supplies of heat and electricity









PAO Mosenergo
PAO TGC-1
PAO OGK-2
PAO MOEK

GHG emissions, CO_2 equivalent, '000 tonnes

LINE PUMPS AT BIRULEVO DHP (SUBDIVISION CHPP-26, PAO MOSENERGO)

to residential areas, social and industrial facilities, but also by consistently supporting sports, academic, and cultural events and initiatives. Targeted aid to children, senior citisens and industry veterans is a priority in our social activities.

G4-22 – **Acquisition of assets**

In late 2013, Gazprom energoholding Group was joined by MOEK, the world's largest integrated company generating, transmitting, distributing, and retailing heat energy[4], which is responsible for dispatch scheduling of heat supply facilities and networks, and connections to the heat distribution system in Moscow and the Moscow Region.

Our 2012–2013 sustainability report did not cover MOEK because for the largest part of the reporting period the company was not part of Gazprom energoholding Group. In this report, we can already summarise the performance of MOEK as part of the Group. As a result of integrating MOEK, Gazprom energoholding became the largest player in the Russian market both in terms of installed electricity capacity (over 37 GW) and installed thermal capacity (c. 64 thousand Gcal/h). The Moscow heat supply market controlled by the Group is the world's largest such market. The acquisition of MOEK has enabled us to achieve the following results:

- eliminate the risks of Mosenergo losing its market share in the Moscow heat supply market;
- obtain the status of a "single heat supply company" providing centralised supply of heat and hot water to Russia's capital (covering c. 95% of consumers in the city);
- improve capacity utilisation for Mosenergo's power plants and reduce gas consumption in the region by taking the load off MOEK's boiler facilities.

For customers in Moscow and the Moscow Region this means higher reliability and efficiency of heat supplies due to improved coordination of operations between Mosenergo and MOEK.

4. For heating and hot water supply.

WHAT ARE OUR SHORT-TERM (2016–2017) AND MID-TERM (2018–2025) OBJECTIVES?

In the short term (2016–2017), our key objective is to strengthen the balance sheet of the Group's companies by increasing the profitability of operations, streamlining costs and improving production efficiency. For 2016–2017, Mosenergo and MOEK plan to continue efforts to centralise the entire generation fleet within Mosenergo, while concentrating all heat distribution networks and distribution functions within MOEK. One of the priority objectives for TGC-1 for these years is to complete the construction and commissioning of its Capacity Supply Agreement (CSA) project at Tsentralnaya CHPP. In 2016–2017, we plan to significantly reduce the debts of our companies and increase the amount of funds paid out as dividends.

In 2014, Gazprom energoholding Group launched a project to establish a dedicated holding company focused on repair operations as part of the Group to increase the operational reliability of equipment, reduce repair times, and improve repair quality. Repair business is not our core activity, but given the limited supply of high quality repair services in this sector having a repair structure within the Group will reduce our dependence on third party contractors, while significantly improving the quality of repairs and cutting their costs. We expect 60% to 70% of the repair programme of our production companies to be covered using our own resources as early as in 2017.

Our priorities for 2016–2017 also include reducing management redundancies across the Group and consolidation of management functions in OOO Gazprom energoholding. In early 2015, the functions of sole executive bodies at Mosenergo and MOEK were handed over to OOO Gazprom energoholding[5]. Plans for the future include similar optimisation of corporate governance at TGC-1 and OGK-2.

CCGT-220 GENERATING UNIT TURBINE HALL AT CHPP-12, PAO MOSENERGO

5. Approved by extraordinary general shareholders meetings held on 20 May 2015.

In the mid-term (2018–2025), we seek to increase the profitability and optimise the structure of our business by capturing attractive opportunities for disposal of non core assets, M&A activity, and penetration of foreign markets.

WHAT ARE THE MACROECONOMIC AND POLITICAL TRENDS THAT HAVE HAD AN IMPACT ON OUR PERFORMANCE IN THE REPORTING PERIOD (2014–2015) ANDWHAT ARE OUR SUSTAINABILITY PRIORITIES?

As the macroeconomic situation in Russia became more challenging in 2014–2015, it put pressure on the performance of our companies. Like many other Russian companies, we have been faced with much higher costs of servicing foreign currency debt and restricted access to external financing. Nevertheless, we have succeeded in ensuring further sustainable growth of our companies through a range of well timed cost-cutting and operational efficiency initiatives. Another positive factor is that we operate in Russia's most economically developed regions, including Moscow and Saint Petersburg, where we capture sustained high demand for heat and electricity and enjoy good consumer payment discipline.

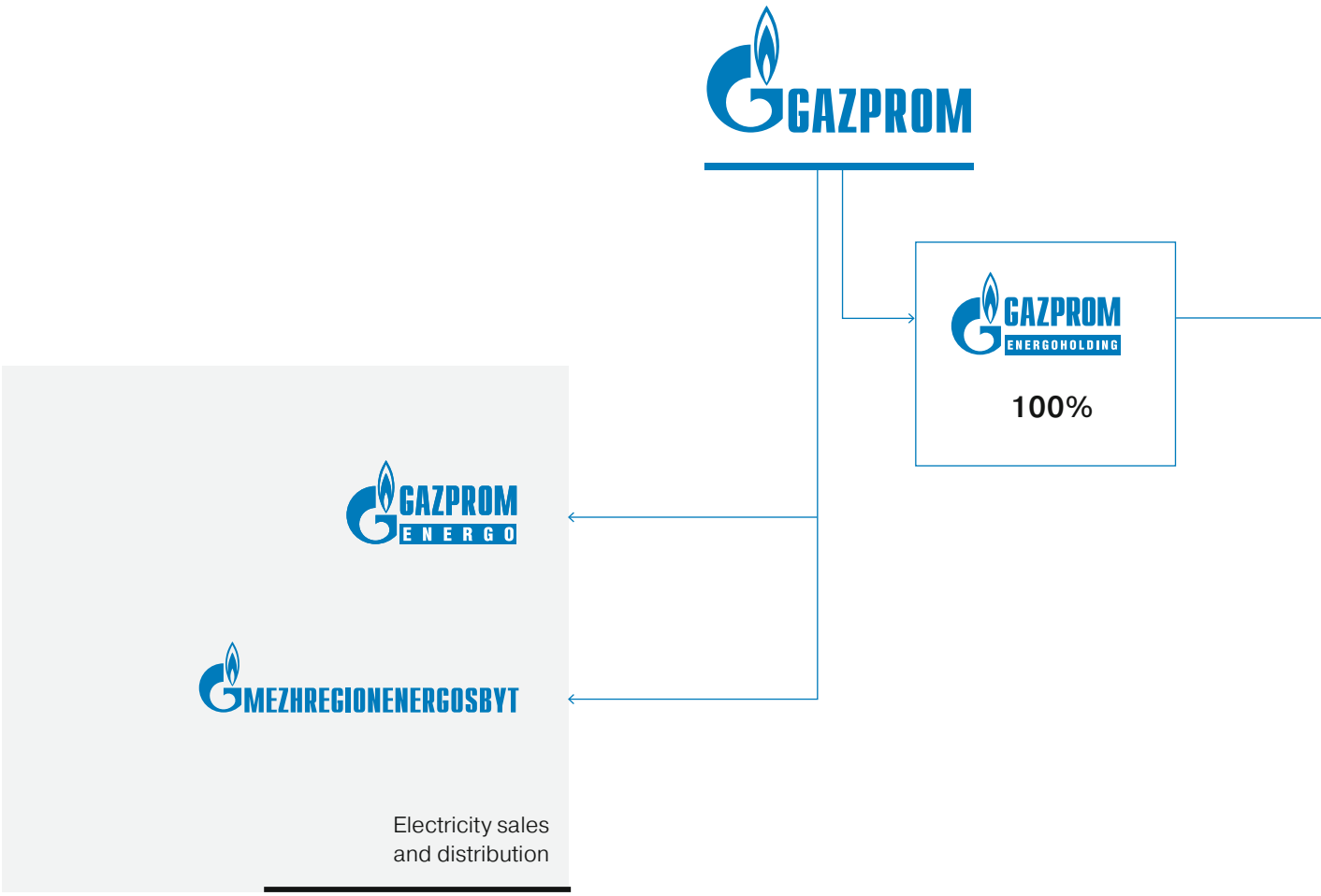
The sanctions introduced by some countries against Russia's industrial majors have prompted stronger diversification of material and equipment sourcing and wider engagement with Russian suppliers. We have leveraged our experience to successfully replace some of the equipment and automation systems we procure with similar products manufactured locally or in South East Asia, and did it within a relatively short timeframe.

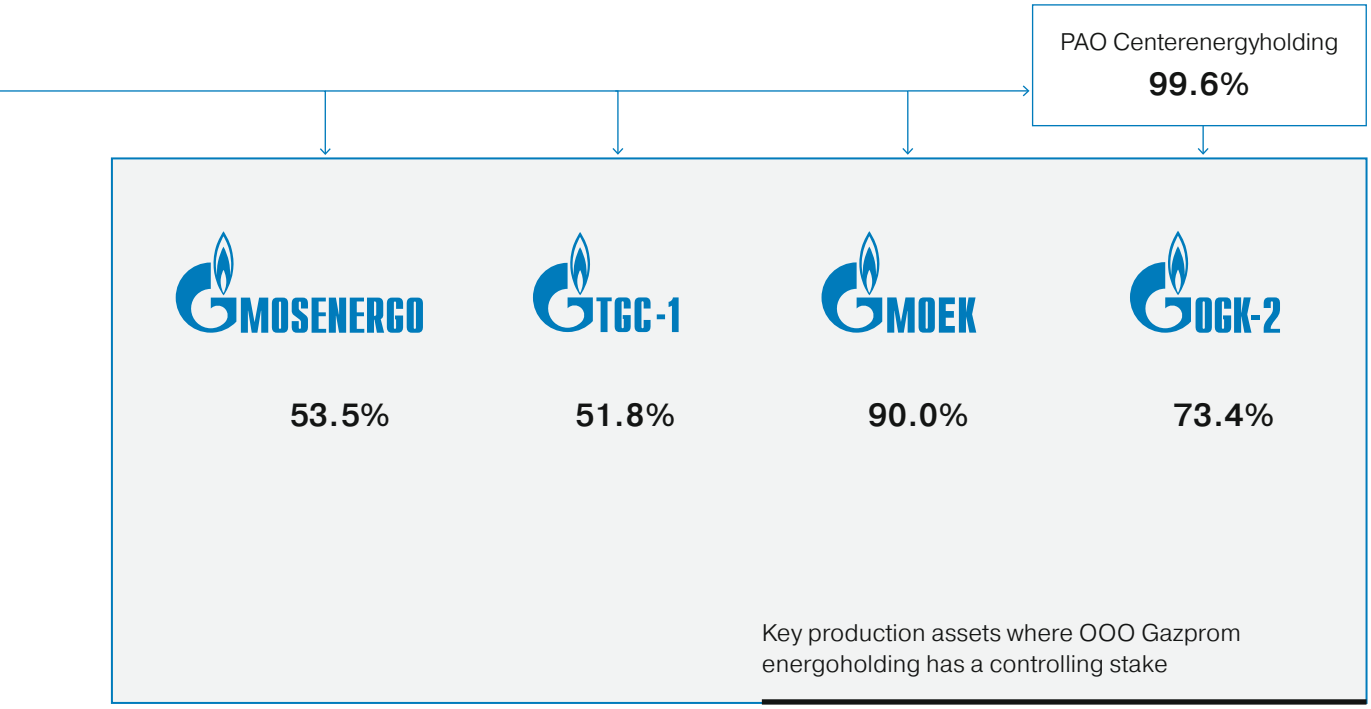
Denis Fedorov
Chief Executive Officer,
OOO Gazprom energoholding

OVERVIEW OF THE GROUP

BUSINESS MAP

Corporate and ownership structure of Gazprom energoholding Group (the shareholding structures of Gazprom energoholding Group's production companies are presented in more detail in APPENDIX 1, TABLE 1.3).





SCOPE OF GAZPROM ENERGOHOLDING GROUP'S SUSTAINABILITY REPORT

G4-4 OOO Gazprom energoholding is a vertically integrated holding company (a wholly owned subsidiary of PJSC Gazprom) that operates Gazprom Group's production companies (Mosenergo, TGC-1, OGK-2, and MOEK) in line with uniform corporate standards.

OOO Gazprom energoholding's key areas of activity:

- involvement in the development of Gazprom Group's strategy in the electricity sector; its implementation and supervision of its implementation by production companies, in particular:
  - development and implementation of effective common strategies and policies across production companies (Technical Policy, Environmental Policy, HR Policy, etc.);
- contributing to the positioning and exercise of powers by the controlling shareholder of Gazprom Group's production companies:
  - development of a set of initiatives to improve the effectiveness of corporate governance and cut costs of production companies;
  - implementation of a common investment strategy and supervision of its implementation by production companies;
- presenting the Group's common position in dealings with government bodies, market regulators, and major counterparties.

The key governance mechanisms for subsidiaries and affiliates include:

1) OOO Gazprom energoholding acting as the sole executive body of Mosenergo and MOEK.

   Mosenergo and MOEK have delegated executive powers to OOO Gazprom energoholding to centralise day-to-day management across Gazprom energoholding Group, implement a common development strategy, carry out direct ongoing monitoring of day-to-day financial and business activities, improve coordination of activities between the Group's companies, ensure effective management of cash flows, optimise the use of resources, cut administrative costs, and centralise planning and control.

   As the sole executive body, OOO Gazprom energoholding:
   - makes decisions on the companies' activities outside the responsibility of the General Shareholders Meeting and the Board of Directors;
   - manages the companies' property;
   - represents the companies both in Russia and abroad;
   - represents the companies in courts;
   - acts as the employer of the companies' staff;
   - exercises other rights of the sole executive body as specified in the applicable laws and/or the companies' Articles of Association.

   OOO Gazprom energoholding also supports Mosenergo and MOEK by developing solutions to operational issues and ways to implement them.

2) Exercising the rights of a shareholder in the production companies, including through:
   - participation in general shareholders meetings;
   - voting on the items on the agenda of general shareholders meetings;
   - proposing items for the agenda of general shareholders meetings;
   - nominating candidates for election to management and control bodies.

The extraordinary General Shareholders Meeting of Mosenergo, held on 20 May 2015 (Minutes No. 1 dated 21 May 2015), and the extraordinary General Shareholders Meeting of MOEK, held on 20 May 2015 (Minutes No. 2 dated 21 May 2015), resolved to delegate the powers of a sole executive body of Mosenergo and MOEK to a managing company, with OOO Gazprom energoholding designated as such company.

On 21 May 2015, agreement on the delegation of powers of Mosenergo's sole executive body No. 2-02 / 1830 dated 21 May 2015 and agreement on the delegation of powers of MOEK's sole executive body No. 2-02 / 1831 dated 21 May 2015 were approved by resolutions of Mosenergo's Board of Directors (Minutes No. 18 dated 21 May 2015) and MOEK's Board of Directors (Minutes No. 19 dated 21 May 2015) and subsequently executed.

CHPP-20, PAO MOSENERGO

3) Having representatives of OOO Gazprom energoholding on the Boards of Directors and Board Committees of relevant production companies.

The management processes are in line with the procedures set out by applicable laws, Articles of Association, and other internal regulations of the companies.

The core business of Mosenergo, TGC-1, and OGK-2 to produce and supply power and electricity generation capacity to the wholesale market; and to generate and distribute heat to end consumers, while MOEK is focused on generation, transmission, distribution and sales of heat energy, as well as on the maintenance and development of Moscow's centralised heat distribution system.

Our generating facilities are located exclusively within Russia, which is also our key distribution market. Generation capacity locations and distribution markets of our production companies in Russia (presented in more detail in APPENDIX 1, TABLE 1.4.).

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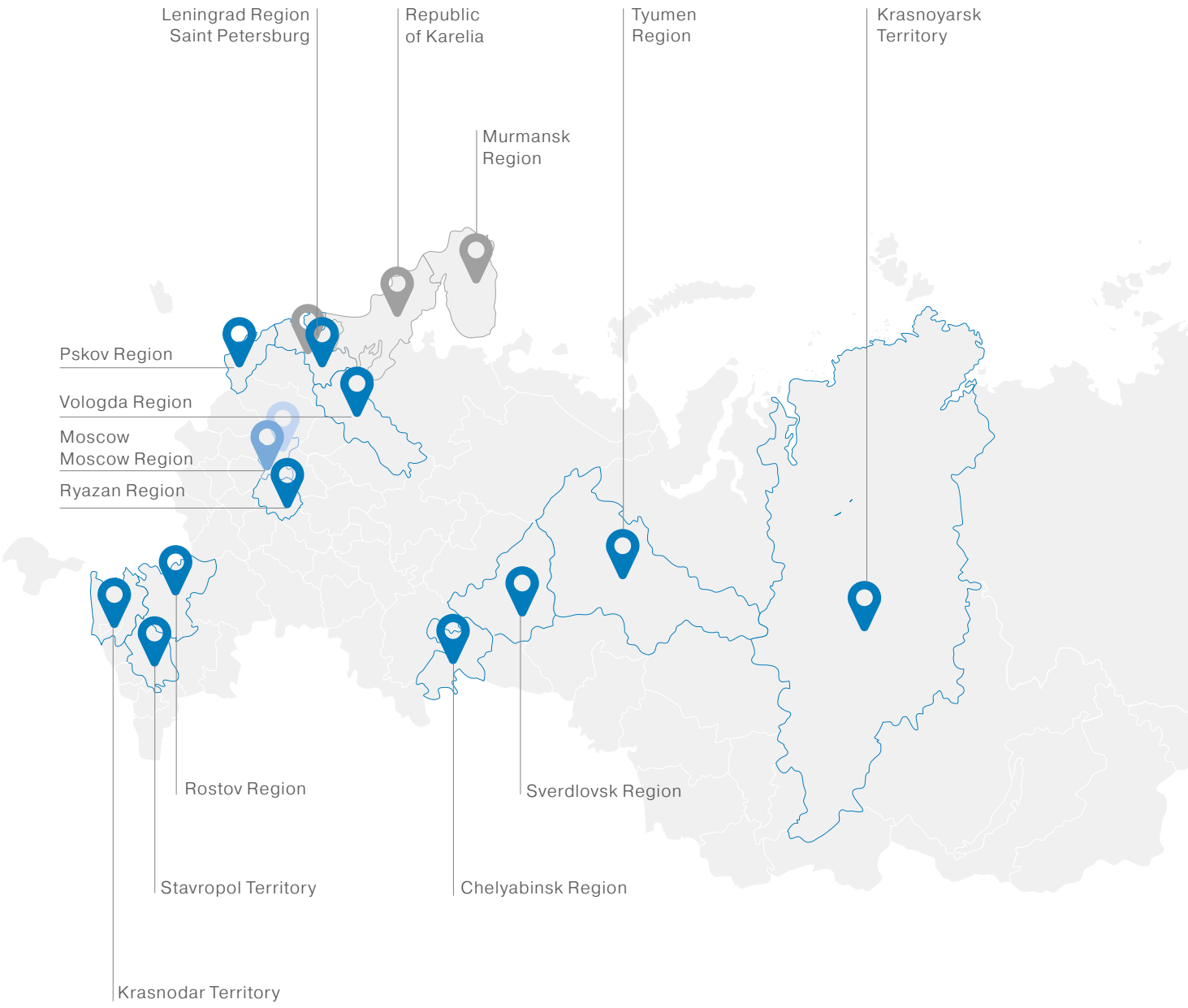
G4-8

SKETCH MAP OF GENERATING FACILITIES OF GAZPROM ENERGOHOLDING GROUP'S COMPANIES



MOSENERGO

- supplies over 60% of electricity and c. 70% of heat consumed in the Moscow Metropolitan Area (Moscow and the Moscow Region);
- generates over 5% of all electricity produced in Russia;
- as at the end of 2015, comprised 15 power plants with a combined installed electricity capacity of 12.9 thousand MW and a combined heat capacity of 43.3 thousand Gcal/h.

TGC-1

- as at the end of 2015, comprised 54 power plants in Saint Petersburg, the Republic of Karelia, and the Leningrad and Murmansk Regions, with a combined installed electricity capacity of 7.1 thousand MW and a combined heat capacity of 14.1 thousand Gcal/h;
- 19 power plants operated by the company are located beyond the Arctic Circle;
- has a unique production asset mix, with hydro generation accounting for c. 40% of its combined installed capacity;
- provides management of PAO Murmanskaya CHPP, a subsidiary generating company covering c. 75% of heat supply to Murmansk.

OGK-2

- Russia's largest heat generation company;
- as at the end of 2015, the company's generation capacity comprised 11 power plant branches across Russia with a combined installed capacity of 18.0 thousand MW;
- accounts for over 6% of the total electricity produced in Russia and c. 0.5% of the total Russian heat supply.

MOEK

- operates over 15.4 thousand km of heat distribution pipes (including c. 7.9 thousand km of mains pipes and 7.5 thousand km of supply pipes);
- comprises 110 generating facilities with a combined heat capacity of 6.006 thousand Gcal/h.

CATEGORIES OF CONSUMERS SERVICED BY OUR COMPANIES IN THE RUSSIAN FEDERATION:

We mainly sell electricity and capacity in the Wholesale Electricity and Capacity Market (WECM), where buyers are large consumers, energy distribution organisations and guaranteeing suppliers who buy electricity (capacity) to sell it to end consumers, including residential consumers. We divide heat energy consumers into the following groups:

- industrial and equivalent consumers;
- wholesale buyers / resellers;
- public sector consumers;
- housing and communal services companies (including managing companies, condominiums (TSZh) / housing cooperatives (ZhSK));
- other consumers.

LOCATION OF THE VUOKSA HPP CASCADE

EXPORTS

Some of the power plants operated by TGC-1 are uniquely located to export part of the electricity they generate to Finland and Norway. Estonia is another possible destination. In 2014–2015, electricity was exported to Finland and Norway[6].

We provide wholesale supplies for export under existing contracts with major energy companies based in Norway and Finland.

Supply destination	Supply source	Electricity exports, mm kWh			
		2014	2015	2016 (plan)	2017 (plan)
Finland	From the trunk lines of Svetogorskaya HPP of Vuoksa HPP Cascade in the Leningrad Region via the 110 kV Imatra-1 line; from the trunk lines of Kaitakoski HPP of Paz HPP Cascade in the Murmansk Region via the 110 kV L-82 line. The maximum supply capacity reaches 70 MW during spring floods.	379.8	538.3	400.0	350.0
Norway	From the trunk lines of Borisoglebskaya HPP of Paz HPP Cascade in the Murmansk Region via the 154 kV L-225 line. The maximum supply capacity may reach 56 MW, while the normal operating capacity is 28 MW.	106.7	95.5	140.0	20.0
Total		**485.6**	**633.8**	**540.0**	**370.0**

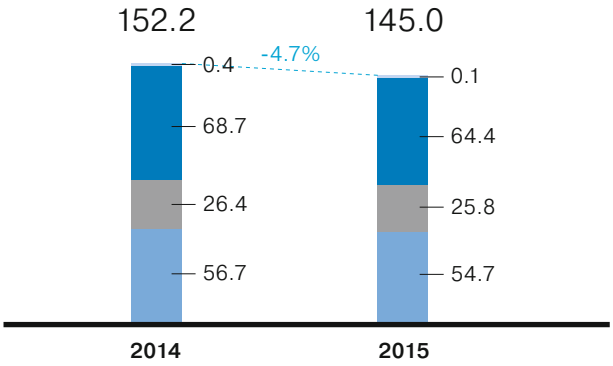
List of export contracts	Counterparty	Country	Contract date
2013–2015	Fortum Power and Heat	Finland	20 December 2012
1 November 2012–31 December 2016	RAO Nordic Oy *	Norway	31 October 2012
1 November 2012–31 December 2016	RAO Nordic Oy *	Finland	31 October 2012

* Contracts with RAO Nordic Oy were signed through PAO Inter RAO acting as an agent on its own behalf but for the account of TGC-1.

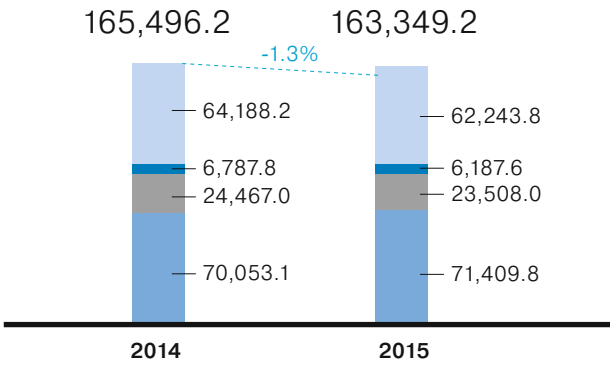
6. Export supplies were made via PAO Inter RAO, which acts as a single export agent.

SCALE OF OPERATIONS

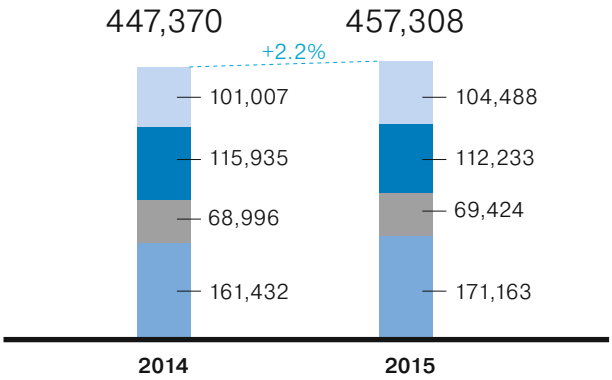
G4-9



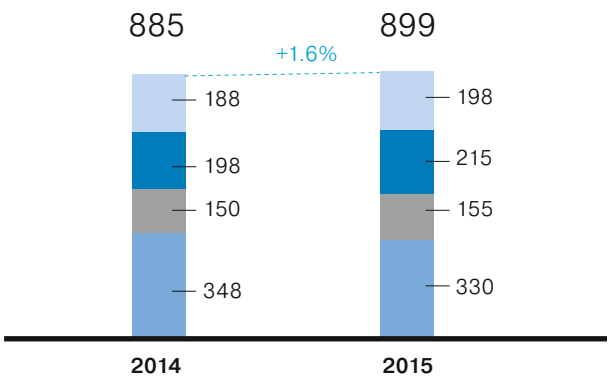
Electricity output, bn kWh



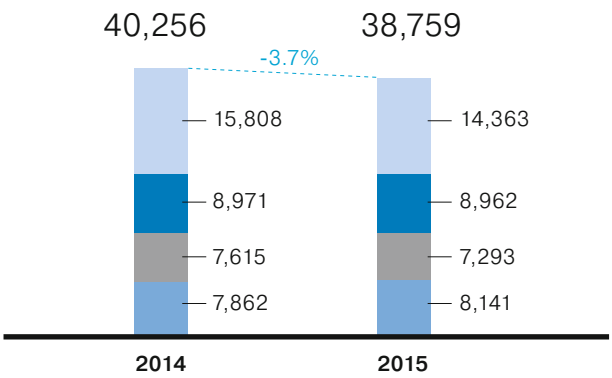
Net heat supply, '000 Gcal*



Net sales, RUB mm



Total asset value, RUB bn **



Headcount, employees ***

- PAO Mosenergo
- PAO TGC-1
- PAO OGK-2
- PAO MOEK

* Including net supply of purchased heat.

** Based on data from separate IFRS consolidated financial statements of the Group's production companies for 2014 and 2015.

*** Including employees under civil contracts, as at the year end.

CHPP-26, PAO MOSENERGO

In 2015, electricity output by our production companies decreased year-on-year.

On the one hand, the decline was in line with the industry wide trends and was due to increased production at nuclear power plants.

On the other hand, this was a result of the policy pursued by our companies and aimed at minimising utilisation of inefficient equipment.

Following the integration of MOEK into Gazprom energoholding Group in 2013, changes in the heat supply structure for Moscow were initiated – starting from 2014, heat generation has been shifted from MOEK's boilers to CHP plants operated by Mosenergo for combined generation. Shifting heat production to more efficient generating facilities enables us to optimise loads on existing heat sources, achieve fuel savings and capture significant economic benefits. Our forward looking development programme for Mosenergo's CHP plants and MOEK's energy sources located in Moscow spans until 2017 and envisages a significant increase in heat generation shifted from MOEK's boilers to Mosenergo's power plants.

In parallel, we have been consolidating the Group's heat network assets located in Moscow within MOEK. The consolidation effort will streamline management and maintenance of these assets through the elimination of redundancies. The ultimate goal is to centralise the entire generation fleet within Mosenergo, while concentrating all heat distribution networks and distribution functions within MOEK.

Currently, the heat generated by Mosenergo is mostly (over 70% in 2015) sold to consumers by MOEK, which obtained the status of a "single heat supply company" within the area of Moscow in 2015.

TOTAL CAPITAL BROKEN DOWN INTO DEBT AND EQUITY, RUB BILLION[7]

	2014			2015		
	Debt	Equity	Total	Debt	Equity	Total
Mosenergo	107	242	349	99	232	331
TGC-1	50	101	151	49	106	155
OGK-2	82	117	199	100	115	215
MOEK	79	109	188	83	115	198

7. IFRS consolidated financial statements of the Group's production companies. Debt includes accounts payable to suppliers and contractors, loans and borrowings, advances paid by buyers, and other liabilities. Equity also includes non-controlling interest.

EU1

INSTALLED CAPACITY BROKEN DOWN BY PRIMARY ENERGY SOURCE AND REGULATION MECHANISM

Pricing for the capacity offered by our companies is determined by the distribution mechanisms and the overall contracting framework in place on the wholesale market:

REGULATED PRICING

Capacity Supply Agreements (CSAs) are contracts signed by suppliers to sell capacity of generating facilities included in the list of generating facilities approved by the Russian Government for participation in the CSA scheme. On the one hand, CSAs secure suppliers' obligations to implement their approved investment programmes and, on the other, guarantee payments for capacity of new (upgraded) generating facilities. The capacity supply period under CSAs is ten years. CSA capacity price is set in a relevant agreement based on the formula approved by a Resolution of the Russian Government.

Sale and purchase agreements for capacity of generating facilities that supply capacity on a "must-run" basis are signed by suppliers who have not been selected during the CCO pre-qualification procedure but are essential for normal operation of the power grid and heat supplies to residential consumers. Under the existing rules, such generating facilities get the status of a "forced generator" and supply capacity on a "must-run" basis. The capacity of "forced generators" is allocated among buyers pro rata to their consumption peaks. Prices for capacity of generating facilities that supply capacity on a "must-run" basis are set by the Federal Tariff Service of the Russian Federation.

FREE MARKET PRICING

Competitive Capacity Outtake (CCO) means trading in capacity at free (unregulated) prices determined through a competitive bidding process.

INSTALLED CAPACITY OF GENERATING FACILITIES (MW) WITH MARKET SALES REGULATED BY VARIOUS MECHANISMS, AS OF 31 DECEMBER 2015 (BROKEN DOWN BY PRIMARY ENERGY SOURCE)

Primary energy source	Capacity regulation mechanisms			
	CSA	CCO	Forced	Total
Mosenergo				
Gas-fired generation (including generating facilities that can use coal as backup fuel or startup fuel but actually used gas)	2,459.0	10,273.0	75.0	12,807.0
Other facilities (failed to pass the CCO pre-qualification procedure; did not apply for CCO; to be decommissioned, etc.)	–	30.0	77.0	107.0
Total				**12,914.0**
TGC-1				
Gas	1,330.0	–	2,175.0	3,505.0
Coal	–	–	174.0	174.0
Hydro	–	939.2	–	939.2
Fuel oil (Murmanskaya CHPP)	All electricity generated by Murmanskaya CHPP is used to meet own operational needs			12.0
Other generating facilities (failed to pass the CCO pre-qualification procedure; did not apply for CCO; to be decommissioned, etc.)	–	2,426.4	–	2,426.4
Total				**7,056.6**
OGK-2				
Gas	1,996.6	7,908.0	–	9,904.6
Coal	270.0	3,066.0	–	3,336.0
Dual-fired generation (power plants that used both gas and coal during the reporting period)	–	2,709.0	2,074.0	4,783.0
Other generating facilities (failed to pass the CCO pre-qualification procedure; did not apply for CCO; to be decommissioned, etc.)	–	–	–	–
Total				**18,023.6**
MOEK				
	From 1 January 2015, the company ceased to participate in the wholesale market and does not sell capacity using the above mechanisms.			

EU2

ELECTRICITY OUTPUT AND HEAT SUPPLY BROKEN DOWN BY PRIMARY ENERGY SOURCE

CHPP-17 and CHPP-22 operated by Mosenergo, as well as OGK-2's Novocherkasskaya GRES, Cherepovetskaya GRES and Serovskaya GRES can use both gas and coal for heat and electricity generation, enabling adjustments to their fuel mix to reflect fluctuations in prices for these fuels. Given the above, for Mosenergo and OGK-2, along with electricity output and heat supply statistics for gas- and coal-fired plants, we keep similar records for generating facilities that are dual-fired.

297 bn kWh

Total electricity produced by Gazprom energoholding Group in 2014–2015

	2014		2015	
	Electricity output, bn kWh	**Heat supply, '000 Gcal**	**Electricity output, bn kWh**	**Heat supply, '000 Gcal**
Mosenergo				
Gas	50,148	61,465	49,180	63,331
Dual-fuel (gas/coal)	6,518	8,856	5,532	8,350
Total	**56,666**	**70,321**	**54,712**	**71,681**
TGC-1				
Gas	14,489	20,573	13,028	19,447
Coal	471	1,597	434	1,513
Hydro	11,449	–	12,332	–
Fuel oil (Murmanskaya CHPP)	17	2,169	17	2,060
Total	**26,426**	**24,339**	**25,811**	**23,020**
OGK-2				
Gas	42,430	5,238	40,800	4,653
Coal	7,531	1,466	8,449	1,392
Dual-fuel (gas/coal)	18,732	381	15,114	472
Total	**68,693**	**7,085**	**64,363**	**6,517**
MOEK				
Gas	0.4	18,430	0.1	10,743
Total	**0.4**	**18,430**	**0.1**	**10,743**

ELECTRICITY SALES BROKEN DOWN BY REGULATING MECHANISM

Our production companies trade in electricity in the Russian wholesale market according to the rules set for the Wholesale Electricity and Capacity Market and approved by Resolution of the Russian Government No. 1172 dated 27 December 2010, and using the following regulating mechanisms:

- Regulated price: trading in electricity at regulated prices (tariffs) under Regulated Contracts (RCs) for sale and purchase of electricity and capacity. RCs are used only for electricity supplies earmarked for delivery to residential and equivalent consumers, and to guaranteeing suppliers operating in North Caucasus Republics, in the Republic of Tuva and in the Republic of Buryatia.

- Unregulated pricing, used within the following markets:
  - Day-Ahead Market (DAM): trading in electricity at free (unregulated) prices determined through competitive selection of price bids from suppliers one day before actual delivery.
  - Balancing Market (BM): trading in electricity at free (unregulated) prices determined through competitive selection of price bids from suppliers and market players with regulated consumption at least one hour before the actual electricity supply so as to balance the electricity generation and consumption.
  - Free Bilateral Contracts (FBC): trading in electricity at unregulated prices under free bilateral sale and purchase agreements.

232 mm Gcal

Total heat supplied by Gazprom energoholding Group in 2014–2015

Electricity sales in the wholesale market broken down by regulating mechanism, '000 MWh	Mosenergo		TGC-1		OGK-2		MOEK	
	2014	2015	2014	2015	2014	2015	2014	2015[8]
Regulated contracts (RCs)	11,164	11,281	5,867	2,495	13,460	12,160	–	–
Day-ahead market (DAM)	44,725	42,271	22,073	24,681	55,553	52,556	274	–
Balancing market (BM)	2,958	2,798	1,024	1,097	3,817	3,445	–	–
Free bilateral contracts (FBCs)	–	–	–	–	130	–	–	–
Exports		–	486	634	–	–	–	–
Retail market[9]	23	–	61	63	1,401	1,450	166	–
Total	**58,870**	**56,350**	**29,509**	**28,969**	**74,361**	**69,611**	**440**	**–**

MANOMETER

Pricing of thermal energy supplied by our companies, their cost structure, and the economic justification for heat tariffs are guided by Federal Law No. 190-FZ On Heat Supply dated 27 July 2010, the Heat Supply Pricing Framework, the Rules for Regulation of Prices (Tariffs) in the Heat Supply Market as approved by Resolution No. 1075 On Pricing in the Heat Supply Market dated 22 October 2012, Recommended Practices for Calculation of Regulated Prices (Tariffs) in the Heat Supply Market as approved by Order of the Federal Tariff Service of Russia No. 760-e dated 13 June 2013, and Chapter 25 of the Russian Tax Code.

Applicable laws provide for potential preferential heat tariffs for certain categories of consumers. Preferential heat tariffs are granted subject to a relevant law in force in the relevant constituent region of the Russian Federation. Such laws specify consumer groups entitled to the benefits, grounds for providing such benefits and the procedure to compensate supply companies for revenue shortfall.

We believe the most practical way would be to present the structure of net heat supply by our companies broken down by regulation type and consumer group.

8. From 1 January 2015, MOEK ceased to participate in the wholesale market and does not sell electricity using the above mechanisms.

9. Pursuant to para. 32 of Resolution of the Russian Government No. 1172 dated 27 December 2010, generating companies (including Gazprom energoholding Group's generating companies) must sell all the electricity they produce via the wholesale market. To sell electricity in the retail market we have to first purchase it in the wholesale market and then resell it to retail customers.

EU3

Net heat supply broken down by regulation type / consumer group, '000 Gcal	Mosenergo		TGC-1 Nevsky, Kolsky and Karelsky Branches		TGC-1 Murmanskaya CHPP		OGK-2		MOEK	
	2014	2015	2014	2015	2014	2015	2014	2015	2014	2015
Wholesale buyers / resellers (including heat suppliers)	54,315.4	57,684.9	6,154.0	4,237.0	–	–	3,189.0	3,040.0	–	–
Public sector consumers	3,204.7	2,530.4	1,675.0	1,778.0	164.0	150.0	34.0	39.0	6,918.6	6,750.1
Industrial and equivalent consumers	2,363.1	2,131.4	1,026.0	960.0	61.0	55.0	2,701.0	2,335.0	1,417.2	1,451.8
Housing and communal services companies (including UZhKh, GZhU / ZhSK)	2,804.4	2,459.9	10,258.0	10,906.0	1,504.0	1,474.0	621.0	575.0	48,782.1	46,589.9
Domestic customers (residential consumers)	–	–	–	–	–	–	8.0	13.0	–	–
Other consumers	7,262.9	6,509.1	1,333.0	1,482.0	188.0	198.0	234.0	175.0	6,982.7	7,370.6
Thermal energy to compensate for heat losses	102.7	94.1	1,993.0	2,160.0	111.0	107.0	–	10.0	–	–
Total	**70,053.2**	**71,409.8**	**22,439.0**	**21,523.0**	**2,028.0**	**1,984.0**	**6,787.0**	**6,187.0**	**64,100.6**	**62,162.4**

224 mm Gcal

Total net heat supply by Gazprom energoholding Group in 2014–2015 (excluding intra-Group net heat turnover)

MOEK's total net heat supply in 2014–2015 significantly exceeded the actual supplies from the company's heat sources and exceeds its own net heat supply by 105 million Gcal – the difference made up by the net supply of heat purchased from Mosenergo.

Starting from 1 February 2015, TGC-1 has operated as a single heat supply company within the area of Petrozavodsk municipality, billing all heat energy consumers, both residential and industrial customers. Direct settlements with the heat generator eliminate the problem of piling bill debts for utility service providers, provide for maximum transparency of calculations, and ensure secure and affordable heat supply.

Direct payments to accounts of the heat generator contribute to timely comprehensive repairs, diagnostics, upgrades, and retrofitting of equipment.

G4-12

OUR SUPPLY CHAIN

Fuel is the key resource purchased by our companies to generate electricity and heat. According to data from IFRS financial statements, fuel costs also dominate the variable cost structure of each of our production companies.

	2014			2015		
	Fuel costs, RUB mm	**Variable costs, RUB mm**	**Share of fuel costs in variable costs, %**	**Fuel costs, RUB mm**	**Variable costs, RUB mm**	**Share of fuel costs in variable costs, %**
Mosenergo	94,965	113,508	83.7%	95,045	114,060	83.3%
TGC-1 (including Murmanskaya CHPP)	28,500	38,285	74.5%	26,396	37,296	70.8%
OGK-2	65,304	77,056	84.7%	62,789	74,005	84.8%
MOEK	12,230	67,265	18.2%	7,172	68,353	10.5%

The structure of fixed costs at our production companies is dominated by personnel, repair and tax costs.

The fuel procurement strategy of Gazprom energoholding Group's production companies is aimed at optimising the fuel mix to minimise costs. Its initiatives include substitution of more expensive fuels with less expensive ones, use of competitive bidding for procurement, and execution of long-term supply contracts.

Diversification of supply sources by our production companies depends on their fuel mix and the distances between their generating facilities. In particular, given the high regional concentration of generation capacity and the use of gas as the primary fuel by the majority of power plants operated by Mosenergo and TGC-1, these companies have low diversification levels.

OGK-2's generation fleet is spread across 12 regions of Russia; therefore, OGK-2 is focused on partnerships with regional coal suppliers to optimise its fuel costs in sourcing gas and various types of coal to feed its power plants. Different branches of OGK-2 use long-term supply contracts to source coal from coal basins across Russia, including the Kansko-Achinsky (Borodinsky and Pereyaslovsky open-pit coal mines), Podmoskovny, Pechorsky (Intinskoye coal deposit), Kuzbass, and Eastern Donbass (in the Rostov Region) coal basins, as well as from coal basins in Kazakhstan, including the Ekibastuz coal basin (the Ekibastuz and Bogatyr open-pit coal mines).

FUEL FEEDING GALLERY AT NOVOCHERKASSKAYA GRES, PAO OGK-2

SUPPLY CHAIN DIAGRAM

OF MAJOR SUPPLIERS[10] AND THEIR SHARES IN THE COMPANY'S RELEVANT RAW MATERIALS COSTS

	MOSENERGO	TGC-1 *
GAS PROCUREMENT	**97.8%** of fuel procurement: 2 suppliers. Share of Gazprom Group's companies – 60%. Share of third party suppliers – 40%.	**86.7%** of fuel procurement: 1 supplier (no competing proposals received at the company's plant locations). Share of Gazprom Group's companies – 100%.
COAL PROCUREMENT	**2.1%** of fuel procurement: 2 suppliers. Share of third party suppliers – 100%.	**3.3%** of fuel procurement: 3 suppliers. Share of third party suppliers – 100%.
FUEL OIL AND DIESEL FUEL PROCUREMENT	**0.1%** of fuel procurement: 2 suppliers. Share of Gazprom Group's companies – 74%. Share of third party suppliers – 26%.	**10.1%** of fuel procurement: 5 suppliers. Share of Gazprom Group's companies – 41%. Share of third party suppliers – 59%.

10. The diagram shows suppliers whose share in the Company's costs for a given fuel exceeds 5%.

CONSUMERS

SUPPLIERS

OGK-2

MOEK

70.7% of fuel procurement:

6 suppliers.

Share of Gazprom Group's companies – 73%.

Share of third party suppliers – 27%.

100% of fuel procurement:

1 supplier.

Share of Gazprom Group's companies – 100%.

28.7% of fuel procurement:

8 suppliers.

Share of third party suppliers – 100%.

0.6% of fuel procurement:

5 suppliers.

Share of third party suppliers – 100%.

* Including Murmanskaya CHPP.

In the supply chain diagram above, we have shown our major suppliers and their shares in the company's costs of purchasing key fuels used for generation – natural gas and coal. To identify major suppliers we used a materiality threshold: the diagram shows suppliers whose share in the company's costs for a given fuel exceeds 5%.

All of our supplier relations are based on responsible partnership, regardless of their share in our supply chain structure. We are committed to maintaining long term, stable, and mutually beneficial relations with our suppliers. To this end, all our companies continuously work to ensure more stable supplies and more transparent pricing. In selecting our suppliers and contractors we mostly rely on competitive tendering. However, we seek to make sure that our counterparties have an impeccable business reputation and comply with laws and corporate and business ethics.

The procurement practices of our companies are governed by the Procurement Regulations of Mosenergo, TGC-1, OGK-2, and MOEK. All our procurement procedures are compliant with the Constitution of the Russian Federation, the Civil Code of the Russian Federation, Federal Law No. 223-FZ On Procurement of Goods, Work and Services by Certain Types of Legal Entities dated 18 July 2011, other federal laws or regulations of the Russian Federation, as well as with the generally accepted principles of the global procurement practices, and other regulations, including local, that are binding on our companies.

In 2015, the Regulations on Procurement of Goods, Work and Services in place at Gazprom energoholding Group's production companies were amended to provide small and medium businesses (SMEs) with an exclusive access to certain procurement opportunities, and to introduce procurement tenders that require bidders to ensure engagement of SMEs as sub-suppliers or co-contractors. A number of privileges are offered with procurement opportunities available exclusively to SMEs:

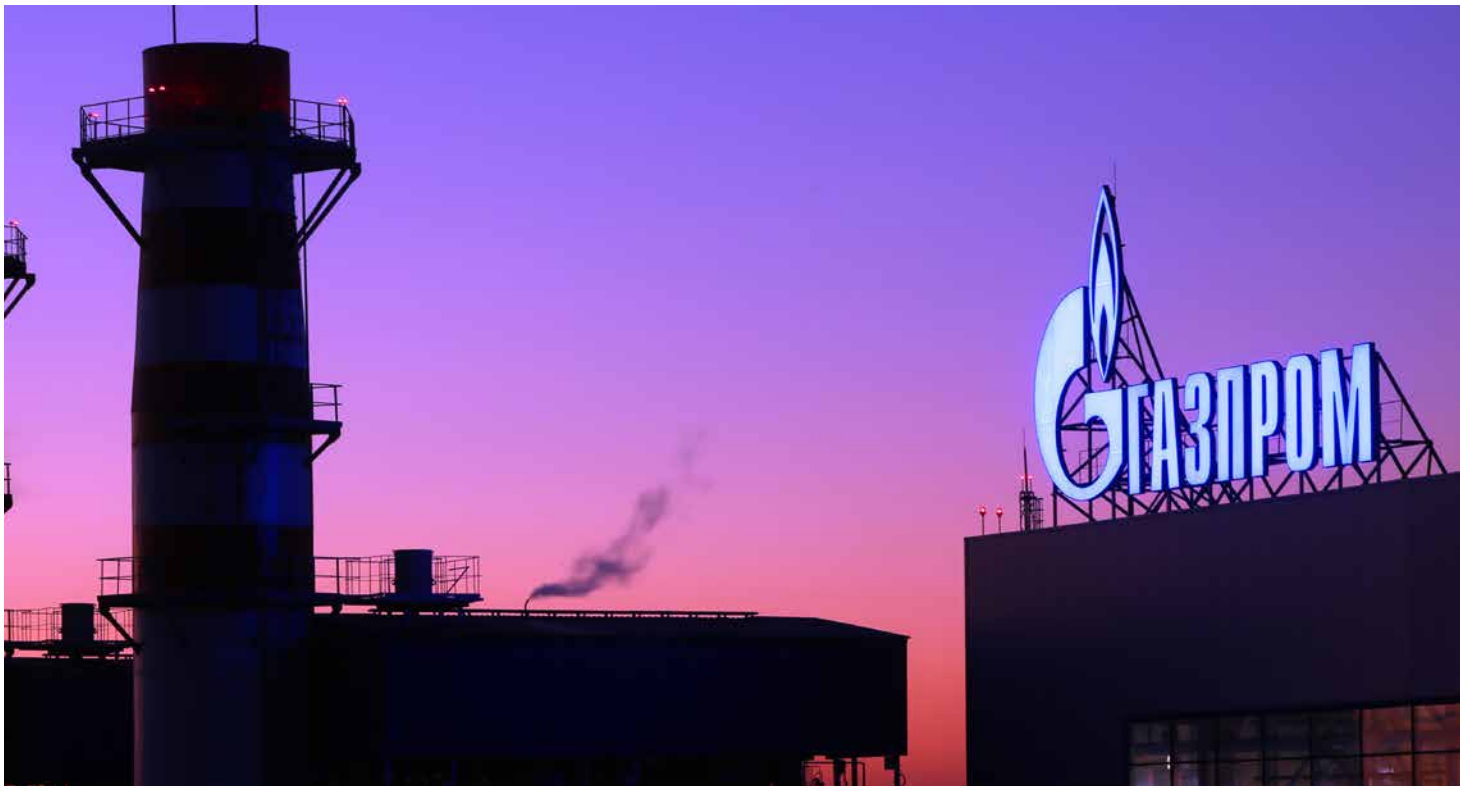
- the amount of the bid bond for SMEs may not exceed 2% of the initial (maximum) contract price (lot price);
- a contract shall be signed within 20 business days of the date the customer made a decision to execute such contract;
- payment under a contract shall be made within 30 calendar days of the date when contractual obligations were performed.

In addition, if a bidder is a Russian SME or involves Russian SMEs as subcontractors or co-contractors to deliver tendered services, such bidder gets extra points in the bidder qualification process for a standard tendering procedure.

In 2015, under a procurement procedure, Gazprom energoholding Group's companies awarded SMEs 30 contracts worth a total of RUB 33,696,400.65 including VAT, or 25% of the total price of contracts signed in a procurement procedure during 2015.

G4-34

CORPORATE GOVERNANCE STRUCTURE OF THE GROUP'S COMPANIES

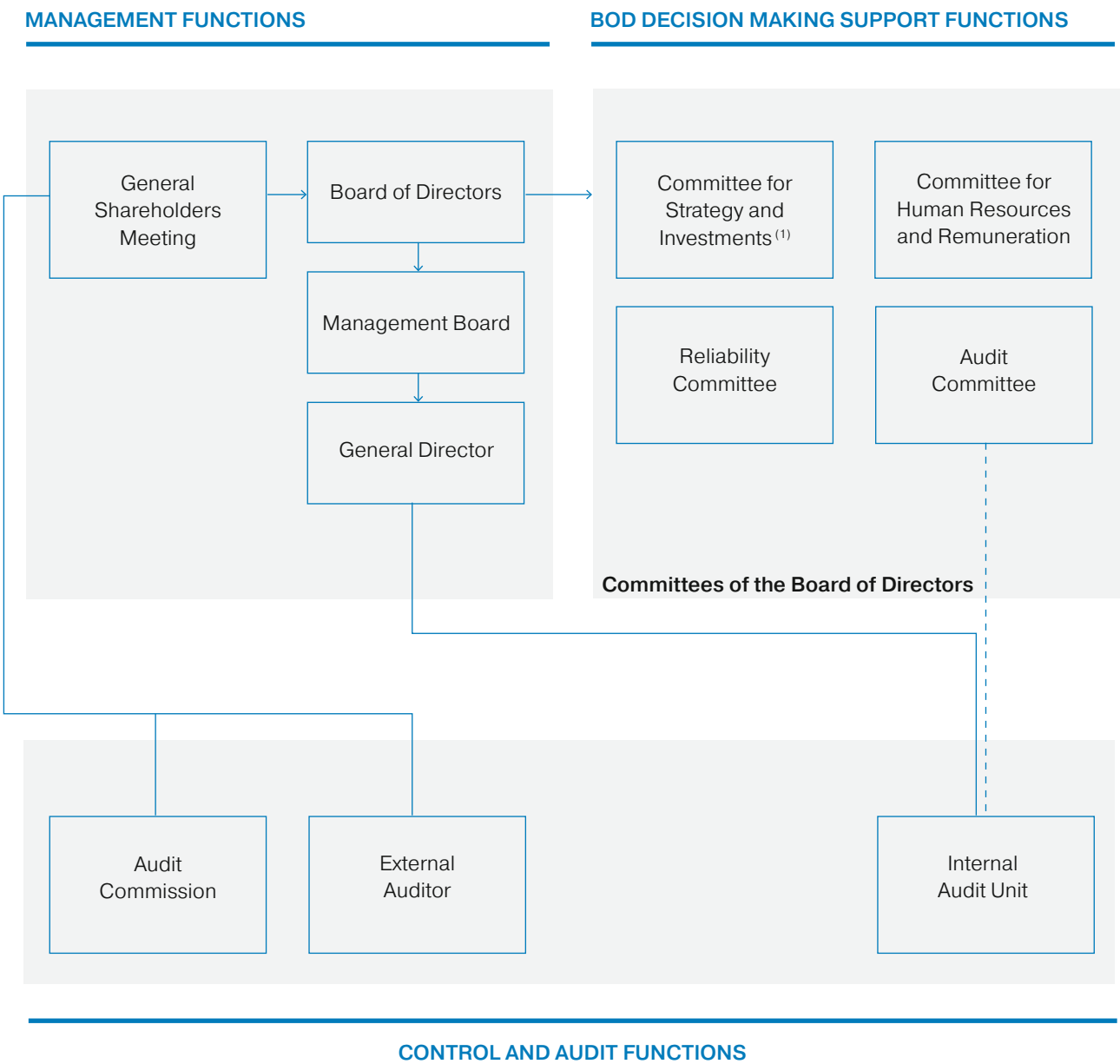


ADLERSKAYA TPP, PAO OGK-2

The corporate governance structure of Mosenergo, TGC-1, OGK-2, and MOEK is built to uniform standards. Corporate governance bodies in TGC-1 and OGK-2 include the General Shareholders Meeting, Board of Directors, Management Board, and General Director. The Management Board and General Director are executive bodies. The corporate governance structure at Mosenergo and MOEK had been entirely identical until May 2015, when the said companies delegated executive powers to OOO Gazprom energoholding. The Managing Director position was added to the organisation chart of Mosenergo.

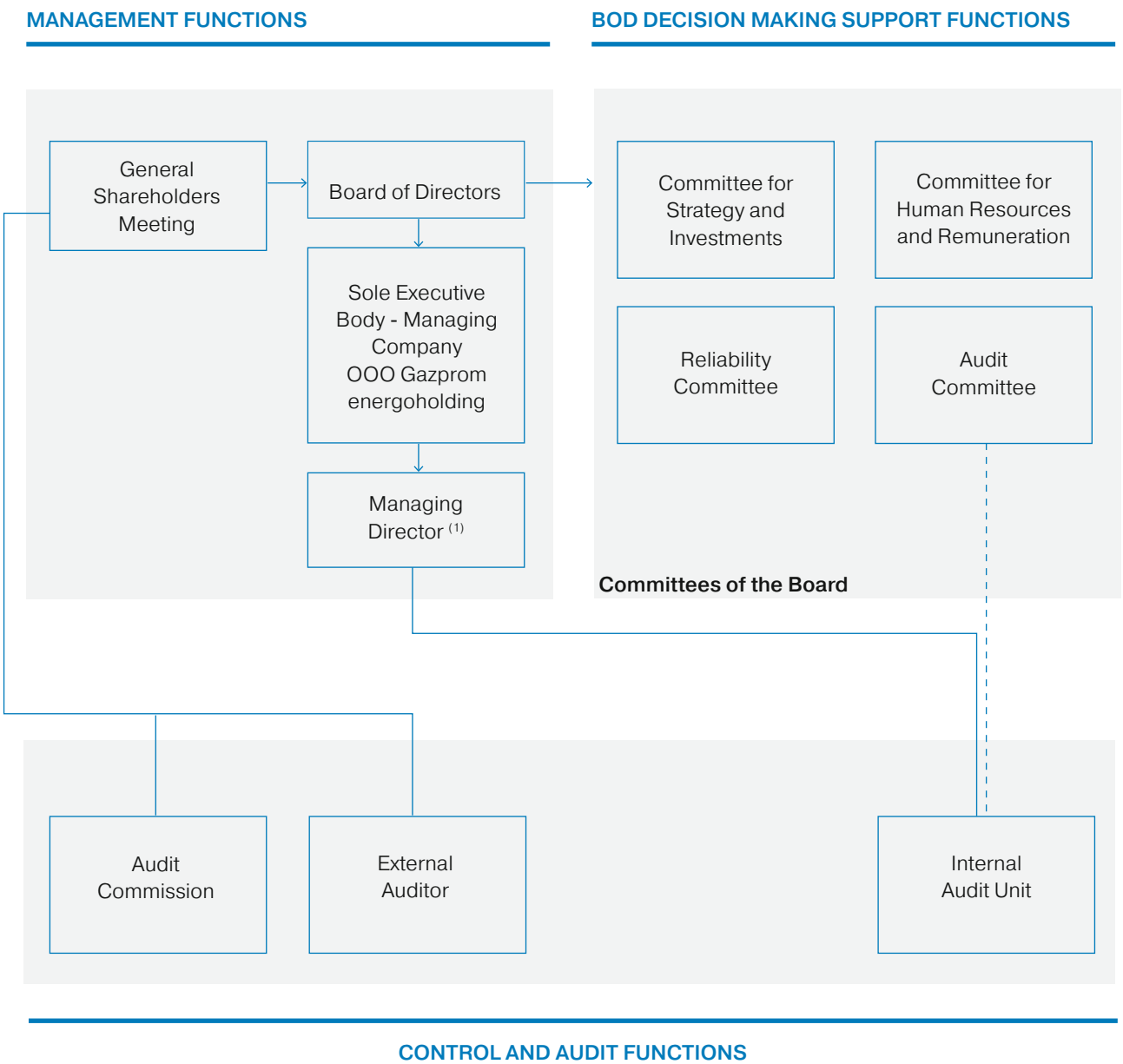
The Group's production companies are managed in strict compliance with the principles of rigorous protection of shareholders' and investors' rights, transparency and information openness.

CORPORATE GOVERNANCE FRAMEWORK AT TGC-1 AND OGK-2



(1) Committee for Business Strategy and Investments in TGC-1.

CORPORATE GOVERNANCE FRAMEWORK AT MOSENERGO AND MOEK



(1) Only in Mosenergo.

THE GENERAL SHAREHOLDERS MEETING

The supreme governing body in each of our production companies. It enables shareholders to obtain information on the company's activities, its performance and plans, and exercise their corporate governance rights. The General Shareholders Meeting passes resolutions on most important matters relating to the company's operations.

The competence and procedures for convening, preparing, holding and summarising the results of the General Shareholders Meeting in each of our production companies are compliant with the laws of the Russian Federation[11] and are set out in internal regulations of the relevant company, i.e. its Articles of Association and the Regulation on the General Shareholders Meeting. The extraordinary General Shareholders Meeting may be convened by the company's Board of Directors at its own discretion, or as requested by the Audit Commission, the auditor, or shareholders (shareholder) who own at least 10% of the voting shares in the company as of the date of such request. The existing procedure ensures equal treatment of all shareholders in our companies.

BOARD OF DIRECTORS

The Boards of Directors in all of our production companies provide overall management of the companies, make decisions on significant matters, oversee the implementation of resolutions passed by the General Shareholders Meeting, and monitor the protection of rights and legitimate interests of the company in line with statutory requirements. The competence of, and the procedures, for the Board of Directors in our companies are governed by internal regulations of the relevant company (its Articles of Association and Regulation on the Board of Directors). The Board of Directors is a collective governing body whose members are elected by the General Shareholders Meeting for a term until the next annual General Shareholders Meeting. The General Shareholders Meeting may decide to terminate the offices of all members of the Board of Directors before their terms expire. Persons elected to the Board of Directors may be re-elected any number of times. Candidates for the Board of Directors may be nominated by shareholders who own at least 2% of the voting shares in the company, or by the Board of Directors if the number of shareholders' nominees is insufficient.

COMMITTEES OF THE BOARD

The Board of Directors in any of our production companies has four committees in place: Committee for Business Strategy and Investments, Audit Committee, Committee for Human Resources and Remuneration, and Reliability Committee. These Committees are advisory and deliberative bodies that ensure effective performance by the Board of Directors of its duties of the overall management of the company's operations.

Committee for Strategy and Investments[12]:

- determines overall strategic priorities and goals and general principles of corporate development;
- makes assessments of the company's performance in the medium and lo nger term;
- reviews the progress in the implementation of approved strategic development programmes and projects;
- makes adjustments to the adopted development strategy;
- determines the Key Performance Indicators (KPIs) subject to approval by the Board of Directors;
- monitors progress against strategic goals and the Key Performance Indicators (KPI) approved by the Board of Directors;
- determines and improves the business planning and budgeting policies;
- provides financial planning and determines the borrowing and dividend policies;
- considers debt financing options, including placement of bonds and issuance of other debt securities;
- makes investment decisions;
- organises reviews of investment projects and programmes submitted to the Board of Directors for consideration.

Audit Committee:

- prepares and submits recommendations on audit and internal control to the Board of Directors;
- evaluates and nominates candidates to act as the company's auditors;
- reviews the auditor's reports;
- assesses the performance of internal control procedures and drafts proposals on their improvement.

Reliability Committee:

- reviews strategic priorities, goals and principles of corporate development for compliance with comprehensive reliability requirements;

11. Federal Law No. 208 FZ On Joint Stock Companies dated 26 December 1995 as last amended by Federal Law No. 210 FZ dated 29 June 2015.

12. Committee for Business Strategy and Investments in TGC-1.

- reviews re-equipment and retrofitting programmes, as well as generation facility repair plans and oversees their implementation;
- prepares proposals for the Committee for Human Resources and Remuneration for appraisal of the management's performance in ensuring compliance with comprehensive reliability requirements;
- makes assessments of measures taken to address emergencies and major process breakdowns for completeness and adequacy;
- examines and approves the Technical Policy of the company and the annual report by the company's General Director on its implementation;
- assesses the performance of the company's technical services in ensuring operating reliability of network and generation equipment, facilities and other process infrastructures.

Committee for Human Resources and Remuneration:

- prepares and submits recommendations on HR, remuneration and social and employment policies of the company to the Board of Directors.

MANAGEMENT BOARD

A collective executive body that manages day-to-day operations in TGC-1 and OGK-2 (and managed such operations until 2015 in Mosenergo and MOEK)[13]. The Management Board reports to the General Shareholders Meeting and the Board of Directors of the company. Members of the Management Board are elected and appointed by the Board of Directors. The Management Board is responsible for the implementation of the corporate goals, strategies and policies. The General Director acts as Chairperson of the company's Management Board. Activities of the Management Board are governed by the Articles of Association and the Regulation on the Management Board.

The Management Board develops forward-looking plans for key business lines of the company and submits them to the Board of Directors for consideration; reviews reports by Deputy General Directors; makes decisions on transactions whose value exceeds 5% of the book value of the company's assets (except for transactions falling within the scope of the Board of Directors' authority).

GENERAL DIRECTOR

General Director leads the Management Board in TGC-1 and OGK-2 (led until May 2015 in Mosenergo and MOEK) and manages day-to-day operations of the company, acting as a sole executive body. General Director is appointed by the Board of Directors and reports to the Board of Directors and the General Shareholders Meeting.

In May 2015, MOEK and Mosenergo delegated their executive powers to OOO Gazprom energoholding.

AUDIT COMMISSION

The Audit Commission in each production company is a collective body elected by the General Shareholders Meeting to monitor financial and business activities.

AUDITOR

The auditor nomination is approved by the General Shareholders Meeting of each production company on an annual basis. The auditor is responsible for auditing financial and business performance of the company in accordance with the legal regulations of the Russian Federation under a relevant agreement signed with the auditor.

CORPORATE SECRETARY

TGC-1, OGK-2, and MOEK have no permanent corporate secretary position in place. In TGC-1 and MOEK, these functions are performed by the Secretary of the Board of Directors and staff of the shareholder relations unit, while in OGK-2 they are assigned between the Corporate and Property Relations Office of the Corporate and Legal Directorate and OOO Gazprom energoholding, acting as the Secretary of the Board of Directors and its committees and OGK-2's General Shareholders Meeting.

At Mosenergo, the permanent corporate secretary position has been abolished. Since June 2015, these functions are performed by the Secretary of the Board of Directors and staff of the Corporate Directorate.

Some functions may be partially delegated and responsibilities for addressing day-to-day economic, environmental, and social issues may be re distributed within the corporate structure of our production companies.

13. In accordance with the new Articles of Association adopted in June 2015, Mosenergo and MOEK do not have a collective executive body (Management Board).

Economic issues	Social issues[14]	Environmental issues
Mosenergo		
– Marketing section; – Finance section; – Production section; – Budgeting Directorate within the Efficiency and Control section.	– Human Resources section.	– Head of the Occupational Health, Safety and Environment Directorate; – Environmental Service (a business unit within the General Directorate, part of the Occupational Health, Safety and Environment Directorate); – Officers responsible for all environmental protection areas across the company's branches; – Environmental Team, responsible for on site day-to-day management of environmental issues across branches (as part of the Branch Standards Service).
TGC-1		
– Economics Department; – Finance Department (directly reporting to the Deputy General Director for Economics and Finance); – Economics Office in Karelsky and Kolsky Branches (reporting to the Branch Deputy General Director for Economics and Finance); – Planning and Economics Office/ Team at Nevsky Branch enterprises (reporting to the relevant Enterprise Director).	– Remuneration and Employment Office: social benefits and guarantees (directly reporting to the HR Director); – Social and Labour Relations Office: voluntary medical insurance (VMI), accident insurance, private pension plans; employee health and recreation programmes, including for families; Veterans Council; housing policy (directly reporting to the HR Director); – Joint permanent commission for the development and monitoring of the Collective Bargaining Agreement; – Public Relations Department: charitable and sponsorship activities; – Committee for Charitable – and Sponsorship Support.	– Deputy General Director – Chief Engineer – Director of Nevsky Branch; – Environmental Service (administratively reporting to the Director of Yuzhnaya CHPP, Nevsky Branch; functionally reporting to the Head of the Power Plant Operation Department); – Environmental functions of Karelsky and Kolsky Branches (reporting to Chief Engineers of relevant branches); – Environmental officers in business units (typically, Chief Engineers of such business units).
OGK-2		
– Economics Directorate of the executive office; – Finance Directorate of the executive office (in autumn 2015, Treasury functions were delegated under a relevant agreement to OOO Gazprom energoholding). Both directorates directly report to the Deputy General Director for Economics and Finance.	– Human Resources Directorate of the executive office: social benefits, guarantees and compensations, voluntary medical insurance (VMI), accident insurance, private pension plans; – Branch Human Resources Directorate; – Commission on the Regulation of Social and Labour Relations (main purpose – maintain social partnership in labour relations, align the interests of parties to labour relations); – Commission for Charitable Sponsorship Support: considers charitable support requests sent to the company, approves the programme of charitable and sponsorship support activities.	– Within the executive office, the Operation and Production Control Office is responsible for ecology and environmental protection issues; – Branches also have in place environmental protection offices.

14. Management of certain social aspects may be delegated to other units.

Economic issues	Social issues[14]	Environmental issues
MOEK		
– Finance section; – Strategy section; – Production section; – Marketing section	– Human Resources Service.	– Ecology and Environmental Protection Office (a business unit within the Production and Technical Service of the Administrative Office, directly reporting to the First Deputy General Director – Chief Engineer).

ADLERSKAYA TPP, PAO OGK-2

G4-56

CORPORATE VALUES

OOO Gazprom energoholding's Code of Corporate Ethics, approved on 15 November 2013, is the core document setting out the values, principles, standards and rules of conduct within Gazprom energoholding Group. Its provisions contain basic guidance for all subsidiaries and affiliates, including our production companies.

All employees of OOO Gazprom energoholding and Gazprom energoholding Group's production companies have read our Code of Corporate Ethics. The Corporate Ethics Commission is responsible for monitoring compliance with the requirements and standards of OOO Gazprom energoholding's Code of Corporate Ethics.

OOO GAZPROM ENERGOHOLDING CODE OF CORPORATE ETHICS SETS OUT THE FOLLOWING CORE VALUES:

PROFESSIONALISM

deep understanding of one's own job, completion of tasks in time and with proper quality, and continuous development of professional knowledge and skills

SUCCESSION

respect for the accomplishments and experience of older generations, interaction between young and veteran employees, professional training and mentoring

LEANNESS

responsible and lean approach to using corporate assets, one's own and other employees' work time

IMAGE

the use of techniques and strategies to build a positive corporate image

MUTUAL RESPECT

team spirit in performing job tasks, confidence, friendly and cooperative approach to addressing tasks

OPENNESS TO DIALOGUE

open and fair information sharing and willingness to develop best solutions through joint efforts

PROACTIVENESS

proactive and self-reliant approach shown by employees in streamlining the production process

MEMBERSHIP IN INDUSTRY ORGANISATIONS

G4-16

Name of industry organisation	Summary profile	Membership of Gazprom energoholding Group's companies
NP Market Council	Brings together, on a membership basis, wholesale electricity and capacity sellers and buyers, wholesale electricity market players, operators of commercial and technological infrastructure in the wholesale market, as well as other organisations active in the electric energy sector in Russia.	Mosenergo, TGC-1, and OGK-2 are on List V of NP Market Council's Chamber of Electric Power Sellers[15]
NP Council of Power Producers association	Brings together Russian generators who jointly control c. 70% of generation capacity and over 90% of installed heat capacity across the country.	OOO Gazprom energoholding (in April 2016, Denis Fedorov, Chief Executive Officer of OOO Gazprom energoholding, was elected Chairman of the Supervisory Board at NP Council of Power Producers association)
The National Sectoral Association of Employers in the Energy Industry (RaPE Association)	A non-profit organisation representing the interests of industry employers in their relations with trade unions, government bodies, and local authorities.	Mosenergo, TGC-1, OGK-2
NP Scientific and Technical Council of the Unified Power System (NP STC UPS)	Brings together sectoral organisations to review the more important initiatives and objectives in the electric energy sector and develop related solutions.	PAO Centerenergyholding

More detailed information about the functions and members of the industry organisations where Gazprom energoholding Group's companies have membership, as well as about the initiatives where our companies participate as members of these organisations, is presented in APPENDIX 1, TABLE 1.5.

We believe that, although NP Market Council plays a key role in ensuring the operation of the Russian electricity market, its activities could be organised in a more efficient way. The more obvious flaws include:

- a disproportionate distribution of votes among its members, without regard for their available capacity;
- a representation of major electricity and capacity market players, including OOO Gazprom energoholding, only via their subsidiary production companies.

As a result, a considerable portion of issues that could have been successfully discussed within NP Market Council are addressed through negotiations between major electricity and capacity suppliers and the Government of the Russian Federation, the Ministry of Energy and other key industry regulators.

15. Pursuant to clause 1 of Article 35 of the Federal Law On Electric Energy Sector.

G4-13

MATERIAL CHANGES AT THE GROUP'S COMPANIES

DURING THE REPORTING PERIOD AND IN THE PERIOD FROM 1 JANUARY 2016 TO THE REPORT'S PUBLICATION DATE

The following material changes occurred during the reporting period (2014–2015) in the locations, activities, start-up and closure of businesses, size, organisational structure, supply chains, business expansion, shareholding structure, locations of major suppliers, and duration of supply contracts at Gazprom energoholding Group's generating companies.

CHANGES IN THE BUSINESS STRUCTURE

In 2014–2015, we took a number of steps towards one of Gazprom energoholding Group's strategic objectives – more effective operation of Moscow's heat distribution system. In accordance with the Plan of Heat Supply to Moscow until 2028, approved by Order of the Russian Ministry of Energy No. 53 dated 9 February 2015, all generating facilities are concentrated within Mosenergo, while all heat distribution networks and distribution functions are consolidated within MOEK.

In particular, in 2014–2015, a number of generating facilities previously operated by MOEK were transferred to Mosenergo:

- lease agreements were signed for the property assets of Lyublino DEHP (district electricity and heating plant, RTES), Khimki-Khovrino DHP (district heating plant, RTS), Krasnaya Presnya DHP, Rostokino DHP, Yuzhnoye Butovo DHP, Babushkino-1 DHP, Novomoskovskaya DHP, Volkhonka Zil DHP, and Kuntsevo DHP;
- lease agreements were signed with an option to buy the property assets of Rublevo DHP, Frezer DHP, Biryulevo DHP, Matveyevskaya DHP, Krasny Stroitel DHP, Kuryanovo DEHP, Standartnaya SHP (subdistrict heating plant, KTS), SHP-11, SHP-17, SHP-44, SHP-56 and Mini-TPP, SHP-18, Zapadny Port MBH (minor boiler house, MK), Melitopolskaya SHP, Severnaya SHP, and Otradnoye DHP;
- sale or purchase agreements were signed for the property assets of SHP-8 and SHP-55, Babushkino-2 DHP, SHP-11a, SHP-24 and SHP-26 and an integrated power facility.

In another major development, in February 2015, MOEK obtained the status of a "single heat supply company" on the territory of its operations covering the areas supplied by CHP plants operated by Mosenergo, heat sources owned by MOEK, and other heat generation facilities, excluding small localised areas receiving heat supplies from isolated departmental or corporate heat sources.

In 2014–2015, TGC-1 sold Ondskaya HPP of the Vyg HPP Cascade and merged the Tuloma and Serebryansky HPP Cascades.

Some of the power plants operated by TGC-1 have also obtained the single heat supply company status in the areas they cover – in particular in Kirovsk and Petrozavodsk in the Murmansk Region, and in certain districts of Murmansk. In February 2015, a new Customer Centre of the Heat Sales Directorate of TGC-1's Karelsky Branch was launched in Petrozavodsk.

With the inclusion of the Groznenskaya TPP project in OGK-2's CSA programme[16], in March 2015, the company's Board of Directors resolved to set up a new branch within OGK-2 – Groznenskaya TPP (Minutes No. 122 dated 23 March 2015).

16. Pursuant to Resolution of the Russian Government No. 1485 r dated 6 September 2010.

YUZHNAYA CHPP, PAO TGC-1

From May 2015, OOO Gazprom energoholding's new address is 16 obrolyubova Ave., Bld. 2-A, Office 11, St Petersburg, Russia.

In 2015, OGK-2 launched a new business – marketing power plants' infrastructure capabilities and vacant space to SMEs.

CHANGES IN CORPORATE GOVERNANCE AND ORGANISATIONAL STRUCTURE

In 2015, three production companies of Gazprom energoholding Group, Mosenergo, OGK-2, and MOEK, changed their corporate forms. In August 2016, TGC-1 also made a similar change. The change of company name (OAO Mosenergo to PAO Mosenergo, OAO OGK-2 to PAO OGK-2, OAO TGC-1 to PAO TGC-1, and OAO MOEK to PAO MOEK) was reflected in the new Articles of Association of each relevant company.

CHANGES IN THE SHAREHOLDING STRUCTURE

The following material changes (over 5% of the share capital) occurred in the shareholding structure of Gazprom energoholding Group's production companies in the period since 31 December 2013, the end date of the previous reporting period:

- In 2015, ZAO Inter RAO Capital exited from Mosenergo (earlier, its share was 5.05%);
- Fortum increased its share in TGC-1 from 25.66% to 29.45% in 2015;

There were no material changes in the shareholding structure of OGK-2 or MOEK in 2014–2015.

CHANGES IN THE SUPPLY CHAIN STRUCTURE, LOCATIONS OF MAJOR SUPPLIERS, AND DURATION OF SUPPLY CONTRACTS

In 2014–2015, there were no material changes in duration of contracts signed by Gazprom energoholding Group's production companies with their suppliers. Locations of major fuel suppliers have not changed either.

In 2014–2015, we have significantly increased the share of Russian companies in our procurement of equipment and automation systems. In particular, most steam turbine units and the instrumentation and control systems of combined cycle gas turbine units at power plants of Gazprom Energoholding's generating companies are equipped with controllers by ZAO TECON Engineering, and ZAO Ural Turbine Works (part of AO ROTEC) was engaged to implement a major retrofit project to upgrade Generating Unit No. 9 at CHPP-22 in 2014.

STAKEHOLDER RELATIONS

KEY STAKEHOLDER GROUPS

G4-18
G4-26
G4-25

Sustainability of our production companies directly depends on the quality of stakeholder relations. We strive to maintain open dialogue with all stakeholders, as we believe that our companies have influence on and are influenced by them to the same extent. We believe that responsibility, openness, and due respect for the interests of all stakeholders during the decision making process are a prerequisite for efficient interaction between us.

In determining our stakeholder groups we were guided by the following key principles:

- their shared interests and expectations from our companies;
- the nature of their impact on the achievement of our companies' strategic goals;
- tools that we use to interact with stakeholders.

GROUPS OF STAKEHOLDER REPRESENTATIVES

G4-24

INVESTMENT COMMUNITY

- shareholders;
- investors;
- analysts.

CAPITAL SUPPLIERS

- lenders;
- rating agencies.

LOCAL COMMUNITIES

- local population;
- civil society organisations;
- local authorities.

REGULATORY AUTHORITIES

- Government of the Russian Federation;
- sectoral regulatory authorities and organisations;
- ministries and agencies;
- regional executive authorities.

CUSTOMERS

- wholesale heat, electricity, and capacity buyers including guaranteeing suppliers and major industrial consumers.

ENVIRONMENTAL ORGANISATIONS

GOODS AND SERVICE SUPPLIERS

EMPLOYEES AND TRADE UNIONS

Residents of the Moscow Metropolitan Area may ask questions on the environmental impacts of Mosenergo's production facilities by filling out a special form on the corporate website or by emailing their questions to the company. Mosenergo's Public Relations Directorate and Environmental Service teams, supported by employees of operating branches, promptly respond by providing requested information.

OGK-2, TGC-1, and MOEK communicate with their residential consumers through public relations supported by relevant unit experts via emails.

GRES-3 NAMED AFTER R.E. KLASSON, PAO MOSENERGO

G4-26
G4-DMA
G4-18

WAYS OF STAKEHOLDER INTERACTION

Stakeholders and topics of interest	Forms of interaction	Frequency of interaction
Investment community (shareholders and investors) Topics of interest: – financial and performance indicators, – investment programmes, – dividend policy, – shareholder value increase, – production efficiency improvement and cost reduction, – business development strategy, – M&A.	General shareholders meetings of Mosenergo, TGC-1, OGK-2, and MOEK, where all most important matters related to the companies' businesses are discussed.	Annual meetings of shareholders of Mosenergo, TGC-1, OGK-2 and MOEK are held once a year. In addition, one extraordinary meeting of shareholders of Mosenergo and one extraordinary meeting of shareholders of MOEK were held in 2014–2015.
	The Boards of Directors and committees of the Boards of Directors of Mosenergo, TGC-1, OGK-2, and MOEK as a forum for ongoing interaction with major represented shareholders in the form of consultations, search for compromises, and finding common ground on most pressing issues.	On a regular basis subject to the established corporate procedures.
	Task teams on individual matters related to the Group's strategic development (M&A), involving representatives of minority shareholders.	We have a practice of setting up ad hoc task teams involving minority shareholders to draft resolutions on such matters (e.g. merger of OAO OGK-2 and OAO OGK-6 in 2011).
	Regular IR events, including meetings between the management of OOO Gazprom energoholding, Mosenergo, TGC-1, and OGK-2 and representatives of shareholders, investors and analysts.	On a regular basis, we hold annual: – PJSC Gazprom Investor Day, – PJSC Gazprom Energy Day, – Gazprom energoholding Group Investor and Analyst Day.
	Regular conference calls are held to discuss IFRS results of Mosenergo, OGK-2, and TGC-1.	In 2014–2015, the following activities were held: – 1 conference call to discuss the financial results of Mosenergo, – 3 conference calls to discuss the financial results of TGC-1, – 3 conference calls to discuss the financial results of OGK-2.
	One off meetings, both one-on-one and in small groups, held with shareholders, analysts, and investors of OOO Gazprom energoholding, Mosenergo, TGC-1, and OGK-2 at events organised by investment funds and banks.	In 2015, meetings were held: – with 3 shareholders, analysts and investors on the premises of OOO Gazprom energoholding on 4 March 2015, – with 16 shareholders, analysts and investors at the BCS Financial Group Power Industry Day on 10 November 2015. In 2014, meetings were held: – with 1 investment analyst on the premises of OOO Gazprom energoholding on 22 July 2014, – with 8 shareholders, analysts and investors at the BCS Financial Group Power Industry Day on 19 November 2014.

Stakeholders and topics of interest	Forms of interaction	Frequency of interaction
	Disclosures on the websites of OOO Gazprom energoholding, Mosenergo, TGC-1, OGK-2, and MOEK, personalised circulation of information in accordance with Russian laws, and submission of all information required by foreign laws to the depository banks of our companies.	Website disclosures are updated with new data subject to mandatory disclosure in accordance with Russian laws, as they appear. Information is transferred to foreign depository banks on a regular basis and upon request.
	Placement of presentations and information materials not subject to mandatory publication under the laws but providing clarifications or reference on websites of OOO Gazprom energoholding, Mosenergo, TGC-1, OGK-2, and MOEK and personalised circulation for convenience of shareholders, analysts, and investors.	IR events, preparation of all reports, and other corporate events which we believe could be of interest to shareholders, analysts, and investors, are covered on websites of our companies by publication of presentations and information materials, including press releases.
	Calls, management meetings, and disclosure of information.	Upon request of shareholders, analysts or investors – up to several times a week. Companies additionally interact with major shareholders when preparing for meetings of the Board of Directors or committees of the Board of Directors, or General Shareholders Meeting, including discussion and submission of proposals by shareholders to be introduced in the agenda of such meetings, as well as nomination of candidates to the governing bodies and their committees.
Service suppliers (lenders and rating agencies) Topics of interest: – financial and performance indicators, – investment programmes, – debt indicators and debt portfolio structure, – borrowing policy, – business development strategy, – M&A.	Meetings between the management of Mosenergo and OGK-2 and representatives of rating agencies, disclosure of all requested information.	For Mosenergo: annually, when ratings assigned by Standard & Poor's and Fitch Ratings are changed or confirmed. For OGK-2: in October 2015, the company was for the first time rated by Fitch Ratings (BB, outlook stable).
	Negotiations for bond placements or bank loans.	One-off basis.
	Negotiations within Gazprom Group regarding intragroup loans.	One-off basis.
	Regular publication of reports on the Group companies' performance.	Reports published by Mosenergo, TGC-1, OGK-2, and MOEK on an annual and quarterly basis include information on their financial condition, liabilities, and potential risks.

Stakeholders and topics of interest	Forms of interaction	Frequency of interaction
Local communities (local population, civil society organisations, and local authorities) Topics of interest: – uninterrupted heat and electricity supply, – compliance with environmental norms and standards, – energy saving and energy efficiency, – compliance with safety standards and rules, – new jobs and salary levels, – taxes, – charity, – joint activities with NGOs and local authorities, – contribution to the development of local infrastructure, – business development.	Involvement in expert consultations, meetings, and working groups on regional development, established by municipal authorities.	On a regular basis.
	Regular information meetings with the public authorities in the regions where the Group companies operate.	On a regular basis.
	Public consultations.	At the inception of each new industrial facility construction project.
	Regular publication of reports on the Group companies' performance.	Reports published by Mosenergo, TGC-1, OGK-2, and MOEK on an annual and quarterly basis include information on the investment and social projects implemented by our companies, including projects aimed to promote development of the regions where our production facilities are located.
	Cultural and awareness raising events to increase local awareness of: – heat and electricity production, – operations of our companies in relevant regions, – ways to improve energy efficiency and safety, – emergency procedures connected with operation of our facilities.	Our production companies, i.e. Mosenergo, TGC-1, OGK-2, and MOEK, organise (each in the region where it operates) such events on a monthly basis and also participate in events held by local authorities and NGOs.
	Publication on the websites of OOO Gazprom energoholding, Mosenergo, TGC-1, OGK-2, and MOEK, and circulation through the media of information affecting interests of the local population, other companies, and local authorities in the regions where the Group companies operate.	All decisions and all events which we believe can be of interest to local communities in the regions where the Group companies operate are covered by publication of information materials, including press releases.
Customers (wholesale heat, electricity, and capacity buyers, including guaranteeing suppliers and major industrial consumers) Topics of interest: – uninterrupted heat and electricity supply, – performance indicators, – investment programmes, – connection terms, – efficiency improvement, – business development strategy.	Interaction with wholesale buyers on matters related to connection, sale and purchase of heat, electricity, and capacity under standard agreements or under free bilateral contracts through the intermediary Trading System Administrator and System Operator.	On a regular basis in accordance with the existing contracts.

Stakeholders and topics of interest	Forms of interaction	Frequency of interaction
Government of the Russian Federation, sectoral ministries and agencies, and regional executive authorities Topics of interest: – uninterrupted heat and electricity supply, – performance and financial indicators, – investment programmes, – efficiency improvement, – business development strategy, – M&A.	Participation in meetings of the Government Commission on the electric energy development issues and the Conciliation Committee under the Ministry of Energy. Interaction with organisations that determine the rules of operation of the Russian heat and electricity market (Federal Antimonopoly Service, Ministry of Energy, Ministry of Construction Industry, Ministry of Economic Development, etc.), as well as with the Trading System Administrator and System Operator. Cooperation with the Supervisory Board of NP Market Council and with the Supervisory Board of NP Council of Power Producers.	Gazprom energoholding Group's management jointly with regulatory authorities carries out ongoing work to streamline the existing regulation and develop a deregulated electricity market. In these efforts, Gazprom energoholding Group's management is guided by the Group's commercial interests and seeks to negotiate the most economically beneficial conditions for our production companies in terms of tariff, tax, and other regulations. Key interaction points in 2014–2015: – Increasing water tax rates. *Initially, the increase was to be executed on 1 January 2014 as a single step rather than gradually. We managed to achieve a phased in increase over 11 years – see Resolution of the Russian Government No. 1509 dated 26 December 2014, and Federal Law No. 366 FZ dated 24 November 2014.* – Tighter requirements for wastewater discharge rates (including the requirement to construct local treatment facilities (LTFs) and to develop discharge reduction plans). *A framework providing for joint responsibility for sewage water treatment for both water utilities and large consumers (including generating companies) was scheduled to come into effect on 1 January 2014. We managed to have this initiative postponed until 1 January 2019 – see Federal Law No. 221 FZ dated 13 July 2015.* – No working framework for undiscounted payments for technical connection (TC) to generator's distribution systems since 2011. *Since 2012, a relevant draft law has been developed by the Ministry of Energy, Federal Tariff Service, Ministry of Economic Development, and the Federal Antimonopoly Service. We managed to maintain a separate contract and price for TCs to distribution systems and to secure reimbursement of all system retrofitting costs incurred during such TCs.* – Keeping the decreasing coefficient of 0.3 in the formula for calculating negative environmental impact charges. *Initiatives to abolish the decreasing coefficient of 0.3 in calculating negative environmental impact charges have been discussed over the last two years. We managed to have this coefficient formalised in Russian laws and to extend its application until 1 January 2019 – see Federal Law No. 404 FZ dated 29 December 2015.*

Stakeholders and topics of interest	Forms of interaction	Frequency of interaction
		– Maintaining the CSA payback scheme. *Russian laws contained no clear framework on CSA payback starting from the sixth year of commissioning of a CSA project, which could result in lower CSA payback. Initiatives providing for lower CSA payback rates and faster payback periods have been under consideration for the last two years. We managed to maintain the investment payback terms and develop a beneficial payback scheme. The initiative is currently undergoing the procedure of approval by the Russian Government.* – Extension of waste disposal licence issuing period. *The need for expanding the list of licensed waste disposal activities and re issuing "old" licences was raised in 2014. At first, this initiative required licences to have licences for new waste disposal activities issued and old licences re issued by 1 January 2019; however, the deadline was later moved to 1 July 2015. We managed to extend the deadline for taking out licences to 1 January 2019 for old activities (Federal Law No. 203 FZ dated 29 June 2015), and to 1 July 2016 for new activities (Federal Law No. 404 FZ dated 29 December 2015).*
G4-15 Environmental organisations Topics of interest: – compliance with environmental norms and standards, – mitigation/increase of all environmental impacts, – environmental programmes and activities, – investment programmes, – energy efficiency initiatives, – business development strategy.	Environmental management system (EMS) certification at the production sites of Mosenergo and MOEK.	All Mosenergo's power plants are certified to ISO 14001:2004, with supervisory (to confirm compliance) and re-certification audits conducted on a regular basis. Maintenance of EMS certificates (ISO 14001:2004) at TGC-1 facilities and expansion of certification at OGK-2 were suspended in 2014. At MOEK, ISO 14001:2004 certification is scheduled for 2016.
	Public consultations involving environmental organisations.	At the inception of each new construction project at our companies' production sites we hold public consultations involving environmental organisations.
	Environmental audits and publication of environmental reports.	Independent audit reports on compliance with the international environmental management standards are published annually on the website of Mosenergo.

Stakeholders and topics of interest	Forms of interaction	Frequency of interaction
Goods and service suppliers Topics of interest: – creditworthiness, – procurement regulations and transparency, – environmental, technical, and other sourcing rules and standards, – investment programmes, – business development strategy.	Disclosure of a complete set of information on procurement and the sourcing procedure simultaneously and equally for all potential suppliers.	Each time any of our companies holds a tender we post invitations to bid at http://zakupki.gov.ru/ and in the GazNeftetorg.ru trading system (http://www.gazneftetorg.ru/), as well as on the website of the relevant company.
	Application of universal sourcing requirements and criteria in accordance with the relevant international standard, which ensures a fair selection process and equal opportunities for all potential suppliers.	We use ISO 9001:2008 as a universal criterion to assess reliability and good faith of potential suppliers. When any of our companies organises procurement for critical areas of business, the procurement committee of the relevant company is involved in the decision-making process to select a supplier.
	Disclosure of information on the total number and price of contracts awarded through the procurement process.	Full information about previous procurement contracts for goods and services is available at all times in the relevant sections on our companies' websites.
Employees and trade unions Topics of interest: – uninterrupted heat and electricity supply, – compliance with environmental norms and standards, – compliance with safety standards and rules, – new jobs and salary levels, – social security and healthcare, – professional growth and development opportunities, – corporate culture, – business development.	– Collective bargaining agreements; – employee incentive schemes; – professional training and skill development; – occupational safety, mandatory medical examinations, work place certification, on the job safety briefings; – sporting and cultural events; – employee social security: voluntary medical insurance, accident insurance, recreation for employees and their family members, private pension plans.	We are consistently interacting with trade unions, maintain employee training and skill development programmes, and use all employee social security mechanisms. Sporting and cultural events are held on a regular basis to reinforce the Group's corporate culture. Occupational safety activities are held in accordance with Russian laws.

G4-15

We did not take any additional measures to enhance stakeholder relations, whether internal or external for our companies, specifically for the purposes of this Sustainability Report.

We believe in consistent building of stakeholder relations and, therefore, use all interaction tools which we believe to be relevant and effective on a regular basis.

G4-2

OUR APPROACH TO RISK MANAGEMENT

Risk management system in Gazprom energoholding Group's production companies comprises a set of initiatives and processes involving executives and employees at all management levels, including risk identification, assessment, and prioritisation, as well as risk mitigation to provide reasonable assurance that our strategic and operational goals will be achieved. This framework relies on coordinated efforts by both management and employees at all corporate governance levels of Gazprom energoholding Group's companies.

CORPORATE RISK MANAGEMENT SYSTEM

MANAGEMENT LEVEL	RISK MANAGEMENT ROLE
Board of Directors	Approves the corporate policy on risk management and internal control
Committees of the Board of Directors	Develop recommendations on the Board of Directors' strategic approach to certain risks
General Director	Guides execution and ensures the operation of the risk management system
Risk management unit	Coordinates development of the risk management system
Functional business units	Are responsible for day-to-day risk management

We are focused on developing an integrated risk management system which also includes uniform regulations and approaches. Gazprom energoholding Group's companies currently apply local regulations governing management of certain types of risks such as industrial, financial, insurance, and tax risks.

Resolution of the Board of Directors of PJSC Gazprom No. 2619 dated 30 October 2015 approved PJSC Gazprom's Risk Management Policy which governs its business units and its subsidiaries and organisations, including Gazprom energoholding Group's production companies.

On 22 April 2016, PJSC Gazprom's Risk Management Policy was further developed into OOO Gazprom energoholding's own Risk Management Policy.

Each of Gazprom energoholding Group's production companies develops its own local regulations on risk management, which incorporate the requirements of PJSC Gazprom's and OOO Gazprom energoholding's Risk Management Policies, international and Russian risk management standards, and the Corporate Governance Code recommended by Letter of the Bank of Russia No. 06 52/2463 dated 10 April 2014.

Gazprom energoholding Group's risk management is closely aligned with its internal controls.

PSKOVSKAYA GRES, PAO OGK-2

The internal control system takes on some risk management tasks, e.g. control of timely and full performance of risk management activities. Gazprom energoholding Group's companies have approved documents which set out internal control procedures, describe the goals, objectives and components of the internal control system and its operating principles, including regulations on the boards of directors' audit committees, internal controls, audit commissions, and internal audit functions.

Gazprom energoholding Group seeks to ensure the continuous development of its risk management system. Employees of the Group's companies have regular training aimed to further develop their risk management skills.

In 2014, Gazprom Group's initiatives on improving its corporate governance standards and improving its investment appeal included an independent corporate governance audit in Gazprom energoholding Group's production companies, together with assessment of their risk management systems. The audit resulted in providing recommendations and developing an action plan to improve corporate governance, including the risk management system. Based on the results of the independent audit, Gazprom energoholding Group's production companies amended their articles of association in 2015 to enhance risk management authority of their boards of directors.

The 2016–2017 action plan for improving risk management provides for the development and improvement of uniform regulations and approaches, updates of the existing local regulations, and the introduction of regular risk monitoring and risk management reporting processes by the Group's production companies.

G4-14

At Gazprom energoholding Group's production companies, risk management includes regular risk identification and analysis, implementation of prevention measures, as well as mitigation of possible negative consequences. In making decisions related to risk management, including environmental risk management, activity planning or business development, Gazprom energoholding Group's companies are guided by the internationally recognised Principle 15 of the Rio Declaration on Environment and Development, United Nations, 1992: "Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost effective measures to prevent environmental degradation."

We understand that Gazprom energoholding Group's production companies are not only exposed to internal and external risks, but also may expose our stakeholders. Therefore, we undertake similar steps with respect to similar exposures of key stakeholders which may arise out of operations of Gazprom energoholding Group's companies.

G4-27

Risks	Affected stakeholders	Measures taken
Territorial risks		
Country risks: – changing (declining) global natural gas and oil prices and the resulting slowdown or stagnation of the Russian economy, which could have an adverse effect on the operations of Gazprom energoholding Group's production companies, their financial position and the outlook for their share prices, and may also limit their access to capital markets and affect the solvency of their consumers.	– Shareholders, investors; – lenders and rating agencies; – local population, civil society organisations, and local authorities; – wholesale heat, electricity, and capacity buyers, including guaranteeing suppliers and major industrial consumers; – Government of the Russian Federation and sectoral regulatory authorities and organisations, as well as ministries, agencies, and regional executive authorities; – goods and service suppliers; – employees.	Our companies are not in full control of this risk. Implementation of proactive measures to successfully cut costs and improve efficiency across all lines of business, which helps us largely reduce the sensitivity to negative economic and political developments in Russia.
Regional risks: – destabilisation in one or more regions where power plants of Gazprom energoholding Group's companies operate, due to the outbreak of military conflicts, imposition of the state of emergency, or strikes.	– Shareholders, investors; – lenders and rating agencies; – local population, civil society organisations, and local authorities; – wholesale heat, electricity, and capacity buyers, including guaranteeing suppliers and major industrial consumers; – Government of the Russian Federation and regional executive authorities; – employees.	Continuous monitoring of the situation in the regions where power plants of Gazprom energoholding Group's companies are located, and regular assessment of the consequences of external factors and internal decisions through long-term forecasts and financial modelling. Coordination of efforts with public and local authorities to curb the negative impacts at the national and regional levels. Keeping up the established business diversification framework which ensures overall sustainability of Gazprom energoholding Group's companies against negative developments in any of the regions where we operate.
Geographic risks: – acts of nature; – termination of transport services to remote and/or hard-to-reach areas.	– Shareholders, investors; – lenders and rating agencies; – local population and local authorities; – wholesale heat, electricity, and capacity buyers, including guaranteeing suppliers and major industrial consumers; – Government of the Russian Federation and regional executive authorities; – environmental organisations; – goods and service suppliers; – employees and trade unions.	Employee training to respond to both natural and man-made emergencies. Close cooperation with authorities, including joint exercises with the Federal Fire Service of EMERCOM of Russia, ambulance service, and special rescue teams. Keeping up the established business diversification framework which ensures overall sustainability of Gazprom energoholding Group's companies against negative developments in any of the regions where we operate.
Risks related to the electricity and capacity market operation and heat supply to consumers		
Decreased electricity and heat demand due to a decline in production in Russia caused by the economic crisis and energy saving measures.	– Shareholders, investors; – lenders and rating agencies; – local population; – goods and service suppliers; – employees.	Development of programmes to decommission some of the worst performing facilities (whenever we are able to meet the existing demand with our cost-efficient capacity). Implementation of programmes to improve operating efficiency. Long-term electricity and heat supply contracts.

Risks	Affected stakeholders	Measures taken
Change in electricity prices in the unregulated market, accompanied by an uncertainty and heat tariff restrictions resulting from dependence on the decisions of tariff regulation authorities.	– Shareholders, investors; – lenders and rating agencies; – local population; – wholesale heat, electricity, and capacity buyers.	Long-term electricity and heat supply contracts. Active involvement in the activities of NP Market Council and NP Trading System Administrator.
Change in prices for energy, services (including repair), materials and equipment.	– Shareholders, investors; – lenders and rating agencies; – local population; – wholesale heat, electricity, and capacity buyers, including guaranteeing suppliers and major industrial consumers; – goods and service suppliers.	Timely optimisation of the fuel mix and proactive enabling measures. Implementation of production cost reduction and fuel saving programmes (including commissioning of CCGT units). Medium term agreements with suppliers at fixed prices stated in business plans. Maintenance of the reserve fuel stock (coal and fuel oil) at power plants to support extra fuel consumption, if necessary, and avoid large scale-one-off purchases. Optimisation of repair & operation and capital construction costs. Tenders to select goods and service suppliers with the maximum price capped at the business plan levels.
EU27 Risk of higher levels of non-payment of electricity and heat bills.	– Shareholders, investors; – lenders and rating agencies; – local population, civil society organisations, and local authorities; – wholesale heat, electricity, and capacity buyers, including guaranteeing suppliers and major industrial consumers; – sectoral regulatory authorities.	Involvement in the activities of the Commission for Payments in the wholesale electricity and capacity market, preparation of proposals on improvement of payment discipline in the wholesale electricity and capacity market. Switch to direct payments from end consumers to Gazprom energoholding Group's production companies, with no intermediaries involved. Debt collection through legal proceedings. Heat supply limitations for regular non-payers (possible only in retail markets; it can be done only after a number of notices are served and only for facilities that are not on the lists of socially significant facilities or on the list of facilities that can not be disconnected by virtue of law).
No demand for a portion of generation capacity offered at the CCO auctions.	– Shareholders, investors; – lenders and rating agencies; – sectoral regulatory authorities.	Use of the optimal strategy of offering generation capacity of Gazprom energoholding Group's companies at the CCO auctions.

Risks	Affected stakeholders	Measures taken
Specific production and technical risks		
Accidents due to wear and tear of fixed assets.	– Shareholders, investors; – local population, civil society organisations, and local authorities; – wholesale heat, electricity, and capacity buyers, including guaranteeing suppliers and major industrial consumers; – sectoral regulatory authorities; – environmental organisations; – employees and trade unions.	Timely repair and upgrades, retrofitting and re-equipment. Implementation of an investment programme providing for the construction of new generation capacity at the existing power plant sites. Gradual decommissioning of old generating facilities.
Failure to meet contractual obligations by contractors and partners in terms of delivery periods and quality of raw materials and components or services.	– Local population, civil society organisations, and local authorities; – wholesale heat, electricity, and capacity buyers, including guaranteeing suppliers and major industrial consumers; – environmental organisations; – employees and trade unions.	Enhancement of the preliminary counterparty risk analysis system. Monitoring of counterparty performance.
Risks of weather conditions, seasonal changes in water flows.	– Shareholders, investors, and analysts; – lenders; – wholesale heat, electricity, and capacity buyers; – goods and service suppliers; – employees and trade unions.	Our companies are not in full control of this risk. Nevertheless, we take it into account during planning and strategic decision making. G4-EC2
Competition from more efficient electricity producers, including those using innovative technologies, in the context of a liberalised market.	– Shareholders, investors; – lenders and rating agencies; – wholesale heat, electricity, and capacity buyers; – sectoral regulatory authorities; – environmental organisations; – goods and service suppliers; – employees and trade unions.	Implementation of programmes to improve operating efficiency. Timely repair and upgrades, retrofitting and re-equipment. Additional employee training and development.
Increased competition in the future, after all energy producing companies complete their investment programmes, including the risk of distribution networks expansion, which will make the “locked” capacity of energy systems in the Murmansk Region (Kola Nuclear Power Plant) and Siberia accessible to a wider range of consumers in the first pricing zone.	– Shareholders, investors; – lenders and rating agencies; – wholesale heat, electricity, and capacity buyers; – sectoral regulatory authorities; – goods and service suppliers; – employees and trade unions.	Implementation of programmes to improve operating efficiency. Timely repair and upgrades, retrofitting and re-equipment. Long-term electricity and heat supply contracts.
Government regulation risks		
Decisions by the government authorities to freeze or limit electricity and heat tariff growth or approve tariffs below the level of costs incurred by Gazprom energoholding Group’s production companies.	– Shareholders, investors; – lenders and rating agencies; – wholesale heat, electricity, and capacity buyers; – local population and local authorities; – Government of the Russian Federation and sectoral regulatory authorities.	Active interaction with the Federal Tariff Service of Russia, regional energy commissions, and fuel and energy committees in regions and cities where Gazprom energoholding Group’s companies have generating facilities, to ensure approval of economically reasonable tariffs.

Risks	Affected stakeholders	Measures taken
Amendments to regulations governing activities of energy sector players, including the rules governing the wholesale electricity and capacity market, as well as regulations on heat supply and utilities.	– Shareholders, investors, and analysts; – lenders and rating agencies; – wholesale heat, electricity, and capacity buyers, including guaranteeing suppliers and major industrial consumers; – Government of the Russian Federation and sectoral regulatory authorities.	Involvement in drafting of regulations and regulatory impact assessment of draft regulations; development of a consolidated position of production companies on amendments to wholesale market rules within NP Council of Power Producers, and communication of this position to the authors of draft regulations.
Risks of changes in the requirements to licensing core activities or rights of Gazprom energoholding Group's production companies to use items with limited circulation (including natural resources).	– Shareholders, investors, and analysts; – lenders and rating agencies; – local communities (local population, civil society organisations and local authorities); – wholesale heat, electricity, and capacity buyers, including guaranteeing suppliers and major industrial consumers; – Government of the Russian Federation and sectoral regulatory authorities; – environmental organisations; – goods and service suppliers; – employees and trade unions.	Upon expiry of licences or in case of changes in licensing requirements, Gazprom energoholding Group's companies will take all possible steps to maintain current or obtain new licences and will also perform all actions necessary to align their activity with the latest licensing requirements.
Risks of changes in Russian legislation, specifically in tax or civil laws.	– Shareholders, investors, and analysts; – lenders and rating agencies; – local communities (local population, civil society organisations and local authorities); – wholesale heat, electricity, and capacity buyers, including guaranteeing suppliers and major industrial consumers; – Government of the Russian Federation and sectoral regulatory authorities; – environmental organisations; – goods and service suppliers; – employees and trade unions.	Timely review of changes in legislation, including tax and civil laws, and relevant adjustments to corporate procedures and processes of Gazprom energoholding Group's companies.
Risks during implementation of investment projects		
Risks of financial and reputational losses during investment project implementation: – no opportunities to raise additional funds required for a full-scale implementation of the investment programme; – project implementation delays and related sanctions imposed on the companies in the context of CCO and in accordance with the CSA terms and conditions; – unexpected increase in costs and deterioration of the approved investment project parameters; – non-compliance of the projects implemented with the standards and requirements of regulatory authorities.	– Shareholders, investors; – lenders; – local population and local authorities; – wholesale heat, electricity, and capacity buyers, including guaranteeing suppliers and major industrial consumers; – Government of the Russian Federation and sectoral regulatory authorities; – environmental organisations; – goods and service suppliers; – employees and trade unions	Selection and assessment of sources of finance for the investment programme. Improvement of the procedures to organise and monitor activities of all those involved in investment project implementation. Tough penalties for a failure to meet critical investment project milestones incorporated in agreements with suppliers and contractors. Detailed designing of technical solutions to be used. Exploring domestic alternatives to imported equipment.

Risks	Affected stakeholders	Measures taken
		Design and rollout of property and financial risks insurance programmes covering the implementation of major investment projects to maintain an optimal risk management cost to acceptable damage ratio. Minimisation of risk response funds in the course of implementation of major investment projects. Enhancing the investment appeal of Gazprom energoholding Group's companies.
Risks related to financial markets		
Interest rate risk.	– Shareholders, investors; – lenders; – goods and service suppliers.	Reduction of sensitivity of the short- and long-term loan portfolio through reliance on intragroup loans – replacement of a portion of the loan portfolio of Gazprom energoholding Group's production companies by loans taken out by PJSC Gazprom and OOO Gazprom energoholding, who have a stronger profile on the bank lending market. Taking external loans mostly on terms forbidding unilateral adjustment of interest rates.
Inflation: – decreased real value of receivables in case of deferred or delayed payments; – increased interest payable; – increased cost of goods and services purchased; – decreased real value of funds raised to implement the investment programme; – impairment of the real purchasing power of cash income is outrunning its nominal growth.	– Shareholders, investors; – lenders and rating agencies; – goods and service suppliers; – Government of the Russian Federation and sectoral regulatory authorities; – employees and trade unions.	Efforts to ensure approval of economically reasonable tariffs for Gazprom energoholding Group's production companies, subject to government limitations. Internal cost-cutting initiatives.
Foreign exchange risk.	– Lenders and rating agencies; – goods and service suppliers.	Maintaining an open currency position as minimised as possible. Revision of plans for purchasing imported goods in foreign currencies.
Risk of outflow of foreign speculative capital in case of an unstable political and economic situation, market downturns or economic slowdown.	– Shareholders, investors; – lenders and rating agencies.	Gazprom energoholding Group's companies are not in full control of this risk. However, we take proactive steps to increase shareholder value of Gazprom energoholding Group's companies and ensure stable share prices.

Risks	Affected stakeholders	Measures taken
Environmental risks		
Risk of environmental damage or pollution with subsequent civil liability and the need to take steps to rectify such damage.	– Shareholders, investors; – lenders and rating agencies; – local communities (local population, civil society organisations and local authorities); – sectoral regulatory authorities; – environmental organisations.	Monitoring of activities to ensure compliance with Russian and international environmental standards. Employee training to respond to any emergency that can cause environmental damage at generating facility sites, including joint exercises with the Federal Fire Service of EMERCOM of Russia, ambulance service, and special rescue teams. Asset retrofitting and upgrades, and production process adjustment to reduce environmental impacts during normal operation. Environmental liability insurance.
Social risks		
Risk of terrorist attacks at generating facilities of Gazprom energoholding Group's companies.	– Shareholders, investors; – lenders; – local communities (local population, civil society organisations and local authorities); – Government of the Russian Federation; – environmental organisations; – employees and trade unions.	Taking anti-terrorist measures in accordance with the requirements of Russian laws. Property and employee insurance.
Risks of process breakdowns and accidents resulting from errors committed by personnel.	– Shareholders, investors, and analysts; – lenders and rating agencies; – local communities (local population, civil society organisations and local authorities); – customers (wholesale heat, electricity, and capacity buyers, including guaranteeing suppliers and major industrial consumers); – Government of the Russian Federation and sectoral regulatory authorities; – environmental organisations; – employees and trade unions.	Commercial insurance of property, civil liability of owners of hazardous production and hydraulic facilities, vehicles, etc. Careful personnel selection against the required set of qualifications. Personnel briefing, training, and development (including special simulator training). Control of compliance with safety rules and work discipline.
Corruption risks and risks of conflict of interests.	– Goods and service suppliers; – Employees and trade unions.	Internal control to ensure no conflict of interests arises during procurement, contracting, and recruitment. Adoption of Codes of Corporate Ethics at OOO Gazprom energoholding and each of Gazprom energoholding Group's production companies. Establishment and operation of the Corporate Ethics Commissions by OOO Gazprom energoholding and each of the production companies.

Risks	Affected stakeholders	Measures taken
Litigation risks: – legal claims made or actions taken against Gazprom energoholding Group's companies (recovery of monies, seizure of property or lawsuits challenging property rights); – rejection of legal claims made or actions taken by Gazprom energoholding Group's companies (recovery of monies, seizure of property or protection of property rights).	– Shareholders, investors, and analysts; – lenders and rating agencies; – local communities (local population, civil society organisations and local authorities); – customers (wholesale heat, electricity, and capacity buyers, including guaranteeing suppliers and major industrial consumers); – Government of the Russian Federation and sectoral regulatory authorities; – environmental organisations; – employees and trade unions.	Securing contract terms to best suit the interests of Gazprom energoholding Group's companies. Reliance on out of court dispute resolution procedures. Minimising the negative impact of any litigation or execution of judicial acts for Gazprom energoholding Group's companies.

ECONOMIC SUSTAINABILITY

G4-DMA

MANAGEMENT'S APPROACH TO ENSURING THE ECONOMIC SUSTAINABILITY OF THE GROUP

Since our production companies are the principal heat and electricity suppliers to both households and industrial enterprises in the regions where they operate, their economic sustainability affects not only their shareholders, investors, lenders, suppliers and employees. Economic sustainability of our companies has an important social effect on all heat and electricity consumers.

To ensure economic sustainability of our production companies, we implement programmes aimed at streamlining costs and improving financial performance:

- Lean Production programme;
- Operating efficiency enhancement programme;
- Personnel cost optimisation;
- Shareholder value enhancement programme;
- Re-equipment and retrofitting optimisation programme.

Our key objectives include optimisation of all cost items (variable and semi variable costs, capex) and improvement of asset performance.

In 2014, the aggregate effect from cost optimisation totalled RUB 7.5 billion, and RUB 6.0 billion in 2015. Our production companies will continue to implement operational efficiency programmes in 2016. Cost reduction efforts in 2016 are expected to save RUB 4.9 billion.

At the end of 2014, OGK-2 adopted new Regulation on rewarding employees who took part in the Efficiency Project by coming up with improvement ideas for the company's existing production and management processes. A total of 5,018 cost-saving proposals were submitted by employees of OGK-2 over the period of 12 months. Some of them were implemented already in 2015, while others will be used shortly. Plans for 2016 include further rollout of the Efficiency project, focusing above all on the fastest implementation of the best ranked proposals.

ECONOMIC EFFECT OF COST OPTIMISATION AND FINANCIAL PERFORMANCE IMPROVEMENT PROGRAMMES ON EBITDA OF OUR PRODUCTION COMPANIES

	EBITDA increase, RUB billion	List of initiatives/programmes with the biggest EBITDA impact
2014		
Mosenergo	0.16	– Decommissioning and disposal of CHPP-29's property assets; – change in the fuel mix at CHPP-17 (full coal phase-out); – upgrades to units and assemblies of auxiliary equipment.
TGC-1	1.197	– Thermal efficiency potential; – electricity consumption to meet own operational needs; – faster repair times; – improvement of power generation efficiency; – improvement of water management efficiency; – repair and maintenance cost management; – reduction in inventories; – reduction in trade receivables; – procurement system optimisation; – reduction in gross losses at individual CHP plants; – organisational development; – disposal of non-core assets.
OGK-2	4.1	– Implementation of proposals presented by employees under the Efficiency project; – phasing out outdated, inefficient capacity; – optimisation of the running capacity mix to maximise the benefits of marginal generation; – optimisation of sales marketing; – diversification of the fuel mix and suppliers.
MOEK	2.0	– Reorganisation of operating branches; – centralisation of business processes; – shift to outsourcing; – restructuring of Branch No. 14 (the Transport Branch); – disposal of fixed and other assets (including sale of Mosenergo's boiler houses).
2015		
Mosenergo	0.69	– Improvement of operational efficiency at CHP plants through shifting heat generation from boiler houses to CHP plants (fuel savings); – phasing out inefficient capacity (GES-2, Babushkino-2 DHP, Frezer DHP, gas turbines at Lyublino GTPP, and Kuryanovo GTPP); – sale of GES-2; – optimisation of the capacity mix and equipment operation modes at CHP plants; – organisational and restructuring initiatives, including headcount optimisation at boiler houses, phasing out the use of rail services at CHPP-27, and optimisation of maintenance service costs in the repair programme; – upgrades to units and assemblies of auxiliary equipment; – other activities.
TGC-1	0.824	– Phasing out inefficient or spare capacity: PP-2; CHPP-14; – improvement of the production system; – maintenance and repair services; – organisational development; – non-core activities; – warehouse logistics; – non-core assets; – optimisation of assets under construction.

	EBITDA increase, RUB billion	List of initiatives/programmes with the biggest EBITDA impact
OGK-2	2.6	– Implementation of proposals presented by employees under the Efficiency project; – use of the infrastructure capabilities of power plants to support SME development and provision of premises to locate new energy intensive production facilities under the Business Opportunities project; – optimisation of inventories of materials and supplies; – phasing out outdated, inefficient capacity; – optimisation of the running capacity mix to maximise the benefits of marginal generation; – optimisation of sales management; – diversification of the fuel mix and suppliers.
MOEK	1.9	– Reorganisation of operating branches; – centralisation of business processes; – shift to outsourcing; – restructuring of Branch No. 14 (the Transport Branch); – disposal of fixed and other assets (including sale of Mosenergo's boiler houses).

SEVERNAYA CHPP, PAO TGC-1

Levels of outdated consumer debt are one of the bigger concerns around financial sustainability of Gazprom energoholding Group's production companies. The problem is particularly acute for AO St Petersburg Heating Grid, TGC-1's subsidiary. We see transition to direct payment arrangements as a solution to this problem. Such payment schemes have already been rolled out in a number of regions covered by TGC-1's heat supplies.

The energy debt problem can also be alleviated by allocating the costs separately between electricity generation and heat generation.

FINANCIAL AND ECONOMIC PERFORMANCE

G4-EC1

Financial performance of our production companies is disclosed in the Sustainability Report in accordance with G4 Guidelines. All financials presented in this report are based on the audited consolidated financial statements of Mosenergo, TGC-1, OGK-2, and MOEK prepared in accordance with the International Financial Reporting Standards (IFRS). Our financial and accounting statements are further disclosed on the official websites of our production companies:

Mosenergo – http://mosenergo.gazprom.com/investors/reports/financial-statements/;

TGC-1 – http://www.tgc1.ru/en/ir/reports/;

OGK-2 – http://www.ogk2.ru/eng/investors/financial-results/;

MOEK – http://moek.ru/ru/investor/reports.html.

DIRECT ECONOMIC VALUE GENERATED

According to G4 Guidelines, direct economic value generated includes the following:

- net sales, i.e. gross sales less returns, discounts and write-offs;
- income from financial investments, i.e. proceeds in the form of interest on financial loans, dividends on shares, royalty or direct income from the use of organisation's assets (e.g., property leases);
- income from the disposal of assets, i.e. proceeds from the disposal of tangible or intangible assets.

RUB mm	Mosenergo		TGC-1		OGK-2		MOEK	
	2014	2015	2014	2015	2014	2015	2014	2015
Net sales	161,432	171,163	68,996	69,424	115,935	112,233	101,007	104,488
Income from financial investments	1,087	1,614	269	363	1,164	1,089	1,263	1,373
Income from asset disposals	1,421	1,520	11	22	3	3	1,746	5,108
Direct economic value generated	**163,940**	**174,297**	**69,276**	**69,809**	**117,102**	**113,325**	**104,016**	**110,969**

ECONOMIC VALUE DISTRIBUTED

According to G4 Guidelines, economic value distributed includes the following:

- operating costs – amounts paid to counterparties for materials, product components, equipment and services, or as lease fees, license fees, commission, royalty or payments made to contract workers, etc.;
- payroll and other payments and benefits – payroll, payments to the government authorities on behalf of employees (taxes, charges), as well as pension and insurance contributions, employee healthcare costs, severance payments, and other forms of employee support;
- payments to providers of capital – dividends to shareholders of all classes and interest paid to lenders. Since our companies' shareholders include federal institutions and municipalities, the amount payable to them was reflected in the "budget payments" item;
- budget payments – all taxes payable by the organisation, except for deferred taxes. Since our companies' shareholders include federal territories and municipalities, this amount also includes dividends payable to them;
- community investments – donations to charities and non governmental organisations or research institutions, costs incurred to maintain public infrastructure, and direct financing of social programmes, cultural and educational events.

	RUB mm	Mosenergo		TGC-1		OGK-2		MOEK	
		2014	2015	2014	2015	2014	2015	2014	2015
	Operating expenses	125,593	127,048	44,011	43,205	89,088	86,886	79,257	80,937
	Payroll and other payments and benefits	9,935	12,035	6,811	7,130	7,574	7,967	15,736	12,739
	Payments to providers of capital	4,507	3,638	3,183	2,913	593	2,095	2,267	2,283
	Budget payments	5,060	2,707	1,482	2,365	3,488	2,660	828	1,229
G4-EC7	Local community investments	18	39	17	93	9	21		3
	Economic value distributed	**145,114**	**145,467**	**55,504**	**55,706**	**100,752**	**99,628**	**98,088**	**97,191**

ECONOMIC VALUE RETAINED

According to G4 Guidelines, economic value retained is calculated as the difference between direct economic value generated and economic value distributed.

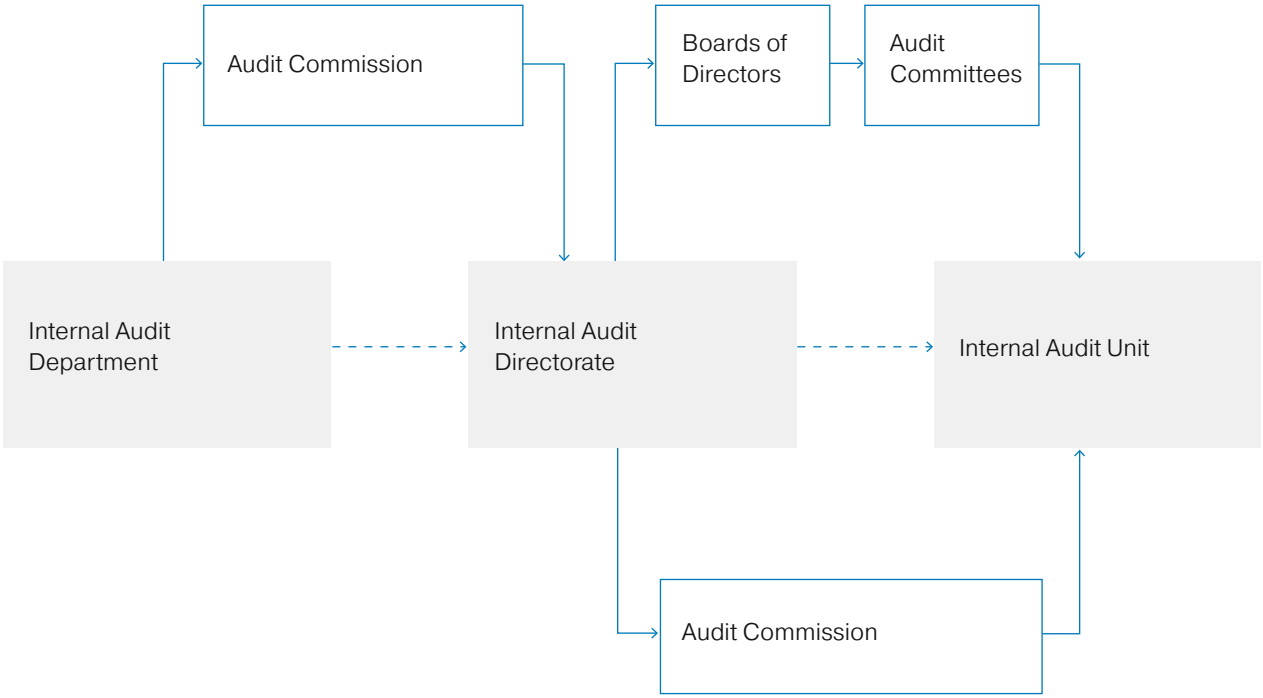
RUB mm	Mosenergo		TGC-1		OGK-2		MOEK	
	2014	2015	2014	2015	2014	2015	2014	2015
Direct economic value generated	163,940	174,297	69,276	69,809	117,102	113,325	104,016	110,969
Economic value distributed	145,114	145,467	55,504	55,706	100,752	99,628	98,088	97,191
Economic value retained	**18,826**	**28,830**	**13,772**	**14,103**	**16,350**	**13,697**	**5,928**	**13,778**

In addition to external audits, financial results of our production companies are also subject to internal controls of PJSC Gazprom. Internal controls are essential to protect the interests of shareholders and investors.

Internal audit functions were set up and audit commissions are elected annually by the general shareholders meeting at Gazprom energoholding Group's production companies and their subsidiaries to oversee preparation of reliable financial and accounting statements.

In their activities, employees of internal audit units at Gazprom energoholding Group's companies are guided by the requirements and guidance contained in Russian laws on internal controls, internal audit, and risk management. Although the internal audit rules and mechanisms in place in our companies have proved their effectiveness, we are committed to their continuous improvement.

FINANCIAL PERFORMANCE INTERNAL CONTROL SYSTEM OF GAZPROM ENERGOHOLDING GROUP'S PRODUCTION COMPANIES



GAZPROM

GAZPROM ENERGOHOLDING

SUBSIDIARIES

GROWTH OF DEMAND

EU10
G4-DMA

FROM PRIVATE, COMMERCIAL, INSTITUTIONAL, AND INDUSTRIAL CONSUMERS

IN THE RUSSIAN MARKET

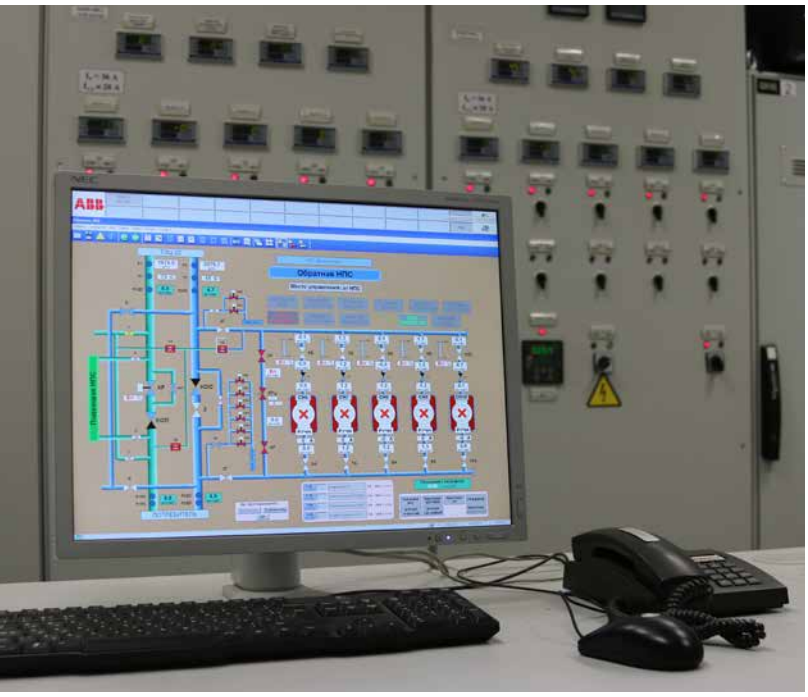
The demand for electricity in Russia is determined by regional business activity and development of regional energy saving programmes. Upon request of the System Operator, our generating companies can supply electricity and capacity to additional consumers within their operating capacity.

The demand for heat mainly depends on weather conditions, energy saving measures effectiveness, as well as on the scale of apartment buildings construction, commercial real estate, and industrial facilities. Currently, new residential quarters are actively developed in the regions where our generating facilities operate. Subject to their installed capacity, our companies are ready to satisfy the demand for heat from such consumers, too.

OGK-2 runs the Business Opportunities project to engage potential investors, interested in locating new production facilities on sites near the company's power plants. The project major aims are to boost electricity and heat supplies, market bottom ash, and encourage the use of vacant space and premises of power plants to generate an extra revenue in the context of falling electricity consumption by external customers.

According to Order of the Ministry of Energy of Russian Federation No. 147 On the Approval of a Blueprint and Programme for the Development of Russia's Unified Power System in 2016–2022 dated 1 March 2016, the total demand for electricity across the UPS is projected to reach 1,067.133 billion kWh by the end of 2022, or up 5,84% from the 2015 electricity consumption level (absolute growth of 58.881 billion kWh). The highest electricity demand growth rates across the UPS of Russia are expected in 2016–2019, driven by the planned expansion and retrofitting of production capacity at the existing facilities and expected commissioning of new production facilities at major processing enterprises. Lower electricity consumption growth rates after 2019 are projected given the expected upgrade of industrial production, above all in the energy intensive metallurgy, and the projected accelerated development of energy saving technology.

Our estimates of the future heat demand structure, generation and consumption throughout 2035 are guided by the Energy Strategy of Russia until 2035. According to the Strategy, the key demand drivers will include growing energy exports and major capacity expansion (5 to 8-fold, to 32–74 billion kWh), particularly, in the country's eastern regions, due to the integration of the Russian electricity sector into the Common Economic Space of the Eurasian Economic Union (EAEU). The role of consumers in the Russian electricity, capacity and system services markets will increase as electricity suppliers will differentiate their offering based on demand elasticity levels and requirements to the reliability and quality of energy supplies. Other important drivers will include the creation of a wholesale electricity and capacity market in the areas covered by isolated energy systems in the Russian Far East and transition from full regulation of heat tariffs to capping the price of thermal energy based on the price set by an "alternative boiler station", i.e. the estimated lowest price of heat that would be supplied by an independent facility built from scratch. Single heat suppliers will be designated in local markets, responsible for reliable and effective heat supplies to consumers.



UNIT CONTROL ROOM

In an important development, 2015 saw a considerable decline in volatility on the capacity market – it was the first time ever that the CCO auction was held to sell capacity for a three-year period (2017–2019). The CCO auction also used for the first time the "elastic demand" model, which provides for capacity outtake based on pricing zones, rather than free power flow zones. Under the new model, the volume of capacity contracted based on the results of the CCO auction will also depend on the current prices. Gazprom energoholding Group is pleased with the results of the 2015 CCO auction as all capacity offered by Mosenergo, OGK-2, and TGC-1 was successfully auctioned off.

Capacity delivery year	Bidder name	Capacity outtake by pricing zone, GW		CCO price, RUB/MW per month	
		First zone	Second zone	First zone	Second zone
2016	Mosenergo	9.7	–	112,624	189,191
	OGK-2	12.1	1.3		
	TGC-1	3.2	–		
Total for the Group		**25.0**	**1.3**	–	
2017	Mosenergo	9.7	–	113,208	181,761
	OGK-2	12.0	1.3		
	TGC-1	3.2	–		
Total for the Group		**24.9**	**1.3**	–	
2018	Mosenergo	10.6	–	110,993	185,740
	OGK-2	11.7	1.3		
	TGC-1	3.2	–		
Total for the Group		**25.5**	**1.3**	–	
2019	Mosenergo	11.1	–	110,451	190,281
	OGK-2	11.7	1.2		
	TGC-1	3.3	–		
Total for the Group		**26.1**	**1.2**	–	

INTERNATIONAL EXPANSION

Gazprom energoholding Group sees entry into foreign markets as a promising avenue for its business expansion. OOO Gazprom energoholding continuously monitors European and Asian electricity markets and evaluates the viability of the Group's participation in various international electricity projects.

A TPP project in Serbia

Currently, OOO Gazprom energoholding is overseeing the construction of a combined cycle gas turbine power plant (thermal power plant, TPP) in Pancevo, Serbia, with an installed capacity of about 140 MW and an expansion option to bring capacity to 208 MW. The new power plant is intended to supply electricity and steam to an oil refinery operated by NIS[17]. The remaining electricity will be sold on the Serbian market.

The progress so far: documents have been issued for the project site, and a competitive tender process has been completed to select the EPC contractor.

Gas-fired generation in China

PJSC Gazprom and China National Petroleum Corporation (CNPC) hold meetings using the platform of Joint Coordinating Committee for cooperation. A Joint Action Plan was signed for gas-fired generation projects, which provides for further cooperation between the two parties to explore China's electricity market and prepare proposals for participation of Gazprom Group's companies in gas-fired generation projects in China.

A memorandum of understanding in Vietnam

On 16 May 2016, a memorandum of understanding was signed between PJSC Gazprom and PetroVietnam State Oil and Gas Corporation. A working group was set up to consider several related projects for offshore gas production in Vietnam and construction of gas-fired TPPs in this country.

POWER OF SIBERIA TPP PROJECT

PJSC Gazprom approved a scheme for combined heat and power supply of Amur Gas Processing Plant (Amur GPP) and Amur Gas Chemical Complex (Amur GCC) through the Power of Siberia TPP project in the Amur Region, with backup capacity provided by an external power system. Peak demand from Amur GPP is forecast at 203 MW, and 340 MW from Amur GCC.

Power of Siberia TPP will enable reliable electricity supplies to the GPP and the GCC, and minimise the costs of connection to an external power system.

17. Naftna Industrija Srbije a.d. (NIS), Novi Sad, is registered in the Republic of Serbia and is 56.15% owned by PAO Gazprom neft. NIS is focused on exploration, production and refining, sales and distribution of oil and oil products, as well as exploration and production of natural gas.

G4-DMA

DECOMMISSIONING OF INEFFICIENT GENERATING FACILITIES

CHPP-29 IN ELEKTROSTAL NEARBY MOSCOW, SOLD BY PAO MOSENERGO IN 2014

Gazprom energoholding Group's generating companies are focused on decommissioning inefficient generating facilities: during 2015, 267.5 MW of capacity was decommissioned. Forward-looking plans for 2016–2017 are to decommission another 1,185 MW. More detailed information about the heat and power generation facilities retired from service during 2014–2015 and decommissioning plans for 2016–2017 is presented in APPENDIX 2, TABLE 2.1.

Not all generating facilities that are inefficient in the owner's view can be approved by the System Operator for decommissioning due to the risk of shortages in electricity or heat supply to residential consumers. The owner must file an application with the System Operator to decommission the facility under its dispatch control. The System Operator considers the application, decides whether to approve or reject it, notifies the applicant about its decision, and then submits its opinion to the Ministry of Energy of Russian Federation. In case the System Operator decides to reject a decommissioning application, the relevant generation facility should operate in the capacity market as a "forced generator", supplying capacity on a "must run" basis, and should be treated on special terms in the CCO procedure.

CAPACITY DECOMMISSIONED DURING THE REPORTING PERIOD

2014

TGC-1

Pervomayskaya CHPP – 58 Gcal/h

2015

MOSENERGO

CHPP-29 (sold) – 16.78 MW

CHPP-6 (sold) – 18 MW

Kuryanovo DEHP – 12 MW

Lyublino DEHP – 12 MW

TGC-1

Tsentralnaya CHPP – 20.5 MW

Dubrovskaya CHPP – 87 MW, 51 Gcal/h

OGK-2

Serovskaya GRES – 150 MW

Troitskaya GRES – 278 MW

CAPACITY SLATED FOR DECOMMISSIONING IN 2016–2017

2016

MOSENERGO

CHPP-8 – 25 MW

CHPP-16 – 130 MW

CHPP-20 – 30 MW

Strogino DEHP – 130 MW

GES-2 (sold) – 10 MW

TGC-1

Pervomayskaya CHPP – 164 MW, 373 Gcal/h

Apatitskaya CHPP – 36 MW, 55 Gcal/h

Tsentralnaya CHPP – 13 Gcal/h

OGK-2

Troitskaya GRES – 556 MW

2017

OGK-2

Troitskaya GRES – 85 MW

G4-EC7
EU10

INFRASTRUCTURE INVESTMENT PROJECTS

Our production companies implement a large-scale investment programme that provides for greenfield construction of new facilities and re-equipment of existing generation and auxiliary facilities. Our investment efforts primarily focus on increasing the shareholder value and enhancing the equity stories of Gazprom energoholding Group's production companies; ensuring reliable uninterrupted electricity and heat supply to consumers, and mitigating the adverse environmental impacts by our power plants. The investment programme of Gazprom energoholding Group's production companies provides for five core project categories:

- mandatory investment projects (e.g. projects under Capacity Supply Agreements (CSAs))[18] that are mandatory for implementation according to statutory requirements and requirements of supervisory authorities;
- other strategic projects: related to the overall business growth of production companies, e.g. construction of new generating units (initiated by the relevant company's top management and assessed based on a business plan);
- efficiency enhancement projects: designed to additionally increase revenue or reduce operating expenses and unrelated to capacity additions (assessed against a business plan and technical criteria);
- reliability enhancement projects: aimed at ensuring a smooth operating process by replacing worn-out equipment (triggered by the breakdown risk level and assessed against specific criteria depending on the equipment type);
- social and administrative projects: unrelated to core operations (triggered by and assessed against qualitative criteria).

Investment programmes of our production companies are approved by their Boards of Directors for every calendar year, with OOO Gazprom energoholding's Capital Construction section and Production section directly involved in their consideration and approval.

Investment projects for the construction of generating facilities under Capacity Supply Agreements (CSAs)are implemented by Gazprom Group's generating companies pursuant to Instruction of the Russian Government No. 1334-r On Approval of the List of Generating Facilities that Will Be Used to Supply Capacity under Capacity Supply Agreements dated 11 August 2010. The responsibility for implementing these projects is assigned to Gazprom Group's generating companies: Mosenergo, TGC-1, OGK-2.

On 1 November 2010, Gazprom Group's generating companies signed Agency Agreements that, on the one hand, guarantee payback from CSA investment projects, and, on the other, impose penalties on the generating companies for delays in delivering on their commitments to supply generating capacity, for failure to supply capacity or capacity undersupply, and for failure to comply with other terms set out in Capacity Supply Agreements, in the procedure and amounts as specified in the relevant agreements. The investment programme of our production companies is one of the biggest in the Russian electricity sector. The total volume of commitments undertaken by Mosenergo, TGC-1, and OGK-2 to commission capacity is 8,932.5 MW[19]. As at 1 January 2016, the Group's companies had already commissioned 7,432.9

18. PAO MOEK does not participate in investment projects for the construction of generating facilities under CSAs.

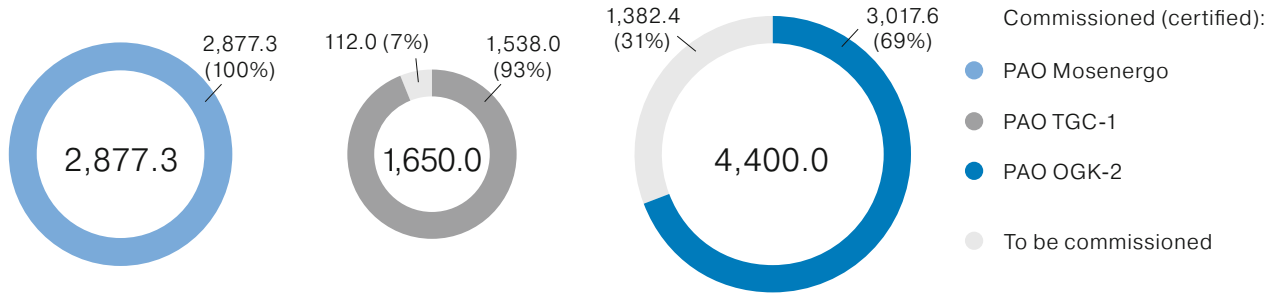
19. Excluding generating unit No. 10 (420 MW) at Serovskaya GRES: pursuant to Resolution of the Russian Government No. 132 r dated 2 February 2016, this commitment was replaced with a commitment to commission generating unit No. 12 (420 MW) at Verkhnetagilskaya GRES, owned by AO Inter RAO – Electric Power Plants.

MW of installed capacity, or 84% of their total volume of commitments under CSAs.

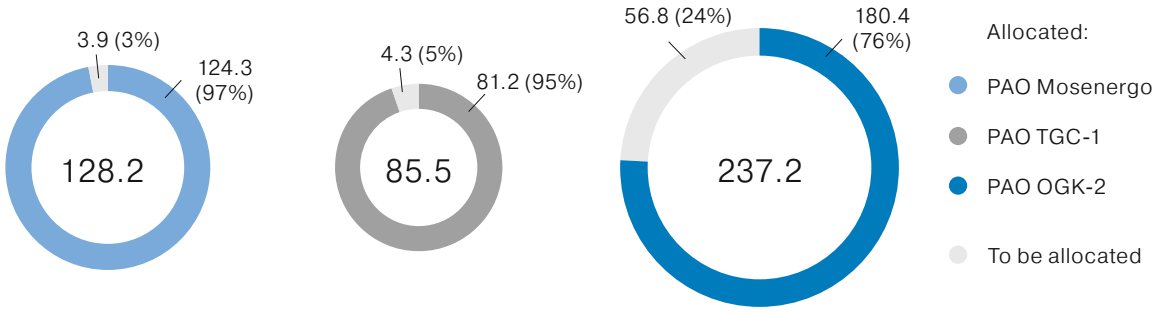
The total costs of all CSA projects in the portfolios of Gazprom energoholding Group's generating companies is RUB 451.0 billion including VAT, of which, as at 1 January 2016, RUB 385.9 billion including VAT (86%) were allocated and RUB 332.4 billion net of VAT (87%) were spent from the total budget of the investment programme.

THE CSA INVESTMENT PROGRAMME IMPLEMENTATION PROGRESS AS AT 31 DECEMBER 2015, MW

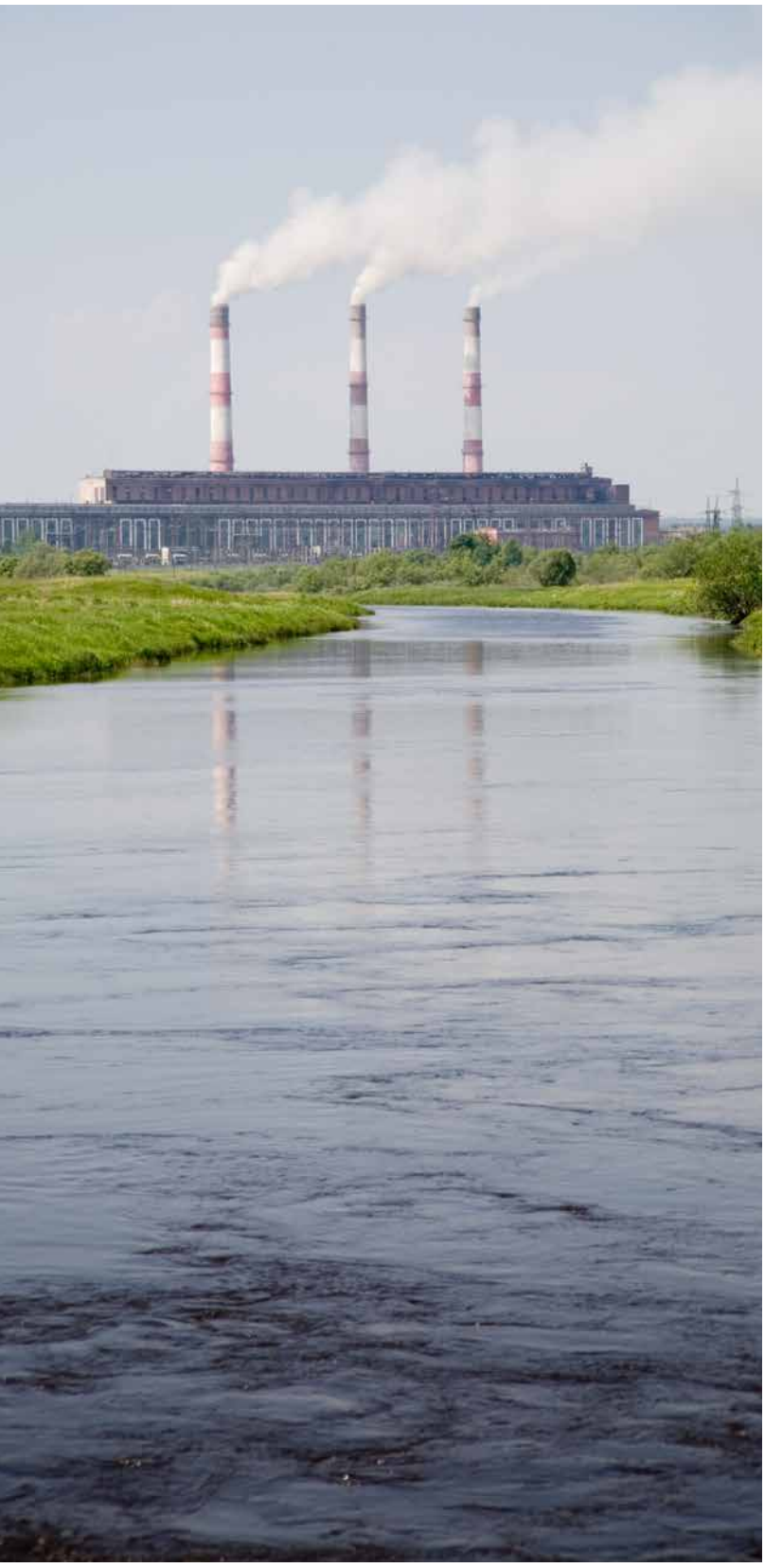
	CSA investment programme		Progress on CSA investment programme	
	Total volume of commitments	Capacity addition commitments	Capacity commissioned (certified)	Share in the total volume of commitments, %
Mosenergo	2,882.5	2,882.5	2,877.3	100%
TGC-1	1,650.0	1,463.0	1,538.0	93%
OGK-2	4,400.0	3,296.0	3,017.6	69%



Progress in implementing the CSA investment programme as at 31 December 2015, MW



Allocations for the CSA investment programme as at 31 December 2015, RUB bn including VAT



SEROVSKAYA GRES, PAO OGK-2

The total volume of our generating companies' commitments to commission capacity in subsequent years is 1,450 MW, including 1,090.0 MW in 2016 and 360.0 MW in 2018.

SEROVSKAYA GRES / VERKHNETAGILSKAYA GRES

OGK-2 intends to assign its rights and obligations in respect of CCGT-420 project at Verkhnetagilskaya GRES to AO Inter RAO – Electric Power Plants, which acts as an investor and customer/developer for the CCGT-420 unit at Verkhnetagilskaya GRES project under construction.

The assignment of the CSA obligations will benefit both companies: PAO Inter RAO will receive a payback guarantee for a project nearing its completion, while OGK-2 will avoid potential fines over construction delay and increased costs of foreign equipment purchases.

In 2015 and early 2016, the following adjustments were made to OGK-2's current CSA project portfolio:

- Pursuant to Resolution of the Russian Government No. 238-r dated 16 February 2015, instead of three 360 MW gas turbines to be constructed by OAO TGC-2, OGK-2 will build two 180 MW combined cycle gas turbines in Grozny;
- Pursuant to Resolution of the Russian Government No. 132-r dated 2 February 2016, instead of generating unit No. 10 (420 MW) project at Serovskaya GRES, OGK-2 will implement generating unit No. 12 (420 MW) project at Verkhnetagilskaya GRES, owned by PAO Inter RAO.

ACTUAL AND PLANNED CAPACITY COMMISSIONING IN THE WHOLESALE ELECTRICITY AND CAPACITY MARKET

UNDER CSA PROJECTS IN 2014–2018, MW (CAPACITY ADDITIONS)

COMMISSIONED DURING THE REPORTING PERIOD

2014

MOSENERGO

CHPP-6 – 421 MW

CHPP-9 – 64.8 MW

OGK-2

Cherepovetskaya GRES – 421.6 MW

2015

MOSENERGO *

CHPP-2 – 211.6 MW

CHPP-20 – 418 MW

OGK-2

Serovskaya GRES – 420 MW

Ryazanskaya GRES – 330 MW

COMMISSIONED IN EARLY 2016 AND SCHEDULED FOR COMMISSIONING

2016

TGC-1

Tsentralnaya CHPP – 100 MW

OGK-2 **

Troitskaya GRES – 660 MW

Novocherkasskaya GRES – 330 MW

2018

OGK-2

Groznenskaya TPP – 360 MW

* Construction of new capacity under Mosenergo's CSA investment programme was fully completed in 2015.

** Facilities commissioned in early 2016.

More detailed information about the heat and power generation facilities commissioned in the wholesale market during 2014–2015 and scheduled for commissioning in 2016–2018 is presented in APPENDIX 2, TABLE 2.2.

Most generating facilities are built using Combined Cycle Gas Turbine (CCGT) technology solutions. CCGT units offer a higher efficiency ratio (48%, and 57% in combined generation) as compared to steam turbine units (c. 35% on average), resulting in lower specific operating expenses. CCGT is one of the greenest technologies to date. This is mostly due to a higher efficiency ratio, which reduces emissions, and to the use of natural gas as fuel, which results in fewer emissions than fuel oil or coal.

On 1 May 2015, AO SO UPS certified a new CCGT-220 generating unit at Mosenergo's CHPP-12. This generating unit is one of the most advanced CCGT units in Russia. Its efficiency ratio is 49% in the condensing mode and 77% in the cogeneration mode. The new generating unit's SRFC is 192 g/kWh, 19.5% less than for other generating units currently in operation at CHPP-12 (238.5 g/kWh). It means that the commissioning of a new CCGT-220 unit at CHPP-12 has allowed the power plant to reduce its overall specific fuel consumption for electricity generation by 15% to 20%. With the new generating unit coming online at CHPP-12, residents of the Russian capital will benefit from more reliable power supplies and reduced power capacity shortage in Moscow's Western and Central administrative districts.

Facility upgrade projects are another promising investment area for us. We see these projects as a good alternative to greenfield projects in terms of both cost and efficiency. On average, generation upgrade projects, including advanced upgrade projects where power plants switch from surface condensers to CCGT units, lead to an increase in capacity comparable to that offered by greenfield construction, while offering 30% to 80% lower costs and 1.5 to 2 times shorter timelines, depending on the upgrade level. Their large-scale implementation, however, requires incentives from the Government, e.g. introduction of a facility similar to the CSA scheme.

We are closely following the situation in regional energy markets across Russia. After we meet our obligations under the mandatory investment programme, we intend to continue the construction of new facilities, primarily in regions with low electricity supply levels. For us, the key consideration in making an investment decision regarding a proposed project will be the achievability of returns at the level not lower than our returns on CSA projects. In particular, one of such projects is a water boiler house replacing outdated, inefficient facilities at Pervomayskaya CHPP. The project's expected ROI is 17%.

In addition to construction projects and advanced upgrades to its facilities, Gazprom energoholding Group pays much attention to maintaining the technologies used at the facilities it operates at an advanced level. Our production companies carry out repair, re-equipment and upgrade projects for their facilities on a regular basis.

In particular, MOEK's investment programme is fully comprised of such projects. The company annually implements retrofit projects to upgrade the heating grids, heating units and heat and power sources it operates, seeking to use the latest and most efficient technologies.

When assessing the condition of equipment or making decisions to launch or prioritise certain activities, we are guided by such principles as safety, reliability and achievability of technical and efficiency performance targets. Despite the programmes run by our companies to achieve overall cost reduction, the total amount of funds allocated annually by our production companies for repair, re-equipment and retrofit projects remains flat. We seek to increase the efficiency of these investments by redistributing the funds towards the projects that offer the greatest benefits in terms of efficiency and technology at the lowest cost.

INVESTMENT PROJECTS OUTSIDE THE CSA PROGRAMME (RE-EQUIPMENT AND RETROFITTING) (RUB MM)

2014	2015		2015	
	Spend (net of VAT)	Funding (incl. VAT)	Spend (net of VAT)	Funding (incl. VAT)
Mosenergo	8,097	8,960	20,193	16,298
OGK-2	2,811	3,295	5,220	5,975
TGC-1	5,887	6,568	6,836	7,521
MOEK	15,621	15,218	18,061	20,044
Total	**32,416**	**34,041**	**50,310**	**49,838**

Repairs are carried out at our power plants in line with the Equipment Repair Schedule that is subject to sign-off by the System Operator and annual approvals. Re-equipment and retrofitting are carried out according to the Rules for Implementation of the Programme for Re-equipment and Retrofitting.

ROLLOUT OF SAP-BASED ENTERPRISE INFORMATION MANAGEMENT SYSTEM FOR GENERATING COMPANIES

In 2013, to ensure comprehensive improvement of operating efficiency in power generation and heat generation and sales at PJSC Gazprom's subsidiaries, Mosenergo and OGK-2 rolled out SAP-based EIMS GC[20], comprising an integral part (segment) of Gazprom Group's shared information space.

In 2014 and 2015, the EIMS GC was upgraded and refined, as well as integrated with PJSC Gazprom's related information management systems. As of today, the system covers the following business processes:

- Accounting and fiscal reporting;
- Finance management;
- Management accounting and budgeting;
- Inventory management;
- Investment management;
- Maintenance and repair management;
- Marketing and sales management;
- Contract management.

The EIMS GC also enables implementation management and tracking for new build capacity construction, technical re-equipment, retrofitting and repair projects.

In 2015, we launched a project to roll out the EIMS GC in TGC-1; the project will be completed in Q3 2017.

In the medium term, we plan to implement Phase 2 of the EIMS GC rollout project to cover the business processes that have not been automated during Phase 1 of the project.

20. Enterprise Information Management System for Generating Companies.

G4-DMA

RESEARCH & DEVELOPMENT

The electricity sector is a hi-tech intensive, rapidly growing industry. To stay competitive we, like other major players in the electricity sector, need to constantly enhance our operating efficiency and introduce innovative equipment.

Our innovation policy is aligned with the national policy on innovations, which seeks to accelerate the transition of the Russian economy to innovation-driven development. We are also guided by the standards and requirements set out in the following documents:

- Blueprint and Programme for the Development of Russia's Unified Power System in 2016–2022, approved by Order of the Russian Ministry of Energy No. 147 dated 1 March 2016;
- Energy Strategy of Russia until 2035 (Draft);
- Power Engineering Development Strategy of the Russian Federation until 2020 including outlook until 2030, approved by Order of the Russian Ministry of Industry and Trade No. 206 dated 22 February 2011;
- The Concept of Technical Policy and Development of OOO Gazprom energoholding's Generating Companies, approved by Order of OOO Gazprom energoholding No. 26-GEH dated 24 May 2011.

DEVELOPMENT AND IMPLEMENTATION OF R&D, TECHNICAL AND INNOVATION POLICIES IN OUR COMPANIES

In July 2009, OOO Gazprom energoholding set up a Research and Development Council (RSC). Today, it operates as a deliberative body seeking to increase the efficiency of research, development and operating activities of the company and energy assets of Gazprom energoholding Group's companies.

The RSC determines priority and high potential areas in R&D, technical and innovation policies of Gazprom energoholding Group's production companies to increase their operating efficiency and the effectiveness of capacity technology upgrades. Key functions of the RSC are as follows:

- provide expert reviews of strategic decisions on technical and innovative development before they are made;
- prepare a list of developed solutions recommended for rollout across the production companies of Gazprom energoholding Group;
- evaluate research and development (R&D) projects, plans and programmes and the results of their implementation in the production companies of Gazprom energoholding Group;
- examine invitations to participate in federal, interdepartmental and sectoral R&D programmes.

The Concept of Technical Policy and Development of Gazprom energoholding Group's production companies serves as the key guidance for the development and implementation of R&D and technical policies by our companies. The document sets out the key objective of our technical policy, which is to make our companies more competitive in the energy market by optimising the operating and technological capabilities of our power plants. To achieve this goal our R&D efforts are focused on the following areas:

- minimise specific fuel consumption for electricity and heat generation by implementing leading-edge technologies and advanced high performance equipment;
- streamline plant repair and maintenance at power plants;
- ensure compliance with environmental requirements in line with the international commitments and national standards;
- increase the level of electricity and heat generation automation to reduce process management costs and production costs.

These activities in Gazprom energoholding Group's production companies are led by the Technical Expert Council (TEC), a specialised coordinating and deliberative body. We also closely cooperate on innovative technologies in the electricity sector and production of advanced energy equipment with National Research University Moscow Power Engineering

Institute, Bauman Moscow State Technical University, Lomonosov Moscow State University, Ural Turbine Works, and All-Russia Thermal Engineering Institute (VTI).

In developing R&D plans and implementing R&D programmes in the Group's production companies, OOO Gazprom energoholding closely cooperates with PJSC Gazprom. In particular, in 2015, cooperative efforts were taken to update PJSC Gazprom's Innovative Development Programme until 2025, prepare the Technological Development Outlook until 2040, and carry out other projects. In 2015, development of MOEK's technical policy was started.

KEY INNOVATIVE PROJECTS

The project for an upgrade of K-300 unit at Kirishskaya GRES based on CCGT-800 technology is one example of the successful implementation of major innovation projects. The Development and Implementation of Technological Solutions for Upgrades of Oil/Gas-Fired TPPs project, used to guide the upgrade activities for K-300 unit at Kirishskaya GRES in 2014 was awarded the Russian Federation Government Prize. Apart from the large scale of the CCGT-800 unit at Kirishskaya GRES (at 800 MW, it is one of the two largest heat generating facilities commissioned in Russia over the last 30 years), this investment project is also unique from the technology perspective. Rather than built from scratch, it was in fact a brownfield project for an upgrade of generating unit No. 6 commissioned back in 1975. Two state-of-the-art gas turbines were added to the existing steam turbine to boost the unit's efficiency ratio from 38% to 55%, while slashing its SRFC by almost 32%, from 324 g/kWh to 221.5 g/kWh. This project was also the first to use unique three-circuit waste-heat boilers with reheating and natural circulation functions. Another important element of the project is that the legacy equipment used in the steam turbine unit as well as the existing power plant operation system and infrastructure were kept for cost efficiency reasons, which considerably cut costs of developing the innovative CCGT unit. Such a large-scale upgrade of a generating unit was the first in the history of the Russian electricity sector, with many unique engineering solutions employed. Their analysis will allow us to develop unified requirements and standards for similar units. The economic effect of the upgrade project is RUB 400 million per year.

Another example of an innovative solution successfully implemented at our power plants is the construction of Russia's first 330 MW coal-fired generating unit using the circulating fluidised-bed (CFB) technology at Novocherkasskaya GRES. The project at Novocherkasskaya GRES is the most powerful generating unit in Russia using this technology. It was launched into operation on 30 June 2016. The total effect of replacing the outdated equipment with a generating unit using the CFB technology at Novocherkasskaya GRES is estimated at RUB 270 million per year.

We also consider as innovative the project for an upgrade of electric grid equipment and construction of new CCGT units with a combined capacity of 100 MW at Tsentralnaya CHPP in Saint Petersburg. This project is unique in that this Russia's oldest power plant will be upgraded without interrupting its operation, since the plant is critical to uninterrupted power supply to central districts of Saint Petersburg. The implementation of this project is further complicated not only by Tsentralnaya CHPP being surrounded by historical buildings, but also by the fact that it will mark its 120th anniversary in 2017, and, accordingly, requires restoration as part of the upgrade project. The project is scheduled for completion in 2016.

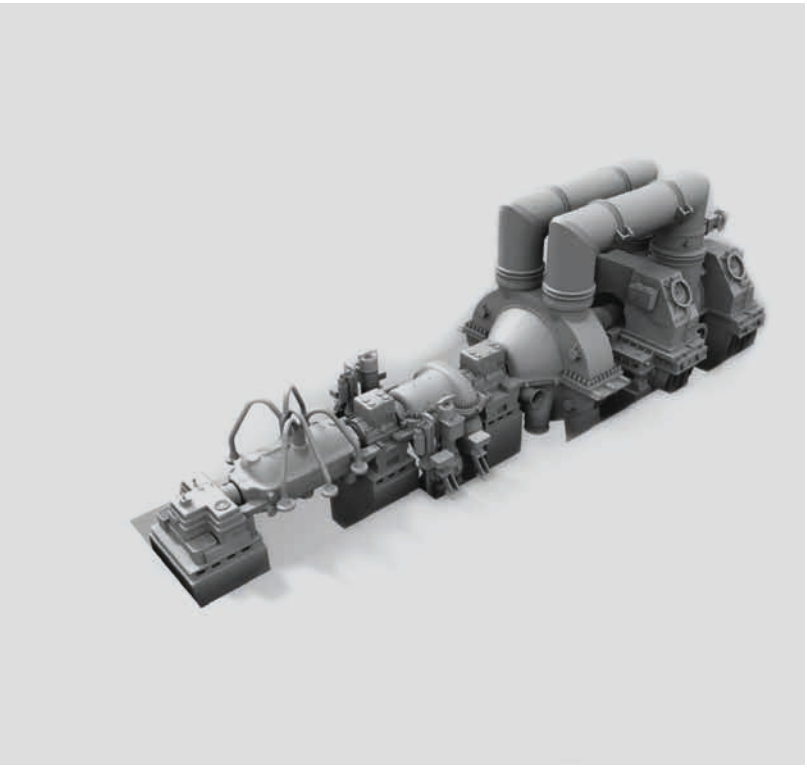
In pursuing our innovation policy, we are constantly facing a number of challenges and obstacles that are beyond our control. In particular, Russia does not produce enough equipment and materials to meet the needs of our companies in building new and upgrading existing generating facilities. Moreover, Russia-made equipment is significantly inferior to the best foreign models in its class in terms of energy efficiency and reliability. As part of our import substitution efforts, we have prioritised the following areas: automated process control systems, heat insulation, gas turbine maintenance services, and retrofitting of gas turbines with involvement of Russian producers.

In 2014, ZAO Ural Turbine Works (part of AO ROTEC) launched a pilot to retrofit generating unit No. 9 at Mosenergo's CHPP-22. As part of the project, the core and auxiliary equipment of the generating unit will be replaced by 1 September 2018, with T-250/300–240 turbine (which was in operation since 1972 and has ran c. 280,000 hours) replaced with a new model T-295/335–23.5. With its maximum capacity reaching 335 MW, it will be the most powerful unit ever manufactured at Ural Turbine Works. In terms of the reliability and robustness of its design solutions and technical features, this type of turbines will be completely unique and unrivalled globally. The turbine will become a flagship of a new model range and is expected to be widely used in the grids of cities with more than one million inhabitants.

We take pro-active steps to reduce the use of foreign-made power plant automation and control systems. Already today, most steam turbine units and the

instrumentation and control systems of combined cycle gas turbine units at power plants of Gazprom energoholding Group's generating companies are equipped with controllers by ZAO TECON Engineering, the leading Russian equipment manufacturer and provider of industrial automation engineering solutions, which joined Gazprom Group in 2011.

During 2015, ZAO TECON Engineering retrofitted seven generating units ranging between 250 MW and 339 MW. In most projects, the existing foreign-made hardware and software suite (by Siemens) was replaced with similar solutions produced locally (by ZAO TECON Engineering). In addition, four CCGT units ranging between 220 MW and 420 MW were automated. Also during the year, automation and dispatch control systems were deployed at 72 heating units operated by MOEK, and nine district heating plants operated by OOO TSK Mosenergo were upgraded. As part of the retrofit programme, 280 automatic gas-fired units and 100 gas burners of last generation (by ZAO TECON Engineering) were installed at the covered generating facilities, enabling significant gas savings and improved performance at the upgraded facilities.



T-295 STEAM TURBINE

T-250 combined-cycle steam turbine is the first of the 19 turbines of this product family manufactured by Ural Turbine Works in 1970s–1980s specifically for Mosenergo's power plants. T-250 turbines are central to Moscow's heat supply system, with their combined capacity accounting for 40% of the total installed generation capacity operated by Mosenergo. The first three T-250 turbines were commissioned during the 1970s, precisely at CHPP-22. In the coming years, some of the T-250 turbines currently in operation will reach the end of their service life.

Through a joint project with ZAO TECON Engineering, we have developed an on-site test and certification rig for burners. Today, it is used across the Group to support upgrade projects of our generating companies to replace physically and functionally obsolete burners with new GGM-type solutions. We also continue the implementation of a pilot to develop a Russian-made air-cooled condensing unit to equip CCGT and steam power TPPs in areas with scarce water resources. Our most recent accomplishments include a successful project to develop own relay protection and automation system, a solution purchased in the past from US-based suppliers.

Another focus area of our R&D covers heat insulation materials. The heat insulation materials and technologies currently used at Russian generating facilities are obsolete, and their use leads to increased loads, lower energy efficiency of equipment and economic losses. The introduction of newly marketed materials that have not been subjected to comprehensive testing by a respected certification centre is fraught with high technical and economic risks. Until recently, the Russian market virtually lacked any equipment platform to test the properties of heat insulation materials at temperatures above 100°C.

To meet the needs of generating companies in modern heat insulation materials OOO Gazprom energoholding continues the construction of a plant to produce expanded vermiculite-based loose heat insulation materials and fittings in Stupino, the Moscow Region. The plant is expected to produce c. 5-7 thousand tonnes of dry mixes per year, and also manufacture various products based on them.

Through a joint project with Lomonosov Moscow State University, Gazprom energoholding Group has launched the Heat Insulation Certification and Research Centre. The centre provides testing and certification services for all heat insulation materials supplied to generating facilities operated by Gazprom energoholding Group's companies. The equipment and software capabilities of the Heat Insulation Certification and Research Centre allow heat insulation materials to be tested across over 30 measures, including for compliance with Russian and international standards (GOST, ISO, EN, DIN, ASTM), establishing vibration resistance, thermo-physical and chemical properties of tested materials at temperatures ranging between –150°C and 600°C–700°C and more.

KIRISHSKAYA GRES, PAO OGK-2

PJSC GAZPROM DAYS AT ST. PETERSBURG POLYTECHNIC UNIVERSITY NAMED AFTER PETER THE GREAT

Priority areas where the company needs innovative solutions include:

- enhancement of output and efficiency of generating facilities;
- improvement of efficiency ratios, service life extension and minimising downtimes for equipment;
- technologies to perform diagnostics and service life assessments for equipment;
- improvement of occupational safety.

In April 2015, Mosenergo held a joint conference with the Skolkovo Foundation themed "Coordination of Efforts in the Development of Innovative Solutions to Improve the Efficiency of Heat and Power Generation".

The Skolkovo Innovation Centre presented a case for coordination of efforts between startups and Gazprom energoholding Group's production companies in developing and implementing innovative solutions for the energy industry.

Mosenergo's representatives gave an overview of the existing approaches used by the company to run innovative R&D programmes and projects and of the company's procedure for developing a roadmap to introduce innovative technologies into its production and business processes. They also highlighted the key condition for cooperation between the Group's production companies and startups: the proposed innovations should meet the actual requirements of the companies' production and business processes and provide solutions to existing technological issues and challenges.

During a round table discussion, the Group's representatives suggested that equipment and sites of the Group's production companies be used to try out and implement innovative projects and technologies developed by startups. Another idea that was discussed was creation of a web-portal based on Skolkovo's platform to collect, summarise and review ideas and proposals for the energy industry and IT that could benefit our companies.

GOVERNMENT SUPPORT RECEIVED OVER THE REPORTING PERIOD

G4-EC4

EQUITY INTEREST HELD DIRECTLY BY THE GOVERNMENT, %

	2014	2015
Mosenergo	26.45	26.45
TGC-1	0.0036664371	0.0000001855
OGK-2	0.09394	0.09394
MOEK	0.0002277438	0.0002277438

THE TOTAL AMOUNT OF GOVERNMENT SUPPORT RECEIVED BY OUR COMPANIES OVER THE REPORTING PERIOD (2014–2015), RUB MM

	2014	2015
Mosenergo[21]	524	253
TGC-1 (actually, subsidies to PAO Murmanskaya CHPP)	562	877
OGK-2	2	–
MOEK	9,881	4,245

The government holds a stake in the share capital of each production company of Gazprom energoholding Group (including via federal and municipal entities).

For Mosenergo and MOEK government support mostly takes the form of subsidies. The Government of Moscow pays Mosenergo to cover the difference between the heat tariff set for the city's residents and the company's tariffs. Therefore, this subsidy is actually a form of redistributed government support to Moscow residents rather than to Mosenergo and MOEK.

TGC-1 does not receive any government subsidies. Subsidies, however, are granted to TGC-1's subsidiary, PAO Murmanskaya CHPP. Pursuant to Law of the Murmansk Region No. 91901-ZMO On the Budgeting Process in the Murmansk Region dated 11 December 2007, PAO Murmanskaya CHPP receives subsidies from the budget of the Murmansk Region to compensate for the revenue shortfall due to supply of heat at tariffs that do not cover costs.

In 2014, Ryazanskaya GRES, a branch of OGK-2, received subsidies from the Ryazan Region government as compensation for the revenue shortfall in 1H 2014 due to heat supplies to consumers at reduced tariff rates.

21. Including revised amounts from previous years.

ENVIRONMENTAL SUSTAINABILITY

G4-DMA

MANAGEMENT'S APPROACH TO ENVIRONMENTAL ASPECTS OF OPERATIONS

Being the largest heat generation holding company in Russia, Gazprom energoholding fully understands its environmental responsibility towards present and future generations and views environmental sustainability and measures minimising the environmental impacts of power plants as its top priority.

The main impacts of our generating facilities that can affect the environment and the health of our employees and local residents living in the immediate vicinity include:

- emissions of greenhouse gases (GHG) and other pollutants;
- wastewater discharge into water bodies, including bottom ash;
- industrial waste disposal;
- use of natural resources (fuel, water and land resources);
- acoustic noise;
- vibration.

Both in making all strategic decisions and in our day-to-day operations we are guided by Russian environmental laws and regulations. In fact, we go beyond simply maintaining our environmental performance within the requirements and limits prescribed by environmental authorities. We constantly seek to reduce the man-made impact on the environment caused by the operation of our companies' generating facilities. We are also confident that by using natural resources as sustainably as possible and by implementing energy saving technologies we greatly contribute to our operating efficiency and competitiveness in the energy sector, and in the longer run these factors may become essential for dynamic and sustainable development of our companies.

While developing and improving measures to protect the environment against the negative impacts of our operations, we proactively cooperate with environmental regulators, with research and educational institutions working on environmental safety, and with specialised NGOs and local communities in the regions where our power plants are located.

The environmental policy pursued by Gazprom energoholding Group's production companies is in line with PJSC Gazprom's environmental policy and the concept of its technical policy and was approved by the Board of Directors of each production company. The key principles of the environmental policy of Gazprom energoholding Group's production companies are as follows:

- recognise the constitutional human right to a healthy environment;
- prioritise environmental safety as an element of national security;
- assume responsibility for environmental protection in developing electric utilities in the regions where our companies' generating facilities operate;
- use natural and energy resources in a sustainable way in generating and transmitting electricity and heat;
- support research on environmental protection in the electricity sector;
- implement only science-based measures and prioritise the best existing technologies to minimise environmental impacts of our generating facilities;
- factor in potential environmental risks when making strategic, management or investment decisions;
- operate in the territories and water bodies of high environmental importance only in exceptional cases subject to specific decisions by government authorities;
- minimise industrial waste and comply with environmental standards for its storage and disposal;
- prioritise preventive measures over response to adverse environmental impact;
- maintain open access to environmental information and in case of emergencies immediately inform all

stakeholders of their environmental implications and response;
- provide open access to the results of environmental monitoring of operating branches of our production companies;
- improve the system of environmental management in line with the best international practices and standards.

CHANGES IN THE SYSTEM OF INTERNAL REGULATIONS ON ENVIRONMENTAL PROTECTION

Changes in the system of internal regulations defining the environmental policy of Gazprom energoholding Group's companies during 2014–2015:

- **Mosenergo:** in 2015, the environmental policy was updated and new standards were introduced (having successfully passed the expert review in Joint Stock Company Scientific Research Institute for Atmospheric Air Protection (AO SRI Atmosphere)):
  - STO Mosenergo 3.4.001 – 2015 Method for Estimating Gross Pollutant Emissions from TPPs and Boiler Houses;
  - STO Mosenergo 3.4.002 – 2015 Rules for Setting up Monitoring Framework for Pollutant Emissions at TPPs and Boiler Houses;
  - STO Mosenergo 3.4.003 – 2015 Guidelines for Inventory of Pollutant Emissions from TPPs and Boiler Houses;
  - STO Mosenergo 3.4.004 – 2015 Guidelines for Measureing Pollutant Emissions at TPPs and Boiler Houses.

- **TGC-1:** On 31 December 2015, a new version of the regulation on industrial environmental control was issued (approved by Order No. 178).

- **MOEK:** the following documents were developed, approved and put in place:
  - as from 1 November 2014 – the Company's Environmental Policy;
  - as from 8 July 2015 – Industrial Environmental Control Programme.

Local regulations (instructions, orders, guidelines) are updated on an ongoing basis in line with current environmental laws.

ENVIRONMENTAL MANAGEMENT SYSTEM (EMS)

The Environmental Management System (EMS) compliant with ISO 14001:2004 (as certificated by independent specialised auditor firms) is the key mechanism used by our production companies to manage environmental risks. All business units of our companies have consistently implemented it since 2007. By the end of 2013, the ISO 14001:2004 Environmental Management System was put in place in all business units of Mosenergo and TGC-1, and in five branches of OGK-2: Stavropolskaya GRES, Serovskaya GRES, Pskovskaya GRES, Surgutskaya GRES, and Troitskaya GRES.

In 2015, Mosenergo underwent a recertification audit[22] of its environmental management system for compliance with ISO 14001:2004, during which it was established that the environmental management system was kept operational, developed in line with the principle of continuous improvement, was effective, and met all the relevant criteria. No instances of non-compliance were revealed; Mosenergo's environmental management system was deemed compliant with the requirements of ISO 14001:2004.

In 2014, following cost optimisation at TGC-1 and OGK-2, it was decided to stop maintaining the environmental management system. The implementation of ISO 14001:2004 environmental management system in MOEK is scheduled for 2016.

22. The audit was conducted by Certification Association Russian Register in the business units of the General Directorate and at the branches: CHPP-11, CHPP-25 and CHPP-27.

TROITSKAYA GRES, PAO OGK-2

2014 was officially declared the Year of Ecological Culture at PJSC Gazprom, during which, among other activities:

- CHPP heads and environmental experts of the Group's companies were trained in ISO 14001 Environmental Management Systems standard: the Introduction to ISO 14001 training course was arranged for CHPP heads, while environmental experts took part in the Internal Auditor of Environmental Management Systems programme;
- a booklet about Mosenergo and its environmental activities was developed, environmental posters were placed on the buildings of Mosenergo branches.

ENVIRONMENTAL ACTIVITIES

Our companies consistently implement targeted environmental initiatives in a number of areas:

- construction and commissioning of high performance CCGT generating units with advanced low emission gas turbine combustion chambers to reduce specific emissions of pollutants (nitrogen oxides, carbon dioxide, solid particles, sulphur oxide and greenhouse gases);
- retrofitting and upgrades of hydro turbine equipment using environmentally friendly materials;
- construction of run-around systems for process water supply at heat power plants to reduce chemical and thermal pollution of water bodies;
- retrofitting of heating grids using new heat insulation materials that more than halve heat losses to minimise thermal pollution of the environment and ensure sustainable use of energy resources;
- construction of new and retrofitting of existing waste treatment facilities to prevent discharge of polluted wastewater into surface water bodies;
- safe treatment of production waste and reduction of waste from solid fuel combustion;
- installation of fish protection systems at water intake facilities to prevent damage to fauna.

We prioritise projects that address several issues at a time.

For instance, on 30 June 2016, new 660 MW coal dust generation unit No. 10 (STU-660) was commissioned at Troitskaya GRES, a branch of OGK-2. Unlike other generating units, it uses higher quality Kuzbass coal as process fuel, rather than coal from the Ekibastuz coal basin in the Republic of Kazakhstan.

This will cut emissions, while at same time reducing the amount of bottom ash waste intended for disposal, and specific water consumption by the branch. Moreover, this unit is capable of dry ash (fly ash) screening, which will enable additional reduction of disposed waste by reclassifying some ash from "waste" into "product". Additionally, generating unit No. 10 provides for emissions desulphurisation, which will considerably reduce the amount of sulphur in emissions.

Another example is CCGT-420 generating unit No. 9 at Serovskaya GRES, commissioned at the end of 2015. Along with improving the reliability of electricity supply at the Serovo-Bogoslovsky energy hub, it also enabled a reduction of pollutant emissions, sustainable use of water resources preventing the thermal pollution of the river, elimination of ash waste, and increased reliability and efficiency of the plant's operation. The new generating unit at Serovskaya GRES will enable an 8.6% reduction of specific fuel consumption.

We also believe that a responsible approach to environmental issues implies that we should be as open as possible and should actively engage all stakeholders. To this end, we provide regular coverage of all issues related to the environmental impacts of our companies and measures taken by them in relevant sections of our corporate websites and work on the following issues on an ongoing basis:

- train and enhance environmental skills and awareness of employees;
- interact with federal and municipal authorities, regulating and non-governmental organisations, and with other stakeholders on environmental issues;
- inform suppliers and contractors of our environmental requirements and standards and follow up on their implementation;
- prevent emergency situations with environmental implications;
- allocate and distribute financial resources to implement our environmental policy.

Employees of Gazprom energoholding Group's production companies responsible for environmental activities are trained under the following programmes: Ensuring Environmental Safety of Hazardous Waste Treatment, Ensuring Environmental Safety by Managers and Experts of General Management Systems, Professional Training to Qualify for the Tasks of Handling Hazard Class 1 to 4 Wastes at least once every five years throughout the period of employment.

NUMBER OF EMPLOYEES TRAINED IN ENVIRONMENTAL ISSUES IN 2014–2015, PEOPLE

	2014	2015
Mosenergo	90	90
TGC-1	27	77
OGK-2	88	50
MOEK	46	32

In our opinion, the most notable achievements by our companies in the reporting period (2014–2015) in terms of stakeholder engagement on environmental matters are as follows.

MOSENERGO
- Active media coverage of environmental aspects of the company's operations, including the publication in Rossiyskaya Gazeta (the official newspaper of the Russian Government) of data on pollutant emissions for 2014 and environmental activities in 2015 to reduce them;
- celebration of World Environment Day in the company;
- distribution in the Internet of a video about the company's environmental performance and a video about the commissioning of CCGT-220 at Mosenergo's CHPP-12, cooperation with the environmental museum in Mytishchi.

TGC-1
- Successful interaction with the Finnish and Norwegian sides on adjusting the water level and preserving the ecosystem in Lake Inari;
- distribution of the Energy Sector: How It Works videos in social networks;
- organising and holding the Real Energy Industry media content competition;
- addressing children and teenagers on energy, energy saving and environmental issues via the myenergy.ru web-site and as part of the Hour of Power initiative in schools and higher education institutions.

OGK-2
- Maximum disclosure of environmental issues via regional mass media (newspapers, TV programmes) and direct contacts with local communities;
- involvement of branches in community council meetings and public hearings to discuss environmental impact assessment reports.

MOEK
- Direct and personalised engagement with environmental community groups and local residents by responding to requests and complaints in an official correspondence, using the hot line, and officially notifying stakeholders in writing of the progress in resolving each issue.

Each production company drafts and implements an annual Environmental Plan to reduce the adverse environmental impacts in the areas where power plants operate and to ensure sustainable use of natural resources.

In 2014, following a complaint from Kurkino residents about the noise generated by the equipment of MOEK's built-in independent heating source, instrumental measurements were performed by an accredited laboratory. Project documentation was subsequently developed, noise reducing anti-vibration joints installed, and the resulting noise level measured. A detailed report on the measures taken was presented to the administration of the Kurkino district and residents who filed the complaint.

FUEL USE AND ENERGY EFFICIENCY

G4-EN1
G4-EN3

Our heat and electricity generation process requires the use of various fuels (gas, fuel oil and coal) as the core feedstock and considerable water consumption for process and auxiliary purposes. All feedstock and materials we use fully meet the existing national standards and do not contain polychlorinated biphenyls (PCB) or similar substances.

Energy consumption and energy efficiency management in our production companies is in line with the requirements of Federal Law No. 261-FZ On Energy Saving and Enhanced Energy Efficiency as Well as Amendments to Certain Legislative Acts of the Russian Federation dated 23 November 2009. All our production companies comply with the requirements set out in Part 1 of Article 16 of Federal Law No. 261-FZ (for organisations that produce and/or transmit water, natural gas, heat, electricity, extract natural gas, oil or coal, produce oil products, process natural gas or oil, or transport oil or oil products) and have run energy audits of their facilities. All our production companies have received energy performance certificates based on the results of the energy audits:

	Issued by	Certificate No.	Issue date
Mosenergo	OOO Intekhenergo-engineering	SRO-092-2012. 12-07	December 2012
TGC-1	ZAO ECM-Service	338-GPE/12	December 2011
OGK-2	ZAO ECM-Service	251-GPE/12	December 2011
MOEK	OAO MOEK-Proekt	POE-0090-12-0358	December 2012

As their primary fuel, Mosenergo's power plants use natural gas, which counts among the most environmentally friendly fossil fuels. As compared to other fuels, gas, when burnt, generates much less air pollutants. One of the power plants in the Moscow Region (CHPP-22) uses solid fuel, coal, as its primary fuel. The use of coal as fuel at CHPP-17 was abolished by letter of the Ministry of Economic Development of Russia No. 22235-AK/D184 dated 15 October 2012. Before 2005, the fuel mix for the Moscow Region had included both peat and coal as solid fuels, and only coal onwards. Most power plants of Mosenergo use fuel oil as emergency and backup fuel.

All CHP plants of TGC-1 located in St Petersburg and in the Leningrad Region, as well as Petrozavodskaya CHPP in Karelia use gas as their primary fuel, and fuel oil as backup fuel. Apatitskaya CHPP uses coal as its primary fuel. TGC-1 also stands apart in that its output (unlike that of Mosenergo and OGK-2) features a significant share of hydro generation:

	2014			2015		
	HPP output, '000 MWh	Total output, '000 MWh	HPP share in total output, %	HPP output, '000 MWh	Total output, '000 MWh	HPP share in total output, %
TGC-1	11,499	26,426	43.51%	12,332	25,811	47.78%

Gas dominates the fuel mix of OGK-2. In particular, Surgutskaya GRES-1, the 2nd and 3d stages of Ryazanskaya GRES, Stavropolskaya GRES, Kirishskaya GRES, Pskovskaya GRES and Adlerskaya TPP, as well as CCGT-420 of Cherepovetskaya GRES and Serovskaya GRES use gas as their primary fuel. Coal is the primary fuel for the 1st stage of Ryazanskaya GRES, Troitskaya GRES, and Krasnoyarskaya GRES-2. Novocherkasskaya GRES, Cherepovetskaya GRES and Serovskaya GRES use both gas and coal as primary fuel for heat and electricity generation, enabling adjustments of the fuel mix to fluctuations in prices for these fuels.

Seven power plants of OGK-2 (the 1st and 2nd stages of Ryazanskaya GRES, Kirishskaya GRES, Novocherkasskaya GRES, Serovskaya GRES, Troitskaya GRES, Krasnoyarskaya GRES-2, and Cherepovetskaya GRES) can also use fuel oil as startup fuel, and three plants (Ryazanskaya GRES, Stavropolskaya GRES, and Kirishskaya GRES) also use fuel oil as backup fuel. In an emergency, CCGT-420 of Cherepovetskaya GRES, CCGT-420 of Serovskaya GRES, and Adlerskaya TPP can use small amounts of diesel fuel.

MOEK's TPPs and boiler houses use natural gas as primary fuel for heat and electricity generation. MOEK also operates diesel-fired boiler houses (including mobile ones, used in emergencies); however, the share of diesel fuel in the company's overall fuel mix is about 0.03%.

We view secure fuel supplies to our plants as central to their operations. For this reason, we enter into long-term agreements for the supply of key fuels in the required amounts and build up sufficient stocks of backup fuels in line with applicable orders of the Russian Ministry of Energy.

FUEL CONSUMPTION

	2014	2015
Mosenergo		
Gas, mmcm	20,406.7	19,516.5
Fuel oil and diesel fuel, '000 tonnes	4.0	8.2
Coal, '000 tonnes	543.0	754.7
TGC-1 (including Murmanskaya CHPP)		
Gas, mmcm	5,426.1	4,928.8
Fuel oil and diesel fuel, '000 tonnes	271.9	263.7
Coal, '000 tonnes	464.7	463.1
OGK-2		
Gas, mmcm	13,074.0	12,196.1
Fuel oil and diesel fuel, '000 tonnes	51.3	18.7
Coal, '000 tonnes	13,616.7	12,824.5
MOEK		
Gas, mmcm	2,570.7	1,466.6
Fuel oil and diesel fuel, '000 tonnes	0.6	0.2
Coal, '000 tonnes	–	–

We consider specific reference fuel consumption (SRFC) to be the key energy efficiency metric for generating facilities. We are also pleased to highlight that our companies have seen their SRFC levels for electricity output steadily decline over the recent years. We attribute these declines to the growing generation share of new and upgraded units with lower specific costs.

G4-EN5
EU11

Except for MOEK, our production companies cover their own heat and electricity needs mostly using own output. Details of heat and electricity consumption for own needs by Gazprom energoholding Group's companies are presented in APPENDIX 3, TABLE 3.1.

SPECIFIC REFERENCE FUEL CONSUMPTION (SRFC)[23]

	2014		2015	
	SRFC for electricity output, g. o. e. / kWh	SRFC for heat output, kg / Gcal	SRFC for electricity output, g. o. e. / kWh	SRFC for heat output, kg / Gcal
Mosenergo				
gas	238.7	165.3	231.0	165.4
dual fuel (gas + coal)[24]	261.0	169.7	247.0	170.9
TGC-1				
gas	170.9	170.5	170.3	170.0
coal	175.2	176.3	177.0	177.2
fuel oil (Murmanskaya CHPP)	–	174.1	–	174.2
OGK-2				
gas	314.4	142.2	312.8	142.4
coal	420.1	172.5	406.9	171.9
dual fuel (gas + coal)[25]	385.9	194.5	391.6	187.7
MOEK				
gas	312.6	156.4	341.3	156.8

Energy losses during heat and electricity transmission are another important measure of the companies' energy efficiency performance. Mosenergo has no overhead or underground transmission or distribution electric grids on its balance sheet, but it has heating grids leased to MOEK on a paid basis. As of 31 December 2015, their combined length was 425 km. TGC-1 has no electricity or heat transmission grids on its balance sheet. At the same time, we have data on the actual heat losses of grids owned by subsidiaries of TGC-1. OGK-2 has no overhead or underground electric grids on its balance sheet, but it has heating grids operated by the company's branches (Novocherkasskaya GRES, Pskovskaya GRES, Ryazanskaya GRES, Serovskaya GRES, Stavropolskaya GRES, Surgutskaya GRES, Cherepovetskaya GRES), with their combined length exceeding 125.234 km. As of 31 December 2015, MOEK had a total of 8,146.1 km of heat mains and 7,706.4 km of heat distribution grids. Details of heat losses in grids on the balance sheet of our production companies are presented in APPENDIX 3, TABLE 3.2.

EU4
EU12

23. SRFC calculations are based on the total volume of fuel burnt for production, including fuel oil and diesel fuel.

24. In the reporting period (2014–2015), PAO Mosenergo's CHPP-22 used both gas and coal for heat and electricity generation to adjust its fuel mix to fluctuations in prices for these fuels.

25. In the reporting period (2014–2015), PAO OGK-2's Novocherkasskaya GRES, Cherepovetskaya GRES and Serovskaya GRES used both gas and coal for heat and electricity generation to adjust their fuel mixes to fluctuations in prices for these fuels.

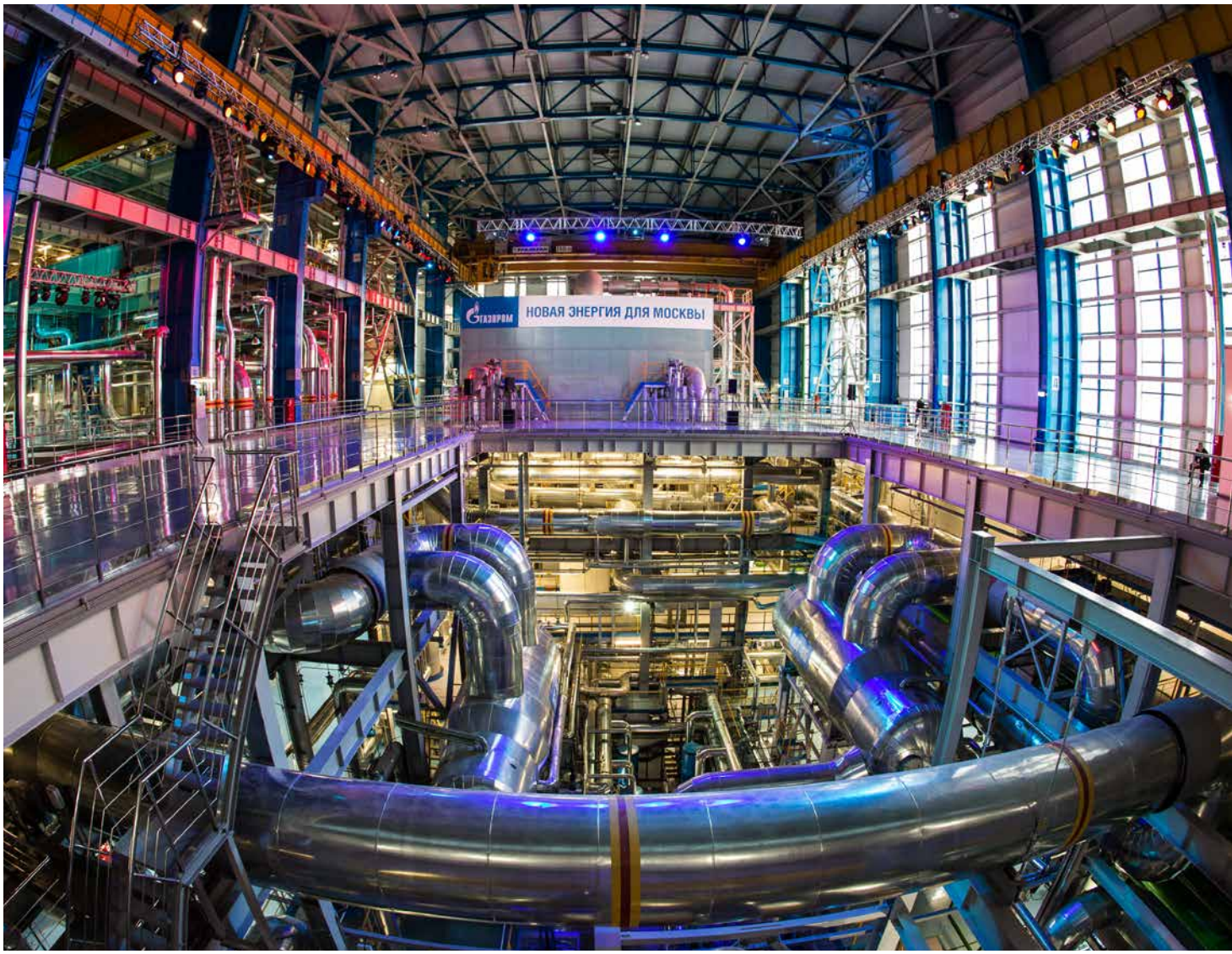
G4-EN6

ENERGY EFFICIENCY ENHANCEMENT

Pursuant to Federal Law No. 261-FZ On Energy Saving and Enhanced Energy Efficiency as Well as Amendments to Certain Legislative Acts of the Russian Federation dated 23 November 2009, Resolution of the Russian Government No. 1225 On Requirements to Regional and Municipal Energy Saving and Energy Efficiency Enhancement Programmes dated 31 December 2009 and Resolution of the Russian Government No. 340 dated 15 May 2010, as well as the Minutes of Meeting of the Ministry of Energy dated 9 September 2010 and Order of the Ministry of Energy No. 398 dated 30 June 2014, Mosenergo and TGC-1 adopted and approved the updated Energy Saving and Energy Efficiency Enhancement Programme of Mosenergo for 2013–2015 and Energy Saving and Energy Efficiency Enhancement Programme of TGC-1

In 2015, Mosenergo won an award of the Government of Moscow for environmental protection efforts in the Best Completed Project Using Green and Energy Saving Technologies category. The Commissioning of PGU-420 at CHPP-16 project won the first prize. The generating unit came online in December 2014 and reduced SRFC at CHPP-16 by 15%–20%, while at the same time cutting natural gas consumption and reducing operating costs. With the introduction of new efficient combined cycle equipment, the environmental performance of CHPP-16 improved as well; in particular, specific emissions of pollutants reduced five times versus the low-efficiency 90 MW unit scheduled for decommissioning in 2016.

CHPP-16, PAO MOSENERGO



CCGT-420 GENERATING UNIT TURBINE HALL AT CHPP-16, PAO MOSENERGO

for 2012–2015. Under these programmes, in the reporting period, Mosenergo and TGC-1 implemented a number of energy saving initiatives. Details of energy saving initiatives implemented in 2014–2015 and resulting savings are presented in APPENDIX 3: for Mosenergo – TABLE 3.3., for TGC-1 – TABLE 3.4.

OGK-2 established a dedicated business unit, Quality Management System and Business Solution Assessment Project Centre, responsible for enhancing the company's operating efficiency. In particular, every year starting from 2013, the Centre, in cooperation with the production section, has been preparing a list of measures to enhance energy efficiency of core and auxiliary equipment in its operating branches. In line with the approved procedures, every energy saving initiative is to be systemised and a relevant project charter must be drafted and entered into the register. The register is then submitted to the Steering Committee for approval, and a source of financing is determined for every cost-driving activity. The overall assessment of the resulting effect is made at the year end. Starting from 26 August 2013, as part of a project to enhance operating efficiency (the Efficiency project), OGK-2 implemented initiatives to enhance energy efficiency and save energy. Details of these initiatives are presented in APPENDIX 3, TABLE 3.5.

MOEK's Energy Saving Programme is developed in line with Resolution of the Moscow Regional Energy Commission No. 398 On Establishing Requirements to Energy Saving and Energy Efficiency Enhancement Programmes for Regulated Organisations dated 24 December 2012. MOEK is also involved in the Municipal Targeted Programme on Energy Saving in Moscow for 2011–2016 and until 2020 and the State Programme of the City of Moscow on the Development of Utilities and Engineering Infrastructure and Energy Saving for 2012–2018. Under these programmes, in 2014–2015, MOEK implemented a number of initiatives to save energy resources and enhance energy efficiency. Details of these initiatives are presented in APPENDIX 3, TABLE 3.6.

In the reporting period (2014–2015), Gazprom energoholding Group's production companies achieved the following savings through the implementation of their energy saving programmes:

The key target indicator established by the Energy Saving Programme for MOEK as a company focused on heat transfer is Reduction of Process Losses of Heat During Transfer throughout Heating grids.

As a result of energy saving initiatives, the following savings were achieved for this indicator:

- in 2014 – 157,791 Gcal versus the planned 166,739 Gcal (actual versus plan variance is due to the adjustment of the scope of certain initiatives, with certain activities moved to 2015);
- in 2015 – 89,465 Gcal versus the planned 86,921 Gcal.

Energy saving and energy efficiency enhancement programmes	Savings achieved							
	2014				2015			
	'000 t. o. e.	mm kWh	'000 Gcal	RUB mm	'000 t. o. e.	mm kWh	'000 Gcal	RUB mm
Energy Saving and Energy Efficiency Enhancement Programme of Mosenergo for 2013–2015	711.10	153.80	5.50	2,949.80	821.10	289.10	14.10	3,588.90
Energy Saving and Energy Efficiency Enhancement Programme of TGC-1 for 2014–2015	10.53	1.38	–	32.30	10.08	2.49	–	40.90
The Efficiency project at OGK-2	43.00	35.00	31.00	498.00	87.00	67.00	60.00	1,422.00
MOEK's Energy Saving Programme and implementation at MOEK of the Municipal Targeted Programme on Energy Saving in Moscow for 2011–2016 and until 2020	–	0.06	157.79	232.76	–	0.47	89.47	143.77

POLLUTANT AND GHG EMISSIONS

G4-EN15

Air pollutants are harmful for the environment and for humans if their content gets above the natural levels and beyond regulatory limits. Therefore, we believe it important to monitor the environmental impacts of our business and take measures to cut emissions.

The thermal power plants operated by our production companies have automated systems to monitor the content and amount of pollutant emissions. The data gathered by the system are both used for internal control and informed management decision making, and fed to specialised supervisory and regulatory authorities responsible for management of natural resources and environmental protection.

In the event of meteorological conditions conducive to dangerous air pollution levels, our thermal power plants take emergency measures to reduce pollutant emissions.

Apart from emergency pollutant emission cuts, our power plants also install low-toxicity burners, flue gas recirculation circuits, two-stage combustion circuits and implement other high performance technologies in their power generation and water boilers.

In addition to the automated pollutant emission monitoring system, the power plants regularly monitor the content and amount of pollutant emissions in line with the schedule (approved by supervisory authorities) of monitoring compliance with regulatory target emission rates for each source of emissions. Accredited environmental laboratories on a regular basis monitor the air quality in the areas affected by power plants' operations, both at emission sources and at selected points within relevant localities.

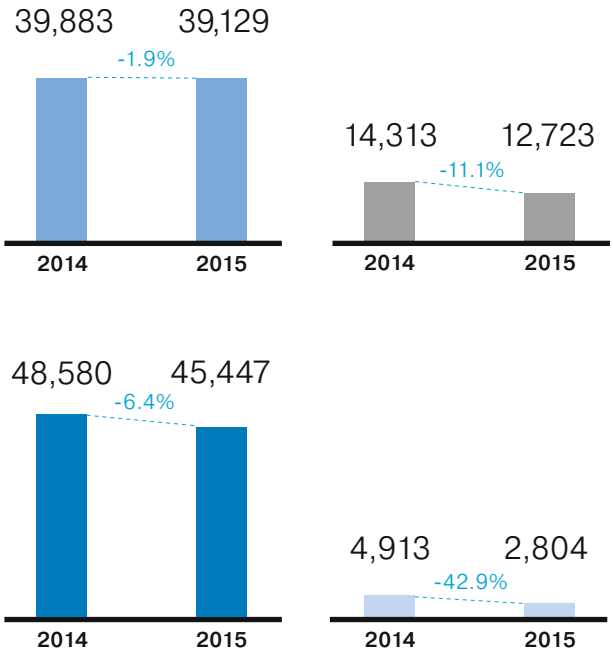
Our production companies analyse data on the intensity and composition of emissions, the condition of instruments and equipment, and the range of measures taken, and study the best existing solutions to inform planning of air protection measures.

In the reporting period (2014–2015), our companies did not buy or sell any carbon quotas as the country has no domestic carbon quota market and Russian companies have no access to the international quota trading market.

All types of pollutant emissions by our power plants are within the limits set by special permits – regulatory target emission rates (TERs) based on the requirements of clause 1 of Article 14 of Federal Law No. 96-FZ On Protection of Ambient Air dated 4 May 1999.

-7%

Reduction of total greenhouse gas emissions by Gazprom energoholding Group's companies in 2015



GHG emissions, CO_2 equivalent, '000 tonnes

G4-EN19

G4-EN21 Detailed information on emissions by Gazprom energoholding Group's production companies is presented in APPENDIX 3: on GHG and equivalent emissions – TABLE 3.7., on intensity of various pollutant emissions – TABLE 3.8.

All generating facilities operated by Mosenergo, OGK-2 and MOEK generate electricity and heat by firing hydrocarbon fuel. By contrast, TGC-1 relies on hydro generation for a considerable share of its output. The table shows pollutant emissions by TGC-1 (excluding Murmanskaya CHPP) per unit of output by hydrocarbon-fired electricity and heat generation facilities (CHP plants).

Emissions of major pollutants and their intensity per unit of output by hydrocarbon-fired electricity and heat generation facilities (CHP plants) operated by TGC-1 (excluding Murmanskaya CHPP) are presented in APPENDIX 3, TABLE 3.9.

In response to growing consumer demand, we are implementing ambitious investment projects on an annual basis by launching new high performance generating facilities and decommissioning outdated and low performance units. As a consequence, our generation becomes more environmentally friendly and uses less fuel. For this reason, we are also studying changes in the total emissions per output unit.

For instance, following the launch of CCGT-420 at Cherepovetskaya GRES (gas-fired), OGK-2 reduced its GHG emissions by 180.1 tonnes of CO_2 equivalent / mm kWh.

Each of our productions companies implements regular environmental initiatives to reduce pollutant and greenhouse gas emissions by old facilities. To measure our progress in this area we separately track changes in emissions from base year (2008) for the facilities that had been owned by the Company in the base year and are owned today.

We carry out research projects and deploy new technological solutions to make the ambient air cleaner. In 2014, we developed the Rules for Setting up Monitoring Framework for Pollutant Emissions at TPPs and Boiler Houses; Guidelines for Inventory of Pollutant Emissions from TPPs and Boiler Houses; and Guidelines for Setting Standards for Pollutant Emissions at TPPs and Boiler Houses.

In June 2016, the construction of a 330 MW generating unit (STU-330) with a circulating fluidised-bed (CFB) boiler was completed at Novocherkasskaya GRES of OGK-2. This project is unique in that, apart from using a cooling tower to reduce water consumption, it provides for a coal firing technology that is an optimal tool to ensure compliance with the existing environmental standards and applicable European standards for pollutant emissions. This was the first case when this technology was introduced in Russia.

INITIATIVES IMPLEMENTED IN 2014–2015 TO REDUCE GREENHOUSE AND POLLUTANT GAS EMMISSIONS

	Factors driving the reduction in greenhouse and pollutant gas emissions
Mosenergo	Use of efficient equipment (CCGT units). Commissioning of CCGT-220 at CHPP-12, CCGT-420 at CHPP-16, and CCGT-420 at CHPP-20. Implementation of energy saving initiatives (shifting heat production from district heating plants (DHPs) and subdistrict heating plants (SHPs) to Mosenergo's CHP plants). Decommissioning of outdated equipment in 2014: – GTU-1 gas turbine at CHPP-29 (sold); – TG-1, 2, and 3 turbine units at CHPP-6 (sold). Decommissioning of outdated equipment in 2015: – TG-7 turbine units at HPP-6 (sold); – boiler houses GT-1 and 2, Kuryanovo; – boiler houses GT-1 and 2, Lyublino.
TGC-1	Use of efficient equipment (CCGT units). Reduced loads determined by branches of Regional Dispatch Office of OAO System Operator of the Unified Power System. Shift in the burnt fuel mix toward natural gas. Increased electricity output by hydro power plants (due to higher water flow levels in rivers). Decommissioning of outdated equipment in 2014: – TP-230-4 type steam boiler at generating unit No. 3 of Pervomayskaya CHPP, Nevsky Branch. Decommissioning of outdated equipment in 2015: – turbine unit T-20.5-26 at generating unit No. 1 of PP-1; – turbine units T-37-90 at generating unit No. 5 and K-50-90 at generating unit No. 6 of Dubrovskaya CHPP, Nevsky Branch; – boiler unit PK-10-Sh at generating unit No. 1 of Dubrovskaya CHPP, Nevsky Branch.
OGK-2	Decommissioning of outdated equipment in 2015: – boilers No. 1, 2, 7 and 11 at Serovskaya GRES; – generating unit No. 7 at Troitskaya GRES.
MOEK	Decommissioning of four inefficient minor boiler houses in 2014. Transfer of 34 stationary emission sources to Mosenergo. Installation of automated process control systems for boilers – at minor boiler house Gora (in Troitsky and Novomoskovsky Administrative Districts), Zakharyino SHP and Kosino SHP. Boiler repairs at Krasnopakhorskoe SHP and Yakovlevo SHP (in Troitsky and Novomoskovsky Administrative Districts). Repair and adjustment operations at SHP-18 and SHP-36 (in Troitsky and Novomoskovsky Administrative Districts). Equipment replacement in 2015: – one boiler at DHP-2 in Zelenograd; – division wall of the PTVM-120E boiler at Tereshkovo DHP. Technical upgrade of gas equipment carried out and automated safety and adjustment systems of gas-fired units brought into compliance with safety rules at two subdistrict heating plants: Pokrovskoe-Streshnevo SHP and SHP-42.

TOTAL COSTS OF MEASURES TO REDUCE THE NEGATIVE IMPACTS OF EMISSIONS ON THE AMBIENT AIR, RUB THOUSAND

	2014	2015
Mosenergo	20,515.0	14,231.0
TGC-1	1,266.0	27,531.0
OGK-2	507,709.0	107,926.4
MOEK	48,150.0	25,902.0

G4-EC2

CLIMATE CHANGE

Since the demand for electricity and heat closely correlates with both seasonal temperature fluctuations and instability of current weather conditions, any material climate change in the regions where we operate would immediately have a noticeable impact on the revenue of our production companies. Our hydro generation facilities owned by TGC-1 are also exposed to risks related to water flow level fluctuations.

Considering that material climate changes are unlikely in the short and medium term and are hard to accurately forecast in the longer term, we do not assess their potential financial implications for our companies. Nevertheless, we do not rule out this risk and are aware of the fact that climate change can both be harmful to our business and become a source of extra demand and higher profits for us. For this reason, we take pro-active steps to improve the economic, financial and process sustainability of our business to make sure we are prepared for any possible scenario.

NARVSKAYA HPP, PAO TGC-1

WATER MANAGEMENT

G4-EN1
G4-EN8

In managing water resources, we are guided by the requirements of Russian and international laws and seek to minimise the impacts the operations of our production companies have on water resources. All our operating processes are compliant with the following approved regulations aimed to reduce water consumption, water disposal and effluent discharges:

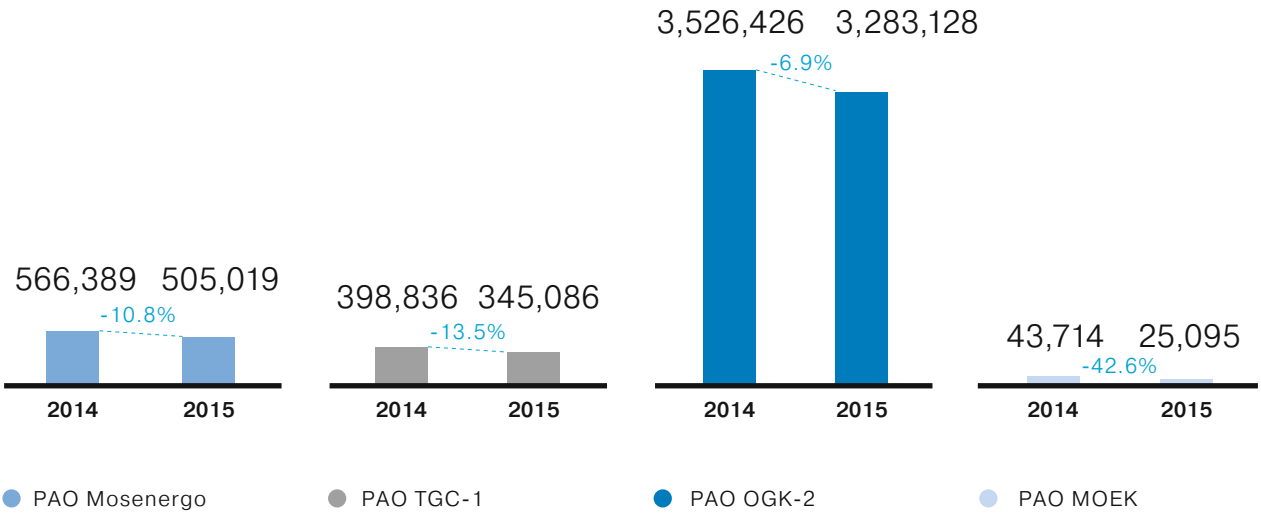
- Water Code of the Russian Federation No. 74-FZ dated 3 June 2006;
- Water Strategy of the Russian Federation until 2020 dated 27 August 2009.

The process of heat and electricity generation is associated with heavy water consumption and discharge of wastewater containing various pollutants.

At combined heat and power plants operated by our companies service water is mostly consumed by cooling systems, where it is used to condense steam. Steam power plants obtain high-pressure water steam from desalinated water by burning fuel. Steam energy is transformed into mechanical energy by rotating the turbine rotor which is then transformed into electricity via an electric generator. The steam exiting from the turbine is condensed by cooling water.

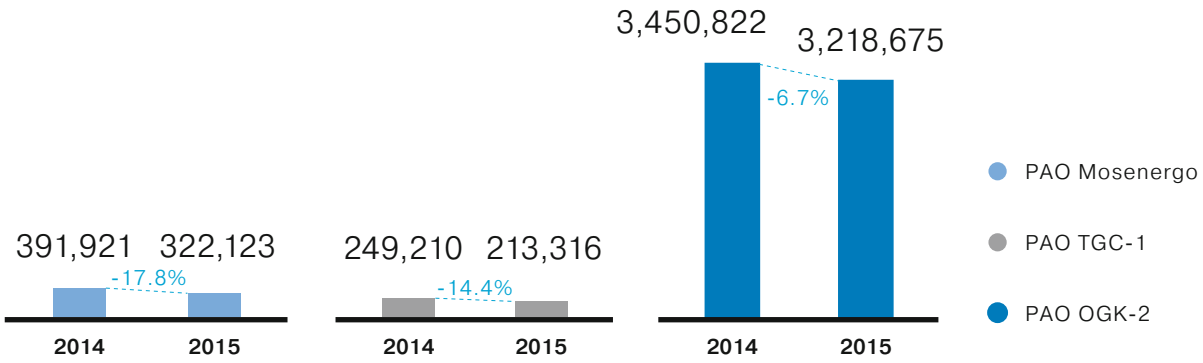
Service water is also needed to cool down auxiliary equipment. Once processed in water treatment facilities, service water is used to compensate for steam losses in the principal cycle of the power plant and the heat supply system. Water is also used to wash heating surfaces of boilers and clean equipment (mainly boilers) of deposits. Coal-fired power plants use water to remove ash and slag from generating facilities, which are disposed of at ash dump sites.

Most combined heat and power plants draw service water from surface water bodies, while some power plants use industrial wastewater. Water from municipal water pipelines is used for sanitary purposes.



Water intake, '000 cubic metres

G4-EN22



Wastewater, '000 cubic metres

Detailed information on the volume and sources of water intake as well as water reuse at Gazprom energo-holding Group's production companies is presented in APPENDIX 3, TABLE 3.10.

Wastewater is discharged via special water outlets into surface water bodies and sewerage networks. Chemical laboratories of power plants check the quality of wastewater on a regular basis. Clean-to-standard wastewater includes wastewater from cooling systems, while treated-to-standard wastewater is water that was purified by treatment facilities. To obtain treated-to-standard wastewater we use mechanical, physical/chemical and biological treatment methods. Details of the volume of disposed wastewater and its purification levels are presented in APPENDIX 3, TABLE 3.11.

Wastewater discharged by our production companies does not contain polychlorinated biphenyls (PCB) or similar substances and is not transferred to other organisations for reuse.

We are actively working to minimise water consumption and water discharge by all our power plants, as well as effluent in wastewater. To this end, all our power plants install or retrofit special wastewater treatment and neutralisation equipment and facilities. In monitoring the effluent we pay specific attention to oil products as an essential environmental aspect.

In 2015, as part of the investment programme to reduce water consumption for process purposes, Mosenergo retrofitted cooling tower No. 2 at CHPP-8 (water consumption reduced by 267 thousand cubic metres) and cooling tower No. 1 at CHPP-26 (water consumption reduced by 826 thousand cubic metres). The water basin protection investment programme for 2016–2019 was updated; water consumption is expected to fall by 10,400 thousand cubic metres.

TGC-1 and Norwegian and Finnish environmental and energy professionals jointly work on preserving the natural parameters of Lake Inari. The parties update their forecasts of the hydrological situation on a regular basis and use them to agree water release from Lake Inari, as well as share information on safe operation and monitoring of waterworks. Their joint efforts are primarily focused on bringing changes in water levels in Inari close to natural changes and preserve its flora and fauna by recreating the conditions for fish spawning and conservation of fish resources. The parties cooperate under the tripartite treaty On Regulation of the Water Level of Lake Inari Using Kaitakoski Hydro Power Plant signed by the Governments of the USSR, Norway and Finland in 1959 (in February 2014, an expert team started preparing amendments thereto). The treaty provides for the monitoring of the water level in Lake Inari, located in Finland, and the Paz River, which flows out of Inari and runs across Finland, Russia and Norway. Seven hydro power plants are installed on the river, including five plants that are combined into the Paz HPP Cascade of TGC-1 and two plants that are part of the Norwegian energy system.

Kaitakoski HPP is the balancing power plant of the hydro system. The HPP is the first power plant of the Paz HPP Cascade that directly affects the level of water and determines the operating mode of downstream plants. The joint efforts of energy and environmental experts of the three countries over more than half a century are an example of stable and mutually beneficial relations between neighbouring nations in natural resources management.

TGC-1 has in place a specialised Water Management Efficiency Improvement Programme. It aims to achieve gradual reduction of drinking quality water losses during intake for process purposes and own needs, and reduction of wastewater discharge into public sewage networks. Under this programme, sustainable reduction of water consumption is achieved by setting target performance indicators (TPIs) calculated on a quarterly basis for each business unit. The long-term objective of the programme is to bring the losses at each power plant in line with regulatory standards.

OGK-2 pursues a programme for staged transition to the water recirculation model. A considerable part of water drawn by the company is used to cool process equipment. Water discharged after equipment cooling is clean-to-standard, so its key negative impact on natural water bodies is thermal pollution. To reduce this impact all new generating units of OGK-2 are designed and constructed using only the water recirculation model for water supply and cooling towers. This model is used in all newly constructed units of Novocherkasskaya GRES, Cherepovetskaya GRES, Serovskaya GRES and Troitskaya GRES.

Power plants of OGK-2 (Krasnoyarskaya GRES-2, Novocherkasskaya GRES, Kirishskaya GRES and Cherepovetskaya GRES) annually direct water from the discharge channel to the intake channel to heat the latter, which enables a considerable reduction of water intake from surface water bodies.

In 2015, at Ryazanskaya GRES, the most effective method was used to clean the Novomichurinsk reservoir – introduction of herbivorous fish species, with about 10 tonnes of fingerlings released, including 6 tonnes of grass carp and black carp, 2 tonnes of mirror carp, and 1.5 tonnes of silver carp.

A specially prepared and lit ground was used, with the fish released via an artificial pool and soft ducts. Over the recent years, a total of 57.5 tonnes of fry has been stocked by Ryazanskaya GRES into the Novomichurinsk reservoir. Stocking helps protect the power plant water intake from small crustaceans and algae which the introduced fish feed on. Additionally, it improves the environmental condition of the reservoir, which affects the well-being of the water environment throughout the region.

In 2015, Cherepovetskaya GRES, a branch of OGK-2, commissioned a 420 MW combined cycle unit (CCGT-420) with a wet cooling tower. It enabled Cherepovetskaya GRES to reduce:

- specific water consumption from surface water bodies – from 90.3 thousand cubic metres / million KWh in 2014 to 47.8 thousand cubic metres / million KWh in 2015;
- specific discharge – from 15.5 tonnes / million KWh in 2014 to 11.2 tonnes / million KWh in 2015;
- specific waste generation – from 80.4 tonnes / million KWh in 2014 to 65.4 tonnes / million KWh in 2015.

G4-EN23

WASTE GENERATION

Business and administrative operations of our companies generate industrial and consumer waste. The level of adverse environmental impacts of our companies' operations, primarily the intensity of pollutant emissions, and the amount of waste are closely linked to the electricity generation rate, the configuration and condition of process equipment at the power plants, as well as to the fuel mix used.

Measures to collect, use, neutralise, transport and dispose of Hazard Class 1, 2, 3 and 4 wastes are taken:

- at Mosenergo – under perpetual licence No. 077 027 to neutralise Hazard Class 2 wastes and dispose of Hazard Class 4 wastes dated 2 September 2014;
- at TGC-1 – under license Series 78 No. 00096 to collect, transport, treat, utilise, neutralise, and dispose of Hazard Class 1 to 4 wastes dated 25 July 2016;
- at OGK-2 – under perpetual licence No. D 26 00003 to neutralise and dispose of Hazard Class 1 to 4 wastes dated 11 January 2013.

MOEK does not collect, use, neutralise, transport and dispose of Hazard Class 1, 2, 3 and 4 wastes; all waste is subject to transfer to specialized companies holding relevant licenses.

Draft waste generation targets (DWGT) and waste disposal limits have been developed and agreed with supervisory authorities for each branch of our production companies. These documents also list the waste neutralisation and waste disposal sites used by the Company. Waste is transferred to other entities to be processed for neutralisation, recycling or disposal at municipal solid waste (MSW) landfills.

Even a one-off unauthorised disposal of industrial waste may cause a genuine environmental problem. For this reason, all business units of our companies strictly monitor their waste handling. Each type of industrial waste is collected into special containers or on special temporary waste storage sites. Waste is taken out by properly licensed third-party companies in line with environmental requirements. Then Hazard Class 1, 2 and 3 wastes and some Hazard Class 4 wastes are disposed of or recycled by specialist companies. The bulk of Hazard Class 4 and 5 wastes is taken to municipal solid waste landfills. All our waste disposal destinations have been agreed with the Federal Supervisory Natural Resources Management Service (Rosprirodnadzor).

Most waste from our operations is represented by Hazard Classes 4 and 5 wastes. They include bottom ash from coal combustion. Bottom ash is placed at our own specially licensed ash dumps. Out of all the waste we generate only used-up fluorescent lamps are of Hazard Class 1. They are carefully collected and delivered to specialist entities for disposal (neutralisation).

Detailed information on the disposal of waste generated by our power plants is presented in APPENDIX 3, TABLE 3.12.

A considerable portion of OGK-2's generation fleet is coal-fired, which makes the issue of bottom ash disposal particularly important for our Company. To reduce its amount and maintain the useful capacity of existing ash dumps coal-fired branches of OGK-2 (such as Novocherkasskaya GRES, Ryazanskaya GRES, Cherepovetskaya GRES and Troitskaya GRES) take measures to dispose of bottom ash waste from ash dumps and remove dry ash directly from under electric filters. At present, we are considering storing bottom ash waste from Krasnoyarskaya GRES-2 in the mined-out area of the Borodinsky open-pit coal mine.

WASTE GENERATION, TONNES

	Mosenergo		TGC-1		OGK-2		MOEK	
	2014	2015	2014	2015	2014	2015	2014	2015
Hazard Class 1	11.9	13.8	10.3	11.5	10.2	12.1	8.3	7.4
Hazard Class 2	14.0	1.2	11.2	2.0	7.2	13.6	9.5	4.3
Hazard Class 3	917.5	994.4	1,537.2	1,459.2	710.4	839.9	56.6	16.5
Hazard Class 4	8,265.1	5,123.3	9,924.6	8,660.3	211,534.3	7,723.4	1,433.2	940.7
Hazard Class 5	143,850.0	167,573.4	109,376.3	95,543.9	3,115,643.8	2,990,140.3	21,912.2	15,432.0
Total	**153,058.5**	**173,706.1**	**120,859.6**	**105,676.9**	**3,327,905.9**	**2,998,729.3**	**23,419.8**	**16,400.9**
Including:								
oil slime	248.0	658.0	898.1	641.2	312.2	50.2	–	–
bottom ash	119,059.0	156,912.7	74,503.3	62,629.0	3,290,269.3	2,872,508.2	–	–

Bottom ash from OGK-2's Troitskaya GRES is taken to an ash dump at the salt lake of Shubarkol. Since it is located in the Kostanay Region of Kazakhstan, Russia's neighbour, all relevant environmental measures are taken in accordance with the Environmental Code of the Republic of Kazakhstan. In particular, we monitor emissions at the ash dump on a regular basis, as well as run operating and environmental monitoring of environmental impacts of the ash dump, pulp pipeline and water duct of Troitskaya GRES, which are also located in the Republic of Kazakhstan. The following measures were taken at the ash dump in 2014–2015:

- dust suppression at ash storage areas by planting perennial grasses;
- maintenance of fences and separation dams of the ash dump;
- operating and environmental monitoring of environmental impacts of the ash dump;
- reclamation of the ash dump's Sections 1 and 2;
- planting perennial grasses in Sections 1 and 2, including the surface of the dams;
- ash dump zoning;
- environmental audit of the ash dump;
- replacing dead trees and bushes on Section 1 dams;
- planting trees and bushes on Section 2 dams.

All these measures are carried out according to the Action Plan of measures to be taken by Troitskaya GRES, a branch of OGK-2, to reduce the adverse environmental impact of the ash dump at Lake Shubarkol in 2015–2016, agreed with the Ministry of Environment of the Republic of Kazakhstan. Upon its expiry, we will adopt a similar plan for 2017–2018 (and so on until we finish using and shut down the ash dump).

> By setting up an ash dump at the salt lake of Shubarkol, we noticeably changed the local environment. Some of these changes are negative, but some are positive for the local flora and fauna.

E.g. meltwater from the eastern water intake area of the dump was obstructed by the dam, which resulted in a new water reservoir, Vostochny. It lies in the path of seasonal bird migrations. Currently, the new lake hosts ducks, nettas, herons, cranes, coots and swans, with many of the species featured in the Russian Red List of endangered species. An increase in the fowl population led to higher numbers of birds of prey (kites, golden eagles, falcons and snowy owls) and carnivorous animals (foxes, corsacs and ferrets). Desalination

of the surface waters in the ash dump vicinities created favourable living and spawning conditions for carps. Gudgeons, which also appeared in the lake, are a sign that the water is relatively clean. Moreover, grain crops on the land around the dump have increased, while the area of saline soils has shrunk, creating more agricultural lands.

In June 2016, new 660 MW coal dust-fired generating unit No. 10 (STU-660) with a cooling tower was commissioned at Troitskaya GRES. It uses higher quality Kuzbass coal (with lower ash content) as process fuel, as opposed to other generating units using coal from the Ekibastuz coal basin in the Republic of Kazakhstan. The operation of this generating unit will reduce specific emissions, specific amount of bottom ash waste and specific water consumption by the branch in general. Moreover, this unit provides for potential dry ash (fly ash) screening, which will enable additional reduction of disposed waste by reclassifying some ash from "waste" into "product". Additionally, generating unit No. 10 provides for the construction of emissions desulphurisation facilities, which will considerably reduce sulphur emissions.

KIRISHSKAYA GRES, PAO OGK-2

FINES, NON-FINANCIAL PENALTIES, COSTS AND INVESTMENTS RELATED TO ENVIRONMENTAL PROTECTION

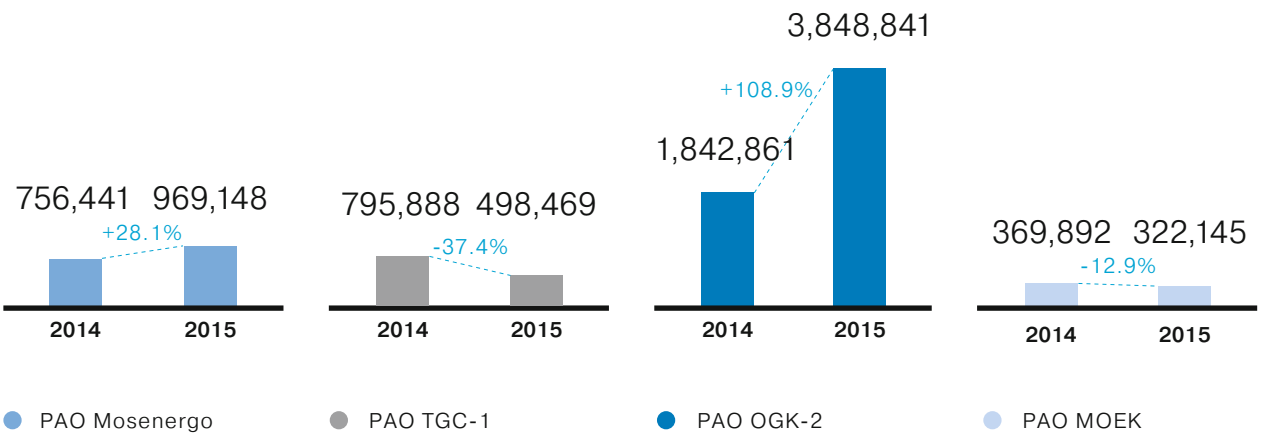
G4-EN29

	Mosenergo		TGC-1		OGK-2		MOEK	
	2014	2015	2014	2015	2014	2015	2014	2015
Number of non-financial penalties imposed	–	–	–	–	–	–	–	–
Total amount of fines imposed, RUB thousand	1,020	1,050	85	370	352.5	1,374.6	–	–
– including in the Russian Federation	1,020	1,050	85	370	240	338	–	–
– including in the Republic of Kazakhstan	–	–	–	–	102.5	1,086.6	–	–

The largest fines imposed on OGK-2 in 2015 were related to the company's operation of the ash dump of Troitskaya GRES in the Republic of Kazakhstan. All identified violations were remedied, the fines were paid.

Detailed information on the breakdown of environmental costs and investments of Gazprom energoholding Group's production companies is presented in APPENDIX 3, TABLE 3.13.

G4-EN31



Environmental costs and investments, RUB thousand

+49,8%

Increase in total environmental costs and investments of Gazprom energoholding Group's companies in 2015.

KRASNOYARSKAYA GRES-2, PAO OGK-2

In 2015, silencers were installed at OGK-2's Krasnoyarskaya GRES, which will enable a reduction of the acoustic load on the environment. Each of the two silencers weighs 3.4 tonnes. They were mounted on the roof of the boiler section at the height of 53 m using a helicopter.

Silencers had to be installed because during startup of the boilers steam is released into the atmosphere by steam superheater blowdown. In the process, the flow of heated steam reaches the speed of sound at the exit, driving the acoustic load from the generated noise beyond standard values, which causes discomfort to the plant's personnel, local residents and the fauna of the surrounding forests.

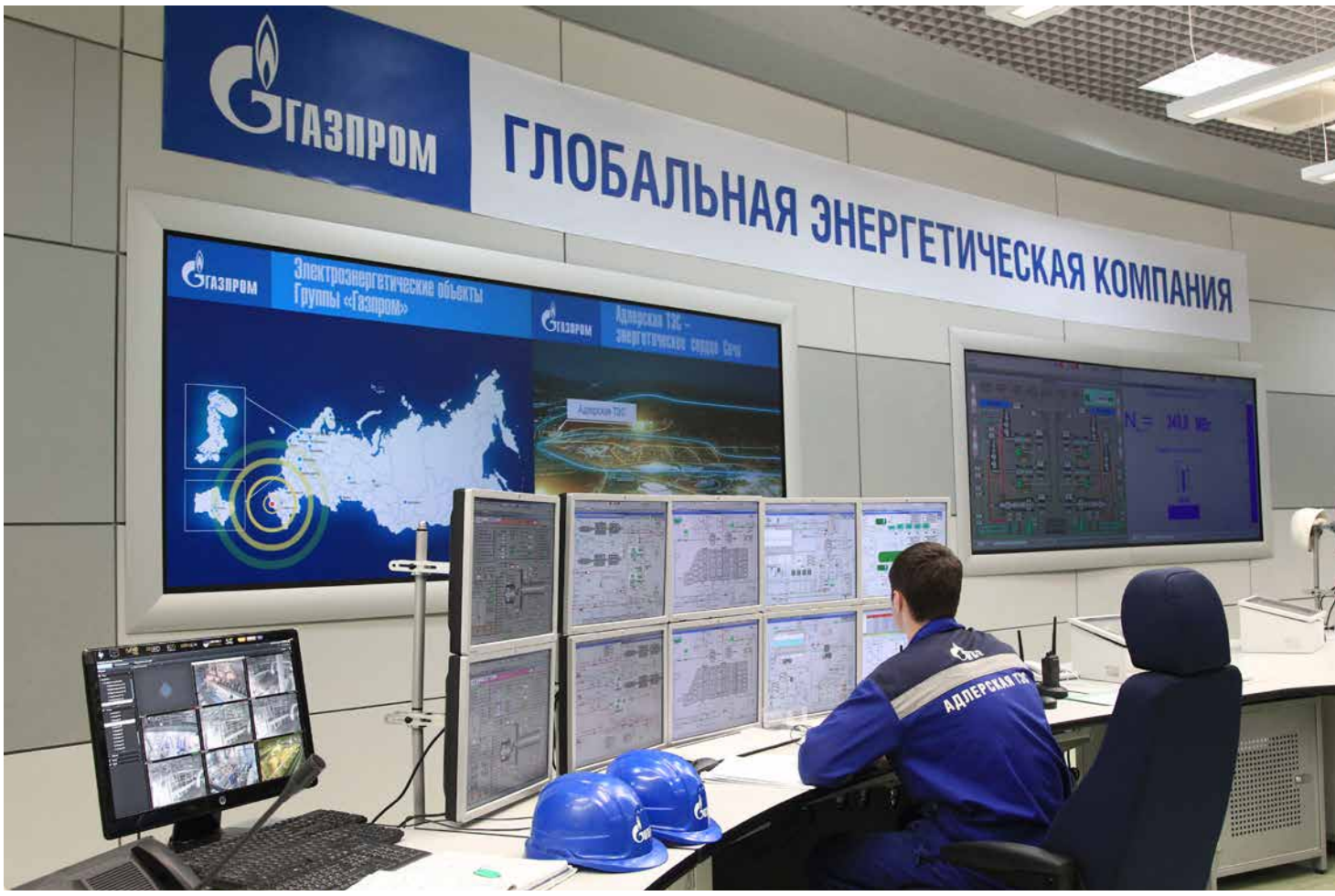
Silencers will reduce the acoustic load during boilers startup and shutdown and in case of emergencies related to loss of load. Noise is reduced by effective slowdown and expansion of the steam flow and speed reduction at the outlet, which causes the flow to divide into small jets.

ENVIRONMENTAL COMPLAINTS

G4-EN34

RECEIVED BY THE COMPANIES IN THE REPORTING PERIOD, AND THEIR RESOLUTION

	Mosenergo		TGC-1		OGK-2		MOEK	
	2014	2015	2014	2015	2014	2015	2014	2015
Total number of environmental complaints filed by the public	12	12	2	2	1	1	–	–
The share of complaints addressed to in the reporting period, number / %	100	100	100	100	100	100	–	–
The share of complaints resolved over the reporting period, number / %	100	100	100	100	100	100	–	–



UNIT CONTROL ROOM AT ADLERSKAYA TPP, PAO OGK-2

LABOUR SUSTAINABILITY

G4-DMA

MANAGEMENT'S APPROACH TO HR POLICY,

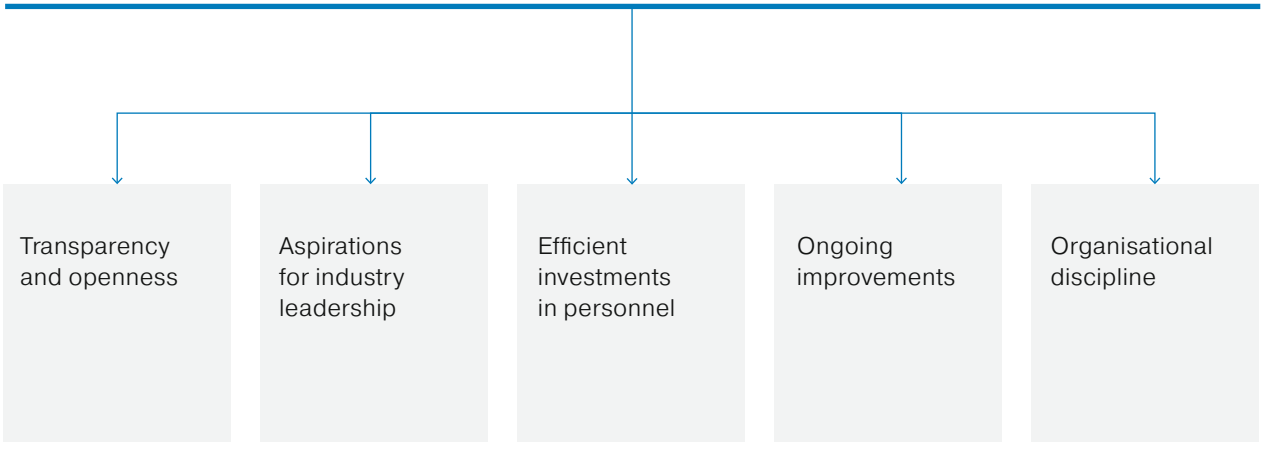
OCCUPATIONAL HEALTH AND SAFETY, RAISING THE QUALITY OF HUMAN RESOURCES, AND PREVENTING CORRUPTION

The HR policy and the personnel management system of Gazprom energoholding Group's production companies are aligned with the strategic goal of PJSC Gazprom: "to become a leader among global energy companies", and are aimed at building a team of professionals capable of delivering their objectives in an efficient way. We believe that our HR policy must primarily focus on achieving and maintaining a stable status of a "preferred employer" that attracts committed and highly efficient people.

We are aware that compliance with labour law requirements and competitive remuneration are the necessary, but not sufficient conditions for retaining highly skilled professionals and recruiting new talent. For this reason, we strongly focus on creating safe and comfortable working conditions and providing our employees with opportunities for career enhancement and professional development, as well as on holding skills contests for employees, sports, recreational and other events and programmes. We also care about social security of our employees. We believe that all this combined provides an incentive for long and efficient employment experience with our companies and makes our employees aware of their value to the Company and of the importance of their contribution to the overall success.

The Human Resources Management Policy of PJSC Gazprom, its Subsidiaries and Entities (approved by Resolution No. 49 of PJSC Gazprom's Management Committee dated 7 November 2006) is the underlying document for HR management in Gazprom energoholding Group's production companies. Corporate documents of our companies were drafted in strict compliance with the above document and statutory requirements of the Russian Federation.

KEY HR POLICY PRINCIPLES



We work towards building a common governance and management framework across Gazprom energoholding Group's production companies. These efforts will result in the unification of articles of association, organisational structures, core business processes, and corporate statistical and analytical reporting forms.

HR management issues are assigned to dedicated functional sections and business units of Gazprom energoholding Group's companies. The relevant functional section of OOO Gazprom energoholding provides methodological support, organises and controls relevant activities of Gazprom energoholding Group's production companies. Representatives of OOO Gazprom energoholding are among the members of the management bodies (and advisory bodies) of its subsidiaries, which are authorised to make decisions to approve the companies' organisational structures and staffing, management remuneration schemes, key performance indicators (KPI list, evaluation methods, target values, progress reports), and approval of collective bargaining agreements. It enables the Company to pursue a uniform policy in terms of organisational development, goal setting and remuneration paid to top managers. Work is underway to unify/optimise the subsidiaries' organisational structures and remuneration schemes for certain categories of employees.

Key HR management documents effective across Gazprom energoholding Group include:

- OOO Gazprom energoholding's HR Management Policy (Order No. 13-GEH dated 1 March 2012);
- OOO Gazprom energoholding's Code of Corporate Ethics (Member's Resolution No. 318 dated 15 November 2013);
- Regulation on Managing the Talent Pool to Fill Management Positions in OOO Gazprom energoholding, its Subsidiaries and Entities (Order No. 61-GEH dated 31 December 2013).

Occupational health and safety is a key industrial safety priority in our companies and is governed by the requirements of applicable regulations, including:

- Federal Law No. 116-FZ On Industrial Safety of Hazardous Operating Facilities (HOF) dated 21 July 1997;
- Rules for In-Process Control over Compliance with Industrial Safety Requirements at Hazardous Operating Facilities as approved by Resolution of the Russian Government No. 263 dated 10 March 1999.

Our companies have in place a specialised Occupational Safety Management System (OSMS) driven by:

- a process-based approach;
- compliance with the statutory occupational safety rules and standards;
- comprehensive training of operating personnel in safe work methods and techniques, supported with regular refresher trainings;
- regular follow-up and appraisal of occupational safety efforts;
- employees' commitment to safe working conditions;
- full logistical support for occupational safety events;
- responsibility of each employee for safety at his or her workplace.

CONTEST AMONG THE OPERATING PERSONNEL OF TGC-1'S THERMAL POWER PLANTS

HR MANAGEMENT SYSTEM IN GAZPROM ENERGOHOLDING GROUP'S PRODUCTION COMPANIES

HR POLICY

Key principles:

- transparency and openness;
- aspirations for industry leadership;
- efficient investments in personnel;
- ongoing improvements;
- organisational discipline.

OCCUPATIONAL HEALTH AND SAFETY

Occupational Safety Management System (OSMS)

REGULATORY FRAMEWORK

Human Resources Management Policy of PJSC Gazprom, its Subsidiaries and Entities

HR Management Policy

Code of Corporate Ethics

Regulations on Managing the Talent Pool to Fill Management Positions in OOO Gazprom energoholding, its Subsidiaries and Entities

Labour Code of the Russian Federation

Federal Law On Industrial Safety of Hazardous Operating Facilities (HOF)

Rules for In Process Control over Compliance with Industrial Safety Requirements at Hazardous Operating Facilities

HUMAN RESOURSES

G4-10

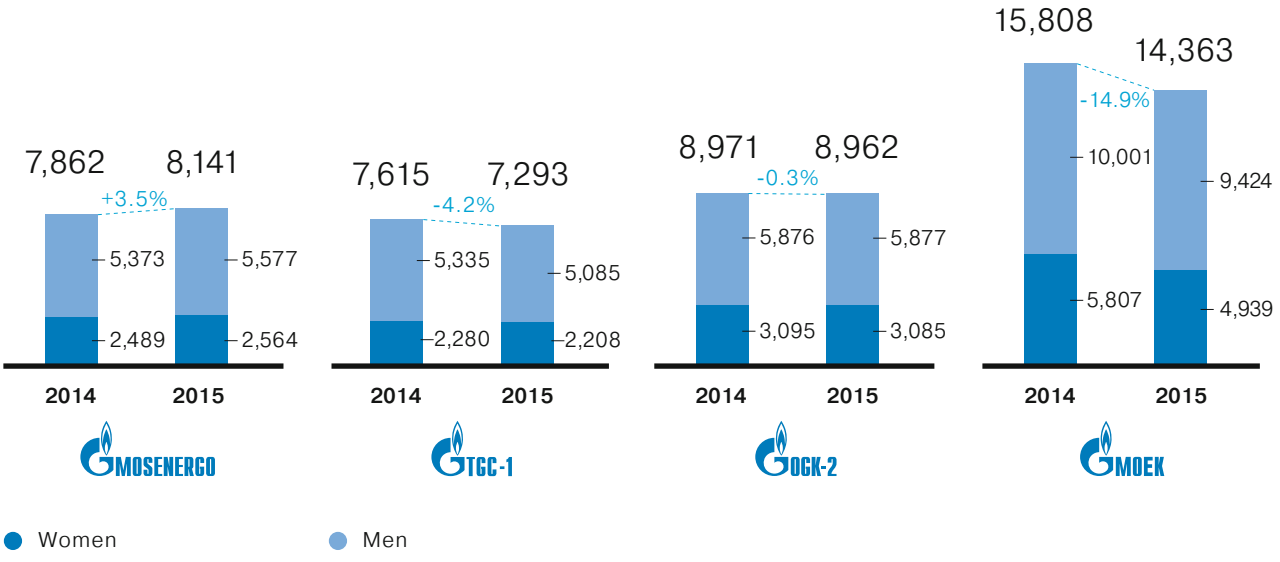
As of 31 December 2015, the headcount of Gazprom energoholding Group's production companies (including persons employed under civil contracts and part-time employees) was 38,759 employees. In 2015 (from 31 December 2014 to 31 December 2015), the headcount reduced by 3.7%, or 1,497 employees, while in 2014 (from 31 December 2013 to 31 December 2014) the reduction was 12.5%, or 5,757 employees.

Details of the personnel structure of Gazprom energoholding Group's companies are presented in APPENDIX 4: with a breakdown by region and gender – in TABLE 4.1.; with a breakdown by staff and contracted employees, type of employment contract, and gender – in TABLE 4.2.; with a breakdown by type of employment and gender – in TABLE 4.3. Headcount of the governing bodies of the Group's production companies by gender and age is presented in APPENDIX 4, TABLE 4.4.

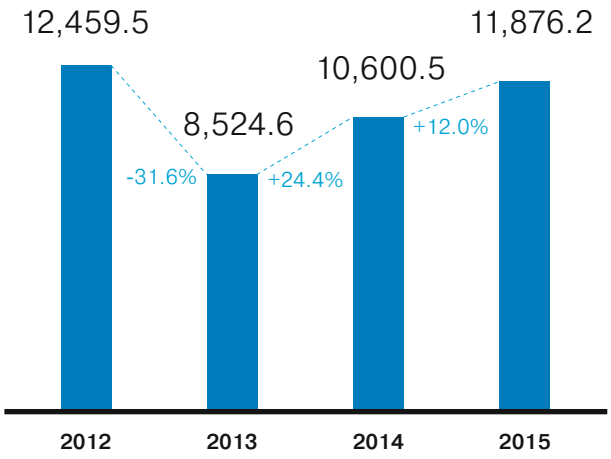
The considerable headcount reduction in 2014 was due to the optimisation of the organisational structures at MOEK and Mosenergo. In 2014, MOEK's headcount reduced in total by 5.9 thousand employees (27.2%). Along with the transfer of some of MOEK's generation facilities to Mosenergo and OOO TSK Mosenergo, it was also due to the centralisation of business processes, outsourcing of support functions, changes in the organisational structure of operating branches, disposal of non-core assets, and sales optimisation. The above processes were the result of MOEK becoming part of Gazprom energoholding Group and aligning its business processes with the current corporate practice of Gazprom Group.

G4-LA12

As part of centralised personnel cost planning, Gazprom energoholding Group's production companies analyse labour productivity. Labour productivity is calculated as the ratio of revenue to average headcount, i.e. the ratio of the companies' income to their labour costs.



Total headcount including persons employed under civil contracts and part-time employees (by region and by gender), employees



Labour productivity (revenue to average headcount ratio, RUB thousand per person[26]

The noticeable reduction of overall labour productivity across the Group's production companies in 2013 versus 2012 was due to MOEK becoming part of the Group, while the sustainable growth of productivity in the following years was mainly due to the optimisation of the organisational structure and business process framework.

In recruiting employees and selecting nominees for management positions, we focus exclusively on their professional skills, without regard for any social status or keeping relevant statistics. The majority of the personnel of the Group's companies live in the regions were the respective power plants are located, with the exception of a small number of employees engaged for construction and operation of new generation facilities.

THE TEAM OF PAO TGC-1'S PRAVOBEREZHNAYA CHPP — WINNER OF THE CONTEST AMONG THE OPERATING PERSONNEL OF OOO GAZPROM ENERGOHOLDING'S THERMAL POWER PLANTS

Gazprom energoholding Group's production companies are currently the leaders among the Russian companies in the electricity sector by labour efficiency (headcount to installed capacity ratio). This was made possible, among other things, by consistent efforts of the Group's and production companies' management to optimise organisational structures and headcount (in 2008–2015, headcount reduction exceeded 30%).

26. Productivity calculations are provided for the Group's companies in aggregate. The calculation for PAO MOEK is included starting from 2013 (the year it joined the Group).

Each new employee undergoes an induction programme. Employees on probation are given a job assignment for the probation period and assessed based on the results achieved.

STAFF TURNOVER

In 2014–2015, the average staff turnover (ratio of the number of employees dismissed for cause to the average headcount in the reporting period) in Gazprom energoholding Group's production companies did not exceed 5%. Detailed information on staff turnover in Gazprom energoholding Group's production companies with a breakdown by age and gender is presented in APPENDIX 4, TABLE 4.5.

The following factors contribute to the recruitment and retention of skilled personnel:

- competitive remuneration (above average across the regions where we operate);
- a number of benefits and compensations payable to employees under corporate documents, including: G4-LA1
  - corporate health insurance programmes and pension plans;
  - engagement of third-party credit organisations to provide services to the employees (special terms and conditions for loan provision, property and life insurance);
  - corporate cultural and entertainment events (including sporting events);
  - recreation for employees and their family members;
  - personnel training and development programmes.

CHESS TOURNAMENT AMONG EMPLOYEES OF GAZPROM ENERGOHOLDING GROUP

STAFF REMUNERATION

Employees' salary in Gazprom energoholding Group's production companies is determined based on the qualification of each employee, the complexity of their job, the employee's performance, as well as the performance of the respective business unit and the Group's company in general. When planning payroll costs for future periods, we also take into account the forecasted consumer price index growth.

The remuneration scheme applied in Gazprom energoholding Group's production companies comprises a fixed part and a variable part of remuneration. The nominal ratio of the fixed part of remuneration to the variable part varies in the range from 80/20 (core personnel – workers, specialists) to 40/60 (managers). The fixed part consists of fixed remuneration payable to employees and compensation payments depending on their work conditions and the nature of their job. The variable part comprises increments and incentive payments, including bonuses accrued at the end of the reporting period (month, quarter, or year) subject to achievement of Key Performance Indicators (KPI) established for individual employees and the company in general. The core set of KPIs usually includes compliance with the implementation deadlines of priority CSA projects, boosting operational efficiency (EBITDA margin), operational safety and reliability (reliability and accident rates), marginal income, etc. In some cases, the above indicators may act to nullify the bonus, i.e. if an indicator is not achieved, the annual bonus is not payable. KPIs are continuously refined in line with the current and strategic objectives of each production company within the Group and serve as a tool to appraise employees' performance and motivation.

One of the key events in Gazprom energoholding Group's HR management system in the reporting period was the implementation of a new remuneration scheme for MOEK's management (Order No. P-4/16 dated 11 January 2016) – a list of key performance indicators (KPIs) was introduced, their target values established and methods developed to assess their achievement. The changes are based on the principles implemented in other production companies within the Group (Mosenergo, TGC-1 and OGK-2).

Mosenergo's remuneration scheme provides for a system of grades (job positions) that reflect the differences among employees depending on their scope of duties, level of responsibility and other factors that are used to calculate the fixed part of remuneration. TGC-1, OGK-2 and MOEK calculate the fixed part of remuneration using a wage rate system (or a wage rate scale), which reflects the differences among employees depending on the complexity of their job duties and achievement of work targets.

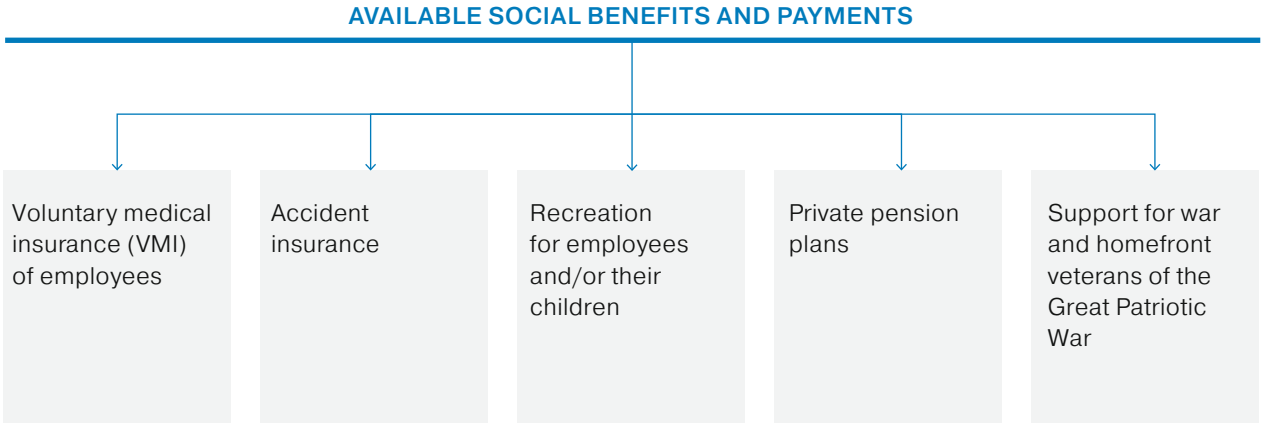
In accordance with Russian laws, the regions where our production companies operate employ the unified minimum wage rate (MWR), which is the same for all employees regardless of their gender. The wage rate for employees in the lowest positions with our companies is above the MWR applicable in respective regions and does not depend on the employee's gender or age. The average wage rate in our companies is also maintained at a level above the regional average. G4-EC5

Detailed information on staff remuneration in Gazprom energoholding Group's production companies is presented in APPENDIX 4. In particular, the information on the employees' minimum wage to MWR ratio by region of operation is shown (TABLE 4.6.), as well as male average salary to female average salary ratio by employee category and region of operation (TABLE 4.7.).

G4-LA13

ICE RINK IN THE GUBERNSKY PARK IN PETROZAVODSK

PROTECTION OF EMPLOYEES' INTERESTS AND RIGHTS



OBSERVANCE OF EMPLOYEES' INTERESTS AND RIGHTS; SOCIAL SECURITY

Social security of our employees is a key priority of our HR policy. The concept of social partnership that underlies our policy provides for various social payments, personal insurance, healthcare and supplementary pensions offered to employees.

G4-LA8 **RELATIONS WITH TRADE UNIONS; COLLECTIVE BARGAINING AGREEMENTS**

Relations with trade unions are an important tool to safeguard the interests of employees in our production companies and maintain a social partnership between the management and the personnel. Primary trade union organisations in branches of TGC-1 and OGK-2 act as part of the All-Russian Electric Trade Union. Primary trade union organisations in branches of Mosenergo are part of Moscow City Trade Union Organisation Elektroprofsoyuz, while MOEK's trade unions are part of NGO Trade Union of Municipal Employees in Moscow. Although the main objective of trade unions consists in safeguarding professional, labour, and social and economic rights of employees against violations by the employer, we believe that their benefit to the employer should not be underestimated.

We highly value feedback from our personnel and seek to use all available channels of communication with our employees. They include focus groups, sessions and workshops, surveys and polls (by mass e-mailing), meetings of management of various levels with employees, dedicated hotlines, etc. These activities mainly focus on assessing personnel satisfaction; adjusting the system of corporate values; improving consumer services available to employees; planning medical examinations, etc.

In May 2015 in Moscow, Gazprom energoholding Group's generating companies organised events for veterans to celebrate the 70th anniversary of Victory in the Great Patriotic War of 1941–1945. Over 20 veterans, former employees of the Group's production companies, took part in the celebration.

The Central Museum of the Great Patriotic War hosted the veterans' meeting with the Russian Minister of Energy Alexander Novak who thanked them for their personal contribution to defeating the enemy and providing the country with electricity in the hard years of war and during the postwar reconstruction period. Participants in the meeting shared their war-time stories and asked the Minister about the current development of the fuel and energy sector. The Minister emphasised that many of the achievements in the fuel and energy sector during the years of war were made possible by the selfless work of women and children while the men had left to defend their Motherland on the front lines.

A tour of the Central Museum of the Great Patriotic War was arranged for the veterans who had arrived from all over Russia, as well as a cruise on the Moskva River, with stories about the facilities which ensured power supply to the capital during the war and in the postwar period. All guests received keepsake gifts, jubilee industry medals and books entitled Energy of the Great Victory. After that, the veterans of the Great Patriotic War came together to honour the memory of those who died on the front lines and placed flowers on the Tomb of the Unknown Soldier near the Kremlin wall.

VETERANS OF GAZPROM ENERGOHOLDING'S COMPANIES TOOK PART IN THE CELEBRATION OF THE 70TH ANNIVERSARY OF VICTORY

For employers, they serve as a "telltale indicator" of the general sentiment in the team, while the trade union's support facilitates running of social initiatives, as well as identification and resolution of issues in the team in general and for each employee in particular. Trade unions also represent the interests of our employees in their relations with other organisations that may be important in addressing their needs. The involvement of trade unions of our companies in the activities of the Russian Trilateral Commission on the Regulation of Social and Labour Relations serves as an example of their contribution to upholding and protecting such interests.

Collective bargaining is another key aspect of the relations between our production companies and trade unions. Collective bargaining agreements were signed based on the Russian Labour Code and best industry practices. In developing contractual relations between social partnership stakeholders, we seek to secure employees' social and economic rights and guarantees, increase labour efficiency and productivity, improve the quality of work, comply with the labour and process discipline, occupational safety and workplace hygiene requirements.

G4-11
G4-LA4

At Mosenergo, TGC-1 and OGK-2, collective bargaining agreements cover 100% of the branches' employees. All stakeholders are involved in monitoring compliance with collective bargaining agreements via periodical (quarterly / half-yearly / yearly) reports and conferences. The companies have collective bodies in place to discuss matters related to collective bargaining agreements, which comprise representatives of employers, employees (trade unions) and in some cases representatives of OOO Gazprom energoholding. Collective bargaining agreements with employees of our production companies include the following key elements:

- work and leisure time rates; duration of the working week, principal and extra leaves;
- minimum monthly pay rates for Grade 1 operators: determined taking account of the CPI for past periods based on the company's balance sheet capabilities;
- occupational safety: employer's commitments on safety, medical examinations, supply of work clothes / footwear, accident insurance, etc.;
- benefits, guarantees and compensations:
  - a lump-sum payment in case of the employee's death or permanent disability as a result of injury sustained through the employer's fault, or as a result of occupational disease;
  - increment to the disability pension due to the unemployed person permanently disabled as a result of injury sustained through the employer's fault;
  - increment to the allowance payable by the state to each child of the employee who died at the workplace;
  - vacation payment;
  - payment at the birth (adoption) of a child, marriage, or death of close relatives;
  - coverage of the cost of travel to the vacation destination (for facilities in the Far North regions and similar locations);
  - other benefits.

Relations of our companies with self-employed businessmen and contractors (legal entities) engaged to perform specific jobs are governed by special agreements entered into between our generating companies and such self-employed businessmen or contractors.

The minimum period of notice to be given to employees on material changes in all production companies within Gazprom energoholding Group is two months, in line with the Russian Labour Code's requirements. In our production companies, collective bargaining agreements also provide for prior notice to be given to trade unions on any forthcoming reorganisation, and for informing them on reorganisation decisions adopted by the meeting of shareholders, within 20 days from the date of relevant decisions.

In 2014–2015, a total of 287 conflict situations were recorded in the Group's production companies, including applications to internal bodies (commissions) in charge of labour disputes review, the labour inspection and court. The majority of labour disputes concerned the recovery of an average monthly wage for the period of employment (applications by MOEK's former employees). The Group's companies in cooperation with trade union organisations make every effort to prevent conflicts: awareness raising activities are arranged for the personnel, internal checks are carried out, and special commissions are put in place within the teams.

OCCUPATIONAL HEALTH AND SAFETY

Industrial safety management in Gazprom energoholding Group's production companies is regulated by Russian laws and applicable statutory regulations on industrial safety:

- the policy and key focus areas, as well as the legal, economic and social framework for ensuring safe operation of hazardous operating facilities are defined by Federal Law No. 116-FZ On Industrial Safety of Hazardous Operating Facilities (HOF) dated 21 July 1997;
- the procedure for establishing and exercising in-process control over compliance with industrial safety requirements is in line with the Rules for In-Process Control over Compliance with Industrial Safety Requirements at Hazardous Operating Facilities approved by Resolution of the Russian Government No. 263 dated 10 March 1999;
- occupational safety issues are addressed in line with Russian laws, the main document being the Labour Code (No. 197-FZ dated 30 December 2001), industry and local regulations.

Although the measures taken by our generating companies on industrial safety and occupational health and safety are fully compliant with the requirements of applicable laws, relevant commitments of our companies are additionally set out in Collective Bargaining Agreements of the production companies. In particular, the Occupational Safety section of Collective Bargaining Agreements contains occupational health provisions aimed at protecting the lives and health of employees at work.

12,513 people

The number of Gazprom energoholding Group's employees trained in occupational safety during 2014–2015.

Our companies take consistent efforts to ensure protection of their employees' lives and health and reduce occupational injury rates, focusing on the following areas:

Focus areas	Measures taken
Administrative and financial support	– Supporting the operation of specialised services responsible for occupational and fire safety; – financing occupational safety measures taken under applicable laws.
Monitoring of the medical condition of employees	– Mandatory preliminary, periodical, pre-shift, and pre-trip medical examinations/inspections of employees of relevant categories at the expense of the employer; – preventing the involvement in any work for employees who failed to timely pass a mandatory medical examination; – preventing the involvement of employees, including with their consent, in any work that is contraindicated for them for health reasons; – recording and analysing occupational diseases of employees; developing and implementing relevant preventive measures.

Focus areas	Measures taken
Healthy and safe work environment	– Creating healthy and safe working conditions at every workplace with subsequent workplace assessment based on parameter measurements; – provision of certified protective clothing, footwear and other personal protective equipment, milk and other equivalent food, detergents and disinfectants (soaps, creams) to employees operating in harmful or hazardous working conditions, or in extreme temperatures or climatic conditions, or in a polluted environment, in line with the existing standards.
Personnel trainings and briefings	– Organising occupational safety trainings, briefings and knowledge tests for employees in line with the established procedure.
Occupational and industrial safety control and audit	– Organising and exercising in-process control in line with the procedure set out in applicable laws; – running a supplementary cross-audit of occupational and industrial safety at operating facilities.
Accident investigation, registration and prevention	– Running unbiased investigation and registration of accidents, analysing their causes and preparing targeted measures to prevent similar accidents in future.

Mosenergo, TGC-1 and OGK-2 follow a systemic approach to occupational safety management. Each of the production companies has in place an Occupational Safety Management System (OSMS)[27] – the key document governing the company's policy on occupational safety, operational reliability and safety, and employees' health protection. The OSMS also establishes the functions of officers and business units within the governance framework of each production company in terms of occupational safety. The OSMS officially stipulates (in regulations, job descriptions, employment contracts, etc.) the areas of responsibility, authorities, rights and cooperation of the personnel in charge of organising, implementing and monitoring the implementation of activities affecting occupational safety.

An Industrial Safety Management System (ISMS) with an integrated system of in-process control over compliance with industrial safety requirements makes part of the OSMS at Mosenergo, TGC-1 and OGK-2. The ISMS provides for information, technical and organisational support of safe operation of the equipment, ensures compliance with the requirements to safe operation in specific conditions. Activities within the ISMS include forecasting and preventing accidents, identifying, assessing and controlling operational risks to minimise possible hazards for the people.

At MOEK, occupational and industrial safety issues are addressed in accordance with the Regulation on In-Process Control over Compliance with Industrial Safety Requirements at Hazardous Operating Facilities approved by Order No. P-252/14 dated 24 December 2014. A set of measures aimed at ensuring safe operation of equipment, preventing accidents and incidents, and localising and eliminating their consequences is implemented on the basis of annually approved schedules and plans to ensure industrial safety. To ensure localisation and elimination of the consequences of accidents at hazardous operating facilities MOEK signed an agreement with the professional rescue unit OOO Technospas Group.

MOEK is currently developing an OSMS similar to the ones in place at Mosenergo, TGC-1 and OGK-2, which is to become the main document regulating the functioning of the occupational safety management system in the company.

In the reporting period (2014–2015), our companies implemented the following measures as part of the existing OSMS and ISMS:

– **Mandatory preliminary, periodical and unscheduled medical examinations (inspections)**

In line with the procedure in place at our companies, in 2014–2015, mandatory preliminary examinations were carried out for new hires, while periodical examinations were based on name lists of employees that were subject to periodical examinations. These lists were submitted to territorial authorities of the Federal Service for Surveillance on Consumer Rights Protection and Human Wellbeing of the Russian

27. PAO Mosenergo's OSMS was approved by Order No. 413 dated 23 November 2015.

Federation (Rospotrebnadzor). Employees who complained about health problems were directed to unscheduled medical examinations. As part of these efforts, we also held awareness raising meetings, handed out booklets on preventing viral diseases and materials promoting blood donation and healthy lifestyles, and organised vaccination of employees.

– **Special assessment of working conditions (SAWC)**

In 2014–2015, pursuant to Order No. 342n On Approval of the Procedure for Workplace Assessment for the Quality of Working Conditions by the Russian Ministry of Healthcare and Social Development dated 26 April 2011, Gazprom energoholding Group's production companies ran a special assessment of working conditions. The results of these efforts included consolidated data sheets; measurement reports and special workplace assessment cards, and recommendations on reducing the impact of harmful operating factors to improve the overall working conditions for employees. The companies also drafted action plans for coming years to ensure better and healthier working conditions. Employees operating in harmful and/or hazardous working conditions were paid compensations.

– **Provision of personal protective equipment (PPE), special clothing and footwear to employees**

In line with the Standard Norms for Supply of Special Work Clothing, Footwear and Other PPE under the Inter-Sectoral Rules for Supply of Special Work Clothing, Footwear and Other PPE to Employees (Order of the Russian Ministry of Healthcare and Social Development No. 290n dated 1 June 2009), in 2014–2015, all employees of our companies operating in harmful and/or hazardous working conditions or in extreme temperatures, or in a polluted environment, were provided with relevant PPE free of charge. All PPE issued had been purchased from leading Russian manufacturers and had certificates of conformity.

– **Training in safe occupational practices; briefings (kick-off, primary, refresher, unscheduled)**

In line with the requirements of Article 225 of the Russian Labour Code, Resolution of the Russian Ministry of Labour and Ministry of Education No. 1/29 On Approval of the Procedure for Occupational Safety Training and Testing of Employees' Knowledge of Occupational Safety Requirements dated 13 January 2003, GOST 12.0.004-90, Occupational Safety Standards System. Organisation of occupational safety training. General Rules, and Order of the Russian Ministry of Fuel and Energy No. 49 Rules for Personnel Relations in Companies of the Russian Electricity Industry dated 19 February 2000, in 2014–2015, our companies briefed their employees on occupational safety under the existing approved programmes. All briefings were recorded in briefing logs. A total of 5,845 and 6,668 employees, respectively, were trained in occupational safety in the Group in 2014 and 2015.

TRAINING IN SAFE OCCUPATIONAL PRACTICES, PEOPLE

	Mandatory		Additional	
	2014	2015	2014	2015
Mosenergo	1,127	1,221	–	–
TGC-1	359	446	46	26
OGK-2	2,362	2,495	438	434
MOEK	1,475	2,032	38	14

Mosenergo has in place an awareness framework to communicate to every employee information related to occupational safety and injury rate:

- a safety calendar, Green Cross, is now available to employees as a new visual tool to communicate information concerning the situation with occupational safety and injury rate across the company and by branch;
- a weekly Occupational and Industrial Safety Leaflet is circulated via e-mail, providing information on new regulations, recent accidents, results of occupational safety audits, etc.;
- identified breaches of occupational safety requirements and other critical occupational safety issues are discussed in each branch during the weekly Safety Hour.

- **Monitoring of occupational safety aspects and safe working conditions**

In 2014–2015, a mobile team of the Occupational Safety Service ran periodical (unscheduled) audits to identify breaches of applicable regulatory technical documents, provide occupational safety recommendations to branches, and follow up on corrective measures. Meetings were also held on a regular basis to discuss regulatory changes in occupational safety.

G4-LA6

- **Providing employees with protective food, milk or other equivalent products**

In 2014–2015, our employees were provided with free milk or other equivalent food when they were actually working in harmful conditions. These measures were taken pursuant to Article 222 of the Russian Labour Code and Order of the Russian Ministry of Healthcare and Social Development No. 45n On Approval of Standards and Conditions for Providing Employees Working in Harmful Conditions with Milk or Other Equivalent Food Products Free of Charge, the Procedure for Payment of Compensation in the Amount Equivalent to the Cost of Milk or Other Equivalent Food Products, and the List of Harmful Workplace Factors which Require Preventive Consumption of Milk or Other Equivalent Food Products dated 16 February 2009.

Mosenergo is currently implementing the Safe Behaviour Culture project to fully eliminate occupational injuries by deploying a framework of behavioural safety audits and comprehensive personnel training under the certified programme Safety in the Workplace.

In 2014, the Corporate Safety School (CSS) was established for Mosenergo's employees as part of the Safe Behaviour Culture project. The CSS serves as an effective tool to achieve Mosenergo's key objective – Zero Injuries. The CSS trained 483 people in safe behaviour in 2014, and 1,500 people in 2015.

WORK-RELATED INJURIES SUFFERED BY EMPLOYEES OF THE GROUP'S PRODUCTION COMPANIES IN 2014–2015

Information about work-related injuries suffered by employees of Gazprom energoholding Group's production companies with a breakdown by severity, gender and region of operation, as well as the loss of working time caused by these injuries, is disclosed in APPENDIX 4, TABLES 4.8.–4.11.

Our production companies investigate accidents resulting in workplace injuries in line with the requirements of Articles 227 to 231 of the Russian Labour Code and Resolution of the Russian Ministry of Labour No. 73 On the Approval of Forms of Documents Required for Investigation and Registration of Workplace Accidents and the Regulations on Specific Requirements to Investigation of Workplace Accidents in Certain Sectors and Organisations dated 24 October 2002.

CONTRACTORS' OCCUPATIONAL HEALTH AND SAFETY

Certain types of activities related to the construction and operation of our production companies' generating facilities are performed by contractors' employees. Contract agreements signed with them include, on a mandatory basis, an appendix stipulating the contractor's responsibility for violation of occupational safety, fire safety and environmental requirements, based on which fines may be imposed, and the worst offenders

INJURY FREQUENCY RATES

	Mosenergo		TGC-1		OGK-2		MOEK	
	2014	2015	2014	2015	2014	2015	2014	2015
Fatal Injury Frequency Rate (FIFR)[28]	–	–	0.09	–	–	–	3.13	–
Lost Time Injury Frequency Rate (LTIFR)[29]	0.22	0.06	0.61	0.09		0.26	0.13	0.28
Occupational Disease Rate (ODR)[30]	–	–	–	–	–	–	–	–
Lost Days Rate (LDR)[31]	7.2	1.7	29.58	2.69	–	16.5	7.9	13.9
Total hours worked by all personnel	13,199,567	14,048,851	11,462,079	11,147,650	15,302,766	15,150,142	31,991,085	24,724,565

may have their passes to the power plants' premises taken away. Requirements are in place to the availability and presentation of health and safety documents authorising contractors' employees to work at the power plants operated by the Group's production companies.

Contractors' employees are regularly engaged in:
- checking the availability of employees' attestation certificates in occupational safety, fire and industrial safety during operations at generating facilities, as well as the marks confirming the right to conduct special operations on the authorisation to conduct operations with core and auxiliary equipment;
- kick-off (primary, targeted) briefings;
- joint Occupational and Fire Safety Days;
- unscheduled workplace inspections (including at night time) by in-house occupational safety experts of the Group' production companies;
- workplace inspections as part of internal (external) technical audits;
- joint meetings of occupational safety services of our production companies and contractors addressing the issues of occupational and industrial safety;
- joint field visits, in-process inspections at Hazardous Operating Facilities (HOF).

In 2014, Ryazanskaya GRES, a branch of OGK-2, won the second place in the regional stage of the Best Russian Social Performer All-Russia Competition. The award ceremony was hosted by the Government of the Ryazan Region. It was the third time that Ryazanskaya GRES was among the leaders in the category for Reducing Occupational Injury and Occupational Disease Rates within the Company.

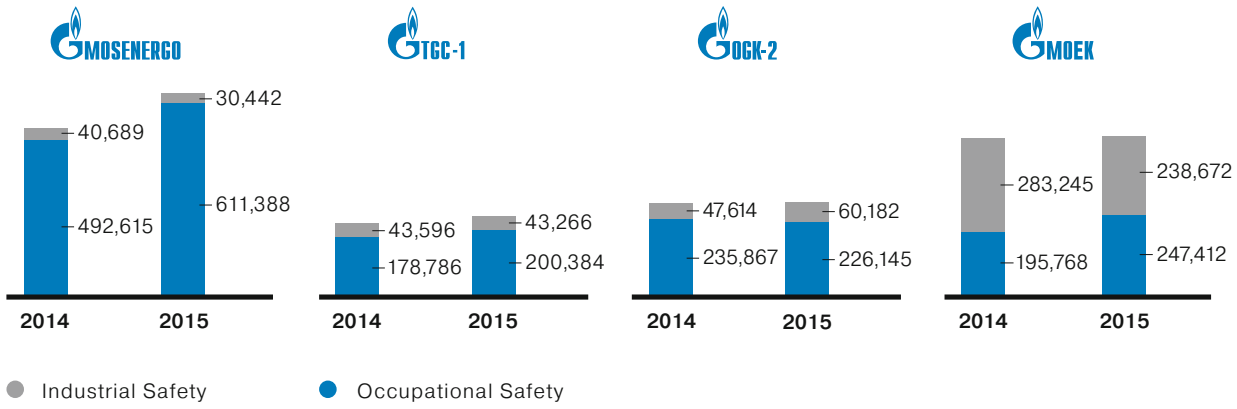
28. Fatal Injury Frequency Rate (FIFR) = the number of fatalities in accidents / total hours worked by all personnel * 1,000,000.

29. Lost Time Injury Frequency Rate (LTIFR) = the number of people injured in accidents / total hours worked by all personnel * 1,000,000.

30. Occupational Disease Rate (ODR) = the number of instances of newly diagnosed occupational diseases / total hours worked by all personnel * 1,000,000.

31. Lost Days Rate (LDR) = the number of days lost as a result of accidents / total hours worked by all personnel * 1,000,000.

SPEND ON OCUPATIONAL AND INDUSTRIAL SAFETY ACTIVITIES, RUB THOUSAND



COMPLIANCE WITH INTERNATIONAL OCCUPATIONAL SAFETY STANDARDS

Despite a relatively low injury rates among our employees, we take pro-active steps to improve the existing Occupational Safety Management System (OSMS). As of 1 February 2014, Gazprom energoholding Group's production companies completed the project to bring their existing OSMS into compliance with national regulatory occupational safety requirements, i.e. GOST R 12.0.007-2009 Occupational Safety Management Systems in Organisations. General Requirements to Development, Implementation, Audit and Improvement. Details of the use of funds to finance occupational and industrial safety activities are presented in Appendix 4, Table 4.12.

SPORTS AND RECREATION

Winter and summer athletic competitions (Spartakiads) are a long-standing corporate tradition of our production companies. We are confident that sports not only support human health but also foster in our employees qualities like striving for victory, team spirit, solidarity and mutual support. These qualities in their turn help enhance job performance.

Gazprom energoholding Group pays much attention to the development of sports and promotion of healthy lifestyles. Every year starting from 2013, Morozovka Resort, a branch of PJSC Gazprom, hosts OOO Gazprom energoholding's Summer Spartakiad. The teams of OOO Gazprom energoholding and its subsidiaries take part in futsal, volleyball, streetball, field and track and table tennis competitions. The total number of the tournament participants exceeds 150 people.

Qualifying spartakiads help select the strongest energy workers in the country who will give credit to Gazprom energoholding Group at the corporate tournament held by Gazprom Group and the Russian Ministry of Energy.

At the 9th Summer Spartakiad of PJSC Gazprom in Tuapse, Gazprom energoholding Group was represented by a delegation of 70 athletes. The united team comprised employees of OOO Gazprom energoholding and athletes from the Group's production companies.

OOO Gazprom energoholding's team actively participates in futsal tournaments. The team's achievements include:

- first place in the Silver Division of the tournament for the awards of the Russian Ministry of Energy;
- third place in the 5th Fuel and Energy Sector Cup;
- second place in the 6th International Fuel and Energy Sector Cup;
- first place in the A conference of the 8th Russian Championship for Corporate Teams;
- first place in the 2nd Official Moscow Championship.

In 2015, OOO Gazprom energoholding's team also made a successful debut in the volleyball competition, having won the first place in the Silver Division of 4th Fuel and Energy Sector Cup Tournament.

RAISING THE QUALITY OF HUMAN RESOURCES

G4-LA10
G4-DMA

We offer our employees extensive opportunities to unlock their personal potential and achieve career growth. Our key focus areas:

- induction programme for new recruits and mentoring scheme;
- implementing unified approaches to and methods of personnel training and appraisal;
- maintaining a talent pool and relying on transparent principles of talent promotion (as at the end of 2015, the talent pool comprised about 1,000 employees);
- corporate skills and innovative projects competitions;
- corporate continuous education and training system.

In September 2015, Gazprom energoholding Group's Shared Staff Training Centre (SSTC) was established on the basis of the training centres operated by our generating companies.

In the coming years, the SSTC will become an educational platform pooling resources across all training centres operated by the Group's production companies, which will enable the standardisation of personnel training and development processes within a common training environment.

We expect that these efforts will considerably enhance the qualifications of our operating and repair personnel, as well as branch and administrative office employees, implement new approaches to the Group' operations, and promote a uniform corporate culture.

We believe that continuous education is essential to achieving our companies' goals and objectives and ensuring their future development. The Regulation on the Corporate Continuous Education and Training System is the underlying document governing the relations between OOO Gazprom energoholding and its production companies in personnel education and development across the Group's companies.

In 2015, the Educational and Methodological Council (EMC) was established to determine the key areas of development of corporate continuous education and training, comprising five sections:

- mandatory industrial and technical training;
- operating personnel development;
- educational methodology;
- corporate competencies development;
- innovative training.

Our companies have in place specialised programmes for their management, talent pools and high-potential employees, providing training in developing effective management tools, improving personal efficiency and business communication skills, and motivating

RUB 368.2 million

Total financing of personnel training and development in Gazprom energoholding Group's companies in 2014–2015

subordinates to improve their professional level. These programmes include:

- Comprehensive HR Management Programme of OOO Gazprom energoholding, Its Subsidiaries and Affiliates;
- the School of Management offering targeted and regular competency-based training programmes for management and talent pool;
- accelerated development programmes for high-potential employees and talent pool;
- joint programmes with higher education institutions (43 training programmes developed and implemented).

Special mention should be made of the Corporate Safety School, which runs the following training courses:

- Safety in the Workplace;
- Execution of Organisational and Technical Activities to Ensure Safe Operation of Electrical Installations and Thermal and Mechanical Equipment.

Distance education is actively developing via the Corporate Education Portal (in 2014–2015, over 3,000 employees were trained (more than 60,000 man-courses)). Distance education comprises both mandatory (managers and specialists) and project training.

G4-LA9 Additionally, over 6,000 workers were trained by corporate training centres (Mosenergo's Training Centre, MOEK's Training Centre, TGC-1's Training Centre) located in the immediate vicinity of power plants and equipped with modern material and technical resources, all the necessary simulators, laboratories, and highly qualified educators. The Training Centres are licensed by the Russian Ministry of Education to conduct educational activities in the relevant professions.

We cooperate with the leading Russian higher education institutions including National Research University Moscow Power Engineering Institute, Bauman Moscow State Technical University, Lomonosov Moscow State University, St Petersburg Polytechnic University, St Petersburg State Technological Institute, Moscow State University of Railway Engineering, National Mineral Resources University (University of Mines), St Petersburg State University of Economics, State University of Management, Kutafin Moscow State Law University. We also maintain relations with regional educational institutions in the areas where our generating companies operate. Training is provided in the form of career enhancement, vocational retraining, short-term workshops and training courses.

More than 90% of personnel training costs are covered by our companies. For these purposes, we sign student agreements with employees. In 2014–2015, the total financing of personnel training and development amounted to RUB 368.2 million (RUB 171.8 million in 2014 and RUB 196.4 million in 2015). This amount includes RUB 263 million spent on trainings for managers, specialists and employees of Gazprom energoholding Group's production companies in 2014–2015 (RUB 121.3 million in 2014 and RUB 141.7 million in 2015). In line with Russian laws, long-term training programmes provide for job-protected study leaves. In making decisions on enrolling managers and specialists on training courses, we take account of the training's scheduled duration, current and future development plans in respective companies, and the annual consolidated personnel development plan in Gazprom energoholding Group's production companies.

Average annual number of training hours per employee by employee category is presented in APPENDIX 4, TABLE 4.13.

In 2014–2015, about 100 employees interned with energy companies in China and Germany.

We hold skills contests for our operating personnel on an annual basis. The key objectives of these contests are to improve the operating personnel's professional competencies in ensuring reliability of the energy system; share best corporate practices in organising and running day-to-day management of thermal power plant equipment; and improve the forms and methods of activities to ensure high quality and reliability of equipment maintenance.

PJSC GAZPROM DAYS AT ST. PETERSBURG POLYTECHNIC UNIVERSITY NAMED AFTER PETER THE GREAT

In 2014, MOEK's team won the fourth place in the All-Russian Contest for the Personnel of Heat Supply and Heat Network Companies in Yessentuki, while Mosenergo's and OGK-2's teams won the second and third places in the All-Russian Contest for the Operating Personnel of Unit-Based Thermal Power Plants. In 2015, the team of Krasnoyarskaya GRES-2, OGK-2's branch, won the All-Russian Open Contest for Operating Personnel, with a number of the team members winning in the Best in Trade categories.

RECRUITMENT AND DEVELOPMENT OF YOUNG TALENT

Our HR policy aims at maintaining an optimal age mix and ensuring the succession of employee generations as a strategic objective. Below are the key tools we use to attract young talent to our companies:

- regular contacts with educational institutions to attract and recruit high-potential graduates;
- traineeships and internships for students of relevant higher and specialised education institutions;
- participation in Career Fairs and publication of information about career opportunities for graduates on information boards in higher education institutions, in social networks and mass media;
- targeted induction and development programmes for young talent.

TGC-1 has in place a Training Centre which focuses, among other things, on attracting young talent and supporting their self-fulfilment and development. The system of practical tasks developed in the Centre enables students of relevant higher education institutions to test the acquired knowledge, get acquainted with TGC-1's business processes, ask questions that interest them and get answers from experts with hands-on experience, and demonstrate their presentation and communication skills. For twelve years running, TGC-1's Training Centre has held the contest for the best diploma project among students of higher education institutions in the North-western Federal District. For many TGC-1's managers, participation in the Diploma Project Contest became the first step in their career. As part of the Contest, each participant is entitled to present their work to TGC-1's top management. In 2014, 48 diploma projects were submitted for the Contest; in 2015, their number reached 30.

Over

1,000 **people**

Annual number of students joining Gazprom energoholding Group's companies as trainees

Each year, over 1,000 students intern at the generation facilities operated by Gazprom energoholding Group's production companies. We have signed relevant agreements with more than 15 leading Russian higher education institutions.

The induction programme for all new employees of our companies, including young talent, comprises a specialised digital induction programme and additional induction trainings:

- The Digital Induction Programme was developed in-house by Gazprom energoholding Group in 2013

to promote corporate values. It comprises the following modules: introduction to the Group's companies, corporate etiquette, and energy industry basics. The Programme is updated on an annual basis in line with newly approved local regulations and changes in the structure of the Group and production companies.

– In 2014–2015, classroom induction (kick-off) trainings were developed in each of the Group's production companies to supplement the Digital Induction Programme. These trainings are offered to young talent and new employees.

We pay special attention to the professional and career growth of our young talent. We regularly hold a Contest of Young Talent and Innovators to encourage and support the most gifted and active young specialists. The Contest provides for a multi-tier selection scheme accessible to employees of all units and levels. The Contest of Young Talent and Innovators attracts over 150 young specialists annually, and the projects submitted by winners of qualifying rounds and finalists are implemented in a production environment.

These contests provide a platform for our production companies to unlock their potential and create the environment to promote creative initiatives.

In 2015, the top finalists of OGK-2's Contest of Young Talent and Innovators won the finals of a similar contest held by OOO Gazprom energoholding.

Project by the winner of OGK-2's 2014 Contest of Young Talent and Innovators, Lead Engineer of the chemical facility at Adlerskaya TPP E. Evgenova on the Upgrade of the Boiler and Heat Distribution Network Make-up Water Treatment Plant won the International Contest of Scientific, Research and Technical, and Innovative Solutions Aimed at Developing the Fuel and Energy and Extraction Industries and was awarded a diploma as the winner of the First Prise in the Contest within the framework of the 3d Russian International Energy Forum.

In 2014, Mosenergo updated its induction course for new employees, which now comprises three modules: Welcome to Mosenergo, Safe Behaviour Culture, and Introduction to Energy Industry – for employees without relevant education in the energy industry. In-house trainers have been trained to teach this course. The course runs on a regular basis. Over 150 new employees have been trained, with each participant receiving a Newcomer's Information Booklet published in 2014.

DMITRY YUPATOV, EMPLOYEE OF MOSENERGO'S CHPP-21, PRESENTS HIS PROJECT AT THE CONTEST OF YOUNG TALENT AND INNOVATORS HELD BY GAZPROM ENERGOHOLDING GROUP

G4-SO4

PREVENTING CORRUPTION

Gazprom energoholding Group's production companies have embedded and foster a culture of zero tolerance to corruption. Employees of production companies, both in Russia and abroad, abide by the requirements and constraints established in line with anti-corruption laws.

The Group's production companies exercise zero tolerance to any forms of illegal influence on the decisions of government agencies, including bribes, unacceptable gifts, employment of family members of public officials, charitable support and sponsorship upon request of public officials employed at relevant government agencies (which make decisions relevant for the Group's generating companies).

Although no corrupt practices involving employees of Gazprom energoholding Group's production companies were identified in the reporting period (2014–2015), we take active preventive measures. Anti-corruption activities in Gazprom energoholding Group's production companies are implemented in strict compliance with applicable Russian laws. Employees of production companies are guided by Federal Law No. 273-FZ On Countering Corruption dated 25 December 2008, Decree of the Russian President No. 309 On Measures to Implement Certain Provisions of the Federal Law On Countering Corruption dated 2 April 2013, Instruction of the Russian Prime Minister No. VP-P13-9308 dated 28 December 2011, and industry-specific and local regulations.

The anti-corruption framework in our production companies is based on OOO Gazprom energoholding's Code of Corporate Ethics. This document sets out our corporate values and covers such issues as conflict of interests, nepotism, gifts, relations with competitors and counterparties, combating corruption, and other critical rules of business conduct. The provisions of the Code of Corporate Ethics are fundamental for all companies within Gazprom energoholding Group. Our companies have in place Corporate Ethics Commissions supervising compliance with the Code's provisions and requirements. The relevant Commission can be contacted via e-mail or over a hotline.

DOCUMENTS GOVERNING ANTI-CORRUPTION POLICIES IN GAZPROM ENERGOHOLDING GROUP'S PRODUCTION COMPANIES

	Adopted on
Mosenergo	
Regulation on the Internal Audit Service	3 July 2008
Business Ethics Code	29 September 2011
Regulation on the Procurement Committee	20 December 2011
Regulation on Procurement of Goods, Work, and Services	15 July 2013
Regulation on Internal Controls	17 February 2014
TGC-1	
Regulation on the Procurement Committee	9 November 2011
Regulation on Interaction with Contractors to Prevent Conflict of Interests in TGC 1's Operations	26 July 2012
Regulation on the Internal Audit Service	11 February 2013
Regulation on Procurement of Goods, Work, and Services	18 July 2013
Regulation on the Procedure for Exercising Internal Control over Financial and Business Operations	11 February 2013
Code of Corporate Ethics	15 November 2013
OGK-2	
Corporate Governance Code	26 September 2006
Regulation on the Procurement Committee	19 December 2011
Code of Corporate Ethics	2 October 2014
Regulation on Procurement of Goods, Work, and Services	1 August 2013, amended on 30 June 2015
Regulation on the Procedure for Exercising Internal Control over Financial and Business Operations (new version)	6 August 2014
Regulation on the Internal Audit Directorate	19 November 2014
MOEK	
Code of Corporate Ethics	25 December 2013
Regulation on Procurement of Goods, Work, and Services	6 March 2015
Regulation on the Procurement Committee	7 August 2015

SOCIAL SUSTAINABILITY

G4-DMA

MANAGEMENT'S APPROACH TO CORPORATE PROJECTS OF THE GROUP'S COMPANIES

THAT HAVE AN IMPACT ON SOCIETY; AVAILABILITY OF GRIEVANCE MECHANISMS

G4-SO6

In summer 2015, TGC-1 launched the TGC-1 to Residents platform in the social network VKontakte to enable direct communication with consumers. The community pages feature latest news in the housing and utilities sector, answers to relevant questions about calculation of heating and hot water supply rates, and information about the possibility to switch to direct payments in the regions where the company operates. The key objective of the new resource is to present information in a convenient format and get feedback from consumers. Further plans include regular updates of the Consumer Ratings, publication of anti-ratings of regions with the highest heating debts, webinars and direct lines with housing and utilities experts, as well as posting useful infographics.

We pay attention not only to our financial and operating performance but also to the social dimension of our sustainability performance. We actively engage municipal authorities, not-for-profit organisations and local communities, and take their interests into account when making our decisions.

Our generating companies participate in sponsorship and charitable initiatives on a regular basis but we only finance projects that have positive social or humanitarian impacts. We do not engage in any political activities and do not finance political parties or organisations.

We do not restrict involvement of our employees in social or political activities unless such activities take place during work time and require the use of our corporate resources.

Our power plants are large industrial facilities and their operations inevitably have an impact on the environment and the social life in the regions where they operate, despite all preventive measures. The construction of our infrastructure investment projects quite obviously causes inconvenience to local communities. For this reason, every time we start a new construction project at production facilities of our companies, we hold public hearings involving community representatives, regulators, federal and municipal authorities and environmental groups.

CHILDREN'S TOUR OF KRASNOYARSKAYA GRES-2, PAO OGK-2

In April 2015, MOEK launched an information service on the company's corporate website enabling Muscovites to check the date and duration of hot water outages in their houses. MOEK made the service as user-friendly as possible. To check the date and duration of hot water outage the user needs to select their district, street and house number in the pop-up windows. If the user fails to find their address using the information service on MOEK's website, it means that hot water and heating supply to the house is provided by a different company.

To pursue its key charitable and sponsorship activities and assist decision-making on involvement in social projects OGK-2 established a Commission on Charity and Sponsorship which considers all applications submitted to the company and requesting charitable support. Subject to financial capabilities of the company, the Commission approves the charitable and sponsorship support programme on an annual basis. For example, the company allocated RUB 8,626 thousand in 2014 and RUB 21,230 thousand in 2015 for charitable purposes.

G4-DMA

ENSURING RELIABLE ENERGY SUPPLY IN THE SHORT AND LONG TERMS

We view reliable energy supply as an essential aspect of social sustainability in the regions where we operate our power plants. Due to the nature of our production companies' business, most of our large investment projects, while being commercial, focus on developing social infrastructure in the regions where our companies operate, i.e. utility infrastructure that supplies heat and electricity to local residential and industrial consumers. By constructing and upgrading our power plants, we contribute to higher reliability and stability of energy supply and partially take the load off facilities that are less efficient in terms of fuel costs and have a bigger environmental footprint.

Since energy supply reliability is directly linked to the technical condition of our production facilities and our performance, we constantly focus on the following areas:

- constructing new and upgrading existing fixed assets (decommissioning inefficient facilities and building new generating units);
- implementing new high-performance green technologies with high efficiency ratios (e.g. CCGT);
- running regular periodic inspections of the technical condition of equipment subject to its hazard class (once every three years) and before the high-hazard periods (fire hazard, lightning hazard, spring flood hazard and the autumn/winter season);
- carrying out preventive maintenance and repairs to ensure viability, reliable performance, safety and controllability of power generating systems.

These efforts minimise the incidence of electricity or heat supply failures and, if they do occur, help us restore normal energy supply in the shortest time possible.

During the 2015 New Year and Christmas holidays, Mosenergo and MOEK took a set of measures to ensure stable electricity, heat and hot water supply to consumers in the Moscow Metropolitan Area. Mosenergo's production facilities were switched to peak generation during the holidays. Mosenergo's CHP plants built up their stocks of reserve fuel, introduced twenty-four-hour duty watches for operating personnel, and put in place the procedure for notifying the management in case of emergency.

In the holiday period, MOEK put in place a special procedure for pipeline monitoring, organised duty watches by responsible employees of the administrative office and operating branches, operating and repair personnel of thermal power plants and distribution networks. During the holidays, the number of field visits to heating mains (by foot or by car) and inspections of equipment and structures on heat distribution networks was increased.

Public holidays, including the lengthy New Year and Victory Day "vacations" (in January and in May, respectively), are particularly demanding on our power plants. Our employees do not take any days off or leaves for these days and we have a procedure in place for calling backup operating personnel. We also organise twenty-four-hour duty watches by repair personnel who always stay available and ready to arrive at first call.

On 5–6 November 2015, electricity supply failures were recorded at TGC-1's Avtovskaya CHPP and Pervomayskaya CHPP. Disconnection of five urban substations (110 KW) was caused by the actuation of the power plants' switchgear safety mechanisms. Nevertheless, thanks to the effective cooperation between the generation company and the grid company, the system operator redistributed the load, while the needs of key socially significant facilities and state institutions were supplied with diesel generators. The above measures enabled prompt resolution of the technological failure and minimisation of implications for consumers.

At OGK-2, between 17 January 2014 and 13 February 2014, as a result of emergency shutdowns of the core equipment at the 1st stage of the Troitskaya GRES branch, the temperature of the heat transfer medium supplying heat to the city of Troitsk and the village of Energetikov dropped by 10ºC and more versus the target values in the supply and return heating mains without disrupting the circulation of the heat transfer medium.

EU28
EU29

In the reporting period (2014–2015), Mosenergo, OGK-2 and MOEK did not record any problems with electricity or heat supply to their consumers.

The most serious emergency that our production companies had to face in 2014–2015 was the fire at Vasileostrovskaya CHPP in December 2015. The efforts to restore the power plant to normal operation continued around the clock, with the essential activities completed promptly. There were no interruptions of electricity supply to consumers.

TROITSKAYA GRES, PAO OGK-2

Maintaining and improving the reliability and efficiency of electricity and heat supply requires regular preventive repairs. In some cases, this implies temporary suspension of operation by our production facili-
EU30 ties. Some of the said suspensions occur as part of a pre-approved plan, and some take place as a result of decisions made on the spot to prevent potential accidents or other emergencies. This, however, does not affect heat and electricity supply to consumers as we promptly redistribute the load across different generating facilities of the Company, including backup facilities.

We use the capacity factor as a wide measure to show the utilisation rate at our power plants subject to scheduled or unscheduled generation suspensions for various reasons.

CAPACITY FACTOR, %

	Mosenergo		TGC-1				OGK-2		MOEK	
			Nevsky, Kolsky and Karelsky Branches		Murmanskaya CHPP					
	2014	2015	2014	2015	2014	2015	2014	2015	2014	2015
Gas-fired CHP plants	51.9	48.6	41.1	37.4	–	–	72.4	63.9	28.1	9.7
Coal-fired CHP plants	56.8	48.2	20.2	18.6	–	–	–	–	–	–
Fuel oil-fired CHP plants	–	–	–	–	15.8	16.2	–	–	–	–
Gas-fired GRES plants	–	–	–	–	–	–	54.9	50.6	–	–
Coal-fired GRES plants	–	–	–	–	–	–	30.4	37.9	–	–
Dual fuel-fired GRES plants	–	–	–	–	–	–	32.9	27.1	–	–

COOPERATION WITH LOCAL COMMUNITIES ON SAFETY ISSUES

G4-SO1
G4-DMA

Although we put various safeguards into place to prevent accidents and emergencies at our power plants, we also run regular drills to practice emergency scenarios and procedures. All relevant efforts in Gazprom energoholding Group's production companies are supervised by the Emergency and Fire Safety Commission of OOO Gazprom energoholding, which meets four times a year. Our drills involve not only employees of our production companies but also representatives of EMERCOM of Russia, various emergency services in the towns and cities where our power plants are located, as well as healthcare institutions and NGOs. We also actively cooperate on these issues with grid companies and other generating companies.

ACCIDENT AND EMERGENCY RESPONSE DRILLS CARRIED OUT

	2014	2015
Mosenergo	24	21
TGC-1	38	43
OGK-2	20	27
MOEK	37	42

Specifically, in 2014–2015, as part of preparation of Mosenego's CHP plants for the autumn / winter periods, 30 drills were carried out in cooperation with local bodies of EMERCOM of Russia, executive authorities and local authorities. The drills focused on practicing cooperation in handing emergencies which threaten to interrupt electricity or heat supply in low outdoor temperatures.

Additionally, in 2014–2015, Mosenergo completed two desktop exercises focused on handling an accident caused by an oil spill at CHPP-25. As part of the exercise, the participants practiced the action plan to prevent and eliminate oil spills at the branch, as well as coordination of efforts and resources among all entities involved – EMERCOM of Russia, OAO CREO (Centre of Rescue and Ecological Operations), and Mosenergo's CHPP-25.

In 2015, 9 out of 27 tactical fire fighting exercises carried out at OGK-2's branches involved the Main Office and the Federal Fire Service of EMERCOM of Russia. Joint exercises included verifying the viability of existing fire safety plans and assessing the current level of fire safety at the company's generating facilities. The exercises enabled the company's employees to practice the rules, procedures, safety measures and actions in case of fire, helped enhance fire safety and readiness of the branches' management and employees for action in case of fire hazard or break-out.

In June 2014, special tactical exercise Lightning-GRES-2014 was organised at the facilities of Ryazanskaya GRES, a branch of OGK-2. The exercise involved: the GRES personnel, a team of FSUE Corporate Security Department of the Russian Ministry of Energy, units of the Regional Offices of the Federal Security Service, the Ministry of Internal Affairs, the Federal Penitentiary Service, the Federal Drug Control Service and EMERCOM of Russia, administrations of the Ryazan Region, the city of Novomichurinsk, the Pronsky and Korablinsky districts. The objective of the exercise was to practice inter-departmental cooperation during an anti-terrorist operation regime imposed in the Pronsky district following the simulated bomb planting at the waterworks, unauthorised entry to the restricted area in an attempt to take hostages and carry out a terrorist attack, and elimination of a fire breakout at the fuel oil facilities.

In February 2014, an annual meeting of the Commission on the Prevention and Emergency Response and Fire Safety was held at TGC-1. The Commission meetings are held at the initiative of TGC-1 since 2010. The meetings help coordinate the efforts of all the services responsible for preventing the negative consequences of spring floods and fires. The Commission discussed the readiness of TGC-1's power plants for the passage of flood waters during the snow and ice melting season, as well as the prevention of negative consequences. Key organisational and technical measures

were identified, as well as the procedure for cooperation with spring flood commissions of municipal entities and local EMERCOM units, inspection of the PA systems, and the dates to hold relevant exercises involving EMERCOM units.

On 10–18 September 2015, a series of emergency response exercises was held at the generating facilities of TGC-1's Karelsky branch – Palieozerskaya, Poduzhemskaya, Belomorskaya and Kondopozhskaya hydropower plants and Petrozavodskaya CHPP. An individual exercise scenario, as close to real life as possible, was prepared for each hydropower plant and Petrozavodskaya CHPP. During the exercise, the participants practiced coordination of efforts between the HPP and CHPP operating personnel and the representatives of regional authorities, EMERCOM and the Government of Karelia. In cooperation with the fire fighters and emergency teams of grid companies, they remedied the damage to the transformers and the consequences of sludge accumulation, which considerably impedes the operation of water intake facilities.

In September 2015, MOEK held a series of emergency response exercises to practice the actions by personnel of the operating branches, thermal power plants and emergency repair services during localisation and elimination of heat supply failures. The exercises also provided for practicing cooperation with the city's energy supply companies and utilities, as well as district authorities. Along with MOEK's operating personnel, the event involved representatives of local units of EMERCOM of Russia, the Russian Ministry of Internal Affairs, Moscow City Fuel and Energy Department, as well as fuel and energy sector companies operating in Moscow. Emergency response exercises were held in all operating branches of MOEK.

Experts of OGK-2's Ryazanskaya GRES annually, in advance of the spring floods, supply the local newspapers of the Pronsky, Korablinsky and Starozhilovsky districts with materials for publications about the state of the Novomichurinsk reservoir and the start of the floods.

COOPERATION WITH LOCAL COMMUNITIES ON ENERGY SAVING

G4-SO1

EXHIBITION OF THE WORKS BY WINNERS OF THE COMPETITION SAY NO TO WASTE OF MONEY – SAVE HEAT AND ELECTRICITY! HELD BY TGC-1

With considerable shares of the energy supply markets in the regions where we operate, we are committed to enhancing energy efficiency not only across our companies but also across regional energy systems. As part of this effort, we actively pursue initiatives to raise awareness among local communities of the issues related to energy saving and engage them on energy efficiency.

On 30 April 2014, the TGC-1 energy-marathon was launched at the venue of the International Children's Fine and Applied Arts Competition – The Room of My Dreams. Eight teams of years 7–9 pupils of Saint Petersburg's boarding school No. 28 and gymnasium No. 524 were involved in the energy marathon. The children took part in an energy-themed quest / trivia game and completed a creative assignment where the teams were to present their own projects dedicated to responsible use of resources and energy efficiency.

On 20 May 2015, TGC-1 held the Hour of Power – an open lesson for the schoolchildren of St Petersburg on the subject of safe and efficient power consumption.

The Hour of Power took place in the interactive zone of the Third Russian International Energy Forum. During the lesson, the company's experts told the children about the scientific and educational portal My Energy (www.myenergy.ru) and demonstrated the learning game My Energy for tablets. The characters of the game explain in simple terms what electricity is, where the current comes from, how to use electrical appliances safely and even how to build a power plant. TGC-1 regularly holds energy efficiency and energy safety lessons in Saint Petersburg, Petrozavodsk and Murmansk. The Hour of Power is held at the company's hydropower plants and CHP plants, scientific and experimental platforms and interactive science museums.

In 2014 and 2015, OGK-2's Kirishskaya GRES held the Energy Eaters creative competition among the city's schools to promote resource saving. To take part in the competition pupils on their 3-6 school-years were invited to draw a picture – a poster or label which could be used as visual aids to promote sustainable consumption of energy resources: electricity, heat, water and fuel. Pupils on their 7-11 school-years were faced with a more challenging and interesting task – to make a research of their own. In 2015, the number of participants doubled versus 2014 – 115 artworks were submitted.

In December 2015, on the eve of the Energy Worker Day, employees of OGK-2's Ryazanskaya GRES organised electricity saving lessons for pupils of Novomichurinsk schools on their 6 school-year, while senior pupils (9–10 school-years) were invited to take part in educational tours of the chemical facility, fuel supply facility and the Environmental Protection Office. Schoolchildren also took part in the essay contest themed Energy Industry, Environment and Us. Out of over 100 essays submitted for the contest 20 best works were awarded with diplomas and presents from the power plant.

In February 2014, TGC-1 in cooperation with OAO St Petersburg Heating Grid opened an exhibition of works by participants in the children's drawing competition Say No to Waste of Money – Save Heat and Electricity! dedicated to heat and electricity saving. Along with the creative competition, the exhibition is part of a wider educational initiative by the energy workers of St Petersburg aimed to promote reasonable and lean energy consumption among the city's residents. The Organising Committee received about 900 drawings dedicated to energy saving by young artists aged from 4 to 18.

The proposal of TGC-1 and OAO St Petersburg Heating Grid to tell the city's residents about ways to save energy in their homes was supported by the Government of Saint Petersburg. Public service ads were put on display across the city, and information materials showing the simplest "energy saving rules" were circulated in kindergartens and schools. The posters featured the red-haired boy Charge (Zaryad in Russian) and Shtep the robot – characters of the themed learning game My Energy presented by TGC-1 – who explained how to avoid unreasonable waste of heat and electricity and thus save the family budget. Educational establishments and the project partners' venues (KidBurg children's city of trades, LabirintUm museum of entertaining science, Umnikum interactive science and entertainment centre) hosted the Hour of Power – a series of special interactive events.

COOPERATION WITH LOCAL COMMUNITIES ON THE ENVIRONMENT

G4-SO1

ENVIRONMENTAL COMMUNITY CLEAN-UP DAY IN ST PETERSBURG

TGC-1 employees took part in a charity clean-up of the grounds of the pediatric oncology and hematology department of St Petersburg's Municipal Hospital No. 31. The union of social activists and young employees of TGC-1 responded with enthusiasm to the invitation by the AdVita foundation to improve the hospital's grounds. Many people volunteered – 15 employees of TGC-1 along with representatives of charity organisations. They cleaned up the grounds and painted the benches and the children's playground.

In May 2014, Murmansk hosted the First National Conference on the Development of Aquaculture in Russia. It involved over 130 experts – representatives of relevant federal and regional government bodies, fishery associations and unions, scientific institutions, as well as Russian and foreign companies engaged in commercial fish farming. The Conference participants visited a unique rainbow trout breeding facility at TGC-1's Verkhne-Tulomskaya HPP, established in 1992. The facility is located underground at the depth of 50 m – the sections of an underground transportation tunnel host a hatching unit comprising 28 tanks where fingerlings are bred. When they gain the target weight, the fingerlings are sold to fish farms, mostly in the Murmansk Region and the Republic of Karelia. The proven technology of mixing the warm water supplied from the HPP with the cold water from the reservoir allows to create perfect conditions for fingerling breeding. Despite all the complications in the

development of aquaculture and thanks to the joint effort between the energy workers and fish farmers, this unique facility has been operating for over twenty years now.

In August 2014, employees of OOO Gazprom energoholding, Mosenergo, OGK-2 and MOEK took part in the All-Russian Environmental Community Clean-Up Day – Green Russia. Together with the teams of other Gazprom Group's companies, Mosenergo employees improved the grounds of the Setunsky Stan Youth Centre in Moscow, having collected about 4 cubic m of rubbish. The event was part of the Year of Ecological Culture at PJSC Gazprom. Various sporting and creative contests and master classes were arranged for children of employees of companies and organisations involved in the community clean-up day.

On 30 August 2014, the All-Russian Environmental Clean-Up Day, TGC-1 employees and social activists of the NGO Clean Petrozavodsk joined in the clear-up on the flood plain of the Neglinka river near Oktyabrsky Avenue. Similar clean-ups were organised that day by environmental activists on the flood plains of the Drevlyanka and the Golikovka rivers. In addition to cleaning up a vast territory, the volunteers also sorted the rubbish, with plastic, glass and paper sent away for recycling.

Employees of OGK-2's Ryazanskaya GRES participate in the Clean Bank of the Pronya initiative. Specifically, in 2015, over 50 people cleaned up a bank of the Novomichurinsk reservoir.

Employees of OGK-2's Pskovskaya GRES are traditionally among the first in the village of Dedovichi to get involved in the clean-up and improvement of the territory of the Energetikov microdistrict. In 2015, 75 people participated in environmental events; 210 trees were planted. At OGK-2's Cherepovetskaya GRES, an entire lilac alley was planted to commemorate Victory Day in 2015.

TREE PLANTING IN PETROZAVODSK

NOT-FOR-PROFIT INFRASTRUCTURE PROJECTS RUN BY THE GROUP'S COMPANIES ON A PRO BONO BASIS

G4-EC7

Our generating companies are major employers and taxpayers in the regions where they operate. So it is safe to say that our companies mainly have a positive impact on local communities and the regional economy.

In an extra effort to support local communities, our generating companies also invest in small social infrastructure projects on a pro bono basis. These investments are too minor to be onerous on the balance sheets of our companies and cannot significantly affect the financial stability of our business. At the same time, they have a great social impact, both enhancing the quality of life for local communities and boosting the image of our companies.

They include, among others, a new free ice rink in the Gubernatorsky Park in Petrozavodsk, constructed by TGC-1. The ice rink was opened on 23 January 2014. The evening's highlight was a fire show and a performance by the precision skating team made up of 32 female athletes of Sports School No. 6 for Children and Young People. Ice quality checks, maintenance and ground cleaning were performed throughout the winter. We hope that the new ice rink has contributed to the revival of athletic traditions of Petrozavodsk.

G4-SO1

COOPERATION WITH LOCAL COMMUNITIES ON CULTURE AND SPORTS

REAL ENERGY PHOTO EXHIBITION IN THE MARSOVO FIELD IN ST PETERSBURG

Our generating companies are fully involved in the cultural life of local communities in the areas where their power plants operate:

– **The Group's generating companies sponsor and organise cultural and sporting events**

In 2015, the year of its 10th anniversary, TGC-1 held the Real Energy Industry competition for journalists, photographers and bloggers. The competition was dedicated to the energy system in the North West of Russia, generating facilities and energy sector workers from the Baltic Sea to the Barents Sea: across four Russian regions, 54 power plants operate and 7 thousand people are employed in the industry. Between 1 April and 15 August 2015, the judges accepted reports, articles, TV and radio spots, interviews with employees of power plants, essays and sketches created

in 2015 and dedicated to TGC-1's energy facilities. Media tours of TGC-1's facilities were arranged for participants as part of the competition. The winners were selected in two categories: Real Energy Workers and Real Facilities. The winners were awarded with valuable prises from the organisers and partners of the competition, and the best photos made the core of a series of Real Energy Industry exhibitions held in September and October 2015 in Saint Petersburg, Murmansk and Petrozavodsk.

On 5 October 2015, a book entitled Ahead of the Time: a Photo Record of the Power Sector in the North West was presented in the new building of the National Library of Karelia. The meeting was attended by working energy professionals, industry veterans, and delegates of the Blockaded Leningrad society in Petrozavodsk. At the ceremony, the book was given for custody to the National Library of Karelia. The book covers the development of the energy industry in the North West from 1802, when Vasily Petrov discovered the electric arc, and until the commissioning by TGC-1 of new modern power plants in the 21st century. The book features unique photographs, interesting facts and recollections of eye-witnesses. Most of the materials have never been published before. They were provided by the Museum of the History of the Energy Industry in the North West and the local national history museums of Karelia, the Leningrad and Murmansk Regions, and found in the personal archives of the people who work or worked in the national energy system.

On 1 February 2015, Kandalaksha hosted the traditional Cross-Country Skiing Cup of TGC-1's Kolsky branch. In 2015, it proved to be the most popular skiing competition in the Polar Region. New cities across the region joined in the tournament. A total of 230 athletes from nine cities and towns of the Murmansk Region and the Republic of Karelia participated in the first stage of the tournament. Depending on their age group, the skiers covered a distance of 1 to 5 km. In 2015, the Cup's partner, along with TGC-1, was Trial-Sport, a chain of sports shops.

The ProGRES youth organisation is active at OGK-2's Serovskaya GRES. It organises and holds regular charity events in the school, kindergartens and social care institutions located in the village of Energetikov. In particular, in 2015, as part of Energy Worker Day celebrations, ProGRES held a Brain Ring game at the power plant, having invited representatives of the city's Mind Sports Club, performed at the working youth festival Take Wing! and participated in the award ceremony of the federal competition Praise the Working Man! in Surgut.

On 14 March 2015, the village of Rayakoski of the Pechengsky District in the Murmansk Region hosted the traditional 18th Ski Track of Friendship for the Barents Sea countries, a unique mass participation ski race covering three neighbouring countries: Russia, Finland and Norway. Participants in the Ski Track of Friendship do not need visas or foreign passports to attend the event. On this day, the small and quiet village of Rayakoski turns into a sports centre and a symbol of international cooperation. Following the long-standing tradition, the opening ceremony and start of the Ski Track of Friendship take place near Rayakoski HPP, with TGC-1 acting as the organiser and official partner of the international ski race. Every year, power engineers put a lot of effort to create a ski run and make arrangements for this sporting event. Over 2,000 people took part in the Ski Track of Friendship in 2015. Within a few hours, the race participants crossed three state borders. Since 1994, the Ski Track of Friendship is opened by border guards of the three countries, followed by professional and amateur athletes.

On 30 September 2015, to celebrate 130 years since the start of the electrification of the Hermitage, an agreement on cooperation between the Hermitage and TGC-1 was signed in the Council Hall of the State Hermitage. According to the three-year agreement, TGC-1 will support programmes to develop the electrification of the State Hermitage, preserve the collection of historic chandeliers and lighting fixtures, install museum lighting to showcase the collections, provide restoration laboratories with special lighting, and implement energy saving technologies. The agreement also includes plans to design and develop museum lighting and energy saving at permanent exhibitions and in open storage rooms in the main museum complex, the General Staff building, the Staraya Derevnya Restoration and Storage Centre, as well as the museum's restoration laboratories.

In October 2015, to celebrate the 50th year since the launch of Kirishskaya GRES, OGK-2 arranged for the demonstration of the multimedia performance Descendants of Prometheus to residents of Kirishi. The 3D show based on the original script was projected to the façade of the City Administration building and accompanied with special effects. The performance followed a unique script: the history of exploration of the land of Kirishi, development of society driven by the discovery of electricity, and the construction of Kirishskaya GRES, which became the city's energy core. A commemorative sign was put up in honour of the first developers of the energy system in Kirishi and in memory of V.I. Baskov, the first Director of Kirishskaya GRES. In addition, a piece of art was installed in Shkoly Iskusstv Square – the Gravity bench

dedicated to the romantic Komsomol members who built the city of Kirishi.

The museum and exhibition centre of Zelenogorsk hosted the exposition by Krasnoyarskaya GRES-2 – the interactive site Let There Be Light, which served as a venue for events for preschoolers and schoolchildren dedicated to the plant's history and the trade of an energy worker.

– **The assets owned by Gazprom energoholding Group's generating companies include sites of cultural and historical heritage**

Mosenergo's State Power Plant No. 1 named after P.G. Smidovich (GES-1) is the oldest operating thermal power plant in Russia; it is included in UNESCO's List of World Heritage Sites as a unique industrial heritage. The 86 MW power plant is located in the centre of Moscow, in Sadovnicheskaya Street, right next to the Kremlin. The plant, which is 115 years old (commissioned in 1897), is still operational – it supplies electricity and heat to facilities in the heart of the Russian capital.

In September 2014, an award ceremony for the winners of the Reputation-2014 All-Russian Financiers' Award was held in Moscow as part of the celebration of the professional holiday – Financier Day. As part of the event, awards were presented to the winners of the Cultural Initiative Awards. Mosenergo was awarded in the Best Internet Project of the Year category as the creator of a unique virtual Museum of the Company's History (http://www.mosenergo-museum.ru). In the opinion of the judges, it attracted Internet users with a wide range of preferences, objectives and knowledge, and helped inspire an active interest in the history of the Russian energy industry.

On 26 March 2014, to celebrate the 80th anniversary of the commissioning of Murmanskaya CHPP, the Museum of the History of Murmanskaya CHPP was opened. It features materials about the start of heat generation in Murmansk and the construction of the CHPP, including the war history, the transition from coal to fuel oil, and the construction of the Southern and Eastern boiler houses. One of the exhibitions is devoted to technical development – many devices within the museum's collection were invented or manufactured by the energy workers themselves. In addition, the Monument to the Valve was erected – a symbol of the polar energy industry and an important element of the city's heat supply infrastructure. The valve had been mounted in 1955 in the city centre. Since then, it had ensured heat supply to about 100 residential and community buildings.

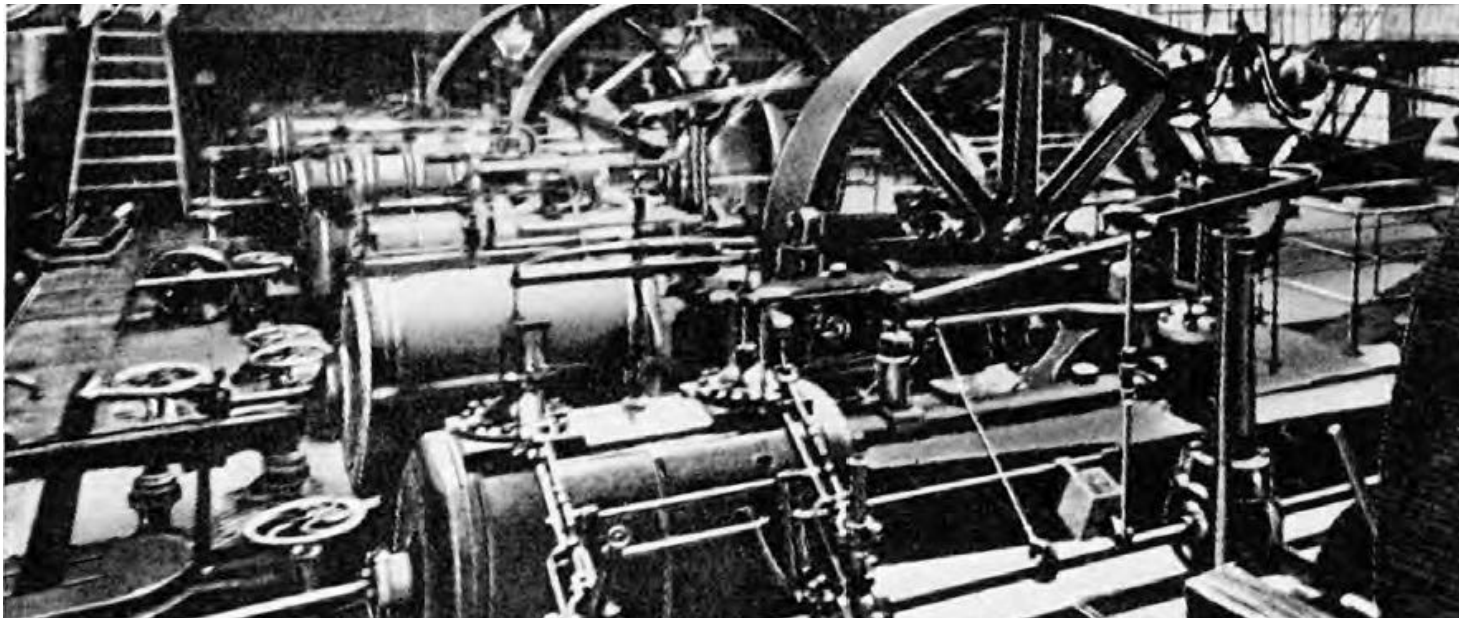
In December 2014, TGC-1's specialists commissioned hydro generating unit No. 3 as part of the upgrade of Hamekoski HPP, the oldest HPP in Russia, with the equipment dating back to 1903. Hamekoski HPP is one of the most important landmarks of Karelia. The plant is special because water is supplied from the dam all the way to the HPP via a long water duct built at a higher level compared to the natural riverbed. When the dam is without water, its design is revealed: its body is seamlessly built into a granite relief – the rock is interspersed with concrete. During the retrofitting and upgrade, the plant's original architecture was preserved.

In December 2015, TGC-1 took part in an initiative to preserve one of the first electric poles erected in Saint Petersburg in the early 20th century by the Electric Lighting Company of 1886. The historic power grid pylon made of reinforced concrete stood near the Muzhestva Square but was in a critical condition and slated to be dismounted and dumped. NGOs applied to TGC-1 with a request to take the "historic pole" to the Museum of the History of the Energy Industry in the North West. The company supported the initiative of the local residents to preserve the artefact. The pole was transported to TGC-1's Central CHPP, the first industrial power plant in Russia. It will be restored and made part of the exhibition in the Museum of the History of the Energy Industry in the North West.

The history of the energy industry in St Petersburg goes hand in hand with the history of the Hermitage. The Winter Palace was the first building in Russia whose halls and façades were lit with electric lamps powered by the largest power plant of its time. The design of the first electric lighting of the Hermitage was unique.

The engineer Vasily Pashkov, a technical expert in the palace administration, proposed by way of experiment to use electricity to illuminate the halls of the palace during the 1885 New Year and Christmas holidays. The experiment proved a success – on 9 November 1885, the project for the construction of an "electricity factory", which used exclusively equipment manufactured in Russia, was approved by the Tsar with a note: "Winter balls of 1886 (10 January) are to be lit entirely by electricity". V. Pashkov was put in charge of the work. To eliminate possible vibration of the building caused by the operation of the steam engines the power plant was to be located in a separate pavilion made of glass and metal. It was located on the ground floor of the Hermitage which has since been called the Electric Floor.

The power plant building had the floor area of 630 sq.m and comprised an engine room with six boilers, four steam engines and two traction engines, as well as a room housing 36 power generating dynamos. The total capacity reached 445 hp. The station consumed around 30 thousand poods (520 tonnes) of coal per year. It was meant to light about a thousand different rooms at a time. The use of electricity at this scale was unprecedented in Russia or in Europe.



ENGINE ROOM OF THE POWER PLANT AT THE WINTER PALACE (LATE 19TH CENTURY)

APPENDICES

APPENDIX 1. OVERVIEW OF GAZPROM ENERGOHOLDING GROUP'S COMPANIES

G4-3 G4-5 G4-7

TABLE 1.1. NAMES, CORPORATE FORMS AND ADDRESSES

Name, corporate form	Address	Mailing address
PAO Mosenergo	101/3 Vernadskogo Ave., Moscow, 119526, Russian Federation	101/3 Vernadskogo Ave., Moscow, 119526
PAO TGC-1	6-B Bronevaya St., Saint Petersburg, 198188, Russian Federation	16/2-A Dobrolyubova Ave., Arena Hall Business Centre, Saint Petersburg, 197198
PAO OGK-2	Solnechnodolsk, Izobilnensky District, Stavropol Territory, 356128, Russian Federation	101/3 Vernadskogo Ave., Moscow, 119526
PAO MOEK	10 Efremova St., Moscow, 119048, Russian Federation	10 Efremova St., Moscow, 119048

G4-17 G4-20

TABLE 1.2. LIST OF SUBSIDIARIES INCLUDED IN CONSOLIDATED FINANCIAL STATEMENTS OF MOSENERGO, TGC-1, OGK-2, AND MOEK

Subsidiary	Interest	
	31 December 2014	31 December 2015
Mosenergo		
OOO Tsentralny Remontno-Mekhanichesky zavod	100.00%	100.00%
OOO TSK Novaya Moskva	–	100.00%
OOO TSK Mosenergo	100.00%	25.60%
OOO TSK Metrologia	100.00%	25.60%
OOO OGK-Investproekt	90.50%	45.00%
TGC 1		
PAO Murmanskaya CHPP	90.34%	90.34%
AO St Petersburg Heating Grid	75.00%	75.00%
OGK 2		
OOO OGK-Investproekt	9.50%	55.00%
OOO OGK-2 Finance	100.00%	100.00%
OOO Centre 112	100.00%	100.00%
MOEK		
OAO Mosgorenergo	100.00%	100.00%
OOO MOEK-Finance	100.00%	100.00%
OAO MOEK-Generatsiya	100.00%	100.00%
OOO Heat Distribution Networks Development	100.00%	100.00%
OOO TsTP MOEK	–	100.00%
OOO TSK Mosenergo	–	74.39%
OOO TSK Metrologia	–	73.65%
OOO TSK MOEK	–	100.00%
OOO MOEK-Proekt	100.00%	–
OOO ITs MOEK	99.00%	–

TABLE 1.3. SHARE CAPITAL STRUCTURE

Shareholders	As at 31 December 2014		As at 31 December 2015	
	Number of shares	%		%
Mosenergo				
OOO Gazprom energoholding	21,265,104,840	53.50	21,265,104,840	53.50
Moscow Department of City Property	10,512,012,316	26.45	10,512,012,316	26.45
ZAO Inter RAO Capital	2,007,375,795	5.05	–	–
Other	5,964,866,749	15.01	7,972,242,544	20.05
Total	**39,749,359,700**	**100.00**	**39,749,359,700**	**100.00**
TGC-1				
OOO Gazprom energoholding	1,996,046,978,490	51.79	1,996,046,978,490	51.79
Fortum	989,152,846,571	25.66	1,135,074,850,193	29.45
Other	869,141,591,510	22.55	723,219,587,888.3/7	18.76
Total	**3,854,341,416,571.3/7**	**100.00**	**3,854,341,416,571.3/7**	**100.00**
OGK-2				
PAO Centerenergyholding	81,081,177,617	73.42	81,081,177,617	73.42
OOO Gazprom energoholding	4,026,935,977	3.65	4,026,935,977	3.65
ZAO Inter RAO Capital	3,382,211,029	3.06	–	–
Other	21,950,836,247	19.88	25,333,047,276	22.93
Total	**110,441,160,870**	**100.00**	**110,441,160,870**	**100.00**
MOEK				
OOO Gazprom energoholding	219,837,795	90.05	219,838,915	90.05
OOO MOEK-Finance	21,752,341	8.91	21,747,678	8.91
Other	2,543,876	1.04	2,547,419	1.04
Total	**244,134,012**	**100.00**	**244,134,012**	**100.00**

TABLE 1.4. GENERATION CAPACITY LOCATIONS AND DISTRIBUTION MARKETS

G4-6
G4-8
G4-9

Branches	Distribution markets / Free power flow zones	Energy generation regions
Mosenergo		
P.G. Smidovich GES-1	Moscow	Moscow and the Moscow Region
R.E. Klasson GRES-3		
CHPP-8		
CHPP-9		
M.Ya. Ufayev CHPP-11		
CHPP-12		
CHPP-16		
CHPP-17		
CHPP-20		
CHPP-21		
CHPP-22		
CHPP-23		
CHPP-25		
CHPP-26		
CHPP-27		

Branches	Distribution markets / Free power flow zones	Energy generation regions
TGC-1		
Nevsky Branch: Tsentralnaya CHPP Pravoberezhnaya CHPP Severnaya CHPP Pervomayskaya CHPP Avtovskaya CHPP Narvskaya HPP Vyborgskaya CHPP Vasileostrovskaya CHPP Ladoga HPP Cascade Yuzhnaya CHPP Dubrovskaya CHPP[32] Vuoksa HPP Cascade	West	Saint Petersburg and the Leningrad Region
Kolsky Branch Apatitskaya CHPP Niva HPP Cascade Tuloma and Serebryansky HPP Cascade[33] Paz HPP Cascade	Kolskaya	Murmansk Region
Karelsky Branch Petrozavodskaya CHPP Kem HPP Cascade Vyg HPP Cascade Suna HPP Cascade	West	Republic of Karelia
PAO Murmanskaya CHPP	Murmansk	Murmansk
OGK-2		
Surgutskaya GRES-1	Tyumen	Tyumen Region
Ryazanskaya GRES	Centre	Ryazan Region
Cherepovetskaya GRES		Vologda Region
Stavropolskaya GRES	Kuban	Stavropol Territory
Adlerskaya TPP		Krasnodar Territory
Kirishskaya GRES	West	Leningrad Region
Pskovskaya GRES		Pskov Region
Troitskaya GRES	Ural	Chelyabinsk Region
Serovskaya GRES		Sverdlovsk Region
Novocherkasskaya GRES	Rostov	Rostov Region
Krasnoyarskaya GRES-2	Siberia	Krasnoyarsk Territory
MOEK	Moscow	Moscow and the Moscow Region

32. Began operating as a subsidiary of TGC-1 on 1 November 2015. Sold on 28 March 2016.

33. Serebryansky HPP Cascade and Tuloma HPP Cascade are merged since September 2014.

TABLE 1.5. MEMBERSHIPS OF GAZPROM ENERGOHOLDING GROUP'S COMPANIES

Organisation	Profile
NP Market Council	Apart from the generating companies of Gazprom energoholding Group, as required by clause 1 of Article 35 of the Federal Law On Electric Energy Sector, List V of the Chamber of Electric Power Sellers includes members of Non-Profit Partnership Market Council that meet the following criteria: – are electricity suppliers; – sell, in the wholesale market, electricity generated using generating equipment that is beneficially owned or otherwise lawfully held by them; – their sales in the wholesale electricity market, with natural gas used as the main fuel, exceeds sales of electricity generated using any other fuel. In accordance with part 6 of clause 1 of Article 33 of the Federal Law On Electric Energy Sector, core objectives of NP Market Council, in the attainment of which we are actively involved, are to: – support the operation of commercial market infrastructure; – ensure efficient interconnection between the wholesale and retail markets; – foster favourable conditions to attract investments in the electric energy sector; – develop a common position among the wholesale and retail market players when drafting regulatory documents governing the electric energy sector; – organise, based on self-regulation, an efficient system for wholesale and retail trade in electricity, capacity, and other goods and services that may be offered in the wholesale and retail markets to ensure energy security of the Russian Federation, unity of the economic space, freedom of economic activity and competition in the wholesale and retail markets, a balance of interests of electricity and power producers and buyers, and satisfaction of the public demand for reliable and sustainable electricity supply.
NP Council of Power Producers	Apart from OOO Gazprom Energoholding, Partnership members include OAO Generating Company, OAO Eurosibenergo, AO Inter RAO – Electric Power Plants, PAO Quadra, IES-Holding, PAO LUKOIL, OOO Siberian Generating Company, AO Sibeco, OAO TGC-2, OAO Fortum, PAO Unipro, and PAO ENEL Russia. The Partnership's strategic objective is to promote a favourable investment climate in the energy sector. To achieve this objective, the generating companies develop, within the Partnership forum, a common position on draft statutory regulations, projects and programmes aimed to promote the development of the electric energy sector, and on interaction with the public authorities at all levels, as well as with infrastructure, non-profit and public organisations in Russia and abroad. The Partnership promotes economic, production, research, and technical liaison between its member companies, represents and protects their interests and rights before legislative and executive authorities, and also provides information and analytical support. The Partnership is a member of advisory bodies, task forces, and expert councils which affect development and operation of the electric energy sector, including those under the Government of the Russian Federation, State Duma of the Russian Federation, Ministry of Energy of Russia, Ministry of Industry and Trade of Russia, Ministry of Economic Development of Russia, Federal Antimonopoly Service of Russia, NP Market Council, Federal Tariff Service of Russia, Russian Union of Industrialists and Entrepreneurs, Chamber of Commerce and Industry of Russia, etc.
National Sectoral Association of Employers in the Energy Industry (RaPE Association)	As part of its interaction with the public authorities RaPE Association is consistently involved in drafting of the sectoral regulations. RaPE Association unites energy companies operating in 43 regions of Russia. Representation in RaPE Association helps our production companies effectively protect their interests in social and labour relations in the electric energy sector and be actively involved in improvement of its legal framework. In 2014, RaPE Association and Public Association All-Russian Electric Trade Union created an Expert Council on the Regulation of Social and Labour relations. One of the priority objectives for the Council is to draft a new sectoral tariff agreement as a uniform industry standard. The Council is engaged in a constructive dialogue on organising a special assessment of working conditions and leads joint monitoring and analysis of accidents, monitoring of the labour market for employment and pay levels, assessment of the risks of labour market tensions and the ways to contain them. In 2014–2015, member organisations of RaPE Association, including Gazprom energoholding Group's experts, together with the Russian Ministry of Energy, developed 8 professional standards (out of the total of 33 sectoral standards) for 67 key positions (professions): – Thermal Power Plant Facilities Operator; – TPP Storage Equipment Operator; – TPP Electrical Equipment Operator; – TPP Electrical Equipment Operation Manager; – TPP Compression Units Operator; – TPP Thermal and Mechanical Equipment Operator; – TPP Thermal and Mechanical Equipment Operation Manager. The above standards were a subject of public consultations, and were duly approved and registered.

Organisation	Profile
NP Scientific and Technical Council of the Unified Power System (NP STC UPS)	Activities of NP STC UPS reflect all stages of development of the national energy sector, including wartime and post-war recovery, hydropower development, DC and AC grid expansion, establishment of the USSR's unified power system, the post-war transition of thermal power generation to high and supercritical steam parameters, and, during the postwar years, implementation of modern gas turbine and steam and gas technologies, and many other themes. The Partnership structure also includes the Scientific and Technical Board comprised of renowned scientists and highly qualified energy experts, including academicians, corresponding members of the Russian Academy of Sciences, candidates and doctors of sciences. At its meeting, the Scientific and Technical Board of NP STC UPS reviews energy facility construction, re-equipment and retrofitting projects; regulatory and technical document; feasibility studies on deployment of new technologies, and other projects and work affecting Russia's unified power system, which require highly qualified expertise and support. Over the past decade, it addressed, and developed recommendations for, over 500 important projects in the electric energy sector. Gazprom energoholding Group's generating companies cooperate with the Partnership on a number of innovative projects in the national energy sector – a project to develop a 520 MW and higher power CCGT and a project to upgrade the GTE-160 turbines for the CCGT-450 unit.

APPENDIX 2. ECONOMIC SUSTAINABILITY

TABLE 2.1. DECOMMISSIONING OF INEFFICIENT HEAT AND POWER GENERATION CAPACITY

	Capacity	Decommissioned		Capacity slated for decommissioning	
		2014	2015	2016	2017
Mosenergo					
CHPP-8	TG-5 turbine unit	–	–	25 MW	–
CHPP-16	TG-1, 2, 3, 4 turbine unit (90 atm)	–	–	130 MW	–
CHPP-20	TG-1 turbine unit (90 atm)	–	–	30 MW	–
Strogino DEHP	2 gas turbines and 1 steam turbine	–	–	130 MW	–
CHPP-29 (sold)	GTU-1	–	16,78 MW	–	–
CHPP-6 (sold)	TG-1, 2, 3 turbine units	–	18 MW	–	–
GES-2 (sold)	TG-7 turbine unit	–	–	10 MW	–
Kuryanovo DEHP	GT-1, 2 gas turbines	–	12 MW	–	–
Lyublino DEHP	GT-1, 2 gas turbine	–	12 MW	–	–
TGC-1					
Tsentralnaya CHPP	T-20.5-26 turbine unit at generating unit No. 1 of PP-2	–	20,5 MW	13 Gcal/h	–
Dubrovskaya CHPP (sold)	T-37-90 turbine unit at generating unit No. 5	–	37 MW	–	–
	K-50–90 turbine unit at generating unit No. 6	–	50 MW	–	–
	PK-10-Sh boiler unit at generating unit No. 1	–	51 Gcal/h	–	–
Pervomayskaya CHPP	PK-10-Sh boiler unit at generating unit No. 1	58 Gcal/h	–	Turbine units No. 3, 4, 5 with IPC (installed power capacity) = 164 MW (heat inst. cap. = 373 Gcal/h) decommissioned on 1 May 2016	–
Apatitskaya CHPP		–	–	36 MW, 55 Gcal/h	–
OGK-2					
Serovskaya GRES	boilers No. 1, 2, 3, 7, 11, 12, TG-1, 2, 4	–	boilers No. 1, 2, 3, 7, 11, 12, TG-1, 2, 4, with nominal IPC = 150 MW	–	–

	Capacity	Decommissioned		Capacity slated for decommissioning	
		2014	2015	2016	2017
Troitskaya GRES	units No. 7, 4, 5, TG-2	-	278 MW	Units No. 4, 5 with nominal IPC = 556 MW, decommissioned from 1 June 2016	TG-2 with nominal IPC = 85 MW from 1 June 2017
MOEK					
In 2014–2015, MOEK did not decommission any capacity and has no plans to decommission in 2016–2017. Instead, the company only transfers and plans to transfer the generation capacity slated for decommissioning to Mosenergo.					

TABLE 2.2. ACTUAL AND PLANNED CAPACITY COMMISSIONING IN THE WHOLESALE ELECTRICITY AND CAPACITY MARKET UNDER CSA PROJECTS IN 2014–2018, MW (CAPACITY ADDITIONS)

Power plant	Capacity	Capacity commissioned (certified)		Capacity scheduled for commissioning		
		2014	2015	2016	2017	2018
Mosenergo[34]						
CHPP-16	CCGT-420	421	–	–	–	–
CHPP-9	GTE-65	64.8	–	–	–	–
CHPP-12	CCGT-220	–	211.6	–	–	–
CHPP-20	CCGT-420	–	418[35]	–	–	–
OGK-2						
Cherepovetskaya GRES	CCGT-420	421.6	–	–	–	–
Troitskaya GRES	STU-660	–	–	660	–	–
Serovskaya GRES	CCGT-420	–	420	–	–	–
Novocherkasskaya GRES	STU-330	–	–	330	–	–
Ryazanskaya GRES	CCGT-330	–	330	–	–	–
Groznenskaya TPP	2*CCGT-180	–	–	–	–	360
TGC-1						
Tsentralnaya CHPP	GTU–CHP	–	–	100	–	–

34. Construction of new capacity under Mosenergo's CSA investment programme was fully completed in 2015.

35. From 1 February 2016, CHPP220 participates in the capacity market.

APPENDIX 3. ENVIRONMENTAL SUSTAINABILITY

TABLE 3.1. HEAT AND ELECTRICITY CONSUMPTION FOR OWN NEEDS

G4-EN3

	2014		2015	
	Electricity consumption for own needs, billion kWh	Heat consumption for own needs, mm Gcal	Electricity consumption for own needs, billion kWh	Heat consumption for own needs, mm Gcal
Mosenergo	**4.587**	**3.079**	**4.481**	**2.710**
TGC-1 (including Murmanskaya CHPP)	**1.629**	**0.949**	**1.500**	**0.864**
OGK-2	**4.048**	**5.548**	**3.814**	**4.513**
MOEK – total, including:	**1.184**	**6.713**	**1.043**	**5.424**
Consumption for the source's own operating needs (non-combined generation)	0.350	0.484	0.237	0.272
Consumption for the source's own operating needs (combined generation)	0.017	0.012	0.005	0.005
Process consumption for transmission and distribution of thermal energy	0.817	6.129	0.801	5.066
Consumption of thermal energy for MOEK's auxiliary purposes	–	0.088	–	0.081

TABLE 3.2. HEAT LOSSES IN GRIDS ON THE BALANCE SHEET OF OUR PRODUCTION COMPANIES AND THEIR SUBSIDIARIES, '000 GCAL

EU12

	2014	2015
Heating grids of Mosenergo (leased to MOEK)	considered in heating balance of MOEK	considered in heating balance of MOEK
Heating grids of OOO TSK Mosenergo (100% subsidiary of Mosenergo)[36]	357.92	238.22
– incl. OOO TSK Novaya Moskva	139.98[37]	91.91
AO St Petersburg Heating Grid (75% subsidiary of TGC-1)	1,867.00	1,849.91
Heating grids of PAO Murmanskaya CHPP (subsidiary of TGC-1)	85.82	80.45
Heating grids of OGK-2	104.70	101.10
Heating grids of MOEK	6,131.35	5,016.21

36. In 2014, Mosenergo's share in OOO TSK Mosenergo was 100%, in 2015 (as of 01.01.2016) – 68%.

37. Considered in heating balance of MOEK.

TABLE 3.3. ENERGY SAVING INITIATIVES IMPLEMENTED BY MOSENERGO IN 2014–2015

Energy saving initiatives under Mosenergo's Energy Saving and Energy Efficiency Enhancement Programme for 2013–2015		Savings achieved							
		2014				2015			
		'000 t. o. e.	mm kWh	'000 Gcal	RUB mm	'000 t. o. e.	mm kWh	'000 Gcal	RUB mm
1.	Strategic measures (incl. commissioning CCGT-based capacity)	296.1	152.4	–	1,311.1	387.1	273.4	–	1,816.6
2.	Measures to develop the heat distribution network (shifting heat production from DHPs and SHPs to CHPPs)	404.4	–	–	1,592.0	419.0	–	–	1,687.9
3.	Maintenance and technical activities	10.6	1.4	5.5	46.7	15.0	15.7	14.1	84.4
Economic benefits from energy saving initiatives		**711.1**	**153.8**	**5.5**	**2,949.8**	**821.1**	**289.1**	**14.1**	**3,588.9**

TABLE 3.4. ENERGY SAVING INITIATIVES IMPLEMENTED BY TGC-1 IN 2014–2015

Energy saving initiatives under TGC-1's Energy Saving and Energy Efficiency Enhancement Programme for 2012–2015		Savings achieved							
		2014				2015			
		'000 t. o. e.	mm kWh	'000 Gcal	RUB mm	'000 t. o. e.	mm kWh	'000 Gcal	RUB mm
1.	**Re-equipment and retrofitting**	**0.03**	**1.28**	**–**	**1.30**	**0.40**	**2.39**	**–**	**4.01**
1.1.	Vasileostrovskaya CHPP. A standard Main Oil Pump OMN (NPS65-35-500) replaced with an Eco Vizor EX-156 displacement pump	–	1.24	–	1.17	–	–	–	–
1.2.	Apatitskaya CHPP Heating grid and boiler condensate pumps (BCP) 5, 6, 7, 8, 14 and Network Pump No. 8 retrofitted to install a variable-frequency drive; the heating grid pipeline replaced with PP foam pipes	0.03	–	–	0.09	–	–	–	–
1.3.	Vasileostrovskaya CHPP. A variable-frequency drive (VFD) installed on storage tank pumps (STP)	–	–	–	–	–	2.27		2.32
1.4.	Vyborgskaya CHPP The cooling system for atmospheric deaerator steam retrofitted to install a plate heat exchanger	–	–	–	–	0.39	–	–	1.54
1.5.	Avtovskaya CHPP. A variable-frequency drive installed on two decarbonised water pumps	–	0.03	–	0.03	–	0.11	–	0.11
1.6.	Avtovskaya CHPP. A variable-frequency drive installed on two boiler coal feeders		0.01	–	0.01	–	0.01	–	0.01
1.7.	Apatitskaya CHPP. 600 m of the heating grid pipeline replaced with PP foam pipes	–	–	–	–	0.01	–	–	0.03
2.	**Activities during overhaul and medium repairs of the core equipment**	**10.50**	**0.10**	**–**	**31.00**	**9.68**	**–**	**–**	**36.78**
3.	**Other organisational and technical initiatives**	**–**	**–**	**–**	**–**	**–**	**0.10**	**–**	**0.11**

Energy saving initiatives under TGC-1's Energy Saving and Energy Efficiency Enhancement Programme for 2012–2015		Savings achieved							
		2014				2015			
		'000 t. o. e.	mm kWh	'000 Gcal	RUB mm	'000 t. o. e.	mm kWh	'000 Gcal	RUB mm
3.1.	Niva HPP Cascade Incandescent light bulbs replaced with energy saving bulbs at HPPs	–	–	–	–	–	0.10	–	0.11
3.2.	Suna HPP Cascade Mercury arc lamps replaced with LEDs	–	–	–	–	–	–	–	–
Economic benefits from energy saving initiatives		**10.53**	**1.38**	–	**32.30**	**10.08**	**2.49**	–	**40.90**

TABLE 3.5. ENERGY SAVING INITIATIVES IMPLEMENTED BY OGK-2 IN 2014–2015

Energy saving initiatives under OGK-2's Efficiency project		Savings achieved							
		2014				2015			
		'000 t. o. e.	mm kWh	'000 Gcal	RUB mm	'000 t. o. e.	mm kWh	'000 Gcal	RUB mm
1.	Fuel use	37.0	–	–	103.9	77.0	–	–	221.5
2.	Operation	6.0	–	–	18.2	10.0	–	–	29.3
3.	Own needs	–	20.0	11.0	52.7	–	37.0	35.0	105.3
4.	Improving efficiency of maintenance services	–	–	–	13.8	–	–	–	4.4
5.	Negative environmental impact charges	–	–	–	160.3	–		–	3.1
6.	Improving efficiency of electricity and capacity sales	–	15.0	20.0	149.3	–	30.0	25.0	1,058.4
Economic benefits from energy saving initiatives		**43.0**	**35.0**	**31.0**	**498.2**	**87.0**	**67.0**	**60.0**	**1,422.0**

TABLE 3.6. ENERGY SAVING INITIATIVES IMPLEMENTED BY MOEK IN 2014–2015

Energy saving initiatives under MOEK's approved programmes		Savings achieved							
		2014				2015			
		'000 t. o. e.	mm kWh	'000 Gcal	RUB mm	'000 t. o. e.	mm kWh	'000 Gcal	RUB mm
1.	**Retrofitting of heating grids**	**–**	**–**	**79.79**	**117.70**	**–**	**–**	**24.47**	**39.96**
1.1.	Retrofitting of heat distribution grids using latest technology	–	–	38.15	56.28	–	–	8.40	13.72
1.2.	Retrofitting of heat mains using latest technology	–	–	22.90	33.78	–	–	9.02	14.73
1.3.	Retrofitting of connection points using latest technology	–	–	17.85	26.33	–	–	6.17	10.08
1.4.	Relaying of buried pipes using upgraded insulation	–	–	0.04	0.06	–	–	–	–
1.5.	Replacement of compensators	–	–	0.85	1.25	–	–	0.88	1.44
2.	**Central heating units (CHUs)**	**–**	**0.06**	**78.00**	**115.06**	**–**	**0.47**	**65.00**	**106.16**
2.1.	Retrofitting of CHUs	–	–	29.00	42.78	–	–	9.50	15.52
2.2.	Automation of CHUs (comprehensive replacement of automation systems)	–	–	49.00	72.28	–	–	55.50	90.64
2.3.	Replacement of heat metering units at CHUs	–	–	–	–	–	–	–	–
2.4.	Retrofitting of VFDs at CHUs	–	0.06	–	–	–	0.47	–	–
Economic benefits from energy saving initiatives		–	**0.06**	**157.79**	**232.53**	–	**0.47**	**89.47**	**143.77**

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TABLE 3.7. GREENHOUSE GAS EMISSIONS IN CO_2 EQUIVALENT

	2014		2015	
	tonnes	Per unit of equivalent output, tonnes/MWh	tonnes	Per unit of equivalent output, tonnes/MWh
Mosenergo				
CO_2	39,847,797	0.288	39,092,468	0.283
CH_4	283	0.000002	410	0.000003
N_2O	27,246	0.0002	28,858	0.00021
SF_6	7,205	0.00005	7,253	0.00005
Total	**39,882,531**	**0.288**	**39,128,989**	**0.283**
TGC-1				
CO_2	12,746,710	0.233	11,074,322	0.211
CH_4	6	–	–	–
N_2O	1,564,692	0.029	1,647,456	0.031
SF_6	1,564	–	1,511	–
Total	**14,312,972**	**0.262**	**12,723,289**	**0.242**
OGK-2				
CO_2	48,438,543	0.63	45,304,071	0.63
CH_4	22,599	0.00029	33,410	0.00046
N_2O	117,927	0.002	108,971	0.002
SF_6	505	–	571	–
Total	**48,579,575**	**0.631**	**45,447,022**	**0.632**
MOEK				
CO_2	4,912,842	0.225	2,803,702	0.222
CH_4	–	–	–	–
N_2O	–	–	–	–
SF_6	–	–	–	–
Total	**4,912,842**	**0.225**	**2,803,702**	**0.222**

TABLE 3.8. EMISSIONS OF MAJOR POLLUTANTS AND THEIR INTENSITY PER UNIT OF OUTPUT BY ALL GENERATION FACILITIES

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	2014		2015	
	Total, tonnes	Per unit of equivalent output, tonnes/MWh	Total, tonnes	Per unit of equivalent output, tonnes/MWh
Mosenergo				
solid	719.76	$5.199*10^{-6}$	1,230.26	$8.793*10^{-6}$
gaseous and liquid	44,312.04	$3.201*10^{-4}$	48,628.72	$3.476*10^{-4}$
Including:				
– nitrogen oxides (in NO_2)	38,659.81	$2.792*10^{-4}$	40,524.08	$2.896*10^{-4}$
– carbon oxide	1,067.33	$7.709*10^{-6}$	1,385.22	$9.901*10^{-6}$
– sulphur dioxide	4,560.73	$3.294*10^{-5}$	6,695.07	$4.785*10^{-5}$
– hydrocarbons (net of volatile organic compounds)	7.03	$5.079*10^{-8}$	6.86	$4.903*10^{-8}$
– volatile organic compounds	16.51	$1.193*10^{-7}$	16.82	$1.203*10^{-7}$
– benzapyrene	0.02	$1.445*10^{-10}$	0.03	$2.287*10^{-10}$
– other gaseous and liquid	0.61	$4.406*10^{-9}$	0.64	$4.589*10^{-9}$
Total	**45,031.80**	**$3.253*10^{-4}$**	**49,858.98**	**$3.564*10^{-4}$**
TGC-1 (including Murmanskaya CHPP)				
solid	4,192.99	$7.661*10^{-5}$	4,457.90	$8.478*10^{-5}$
gaseous and liquid	41,900.75	$7.656*10^{-4}$	38,161.00	$7.257*10^{-4}$
Including:				
– nitrogen oxides (in NO_2)	20,107.91	$3.674*10^{-4}$	17,181.25	$3.267*10^{-4}$
– carbon oxide	5,670.93	$1.036*10^{-4}$	5,139.79	$9.774*10^{-5}$
– sulphur dioxide	16,095.01	$2.941*10^{-4}$	15,807.56	$3.006*10^{-4}$
– hydrocarbons (net of volatile organic compounds)	–	–	0.28	$5.325*10^{-9}$
– volatile organic compounds	25.57	$4.672*10^{-7}$	29.87	$5.680*10^{-7}$
– benzapyrene	–	–	0.01	$1.902*10^{-10}$
– other gaseous and liquid	1.33	$2.430*10^{-8}$	2.24	$4.260*10^{-8}$
Total	**46,093.74**	**$8.422*10^{-4}$**	**42,618.90**	**$8.105*10^{-4}$**
OGK-2				
solid	88,275.36	$1.15*10^{-3}$	86,435.45	$1.20*10^{-3}$
gaseous and liquid	245,163.15	$3.19*10^{-3}$	207,650.61	$2.89*10^{-3}$
Including:				
– nitrogen oxides (in NO_2)	69,656.17	$9.05*10^{-4}$	60,546.87	$8.42*10^{-4}$
– carbon oxide	29,028.62	$3.77*10^{-4}$	24,571.40	$3.42*10^{-4}$
– sulphur dioxide	145,381.91	$1.89*10^{-3}$	120,348.48	$1.67*10^{-3}$
– hydrocarbons (net of volatile organic compounds)	4.97	$6.46*10^{-8}$	101.49	$1.41*10^{-6}$
– volatile organic compounds	191.54	$2.49*10^{-6}$	196.46	$2.73*10^{-6}$
– benzapyrene	0.02	$2.60*10^{-10}$	0.03	$4.17*10^{-10}$
– other gaseous and liquid	899.92	$1.17*10^{-5}$	1,885.88	$2.62*10^{-5}$
Total	**333,438.51**	**$4.33*10^{-3}$**	**294,086.06**	**$4.09*10^{-3}$**
MOEK				
solid	–	–	–	–
gaseous and liquid	5,057.9	–	2,978.5	–
Including:				
– nitrogen oxides (in NO_2)	3,303.0	–	2,457.3	–
– carbon oxide	929.3	–	521.2	–
– sulphur dioxide	–	–	–	–

	2014		2015	
	Total, tonnes	Per unit of equivalent output, tonnes/MWh	Total, tonnes	Per unit of equivalent output, tonnes/MWh
– hydrocarbons (net of volatile organic compounds)	–	–	–	–
– volatile organic compounds	–	–	–	–
– benzapyrene	–	–	–	–
– other gaseous and liquid	825.6	–	–	–
Total	**5,057.9**	**–**	**2,978.5**	**–**

TABLE 3.9. EMISSIONS OF MAJOR POLLUTANTS AND THEIR INTENSITY PER UNIT OF OUTPUT BY HYDROCARBON FIRED ELECTRICITY AND HEAT GENERATING FACILITIES (CHP PLANTS) OPERATED BY TGC 1 (EXCLUDING MURMANSKAYA CHPP)

	2014		2015	
	Total, tonnes	Per unit of equivalent output, tonnes/MWh	Total, tonnes	Per unit of equivalent output, tonnes/MWh
TGC-1				
solid	4,110.65	$7.51*10^{-5}$	4,371.24	$8.31*10^{-5}$
gaseous and liquid	27,610.50	$5.04*10^{-4}$	24,557.17	$4.67*10^{-4}$
Including:				
– nitrogen oxides (in NO_2)	18,284.11	$3.34*10^{-4}$	15,498.68	$2.95*10^{-4}$
– carbon oxide	5,612.45	$1.03*10^{-4}$	5,090.00	$9.68*10^{-5}$
– sulphur dioxide	3,697.79	$6.76*10^{-5}$	3,946.80	$7.51*10^{-5}$
– hydrocarbons (net of volatile organic compounds)	-	$1.83*10^{-11}$	0.28	$5.38*10^{-9}$
– volatile organic compounds	14.89	$2.72*10^{-7}$	19.19	$3.65*10^{-7}$
– benzapyrene	-	-	0.01	$2.28*10^{-10}$
– other gaseous and liquid	1.27	$2.32*10^{-8}$	2.21	$4.20*10^{-8}$
Total	**31,721.15**	**$5.80*10^{-4}$**	**28,928.42**	**$5.50*10^{-4}$**

G4-EN8 **TABLE 3.10. VOLUME AND SOURCES OF WATER INTAKE, '000 CUBIC METRES**

	Mosenergo		TGC-1		OGK-2		MOEK	
	2014	2015	2014	2015	2014	2015	2014	2015
Water intake, '000 cubic metres								
from surface sources	509,912	447,586	276,217	233,935	3,508,221	3,271,434	–	–
from underground sources	4,249	4,062	34	1	6,920	1,552	20,002	20,002
from public water supply systems	7,423	7,649	115,389	104,809	6,957	6,318	6,690	5,093
from other water supply systems	44,805	45,722	7,196	6,341	4,328	3,824	17,022	–
Total	**566,389**	**505,019**	**398,836**	**345,086**	**3,526,426**	**3,283,128**	**43,714**	**25,095**
G4-EN10 **Water reuse, '000 cubic metres**								
Total	**24,994**	**22,563**	**2,397**	**2,182**	**139,632**	**148,358**	**–**	**–**

TABLE 3.11. DISPOSED WASTEWATER AND ITS PURIFICATION LEVELS, '000 CUBIC METRES

G4-EN22

	Mosenergo		TGC-1		OGK-2		MOEK[38]	
	2014	2015	2014	2015	2014	2015	2014	2015
polluted and untreated	–	–	103,134	93,527	2,252	2,211	–	–
polluted and insufficiently treated	25,485	23,632	1,858	1,496	2,910	3,750	–	–
clean-to-standard (untreated)	350,793	283,237	144,087	118,293	3,439,326	3,207,658	–	–
treated-to-standard	15,643	15,254	131	–	6,334	5,057	–	–
Total	**391,921**	**322,123**	**249,210**	**213,316**	**3,450,822**	**3,218,675**	**–**	**–**

TABLE 3.12. WASTE DISPOSAL, TONNES

G4-EN23

	2014			2015		
	Total	Including:		Total	Including:	
		Oil slime	Bottom ash		Oil slime	Bottom ash
Mosenergo						
Placed at own landfills	56,795.4	–	56,795.4	116,530.7	–	114,345.8
Recycled by the company	95.9	7.7	–	1.1	0.6	–
Neutralised by the company	–	–	–	–	–	–
Delivered to third parties	96,205.6	240.3	63,877.4	57,176.1	657.4	42,566.8
Including for:						
– recycling	72,624.8	–	63,877.4	46,408.4	35.5	42,566.8
– neutralisation	1,085.8	240.3	–	1,008.8	621.9	–
– storage	–	–	–	–	–	–
– landfilling	22,494.9	–	–	9,758.9	–	–
TGC-1						
Placed at own landfills	2,099.9	–	–	37,668.2	19.2	37,475.0
Recycled by the company	3.1	–	–	0.7	–	–
Neutralised by the company	0.8	–	–	0.7	–	–
Delivered to third parties	118,901.0	879.1	72,802.9	68,008.9	621.9	25,154.0
Including for:						
– recycling	30,899.9	8.0	–	31,758.7	–	–
– neutralisation	1,043.8	626.2	–	883.1	502.1	–
– storage	–	–	–	–	–	–
– landfilling	86,957.3	244.9	72,802.9	35,367.1	119.8	25,154.0
OGK-2						
Placed at own landfills	2,138,263.8	–	2,135,709.9	1,930,842.5	–	1,929,896.8
Recycled by the company	31,813.1	150.7	27,540.0	1,426,872.7	0.7	1,333,344.0
Neutralised by the company	6.8	–	–	6.2	–	–

38. MOEK does neither discharge water into surface water bodies nor organises treatment or disposal of its wastewater. Clean to standard wastewater resulting from MOEK's operations is disposed of into the centralised water disposal system of GUP Mosvodostok and AO Mosvodokanal to be further transferred for treatment by these entities.

	2014			2015		
	Total	Including:		Total	Including:	
		Oil slime	Bottom ash		Oil slime	Bottom ash
Delivered to third parties	86,369.5	161.5	59,370.2	75,722.3	42.5	48,979.5
Including for:						
– recycling	71,049.6	–	59,370.2	59,837.7	–	48,979.5
– neutralisation	291.3	161.5	–	374.8	42.5	–
– storage	0.2	–	–	–	–	–
– landfilling	15,028.4	–	–	15,509.8	–	–
MOEK						
Placed at own landfills	–	–	–	–	–	–
Recycled by the company	–	–	–	0.7	–	–
Neutralised by the company	–	–	–	–	–	–
Delivered to third parties	23,419.7	–	–	16,400.2	–	–
Including for:						
– recycling	56.6	–	–	574.4	–	–
– neutralisation	17.7	–	–	78.4	–	–
– storage	–	–	–	–	–	–
– landfilling	23,345.4	–	–	15,747.4	–	–

G4-EN31

TABLE 3.13. ENVIRONMENTAL COSTS AND INVESTMENTS, RUB THOUSAND

	Mosenergo		TGC-1		OGK-2		MOEK	
	2014	2015	2014	2015	2014	2015	2014	2015
Preparation and approval of permits	26,589	33,085	18,440	23,503	23,061	5,921	26,158	2,243
Industrial environmental control and monitoring	20,738	37,540	13,784	15,528	26,963	28,821	41,606	25,226
Negative environmental impact charges, including fines and recovery costs	34,268	34,030	125,896	55,623	405,216	366,903	6,630	3,450
Equity investments to improve environmental performance, including:	47,435	87,910	50,638	97,078	702,711	2,679,396	–	–
– water protection	26,920	73,679	49,233	69,315	187,018	2,572,948	–	–
– air protection	20,515	14,231	–	26,842	476,296	104,530	–	–
– land protection	–	–	–	–	1,544	1,917	–	–
– fish protection and reproduction	–	–	1,405	921	37,853	–	–	–
– disposal, neutralisation and landfilling of toxic waste	–	–	–	–	–	–	–	–
Current (operating) environmental costs, including:	29,404	49,522	235,725	68,455	237,032	288,399	6,492	6,621
– ambient air protection and climate change prevention	9,599	11,072	37,761	5,805	76,564	92,397	–	2,207
– wastewater collection and treatment	11,072	29,636	60,727	35,449	153,918	165,444	2,164	2,207
– waste treatment	8,161	8,780	113,553	18,942	17,580	23,011	2,164	2,207

	Mosenergo		TGC-1		OGK-2		MOEK	
	2014	2015	2014	2015	2014	2015	2014	2015
– protection and remediation of land, and surface and ground waters	–	–	640	665	19,428	2,141	2,164	–
– protection of the environment against noise, vibration and other physical impacts	572.0	19	847	1,109	565	686	–	–
– preservation of biodiversity and protection of nature areas	–	–	–	–	2,489	2,721	–	–
– research and development	–	–	–	–	–	–	–	–
– other	–	15	22,197	6,485	2,488	1,999	–	–
Fees for environmental services	598,007	727,061	351,405	238,282	447,878	479,401	289,006	284,605

G4-10

APPENDIX 4. LABOUR SUSTAINABILITY

TABLE 4.1. THE TOTAL HEADCOUNT INCLUDING PERSONS EMPLOYED UNDER CIVIL CONTRACTS AND PART-TIME EMPLOYEES (BY REGION AND BY GENDER)

Region of operation	2014		2015	
	Female	Male	Female	Male
Mosenergo				
Moscow and the Moscow Region	2,489	5,373	2,564	5,577
Total for Mosenergo	**2,489**	**5,373**	**2,564**	**5,577**
	7,862		**8,141**	
TGC-1				
St Petersburg	1,173	2,326	1,177	2,328
Leningrad Region	280	717	180	474
Republic of Karelia	226	680	277	694
Murmansk Region[39]	601	1,612	574	1,589
Total for TGC-1	**2,280**	**5,335**	**2,208**	**5,085**
	7,615		**7,293**	
OGK-2				
Moscow and the Moscow Region	190	139	167	134
Tyumen Region	280	647	274	646
Ryazan Region	376	752	378	747
Stavropol Territory	255	539	256	544
Leningrad Region	299	513	299	514
Chelyabinsk Region	430	847	428	824
Rostov Region	424	733	442	775
Krasnoyarsk Territory	220	651	222	652
Vologda Region	242	355	237	356
Sverdlovsk Region	174	341	168	343
Pskov Region	130	217	133	205
Krasnodar Territory	75	142	81	137
Total for OGK-2	**3,095**	**5,876**	**3,085**	**5,877**
	8,971		**8,962**	
MOEK				
Moscow and the Moscow Region	5,807	10,001	4,939	9,424
Total for MOEK	**5,807**	**10,001**	**4,939**	**9,424**
	15,808		**14,363**	
Total for Gazprom energoholding Group's production companies	**13,671**	**26,585**	**12,796**	**25,963**
	40,256		**38,759**	

39. Including employees of PAO Murmanskaya CHPP

TABLE 4.2. TOTAL HEADCOUNT BY STAFF AND CONTRACTED EMPLOYEE, TYPE OF EMPLOYMENT CONTRACT, AND GENDER

	Staff employees								Contracted employees			
	Employment contract with a staff employee				Employment contract with a part-time employee				Civil contract			
	2014		2015		2014		2015		2014		2015	
	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male
Mosenergo	2,480	5,345	2,547	5,529	4	3	2	2	5	25	15	46
TGC-1	2,253	5,299	2,177	5,032	6	19	13	31	21	17	18	22
OGK-2	3,089	5,865	3,081	5,867	1	5	1	3	5	6	3	7
MOEK	5,787	9,877	4,922	9,363	20	124	17	61	–	–	–	–
Total	**13,609**	**26,386**	**12,727**	**25,791**	**31**	**151**	**33**	**97**	**31**	**48**	**36**	**75**
	39,995		**38,518**		**182**		**130**		**79**		**111**	

TABLE 4.3. STAFF EMPLOYEE HEADCOUNT BY TYPE OF EMPLOYMENT AND GENDER

	Full-time employee				Part-time employee			
	2014		2015		2014		2015	
	Female	Male	Female	Male	Female	Male	Female	Male
Mosenergo	2,477	5,345	2,543	5,529	3	–	4	–
TGC-1	2,244	5,289	2,154	5,023	10	9	24	8
OGK-2	3,090	5,870	3,082	5,870	–	–	–	–
MOEK	5,763	9,877	4,900	9,363	24	–	22	–
Total	**13,574**	**26,381**	**12,679**	**25,785**	**37**	**9**	**50**	**8**
	39,955		**38,464**		**46**		**58**	

TABLE 4.4. HEADCOUNT OF GOVERNING BODIES BY GENDER AND AGE

G4-LA12

	Under 30				30 to 50				Over 50			
	2014		2015		2014		2015		2014		2015	
	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male
Mosenergo	115	225	101	201	346	917	371	1,012	266	785	275	767
TGC-1	20	129	22	118	239	688	238	680	167	544	174	521
OGK-2	7	32	4	34	255	798	212	711	99	377	101	390
MOEK	49	248	36	165	370	894	287	853	271	651	216	595
Total	**191**	**634**	**163**	**518**	**1,210**	**3,297**	**1,108**	**3,256**	**803**	**2,357**	**766**	**2,273**
	825		**681**		**4,507**		**4,364**		**3,160**		**3,039**	

TABLE 4.5. STAFF TURNOVER BY AGE AND GENDER

G4-LA1

	Under 30				30 to 50				Over 50			
	2014		2015		2014		2015		2014		2015	
	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male
Employees hired in 2014–2015, persons												
Mosenergo	136	337	78	314	126	465	141	299	349	250	89	174
TGC-1	71	250	83	257	112	202	74	133	64	84	24	43
OGK-2	85	213	90	205	100	150	111	151	23	30	31	44
MOEK	132	299	215	520	238	351	263	595	107	199	101	303

	Under 30				30 to 50				Over 50			
	2014		2015		2014		2015		2014		2015	
	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male
Employees dismissed in 2014–2015, persons												
Mosenergo	21	55	11	36	91	163	46	59	181	355	95	171
TGC-1	36	207	1	185	77	174	101	221	81	238	121	298
OGK-2	32	84	31	84	75	129	84	128	105	135	74	120
MOEK	331	754	201	318	986	1,414	572	716	1,727	2,140	699	870
Average employment time in our companies for employees dismissed in 2014–2015, years												
Mosenergo	3	3	2	2	10	11	7	7	23	23	20	23
TGC-1	2.2	2.5	2.11	2.6	9.8	5.11	11.5	9.9	24.7	22.11	25.11	22.7
OGK-2	2	2	1	2	6	4	7	8	18	22	19	24
MOEK	3	3	2	2	7	6	5	5	13	12	8	9

G4-EC5

TABLE 4.6. MINIMUM WAGE (INCLUDING COMPENSATION AND INCENTIVE PAYMENTS) TO MWR RATIO IN THE REGIONS OF OPERATION

	2014	2015
Mosenergo		
Moscow	2.23	1.97
TGC-1		
St Petersburg	1.69	1.54
Leningrad Region	1.82	2.03
Republic of Karelia	2.20	2.03
Murmansk Region	2.17	1.92
OGK-2		
Moscow	3.43	3.19
Tyumen Region	2.79	2.46
Ryazan Region	3.23	3.13
Stavropol Territory	2.26	2.13
Leningrad Region	3.57	3.05
Chelyabinsk Region	1.89	1.92
Rostov Region	2.84	2.67
Krasnoyarsk Territory	4.09	4.48
Vologda Region	3.16	2.79
Sverdlovsk Region	1.96	1.59
Pskov Region	2.49	2.52
Krasnodar Territory	3.30	2.50
MOEK		
Moscow	1.13	1.12

G4-LA13

TABLE 4.7. MALE AVERAGE SALARY TO FEMALE AVERAGE SALARY RATIO BY EMPLOYEE CATEGORY AND REGION OF OPERATION

	Management		White collar		Blue collar	
	2014	2015	2014	2015	2014	2015
Mosenergo						
Moscow and the Moscow Region	1.14	1.14	1.13	1.13	1.23	1.22
TGC-1						
St Petersburg	1.05	1.05	1.08	1.09	1.31	1.29
Leningrad Region	1.15	1.03	1.14	1.16	1.28	1.27

	Management		White collar		Blue collar	
	2014	2015	2014	2015	2014	2015
Republic of Karelia	1.08	1.05	1.10	1.11	1.14	1.15
Murmansk Region	1.2	1.2	1.11	1.13	1.15	1.16
OGK-2						
Moscow	1.10	1.11	1.09	1.09	–	–
Tyumen Region	1.09	1.06	1.27	1.29	1.39	1.39
Ryazan Region	1.11	1.10	1.19	1.17	1.36	1.36
Stavropol Territory	1.24	1.25	1.23	1.24	1.33	1.32
Leningrad Region	1.27	1.26	1.18	1.17	1.49	1.46
Chelyabinsk Region	1.19	1.21	1.18	1.18	1.28	1.28
Rostov Region	1.17	1.16	1.22	1.18	1.31	1.29
Krasnoyarsk Territory	1.13	1.11	1.18	1.14	1.23	1.23
Vologda Region	1.36	1.38	1.10	1.12	1.23	1.21
Sverdlovsk Region	1.23	1.19	1.08	1.04	1.22	1.21
Pskov Region	1.52	1.45	1.20	1.19	1.47	1.49
Krasnodar Territory	1.40	1.32	1.09	1.08	1.22	1.29
MOEK						
Moscow	0.97	0.99	1.10	1.10	1.47	1.51

TABLE 4.8. INJURIES BY SEVERITY

G4-LA6

	Fatal		Major		Minor	
	2014	2015	2014	2015	2014	2015
Mosenergo	–	–	1	1	2	–
TGC-1	1	–	1	–	5	1
OGK-2	–	–	–	3	–	1
MOEK	1	–	–	4	4	3

TABLE 4.9. INJURIES BY GENDER

	Male		Female	
	2014	2015	2014	2015
Mosenergo	1	1	2	–
TGC-1	5	1	2	
OGK-2		4		
MOEK	3	6	2	1

TABLE 4.10. INJURIES BY REGION

	2014	2015
Mosenergo		
Moscow Metropolitan Area	3	1
TGC-1		
St Petersburg	3	1
Leningrad Region	–	–
Republic of Karelia	2	–
Murmansk Region	2	–

	2014	2015
OGK-2		
Moscow	–	–
Tyumen Region	–	–
Ryazan Region	–	–
Stavropol Territory	–	1
Leningrad Region	–	2
Chelyabinsk Region	–	–
Rostov Region	–	1
Krasnoyarsk Territory	–	–
Vologda Region	–	–
Sverdlovsk Region	–	–
Pskov Region	–	–
Krasnodar Territory	–	–
MOEK		
Moscow Metropolitan Area	5	7

TABLE 4.11. LOSS OF WORKING TIME DUE TO ACCIDENTS, DAYS

	2014	2015
Mosenergo	108	26
TGC-1	339	30
OGK-2	–	250
MOEK	254	346

TABLE 4.12. SPEND ON OCUPATIONAL AND INDUSTRIAL SAFETY ACTIVITIES, RUB THOUSAND

	Total for the year, RUB thousand		Share in the total production costs, %		Total for the year per employee, RUB thousand	
	2014	2015	2014	2015	2014	2015
Occupational safety						
Mosenergo	492,615	611,388	0.34	0.42	65.9	77.7
TGC-1	178,786	200,384	0.27	0.32	26.0	30.0
OGK-2	235,867	226,145	0.29	0.30	26.8	24.2
MOEK	195,768	247,412	0.17	0.22	10.1	17.6
Industrial safety						
Mosenergo	40,689	30,442	0.03	0.02	5.4	3.8
TGC-1	43,596	43,266	0.07	0.07	6.5	6.5
OGK-2	47,614	60,182	0.07	0.08	8.2	8.3
MOEK	283,245	238,672	0.24	0.21	15.4	16.9

G4-LA9

TABLE 4.13. AVERAGE ANNUAL NUMBER OF TRAINING HOURS PER EMPLOYEE BY EMPLOYEE CATEGORY

	Management		White collar		Blue collar	
	2014	2015	2014	2015	2014	2015
Mosenergo	58	74	58	74	37	51
TGC-1	40	47	40	47	49	62
OGK-2	68	33	68	33	88	31
MOEK	54	53	54	53	69	40

CONTACTS

G4-31

FOR QUESTIONS REGARDING THE REPORT OR ITS CONTENTS

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GRI CONTENT INDEX

INDEX OF STANDARD GRI REPORTING ELEMENTS IN ACCORDANCE WITH THE G4 SUSTAINABILITY REPORTING GUIDELINES AND INDICATORS OF THE ELECTRIC UTILITIES SECTOR DISCLOSURES

GRI (G 4.0.) Indicator	Title of GRI (G 4.0.) Indicator	Placement in the Report, Comments		External Assurance
		Chapter	Page	
GENERAL STANDARD DISCLOSURES				
G4-1	Statement from the most senior decision-maker of the organisation	CEO's Statement	pp. 6–11	no
G4-2	Description of key impacts, risks, and opportunities	Stakeholder Relations: Our Approach to Risk Management	pp. 54–63	no
G4-3	The name of the organisation	Appendix 1. Table 1.1.	p. 162	no
G4-4	The primary brands, products, and services	Overview of the Group: Business Map	pp. 16–17	no
G4-5	The location of the organisation's headquarters	Appendix 1. Table 1.1.	p. 162	no
G4-6	The number of countries where the organisation operates, and names of countries where either the organisation has significant operations or that are specifically relevant to the sustainability topics covered in the report	Overview of the Group: Business Map	pp. 18–19	no
		Appendix 1. Table 1.4.	pp. 163–164	
G4-7	The nature of ownership and legal form	Appendix 1. Table 1.1.	p. 162	no
G4-8	The markets served	Overview of the Group: Business Map	pp. 18–20	no
		Appendix 1. Table 1.4.	pp. 163–164	
G4-9	The scale of the organisation	Overview of the Group: Scale of Operations	p. 21	no
			pp. 163–164	
G4-10	The total number of employees by different breakdowns	Labour Sustainability: Human Resources	pp. 121–123	no
		Appendix 4. Tables 4.1–4.4.	pp. 178–179	
		Comment: A portion of the organisation's work performed by workers who are legally recognised as self-employed, or by individuals other than employees or supervised workers, including employees and supervised employees of contractors is not substantial. Our companies do not face significant seasonal variations in employment numbers		
G4-11	The percentage of total employees covered by collective bargaining agreements	Labour Sustainability: Protection of Employees' Interests and Rights	p. 128	no
G4-12	The organisation's supply chain	Overview of the Group: Our Supply Chain	pp. 28–32	no
G4-13	Significant changes during the reporting period	Overview of the Group: Material Changes at the Group's Companies	pp. 42–43	no
G4-14	Whether and how the precautionary approach or principle is addressed by the organisation (Principle 15 of 'The Rio Declaration on Environment and Development')	Stakeholder Relations: Our Approach to Risk Management	p. 56	no

GRI (G 4.0.) Indicator	Title of GRI (G 4.0.) Indicator	Placement in the Report, Comments		External Assurance
		Chapter	Page	
G4-15	Externally developed economic, environmental and social charters, principles, or other initiatives to which the organisation subscribes or which it endorses	Stakeholder Relations: Ways of Stakeholder Interaction	p. 52–53	Compliant with ISO 14001:2004: – Mosenergo – confirmed by valid certif-icates from independent audit com-panies for all power plants. – TGC-1 and OGK-2 – maintenance of certificates suspended in 2014. – MOEK – certification scheduled for 2016.
		Comment: Standards we comply with: – Environmental Management Systems (EMS) – ISO 14001:2004; – ISO 9001:2008 to assess reliability and good faith of potential suppliers. Starting from 2014, we have implemented the voluntary initi-ative to disclose economic, environmental and social data in line with the GRI principles. Starting from 2016, we have implemented the voluntary initiative to disclose environmental data in line with the CDP standards.		
G4-16	Memberships of associations	Overview of the Group: Membership in Industry Organisations	p. 41	no
		Appendix 1. Table 1.5.	pp. 165–166	
G4-17	List of all entities included in the organisation's consolidated financial statements or equivalent documents. Entities included in the organisation's consolidated financial statements or equivalent documents, but not covered by the report.	Report Profile	p. 4	no
		Appendix 1. Table 1.2.	p. 162	
G4-18	The process for defining the report content	Report Profile	p. 4	no
		Stakeholder Relations: Key Stakeholder Groups	p. 46	
		Stakeholder Relations: Ways of Stakeholder Interaction	p. 48	
		Comment: When defining the report content (including the list of covered Aspects), we applied the Principles for Defining Report Content listed in the G4 Sustainability Reporting Guidelines: – the Principle of Stakeholder Inclusiveness; – the Principle of Sustainability Context; – the Principle of Materiality; – the Principle of Completeness.		
G4-19	The material Aspects identified in the process for defining report content	Category "Economic": – Aspect "Economic Performance"; – Aspect "Market Presence"; – Aspect "Indirect Economic Impacts". Category "Environmental": – Aspect "Materials"; – Aspect "Energy"; – Aspect "Water"; – Aspect "Emissions"; – Aspect "Effluence and Waste"; – Aspect "Compliance"; – Aspect "Overall"; – Aspect "Environmental Grievance Mechanisms". Category "Social": – Aspect "Employment"; – Aspect "Labour/Management Relations"; – Aspect "Occupational Health and Safety" – Aspect "Training and Education"; – Aspect "Diversity and Equal Opportunities"; – Aspect "Equal Remuneration for Women and Men" – Aspect "Local Communities"; – Aspect "Anti-corruption"; – Aspect "Public Policy".		no

GRI (G 4.0.) Indicator	Title of GRI (G 4.0.) Indicator	Placement in the Report, Comments		External Assurance
		Chapter	Page	
G4-20	The Aspect Boundary for each material Aspect	Report Profile	p. 4	no
		Appendix 1. Table 1.2.	p. 162	
		Comment: – All Aspects covered in the report are material for four production companies of Gazprom energoholding Group: Mosenergo, TGC-1, OGK-2 and MOEK, including all their branches located in all regions, and for TGC-1's subsidiary generation company – PAO Murmanskaya CHPP. – For subsidiaries (Mosenergo: OOO Tsentralny Remontno-Mekhanichesky zavod, OOO TSK Novaya Moskva, OOO TSK Mosenergo, OOO TSK Metrologia, OOO OGK-Investproekt; TGC-1: PAO Murmanskaya CHPP, AO St Petersburg Heating Grid; OGK-2: OOO OGK-Investproekt, OOO OGK-2 Finance, OOO Centre 112; MOEK: OAO Mosgorenergo, OOO MOEK-Finance, OAO MOEK-Generatsiya, OOO Heat Distribution Networks Development, OOO TsTP MOEK, OOO TSK Mosenergo, OOO TSK Metrologia, OOO TSK MOEK, OAO MOEK-Proekt, OOO ITs MOEK) only Aspect "Economic Performance" is material. – There are no specific limitations regarding the Aspect Boundaries within Gazprom energoholding Group's production companies: Mosenergo, TGC-1, OGK-2, MOEK.		
G4-21	The Aspect Boundary outside the organisation for each material Aspect	Comment: All selected Aspects are material inside our generating companies. There is a list of selected aspects, material both inside and outside of our generating companies in every region of our activities: Category "Economic": – Aspect "Economic Performance" – material for shareholders, investors, lenders and rating agencies, goods and service suppliers; – Aspect "Market Presence" – material for local population, local authorities, trade unions; – Aspect "Indirect Economic Impacts" – material for local population, local authorities, wholesale heat, electricity, and capacity buyers including guaranteeing suppliers and major industrial consumers; Category "Environmental": – Aspect "Materials" – material for environmental organisations, goods and service suppliers, shareholders, investors and lenders; – Aspect "Energy" – material for shareholders, investors, coal and gas suppliers, sectoral regulatory authorities; – Aspects "Water", "Emissions", "Effluence and Waste", "Compliance", "Overall", "Environmental Grievance Mechanisms" – material for local population, civil society organisations and local authorities, environmental organisations. Category "Social": – Aspects "Employment", "Labour/Management Relations", "Occupational Health and Safety", "Training and Education", "Diversity and Equal Opportunities", "Equal Remuneration for Women and Men" – material for local population, civil society organisations and local authorities, sectoral regulatory authorities, trade unions; – Aspect "Local Communities" – material for local population, civil society organisations and local authorities; – Aspect "Anti-corruption" – material for goods and services suppliers, trade unions; – Aspect "Public Policy" – material for local population, civil society organisations, local and federal authorities. There are no specific limitations regarding the Aspect Boundaries outside Gazprom energoholding Group's production companies: Mosenergo, TGC-1, OGK-2, MOEK.		no

GRI (G 4.0.) Indicator	Title of GRI (G 4.0.) Indicator	Placement in the Report, Comments		External Assurance
		Chapter	Page	
G4-22	The effect of any restatements of information provided in previous reports, and the reasons for such restatements.	Report Profile	p. 4	no
		CEO's Statement	p. 9	
		Comment: Unlike the previous sustainability report (2012–2013), in this report we are not talking about generation companies, but production companies with Gazprom energoholding Group. The reason for this is that along with Mosenergo, TGC-1 and OGK-2 whose core operations are electricity and heat generation, this report also covers MOEK whose core business comprises heat transportation, distribution and sale. MOEK joined Gazprom energoholding Group in late 2013.		
G4-23	Significant changes from previous reporting periods in the Scope and Aspect Boundaries.	Report Profile	p. 4	no
		Comment: The scope of this report is extended versus the scope of the previous report (2012–2013) – along with Mosenergo, TGC-1 and OGK-2 it also covers MOEK which joined Gazprom energoholding Group in late 2013.		
G4-24	The list of stakeholder groups engaged by the organisation	Stakeholder Relations: Key Stakeholder Groups	p. 46	no
G4-25	The basis for identification and selection of stakeholders with whom to engage	Stakeholder Relations: Key Stakeholder Groups	p. 46	no
G4-26	The organisation's approach to stakeholder engagement, including frequency of engagement by type and by stakeholder group, and an indication of whether any of the engagement was undertaken specifically as part of the report preparation process	Stakeholder Relations: Ways of Stakeholder Interaction	p. 48	no
G4-27	Key topics and concerns that have been raised through stakeholder engagement, and how the organisation has responded to those key topics and concerns	Stakeholder Relations: Our Approach to Risk Management	p. 57	no
G4-28	Reporting period for information provided	Report Profile	p. 4	no
G4-29	Date of most recent previous report (if any)	Comment: The previous sustainability report, prepared following the GRI guidelines, was published on the official websites of OOO Gazprom energoholding, Mosenergo, TGC-1 and OGK-2 on 25 December 2014.		no
G4-30	Reporting cycle	Report Profile	p. 4	no
G4-31	The contact person for questions regarding the report or its contents	Contacts for Questions Regarding the Report or its Contents	p. 183	no
G4-32	The 'in accordance' option the organisation has chosen. The GRI Content Index for the chosen option. The reference to the External Assurance Report, if the report has been externally assured.	The chosen option is "Core" Report Profile		no
		Report Profile	p. 4	
G4-33	The organisation's policy and current practice with regard to seeking external assurance for the report	Report Profile	p. 4	no
G4-34	The governance structure of the organisation, including committees of the highest governance body, committees responsible for decision-making on economic, environmental and social impacts	Overview of the Group: Corporate Governance Structure of the Group's Companies	pp. 33–39	no
G4-56	The organisation's values, principles, standards and norms of behavior such as codes of conduct and codes of ethics	Overview of the Group: Corporate Values	p. 40	no

GRI (G 4.0.) Indicator	Title of GRI (G 4.0.) Indicator	Placement in the Report, Comments		External Assurance
		Chapter	Page	
SPECIFIC STANDARD DISCLOSURES				
Category "Economic"				
G4-DMA		Economic Sustainability: Management's Approach to Ensuring the Economic Sustainability of the Group	pp. 66–68	no
Aspect "Economic Performance"				
G4-EC1	Direct economic value generated and distributed	Economic Sustainability: Financial and Economic Performance	pp. 69–72	no
G4-EC2	Financial implications and other risks and opportunities for the organisation's activities due to climate change	Environmental Sustainability: Climate Change	p. 106	no
		Stakeholder Relations: Our Approach to Risk Management	p. 59	
G4-EC4	Financial assistance received from government	Economic Sustainability: Government Support Received Over the Reporting Period	p. 89	no
Aspect "Market Presence"				
G4-EC5	Ratios of standard entry level wage compared to local minimum wage at significant locations of operations	Labour Sustainability: Staff Remuneration	pp. 124–125	no
		Appendix 4. Table 4.6.	p. 180	
Aspect "Indirect Economic Impacts"				
G4-EC7	Development and impact of infrastructure investments and services supported	Economic Sustainability: Infrastructure Investment Projects	pp. 78–83	no
		Social Sustainability: Not For Profit Infrastructure Projects Run by the Group's Companies on a Pro Bono Basis	p. 155	
		Economic Sustainability: Financial and Economic Performance	p. 70	
Category "Environmental"				
G4-DMA		Environmental Sustainability: Management's Approach to Environmental Aspects of Operations	pp. 92–96	no
Aspect "Materials"				
G4-EN1	Materials used by weight or volume	Environmental Sustainability: Fuel Use and Energy Efficiency	pp. 97–98	no
		Environmental Sustainability: Water Management	p. 107	
		Comment: Our heat and electricity generation process predetermines our use of various fuels (gas, coal, fuel oil and diesel fuel) as the core feedstock and our considerable water consumption for process and auxiliary purposes.		
Aspect "Energy"				
G4-EN3	Energy consumption within the organisation	Environmental Sustainability: Fuel Use and Energy Efficiency	pp. 97–99	no
		Appendix 3. Table 3.1.	p. 169	
G4-EN5	Energy intensity	Environmental Sustainability: Fuel Use and Energy Efficiency	p. 99	no
G4-EN6	Reduction of energy consumption	Environmental Sustainability: Energy Efficiency Enhancement	pp. 100–102	no
Aspect "Water"				
G4-EN8	Total water withdrawal by source	Environmental Sustainability: Water Management	pp. 107–108	no
		Appendix 3. Table 3.10.	p. 174	
G4-EN10	The total volume of water recycled and reused by the organisation	Appendix 3. Table 3.10.	p. 174	no

GRI (G 4.0.) Indicator	Title of GRI (G 4.0.) Indicator	Placement in the Report, Comments		External Assurance
		Chapter	Page	
Aspect "Emissions"				
G4-EN15	Direct greenhouse emissions	Environmental Sustainability: Pollutant and GHG emissions	pp. 103–104	no
		Appendix 3. Table 3.7.	p. 172	
G4-EN18	Greenhouse gas emissions intensity	Appendix 3. Table 3.7.	p. 172	no
G4-EN19	Reduction of greenhouse gas emissions	Environmental Sustainability: Pollutant and GHG emissions	pp. 104–105	no
G4-EN21	NO_x, SO_x and other significant air emissions	Environmental Sustainability: Pollutant and GHG emissions	p. 104	no
		Appendix 3. Tables 3.8–3.9.	pp. 173–174	
Aspect "Effluence and Waste"				
G4-EN22	Total water discharge	Environmental Sustainability: Water Management	p. 108	no
		Appendix 3. Table 3.11.	p. 175	
G4-EN23	Total weight of waste by type and disposal method	Environmental Sustainability: Waste Generation	pp. 110–112	no
		Appendix 3. Table 3.12.	p. 175	
Aspect "Compliance"				
G4-EN29	Monetary value of significant fines and total number of nonmonetary sanctions for noncompliance with environmental laws and regulations	Environmental Sustainability: Fines, Non Financial Penalties, Costs and Investments Related to Environmental Protection	p. 113	no
Aspect "Overall"				
G4-EN31	Total environmental protection expenditures and investments by type	Environmental Sustainability: Fines, Non Financial Penalties, Costs and Investments Related to Environmental Protection	p. 113	no
		Appendix 3. Table 3.13.	pp. 176–177	
Aspect "Environmental Grievance Mechanisms"				
G4-EN34	Number of grievances about environmental impacts filed, addressed, and resolved through formal grievance mechanism	Environmental Sustainability: Environmental Complaints Received by The Companies in the Reporting Period, and Their Resolution	p. 115	no
Category "Social"				
Sub-category "Labour Practices and Decent Work"				
G4-DMA		Labour Sustainability: Management's Approach to HR Policy, Occupational Health and Safety, Raising The Quality of Human Resources, and Preventing Corruption	pp. 118–120	no
Aspect "Employment"				
G4-LA1	Total number of new employee hires and employee turnover by age group, gender and region	Labour Sustainability: Human Resources	p. 123	no
		Appendix 4. Table 4.5.	pp. 179–180	
Aspect "Labour/Management Relations"				
G4-LA4	Minimum notice periods regarding operational changes, including whether these are specified in collective agreements	Labour Sustainability: Protection of Employees' Interests and Rights	p. 128	no
Aspect "Occupational Health and Safety"				
G4-LA6	Rates of injury	Labour Sustainability: Occupational Health and Safety	pp. 132–133	no
		Appendix 4. Tables 4.8–4.11.	pp. 181–182	
G4-LA8	Health and Safety Topics Covered in Formal Agreements with Trade Unions	Labour Sustainability: Protection of Employees' Interests and Rights	pp. 126–128	no
Aspect "Training and Education"				
G4-LA9	Aspect "Diversity and Equal Opportunities"	Labour Sustainability: Raising the Quality of Human Resources	p. 136	no
		Appendix 4. Table 4.13.	p. 182	

GRI (G 4.0.) Indicator	Title of GRI (G 4.0.) Indicator	Placement in the Report, Comments		External Assurance
		Chapter	Page	
G4-LA10	Programs for skills management and lifelong learning that support the continued employability of employees and assist them in managing career ending	Labour Sustainability: Raising the Quality of Human Resources	pp. 135–139	no
Aspect "Diversity and Equal Opportunities"				
G4-LA12	Composition of governance bodies and breakdown of employees per employee category according to gender, age, minority group membership, and other indicators of diversity	Labour Sustainability: Human Resources	p. 121	no
		Appendix 4. Table 4.4.	p. 179	
Aspect "Equal Remuneration for Women and Men"				
G4-LA13	Ratio of basic salary and remuneration of women to men by employee category, by significant locations of operation	Labour Sustainability: Staff Remuneration	p. 125	no
		Appendix 4. Table 4.7.	pp. 180–181	
Sub-category "Society"				
G4-DMA		Social Sustainability: Management's Approach to Corporate Projects of the Group's Companies That Have an Impact On Society; Availability of Grievance Mechanisms	p. 144	no
Aspect "Local Communities"				
G4-SO1	Percentage of operations with implemented local community engagement, impact assessments, and development programs	Social Sustainability: Cooperation with Local Communities on Safety Issues	pp. 149–150	no
		Social Sustainability: Cooperation with Local Communities on Energy Saving	pp. 151–152	
		Social Sustainability: Cooperation with Local Communities on the Environment	pp. 153–154	
		Social Sustainability: Cooperation with Local Communities on Culture and Sports	pp. 156–158	
		Comment: 100% of units within Gazprom energoholding Group's production companies take part in implementing local community engagement and development programs. We do not implement any special impact assessments programs		
Aspect "Anti-corruption"				
G4-SO4	Communication and training on anti-corruption policies and procedures	Labour Sustainability: Preventing Corruption	pp. 140–141	no
Aspect "Public Policy"				
G4-SO6	Total monetary value of political contributions by country and recipient/beneficiary	Social Sustainability: Management's Approach to Corporate Projects of the Group's Companies That Have an Impact On Society; Availability of Grievance Mechanisms	p. 144	no
GENERAL STANDARD DISCLOSURES FOR THE ELECTRIC UTILITIES SECTOR				
EU1	Installed capacity, broken down by primary energy source and by regulatory regime	Overview of the Group: Scale of Operations	pp. 23–24	no
EU2	Net energy output broken down by primary energy source and by regulatory regime	Overview of the Group: Scale of Operations	pp. 24–26	no
EU3	Number of residential, industrial, institutional and commercial customer accounts	Overview of the Group: Scale of Operations	p. 27	no
		Comment: We have no information on the exact number of customers, as Gazprom energoholding Group's companies trade electric energy on the wholesale market.		
EU4	Length of above and underground transmission and distribution lines by regulatory regime	Environmental Sustainability: Fuel Use and Energy Efficiency	p. 99	no

GRI (G 4.0.) Indicator	Title of GRI (G 4.0.) Indicator	Placement in the Report, Comments		External Assurance
		Chapter	Page	
SPECIFIC STANDARD DISCLOSURES FOR THE ELECTRIC UTILITY SECTOR				
Category "Economic"				
Aspect "Availability and Reliability"				
G4-DMA	Management approach to ensure short and long-term electricity availability and reliability	Social Sustainability: Ensuring Reliable Energy Supply in the Short and Long Terms	pp. 146–148	no
EU10	Planned capacity against projected electricity demand over the long term, broken down by energy source and regulatory regime	Economic Sustainability: Growth of Demand from Private, Commercial, Institutional, and Industrial Consumers	pp. 73–75	no
		Economic Sustainability: Infrastructure Investment Projects	pp. 78–83	
Aspect "Demand-Side Management"				
G4-DMA	Demand-side management programs including residential, commercial, institutional and industrial programs	Economic Sustainability: Growth of Demand from Private, Commercial, Institutional, and Industrial Consumers	pp. 73–75	no
Aspect "Research and Development"				
G4-DMA	Research and development activity and expenditure aimed at providing reliable electricity and promoting sustainable development	Economic Sustainability: Research & Development	pp. 84–88	no
Aspect "Plant Decommissioning"				
G4-DMA	Activities to decommission inefficient capacity	Economic Sustainability: Decommissioning of inefficient generating facilities	pp. 76–77	no
EU11	Average generation efficiency of thermal plants by energy source	Environmental Sustainability: Fuel Use and Energy Efficiency	p. 99	no
Aspect "System Efficiency"				
EU11	Average generation efficiency of thermal plants by energy source	Environmental Sustainability: Fuel Use and Energy Efficiency	p. 99	no
EU12	Transmission and distribution losses as a percentage of total energy	Environmental Sustainability: Fuel Use and Energy Efficiency	p. 99	no
		Appendix 3. Table 3.2.	p. 169	
Category "Social"				
Sub-category "Labour Practices and Decent Work"				
Aspect "Employment"				
G4-DMA	Programs and processes to ensure the availability of a skilled workforce	Labour Sustainability: Raising the Quality of Human Resources	pp. 135–139	no
Sub-category "Society"				
Aspect "Local Communities"				
G4-DMA	Stakeholder participation in decision making processes related to energy planning and infrastructure development	Stakeholder Relations: Ways of Stakeholder Interaction	pp. 48–53	no
EU22	Number of people physically or economically displaced due to the company's activities (implementation of the company's investment projects)	Comment: According to our information, within the reporting period there were no people physically or economically displaced due to our companies' activities.		no
Aspect "Disaster/Emergency Planning and Response"				
G4-DMA	Contingency planning measures, disaster/emergency management plan and training programs, and recovery/restoration plans	Environmental Sustainability: Management's approach to environmental aspects of operations	pp. 92–96	no
		Social Sustainability: Cooperation with Local Communities on Safety Issues	pp. 149–150	no
Aspect "Customer Health and Safety"				
EU25	Number of injuries and fatalities to the public involving company assets including legal judgments, settlements and pending legal cases of diseases	Comment: According to our information, within the reporting period there were no injuries and fatalities to the public involving company assets.		no

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Aspect "Access"				
EU27	Number of residential disconnections for non payment, broken down by duration of disconnection and by regulatory regime	Stakeholder Relations: Our Approach To Risk Management	p. 58	no
		Comment: According to the existing legislation, electricity supply can be limited for regular non payers only on the retail market. Gazprom energoholding Group's companies operate on the wholesale market and, therefore, are not involved in this process. Heat supply limitation can be implemented only after a number of notices and only with respect to facilities other than socially significant facilities or facilities that can not be disconnected by virtue of law. There were no heat limitations implemented by our companies within the reporting period (2014–2015).		
EU28, EU29	Power outrage frequency Average power outrage duration	Social Sustainability: Ensuring Reliable Energy Supply in the Short and Long Terms	p. 147	no
EU30	Average plant availability factor by energy source	Social Sustainability: Ensuring Reliable Energy Supply in the Short and Long Terms	p. 148	no