## ANNUAL REPORT



## **ANNUAL REPORT** MOSENERGO PJSC 2020

Director General of Gazprom Energoholding LLC Managing company of Mosenergo PJSC

Preliminarily approved by the Board of Directors of Mosenergo PJSC Meeting Minutes No. 96 dated May 21, 2021

D.V. Fedorov



## CONTENTS

#### TO INVESTORS AND SHAREHOLDERS... 2

1.1 Address of the Chairman of the Board of Directors of Mosenergo PJSC
1.2 Address of the Managing Director of Mosenergo PJSC5
1.3 Mosenergo PJSC profile
14 Why invest
1.5 The equity market in 2020



#### KEY CORPORATE EVENTS OF 2020...16



#### CORPORATE GOVERNANCE...70

6.1 Memorandum of intent of Gazprom PJSC towards controlled companies: Mosenergo PJSC, MIPC PJSC, OGK-2 PJSC, and TGK-1 PJSC
6.2 Underlying principles
6.3 General Meeting of Shareholders 73
6.4 General Meeting of Shareholders
6.5 Executive bodies
6.6 Audit Commission
6.7 Remuneration

**>>** 



ECOLOGY...49

4.1 Environmental policy	+9
4.2 Environmental policy	50
4.3 Environmental projects	53



**>>** 

#### SOCIAL RESPONSIBILITY...54

5.1 Corporate culture
5.2 Personnel size and structure
5.3 Personnel training and development60
5.4 Motivation and social programs 64
5.5 Labor protection66

**>>** 



#### OPERATING ACTIVITY...20

3.1 Company development
3.2 Production
3.3 Sales
3.4 Fuel supply 31
3.5 Investment and maintenance activities $\ldots$ . 32
3.6 Analysis of financial results 36
3.7 Risk management



**>>** 

.71

**>>** 

#### ADDITIONAL INFORMATION AND APPENDICES ...86

7.1 Information policy	87
7.2 Mosenergo history	88
7.3 IFRS Financial Statements	96
74 Glossary	98
7.5 Contact Information	99

## TO INVESTORS AND SHAREHOLDERS



1.1 Address of the Chairman of the Board of	
Directors of Mosenergo PJSC	

- 1.2 Address of the Managing Director of Mosenergo PJSC
  - 1.3 Mosenergo PJSC profile
    - 1.4 Why invest

5

8

12

13

1.5 The equity market in 2020

### 15 power plants – 43.8 thousand 12.8 GW Gcal/h installed installed heat capacity

capacity

Mosenergo's activities in generating equipment composition and mode upgrade and the efficient cogeneration during the heating period operation helped achieve impressive results.



In 2020, the company participated in the environmental information openness rating prepared by the World Wildlife Fund (WWF) of Russia and the National Rating Agency (NRA) for energy generating companies for the first time. Mosenergo made a debut in this rating and got second place.

### 1.1 ADDRESS OF THE CHAIRMAN OF THE **BOARD OF DIRECTORS OF MOSENERGO PJSC**



#### Dear Shareholders.

The key strategic goal of Gazprom in the electric power industry is the stable growth of financial and economic indicators while ensuring the reliability of the power supply to the customers.

In 2020, Mosenergo PJSC operating as part of the Group successfully accomplished its goals despite the problems associated with the global pandemic.

The reduction of the demand for electricity and the heating period due to the warmer weather resulted in the reduction of the key performance indicators and financial results of Mosenergo PJSC. At the same time, the key indicators of the business plan were exceeded. Thus, the net profit of Mosenergo PJSC in 2020 amounted to 14.3 billion rubles, which is 5.2 billion rubles or 56.2% above

the plan. Some optimization activities implemented at the company had a significant impact on the growth of indicators compared to the planned values. These included the sequestration of costs, the reduction of specific fuel consumption, and the improvement of debt collection. The aggregate effect of these activities in 2020 amounted to 6.5 billion rubles.

Gazprom's strategy in the power industry for 2018-2027 stipulates the implementation of projects on creating new facilities and upgrading the existing ones. For Mosenergo PJSC, the upgrade of the generating equipment is one of the key conditions for the long-term development and the assurance of reliable power supply to companies and residents.

In 2021, the company is planning to commission renovated power plant unit 9 at the TPP-22, which includes a brand-new development of the Russian turbine construction school, the T-295 cogeneration turbine, which is the most powerful one in Russia.

In January 2019, the Government of the Russian Federation adopted a resolution on the Modernization of Generating TPS facilities. Two of Mosenergo PJSC's generating facilities were selected after a competition: power unit 10 of TPP-22 and turbine 4 of TPP-23 that are to be commissioned after the upgrade in 2024. In February 2020, the Government of Russia approved the projects within the framework of the TPS modernization program to be commissioned in 2025. Another two of Mosenergo PJSC's projects were included in this list: TG-7 at TPS-21 and power unit 4 at TPS-25. The modernization of the power facilities will help prolong the operating life of cogeneration equipment, improve the efficiency ratio, reduce the specific fuel consumption, and improve the environmental indicators of generating facilities.

The improvement of the operational efficiency of Mosenergo PJSC is the goal of the program for the improvement of the chargeable capacity of combined cycle power units, the prolongation of service intervals, and the stated service life of combined cycle power units (CCPU). Some technical projects have been implemented at the gas turbines of the CCPU power plants at TPP-16, TPP-20, TPP-26, and TPP-27 (GT-31 turbines of unit 3). The company is planning to incrementally improve the remaining CCPU turbines at TPP-12, TPP-21, TPP-27.

The financial stability and reliability of Mosenergo PISC under the Gazprom management are confirmed by the leading rating agencies. In 2020, the Russian Analytical Credit Rating Agency (ACRA) gave Mosenergo PJSC the highest credit rating of AAA (RU) with a stable rating forecast, and the in-

#### Chairman of the Board of Directors of Mosenergo PJSC

ternational Fitch rating agency maintained Mosenergo PJSC's rating at BBB with a stable forecast.

The location of Mosenergo PJSC's production facilities in the capital region with the population of over 10 million people imposes special liabilities on the company in terms of observing regulations and environmental laws, the consistent reduction of emissions in the atmosphere, the reduction of noise impacts on the territories around the production facilities, and the protection of water bodies.

The environmental management system (EMS) of Mosenergo PISC was the first in Russia to receive a compliance certificate for ISO 14001 international standard in 2006. The company maintains a high level of nature conservation activities and constantly improves its EMS. In 2020, a recertification audit of Mosenergo PJSC confirmed the company's compliance with the requirements of ISO 14001:2015.

Besides, in 2020, the company participated in the environmental information openness rating for energy generating companies for the first time. This rating was prepared by the World Wildlife Fund (WWF) of Russia and the National Rating Agency (NRA). Mosenergo PJSC made a debut in this rating and got second place. The list of TOP-10 power industry companies in terms of open information includes other generating and heating suppliers of Gazprom: MIPC, OGK-2, and TGK-1.

Gazprom is interested in sustainable development, the growth of financial indicators, and the shareholder value of electric power companies of the Group. Mosenergo PJSC's Board of Directors and management are cooperating to develop the company for the benefit of all of its shareholders. We count on your support in solving the key problems in improving Mosenergo PJSC's financial stability, operational efficiency, and the implementation of its strategy.

**Vitaly Markelov** 

## 1.2 ADDRESS OF THE MANAGING DIRECTOR OF MOSENERGO PJSC



#### Dear Shareholders,

In 2020, Mosenergo PJSC, like other companies in the sector, had to operate in an unusual and complicated context. The COVID pandemic and the associated restrictions impacted our work and everyday lives, changed our habits, communication standards, and made us pay more attention to our health and the health of our nearest and dearest.

Under these conditions, Mosenergo PJSC had to ensure the reliable operation of thermal power plants, district, and local power plants producing electricity and heat for millions of consumers in Moscow and Moscow Oblast. The company managed to deal with the external challenges, demonstrated high performance results and operational efficiency, and worked thoroughly on the environmental issues.

Mosenergo PJSC's activities in generating equipment composition and mode upgrade and the efficient cogeneration during the heating period operation helped achieve impressive results. The proportion of electric power produced via the cogeneration cycle for Mosenergo PJSC's TPP in 2020 was 66.1% (it was 62% in 2019). The specific reference fuel consumption (SRFC) indicator for the supply of electric power at the end of the year was at the all-time lowest of 224.1 g/kWh, which constitutes one of the most tangible results of operational efficiency improvement activities at Mosenergo PJSC. Environmental protection is a prioritized area of Mosenergo PJSC's operations. Due to the reduction of fuel consumption and the implementation of environment protection actions, the emissions of pollutants at Mosenergo PJSC reduced by 6.3% in 2020. The share of the cleanest organic fuel natural gas - in the overall fuel mix of the company increased up to 99.4%.

The actions implemented by Mosenergo PJSC to improve the environmental indicators of its activities include the equipment renovation at TPP-22, which will result in the complete transition to oil-and-gas generation instead of coal generation. This will not only allow for a significant reduction of emissions but also help increase the marginal profits and reduce the semi-fixed costs associated with the running of the coal infrastructure at TPP-22.

Mosenergo PJSC management continues its work on the improvement of the financial stability and operational efficiency of the company. The company takes part in the competitive selections within the KOMMod TPS modernization program approved by the Government of Russia. Some actions are implemented at the combined cycle power plants to increase the service intervals and state service life of gas turbines, as well as the chargeable capacities of power units. Some works are being performed for the decommissioning of the inefficient facilities at GRES-3, TPP-16, TPP-17, and TPP-20; the improvement of primary engineering and economic TPP indicators; the optimization and automation of the water chemistry conditions at several large power plants, which will allow for a significant reduction of costs for water consumption and discharge.

The transition of MIPC heating plants to Mosenergo PJSC's sources within the "old" Moscow boundaries is still being implemented. The effects of the

#### Managing Director of Mosenergo PJSC

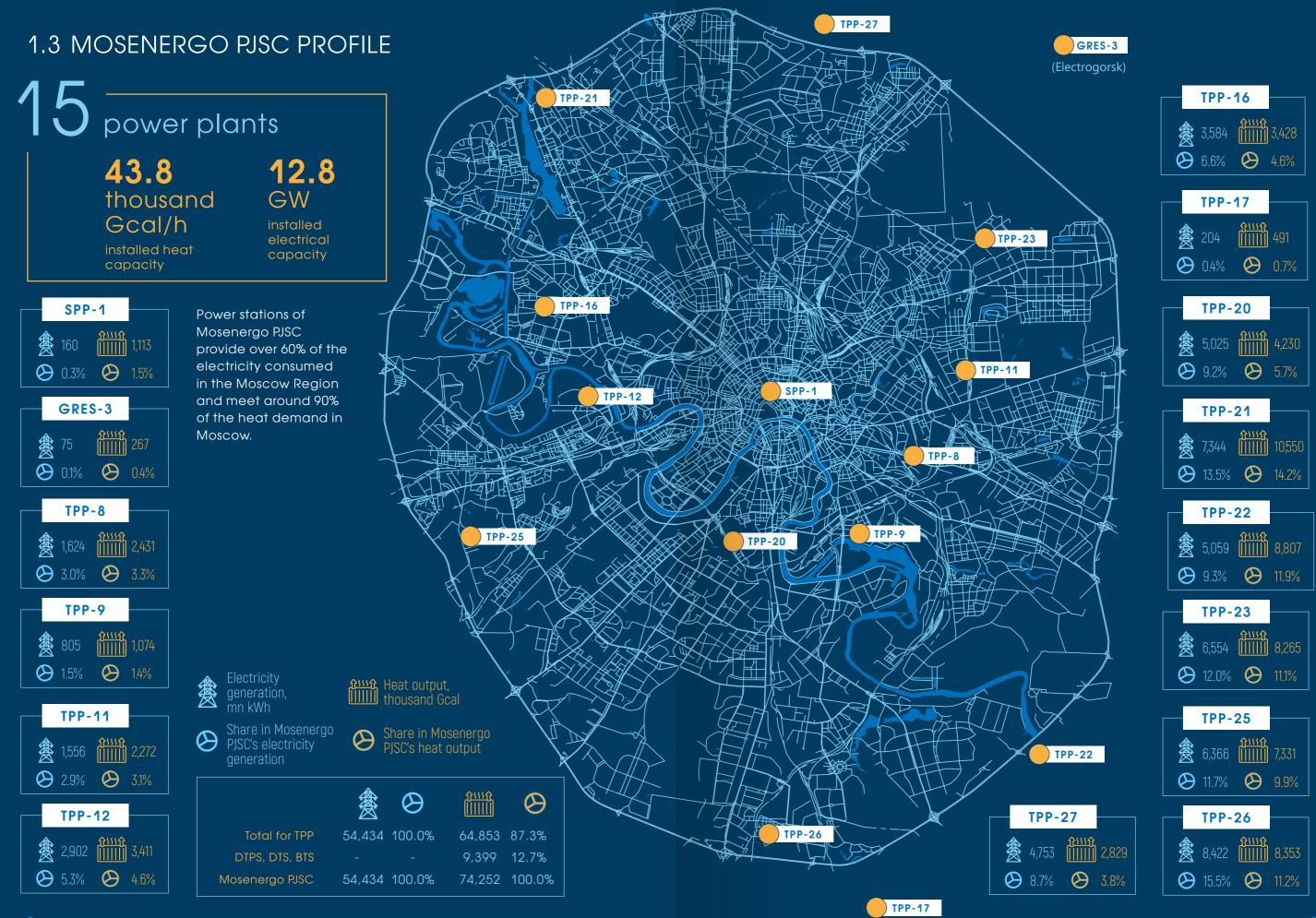
program implementation are achieved due to the reduction of fuel consumption necessary for the production of electricity and heat when condensing generation is replaced by cogeneration, the reduction of semi-fixed operational costs, and the sales of decommissioned heating plant components.

In the past year, Mosenergo PJSC's personnel demonstrated a high level of responsibility, unity, and readiness to work under new conditions. The competence of the employees and the high corporate standards of Mosenergo PJSC are confirmed by the results of various sector-specific contests, competitions, and ratings.

The teams of TPP-26 and TPP-23 got the first two places in the operational staff competitions for the block-type thermal power stations of Gazprom Energoholding LLC Two projects prepared by the employees of TPP-11 n.a. M. Ya. Ufayev and TPP-20 became the winners of the second International competition of scientific, engineering, and innovative developments held with support from the Ministry of Energy of the Russian Federation. Besides, the Minenergo of Russia recognized Mosenergo PJSC for the active social policies and awarded the company with a certificate for the best socially-oriented power company. In the 2020 HeadHunter rating of employers in Russia, Mosenergo PJSC is the fourth company in terms of applicant attractiveness in the Power Industry and Resource Extraction category.

Mosenergo PJSC shall continue to fulfill its capacity and take actions to improve its operational efficiency and financial stability. Company managers and employees do everything possible to accomplish the company goals and ensure the Mosenergo PJSC's status as a leader in the Russian power industry.

**Alexander Butko** 



(Stupino)

#### Equity capital<sup>1</sup>



The authorized capital of Mosenergo PJSC is 39,749,359,700 rubles divided into 39,749,359,700 common registered uncertificated shares, with the face value of one 1 (one) ruble each.



The stock of Mosenergo PJSC is featured in the highest quotation list of the Moscow Exchange.

Depositary receipts of Mosenergo PJSC are traded on the over-the-counter market of the USA and Europe.

#### **TICKER SYMBOLS:**

Moscow Exchange - MSNG

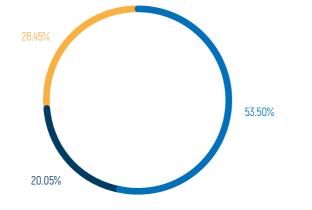
Bloomberg - MSNG

Level 1 ADR on the over-the-counter market (New York) - AOMOY

Level ADR (WKN) on the over-the-counter market (Frankfurt) - 899416

<sup>1</sup> as of December 31, 2020





Gazprom Energoholding LLC
The City of Moscow represented by the
Department of Municipal Property of the
City of Moscow
Other individuals and legal entities

#### Credit ratings

Rating agency	Rating score	Date of assignment	
Fitch Ratings	BBB/Stable outlook	July 29, 2020	
Standard&Poor's	BBB-/Stable outlook	June 19, 2020	
Expert Rating Agency	AAA/Stable outlook	recalled on October 12, 2020	
ACRA	AAA/Stable outlook	December 18, 2020	

#### Key performance indicators

Installed electrical capacity at the end of the period, MW
Installed heat capacity at the end of the period, Gcal/h
Electricity generation, mn kWh
Busbar electricity output, mn kWh
Capacity sales, mn kWh
Heat output, thousand Gcal
Specific fuel consumption for power output, goe/ kWh
Specific fuel consumption for of heat output <sup>2</sup> , kg/Gcal

#### Key financial indicators<sup>3</sup>, millions of rubles

	2018	2019	2020	Change 2020/2019
Revenue	199,047	189,782	181,013	-4.6%
Prime cost	(170,705)	(172,256)	(165,746)	-3.8%
Sales profit	28,341	17,525	15,267	-12.9%
Net profit	23,770	17,427	14,266	-18.1%
	December 31, 2018	December 31, 2019	December 31, 2020	Change 2020/2019
Non-current assets	204,469	225,869	223,194	-1.2%
Current assets	88,872	96,487	100,958	+4.6%
Long-term liabilities	27,323	47,987	37,127	-22.6%
Short-term liabilities	16,810	15,721	18,895	+20.2%

Non-current assets
Current assets
Long-term liabilities
Short-term liabilities

<sup>2</sup> With heating plants <sup>3</sup> According to the Russian Accounting Standards (RAS)

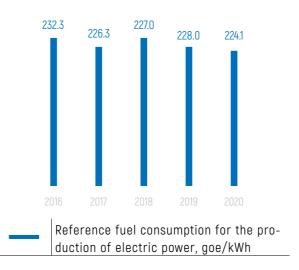
2018	2019	2020	Change 2020/2019
12,798	12,825	12,825	0.0%
43,136	43,211	43,777	+1.3%
58,316	60,110	54,434	-9.4%
53,456	55,204	49,667	-10.0%
60,195	62,096	56,441	-9.1%
82,291	75,366	74,252	-1.5%
227.0	228.0	224.1	-1.7%
163.4	163.3	163.3	0.0%

### 1.4 WHY INVEST<sup>4</sup>

**Financial results** 







Dividend payout (for the

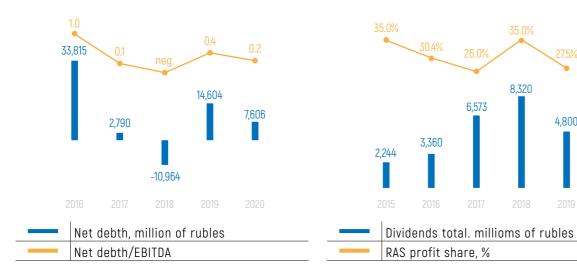
8.320

4.800

6.573

given year)

High fuel efficiency

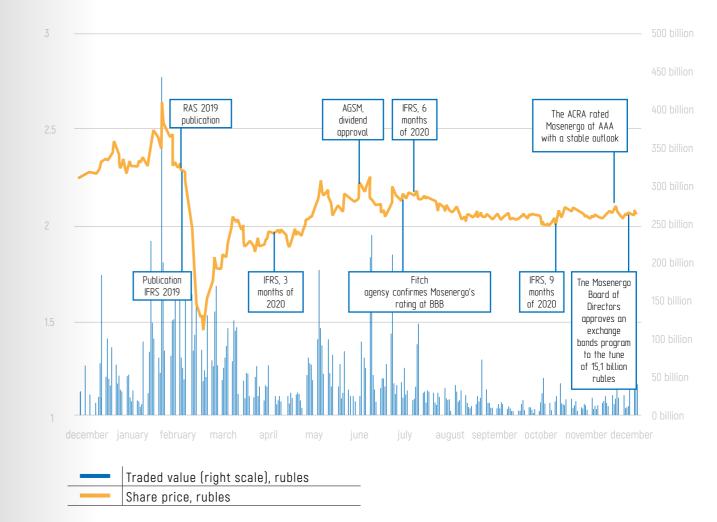


<sup>4</sup> The data are presented according to the RAS and the Company's management reports

### 1.5 THE EQUITY MARKET IN 2020

The difficult year of 2020 was a challenge for the global economy because of the horrible COVID-19 pandemic, border closures, unprecedented personal precautions imposed in many counties, and the dramatic and huge production drops in some sectors. The Russian economy was not an exception, although it did not suffer the most. Through the study of the Moscow Exchange stock index, we can only see the amplitude reactions, first to the pandemic and then to the actions taken to localize the combat against the virus.

#### The dynamics of Mosenergo shared in 2020



The optimistic beginning of 2020 when a new maximum for the Moscow Exchange stock index was set was succeeded by a rapid capitalization drop for the entire market. Yet when the first wave of the pandemic subsided and the first vaccines appeared, the index gradually recovered its positions and even renewed the historical maximum by the end of the year. This recovery, however, was not large-scale, and it did not affect many shares that could not recover their market value. After the drop in the March of 2020, the shares of Mosenergo PJSC could not recover completely and showed an 8% decrease at the end of the year.

#### The dynamics of Mosenergo shared in 2020

	Level 1	Reg.S	Rule 144-A
Coefficient	1:50 shares	1:50 shares	1:50 shares
Brief description	Receipts can be freely traded on the over-the- counter market of the USA and Europe.	Receipts are intended for a wider range of private professional investors outside the USA than stipulated by Rule 144A.	Receipts are intended for private offering to a restricted number of institutional investors, primarily in the USA.
Year of issue	1997	2008	2008
ISIN	US0373763087	US61954Q2093	US61954Q1004
Depositary bank		The Bank of New York Mello	n

#### Outstanding depositary receipts

		December 31, 2018	December 31, 2019	December 31, 2020	2020/2019
Level 1	pcs	8,175,213	7,727,302	7,705,001	-0.3%
Reg.S	pcs	145,946	144,046	144,046	0.0%
Rule 144-A	pcs	14,349	14,349	15,908	+10.9%
Total	pcs	8,335,508	7,885,697	7,864,955	-0.3%

#### **Dividend Policy**

The dividend policy of Mosenergo PJSC was approved by the Board of Directors on September 12, 2017.

The dividend policy of Mosenergo PJSC was developed in compliance with the applicable laws of the Russian Federation, the Code of Corporate Conduct recommended by the Central Bank of the Russian Federation, the Articles of Association

The following principles are adhered to when calculating the amounts of dividends:

- The transparency of the mechanism for defining the amounts of dividends;
- The balance between short-term (income generation) and long-term (Company development) shareholder interests;
- The focus on increasing the Company's investment appeal and capitalization.

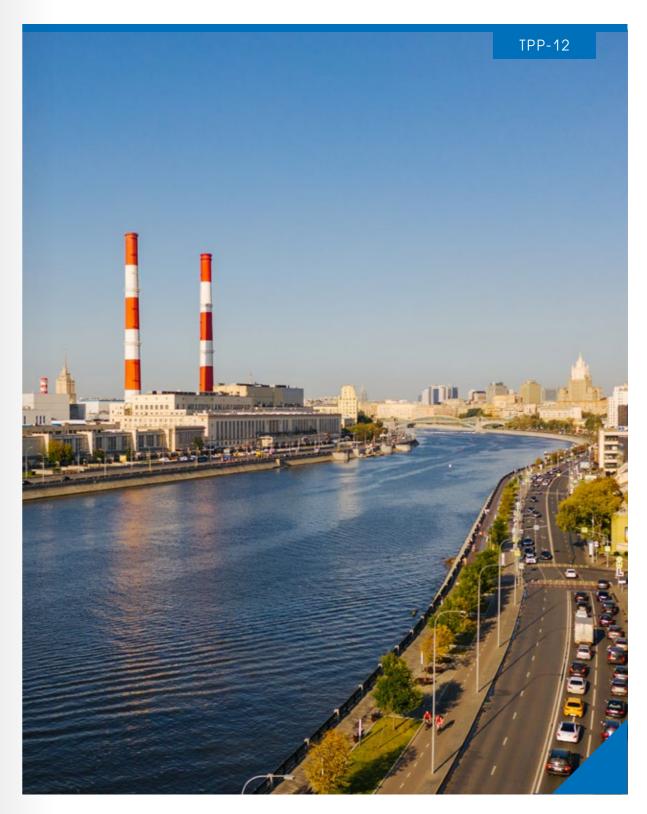
of Mosenergo PJSC, and internal documents of Mosenergo PJSC.

The amount of dividends is calculated based on the Company's net profit as reflected in the annual financial statements produced following requirements of the laws of the Russian Federation.

The amount of dividends is calculated in the following order:

- Some of the net profits are allocated to the reserve fund as stipulated by the Company's Articles of Association; The allocation of net profits to the reserve fund stops when the fund reaches the amount required by the Company's Articles of Association;
- Some of the net profit is used to pay out dividends to the amounts recommended by the Board of Directors;
- Some of the net profits remaining after all the deductions are at the Company's disposal.

To make decisions on paying out dividends, the Company Board of Directors provides the recommendations on the amounts of dividends for the consideration of the General Meeting of Shareholders. The dividends are paid out after the General Meeting of Shareholders produces a respective decision.



The total amount of declared dividends paid by Mosenergo PJSC for 2019 was 4,799,735,184 rubles or 29.15% of the net profit following RAS. As of December 31, 2020, the Company paid out dividends for 2019 to the tune of 4.773.830.783 rubles or more than 99.5% of the total amount of declared dividends 2

## KEY CORPORATE EVENTS OF 2020



Mosenergo PJSC began the construction of a Uniform Logistics Center at TPP-27.



By Decree of February 7, 2020, the Government of the Russian Federation approved the list of projects within the thermal power plant modernization program to be commissioned in 2025. This list includes two of the Mosenergo PJSC's projects: the TG-7 turbine generating set at TPP-21 and power unit 4 at TPP-25.



### Duly 29

The Fitch rating agency confirmed its long-term issuer default ratings (IDR) for foreign and national currency of Mosenergo PJSC at the BBB level with a stable outlook.

#### January

For the first time in its history, Mosenergo PJSC participated in the Future Today rating of the best employers in Russia and finished with the 12th place in the subrating reflecting the popularity of employers among the target audience: senior students and graduates of the industry-specific colleges.

#### February





#### June 24

The annual General Meeting of Mosenergo PJSC Shareholders took place by absentee voting.



#### September

1. The teams from two of the Mosenergo PJSC branches - TPP-26 and TPP-23 - got the first and the second places respectively in the competition of the personnel of block-type TPS of Gazprom Energoholding.



The projects of Mosenergo PJSC won five awards in four categories of the KonTEKst 2020 communicative project competition for the Russian fuel-and-energy sector companies.



#### November 5

Following the order of the Minister of Energy of the Russian Federation, Mosenergo PJSC received a certificate of readiness for the operation during the heating season of 2020-2021.

Mosenergo PJSC won in two categories of the MediaTEK-2020 all-Russian contest for the press offices of the fuel-and-energy companies and regional administration organized by the Minenergo



The Museum of Mosenergo PJSC and the Power Sector of Moscow got first place in the Best Corporate Museum category at the 11th Corporate Public Relations and Media Services of Gazprom PJSC subsidiaries.

of Russia.

МЕДИАТЭК



#### >> December 18

The Analytical Credit Rating Agency (ACRA) assigned its highest credit rating (AAA RU) to Mosenergo PJSC. This rating has a stable outlook.

#### December 21

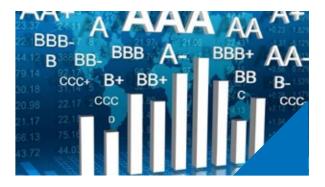
The Board of Directors of Mosenergo PJSC approved a program for the issue of series 001R exchange bonds to the tune of 15 billion 100 million rubles of Russia.



Mosenergo PJSC got second place in the environmental information openness rating for energy generating companies prepared by the World Wildlife Fund (WWF) of Russia and the National Rating Agency (NRA).



#### December



Mosenergo PJSC confirmed that its Environmental Management System complies with the requirements of the ISO 14001:2015 international standard.



In the December of 2020, a general service-life extension audit was held at GT-31 gas turbine in power unit 3 of CCPU-450 of TPP-27 after it reached 100 thousand equivalent operating hours (EOH) for the first time at Mosenergo PJSC. These activities resulted in the increase of the service interval from 33 to 21 thousand EOH and the prolongation of the ultimate life of the turbine by another 123 thousand EOH.



# 3 OPERATING ACTIVITY



3.1 Company development	21
3.2 Production	24
3.3 Sales	28
3.4 Fuel supply	31

32

36

38

- 3.5 Investment and maintenance activities
  - 3.6 Analysis of financial results
    - 3.7 Risk management

## 3.1 COMPANY DEVELOPMENT





## Modernization of generating assets as part of the KOMMod program

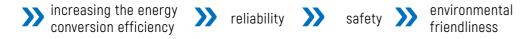
(approved by Resolution No. 43 of the Government of the Russian Federation on the Modernization of Generating TPS Facilities dated January 25, 2019) is one of the prerequisites for the long-term development of Mosenergo PJSC and provision of reliable uninterrupted supply of electricity to its consumers. Two of the company's in-demand generating facilities with long running time and heavy wear and an aggregate capacity of 350 MW successfully passed a competitive selection process for 2022–2024: T–250 power unit No. 10 at TPP-22 and T-100 turbine No. 4 of TPP-23. Two more of the Mosenergo PJSC facilities - TG 7 at TPP-21 and unit 4 at TPP-25 - were selected for generating facility modernization projects at thermal power plants that should begin supplying power between January 1, 2025, and December 31, 2025. These facilities were included in the list of generating facilities that supply power under sales (supply) contracts for upgraded generating facilities as approved by Resolution No. 232-R of the Government of the Russian Federation 07.02.2020.

The modernization will help prolong the operating life of cogeneration equipment by 300 thousand hours, increase the efficiency by 3-4%, reduce the specific fuel consumption, and improve the environmental indicators for NOx emissions. It is expected that a more effective generation will lead to a higher income of modernized stations and increase energy efficiency and reliability of energy supply to consumers.



#### The improvement of operating efficiency

is one of the key development priorities of Mosenergo PJSC for the foreseeable future. It includes projects aimed at the following:



The key projects include the following:

- The completion of the decommissioning program for ineffective power generating facilities: GRES-3, TPP-17 (switching to the heating plant mode), and the decommissioning of worn-out and inefficient 90 at equipment at TPP-16 and TPP-20.
- The modernization of the pilot model of the most powerful Russian cogeneration turbine at TPP-22 (unit 9). This project stipulates the replacement of the turbine for a more powerful one, as well as the ancillary equipment in the existing unit of the main building.
- The increase in the chargeable capacity of CCPU, the prolongation of service intervals, and the statutory service life. As of this day, the management of Mosenergo PJSC has already implemented technical projects that resulted in the increase of service intervals and chargeable capacity of new CCPU gas turbines at TPP-26, TPP-20, NPP-16, and unit 3 at TPP-27 (GT-31). Besides, the company is planning to incrementally upgrade the remaining CCPU-450 gas turbines at TPP-21, two CCPU-450 at TPP-27, and CCPU-220 at TPP-12. In 2021, an extended audit will be held at the CCPU at TPP-16 stipulating some auxiliary works like the introduction of the SP-8 package to improve the marginal profits and the earnings from the power unit output sales.
- The implementation of the program to improve the primary technical and economic indicators of TPP. Program activities shall ensure the reduction of the specific fuel consumption through the normalization of the primary technical and economic performance (TEP) and, if possible, the reversal to the original design values, the optimization of the included equipment, and the reduction of in-house power consumption at power plants.
- The continuation of the thermal load transfer from the heating plants of MIPC PJSC to the sources of Mosenergo PJSC within Old Moscow The effects of the program implementation are achieved through the reduction of fuel consumption necessary to produce electricity and heat at TPP + heating plant units when the condensing generation is replaced by cogeneration (fuel effect), as well as the reduction of semi-fixed operational costs, and the sales of decommissioned heating plant components.
- The optimization and automation of the water chemistry conditions at TPP-21, TPP-23, and TPP-25 to reduce the expenses on water supply and discharge.
- The renovation of TPP-22 equipment to shift from burning coal to gas and mazut at all of the units. The project is expected to increase marginal profit, a significant reduction of semi-fixed costs associated with the maintenance of coal infrastructure at the plant, and the reduction of emissions from stationary sources in Moscow.



#### Technological development

#### The use of new technologies and innovations

Technological development is primarily understood as the transition to the modern level of digitization, including computing hardware, means of communication, storage, processing, and presentation of information that constitute a Digital Enterprise. Digital technologies should become a competitive advantage of Mosenergo PJSC in all areas of its activities, including production, sales, and ancillary processes.

Moreover, the Company modernizes overaged and obsolete management and control systems by introducing modern SCADA systems within the framework of the development of new technologies and automation. As a result, by 2027, the share of the core process equipment fitted with SCADA systems will reach 100%. When choosing hardware and software automation tools, fully functional packages designed in Russia will be given preference over other options.

Import substitution is a key area of application of modern technologies aimed at reducing the risks of cost increases and non-deliveries of critical spare parts and materials, as well as the impossibility of servicing foreign-made equipment. Mosenergo PJSC's activities in this area comply with the uniform approach of the Gazprom Energoholding LLC Group. Apart from introducing Russian SCADA engineering solutions, the Company strives to reduce the dependence of maintenance and repair servicing of generating companies on foreign suppliers of gas turbine equipment.



#### **Business** expansion

The Company is planning to continue to expand and diversify its business up to 2027: As part of the optimization of the heating supply scheme, the Company is planning to further consolidate the heat-generating sources of the Gazprom Energoholding LLC Group in Old Moscow under the auspices of Mosenergo PJSC. The project involves the transfer of several heating plants of MIPC PJSC to Mosenergo PJSC As part of this project, in 2019, Mosenergo PJSC purchased 2 heating plants of MIPC PJSC: DTS Tushino-5 and DTS Tereshkovo. In 2020, 4 more heating plants were leased with a purchase option including DTS Tushino-1, DTS Tushino-2, DTS Tushino-3, and DTS Tushino-4.

- The connection of additional heating plants and new heating supply areas (provided on active TPP).
- improvement of S&A efficiency.

The implementation of the development program shall be controlled via the comprehensive approach to project management and management motivation system in place at Mosenergo PJSC.

As a result of the implementation of the aforementioned initiatives, in 2027, the company should become the most efficient territorial generating company in Russia ensuring reliable energy supply to its consumers while maintaining financial stability and high EBITDA margins.

that it is cost-efficient for Mosenergo PJSC through the increase in the thermal load

The development of Mosenergo PJSC's subsidiaries and affiliates (S&A): Mosenergoproekt LLC and Central Repair and Machinery Plant LLC. The projects stipulate the increase in the internal efficiency of S&A and their revenue in the existing areas of activity, as well as the development of new types of activities. As of 2021, the implementation of the Strategy stipulates the goals related to the further increase of the customer focus (during their interactions with Mosenergo PJSC in particular) and the

### 3.2 PRODUCTION

In 2020, Mosenergo PJSC did not face any major disruptions, which ensured a stable operation of the power plant equipment and a reliable supply of heat and electricity to the consumers in Moscow and the Moscow region.

In 2020, the average annual installed capacity of Mosenergo PJSC amounted to 12,824.9 MW and 43,567.6 Gcal/h, including 12,824.6 MW and 33,779.7 Gcal/h for the Company TPS and 0.3 MW and 9,787.9 Gcal/h for DTS and BTS respectively.

The average annual heat output increased by 437.2 Gcal/h as compared to the previous year.

These changes were caused by the following:

- The transfer of DTS Tushino-1, DTS Tushino-2, DTS Tushino-3, and DTS Tushino-4 with the aggregate installed heat capacity of 1080.00 Gcal/h (yearly average of 722.95 Gcal/h) since 01.05.2020;
- The decommissioning of DTS Biryulevo with the installed heat capacity of 480.00 Gcal/h (yearly average of 119.34 Gcal/h) since 01.04.2020;
- The decommissioning of BTS Severnaya with the installed heat capacity of 34.00 Gcal/h (yearly average of 28.33 Gcal/h) since 01.11.2020.

The installed electric capacity was not measured in 2020.

The installed electric capacity of the Company at the end of 2020 amounted to 12,824.9 MW. The installed heat capacity was 43,777.0 Gcal/hour, including 9,997.3 Gcal/h for DTS and BTS.

The electric power output of Mosenergo PJSC for 2020 was 54.5 billion kWh, which is 9.4% lower than the previous year's value.

The reduction of electricity output compared to the previous year is a result of the reduced consumption due to the high outside temperatures in the first quarter of 2020, the reduction of power consumption in the second quarter due to the restrictions imposed because of the coronavirus pandemic, and the difference in repairs locations in 2019 and 2020.

In 2020, the power output of the steam power equipment (SPE) group amounted to 38.2 billion kWh, which is 7.6% lower than the 2019 figure.

The electric power output of the CCPU group amounted to 16.3 billion kWh, which is 13.5% lower than in 2019. In 2020, the share of the CCPU group Electricity output in 2020



in the electricity generated by the company amounted to 29.9%, which is 1.4% lower than in the previous year.

The share of the cogeneration output of the Company TPP was 66.1%, including 72.1% for the SPE group (+4.3%), and 51.8% for the CCPU group (+2.5%).

The increased share of cogeneration can be linked to the optimization of equipment sets and operating modes to improve fuel efficiency.

#### Electricity output, million kWh

Power plant	2019	2020	Power plant	
SPP-1	183	160	-12.5%	
GRES-3	82	75	-8.7%	
TPP-8	1,930	1,624	-15.8%	
TPP-9	988	805	-18.5%	
TPP-11	1,644	1,556	-5.4%	
TPP-12	2,843	2,902	+2.1%	
TPP-16	3,643	3,584	-1.6%	
TPP-17	189	204	+8.0%	
TPP-20	5,692	5,025	-11.7%	
TPP-21	7,954	7,344	-7.7%	
TPP-22	5,101	5,059	-0.8%	
TPP-23	7,313	6,554	-10.4%	
TPP-25	6,705	6,366	-5.1%	
TPP-26	9,890	8,422	-14.8%	
TPP-27	5,953	4,753	-20.2%	
Total	60,110	54,434	-9.4%	

Total heat output in 2020

## 74,252 thousand Gcal

The total heat output of the Company amounted to 74.3 million Gcal, which is 1.5% lower than in the same period of 2019.

The power plants of the company supplied 64.9 million Gcal to their customers, which is 1.6% lower than in the previous year

The total heat output for DTS and BTS amounted to 9.4 million Gcal, which is 0.4% lower than in the previous year.

The reduction of the heat output compared to the previous year can be explained by the higher outdoor temperatures during the heating season of 2019/2020, as well as the late start of the 2020/2021 heating season due to high temperatures.

The heat supply of the CCPU and GTU groups amounted to 7.3 million Gcal, which is 4.5% lower than in the previous year. The reduction compared to the figures for the previous years is due to the significant increase in renovation activities in the group in the 4th quarter compared to 2019.

The heat supply of the SPE group amounted to 57.6 million Gcal, which is 1.3% lower than in the previous year.

In 2020, DTS and BTS transferred 5415.9 thousand Gcal of heat to the TPP of Mosenergo PJSC, which amounts to 8.35% of the TPP heat output and 0.6% higher than the figure for the previous year.

#### Outdoor temperature<sup>5</sup>

#### Outdoor Temperature,°C

		period	ł	
year		heating	summer	
2019	+7.8	+2.2	+16.9	
2020	+8.0	+2.7	+16.4	

<sup>5</sup> for the heating period dates

## Heat supply by collectors, thousands of Gcal, thousand Gcal

Power plant	2019	2020	Change
SPP-1	1,177	1,113	-5.4%
GRES-3	261	267	+2.3%
TPP-8	2,536	2,431	-4.1%
TPP-9	1,091	1,074	-1.6%
TPP-11	2,205	2,272	+3.0%
TPP-12	3,368	3,411	+1.3%
TPP-16	3,457	3,428	-0.8%
TPP-17	495	491	-0.8%
TPP-20	4,422	4,230	-4.3%
TPP-21	10,698	10,550	-1.4%
TPP-22	8,317	8,807	+5.9%
TPP-23	8,506	8,265	-2.8%
TPP-25	7,547	7,331	-2.9%
TPP-26	8,558	8,353	-2.4%
TPP-27	3,297	2,829	-14.2%
Total TPP	65,934	64,853	-1.6%
District thermal power stations (DTPS), district ther- mal stations (DTS), block thermal sta- tions (BTS)	9,432	9,399	-0.4%
Mosenergo PJSC	75,366	74,252	-1.5%

In 2019, the utilization factor of the average annual installed electrical capacity of the turbines at the Mosenergo PJSC power stations amounted to 48.3%, which is 5.2% lower than in the previous year. The installed capacity utilization factor (ICUF) for the SPE group reduced by 3.7%, and by 10.2% for the CCPU group.

The ICUF reduction was caused by the reduced consumption due to the high outdoor temperatures in the first quarter of 2020 and the restrictions imposed because of the covid pandemic in the second quarter, as well as the differences in the sets of repair locations for 2019 and 2020.

#### Installed capacity utilization factor, %

Nama	ICUF for electricity, %			ICUF for heat, %		
Name	2019	2020	Change	2019	2020	Change
Total for Mosenergo PJSC TPP, including	53.5	48.3	-5.2	37.7	35.4	-2.3
Equipment in operation (SPE)	47.5	43.8	-3.7	36.3	34.2	-2.1
CSA facilities <sup>6</sup>	74.2	64.0	-10.2	51.7	47.1	-4.6

The utilization factor of the average annual installed thermal capacity of TPS turbines at Mosenergo PJSC decreased by 2.3%, including the 2.1% reduction for the equipment in operation and the 4.6% reduction for the CSA facilities.

In 2020, the Company's reference fuel consumption to produce electricity and heat was 23,254,307 toe, including 1,456,087 toe for heating plants.

In the reporting year, the consumption of reference fuel by the power plants of Mosenergo PJSC amounted to 21,798,220 toe, which is 7.0% lower than in the previous reporting year.

#### Fuel consumption, toe

Name	2019	2020	Change
SPP-1	223,540	203,066	-9.2%
GRES-3	65,889	64,121	-2.7%
TPP-8	907,309	796,135	-12.3%
TPP-9	420,584	363,748	-13.5%
TPP-11	734,989	719,330	-2.1%
TPP-12	1,136,906	1,128,761	-0.7%
TPP-16	1,160,613	1,143,418	-1.5%
TPP-17	135,106	139,254	3.1%
TPP-20	1,910,445	1,707,190	-10.6%
TPP-21	3,184,090	3,055,545	-4.0%
TPP-22	2,560,622	2,580,630	0.8%
TPP-23	3,061,723	2,772,256	-9.5%
TPP-25	2,718,116	2,596,998	-4.5%
TPP-26	3,523,252	3,124,697	-11.3%
TPP-27	1,691,975	1,403,071	-17.1%
Total for TPP	23,435,159	21,798,220	-7.0%
District thermal power stations (DTPS), dis- trict thermal stations (DTS), block thermal stations (BTS)	1,463,760	1,456,087	-0.5%
Mosenergo PJSC	24,898,919	23,254,307	-6.6%

<sup>6</sup> CSA facilities include GTU blocks at TPP-30 in Pavlovsky Posad

In 2020, the fuel consumption decreased due to the lower heat and electricity production at the power and heating plants of Mosenergo PJSC.

The reduction of reference fuel consumption for the entire company was 224.1 g/kWh and 163.3 kg/ Gcal, including the 0.0 g/kWh and 154.9 kg/Gcal for the transferred heat plants (DTS/BTS).

In 2020, the specific fuel consumption for the TPP of Mosenergo PJSC to supply electricity was 3.9 g/kWh lower than in 2019. At the same time,

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#### The key factors that had a positive effect on the efficiency of equipment are as follows: ਛਾਢਾ

The optimization of operating modes in the autumn and winter of 2019/2020 (when the outdoor temperatures were high) and during the restrictions associated with the pandemic;



the changes in the reduction of reference fuel consumption for electricity across equipment groups have different directions relative to the level achieved:

- For the CCPU and GTU facilities, it was 201.8 g/kWh, which is 0.8 g/kWh higher than in the previous year;
- For the SPE facilities, it was 234.1 g/kWh, which is 6.8 g/kWh lower than in the previous year.

The optimization of equipment configurations under the restrictions associated with the pandemic and the improvement of operating modes of the heating grid during the summer.

## 3.3 SALES

The electricity sales in 2020 were 5,654.9 thousand MWh (9.1%) lower than in the previous year and amounted to 56,441.1 thousand MWh due to the reduction of company power plant output by 9.4%.

The main reasons behind the reduction of the output compared to the previous year include the following:

 the reduction of electric power consumption in the 1st price zone of the Russian UES due to the abnormally warm weather in the 1st quarter of 2020, as well as the consequences of the covid pandemic. This resulted in the Company's optimization of the active generating equipment.

#### Electricity Sales, thousands of MWh



The reduction of capacity sales in 2020 is primarily due to the increased under-delivery in the competitive capacity selection sector (CCS).

The electricity and capacity sales revenue in 2020 amounted to 101,623 million rubles, which is 9,881 million rubles or 8.9% lower than in 2019.

**Prices and tariffs.** In 2019, Mosenergo PJSC sold its generated electricity on the wholesale electricity and capacity market (hereinafter referred to as the WECM) at free and regulated tariffs

Electricity Sales in 2020

56,441 thousands of MWh

- the reduction of the heat output from TPP collectors (1.6%) due to the increased outdoor temperatures mainly in the 1st quarter of 2020;
- the increase in SPP output in the 1st price zone by over 10%.

The capacity sales for 2020 amounted to 10,842.6 MW, which is lower than the previous year's figure by 357.3 MW or 3.2%.

#### Capacity Sales, MWh



Electricity (capacity) was sold at regulated prices (tariffs) in the following cases:

- under the regulated contracts for power supply to households and equivalent categories of consumers (the RC sector);
- electricity (capacity) supply for the power stations designated as "forced generators".

Electricity and Capacity Sales Revenue in 2020

101,623 million rubles

#### Name

The average weighted selling price of electricity, RUB/

Average weighted RC tariff, RUB/MWh

Average weighted selling price under free contract

Average weighted selling price for new capacity, RUB/

Average weighted selling price for old capacity, RUB/M

The key factors affecting electricity prices are as follows:

- The reduction of power consumption due to the abnormally warm weather in the 1st quarter of 2020, as well as the impacts of the covid pandemic;
- The reduction in the net electric power flow from the price zone (the reduction of electricity exports).
- The increase in the SPP output in the 1st price zone.

## Average weighted selling price of electricity in 2020

1,230 RUB/MWh

#### Thermal energy sales and revenue

Indicator

Thermal energy sales revenue, millions of rubles Total sales, thousands of Gcal Average tariff, RUB/Gcal

The 1.6% increase in the Company heat sales revenue against the 1.5% sales drop is explained by the growth of heat tariffs - the annual tariff protection taking into account the indexation.

	2019	2020	Change
/MWh, including	1,293.12	1,230.03	-4.9%
	900.72	905.47	+0.5%
ts, RUB/MWh	1,379.62	1,307.06	-5.3%
/MW per month	874,792.93	963,048.10	+10.1%
MW per month	143,270.84	148,191.61	+3.4%

The key factors affecting capacity prices are as follows:

- The increase in the prices for CSA facilities at TPP-12 and TPP-16 due to the beginning of the payment period for the share of aggregate costs for the period after CSA operation (delta 10-15) since January 2020;
- The adjustment (since January 2020) of the share of reimbursable expenses for some of the CSA facilities. This value reflects the expected profit of electricity sales after the expiration of the CSA supply period (clarification of the share calculation procedure in the regulatory framework following Resolution No. 1065 of the Government of Russia dated September 02, 2017);
- Consumer price indices were taken into account when indexing the CCS price. The CCS price for 2020, taking into account the indexation, was 126,500.78 RUB/MW (+1.98% to the 2019 value).

2019	2020	Change
75,752	76,969	+1.6%
75,004	73,896	-1.5%
1,009.97	1,041.59	+3.1%

Thermal Energy Sales Revenue in 2020

76,969 millions of rubles

#### Tariffs

#### All the thermal energy supplied to consumers in the City of Moscow and the Moscow Region using water as the medium is subject to regulated tariffs.

According to article 8 of Federal Law No. 190-Ф3 on the Heating Supply dated July 27, 2010, since January 01, 2018, the prices for the thermal power (capacity) generated and/or supplied using steam

as the medium have been deregulated and determined by agreement of the parties to a heating supply contract and/or thermal energy (power) and/or heat medium supply contract

Name	2019	2020	Change
Average weighted thermal energy tariff, RUB/Gcal, including:	1,009.97	1,041.59	+3.1%
Average weighted tariff for generation + sales activities, RUB/Gcal	1,002.92	1,035.34	+3.2%

The main reason behind the increase in the average weighted thermal energy tariff of Mosenergo PJSC is the annual review of consumer tariffs by the Department of Economic Policy and Development (DEPaD) of Moscow and the Committee for Prices and Tariffs of the Moscow Oblast taking into account the socioeconomic development forecasting indices for 2020. Besides, the average weighted tariff is affected by the establishment of MIPC PJSC as the single heat supply organization and gradual renewal of heat supply agreements with this organization, as well as the redistribution of the consumers purchasing thermal energy from the sources of Moscow and Moscow Oblast through the collectors and networks of MIPC PJSC differentiated by the heat transfer medium: steam or hot water.

#### Thermal energy consumers

	As of D	ecember 12, 2019	As of	December 12, 2020
Consumer (category of consumers)	Share in the net supply, %	Supplied con- tractual load, Gcal/hour	Share in the net supply, %	Supplied contrac- tual load, Gcal/hour
MIPC PJSC (wholesale reseller):	95.3%	43,341	95.3%	44,312
Heating plants transferred to Mosenergo PJSC	12.5%	6,509	12.7%	7,384
TSK Mosenergo (TPP) (wholesale reseller)	1.9%	1,018	1.8%	1,029
Industrial enterprises (retail)	1.2%	871	1.5%	838
Budgetary institutions (retail)	0.1%	33	0.04%	24
Other legal entities (retail)	0.8%	813	0.7%	757
Households, condominiums, building cooperatives, etc. (retail)	0.7%	84	0.7%	67
Total	100%	46,160	100%	47,027

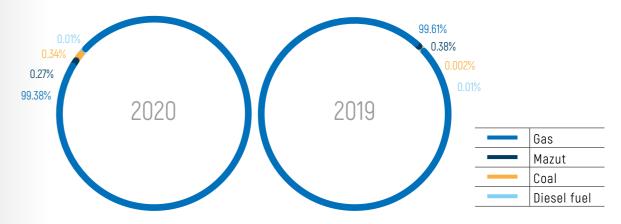
The increase in the supplied contractual load is due to Mosenergo PJSC's leasing of four new heat plants DTS Tushino-1, 2, 3, and 4 from MIPC PJSC with a purchase option.

### 3.4 FUEL SUPPLY

#### Natural gas remained the key component of the fuel mix in 2020.

It takes up 99.38% of the Company's fuel mix. The share of coal which was used due to the beginning of a relevant stock optimization program to empty storage facilities and perform renovation

Fuel mix structure



Over the 12 months of 2020, the structure of the fuel mix changed compared to the same period of 2019 as follows:

- the share of gas reduced by 0.23%;
- the share of coal increased by 0.34%;
- the share of mazut reduced by 0.11%;
- the share of diesel fuel did not change.



The stability and reliability of fu power stations in 2020 was ach gas supply in full following cu rent agreements;

#### Fuel consumption by power stations of Mosen

	Unit	2016	2017	2018	2019	2020	Change 2020/2019
Gas	millions of cubic meters	21,693	21,063	21,693	21,240	19,730	-7.1%
Coal	Thousands of tons of natural fuel	700	441	238	1	99	x99
Mazut	Thousands of tons of natural fuel	2	11	55	69	46	-33.1%

works at TPP-22 was 0.34%. Being a reserve fuel type, mazut (0.27%) was used by the power plants of Mosenergo PJSC to refresh its stocks. The share of diesel fuel in 2020 was 0.01%.

The reduction of the gas share was caused by the increase in the coal share due to the beginning of a coal stock optimization program to empty storage facilities and renovate TPP-22 to refrain from using coals as a reserve fuel. The consumption of mazut was reduced because of the adjustment of the renewal program for the long-term mazut stocks.

iel supply to all of the Mosenergo PJSC	
nieved through the following:	

ur-	<ul> <li>the development of sufficient</li> </ul>	
	stocks of reserve fuels follow-	
	ing the orders of the Ministry of	
	Energy of Russia and the reso-	
	lutions of the Government of	
	Moscow.	

nergo	PJ	SC	
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MOSENERGO | ANNUAL REPORT 2020 31

## 3.5 INVESTMENT AND MAINTENANCE ACTIVITIES



Within the framework of the Investment Program, Mosenergo PJSC fulfills the Company's strategic goals aimed at improving the effectiveness and maintaining the high level of safety, cost efficiency, and reliability of heat and electricity generation

#### Investments

In 2020, the funds allocated within the investment program amounted to 15,682 million rubles (VAT included), and the actual investment amounted to 15,585 million rubles (VAT included) so that the plan was completed for 99.38%.

The key investment areas for the Company are as follows:

- enhancing the safety of production through equipment compliance with the applicable rules and standards;
- enhancing the operational efficiency through replacing equipment with high-efficiency options with reduced specific fuel consumption

for the production of electrical and thermal energy;

- enhancing the equipment operation reliability through the modernization of power generation systems nearing the end of service life and the promotion of production process automation;
- mitigating the negative environmental impacts of power plants through technology retrofitting and decommissioning of obsolete equipment;
- extending the scope of environmental activities at power plants.

A sufficient amount of funds was allocated to the development of information and communication technology, safety, and control systems.

## Results of the most important investment projects by category.

#### Strategic projects:

The key most crucial Investment program projects include the KOMMod projects for the modernization of generating equipment at thermal power plants:

- The technical retrofitting of the power unit of plant No. 10 at TPP-22 (to be commissioned in 2024, the output after upgrade: 250 MW),
- The technical retrofitting of T-100-130 turbine generating unit of plant No. 4 at TPP-23 (to be commissioned in 2024, the output after upgrade: 110 MW),
- The technical retrofitting of the turbine generating unit of plant No. 7, boiler unit of plant No. 1 at TPP-21 (to be commissioned in 2025, the output after upgrade: 80 MW),
- The technical retrofitting of the power unit of plant No. 4 at TPP-25 (to be commissioned in 2025, the output after upgrade: 257 MW).

These projects aim to prolong the useful service life of cogeneration equipment, improve and reduce the specific fuel consumption, and improve the environmental indicators for NOx emissions.

Another key project is the Full Equipment Reconstruction of Power Unit No. 9 at TPP-22, which comprises the replacement of the overaged T-250/300-240 steam turbine of plant No. 9 with a brand-new cogeneration T-295/335-23.5 turbine made by Ural Turbine Works. The new series of Ural machines will replace the end-of-servicelife T-250 turbines. This project has a special significance for the Company as T-250 turbines manufactured by Ural Turbine Works are the primary heat supply sources for Moscow, and their aggregate capacity reaches 40% of the Company's total installed generating capacity.

#### >>> Efficiency projects:

- 1. The projects intended to improve the power generation efficiency:
- SPP-1, GRES-3, TPP-9, TPP-11, TPP-12, TPP-16, TPP-17, TPP-20, TPP-21, TPP-22, TPP-23, TPP-25, TPP-26, TPP-27 – The technical retrofitting of the commercial heat and heat medium accounting system.
- 2. The projects intended to normalize the state of heating equipment:
- TPP-11 The replacement of the lower cubes of the first stage of TVP EK-7.

#### Mandatory projects:

- The projects intended for the technical retrofitting of the natural gas consumption and distribution infrastructure:
- TPP-17 The technical retrofitting of the gas consumption infrastructure of PWB-1V and PWB-2V according to the Safety Regulations for Gas Distribution and Consumption Systems.
- 2. The projects intended to ensure fire safety at the branches of Mosenergo PJSC:
- TPP-12, TPP-23 Fireproof coating of the supporting structures, closing cable transits.
- **3.** The projects intended to reduce negative environmental impacts:
- TPP-16 The installation of noise suppression devices on the equipment and structures.
- 4. The projects intended to bring the equipment into compliance with regulatory requirements of supervisory authorities (not related to natural gas consumption, fire safety, and the environment):
- TPP-12 The installation of circuit breakers for 110 kV aerial cable line potential transformer of TPP-12 – MSU-I, circuit II, and 110 kV cable line of TPP-12 – City I, II – 110 kV gas-insulated switchgear.

#### Reliability projects:

- The projects intended to enhance the operational reliability of the power plant electricity output infrastructure:
- TPP-22 The replacement of the TV-60-2 generator at plant No. 2 with a new one with air cooling, as well as a new relay protection and automatics system and a new TG-8 generator.
- TPP-21, TPP-23, TPP-25, TPP-26 The replacement of the battery, rectifier chargers, and the direct current board.
- 2. The projects intended to improve the operational reliability of boiler plants:
- TPP-9 The installation of a DKS-2 fuel gas compressor.
- **3.** TPP-9 The installation of a DKS-2 fuel gas compressor:
- TPP-16 The modernization of the EK-6 management and control system.

#### >>> Other projects»:

- 1. The projects intended to provide corporate protection:
- TPP-17 The development of an integrated security equipment system
- 2. The projects on the modernization of IT, communications, and data transmission intended to improve the storage and transmission of information:
- GD The creation of a network of operative dispatch communications at the power facilities of Mosenergo PJSC based on the VolP.

#### Repairs

In 2020, all thermal, mechanical, and electrical equipment maintenance programs were complet-

ed in full and in line with the approved maintenance schedule and within the budget:

#### Equipment repairs, instances

Equipment	Overhaul	Mid-level	Running
Power generation units	5	3	10
Power generation units	11	10	58
Turbines	14	5	61
GTU	0	0	6
Peak water-heating boilers	8	0	101
Heating plants (CCPU)	3	1	10
GT (CCPU)	1	1	19
Turbogenerators (CCPU)	0	1	12
Water-heating boilers (DTS/BTS)	21	0	100
Generators	17	9	81
Transformers	0	-	144
110-500 kV switches	6	0	-

#### Repairs at buildings and structures, instances

Facility	Total for			
Repaired	Mosenergo PJSC	Type of works	2019	2020
Cooling toward	F0 pag -	Repairs	38	23
Cooling towers	59 pcs. —	Inspection	12	9
Chimneys	198 pcs.	Comprehensive inspection	39	36
Liquid fuel tanks	84 pcs.	Inspection with industrial safety expert review (ISER)	17	11

#### Main uncommon repairs of the thermal and mechanical equipment, instances

Works	2019	2020
Industrial turbine rotor repairs	28	29
Replacement of turbine rotor blade/disk sets	11/3	11/0
Rotor replacement	2	1
Replacement of elements of the turbine cylinder wheel space	4	2
Replacement of piping of heaters and capacitors	1	2
Replacement of piping of heaters and capacitors	-	-

#### Main uncommon repairs of the electrical equipment, instances

#### Works

Generator rotor repairs involving removal and defectos Replacement of generator welding wheels Replacement of generator welding wheels Replacement of an upper stator winding bar Replacement of high-voltage bushings

#### Information on CCPU maintenance service

Branch	2019	2020	Branch	2019	2020
TPP-12	HGI		TPP-26	AR	B3
TPP-16	MI	MI	TPP-27 (GT-31)	MI	GIsPR
TPP-20		MI	TPP-27 (GT-32)	MI	MI
TPP-21 (GT-11B)	MI	MI	TPP-27 (GT-41)	MI	MI
TPP-21 (GT-11V)	MI	MI	TPP-27 (GT-42)	MI	MI



	2019	2020
oscopy of retaining rings	9	14
	7	7
	1	0
	2	1
	4	2

## 3.6 ANALYSIS OF FINANCIAL RESULTS<sup>7</sup>

#### Revenue

The sales revenue of Mosenergo PJSC over the 12 months of 2020 reduced by 5% compared to the 12 months of 2019 and amounted to 181.0 billion rubles. The electricity sales revenue was reduced by 10.9 billion rubles (-14%) due to the 5% reduction of the average weighted price and the 9% reduction of sales. It amounted to 69.4 billion rubles. The capacity sales revenue over the 12 months of 2020 amounted to 32.2 billion rubles, which is 1.0 billion rubles (3%) higher than in the previous

#### Prime cost

billion rubles (-4%) compared to the 2019 figures and amounted to 165.7 billion rubles. (including the 83.7 billion rubles of the prime cost of electricity and capacity, 79.5 billion rubles for thermal energy, and 2.5 billion rubles for other products).

The reduction of costs in 2020 as compared to the previous period was achieved primarily through the following:

• The reduction of fuels costs of 5.8 billion rubles:

#### Other incomes and expenses

The 0.03 billion ruble increase in the balance of other incomes and expenditures compared to the 12 months of 2019 is due to the following factors:

- The 1.47 billion ruble reduction of the interest due to the increased loan payments compared to the previous year (the loan from GPB);
- The 1.37 billion ruble reduction of the currency difference compared to the previous year due to the growth of the euro over 7 months of 2020 by 16.9 rubles. The currency liabilities associated with the BNP Paribas loan were completely settled in July 2020;
- The 0.65 billion ruble reduction of the profit/ loss balance compared to the preceding years due to the adjustment of property taxes for 2014-2016 effected in 2019:
- The write-off of some non-liquid assets and materials to the tune of 0.31 billion rubles:

year. This is due to the 7% increase in the average weighted price and a simultaneous 3% reduction in sales. The revenue from the sales of thermal energy was 77.0 billion rubles, which is 1.2 billion rubles (2%) higher than in the previous year. This is due to the increase in the heating tariffs - the annual tariff protection taking into account the indexation. The revenue from the other activities amounted to 2.4 billion rubles, which is 0.1 billion rubles lower than in the previous year (-4.2%).

- In 2020, the prime cost of products reduced by 6.5 The reduction of electricity purchase costs of 0.7 billion rubles:
  - The reduction of repair costs of 0.5 billion rubles;
  - The increase in the labor compensation expenses of 0.4 billion rubles due to the increased personnel count resulting from the acceptance of four DTS Tushino 1-4 and the indexation of salaries:
  - The increase in other expenses of 0.1 billion rubles.
  - The improvement of the bad debt reserve to the tune of 1.48 billion rubles due to the reduction of reserve accrual caused by the improved debt collection among the electricity companies of the Northern Caucasus Federal District;
  - The recovery of provisions for the property tax to the tune of 0.45 billion rubles:
  - The increased earnings from the reevaluation of the financial investment in the OGK-2 PISC and TSK Mosenergo LLC to the amount of 1.68 billion rubles;
  - The growth of income due to the dividends obtained from OGK-2 PJSC and GAZEKS-Management LLC to the amount of 0.21 billion rubles;
  - The increase in other incomes and expenses to the tune of 0.01 billion rubles.

#### Net profit

The net profit of the Company amounted to 14.3 billion rubles, which is 13% lower than the same figure for 2019. The reduction of the net profit is mainly explained by the reduced sales revenue.

#### Net profit in 2020

## 14.3billion rubles

#### Business structure analysis

As of December 31, 2020, the fixed assets reduced by 2 billion rubles compared to December 31, 2019 (from 225 billion rubles to 223 billion rubles) due to the reduction of long-term financial investments in loans.

The current assets consist of the following components: debts receivable - 36%, short-term financial investments - 38%, reserves - 16%, mon-

#### Analytical financial standing ratios

The current liquidity ratio amounted to 6.01, which is 1.63 points lower than in 2019 and mainly due to the reduction of the current assets.

The turnover of the accounts receivable increased compared to 2019 and amounted to 61 days (+2 days). This is due to a higher revenue decrease rate (-8.8 billion rubles) against the decrease rate of the accounts receivable (-0.7 billion rubles).

The sales margin decreased from 9.24% in 2019 to 8.44% in 2020 due to a higher revenue decrease rate (-8.8 billion rubles) against the sales revenue decrease rate (-2.3 billion rubles).

<sup>7</sup> According to the Russian Accounting Standards (RAS)

#### Liquidity and loan portfolio management

As of December 31, 2020, the loan debt of the Company was 15.1 billion rubles.

The average weighted interest rate for loans over the 12 months of 2020 was 5.068% for credits in rubles and 1.754% for foreign currency loans.

There are no past-due debts on loans and credits.

etary funds - 7%, other current assets - 3%. As of December 31, 2020, short-term financial investments increased due to the growth of short-term deposits.

As of December 31, 2020, short-term liabilities increased by 3 billion rubles compared to December 31, 2019, due to the increase in the debts receivable to suppliers and contractors.

### **3.7 RISK MANAGEMENT**

#### Risk management system

Mosenergo PJSC has a system of risk management and internal control (hereinafter referred to as the RMICS) complying with the principles set out in the Corporate Governance Code recommended by the Bank of Russia and the guidelines for risk management and internal control of the Gazprom Group provided to the Company by the managing company Gazprom Energoholding LLC.

The RMICS of Mosenergo PJSC is a corporate governance component that covers all of the management levels. The goals of the RMICS include the following:

- ensuring the accomplishment of the Company goals;
- ensuring the proper control of the Company's financial and economic activities.

Mosenergo PJSC approved the key internal guidelines regulating the principles and approaches used in the construction and operation of an efficient RMICS:

- The Company approved its Risk Management and Internal Control (RMIC) Policy by the resolution of the Company Board of Directors dated July 30, 2019 (extract from minutes No. 70 of the Board of Directors dated August 05, 2019) that determined the key principles and approaches to the organization, components, goals, and objectives of RMICS, as well as the functions and the distribution of authority between the participants of the RMICS.
- The regulations on the management system for operational risks determine the organizational principles behind the operational risk management in the Company, its goals, and objectives, the distribution of functions among the participants, the main approaches to identification, assessment, responding, monitoring, reporting, and providing information on operational risk management;
- The regulations for the interactions between the participants of the risk management system determine the components of the risk

management and internal control system in terms of risk management and powers assigned, specify the procedures for the interaction of participants on various levels of risk managements, distribute functions and responsibilities, and describes the nature of interactions;

Guidelines and instructions determining the approaches to risk identification, assessment, classification, and monitoring, the maintenance of the database on the implemented risk events, the preparation of RMICS reports, and regulating the structure of the annual report on the RMICS operation, the terms of RMICS efficiency self-assessment, and the recommended values to determine the development level of the Company RMICS.

Following the RMIC policy, the key components of the Company RMICS include the following:

- The Company Board of Directors;
- The Auditing Committee of the Board of Directors;
- The sole executive body;
- The Managing Director;
- The collegiate body;
- The responsibility center for risk management and internal control (hereinafter referred to as the RC RMIC).
- Business process owners;
- Risk owners (co-owners).

The main functions of the key RMICS components at Mosenergo PJSC are shown in the table below.

The powers of the Collegiate body related to the review and approval of issues associated with the organization and efficiency improvement for the RMICS operations are assigned to the Operational Committee of the Company conducting the preliminary review and approval of the RMICS documents.

The functional responsibility for RMICS is assigned to the Company RC RMIC following the RMIC policy of Mosenergo PJSC. The owners of risks and business processes perform risk management activities within the framework of their operational duties.

The functions of RC RMIC stipulated in cl. 5.2.6 of the RMIC policy are assigned to the Risk and Internal Control Management Department created based on the resolution of the Company board of directors on the approval of the general structure of the executive branch of Mosenergo PJSC,

#### The main functions of the key RMICS components

RMICS component	
Board of Directors	<ul> <li>approves the Company's internative agement and internal control, in organization, operation, and device</li> </ul>
	<ul> <li>sets the maximum permissible reviews the RMICS organization results of RMICS evaluation and tions on the improvement of RM</li> </ul>
	• controls the reliability and effic
The Auditing Committee of the Board of	<ul> <li>carries out preliminary reviews within the scope of competence</li> </ul>
Directors	<ul> <li>reviews summary reports on ris internal control procedures, an</li> </ul>
	• ensures the RMICS operation;
Sole Executive Body	<ul> <li>reviews information on the criti ment activities, provides recom ing of the risk management act necessary;</li> </ul>
	• approves threshold levels and

the overall branch structure of Mosenergo PJSC (Minutes No. 80 of March 23, 2020).

The Department of Risk and Internal Control Management is subjected to the deputy director-general - the efficiency and control director, which helps to separate the activities of this department from the activities of units that perform risk management as part of their operations, and the activities that are associated with internal audit and the control-and-audit departments.

Mosenergo PJSC evaluates and monitors the efficiency of RMICS through self-assessment, internal and external audits. The self-assessment of RMICS efficiency is carried out by the risk owners and it is included in the annual report on the operation of RMICS during the reporting period. The internal assessment of RMICS efficiency is carried out by a Company unit responsible for the organization and performance of regular internal audits following the established procedures.

#### Main functions

hal documents defining its policies on risk manincluding the principles and approaches to the evelopment of RMICS:

and threshold risk levels for the Company, n, operation, and efficiency issues, including the d self-assessment, and provides recommenda-MICS when necessary.

ciency of the RMICS operation;

and provides recommendations on the matters ce of the Company Board of Directors in the RMIC;

isks and internal control procedures, results of nd risk management efficiency assessments.

tical risks of the Company and the risk managenmendations on the improvement and monitorctivities and internal control procedures when

limits for the financial risks of the Company.

	<ul> <li>ensures the implementation of the resolutions taken by the Company Board of Directors concerning the organization of RMICS, supports the efficient opera- tion of RMICS in the Company's and its subsidiaries within the relevant scope of functions;</li> </ul>
The Managing	<ul> <li>determines the development areas for RMICS;</li> </ul>
Director	<ul> <li>approves the Company's local regulatory documents on risk management and internal control that are not subject to approval by the Company Board of Directors, including those on the assignment of Risk Owners (Co-owners) and Business Process Owners;</li> </ul>
	<ul> <li>approves the RMICS reports and performance benchmarks<sup>8</sup></li> </ul>
The collegiate body	<ul> <li>reviews and approves RMICS documents, annual RMICS operation reports, and quarterly risk management system monitoring results, as well as the maximum permissible risk levels, threshold risk levels, and limits for the specific risks at the Company.</li> </ul>
	<ul> <li>develops a single RMICS policy and coordinates the risk management and inter- nal control activities;</li> </ul>
	<ul> <li>prepares proposals on the maximum permissible risk levels, threshold risk levels, and the limits for specific risks;</li> </ul>
The RMIC RC	<ul> <li>provides methodological support for risk management and internal control activities and develops RMICS documents;</li> </ul>
	$\cdot$ verifies the organization of the internal control system in the Company units;
	<ul> <li>prepares consolidated RMICS reports and informs management bodies of the RMICS organization and operation.</li> </ul>
	<ul> <li>make decisions on risk management issues in their assigned functional areas of activity;</li> </ul>
Risk owners (co-owners)	<ul> <li>control the reliability and operations efficiency of RMICS within their scope of functions;</li> </ul>
	<ul> <li>monitor risk management activities and implement risk management cycle within the areas of activity they are responsible for.</li> </ul>
	• ensure the operation of RMICS within their business processes;
Business process owners	<ul> <li>ensure the integration of risk management processes and internal control pro- cedures in their business processes;</li> </ul>
	· develop the internal control procedures required to reduce the identified risks.

<sup>8</sup> These include a list of business processes of the Company and its subsidiaries, and a list of Company branches and subsidiaries for risk identification and assessment, as well as the identification of internal control procedures during the reporting period.

#### Key risk events in the reporting period

The map of critical risks and the action plan for critical risk management of Mosenergo PJSC for 2020 were reviewed in the reporting period by the Auditing Committee of the Mosenergo PJSC Board of Directors and the Board of Directors itself:

• The map of critical risks includes one risk event (the risk of equipment accidents);

#### Key risk events in the reporting period and their descriptions

Risk type	Risk description
	ustry risks
<ul> <li>The risk of electricity and heat sales marginal profit reduction (in the competitive sector). The following events are classified as related to this risk by the company:</li> <li>The risk of heat/electricity demand decrease (or of loss of a market share to competitors);</li> <li>DAM<sup>a</sup> price reduction risk below the business plan level.</li> </ul>	The net electricity and heat supply are affected by external factors (outdoor temperatures, electric power flow to the Moscow regions, etc) that may lead to the wipeout of more expensive TPP in the whole- sale, the reduction of electricity sales margins in the wholesale mar- ket, the reduction of heat sales.
The risk of company per- formance indicator deterio- ration due to the approval/ amendment of legal acts regulating the activities	The risk of company performance indicator deterioration due to the approval/amendment of legal acts regulating the activities of power industry players, including the rules

gulating the activities of power industry players, including the rules of the wholesale electricity and capacity market and the heating supply regulations

lustry players, including the rules of the wholesale electricity and capacity market and the heating supply regulations

#### associated with the supply/consumption of electricity to the amounts determined upon the results of the competitive selection of price bids for a day ahead.

Critical risk management in the reporting period followed the Critical Risk Management Action Plan.

The key risk events specified by the company as the most significant ones in the reporting period as well as their descriptions and response actions are presented in the table.

#### **Response** actions

- equipment configuration optimization;
- · redistribution of heat loads among sources;
- source efficiency improvement through switching the heat plant loads to the generation facilities;
- the optimization of the supply schedule depending on the emerging WECM prices at various times of the day;
- r- reducing the technological minimum (Pmin);
  - · the implementation of actions to improve the technical and economic parameters (TEP).
  - The monitoring of changes in the electricity and heating supply laws:
  - · Performing model calculations for the assessment of the impacts legislative initiatives have on the financial results of the Company.
  - Participating in the discussion of legislative projects among the industry-specific communities

<sup>9</sup> The day-ahead market (DAM) is a system of relationships between the wholesale market players and FSK within price zones of the wholesale electricity market

Risk type	Risk description	Response actions	Risł	k type	Risk description
<ul> <li>Technical production risks:</li> <li>Equipment accident risk;</li> <li>Heating supply accident risk;</li> <li>Process disruption risk;</li> <li>Off-schedule equipment repairs risk;</li> <li>Scheduled repair length/price increase risk;</li> <li>Risk of non-compliance with criteria when the generating equipment is used for RPFC<sup>10</sup> and GPFC<sup>11</sup>;</li> <li>Risk of available capacity decrease and the operation of inefficient equipment configuration</li> </ul>	The risks associated with off-sched- ule changes of the operating mode of the generating equipment, equipment failure, and the resulting disruptions in electricity and heating supply.	<ul> <li>The implementation of a repairs program, controlling the quality of its implementation;</li> <li>The implementation of an improvement program for the equipment operation reliability, the retrofitting and improvement program;</li> <li>The implementation of a program for pipeline replacement, continuous monitoring, and diagnostics of the heating system pipelines, as well as of the primary equipment of cogeneration units, boilers, and turbines;</li> <li>The signing of agreements with suppliers of materials and resources (MR) and the availability of specialized tools and spare parts for emergency repairs in company branches;</li> <li>The cooperation with MIPC PJSC to jointly prevent equipment deterioration;</li> <li>The maintenance of standard fuel reserves, the operability of the reserve and emergency fuel acceptance, storage, and transporting infrastructure, as well as the current needs in reagents, operating materials, and the conclusion of multiannual framework agreements for MR supply</li> <li>The timely performance of scheduled repairs and ensuring the quality control of repairs, the preservation of due operation of the equipment by the shift personnel, and timely performance of required expert evaluations, technical inspection, and equipment checkups;</li> <li>Maintaining and enhancing the qualifications of the personnel through seminars, continuing education courses, pre-examination training and knowledge tests, emergency response drills, simulation of occupational situations, communication of causes and prerequisites of accidents to employees held accountable for accidents, and the participation in corporate and all-Russian competitions for operating personnel;</li> <li>Ensuring the readiness of equipment and the required parameters to meet the requirements for the participation in RPFC/GPFC;</li> <li>when submitting price bids for AGECS<sup>10</sup>, DAM, and the real-time market, the Company takes into account the operation of the best equipment configuration at the optimal load and supports standard equ</li></ul>	<ul> <li>environmenta</li> <li>The risk of injuries;</li> <li>The risk of company if</li> <li>The risk of comply wi and prosp regulatory for indust fire safety protection</li> <li>The risks of comply wi and prosp latory requentionments</li> </ul>	ctivities in upational II as labor and al protection: f occupational f fires at the facilities; f failing to ith the existing pective (new) y requirements rial safety, y, and labor h; of failure to ith the existing pective regu- uirements for ental protection	The stability and efficiency of Mosenergo PJSC's operations de- pend on the labor protection, as well as industrial, fire, and environmental safety activities at the company.
		insurance			nication channels (TMiS) from the power Facility to MosRDU'

<sup>10</sup> rated primary frequency control

<sup>11</sup> General primary frequency control for the electric current

<sup>12</sup> active generating equipment configuration selection

- Regular technical audits to assess the industrial safety, labor protection, fire safety, and environmental protection systems at company facilities;
- Developing the standards of safe behavior of the personnel including the training on safe behavior and first aid skills at the corporate safety school, managers' auditing of employees' safe behavior, and the implementation of a labor protection risk management project;
- The organization of volunteer emergency response teams;
- Signing agreements for the servicing of dangerous production facilities with professional emergency response teams;
- The arrangement of properly equipped in-house fire depots at large power plants;
- Conducting investment in equipping fire alarm and protection systems in the buildings and structures;
- The attraction of specialized expert organizations to monitor the technical condition, inspect, perform technical evaluation, diagnostic and service-life assessment for the equipment, industrial safety assessment for the equipment, buildings, and structures at the dangerous production facilities;
- Personnel training and qualification improvement at study centers and TPP, training and testing the staff for the industrial, fire, power, and hydraulic structure safety;
- The timely updating of the action plans to prevent and eliminate emergencies, and the actions to localize and mitigate the consequences of accidents at dangerous production facilities;
- The use of an automated monitoring system for pollutant emissions;
- Conducting investments in noise reduction;
- The preferred use of natural gas over mazut and coal, and the introduction of more environmentally friendly production equipment;
- Auditing the management systems for industrial safety, labor protection, and environmental protection by independent expert organizations.

To ensure the fault-free operation of dispatcher communications at its power facilities, the Company maintains backup channels for the transmission of telemetric data.

Risk t	суре	Risk description	Response actions
	2. Fina	ancial risks	
Foreign exchan	ge risk:	Risk of adverse changes in the fair value of foreign currency-denom- inated liabilities due to changes in exchange rates; risk of changes in foreign currency-denominated costs due to the changes in exchange rates	foreign exchange risk assessment and monitoring the optimization of the Company currency portfolio and the cash flow planning to minimize the needs for loan raising
Loan risk/cons payment worth deterioration		The risk of the Company's losses due to the failure to perform, un- timely or incomplete performance of financial obligations towards the Company by its contractors (heat consumers, electricity, and capacity consumers)	monitoring the level of overdue accounts receivable Implementing actions intended to reduce the level of overdue accounts receivable the analysis of payment worthiness and financial stability of contractors the use of the loan risk reduction mechanisms (bank guarantees) in the procurement activities
	_		

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3. Risks associate	d with the	operations	s of Moser	nergo PJSC

The risk of the non-compli- ance of the available human resources with the autho- rized personnel size:	The lack of specialists with required qualifications in the labor market or the non-compliance of the Compa- ny's wages with the market may re- sult in insufficient personnel count, longer and more expensive training, longer recruitment, and higher per- sonnel motivation expenses incurred by the Company.	<ul> <li>The fulfillment of training and professional development pro- grams for the operating personnel;</li> <li>The preparation of the employee pool for the Production unit;</li> <li>The implementation of programs intended to improve personnel satisfaction;</li> <li>Monitoring market-wide wages.</li> </ul>
The risk of identified non-compliance with the legal requirements for civil defense (CD) and emergen- cy protection as a result of audits by regulatory authorities	Changes in the CD&EP laws or the Company's failure to comply with the CD&EP standards may result in inconsistencies identified during the regulators' audits	<ul> <li>Keeping the protective structures in compliance with the relevant laws;</li> <li>Performing a complex audit of CD protective structure.</li> </ul>
The risk of failure to cover the need in operating staff due to the spread of COVID	The key risk factor is the incidence of COVID cases at the Company branches	<ul> <li>Implementing the actions that aim to protect the health of the operating personnel and human resource pool establishment;</li> <li>Implementing the actions aiming to reduce the risk of the infection spread.</li> </ul>
The risk of the Company's failure to receive works, products, and services due to the increase in the prices for materials and components.	This risk is attributed to the growth of material and resource price re- sulting from the sharp fluctuations of the exchange rate, inflation in- crease, and other factors	<ul> <li>Negotiating with the suppliers;</li> <li>The establishment of a centralized minimum reserve stock of equipment;</li> <li>Signing long-term supply contracts with fixed prices;</li> </ul>

Risk type	Risk description	
Risks attributed to non- core/inefficient asset management	The following risks are associated with the Company's management of non-core assets:	•
	<ul> <li>The planned sales of non-core/ inefficient assets behind the schedule/at lower prices;</li> </ul>	
	<ul> <li>Reduced revenues from renting out non-core/inefficient assets;</li> </ul>	
	<ul> <li>Claims/sanctions upon the re- sults of audits from regulatory/ supervisory bodies in property management.</li> </ul>	
The risk of claims/sanctions from tax authorities	The Company fully complies with the tax legislation applied to its oper- ations. Yet, there is a potential risk of disagreement with the relevant regulators on some controversial issues.	
د ه 4. Lega	l risks	
The risk of the performance of a judicial act resulting in the emergence of liabilities for the Company	<ul> <li>The existing judicial practices for the insolvency officer disputes concerning the payments for resources, services, and works provided to the debtor that were</li> </ul>	

concerning the payments for resources, services, and works provided to the debtor that were effected by the debtor within 1 month before the court takes an insolvency decision and after that is as follows: the courts render these payment transactions invalid, which may result in the return of the received funds to the bankruptcy assets and the inclusion of this debt in the creditor list;

 The improper fulfillment of contractual provisions by the Company

#### Response actions

- The analysis of non-core assets to facilitate the prompt property right registration;
- Preparing and implementing sales programs for non-core assets.

- Monitoring the changes in the taxation laws, as well as judicial and administrative practices;
- Assessing the transactions to be implemented in terms of tax risk reduction;
- Improving the qualification of the employees dealing with tax computation and payments;
- Taking legal actions in case of additional tax and fee accrual after-tax audits
- The monitoring of federal executive authorities' review of the draft legislative initiative to amend the Federal Law on Insolvency (Bankruptcy) and the results of their public discussion;
- Making a conclusion concerning the causes of the Company's debt recovery/unreasonable gains/losses and providing suggestions to minimize the adverse effects in the future.

## Self-evaluation of the risk management and internal control system efficiency.

The risk owners performed a self-evaluation of the RMICS for 2020 using the approach approved in the Guidelines for the self-assessment of the efficiency of the risk management and internal control system (hereinafter referred to as the Guidelines): the self-assessment of RMICS efficiency comprises the self-assessment of the risk management system (RMS) efficiency and the self-assessment of the internal control system (ICS) efficiency.

According to the results of the RMICS self-assessment, the RMS development level as a whole ensures the efficient operation of the RMS (the 'good' rating) and the ICS development level partially ensures the accomplishment of the Company's goals in internal control ('satisfactory').

The results of the RMICS self-assessment were consolidated by the Department of Risk Management and Internal Control in the Report on the Company RMICS Performance in 2020 including the Company RMICS development areas for 2021.

The Company RMICS Performace Report for 2019 was considered at the meeting of the Company Board of Directors dated September 16, 2020 (extract from minutes No. 88 of the Board of Directors meeting dated September 21, 2020).

## Assurance of compliance of the company operations with the legal requirements for corruption control, unauthorized use of insider information, and market manipulation

## Mosenergo PJSC exercises internal control over legal compliance within the framework of the internal control system.

The primary local regulatory documents of Mosenergo PJSC developed according to the legal requirements and the best compliance practices:

- The provisions for the procurement of goods, works, and services by Mosenergo PJSC defining the uniform procurement rules and the procedures for goods, works, and services that ensure that there are no discrimination or unwarranted competition restrictions for procurement participants, allows for procurement transparency, targeted and cost-efficient use of monetary assets to procure goods, works, and services. Mosenergo PJSC approved procurement procedures to mitigate the risks of the Company procurement procedures being challenged by antimonopoly authorities
- The insider information access policy of Mosenergo PJSC defining the mechanisms of prevention, identification, and combating the organized trading abuse through the unlawful use of insider information or market manipulation. Mosenergo PJSC approved its list of insider information;
- The business ethics code establishing the most important business behavior rules for managers and employees used at Mosenergo PJSC and its subsidiaries that rule out conflicts of

46 OPERATING ACTIVITY

interest and corruption, as well as joint employment of relatives with direct or indirect subordination.

Mosenergo PJSC has some procedures in place to ensure compliance with the anti-corruption laws:

- The Company developed and adopted local regulations intended to make sure its operations are in good faith and prevent and settle conflicts of interests: the Contract Work Policy; the resolution on the Compliance with the Procedure for the Conclusion of the Transactions that Mosenergo PJSC is interested in; the Order on the Approval of Procurement Violation Significance Criteria; the Order on the Establishment of the Maximum Price of a Contract Concluded with a Sole Supplier (Executive, Contractor), and other documents;
- The Company cooperates with the law enforcement agencies and submits materials to them in due course if there are reasons to believe a Company employee or any other person committed actions associated with corruption that can be classified as a criminal offense;
- The Company's local regulatory documents define the departments and officers responsible for the prevention of corruption violations. The

action plans of corporate protection departments include anti-corruption activities;

- The Company approved the seal accounting policy to improve the seal use practices;
- The Company approved procedures and takes efforts to obtain the information about the chain of ownership, including beneficiaries (in-



cluding the ultimate one), and/or the composition of executive bodies of contractors.

The Company operates an anti-fraud, anticorruption, and anti-larceny hotline and continuously improves and develops its anti-corruption system



## ECOLOGY



4.1 Environmental policy
4.2 Environmental policy
3 Environmental projects

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49

**4.1 ENVIRONMENTAL POLICY** 

#### Mosenergo PJSC pays close attention to environmental protection issues.

In its activities, the company relies on its environmental policy, which reflects the basic principles and intentions of the Company in environmental protection.

The environmental policy is communicated to the Company personnel, new employees, as well as to the contracting organization staff. It serves as a reference for making management decisions and performing day-to-day operations.

Mosenergo PJSC has been certified for compliance with the international ISO 14001 standard for Environmental Management Systems (hereinafter – EMS) since 2006. It continues to maintain a high level of environmental protection activities and constantly improves its environmental management system. Mosenergo PJSC checks that its environmental management system complies with the standard every year.

The recertification EMS audit of Mosenergo PJSC is aimed to check the compliance with the requirements of the standard, and it was held on November 27-29, 2020 at the departments of the directorate general and four of the Company branches including TPP-8, TPP-11 n.a. M. Ya. Ufaev, TPP-16, and TPP-25.

The audit was performed by the ROSTEKHSERT LLC Auditing Company. Apart from the compliance analysis of the Mosenergo PJSC environmental management system with the ISO 14001:2015 standard requirements, the audit also aimed to check



whether the requirements of the Company's internal documents were fulfilled and identify the improvement opportunities. The goals of the audit were accomplished. The audit did not find any violations of the ISO 14001:2015 standard requirements at the Company EMS.

Mosenergo PJSC participates in various events dedicated to environmental protection issues, environmental safety assurance, and resolving the relevant issues of natural resource management. Besides, it organizes events to improve the environmental awareness of employees and the general public.

Mosenergo PJSC runs the Mosenergo history museum. The primary exhibitions are dedicated to the history of Mosenergo PJSC, its relations with the development of the city, as well as the heat and electricity generation technology. The museum has a special interactive stand dedicated to environmental protection issues that explains the different aspects of the environmental impact of TPP and describes the environmental protection activities that can reduce this impact.

In 2020, Mosenergo PJSC took part in the environmental information openness rating for power generating companies. It was the first year when Mosenergo PJSC participated in this rating.

The results were announced on December 22, 2020, and Mosenergo PJSC got second place.

### 4.2 ENVIRONMENTAL STATEMENT

#### Emissions

#### Pollutant emission dynamics at Mosenergo, thousands of tons

Name/year	2016	2017	2018	2019	2020
Total:	48.6	42.1	42.08	35.9	33.6
including:	40.0	42.1	42.00	55.9	55.0
Nitrogen oxides (NOx)	41.5	36.7	35.6	30.8	29.1
Sulfur oxides (SOx)	4.8	3.2	4.2	3.6	3.0
solids	0.9	0.8	0.5	0.1	0.2

Emission dynamics for the main pollutants:

- nitrogen oxide emissions decreased by 5.5% or 1.689 thousand tons and amounted to 29.121 thousand tons;
- sulfur dioxide emissions decreased by 16.7% or 0.605 thousand tons and amounted to 3.023 thousand tons;
- solid emissions increased by 82.8% or 0.106 thousand tons and amounted to 0.234 thousand tons.
- · Including:
- mazut ash emissions decreased by 23.1% or 0.003 thousand tons and amounted to 0.010 thousand tons;
- coal ash emissions increased by 6 times or 0.155 thousand tons and amounted to 0.186 thousand tons.

Over the 12 months of 2020, pollutant emissions by all of the Mosenergo PJSC facilities decreased by

The share of coal in the overall fuel mix of Mosenergo PJSC increased and amounted to 0.35% against 0.002% in the same period of the previous year. The share of liquid fuel decreased and amounted to 0.28% against 0.38% in the same period of the previous year. The sulfur content of coal decreased from 0.37% to 0.34%, and the ash content reduced from 19.37% to 16.67%. The sulfur content of mazut increased from 2.37% to 2.47%. The overall fuel consumption at Mosenergo PJSC in the reporting period reduced by 16.445 thousand toe or 6.6% compared to the same period of 2019, including:

- natural gas consumption reduced by1694 thousand toe or 6.8%;
- coal consumption increased by 79.7 thousand toe or 139 times;
- liquid fuel consumption reduced by 30.8 thousand toe or 32.2%, including:
- mazut consumption reduced by 30.4 thousand toe or 32.4%;
- diesel fuel consumption reduced by 0.5 thousand toe or 22.3%.

6.3% [2.276 thousand tons] compared to 2019 and amounted to 33.625 thousand tons

The emissions decrease is caused by the reduced fuel consumption. The decrease in nitrogen oxide emissions is caused by the reduced fuel consumption. The emissions of sulfur dioxide and mazut ash decreased due to reduced mazut consumption. Coal ash emissions increased due to the higher coal consumption. To prevent the excessive emission of pollutants, the Company installed an automated environmental monitoring system on the power plant boilers at its branches that allows for real-time monitoring of the pollutant concentrations in exhaust gases, as well as the prompt performance of actions to reduce emissions if necessary.

As a result, standard emissions for any of the pollutants were not exceeded on any of the boilers.

Following the existing laws, the Central Laboratory for Environmental Protection (CLEP) of the Department for Ecology at Mosenergo PJSC (accreditation record number ROOS RU.001.511836 in the register of accredited entities) performed the industrial environmental control for the pollutant emissions from boiler units and monitored the ambient air condition in the residential areas affected by TPS.

Following the approved work schedule for 2020, the CLEP took 471 measurements on the active TPS boiler equipment at all of the Mosenergo PJSC TPS, including 332 measurements on power boilers, 45 measurements on waste heat boilers, and 94 measurements on water boilers to determine the content of nitrogen oxide, nitrogen dioxide, and carbon oxide in the exhaust gases and control their temperature.

Apart from the content of pollutants, standard equipment like oxygen analyzers, gas analyzers for nitrogen oxides and carbon oxide, and exhaust gas thermocouples were tested.

In 2020, ambient air samples were taken in the areas affected by TPS including 2616 samples for nitrogen oxide; 2736 for nitrogen dioxide; 2664 for carbon oxide; 2736 for sulfur dioxide; and 288 for dust (suspended solids).

#### Greenhouse gas emission dynamics at Mosenergo, millions of tons

#### Name/year

#### Greenhouse gases

The actual greenhouse gas emissions in 2020 amounted to 37.1 million tons. The amount of greenhouse gas emissions ( $CO_2$  equivalent) in 2020 decreased by 6% compared to 2019 due to the reduced fuel consumption and energy efficiency improvement activities.

## Ambient air measurements taken to check the content of pollutants

## 11,040

A total of 11,040 ambient air measurements were taken to check the content of pollutants.

In 2020, a total of 428 measurements were taken at the operating DTS, BTS, MK, Mini TPS, and Energokompleks using the Testo portable gas analyzers (407 of those were taken on water and 21 on the steam boiler) to determine the content of nitrogen oxides and carbon oxide in the exhaust gases and their temperature using small digital thermometers.

Along with the changes in the content of pollutants in boiler exhaust gases, standard device readings were recorded. These included KGA-8S stationary gas analyzers, commercial gas flow meters, gas, and water consumption meters for boilers, and temperature sensors for gas, water, exhaust fumes, and the blasting air.

The industrial emissions and the quality of the ambient air in the residential areas near boiler plants were measured by contractors.

Along with the changes in the content of pollutants in boiler exhaust gases, standard device readings were recorded. These included KGA-8S stationary gas analyzers, commercial gas flow meters, gas, and water consumption meters for boilers, and temperature sensors for gas, water, exhaust fumes, and the blasting air.

2016	2017	2018	2019	2020
42.0	40.2	40.9	39.6	37.1

The amount of greenhouse gas emissions (CO<sub>2</sub> equivalent) in 2020 decreased by



#### Water consumption

#### Water intake at Mosenergo, millions of cubic meters per year

	2016	2017	2018	2019	2020
Water intake, including:	509.1	433.1	393.4	402.33	412.76
from surface water bodies	455.0	383.2	343.5	352	363.04
from the industrial water supply system	45.8	42.0	42.5	43.1	42.23
from the urban water supply system	8.2	7.8	7.3	7.1	7.38
from underground sources	0.126	0.123	0.130	0.13	0.11

Water consumption increased due to the increased river water intake at TPP-12 taking into account the active equipment.

Water discharge to water bodies at Mosenergo, millions of cubic meters per year

	2016	2017	2018	2019	2020
Total	329.9	295.1	255.7	280.7	271.8
Partially clean water	297.2	264.8	227.7	241.9	234.9

The water body discharge amounts were reduced due to the decreased feed water consumption at TPP-9 with a direct cooling system.

and power boilers, evaporation, drop priming and blasting in circulation cooling systems with cooling towers, and the fact that at some of the TPS, water is discharged to the water grid and Mosvodostok.

The difference between the water intake and discharge to the surface water bodies is explained by the water supply to the heating grid (MIPC)

Waste generation data

#### Waste generation data, thousands of tons

	2016	2017	2018	2019	2020
Waste generation	145.7	122.6	78.7	28.18	34, 6
Including ash and slag waste (ASW)	126.5	87.5	50.0	0.14	17, 2

Over the 12 months of 2020, the output of ash and slag increased due to the higher coal consumption. Waste storage at the Company WDS facilities increased compared to 2019 due to the higher coal consumption.



The limits for the wastes sent to the landfill were not exceeded in the reporting period

## **4.3 ENVIRONMENTAL PROJECTS**

#### Environmental protection activities

#### Expenditures on environmental protection pro

Non-capital activities (prime cost)

Non-capital activities (prime cost)

Investment activities including front-end engineering and design

#### Total

Among non-capital activities, there are works aiming to ensure compliance with the requirements of nature protection laws in terms of developing and obtaining permits and performing industrial inspections of the environmental impacts of Mosenergo PJSC's branches.



## In 2020, Mosenergo PJSC spent on environmental protection projects 759,679 billion rubles

ojects of	ts of Mosenergo, thousands of rubles <sup>1</sup>				
2016	2017	2018	2019	2020	
42,574	32,015	55,356	72,603	50,763	
35,441	41,046	62,129	59,759	55,887	
104,608	29,161	90,709	242,186	653,029	
182,623	102,222	208,194	374,548	759,679	

The capital activities include the replacement of boiler screens, convection heating surfaces, and burners, the installation and renovation of water metering devices, and the installation of noise suppression facilities.

5

## SOCIAL RESPONSIBILITY



5.1 Corporate culture	55
.2 Personnel size and structure	58
onnel training and development	60
Motivation and social programs	64
5.5 Labor protection	66

5.3 Pers

5.4

### 5.1 CORPORATE CULTURE

The goal of the human resource management policy of Mosenergo PJSC is to create an efficient human resource management mechanism, including through the developing and reinforcing of the corporate culture aimed at clear, open, and timely communication of the Company's activities to employees with the possibility of feedback.

Employees are informed about significant events through the primary communication channels, such as the corporate newspaper, Vesti Mosenergo, the intranet portal, official groups in social networks, bulk mailing, and corporate information stands.

To promote the involvement of young specialists, as well as their quick and efficient adaptation, the identification, and the most efficient utilization of creative and productive abilities, the Company has been running the Young Specialist Council (YSC) since 2016 to cover the following activities:







mass cultural events al

technical ideas and improvement suggestions social events

In 2020, the Young Specialist

Council held 20 different ZU events

In 2020, the Young Specialist Council held 20 different events; around 480 people took part in these events. The list of events included the Shrovetide festival in Morozovskaya hospital, a trip to the aviation museum to celebrate the 75th anniversary of the Victory in Europe, and the technical experience exchange conference with TGK-1 and OGK-2. Some of the events were held in the remote mode including the technical conferences of YSC, the participation in the Young Engineers of the FES conference, Remembering the Future, the cooking competition, the Skirmish Feedback may be provided through the 24/7 telephone hotline and the reserved e-mail address <u>vopros@mosenergo.ru</u>. Directors of all of the Mosenergo PJSC branches regularly organize information briefings.



of Wits: Mosenergo; the participation in the social innovation forum, and the annual conference of the Young Scientist and Specialist Council.

In 2020, Mosenergo PJSC's branches continued to organize the quarterly Best Employee contest. The best employee is the one who achieved the most significant and remarkable results that affected the Company's performance. The list of the contest winners and articles about the most outstanding of them are published in the corporate newspaper. Due to the pandemic in 2020, sporting events were shortened and some of them were held online. Mosenergo PJSC organized a Spartakiad for its branches comprising 4 sports out of 10: futsal, streetball, football, and chess.

The Company runs the Veteran Council to strengthen corporate culture traditions, organize patriotic education for young specialists, and ensure the generational bridge. In 2020, the Veteran Council held 5 events, including the ceremony of laying wreaths on the tomb of the unknown soldier involving the Mosenergo PJSC veterans, awarding industry veterans with medals and gift sets to celebrate the 100th anniversary of the GOELRO, and the participation in the celebration of the 90th anniversary of Mosenergo PJSC's TPP-8.

In 2020, the Company continued to congratulate the soldiers and home front workers of the Great Patriotic War. The Company's employees, Veteran Council, and Young Specialist Council took an active part in this event and personally congratulated 6 veterans and 88 home front workers.

In 2020, the Company worked to promote itself in the Russian market of employers:

- It created a mini career website on the hh.ru recruiting platform.
- Branded job vacancy forms were added to hh.ru.

- Two new recruitment sources were added: the Virtual Recruiter and the ClickMe targeted advertising.
- The Company held three interviews for the target audiences entitled Life in the Company.
- The Company participated in two of the key employer ratings for experienced candidates and students.
- The information about the Company and its vacancies was displayed in the key partner universities.
- The Company participated in the best socially-oriented power industry company contest organized by the Minenergo of Russia.
- The Company became a member of the Oil and Gas Industry Council under the Minenergo of Russia.
- The Company created a career guidance project to attract school children to the power industry

Due to its consistent and efficient use of personnel attraction instruments, Mosenergo PJSC was recognized as an HR Branding Expert by the largest Russian Internet recruiting company, which implies the high efficiency of its branding as an employer.



Employees are informed about significant events through the primary communication channels, such as the corporate newspaper, Vesti Mosenergo, the intranet portal, official groups in social networks, bulk mailing, and corporate information stands.

- To attract the personnel, the Company organized interviews with its employees:
- The interview with a power plant director is intended for the employees seeking rapid career growth.
- The interview with the personnel management department targets the office workers;
- The interviews with the branch employees are intended for the production personnel.





To promote the HR brand of the company and evaluate its attractiveness compared to the other companies in the labor market, the Company participated in the following:

The hh.ru rating of the best employers in Russia.

As a result, the Company was in the top 60 largest employers in Russia and took 34th place in the applicant poll.

The Future Today 2020 Target Audiences rating of the best employers in Russia for students.

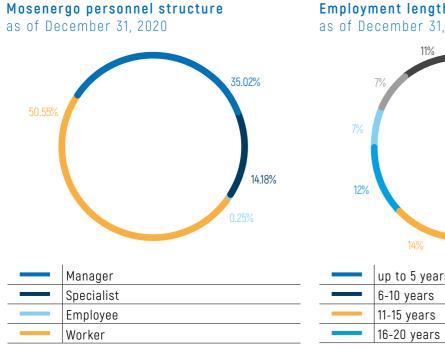
The Company got 12th place in 2020.

 The Best Socially-Oriented Power Industry Company Contest 2020

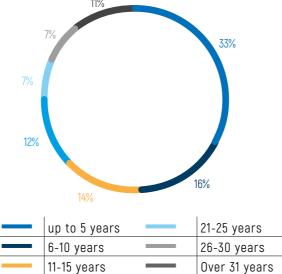
The Company received a certificate for the active implementation of the social policy.

### **5.2 PERSONNEL SIZE AND STRUCTURE**

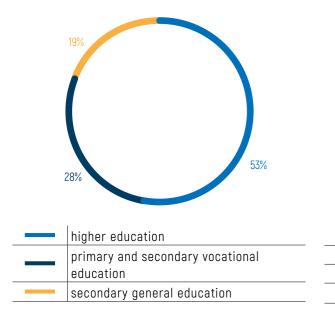
## As of December 31, 2020, the headcount of Mosenergo PJSC personnel totaled 8,152 people



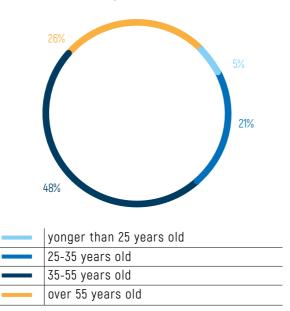
Employment length at Mosenergo as of December 31, 2020



Education levels of Mosenergo employees as of December 31, 2020

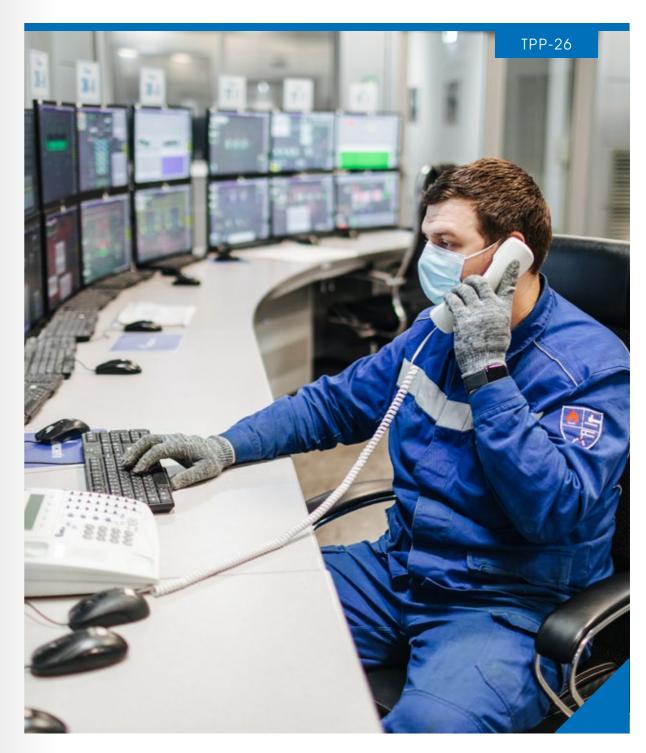


Age groups at Mosenergo as of December 31, 2020



#### Personnel turnover dynamics

- In 2020, the personnel turnover amounted to 6.27%. During this period, the Company:
- hired 1,079 people,
- discharged 957 people, including:



- 504 resigned employees,
- > 26 employees dismissed as a result of negotiations,
- > 10 employees made redundant as a result of headcount optimization,
- > 417 employees were discharged for other reasons

## 5.3 PERSONNEL TRAINING AND DEVELOPMENT

#### Mosenergo PJSC pays great attention to personnel development as required to achieve the Company goals and satisfy the mandatory requirements of the Russian laws.

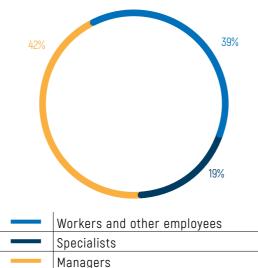
The corporate personnel development system features two primary aspects. Firstly, it ensures the compliance of personnel qualifications with the Company's current goals. Secondly, it helps to prepare human resources to implement the strategic plans of the Company, which involves the development of skills and competencies that can be required in the future.

In 2020, 6,855 employees completed training and off-the-job professional development courses following the established training frequency rates, and current and long-term development plans. This figure includes 2,707 workers and 4,148 managers and specialists. In 2020, due to the restrictions associated with the spread of the coronavirus, in-person training activities were transferred to the remote mode using computer technologies. The remote learning system stipulates the possibility of taking the compulsory training, as well as personal and professional competence development courses in the remote mode. In 2020, the employees of Mosenergo PJSC completed over 15,000 electronic courses.

## Personnel training Mosenergo PJSC in 2020

In 2020, the employees of Mosenergo completed

## >15,000 electronic courses





The Company workers, specialists, and managers receive training at the corporate Training Center that develops and teaches targeted personnel training programs in the key areas of the Company's activities.

The operating personnel of Mosenergo PJSC undergoes simulation training at the Training Center simulation center. In 2020, 656 operating employees underwent simulation training.

Within the Safe Behavior Project for the employees of Mosenergo PJSC, 879 employees completed the Safety Energy course and 515 employees completed the Job-Order/Permit-to-Work System course at the Corporate Safety School.

The knowledge of the employees is tested by the Central Permanent Commission of the Company. In 2020, there were 44 meetings of the CPCC, and 106 people underwent testing.

The industrial safety testing is held at the Central Testing Commission of Mosenergo PJSC based on the Uniform Testing Portal of Rostechnadzor. In 2020, there were 14 meetings of CTC, and 698 people underwent testing (1,379 permits were received).

The Company employs the approved professional standards. The experts of Mosenergo PJSC were included in the workgroup of Gazprom Energoholding LLC to collaborate with the All-Russian Trade Association of Power Suppliers (RaPE Union) and develop professional standards for chemical analysts and water conditioning specialists at thermal power stations. The draft professional standards were developed in 2019, approved by the Council for Professional Qualifications in the Power Industry, and transferred to the Russian Ministry of Labor for further consideration.

The number of employed professional standards is 27; 6 of them are mandatory and 21 are non-mandatory.

The scope of mandatory professional standards covers 245 people.

The scope of non-mandatory professional standards covers 3,298 people.

In 2020, 5 employees completed vocational or further education or professional training courses to ensure their compliance with the requirements to the education and training specified by mandatory professional standards. In 2020, the Company developed and updated education programs following the requirements of professional standards:

- · 12 programs for mandatory standards;
- · 54 programs for non-mandatory standards;

To improve the professional qualification of the operating personnel at TPS, the Company organized competitions for the operating personnel of the block-type TPS of Gazprom Energoholding LLC Group, in which the TPP-26 team got 1st place and the TPP-23 team got the 2nd place.

The cross-connection TPS operating personnel at specific power plants and between them, as well as the competitions of repairs staff were canceled due to the current restrictions due to the coronavirus.

To develop collaboration with universities and colleges, Mosenergo PJSC cooperates with the following institutions:

- the National Research University (NRU) "MPEI" (Federal State Budgetary Education Institution of Higher Education (FSBEI of HE)),
- the branch of the NRU "MPEI" (FSBEI of HE) in Konakovo,
- the Shatura Power Energy College (State Budgetary Vocational Education Institution (SBVEI) of the Moscow Region (MR)),
- Lenin Ivanovo State Power Engineering University (FSBEI of HE),
- the Ivanovo Power Energy College (Regional State Budgetary Vocational Education Institution),
- the branch of the Dubna University (State Budgetary Education Institution of HE of the MR)-the Lytkarino Technology and Humanities College,
- and the Railway and Urban Transport College (SBVEI) in the following areas:
- the Moscow State College of Electrical Engineering and Information Technology (SBVEI)
- RUDN University
- the RANEPA Presidential College of Multilevel Professional Education



In 2020, 10 students completed applied bachelor's studies in Thermal Energy and Engineering at the NRU MPEI and 11 students in Power and Electrical Engineering. In 2020, 16 of the NRU MPEI students entered into a sponsorship agreement with Mosenergo PJSC.

In 2020, 276 students completed internships at the Company, including 230 formally employed students.

A total of 5 Company employees are obtaining their first high education degree at NRU MPEI.

In 2020, 105 of the Company employees completed training and career transition training.

In 2020, 25 people took part in the Engineering Case-Solving Championship including 22 young specialists from the Company and 3 students.

In the 2020 corporate professionalism contests, 5 of the Company employees won the Best Professional awards, and 1 employee participated in the Best Young Rationalizers of Gazprom PJSC.

In 2020, 27 people took part in the My Idea - My Career contest. 6 people won this contest. 17 out of 23 projects were approved for implementation.

In November 2020, 6 of the Company employees took part in the IX Contest for the Young Specialists and Rationalizers of Gazprom Energoholding LLC. In this contest, 3 of the Company works won in special categories: For Developing a Relevant Solution for the Pandemic, For the Calculation of the Economic Effect, For the Attention to the Environment.

In 2020, 10 of the Company employees took part in the corporate activities of the Gazprom Energoholding Group for personnel training and development.

Following individual development plans, some training sessions and seminars were held in 2020 for those in the managerial candidate pool. In 2020, the 7-Module Candidate Pool Development Program was implemented. It comprises the following modules: Strategic Management, Process Management, Efficient Manager, Team Efficiency, Leadership, Finance Management, Personal Efficiency, and Self-Management. A total of 5 Program participants accomplished their goals (got raised).

Following the resolution of the Response Center for the Prevention of Virus Spread, a candidate pool was established to substitute operating staff



development.



members in case of COVID incidence. To prepare for the substitution of positions, a pool of 4,728 substitute employees (hereinafter referred to as substitutes) was establishes, and 4,630 of the substitutes underwent training (or they do not require extra training). During the implementation of the substitute training program, 421 more substitutes were found and trained since July 2020, including 397 of them who already had the required education. The share of trained substitutes was 98%.

In 2020, some actions were performed concerning the development of remote courses (4 courses for blue-collar jobs, adaptation training), study film shooting (4 study films for blue-collar jobs), the introduction of an electronic library, and the establishment of the internal mentorship as part of the development strategy for the education system.

MOSENERGO | ANNUAL REPORT 2020 63

## 5.4 MOTIVATION AND SOCIAL PROGRAMS

The motivation system for the employees of Mosenergo PJSC is based on key performance indicators and helps attract and retain qualified personnel through offering competitive financial remuneration.

The Company implemented the annual indexation of wages by 3% for all of its employees.

Social benefits for the personnel is one of the sustainable development tools promoting Mosenergo PJSC as a reliable and responsible employer and partner. Social payments are made according to the collective bargaining agreement and the Company's local regulatory documents.

#### In 2020, a total of

# 232 million rubles

were paid to the Company employees as social benefits

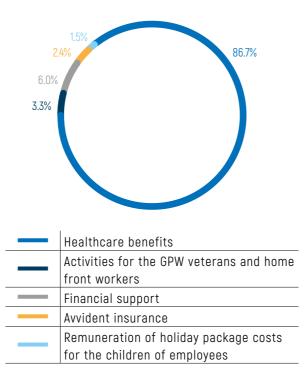
#### Remuneration of holiday package costs for the children of the Mosenergo PJSC employees.

In 2020, 70 employees of Mosenergo PJSC were remunerated for purchasing a total of 81 holiday trips to recreation camps for their children.

## $70_{\text{employees}}$

Remunerated for purchasing a total of 81 holiday trips to recreation camps for their children

## Social benefits for the employees of Mosenergo



#### Voluntary health insurance for the employees of Mosenergo PJSC.

In 2020, 7,911 employees of Mosenergo PJSC were provided with voluntary health insurance

7,911 employees

Provided with voluntary health insurance

# Activities with the GPW veterans and home front workers.

In 2020, Mosenergo PJSC provided financial support to 43 veterans and 236 home front workers of the Great Patriotic War to the amount of 7,620 thousand rubles.

#### **Trade union**

In 2020, the Company held a range of fitness and health and mass culture events together with the trade union. These events include power plant anniversaries (TPP-8, TPP-17, TPP-22), the Mosenergo Spartakiad, the Mosenergo Health Day, events for young specialists, events organized by the Veteran Council, and the Victory Day (May 9th). The associated expenses amounted to over 30 million rubles.



## The non-financial motivation of employees.

In 2020, 891 of the Mosenergo PJSC employees received Honorary Certificates and Commendation Letters from the Minenergo, Gazprom, GEH, Mosenergo, DZhKH, and Rostechnadzor, 324 commemorative medals were bestowed on the Company employees, as well as 5 medals to GEH employees and 171 medals to Mosenergo PJSC veterans to celebrate of the 100th anniversary of GOELRO, and 433 employees received medals in recognition of their long-term employment with Mosenergo PJSC.

The Company pays considerable attention to the non-financial motivation of its personnel intended to improve personal performance and promote good production performance. Commendation for state, ministerial, and industry awards is an efficient tool of moral motivation for the Company employees.

## 5.5 LABOR PROTECTION

In 2020, the Company spent a total



to finance the activities aiming at the improvement of labor conditions and labor protection, as well as the prevention of occupational diseases. This figure corresponds with 0.2% of the generation expenses.

#### Labor protection expenses in 2020, thousands of rubles

Expenditure type	2019	2020
Voluntary health insurance, milk provision	201,719	212,099
Special workplace assessment, production control, labor protection training	3,799	2,915
Operation of health centers, medical checkups	77,455	75,352
Provision of protective gear (personal protective equipment. collective protective equipment, etc.), uniform washing, and repairs	161,727	157,747
Indoor and outdoor cleaning	288,161	326,846
TOTAL:	732,861	774,959

## Availability of labor protection and industrial safety services and specialists in Executive Offices and at the Company power plants (branches).

The labor protection and production system audit department employs 28 people. Each power plant (branch) is supervised by one of the 15 chief officers for labor protection.



## State of mandatory preliminary, regular, and extraordinary medical checkups (examinations).

The Company performs mandatory preliminary, regular, and extraordinary medical checkups (examinations) in compliance with the requirements of Article 213 of the Labor Code (LC) of the Russian Federation, Order No. 302n of the Ministry of Health and Social Development of Russia on the Approval of Lists of Harmful and/or Dangerous Production Factors and Works Requiring Preliminary and Regular Medical Checkups (Examinations), and the Procedures for Mandatory Preliminary and Regular Medical Checkups (Examinations) of Employees Engaged in Physically

#### Special Assessment of Labor Conditions.

In 2020, Mosenergo PJSC performed a special assessment of labor conditions of 549 workplaces in compliance with Federal Law No. 426-FZ on the

## Providing employees with personal protective gear, uniforms, footwear, washing agents and/or detergents, healthy and dietary foods, milk, or other equivalent foodstuffs.

- The Company provides the employees with personal protective gear, uniforms, and footwear according to the standard guidelines for distribution of uniforms, safety footwear, and other personal protective equipment (PPE) (Order No. 340n of the Ministry of Health and Social Development of Russia dated April 25, 2011) and the Annex to the Collective Bargaining Agreement of Mosenergo PJSC. All the distributed PPE have certificates of compliance and are purchased from the leading Russian manufacturers. The Company organizes controlled washing of the employees' uniforms.
- The Company provides the employees with washing agents and detergents according to Order No. 1122n of the Ministry of Health and Social Development of the Russian Federation (Minzdravsotsrazvitiia of Russia) on the Approval of the Standard Guidelines for Free Distribution of Washing Agents and Detergents Among Employees dated December 17, 2010, the labor safety standard for the Provision of Employees with Washing Agents and/ or Detergents, and the Annex to the Collective Bargaining Agreement of Mosenergo PJSC.

Demanding Works or Works with Harmful and/or Dangerous Labor Conditions dated April 12, 2011.

Employees undergo mandatory preliminary checkups when they start working for the Company. Regular checkups are held following the lists of employees subject to regular checkups; these lists are submitted to the local offices of the Russian Federal Service for Surveillance on Consumer Rights Protection and Human Wellbeing (Rospotrebnadzor). The Company has a medical checkups agreement with SOGAZ-Medservice LLC.

Special Assessment of Labor Conditions dated December 28, 201x.

- The Company provides the employees with milk according to Article 222 of the LC of the RF and Order No. 45n of the Ministry of Health and Social Development of the Russian Federation (Minzdravsotsrazvitiia of Russia) on the Approval of Standards and Conditions for Free Distribution of Milk or Other Equivalent Foodstuffs Among Employees with Harmful Labor Conditions, the Procedure of Remuneration in the Amount Equivalent to the Cost of Milk or Other Equivalent Foodstuffs, and the List of Harmful Production Factors Which, When Present, May Require Preventive Consumption of Milk or Other Equivalent Foodstuffs dated February 16, 2009.
- In 2020, the employees of Company branches received milk supplied by Kompas Group Rus LLC under the relevant service agreement.

Welfare, medical, and preventive services for employees. Availability and equipment of welfare facilities, mess halls, medical aid rooms, and restrooms.

Following Article 223 of the labor code of the Russian Federation, each of the Company branches has welfare facilities (locker rooms, changing rooms, shower rooms, washrooms, restrooms, uniform storage, and distribution rooms), mess halls, medical aid rooms, and recreation rooms. All the facilities are cleaned and aired. Occupant space requirements are met in all of them. Departments also have medical aid posts with first aid kits and potable water dispensers.

#### Workplace briefings (introductory, initial, repeated, extraordinary).

The Company holds all kinds of workplace briefings (introductory, initial, repeated, extraordinary) following the requirements of the Russian Federation laws. The Company develops, approves, and upgrades briefing programs in a timely manner, and keeps duly executed briefing logs.

#### Accident analysis

2019	2020
1	2
1	2
0	0
0	0
0	0
0.07	0.14
	1 1 0 0 0

In 2020, there were 2 minor accidents at Mosenergo PJSC:

 On February 13, 2020, a TPP-11 employee went into a hospital because of the headache he had after he knocked his head on a pipeline while wearing a hard hat (no witnesses). After the investigation of this accident by the Company commission, no violations were found either by the employee or by the Mosenergo PJSC officials. On September 9, 2020, a TPP-25 employee got a workplace injury as a result of falling in the air-gas flow duct of power plant boiler No. 5. The employee performed the internal inspection to create a map of leaks to be repaired. According to the results of the investigation, the main cause of the accident is the improper organization of works by both the immediate manager and the injured employee. The persons responsible incurred the disciplinary liability, the personnel underwent an off-schedule training, and the Safety Hours event was held at all of the branches.

#### Investigations of workplace accidents (procedure and timeframe)

Mosenergo PJSC investigates workplace accidents in compliance with the requirements of Articles 227–231 of the Labor Code of the Russian Federation and Resolution No. 73 of the Ministry of Labor and Social Protection of the Russian Federation on the Approval of Forms of the Documents

#### Labor protection control measures

The Company regularly held Labor Protection Days and Safety Hours: a total of 135 Labor Protection Days and 480 Safety Hours were held across all the Company branches. Heads of specialists of the Directorate General were involved in the work of commissions at TPP. In the second quarter of 2020, all the mass events at the branches were canceled due to the COVID pandemic.

In 2020, a total of 52 labor protection audits were conducted at the departments of the Company branches. In the second quarter of 2020, branch audits were not held due to the COVID pandemic and the restrictions concerning the visits to the power stations.

Mosenergo PJSC implemented labor protection control activities required by contracting organizations when working at the Company facilities that helped identify and correct around 6000 violations. The Company ensures strict inspections of capital construction sites.

In 2020, the Company identified over 12,000 risks and mitigated about 6,000 of them owing to its system of labor protection and fire safety risk



<sup>13</sup> The frequency factor (FF) is the number of injured people per million of hours worked throughout the company (according to the timekeeping data).

identification, assessment, and elimination. For the risks that remained active, temporary measures were taken to reduce the severity and probability of exposure to hazardous factors.

The Company developed and implemented the Behavioral Safety Auditing (BSA) standard as part of the project intended to develop safe behavior among the employees to achieve the strategic goal of zero injuries. More than 800 employees of Mosenergo PJSC and contracting organizations completed BSA training, including heads of heating plants, employees of the Directorate General, and representatives of the TER LLC management. In 2020, the trained personnel members performed about 10,000 behavioral audits, identified and corrected more than 13,000 dangerous conditions and actions of employees of the Company's branches and contracting organizations as a result of these audits. Besides, managers of various levels conducted over 8000 BSA to prevent the spread of the coronavirus.

The Company operates permanent Labor Protection Committee and Branch Labor Protection Commission.

# CORPORATE GOVERNANCE



6.1 Memorandum	of intent of Gazprom PJSC towards controlled companies:	
	Mosenergo PJSC, MIPC PJSC, OGK-2 PJSC, and TGK-1 PJSC	

6.2 Underlying principles

71

71

73

74

84

84

84

- 6.3 General Meeting of Shareholders
- 6.4 General Meeting of Shareholders
  - 6.5 Executive bodies
  - 6.6 Audit Commission
    - 6.7 Remuneration

## 6.1 MEMORANDUM OF INTENT OF GAZPROM PJSC TOWARDS CONTROLLED COMPANIES: MOSENERGO PJSC, MIPC PJSC, OGK-2 PJSC, AND TGK-1 PJSC



The electric power industry is a strategic area of the Gazprom Group activities. Over the last 10 years, JSC Gazprom established Russia's largest vertically-integrated electricity holding to unite assets in the production of electricity, and heat, transmission, and sale of heat, as well as in related segments.

Its power engineering assets are consolidated in a 100% subsidiary company

Gazprom Energoholding LLC, which holds control stocks of Mosenergo PJSC, TGK-1 PJSC, and MIPC PJSC-the single heat supply organization in Moscow. The control stock of OGK-2 PJSC is held by Tsentrenergoholding PJSC, a subsidiary of Gazprom Energoholding LLC.

Mosenergo PJSC, TGK-1 PJSC, OGK-2 PJSC, and MIPC PJSC are an inherent part of the Gazprom Group's business. Disposal of these assets is not considered.

## 6.2 UNDERLYING PRINCIPLES

The Company's corporate governance is based on the legislative guidelines of the Russian Federation, the Company's Articles of Association, and the Corporate Governance Code recommended by the Bank of Russia, as well as on the internationally established principles of corporate governance.

The underlying principles of corporate governance of the company are described in the Corporate Governance Code of Mosenergo PJSC.

The Company's corporate governance is based on the following:

• the accountability of the Company Board of Directors to its shareholders, as well as the accountability of the Company's executive bodies to its management bodies and a sense of trust in the relationships between all the corporate governance participants;

Gazprom PJSC considers the progressive development of these companies, stable growth of their financial indicators, and maintaining the reliability of power supply to consumers a top priority.

Gazprom PJSC manages these companies under uniform corporate standards, is aware of the importance of improving the corporate governance of the companies it controls and seeks to ensure the openness and transparency of their activities.

- the reliable and efficient accounting of title to shares, as well as the possibility of unrestricted and fast disposal of the stock owned by the shareholders and the possibility of efficient protection of infringed rights of shareholders;
- transparent operations, disclosure of accurate information on significant facts and data about the Company activities, the provision of the required access to information, as well as the maintenance of a reasonable balance between the Company's transparency and the pursuit of its commercial interests:

- the Company's social responsibility, including the adherence to quality standards and environmental safety regulations and the creation of the most progressive working conditions;
- the adherence to the ethical norms preventing the use of corporate opportunities by the Company employees to the detriment of both the Company and third parties including through the illegal use of confidential and insider information.

The strategy of Mosenergo PJSC to improve corporate governance mechanisms includes systematic updating of the Company's internal regulatory documents, development of activities of committees of the Company's Board of Directors, improvement of the quality of the materials prepared for meetings of the Board of Directors, including through preliminary discussion of the issues to be considered at meetings of the Board of Directors by committees and through interaction between the Company's divisions with shareholder representatives.

The Company's most important corporate governance objectives remain as follows:

- maintaining the balance of interests of all the Company shareholders as well as other persons interested in the sustainable development of the Company;
- maintaining the necessary level of transparency cy and publicity at the Company;
- organizing the work of the Board of Directors committees involving shareholder representatives, Company specialists, and independent experts;
- ensuring the participation of the Mosenergo PJSC in the management of its subsidiaries, the participation of the Company representatives in assemblies, meetings of executive bodies, and other corporate events of the Company's affiliates and subsidiaries, non-profit, and other organizations where the Company holds a share.

One of the priority objectives for Mosenergo PJSC intended to improve the general level of corpo-

rate governance is to introduce new electronic services for the shareholders.

Since 2019, the Company shareholders can connect to the Personal Shareholder Account for free. This service allows registered shareholders to obtain the following information online:

- · about the Company and its securities;
- about the corporate actions of the Company, including the information on the general meetings of shareholders;
- about the Company's dividend payment policy, procedure, and history;
- about the accounts in the Company shareholder register including personal details and account-based information on securities.

The Personal Shareholder Account also allows taking part in General Meetings of Shareholders remotely, as well as voting through an electronic ballot. A shareholder may connect to the service by using a confirmed account at the Public Services Portal without having to visit the registrar's office.

The information on the possibility to take part in a General Meeting remotely is communicated to the shareholders through a meeting notification specifying the website and listing the actions that a shareholder ought to do to take part in the meeting remotely.

By the end of 2020, 430 of the Company shareholders connected to the Personal Shareholder Account.

The Company's management bodies are the General Meeting of Shareholders and the Board of Directors. The managing organization, Gazprom Energoholding LLC, has been acting as the sole executive body of the Company since May 21, 2015, under the agreement with the Company. It deals with the management of the Company's current activities except those placed within the scope of functions of the General Meeting of Shareholders and the Board of Directors of the Company. The Articles of Association of Mosenergo PJSC do not stipulate a Collegial Executive Body. The Board of Internal Auditors of Mosenergo PJSC oversees the Company's financial and operating activities.

## 6.3 GENERAL MEETING OF SHAREHOLDERS

The General Meeting of Shareholders is the supreme governing body of Mosenergo PJSC that allows shareholders to exercise their right to participate in the management of the Company and obtain information about the Company activities, achievements, and plans.

The scope of functions of the General Meeting of Shareholders includes the most important issues of the Company's operations, such as amending and elaborating the Articles of Association and the internal documents regulating the activities of the Company bodies, changes in the authorized capital, reorganization of the Company, the election of members of the Board of Directors and the Board of Internal Auditors, approval of the Company auditor, profit distribution, dividend payment (declaration), etc. Besides, the General Meeting of Shareholders makes decisions concerning the authorization of transactions or subsequent approval of large transactions and the transactions that the Company is interested in when required by the laws of the Russian Federation.

The procedure for preparing for and holding the general meetings of shareholders complies with the laws of the Russian Federation and is defined by the Company's Articles of Association and the General Meetings of Shareholders Policy of Mosenergo PJSC, and it corresponds with the best corporate governance practices. The established procedure ensures equal treatment of all of the Company shareholders.

The General Meeting of Shareholders of Mosenergo PJSC dedicated to the results of the Company's operations in 2019 was held on June 24, 2020.

The amendments to the laws adopted due to the 2020 pandemic allowed for the first in-absentia Annual General Meeting of Shareholders. With a view to the current restrictions, shareholders were informed about the meeting in due time. The Company used the postal service to sent out voting ballots, as well as to collect and process them after the shareholders sent them back.

The average number of votes of the persons who took part in general meetings on various matters

amounted to around 90% of the total number of the Company's outstanding voting shares. This indicates the high activity of the shareholders and their interest in participating in the key corporate events.

The Personal Shareholder Account helped conduct the General Meeting of Shareholders remotely because it facilitates remote participation in the meetings and voting through electronic ballots.

At the meeting, the shareholders approved the annual report 2019 and financial statements of Mosenergo PJSC, as well as the distribution of the Company profits based on the 2019 results. The shareholders decided to pay the 2019 dividends on the common shares of the Company to the amount of 0.12075 rubles per one common registered share of the Company in cash within the timeframe set by the applicable laws.

The shareholders of Mosenergo PJSC also elected the new Board of Directors and Board of Internal Auditors of the Company, approved the Company auditor and adopted a resolution on the remuneration and reimbursement for the members of the Board of Directors.

The meeting approved the new versions of the General Meetings of Shareholders Policy of Mosenergo PJSC and the Regulations on the Director-General and decided to terminate the Regulations on the Internal Auditing Committee of Mosenergo PJSC and the Regulations on the Remunerations and Reimbursement for the Members of the Internal Auditing Committee. Besides, some issues related to the approval of the new version of the Mosenergo PJSC Articles of Association and the authorization of related-party transactions. However, no resolutions were taken on these matters because the required number of votes was not received.

## 6.4 BOARD OF DIRECTORS

The Board of Directors of Mosenergo PJSC is the Company management body that carries out general management of the Company activities other than those placed within the scope of functions of the General Meeting of Shareholders in compliance with the Federal Law on Joint-Stock Companies and the Articles of Association. The Board of Directors takes efforts to fulfill the Company goals and objectives stipulated in the Articles of Association.

The Board of Directors operates according to the Policy on the Board of Directors of Mosenergo PJSC approved by the General Meeting of Shareholders.

Following its scope of functions, the Board of Directors determines the Company's strategy, policy, and underlying principles of operations, including those for investment and borrowing activities, risk and property management, and other areas, and it also oversees their implementation. Furthermore, the Board of Directors oversees the Company's corporate governance practices and plays a key role in the significant corporate events of the Company.

The Board of Directors consists of 13 members elected at the General Meeting of Shareholders according to the Federal Law on Joint-Stock Companies and the Company Articles of Association.

Members of the Board of Directors of Mosenergo PJSC as of December 31, 2019.

## Members of the Board of Directors of Mosenergo PJSC as of December 31, 2019:

Alexander Aleksandrovich Butko Andrey Igorevich Dmitriyev Aleksandr Sergeyevich Ivannikov Konstantin Vasilyevich Komissarov Vitaly Anatolyevich Markelov (chairman) Elena Vladimirovna Mikhaylova Kirill Sergeyevich Purtov Alexander Andreyevich Solovyev Gennady Nikolayevich Sukhov Andrey Nikolayevich Tabelsky Denis Vladimirovich Fedorov Andrey Viktorovich Khorev Alexey Vladimirovich Chernikov

During the annual General Meeting of Shareholders that took place on June 24, 2020, the shareholders elected a new Board of Directors of the Company. Members of the newly elected Board of Directors of Mosenergo PJSC:

Alexander Aleksandrovich Butko Aleksandr Sergeyevich Ivannikov Konstantin Vasilyevich Komissarov Vitaly Anatolyevich Markelov (Chairman) Elena Vladimirovna Mikhaylova Kirill Sergeyevich Purtov Alexander Andreyevich Solovyev Gennady Nikolayevich Sukhov Andrey Nikolayevich Tabelsky Denis Vladimirovich Fedorov Andrey Viktorovich Khorev Pavel Olegovich Shatsky Alexey Vladimirovich Chernikov As a result of the vote at the Annual General Meeting of Shareholders, A.I. Dmitriev was dismissed as a member of the Board of Directors and replaced by P.O. Shatsky.

In 2020, the Board of Directors of Mosenergo PJSC met 15 times. The most important matters considered by the Board of Directors included the following:

- the approval of the Mosenergo PJSC performance and business plan implementation report for the 12 months of 2019;
- the approval of the Mosenergo PJSC business plan for 2020 and the approval of the corrected business plan 2020;
- the development of a procurement policy including the approval of a comprehensive annual procurement program of Mosenergo PJSC (stage 2) for 2020, and the approval of a comprehensive annual procurement program of Mosenergo PJSC for 2021 (high-priority procurements);
- the approval of the Insurance Coverage Program for 2021;
- matters of calling and preparing for the annual and extraordinary general meetings of shareholders of the Company;
- the formation of committees within the Company Board of Directors;

#### In 2020, the most important matters within the scope of functions of the Company Board of Directors were preliminarily reviewed by the committees of the Board of Directors. The Company's Board of Directors features four committees:

- Audit Committee;
- Strategy and Investment Committee;
- HR and Remunerations Committee;
- Reliability Committee.

The committees of the Mosenergo PJSC Board of Directors help it solve the problems within the scope of its functions efficiently.

- the establishment of the status of the members of the Company Board of Directors;
- the establishment of conditions for auditor employment and the approval of the auditor contract;
- the participation of the Company in other organizations;
- the approval of the Gazprom Energoholding LLC reports on the services rendered under the agreement to transfer the powers of the sole executive body of Mosenergo PJSC;
- the authorization of related-party transactions;
- the authorization of transactions for the alienation of the Company property;
- working with the accounts receivable of the Company;
- determining the Company position on the items of the agenda of the General Meetings of Mosenergo PJSC subsidiaries and affiliates;
- the approval of the work plan for the Mosenergo PJSC Internal Audit Department;
- the efficiency of the risk management and internal control system of Mosenergo PJSC in 2019;
- the approval of the Company business plan for 2021;
- the approval of the Mosenergo PJSC Exchange Bond Program and Catalog.

The committees operate following the regulations on committees approved by the Board of Directors. In their operations, the committees abide by the federal laws and other legal acts of the Russian Federation, the Company Articles of Association, the Regulation on the Company Board of Directors, and the resolutions of the Company Board of Directors.

#### Auditing Committee of the Board of Directors

The goal of the Committee is the development and provision of recommendations (conclusions) for the Board of Directors concerning auditing, internal control, and risk management at the Company.

In 2020, the Committee for the most part consisted of independent Company directors following the Moscow Exchange Listing Rules.

The Committee held 8 meetings and reviewed 16 issues in 2020. All of the meetings were held in absentia.

The Committee facilitated the efficient operation of the Board of Directors in terms of controlling the financial and business activities of the Company.

The most important issues reviewed by the Committee in the reporting period include the following:

1. The preliminary review of the Recommendations to the General Meeting of Company Shareholders concerning the approval of the annual accounting (financial) reports for 2019, which fall within the scope of function of the Board of Directors.

- 2. The preliminary review of the Recommendations to the General Meeting of Shareholders concerning the assignment of the Company Auditor, which falls within the scope of the Board of Directors.
- 3. The assessment of the auditor's report on the accounting (financial) reports of the Company in 2019 prepared according to the Russian Accounting Standards and the consolidated financial report of the Company for 2019 prepared following the International Reporting Standards of the Company, and the quality of auditing services.
- 4. The assessment of the auditor's report on the accounting (financial) reports of the Company in 2019 prepared according to the Russian Accounting Standards and the consolidated financial report of the Company for 2019 prepared following the International Reporting Standards of the Company, and the quality of auditing services.
- 5. The assessment of independence, integrity, and the lack of conflicts of interest with FBK LLC. the auditor of Mosenergo PJSC.

#### Strategy and Investment Committee of the Board of Directors

The goal of the Committee is the development and provision of recommendations (conclusions) for the Board of Directors and the executive bodies of the Company concerning the prioritized areas of activity, strategic goals, and the underlying principles of strategic development of the Company, and business planning.

The Committee held 4 meetings and reviewed 7 issues in 2020. All of the meetings were held in absentia.

The most important issues reviewed by the Committee in the reporting period include the following:

- 1. The recommendations for the Company Board of Directors on the approval of the Mosenergo PJSC business plan for 2020.
- 2. The preliminary review of the approval of the Mosenergo PJSC performance and business plan implementation report for the 12 months of 2019, which falls within the scope of functions of the Board of Directors.
- 3. The preliminary review of the approval of the corrected business plan of the Company for 2020, which falls within the scope of the Board of Directors.
- 4. The preliminary review of the approval of the Company business plan for 2021, which falls within the scope of functions of the Board of Directors.

#### Personnel and Remunerations Committee of the Board of Directors

The goal of the Personnel and Remunerations Committee is the development and provision of recommendations (conclusions) for the Board of Directors and the managing company of the Company concerning the areas of activity of the Board of Directors related to the personnel, social, and labor policies of the Company.

In 2020, the Committee for the most part consisted of independent Company directors following the Moscow Exchange Listing Rules.

The Committee held 5 meetings and reviewed 9 issues in 2020. All of the meetings were held in absentia.

The Committee facilitated the efficient operation of the Board of Directors in terms of controlling the Company operations related to the personnel, social, and labor policies.

The most important issues reviewed by the Committee in the reporting period include the following:

#### Reliability Committee of the Board of Directors

The goals of the Committee include the following:

- 1. Developing and giving recommendations (conclusions) to the Company Board of Directors on the following aspects of their activities:
- The expert assessment of investment programs and power facility repair plans and the analysis of their implementation in terms of complex reliability requirements;
- The assessment of adequacy and sufficiency of actions taken based on the results of investigations of accidents and large technological disturbances and controlling the implementation of these actions;
- The assessment of the activities of the Company engineering teams related to the follow:
- ensuring the integral operational reliability of the network and generating equipment and structures;

In the reporting year, the members of the Board of Directors did not conduct any transactions to acquire/alienate Company shares.

The Company granted no loans to the members of the Board of Directors in the reporting year.

No claims were put forward against the members of the Board of Directors related to their performance as the members of the Board of Directors in the reporting year.

- 1. The development of recommendations for the shareholders of Mosenergo PJSC related to the election of the Board of Directors of Mosenergo PISC.
- 2. The preliminary review of the approval of the Gazprom Energoholding LLC reports on the services rendered under the agreement to transfer the powers of the sole executive body of Mosenergo PJSC, which falls within the scope of functions of the Board of Directors.
- 3. The preliminary review of the approval of the Gazprom Energoholding LLC reports on the services rendered under the agreement to transfer the powers of the sole executive body of Mosenergo PJSC, which falls within the scope of functions of the Board of Directors.
- 4. The preliminary review of the approval of amendments made to the Collective Bargaining Agreement of Mosenergo PJSC, which falls within the scope of functions of the Board of Directors.

- maintaining the normal state of the key assets and informing about the forecast reliability risks for their operation.
- 2. Informing the Company Board of Directors about the state of the key assets at the power facilities of the Company.

The Committee held 3 meetings (one by personal attendance) and reviewed 29 issues in 2020.

The most important issues reviewed by the Committee in the reporting period include the followings:

- 1. The repairs program for 2020.
- 2. The investment program for 2020.
- 3. The implementation of the repairs and investment programs of the Company.
- 4. The analysis of accidents and the associated economic damages.

Mosenergo PJSC provides liability insurance for the members of the Company Board of Directors. Insurance is to compensate for any potential damage as a result of unwanted actions (omission) of insured persons while performing their functions. The insurance premium under the 2020 agreement is 3 million rubles and the insurance amount is 600 million rubles

#### Members of the Board of Direct<sup>14</sup>

The biographical information on the members of the Board of Directors of Mosenergo PJSC may also be found at the website of Mosenergo PJSC at <u>www.mosenergo.ru</u>

#### **Alexander Aleksandrovich Butko**

#### Member of the Board of Directors

Year of birth: 1964 Education: higher Primary employment data for the last 5 years: 2015 - 2015: Mezhregionenergostroy LLC, Chief Executive Officer. 2015- 2015: TSEI LLC, Chief Executive Officer. Since 2015: Mosenergo PJSC, Managing Director. Share in the issuer's authorized capital: zero. Share of the issuer's common stock: zero.

#### Aleksandr Sergeyevich Ivannikov

#### Member of the Board of Directors

Year of birth: 1966 Education: higher Primary employment data for the last 5 years: Since 2015: Gazprom PJSC, First Deputy Head of the Department for Finance and Economics, Head of Department. Share in the issuer's authorized capital: zero. Share of the issuer's common stock: zero.

#### Konstantin Vasilyevich Komissarov

Independent Member of the Board of Directors Year of birth: 1976 Education: higher Primary employment data for the last 5 years: 2015-2016: LOCKO-Bank (JSC) commercial bank, Advisor to the Chairman of the Board of Directors–Head of the Information Analysis Unit at the Department of Financial Markets. Since 2016: Investment Company REGION Joint-Stock Company, Deputy Chief Executive Officer for Market Investment. Share in the issuer's authorized capital: zero. Share of the issuer's common stock: zero.

#### Vitaly Anatolyevich Markelov

#### **Chairperson of the Board of Directors**

Year of birth: 1963 Education: higher Primary employment data for the last 5 years: Since 2015: Gazprom PJSC, Deputy Chairman of the Management Committee, member of the Management Committee. Share in the issuer's authorized capital: zero. Share of the issuer's common stock: zero. <sup>\*</sup> As of December 31, 2020.

#### Elena Vladimirovna Mikhaylova

Member of the Board of Directors Year of birth: 1977

Education: higher Primary employment data for the last 5 years: Since 2015: Gazprom PJSC, member of the Management Committee, Head of the Department. 2015- 2019: Gazprom Mezhregiongaz LLC, Deputy Chief Executive Officer for Corporate and Property Relations (part-time). Share in the issuer's authorized capital: zero. Share of the issuer's common stock: zero.

#### **Kirill Sergeyevich Purtov**

#### Member of the Board of Directors

Year of birth: 1979 Education: higher Primary employment data for the last 5 years: 2015-2020: Moscow City Municipal Property Department, Head of the Economy Department, Deputy Head of the Department, First Deputy Head of the Department. Since 2020: Moscow City Hall, Minister; Department of Economic Policies and Development of Moscow, Head.

Share in the issuer's authorized capital: zero. Share of the issuer's common stock: zero.

#### **Alexander Andreyevich Solovyev**

Member of the Board of Directors
Year of birth: 1984
Education: higher
Primary employment data for the last 5 years:
2015-2017: International Medical Cluster Fund, First Deputy Chief Executive Officer.
2017-2017: Mosremont State Unitary Enterprise of the City of Moscow, Deputy Chief Executive Officer.
2017-2019: Moscow Renovation Department, Deputy Head.
Since 2019: Moscow Department of Housing, Utilities, and Amenities, Head.
Share in the issuer's authorized capital: zero.
Share of the issuer's common stock: zero.

#### Gennady Nikolayevich Sukhov

Member of the Board of Directors Year of birth: 1961 Education: higher Primary employment data for the last 5 years: Since 2015: Gazprom PJSC, Deputy Head of the Department, member of the Management Committee, Department Head. Share in the issuer's authorized capital: zero. Share of the issuer's common stock: zero.

#### Andrey Nikolayevich Tabelsky

Member of the Board of Directors

Year of birth: 1985 Education: higher Primary employment data for the last 5 years: Since 2015: Gazprom PJSC, Deputy Head of the Department, member of the Management Committee, Department Head. Share in the issuer's authorized capital: zero. Share of the issuer's common stock: zero.

#### **Denis Vladimirovich Fedorov**

#### Member of the Board of Directors

Year of birth: 1978 Education: higher Primary employment data for the last 5 years: Since 2015: Gazprom PJSC, Head of the Department. Since 2015: Gazprom Energoholding LLC, Chief Executive Officer. Since 2015: Tsentrenergoholding PJSC, Chief Executive Officer. Share in the issuer's authorized capital, %: 0,046456%. Share of the issuer's common stock, %: 0,046456%.

#### **Andrey Viktorovich Khorev**

#### Independent Member of the Board of Directors

Year of birth: 1972 Education: higher Primary employment data for the last 5 years: Since 2018: TPS Group LLC, Advisor to the Chief Executive Officer. Since 2019: GPB Bank (JSC), Advisor to the Chairman of the Management Committee. Since 2019: RusKhimAlliance LLC, Deputy Chief Executive Officer. Share in the issuer's authorized capital: zero. Share of the issuer's common stock: zero.

#### **Alexey Vladimirovich Chernikov**

Independent Member of the Board of Directors Year of birth: 1990 Education: higher Primary employment data for the last 5 years: 2015-2017: Slavianskoe Zastole LLC, Chief Financial Officer. 2017-2017: ANCHOR FINTECH LLC, Senior Analyst. 2017-2018: EZSA JSC, First Deputy Chief Executive Officer. Since 2019: State Budgetary Enterprise (SBE) "Moscow Investment Agency", Deputy Investment Director

#### **Pavel Olegovich Shatsky**

#### Member of the Board of Directors

Year of birth: 1972 Education: higher Primary employment data for the last 5 years: Since 2015: Gazprom Energoholding LLC, First Deputy Director-General. Share in the issuer's authorized capital, %: 0.001132%. Share of the issuer's common stock, %: 0.001132%.

The Corporate Secretary of Mosenergo PJSC was appointed by a resolution of the Board of Directors of Mosenergo PJSC of September 30, 2016:

#### **Aleksey Mikhailovich Gusev**

#### Corporate Secretary, Mosenergo PJSC

Year of birth: 1980 Education: higher

Primary employment data for the last 5 years:

Since 2015: Gazprom Energoholding LLC, Deputy Department Head, Head of the Corporate Relations and Control Department-Corporate Secretary, Deputy Head of the Corporate Relations Department, Head of the Corporate Operations Department.

Deputy Director for Corporate and Property Matters-Department Head, Deputy Director for Legal and Corporate Operations.

Share in the issuer's authorized capital: zero Share of the issuer's common stock: zero



#### Committees of the Board of Directors

#### Audit Committee

Members of the Audit Committee approved by the Resolution of the Board of Directors of Mosenergo PJSC on July 21, 2020:

#### Chairman of the Committee:

Konstantin Vasilyevich Komissarov - Konstantin Vasilyevich Komissarov;

#### Members of the Committee:

Alexander Sergeyevich Ivannikov – a member of the Board of Directors of Mosenergo PJSC;

Andrey Viktorovich Khorey - a member of the Board of Directors of Mosenergo PJSC;

Alexey Vladimirovich Chernikov - a member of the Board of Directors of Mosenergo PJSC.

Active members of the Audit Committee until June 24, 2020: chairman - K. V. Komissarov, committee members: A. I. Dmitriev, A. S. Ivannikov, A. V. Khorev, A. V. Chernikov.

#### Strategy and investment committee

Members of the Committee approved by the Resolution of the Board of Directors of Mosenergo PJSC on July 21, 2020:

#### Chairman of the Committee:

Denis Vladimirovich Fedorov - a member of the Board of Directors of Mosenergo PJSC.

#### Members of the Committee:

Alexander Aleksandrovich Butko - a member of the Board of Directors of Mosenergo PJSC;

Valentin Borisovich Gryaznov - Advisor to the Department Head of Gazprom PJSC;

Elena Pavlovna Egorova - Deputy Managing Director - Director for Efficiency and Control of Mosenergo PISC:

Yevgeniy Nikolaevich Zemlyanoy - Deputy Director General for Economics and Finance, Gazprom Energoholding LLC;

Konstantin Vasilyevich Komissarov - a member of the Board of Directors of Mosenergo PJSC;

Irina Yurievna Korobkina - Deputy Department Head of Gazprom PJSC;

Irina Yurievna Korobkina - a member of the Board of Directors of Mosenergo PJSC.

Deputy Department Head of Gazprom PJSC: chairman - D. V. Fedorov, committee members: A. A. Butko, V. B. Gryaznov, A. I. Dmitriev, E. P. Egorova, E. N. Zemlyanov, K. V. Komissarov, I. Yu. Korobkina, P. O. Shatsky.

#### HR and Remuneration Committee

Members of the Committee approved by the Resolution of the Board of Directors on July 21, 2020:

#### Chairman of the Committee:

Pavel Olegovich Shats - a member of the Board of Directors of Mosenergo PJSC.

#### Members of the Committee:

Alexander Sergeyevich Ivannikov - a member of the Board of Directors of Mosenergo PJSC;

Konstantin Vasilyevich Komissarov - a member of the Board of Directors of Mosenergo PJSC;

Andrey Viktorovich Khorey – a member of the Board of Directors of Mosenergo PJSC;

Alexey Vladimirovich Chernikov - a member of the Board of Directors of Mosenergo PJSC.

Active members of the Audit Committee until June 24, 2020: : chairman - A. A. Butko, committee members: A. S. Ivannikov, K. V. Komissarov, A. V. Khorev, A. V. Chernikov.

82 CORPORATE GOVERNANCE

#### **Reliability Committee**

Members of the Committee approved by the Resolution of the Board of Directors on July 21, 2020:

#### Chairman of the Committee:

Mikhail Vladimirovich Fedorov – Director for Production, Gazprom Energoholding LLC.

#### Members of the Committee:

Andrey Viktorovich Kalashnikov - Deputy Director for Production - Head of Technical Services Department, Gazprom Energoholding LLC;

Sergey Nikolaevich Lenyov – Deputy Managing Director - Engineer-in-Chief of Mosenergo PJSC;

Roman Viktorovich Litvinov - Deputy Department Head at Gazprom PJSC;

Konstantin Vladimirovich Moskvin - Deputy Engineer-in-Chief - Head of the Equipment Management Department of Mosenergo PJSC;

Sergey Aleksandrovich Petelin - Deputy Director for Production - Head of the Production Department of Gazprom Energoholding LLC;

Mikhail Vladimirovich Sorokin - Department Head at Gazprom PJSC.

Active members of the Audit Committee until June 24, 2020: chairman - M. V. Fedorov, committee members: A. V. Kalashnikov, A. A. Kondratenko, S. N. Lenyov, R. V. Litvinov, K. V. Moskvin, S. A. Petelin, M.V. Sorokin

#### Participation in the Company Board of Directors meetings and the Board of Directors **Committees in 2020**

Full name	D	Board of irectors <sup>15</sup>	Audit Committee	Strategy and investment committee	HR and Remuneration Committee
A. A. Butko	15/15	100%		100%	100%
A. I. Dmitriev	8/8	100%	100%	100%	
A. S. Ivannikov	13/15	87%	63%		60%
K. V. Komissarov	15/15	100%	100%	100%	100%
V. A. Markelov	15/15	100%			
E. V. Mikhailova	15/15	100%			
K. S. Purtov	1/15	7%			
A. A. Solovyev	5/15	33%			
G. N. Sukhov	15/15	100%			
A. N. Tabelsky	10/15	67%			
D. V. Fedorov	15/15	100%		100%	
A. V. Khorev	15/15	100%	100%		100%
A. V. Khorev	7/7	100%		100%	100%
A. V. Chernikov	15/15	100%	100%		100%

15 The ratio of the number of meetings that a Director attended and the total number of meetings within the period the Director served on the Board of Directors and the respective committee

## 6.5 EXECUTIVE BODIES

Following the Resolution of the extraordinary General Meeting of Shareholders of Mosenergo PJSC dated May 20, 2015, the powers of the Company's sole executive body were transferred to the managing organization–Gazprom Energoholding Limited Liability Company (INN (Individual Taxpayer Identification Number) 7703323030, OGRN (Primary State Registration Number) 1037739465004).

The managing organization shall have rights and responsibilities to govern the Company under the law of the Russian Federation, the Company's Articles of Associations, and the agreement made with the Company. The managing organization shall be responsible for handling the Company's current operations except for the matters within the scope of functions of the General Meeting of Shareholders and the Company Board of Directors.

The share of Gazprom Energoholding LLC in the authorized capital of Mosenergo PJSC is 53.50%.

The share of the common stock of Mosenergo PJSC held by Gazprom Energoholding LLC is 53.50%.

## 6.6 AUDIT COMMISSION

The Internal Audit Commission consisting of 5 members is elected at the General Meeting of Shareholders to oversee the Company's financial and business operations.

The Company Audit Commission operates following the legislation of the Russian Federation and the Company Articles of Association.

The members of the Audit Commission were elected at the Annual General Meeting of Shareholders of Mosenergo PJSC on June 24, 2020:

- Anatoly Anatolyevich Kotlyar Department Office Head at Gazprom PJSC
- Vitaly Vyacheslavovich Kudryashov Deputy Director for Economics and Finance - Head of the

Treasury Department at Gazprom Energoholding LLC, Deputy Director-General for Economics and Finance of GEKh Finance LLC,

- Yury Andreevich Linovitsky Head of the Internal Audit Department of Gazprom Energoholding LLC for the Internal Audit project of Gazprom Personal LLC;
- Margarita Ivanovna Mironova First Deputy Head of the Management Committee Administration - Department Head at Gazprom PJSC;
- Marat Khasanovich Salekhov Deputy Department Head - Department Office Head at Gazprom PJSC.

## 6.7 REMUNERATION

Following the Company Articles of Association and the resolution of the General Meeting of Shareholders, members of the Company Board of Directors may be entitled to remuneration and/or reimbursement for the expenses incurred while performing functions of members of the Company's Board of Directors.

The amounts, types, and procedures for the remuneration and reimbursement payments to the members of the Board of Directors of Mosenergo PJSC are defined in the Policy on the Determination of the Amounts of Remuneration and Reimbursement for the Members of the Board of Directors of Mosenergo PJSC approved at the General Meeting of Shareholders on June 13, 2019. The members of the Board of Directors that cannot receive payments from commercial organizations according to the legislation of the Russian Federation are not remunerated.

Following the aforementioned Policy, the remuneration for the members of the Board of Directors consists of the base and additional payments.

The base part of the remuneration is paid to the members of the Company Board of Directors

for the attendance of the Board of Directors meetings. The amount of remuneration paid is equivalent to four minimum monthly remuneration rates for a first-grade employee set by the industry-wide tariff agreement of the power engineering sector of the Russian Federation as of the date of the meeting of the Company Board of Directors taking into account the indexation set by the said agreement. The payments are made quarterly depending on the results of the Board of Directors meetings held during the quarter at least 1 (one) month before the quarter ends.

The additional remuneration is paid to the members of the Company Board of Directors at the end of the financial year if the Company generates net profit. The decision to pay out the additional remuneration to the members of the Board of Directors is made by the General Meeting of Shareholders. The decision of the Company's General Meeting of Shareholders concerning the payment of the additional remuneration to the members of the Board of Directors shall determine the total amount of such remuneration. The total amount of the additional remuneration based on the Company's performance may not exceed five percent of the Company's net profit earned in the financial year when the current members of the Company Board of Directors were elected.

The additional remuneration based on the Company performance is not paid to the members of the Board of Directors who attended less than half of all the Board of Directors meetings (from the date of election until termination of appointment).

The total amount of remunerations paid to the members of the Board of Directors in 2020 amounted to 69,236,034.30 rubles, including the reimbursement for the participation in the executive body operations (35,296,722 rubles), wages (22,917,452.30 rubles), and bonuses (11,021,860 rubles).

The remuneration and reimbursement to the members of the Audit Commission of the Company are paid according to the Policy on the Payment of Remuneration and Reimbursement of the Members of the Audit Commission of Mosenergo PJSC approved at the General Meeting of Shareholders on June 10, 2015.

Following this Policy, the members of the Company Audit Commission receive a one-time payment for the participation in the inspection (audit) of the Company's financial and business operations to the amount equal to twenty-five minimum monthly remuneration rates of a first-grade employee set by the industry-wide tariff agreement of the power engineering sector of the Russian Federation for the period of inspection (audit) taking into account the indexation set by the said agreement. The members of the Company Audit Commission are reimbursed for the expenses incurred to attend the meetings of the Company Audit Commission and take part in the inspection according to the Company regulations on the reimbursement of business travel expenses in place at the time of such meetings or inspections

The amount of remuneration paid to the members of the Audit Commission for the participation in the operations of the body overseeing the Company's financial and business operations in 2020 totaled 936,477 rubles.

On June 24, 2020, the annual General Meeting of Shareholders decided to terminate the Policy on the Payment of Remuneration and Reimbursement to the Members of the Audit Commission. From that moment on, the decisions concerning the payment of remuneration and (or) reimbursement to the members of the Audit Commission shall be made by the General Meeting of the Company Shareholders according to the Articles of Association.

The remuneration for the managing company is defined by the contract to delegate the powers of the sole executive body of the Company to the managing company. In 2020, it amounted to 130,170,596.92 rubles. Besides, the VAT amounted to 26,034,119.39 rubles. Thus, the amount of remuneration including VAT amounted to 156,204,716.31 rubles.

# 7

# ADDITIONAL INFORMATION AND APPENDICES



- 7.1 Information policy
- 7.2 Mosenergo history
- 7.3 IFRS Financial Statements
  - 7.4 Glossary

87

88

96 98

99

7.5 Contact Information

## 7.1 INFORMATION POLICY

Mosenergo has an open information policy. The Company's operations are regulated by corporate governance principles, generally accepted in respected business, as well as by principles of social responsibility and a reliable partnership with government authorities.

Mosenergo's Information Policy aims to enable the prompt and comprehensive presentation of accurate information about the Company's activities, as well as to provide open access to such information to all stakeholders, such as shareholders, investors, government officials, the mass media etc.

In addition, Mosenergo participates in major industry exhibitions and conferences.

Mosenergo PJSC's PR projects regularly become winners of prestigious contests and prizes. Among the latest achievements of the company are victories in two categories of the All-Russian contest of media, press services of energy companies and regional administrations of MediaTEK-2020, and first place award of the XI Corporate Contest of Public Relations and Media Services of subsidiaries and organizations of PJSC Gazprom in the nomination "The Best Corporate Museum", five awards in four nominations of the competition of communication projects of the companies of the fuel and energy complex "Kon-TEKst-2020".



Mosenergo's official website (www.mosenergo. ru). In addition, Mosenergo participated in major industry exhibitions and conferences. Mosenergo's official website is the Company's key information resource. Since April 1, 2016, Mosenergo has moved to a new version of the official website in accordance with the uniform corporate identity of the PJSC Gazprom Group. This website provides full information about the Company's activities and allows Mosenergo to respond in a timely manner to inquiries submitted by shareholders, investors, government officials and the media. The site displays quarterly and annual reports for shareholders, quarterly issuer's reports, financial statements compliant with RAS and IFRS standards and information that may have a significant impact on the value of securities..

Mosenergo is also present on social media networks:

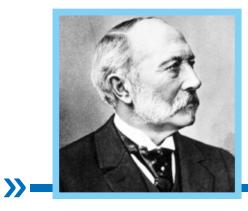
www.facebook.com/MosenergoNews/,
Instagram:

www.instagram.com/mosenergo.official,

VKontakte:

vk.com/mosenergo\_official.

## 7.2 MOSENERGO HISTORY



Joint Stock Company of Electric Lighting was founded in 1886 by Carl Siemens, a Saint-Petersburg merchant of the First Guild who was the Head of the Siemens & Halske Representative Office. The Company was founded in Saint-Petersburg; however, at its very first Board of Directors' meeting, a proposal was made to prepare grounds for the Company's operations in Moscow.



On July 31, 1887, the executive board of the "1886 Society" approved the Agreement to install electric lighting in the Postnikova Passage on Tverskaya Street in Moscow.

At the end of 1888, the Company successfully completed the construction of the first centralised power plant, with electric power supplied by the Georgievskaya power plant.



On November 28, 1897 the Company hosted a festive celebration for the opening of the Moscow Municipal Power Station (MMPS-1) Raushskaya (now SPP-1), and on February 15, 1907 the Company launched the second station - MMPS-2 Tramvaynaya.

Mosenergo's history is closely interrelated to the development of Russia's economics, society and culture.



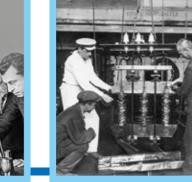
The next important stage of development for Moscow's electrical power grid was the decision to construct a large power plant fired with local fuel in the vicinity of Moscow. This decision was implemented by Robert Klasson, managing director of the Moscow Office of "1886 Company". The construction of the plant, which envisioned the use a new type of fuel, was a major project involving the development of new technologies and the creation of the entire peat extraction industry.



In 1912, the Company started building the world's first peat-fired district power plant in the Bogorodsk District. In April 1913, a new company, Moscow Joint Stock Company "Elektroperedacha", was founded to utilize the capacity generated by the new station. The plant itself began operations in 1914 and, in 1915, started to work in parallel with the Raushskaya station.



 $\mathbf{N}$ 



The management of state power stations was delegated to the Power Department of the Supreme Council of Public Property. At the same time, in December 1917, Ivan Radchenko and Alexander Vinter proposed further developments of the Moscow power industry. These proposals became the basis for the first State Plan for the Electrification of the whole country, GOELRO.

In December 1920, the GOELRO plan was ratified by the eighth All-Russia Soviet Congress. According to the plan. the volume of capacity of the Moscow power system was intended to increase almost four-fold within 10 to 15 years. The installed capacity was to increase from 93 thousand to 340 thousand kW.



Pursuant to the GOELRO plan, several stations were built in the Moscow Region, namely Kashirskava TPP (now TPP-4), Shaturskaya TPP (now TPP-5), Krasnopresnenskaya TPP (now a subsidiary of TPP-12), TPP-6 and TPP-8. One of the key events in this period was the completion of Russia's first 110 kV voltage power line between Kashira and Moscow, as well as a two-circuit ring of power lines and transformers around Moscow with a voltage of 115 kV.





In the 1930s, the workers of the Moscow power supply system, known until 1932 as MOGES (Unified Management of Power Plants of the Moscow Region), started operations to provide centralized district heating to the Soviet capital. In March 1931 the first heating mains from MMPS-1 was launched and a specialized enterprise for the maintenance and development of the Moscow district heating network was founded.

The start of World War II put the development of the power system on hold. Part of the equipment was destroyed. some was redeployed and the total capacity of Mosenergo dropped twofold. Nevertheless, Moscow power engineers managed to maintain a continuous supply of power to the city's defense facilities; they constructed high-voltage obstacles to defend against enemy troops and assembled power-generating trains for the liberated regions of the country. The restoration of the power industry started immediately after the successful counter-offensive campaign of the Soviet Army in the winter of 1941-1942. As early as 1945, Mosenergo had already managed to achieve a pre-war level of installed capacity.



Joint stock companies "Electric Lighting 1886 Company" and "Elektroperedacha" successfully operated until October 1917. After the October Revolution, the stations were nationalized and ceased operations under their previous ownership in December 1917.



In 1946, Mosenergo began to utilize a new type of fuel: SPP-1 started burning natural gas. In the same year, the Moscow power system was connected to the Ivanovo, Yaroslavl and Gorky power systems. In 1956, the first section of the Unified Power System in the European part of Russia was created with the introduction of high-voltage power lines from Kuibyshev to Moscow.



pean part of the country was created.

In 1950, TPP-17 was introduced in the city of Stupino near Moscow, in 1952 -TPP-20 in the south-west of Moscow, and in 1955 - TPP-16 in the northwest of the capital. In 1956, with the introduction of a high-voltage line from Kuibyshev to Moscow, the first link of the Unified Energy System of the Euro-



Within the Unified Power System framework in 1960, the country brought into operation the first units of TPP-22, and for the first time in the USSR a 1,000 mm-diameter heat pipeline was installed at TPP-11. On October, 22 1963 Mosenergo launched TPP-21, shortly followed by TPP-23, TPP-25 and TPP-26.

In the 1970s, Mosenergo successfully implemented 250-MW thermal power generating units with supercritical steam parameters. This kind of unit was first constructed at TPP-22 and became the base for other heat and power plants: TPP-21, 23, 25 and 26.



The development of the district heating system remained a pending issue for Mosenergo, especially during the mass construction of residential apartments in the city when district heating pipelines with the length of 20-30 kilometers and pipeline diameters of 1,200-1,400 mm started to be laid from the new, powerful TPPs. At the same time, intensive grid development was in progress with the extensive construction of 750 kV power transmission lines. The total length of the high voltage power transmission lines increased dramatically. Two high-voltage 220 kV rings were completed around Moscow, soon followed by 500 kV rings.







In 2005, Mosenergo developed and started the implementation of the Program for Development and Retrofitting, including the planning, construction and commissioning of new generating facilities on the sites of operational power plants in energy-deficient regions and heat and electricity demand nodes with developed infrastructure.

In 2007, Gazprom became a strategic investor in Mosenergo, consolidating a controlling stake (53.5% of the authorized capital) of the Company. The Moscow Government became the owner of the blocking stake (26.45%) in Mosenergo.

On November 22, 2007, less than two years after the start of construction, TPP-27 launched a combined cycle steam-gas power unit with an electric power rating of 450 MW and heat output of 300 Gcal. In June 2008, a unit of the same type was put into operation at TPP-21, and in December of the same year the Company installed yet another 450-MW steam-gas power unit at TPP-27.



On December 30, 1987, Mosenergo brought the first hydroelectric generating set of the Zagorsk Pumpedstorage HydroPlant into operation a unique power unit regulating peak loads in the grid system. In 1990, the Moscow Grid absorbed Ryazan TPP-24 and in 1992 it acquired TPP-28 in Moscow

In 1993, the production association, Mosenergo, was transformed into an open joint stock company





On June 30, 2011, a new 420-MWe combined-cycle power unit was put into operation at TPP-26. This unit has the highest efficiency rate among Russian power plants - up to 59%. The general contractorsin its construction were Alstom Consortium (France) and EMAlliance JSC.

In April 2014, a GTU-65 unit with an AE64.3A Ansaldo Energia gas turbine (Italy) was commissioned at TPP-9; and in December 2014, a SGU-420 steamgas unit was commissioned at TPP-16 (the manufacturer and the supplier of the basic equipment: Siemens (Germany)).





except for GRES-4, GRES5, GRES-24 and

Zagorskaya PSPP.

On April 1, 2005, during the reform of the Russian electric power industry, Mosenergo OJSC was divided into 14 independent companies by types of activity: generation, electricity transmission, sales, energy repair, etc. assets,



After the Moscow United Energy Company became part of the Gazprom Group in 2013, over 40 heat generating facilities of MOEK were transferred to Mosenergo. The total installed heat capacity of the connected boiler houses is almost 10 thousand Gcal / h - more than 20% of the total installed heat capacity of Mosenergo.







A new steam and gas power unit (SGU-220) was commissioned at TPP-12 of Mosenergo on May 1, 2015. The core equipment of the new power unit was made in Russia. The nominal power of the unit: 220 MW, the certified power at cogeneration: 211.6 MW, heat power: no less than 140 Gcal / h. After the SGU-220 was commissioned, the installed power of TPP-12 rose by more than . 50%.

On May 20, 2015, the extraordinary general shareholder's meeting of Mosenergo OJSC decided to transfer powers of the company's sole executive body to the managing organization: Gazprom Energoholding LLC. This decision was made to improve the management efficiency, avoid duplication of functions, and cut administrative expenses and other costs.

On December 22, 2015, two modern steam and gas power unit were commissioned at TPP-20 of Mosenergo in Moscow and the Serov SDPP of OGK-2 PJSC in the Sverdlovsk Region. President of the Russian Federation Vladimir Putin took part in the event through videoconference. The installed power of TPP-20 before the SGU-420 commissioning was 730 MW; heat power, 2,400 Gcal/h; after the unit was commissioned, the installed power increased to 1,148 MW, and the heat power, to 2,620 Gcal/h.

In January 2017, Mosenergo acquired 100% share in the authorized capital of Mosenergoproekt LLC, Russia's leading energy project institute, which had been belonging to the Company since 2010.

On February 10, 2017, the first heating turbine T-295 (manufactured by the Ural turbine factory) was presented to Mosenergo. The turbine is to be installed at the TPP-22, replacing T-250 that had been operating as a part of the energy unit No.9 and taken out of operation in 2016. The modernized energy unit No.9 of the TPP-22 is to be commissioned in 2021.



At the end of 2018, an extended inspection of the gas turbine hot section was carried out at the SGU-420 power unit of TPP-20 of Mosenergo. The power unit became a pilot project for the concept of flexible service intervals. thanks to the implementation of which the Company will be able to reduce the cost of servicing equipment and increase revenues from the supply of electricity and capacity.









On December 22, 2017, the new Museum of Mosenergo and Moscow Power Industry was opened.

MOSENERGO | ANNUAL REPORT 2020 93

## 7.3 IFRS FINANCIAL STATEMENTS

#### Consolidated statement of financial position (in millions of Russian ruble)

	31 December 2020	31 December 2019 (restated)	31 December 2018 (restated)
Assets			(,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
Non-current assets			
Property, plant and equipment	275 107	284 612	227 388
Investment property	1 449	1 803	1 548
Intangible assets	872	580	696
Investments in associates	23 617	22 700	-
Accounts receivable and prepayments	1 435	694	5 317
Deferred tax assets	-	-	-
Other financial assets	11 518	13 294	11 979
Other non-current assets	-	-	-
Total non-current assets	313 998	323 683	246 928
Current assets			
Inventories	16 100	15 617	13 815
Accounts receivable and prepayments	32 909	34 279	38 347
Income tax receivable	297	397	239
Cash and cash equivalents	7 679	11 658	16 220
Other financial assets	36 008	27 010	12 567
Other current assets	-	-	-
	92 993	88 961	81 188
Non-current assets held for sale	-	37	43
Total current assets	92 993	88 998	81 231
Total assets	406 991	412 681	328 159
Equity and liabilities			
Equity			
Share capital	166 124	166 124	166 124
Share premium	48 661	48 661	49 213
Treasury shares	-	-	(871)
Revaluation reserve	152 290	153 210	104 276
Accumulated loss and other reserves	(37 284)	(41 545)	(41 715)
Total equity	329 791	326 450	277 027
Non-current liabilities			
Borrowings	15 100	24 838	3 691
Provision for post-employment benefits	425	413	298
Accounts payable and other liabilities	834	1 019	286
Lease liabilities	4 899	5 438	195
Provisions	-	-	-
Deferred tax liabilities	35 454	37 529	28 951
Total non-current liabilities	56 712	69 237	33 421
Current liabilities	00712	00 207	00 121
Borrowings	11	1 125	1 293
Accounts payable and other liabilities	15 181	10 374	10 223
Income tax payable	956	649	82
Other taxes payable	2 471	1 959	2 535
Lease liabilities	403	361	2 555
Provisions	1 466	2 526	3 576
Total current liabilities	20 488	<u> </u>	<u> </u>
Total liabilities		86 231	51 132
Total equity and liabilities	406 991	412 681	328 159

#### Consolidated statement of comprehensive income (in millions of Russian ruble)

	2020	2019
Revenue	180 908	189 777
Operating expenses	(172 235)	(179 290)
Impairment loss on financial assets	(1 075)	(3 874)
Operating profit	7 598	6 613
Finance income	4 533	5 275
Finance expense	(2 875)	(1 053)
Share of profit (loss) of associates	917	(224
Loss on disposal of equity investments	(3)	
Profit before income tax	10 170	10 61
Income tax expense	(2 125)	(1 012
Profit for the period	8 045	9 59
Other comprehensive income:		
Items that will not be reclassified subsequently to profit or loss, net of tax:		
Remeasurement of post-employment benefit obligations	[1]	(62
Gain arising from change in fair value of financial assets measured at fair value through other comprehensive income	614	22
Impairment loss on property, plant and equipment	(533)	
Revaluation of property, plant and equipment	-	49 01
Effect of acquisition under common control	-	
Other income (loss)	-	
Total other comprehensive income that will not be reclassified to profit or loss	80	49 17 <sup>,</sup>
Other comprehensive income for the period	80	49 17
Comprehensive income for the period	8 125	58 77
Profit for the period attributable to:		
Owners of PJSC Mosenergo	8 045	9 59
Non-controlling interest	-	
Comprehensive income for the period attributable to:		
Owners of PJSC Mosenergo	8 125	58 77
Non-controlling interest	-	
Basic and diluted earnings per share attributable to the owners of PJSC Mosenergo (in Russian Rubles)	0,202	0,24

2020	2019
180 908	189 777
(172 235)	(179 290)
(1 075)	(3 874)
7 598	6 613
4 533	5 275
(2 875)	(1 053)
917	(224)
(3)	-
10 170	10 611
(2 125)	(1 012)
8 045	9 599

#### Year ended 31 December

#### MOSENERGO | ANNUAL REPORT 2020 95

## Consolidated statement of cash flows (in millions of Russian ruble)

	Year ende	d 31 December
	2020 2	2019 (restated)
Cash flows from operating activities		
Profit before income tax	10 170	10 611
Adjustments to profit before income tax		
Amortisation and depreciation	22 874	17 974
Impairment loss on financial assets	1 075	3 874
Impairment loss on non-financial assets	42	605
Change in fair value of non-financial assets	1 715	8 174
Change in provisions	307	358
Share of (profit) loss of associates	(917)	224
Loss on disposal of equity investments	3	-
Loss on disposal of property, plant and equipment and other assets	1 005	348
Finance income	(4 533)	(5 275)
Finance expense	2 875	1 053
Other non-cash items	-	-
Total effect of adjustments	24 446	27 335
Cash flows from operating activities	34 616	37 946
before working capital changes		
Working capital changes	(=)	()
Change in accounts receivable and prepayments	(3 908)	(103)
Change in inventories	(124)	(595)
Change in other current and non-current assets	-	-
Change in accounts payable and other liabilities	2 797	(539)
Change in other taxes payable	190	(714)
Change in provision for post-employment benefits	11	38
Total effect of working capital changes	(1 034)	(1 913)
Income tax paid	(3 990)	(5 388)
Interest paid	(1 676)	(698)
Net cash from operating activities Cash flows from investing activities	27 916	29 947
Acquisitions of property, plant and equipment and intangible assets	(15 883)	(15 890)
Proceeds from sale of property, plant and equipment and intaligible assets	(15 885) 392	253
Loans issued	(981)	(27 010)
	1 255	1 994
Repayment of loans issued	1 200	1 994
Interested paid and capitalised	- 7.025	-
Interest received	3 825	4 441
Dividends received	231	52
Acquisition of subsidiaries, net of cash acquired	-	-
Sale of subsidiaries and associates, net of cash disposed	-	997
Investment in associates	-	(22 700)
Disposal of associates	2 784	-
Acquisition of other financial assets	-	-
Disposal of other financial assets	-	-
Placement of short-term deposits	(15 900)	(13 300)
Repayment of short-term deposits	8 900	23 700
Net cash used in investing activities	(15 377)	(47 463)
		22 700
Cash flows from financing activities		
Cash flows from financing activities Proceeds from borrowings	(11 E20) -	
Cash flows from financing activities Proceeds from borrowings Repayment of borrowings	(11 529) (351)	(1 150)
Cash flows from financing activities Proceeds from borrowings Repayment of borrowings Repayment of lease liabilities	(351)	(1 150) (276)
Cash flows from financing activities Proceeds from borrowings Repayment of borrowings Repayment of lease liabilities Dividends paid	(351) (4 766)	(1 150) (276) (8 289)
Cash flows from financing activities Proceeds from borrowings Repayment of borrowings Repayment of lease liabilities Dividends paid Net cash used in financing activities	(351) (4 766) <b>(16 646)</b>	(1 150) (276) (8 289) <b>12 985</b>
Cash flows from financing activities         Proceeds from borrowings         Repayment of borrowings         Repayment of lease liabilities         Dividends paid         Net cash used in financing activities         Effect of foreign exchange rate changes on cash and cash equivalents	(351) (4 766) (16 646) 128	(1 150) (276) (8 289) <b>12 985</b> (31)
Cash flows from financing activities         Proceeds from borrowings         Repayment of borrowings         Repayment of lease liabilities         Dividends paid         Net cash used in financing activities         Effect of foreign exchange rate changes on cash and cash equivalents         Decrease in cash and cash equivalents	(351) (4 766) (16 646) 128 (3 979)	(1 150) (276) (8 289) <b>12 985</b> (31) <b>(4 562)</b>
Cash flows from financing activities         Proceeds from borrowings         Repayment of borrowings         Repayment of lease liabilities         Dividends paid         Net cash used in financing activities         Effect of foreign exchange rate changes on cash and cash equivalents	(351) (4 766) (16 646) 128	(1 150) (276) (8 289) <b>12 985</b> (31)

### Consolidated statement of changes in equity (in millions of Russian ruble)

	Equ	uity attributa	ble to the ov	wners of th	e PJSC Mosenergo	)
-	Share capital	Share premium	Treasury shares	Revalua- tion	Accumula- ted loss and other reserves	Tot
Balance as of 1 January 2019	166 124	49 213	(871)	104 276	(41 715)	277 02
Effect of changes in accounting policies	-	-	-	-	-	
Balance as of 1 January 2019	166 124	49 213	(871)	104 276	(41 715)	277 0
Profit for the period	-	-	-	-	9 599	9 5
Other comprehensive income (loss):						
Remeasurement of post-employment benefit obligations	-	-	-	-	(62)	(6
Gain arising from change in fair value of financial assets	-	-	-	-	224	2
measured at fair value through other comprehensive income						
Change in fair value of assets held for sale	-	-	-	-	-	
Change in fair value of investment property Impairment loss on property, plant and equipment	-	-	-	-	-	
Revaluation of property, plant and equipment	-	-	-	- 49 012	-	49 (
Transfers from revaluation surplus on property, plant and				(78)	- 78	43 (
equipment to accumulated loss and other reserves	-	-	-	(70)	70	
Other	-	-	-	-	-	
Comprehensive income for the period	-	-	_	48 934	9 839	58 7
Transactions with the owners of PJSC Mosenergo						
Shares issued	-	-	-	-	-	
Treasury shares	-	(552)	871	-	-	į
Share based payments	-	-	-	-	-	
Transaction costs	-	-	-	-	-	
Acquisition of subsidiaries	-	-	-	-	-	
Disposal of subsidiaries	-	-	-	-	-	
Change of controlling interest in subsidiaries	-	-	-	-	-	
Effect of acquisition under common control	-	-	-	-	(1 362)	(1 3)
Dividends declared	-	-	-	-	(8 307)	(8 30
Balance as of 31 December 2019	166 124	48 661	-	153 210	(41 545)	326 4
Balance as of 1 January 2020	166 124	48 661	-	153 210	(41 545)	326 4
Effect of changes in accounting policies	-	-	-	-	-	
Balance as of 1 January 2020	166 124	48 661	-	153 210	(41 545)	326 4
Profit for the period	-	-	-	-	8 045	8 (
Other comprehensive income (loss):					(1)	
Remeasurement of post-employment benefit obligations Gain arising from change in fair value of financial assets	-	-	-	-	(1) 614	1
measured at fair value through other comprehensive income	-	-	-	-	014	(
Change in fair value of assets held for sale	-	-	-	_	_	
Change in fair value of investment property	-	-	-	-	-	
Impairment loss on property, plant and equipment	-	-	-	(533)	-	(5
Revaluation of property, plant and equipment	-	-	-	-	-	(0)
Transfers from revaluation surplus on property, plant and	-	-	-	(387)	387	
equipment to accumulated loss and other reserves						
Other	-	-	-	-	-	
Comprehensive income (loss) for the period	-	-	-	(920)	9 045	8 ′
Transactions with the owners of PJSC Mosenergo						
Shares issued	-	-	-	-	-	
Treasury shares	-	-	-	-	-	
Share based payments	-	-	-	-	-	
Transaction costs	-	-	-	-	-	
Acquisition of subsidiaries	-	-	-	-	-	
Disposal of subsidiaries	-	-	-	-	-	
Change of controlling interest in subsidiaries	-	-	-	-	-	
Effect of acquisition under common control		-	-	-	-	<i>(</i>
Dividends declared	-	-	-	-	(4 784)	(4 78
Balance as of 31 December 2020	166 124	48 661	-	152 290	(37 284)	3297

Equity attributable to the owners of the PJSC Mosenergo

MOSENERGO | ANNUAL REPORT 2020 97

## 7.4 GLOSSARY

ADR	American depository receipt
NPP	Nuclear power plant
SPHPP	Pumped-storage hydro power plant
GDR	Global depository receipt
SDPP	State-owned district power plant
GTU	Gas turbine unit
SPP	State Power Plant
VMI	Voluntary medical insurance
FFZ	Free power transfer zone
CF	Capacity factor
CN	mode Condensing mode
IT	Integrated testing
EC	Efficiency coefficient
KPI	Key performance indicator
DHP	District Heating Plant
MIPC	Moscow Integrated Power Company
IFRS	International financial reporting standards
PPP	Private pension provision
PPF	Private pension fund
AI	Accident insurance
WGC	Power generating company of the wholesale market
WEM	Wholesale Electricity Market
PWHB	Peak water-heating boiler
СТ	Commissioning trials
SUW	Start-up works
SPE	Steam-power equipment
ST	Steam Turbine
RAS	Russian accounting standards
DAM	Day ahead market (a sector of the electricity market)
RHP	Regional Heating Plant
REC	Regional Energy Commission
BoD	Board of Directors
SOUES	System operator of the unified energy system
t/e	Thermal energy
EA, IS & EP	Department of engineering audit, industrial safety and
ТРР	environmental protection Thermal power plant
FTS	Federal Tariff Service
FFMS	Federal Financial Markets Service
RF CB	Russian Federation Central Bank
e/e	Electric power
TPP	thermal power plant
RAS	Russian Accounting Standards
IFRS	International Financial Reporting Standards
DHP	district heating plant
ВНР	block heating plant
CCGT	combined cycle gas turbine
SPP	state power plant
CSA	capacity supply agreement
RHPP	regional heating power plant water-heating boilers
	egiena. Southy poner plant nator houting bollore

RMS SCIGE WB CPI gfe KOMMod

ER

risk management system selecting composition of included generating equipment water boiler consumer price index grams of fuel eqivalent Competitive selection of projects for the implementation of measures to modernize generating facilities of thermal power plants Emergency repairs

#### Units of measurement

Gcal (Giga calorie) Gcal/h (Giga calories per hour) kV (kilo Volt) kWh (kilo Watt hour) MW (Mega Watt) tnf tfe

## unit of measurement of heat tons of natural fuel tons fuel equivalent

## 7.5 CONTACT INFORMATION

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unit of measurement of thermal power unit of measurement of voltage unit of measurement of electric power

unit of measurement of electric capacity

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