

RESPONSIBLE STRATEGY –

# *eco* **LOGICAL** **GROWTH**



# TABLE OF CONTENTS

**P. 4** **REPORT PROFILE**

**P. 5** **STATEMENT FROM THE CEO OF GAZPROM ENERGOHOLDING GROUP**

**P. 6** **GAZPROM ENERGOHOLDING GROUP TODAY**

**P. 16** **BUSINESS MODEL**

**P. 22** **01. SUSTAINABILITY MANAGEMENT**  
*Gazprom Energoholding Group's Development Strategy* ..... 24  
*Corporate Governance and Remuneration Policy* ..... 30  
*Risk Management* ..... 34

**P. 40** **02. STAKEHOLDER ENGAGEMENT**

**P. 48** **03. RESPONSIBLE ENERGY SUPPLY**

**P. 58** **04. ECONOMIC PERFORMANCE**  
*Financial and Operating Results* ..... 62  
*Supply Chain* ..... 66  
*Anti-corruption* ..... 68

**P. 70** **05. ENVIRONMENTAL PROTECTION**

**P. 96** **06. HEALTH AND SAFETY**

**P. 104** **07. PROFESSIONAL DEVELOPMENT AND SOCIAL SUPPORT FOR EMPLOYEES**

**P. 120** **08. PHILANTHROPY AND SUPPORT FOR REGIONS OF OPERATION**

**P. 128** **APPENDICES**

# REPORT PROFILE

GRI 101, 102-46, 103-1, 102-48, 102-49, 102-50, 102-51, 102-52, 102-54

*This is the fifth Sustainability report (the “Report”) of Gazprom Energoholding Group (the “Group”) for the calendar year 2020.*

In this Report 000 Gazprom Energoholding, PAO Mosenergo, PAO TGC-1, PAO OGK-2, and PAO MIPC are referred to as Gazprom Energoholding, Mosenergo, TGC-1, OGK-2, and MIPC, respectively. Gazprom Energoholding, Mosenergo, TGC-1, OGK-2, and MIPC are jointly referred to as Gazprom Energoholding Group companies, Gazprom Energoholding Group or Group companies. The generating companies Mosenergo, TGC-1, OGK-2, and MIPC managed by Gazprom Energoholding are jointly referred to as Gazprom Energoholding Group’s generating companies or the Group’s generating companies.

## REPORT PREPARATION, CONTENT AND TOPIC BOUNDARIES

<b>Standards for preparing and defining the Report content</b>	<ul style="list-style-type: none"> <li>GRI Standards</li> <li>UN Sustainable Development Goals embraced by Gazprom Energoholding Group</li> </ul>
<b>Level of disclosure</b>	This Report has been prepared in accordance with the GRI Standards: Core option, with the GRI Compliance Table presented in Appendix 2. GRI Content Index
<b>Reporting cycle</b>	1 year
<b>Scope of disclosure</b>	<p>Four generating companies of Gazprom Energoholding Group:</p> <ul style="list-style-type: none"> <li>Electricity generating companies, Mosenergo, TGC-1 and OGK-2 [listed on the Moscow Exchange]</li> <li>A heat generating and supply company, MIPC [a non-listed company]<sup>1</sup></li> </ul>
<b>Disclosure period</b>	<ul style="list-style-type: none"> <li>2020 calendar year</li> <li>Key events of 2021 before the Report’s publication</li> </ul>
<b>Sources of information</b>	<ul style="list-style-type: none"> <li>Management reports and audited IFRS financial statements</li> <li>Data received from relevant business units of Gazprom Energoholding Group companies</li> </ul>
<b>Changes to disclosures compared to previous Reports</b>	<ul style="list-style-type: none"> <li>Transition from a two-year to a one-year reporting cycle</li> <li>Update to the list of material topics disclosed in the Report<sup>2</sup> (an additional stakeholder survey was conducted as part of the Report preparation process)</li> </ul>

All data on Mosenergo, TGC-1, OGK-2, and MIPC, except financials, are provided excluding their subsidiaries and affiliates unless stated otherwise. All financials are given as per IFRS consolidated financial statements. Going forward, the Group plans to gradually extend nonfinancial reporting to include all subsidiaries and affiliates of Mosenergo, TGC-1, OGK-2, and MIPC covered by consolidated financial statements.<sup>3</sup>

The Report presents the Group’s medium-term and long-term plans. Their implementation is subject to inherent risks and uncertainties including factors beyond the control of Gazprom Energoholding Group companies.

# STATEMENT FROM THE CEO

*of Gazprom Energoholding Group*

GRI 102-14



**DEAR COLLEAGUES,**

*In 2020, much like the rest of the country, we faced an unprecedented situation and formidable challenges. The COVID-19 pandemic and ensuing restrictions have had a strong impact on our performance.*

Gazprom Energoholding Group had a special responsibility throughout this: to ensure the reliable operation of power plants that generate electricity and heat for millions of consumers across Russia, including healthcare facilities and critical infrastructure. Professionalism and commitment were of particular importance in this context.

All Group companies passed this challenge with flying colours, demonstrating strong operating and financial performance, operational efficiency and, most importantly, all while keeping our people as safe as possible. Today, we are making good progress towards delivering our sustainability strategy and are prepared to take on any challenge that may arise on the way.

The strong performance of our large team is at the heart of the sustainable growth of Gazprom Energoholding Group companies. We would like to thank all our employees for their smooth and effective teamwork in these challenging times!

**Denis V. Fyodorov**  
**CEO, 000 Gazprom Energoholding**

<sup>1</sup> For the names, corporate forms, and addresses of the companies covered in this Report, see Appendix 3.

<sup>2</sup> For more details on the materiality process, a full list of topics and materiality assessment, see Appendix 1.

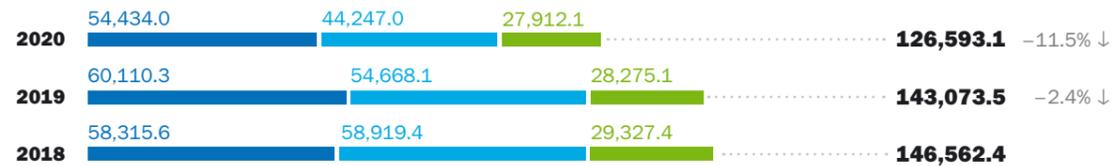
<sup>3</sup> For the full list of subsidiaries and affiliates covered by consolidated financial statements, see Appendix 4.

# 2020 HIGHLIGHTS

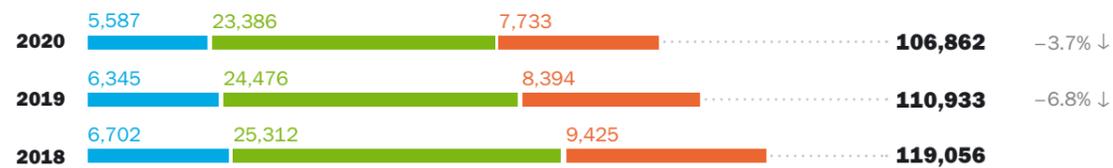
GRI 102-7

## OPERATIONAL PERFORMANCE

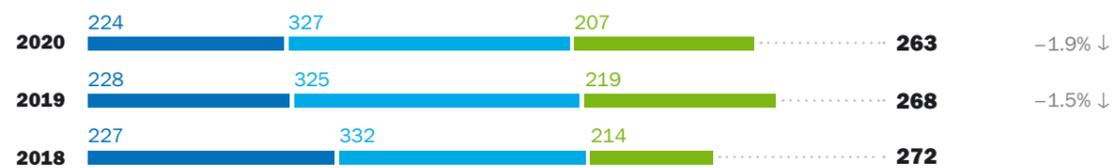
### Electricity Output, mm kWh



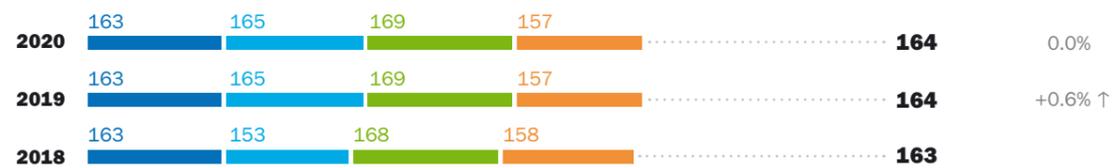
### Net Heat Supply to Captive Consumers, thousand Gcal\*



### SRFC for Electricity Supply, g/kWh\*\*



### SRFC for Heat Supply, kg/Gcal\*\*



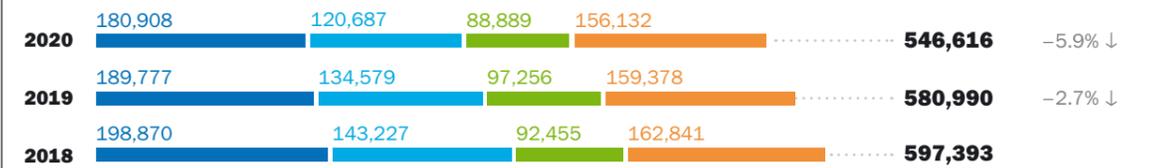
■ Mosenergo ■ OGK-2 ■ TGC-1 ■ MIPC ■ «Mosenergo and MIPC

\* Including OOO TSK Mosenergo and AO Murmanskaya CHPP.

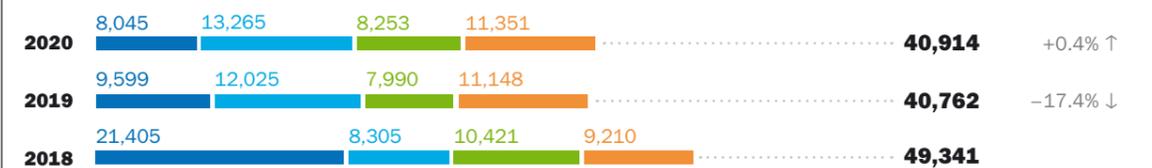
\*\* Excluding AO Murmanskaya CHPP. The physical method of calculation was used for TGC-1 and Mosenergo, and the combined method for OGK-2.

## ECONOMIC PERFORMANCE

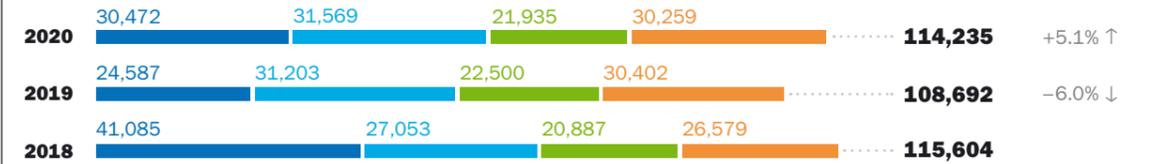
### Revenue (IFRS), RUB mm



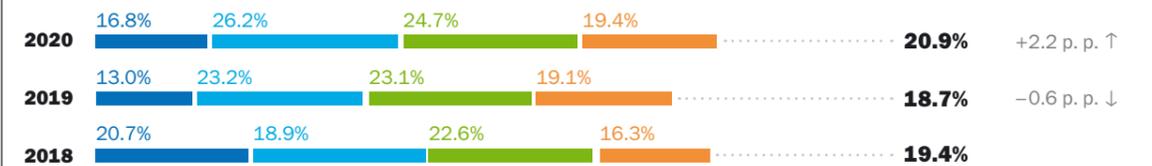
### Profit for the Year (IFRS), RUB mm



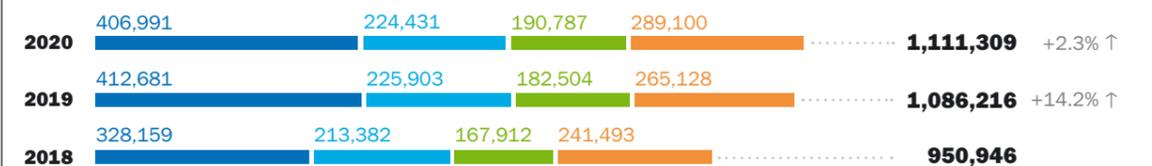
### EBITDA (IFRS), RUB mm



### EBITDA Margin, %



### Total Asset Value, RUB mm\*\*\*

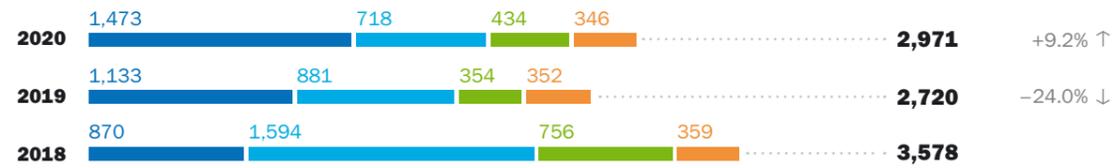


■ Mosenergo ■ OGK-2 ■ TGC-1 ■ MIPC

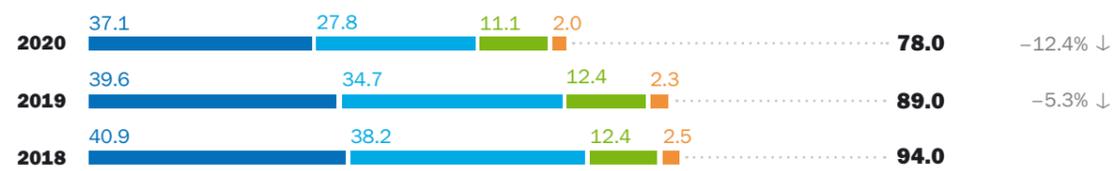
\*\*\* Based on data from certain IFRS consolidated financial statements of the Group's generating companies for 2018–2020.

## SUSTAINABILITY PERFORMANCE

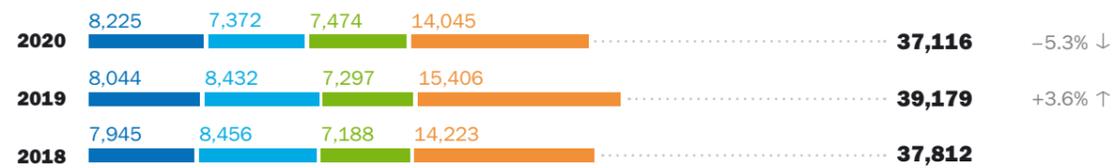
### Environmental Protection Costs, RUB mm



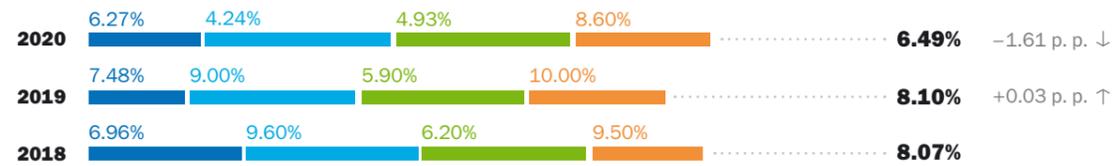
### GHG Emissions, mm tonnes of CO<sub>2</sub>-equivalent



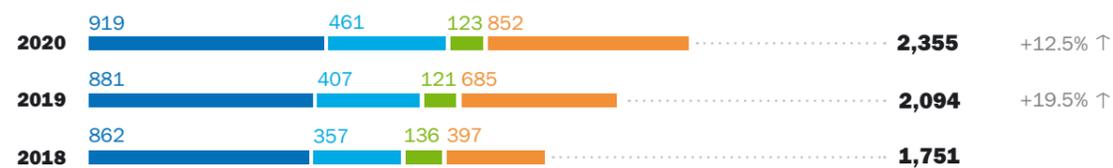
### Headcount, employees\*



### Employee Turnover, %



### Occupational Health Costs, RUB mm



■ Mosenergo ■ OGK-2 ■ TGC-1 ■ MIPC

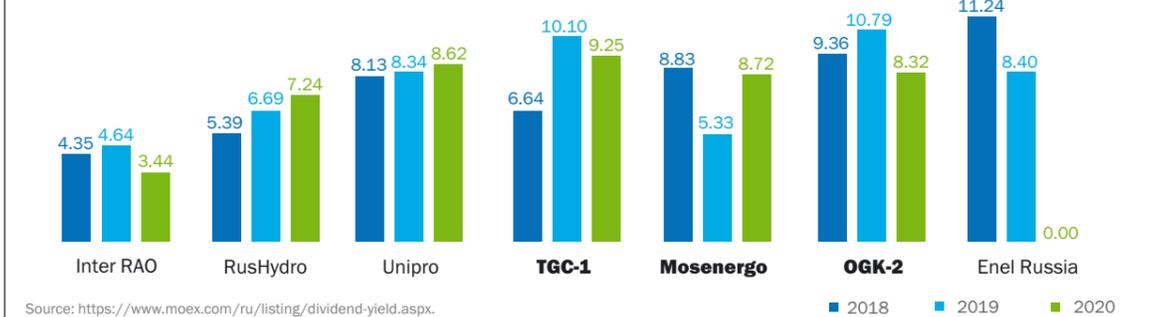
\* Including contractors employed under independent contractor agreements and part-time employees as at year end.

## INVESTMENT CASE

### Market Capitalisation as at 31 December 2020:



### Dividend Yield for 2018–2020, %

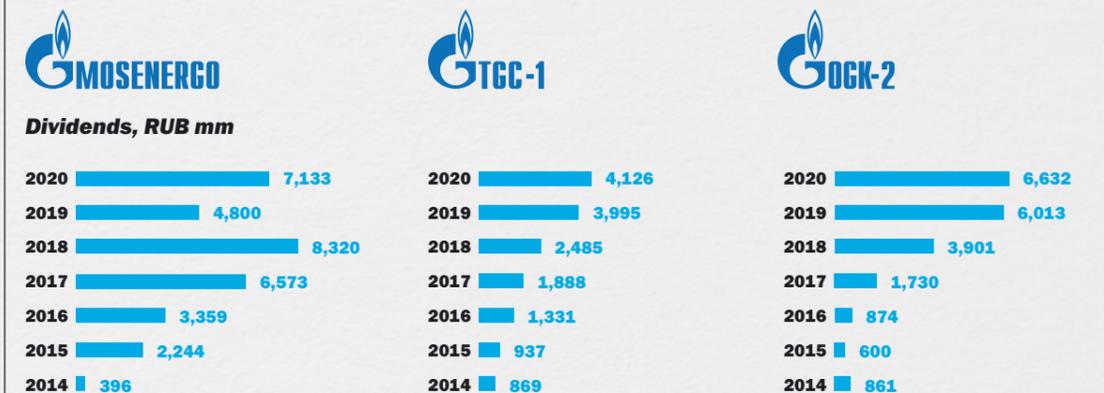


Source: <https://www.moex.com/ru/listing/dividend-yield.aspx>.

## DIVIDENDS: HISTORY/LEVERAGE OF GAZPROM ENERGOHOLDING GROUP'S GENERATING COMPANIES\*\*

The Dividend Policy is built to maintain balance between debt servicing, investments and dividend maximisation.

In 2019, the Group's generating companies switched to a dividend payout of 50% of net profit.



### Debt/EBITDA, 2020



\*\* Dividends for the reporting period.

# ABOUT

## Gazprom Energoholding Group

GRI 102-2

Gazprom Energoholding is a vertically integrated holding company (a wholly owned subsidiary of PJSC Gazprom), Russia's largest owner of electricity generating assets (with major stakes in Mosenergo, TGC-1 and OGK-2), and the major shareholder in MIPC, Moscow's key heat supplier. The Group ranks among the Top 10 European electricity producers.

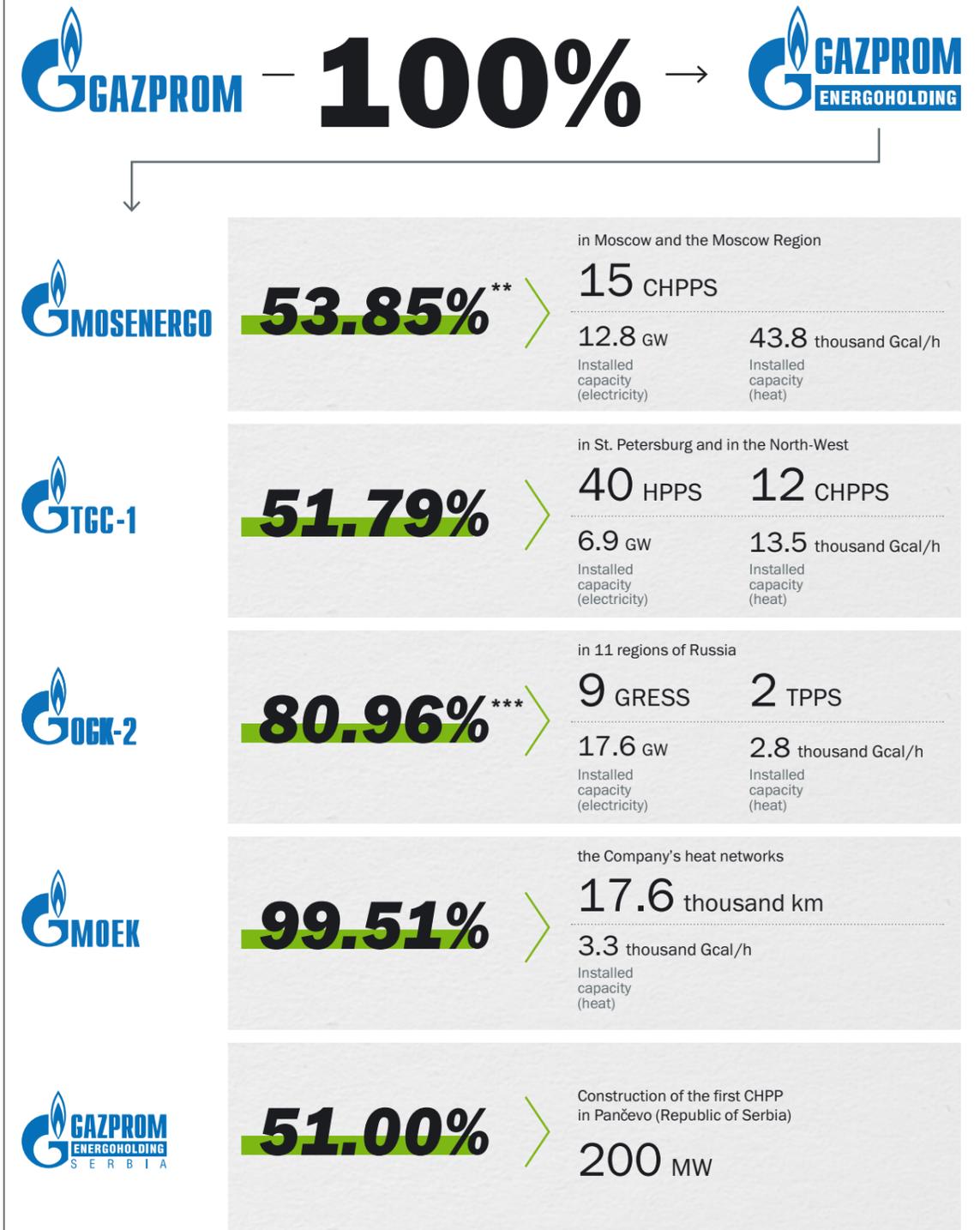
### THE GROUP'S FLEET INCLUDES



### COMPETITIVE ADVANTAGES



### CORE ASSETS OF GAZPROM ENERGOHOLDING GROUP\*



\* For a list of subsidiaries included in consolidated financial statements of Mosenergo, TGC-1, OGK-2 and MIPC, see Appendix 4.  
 \*\* On 22 June 2021, OGK-2 and Gazprom Energoholding completed a purchase deal on Mosenergo shares, increasing Gazprom Energoholding's direct ownership in Mosenergo to 53.9%.  
 \*\*\* On 30 June 2021, Mosenergo and Gazprom Energoholding completed a purchase deal on OGK-2 shares, increasing Gazprom Energoholding's direct ownership in OGK-2 to 7.54%. Gazprom Energoholding indirectly owns a 73.29% stake in OGK-2 (through PAO Centerenergoholding).

# GEOGRAPHY AND FUEL MIX

of Gazprom Energoholding Group's generating companies

GRI 102-4, 102-6, EU2, EU4



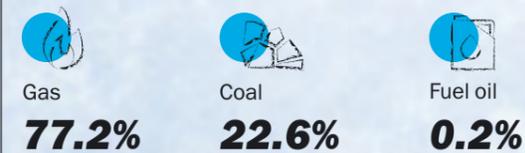
**GMOEK**  
**Moscow's leading infrastructure company operating the world's longest heat distribution system.**

In operation more than  
**17.6** thousand km  
 heat distribution pipelines



**GOGK-2**  
**One of the largest electricity generating companies in Russia.**

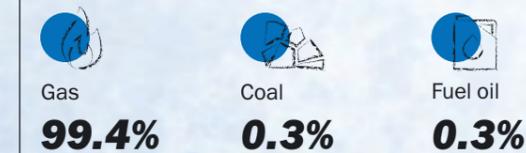
As at the end of 2020  
**12** branch power plants  
**17.6** GW electricity capacity  
**2.83** thousand Gcal/h heat capacity



**MOSENERGO**  
**Russia's major territorial generating company.**

As at the end of 2020  
**15** power plants  
**12.8** GW electricity capacity  
**43.8** thousand Gcal/h heat capacity

The company generates over  
**50%**  
**of all electricity consumed in the Moscow Metropolitan Area**  
 All power plants operated by Mosenergo use gas as their primary fuel.



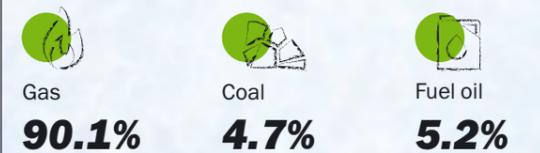
For more details on regions in which Gazprom Energoholding Group companies generate and sell their products, see Appendix 5.

**GTCC-1**  
**A strategic heat supplier for St. Petersburg, Petrozavodsk, Murmansk, as well as Apatity and Kirovsk (Murmansk Region).**

As at the end of 2020  
**52** power plants  
**in St. Petersburg, the Republic of Karelia and the Leningrad and Murmansk Regions**  
**6.92** GW electricity capacity  
**13.48** thousand Gcal/h heat capacity

**Stands out for its high share of hydro generation in installed capacity mix.**  
 The generated electricity is supplied to the domestic wholesale electricity and capacity markets and also exported to Finland and Norway.

**75%**  
 of Murmansk's heat supply is covered by AO Murmanskaya CHPP, a subsidiary generating company



# YEAR HIGHLIGHTS

GRI 102-10, 203-1

## DECEMBER 2019– OCTOBER 2020

### ○ Sale of Krasnoyarskaya GRES-2

In December 2019, Krasnoyarskaya GRES-2, a coal-fired power plant with an installed capacity of 1,260 MW, was sold by its owner, OGK-2, to SUEK Group.

**On 1 October 2020, the power plant was handed over to the new owner.**

## FEBRUARY 2020

### ○ ISO 50001:2018

OGK-2 was successfully certified to **ISO 50001:2018** energy management systems and the standard's Russian analogue, **GOST R ISO 50001-2012**.

## SEPTEMBER 2020

- TGC-1 was successfully certified to **ISO 50001:2018** energy management systems.

## DECEMBER 2020

### ○ The first free contract for green energy supply

TGC-1 entered into its first free power-purchasing agreement with AO Siburenergomangement (part of SIBUR Holding) for the electricity generated at Lesogorskaya HPP in the Leningrad Region.



"TGC-1 enjoys a unique mix of generating assets, with **40%, or about 3,000 MW, of its installed capacity coming from hydropower**. We are ready to supply this carbon-free electricity to industrial customers, giving a competitive edge to their products, especially those meant for exports."

**Alfred Yagafarov**

Deputy Managing Director for  
Electricity and Capacity Sales at TGC-1

### ○ Gazprom Energoholding Group's generating companies ranked among the Top 10 in the WWF environmental transparency rating

Mosenergo and OGK-2 came second and third, while MIPC and TGC-1 finished among the Top 10 according to the Environmental Transparency Rating of Fossil-Fuel Power Generating Companies Operating in Russia 2020 by WWF Russia. Rating participants were evaluated against three key criteria: Environmental Management, Environmental Impact and Disclosure of Information.

### ○ ISO 14001:2015

A recertification audit confirmed the compliance of Mosenergo's environmental management system (EMS) with **ISO 14001:2015**.

#### Events After the Reporting Date

## APRIL 2021

- TGC-1 made its first sale of green I-REC certificates via Sber's blockchain platform. The certificates were issued for PAO Polyus companies and confirm that the energy supplied is sourced from renewable generation.

# BUSINESS MODEL

## OUR RESOURCES

	2019	2020	Δ, %
Headcount, employees	39,071	36,234	-7.3
Fuel consumption, mm toe			
- Gas	51.6	45.7	-11.4
- Coal	46.2	41.6	-9.9
- Fuel oil, diesel fuel and other	0.4	0.4	0
Water consumption, mmcm	3,534	2,894	-18.1

## OUR ASSETS

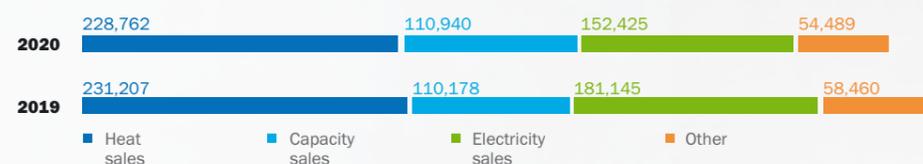
	2019	2020	Δ, %
Installed electricity capacity, MW	38,755	37,357	-3.6
Installed heat capacity, Gcal/h	67,316	65,603	-2.5
Heat networks, km	16,580	16,634	+0.3

## OUR GENERATION

	2019	2020	Δ, %
Electricity output, mm kWh	143,074	126,593	-11.5
Heat supply from TPPs, thousand Gcal	115,256	111,144	-3.6
Electricity sales, mm kWh	151,461	134,313	-11.3
Capacity sales, MW	34,134	22,730	-33.4
Net heat supply, thousand Gcal	110,945	106,862	-3.6

## EBITDA STRUCTURE

### Revenue Breakdown, RUB mm



## Competitive Advantages

- Fuel mix diversification and optimisation depending on the environment in the fuel markets
- Efficient use of energy and other natural resources (including higher utilisation of efficient CCGT units)
- High qualifications and continuous upskilling of employees
- Boosting and maintaining the Group's status as a top employer to stimulate long-term employment and employees' effective work
- Synergetic cooperation with Gazprom Group

## Competitive Advantages

- Branch power plants across Russian regions
- One of the largest electricity generating groups in Russia
- Reliable, incident-free and efficient power plant operations
- Focus on improving operational efficiency and growing market capitalisation by replacing worn-out fixed assets and decommissioning low-performing capacities
- Consistent upgrades of generating capacities under the Competitive Selection of Capacities for Modernisation and CSAs for renewable projects

## Competitive Advantages

- Heat and electricity supply to Russia's most developed regions, including Moscow and St. Petersburg, which ensures a stable demand for heat and electricity and regular payments
- Various operating modes at different power plants and regional competitive advantages: some supply electricity and capacity to industrial facilities in fast-growing regions and some play the role of backbone enterprises and suppliers of heat and electricity to residential areas
- Electricity export to Finland and Norway, potentially also to Georgia and Azerbaijan (Stavropolskaya GRES), Belarus and Baltic states (Pskovskaya GRES)

## PROFIT GENERATION AND DISTRIBUTION

### Net Profit, RUB mm



### Cost Breakdown, RUB mm



EBITDA In 2020

+ 5.1%

# 114,235

RUB mm

## Development Priorities

- Generating capacity upgrades
- Decommissioning of over 2 GW of low-performing capacity by 2022
- Implementation of operational efficiency and cost optimisation initiatives
- Import substitution projects and prioritisation of Russian-made equipment
- Use of plants and boiler houses to reduce gas transmission system stress
- Development of the power generation business in the foreign markets

## STAKEHOLDER VALUE IN 2020

RUB mm

Contribution to the UN  
Sustainable Development  
Goals

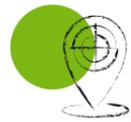
						
  <b>FOR HEAT, ELECTRICITY AND CAPACITY CONSUMERS</b>	Reduction of electricity supply disruptions	No disruptions	No disruptions	No disruptions	–	
	Reduction of heat supply disruptions	No disruptions	No disruptions	No disruptions	+77	
	Reduction of GHG emissions in CO <sub>2</sub> -equivalent	–2,548 thousand tonnes	–1,296 thousand tonnes Free contracts for green energy supply	–6,932 thousand tonnes Sale of Krasnoyarskaya GRES-2	–265 thousand tonnes	
 <b>FOR SHAREHOLDERS AND INVESTORS</b>	Dividends for 2020	RUB 7,133 mm	RUB 4,126 mm	RUB 6,632 mm	–	
	Year-on-year change in capitalisation	+7.5%	–13.7%	+29.9%	Not calculated as the company is not listed	
  <b>FOR THE STATE</b>	Taxes	RUB 5,850 mm	RUB 3,627 mm	RUB 6,641 mm	RUB 6,296 mm	
	Cooperation with executive governing bodies in Russian regions to plan and implement regional development programmes					
    <b>FOR EMPLOYEES AND TRADE UNIONS</b>	Remuneration	RUB 12,070 mm	RUB 9,930 mm	RUB 9,485 mm	RUB 16,951 mm	
	Occupational health and safety	RUB 919 mm	RUB 123 mm	RUB 461 mm	RUB 852 mm	
	Education and retraining	RUB 44.98 mm	RUB 17,863 mm	RUB 45.14 mm	RUB 29.89 mm	
	Equal opportunities	Women on the Board of Directors and Board committees	Women on the Board committees	Women on the Board of Directors and Board committees	Women on the Board of Directors and Board committees	
 <b>FOR LENDERS</b>	Timely interest payments	RUB 1,165.43 mm	RUB 106 mm	RUB 2,066.02 mm	RUB 21,176 mm	
	Timely principal repayment	RUB 11,529.01 mm	RUB 13,445 mm	RUB 39,788.10 mm	RUB 1,831 mm	
	Credit rating at 2020-end	Fitch Ratings	BBB (stable outlook)	BBB (stable outlook)	BBB– (positive outlook)	–
		Expert RA	–	–	ruAA+ (stable outlook)	ruAA– (positive outlook)
		S&P Global Ratings	BBB– (stable outlook)	BBB– (stable outlook)	–	–
		ACRA	AAA (RU) (stable outlook)	AA+ (RU) (stable outlook)	–	–
        <b>FOR LOCAL COMMUNITIES AND ENVIRONMENTAL ORGANISATIONS</b>	Philanthropy	RUB 7.62 mm*	RUB 14 mm	RUB 6.8 mm	–	
	Environmental protection and energy efficiency	RUB 1,540 mm	RUB 695 mm	RUB 1,009	RUB 6,365 mm	
	Ensuring industrial safety	RUB 137.82 mm	RUB 9 mm	RUB 46 mm	RUB 314 mm	
	Compliance with international standards	OHSAS 18001:2007, ISO 14001:2015	ISO 50001:2018	OHSAS 18001:2007, ISO 14001:2015, ISO 50001:2018, ISO 9001:2015	OHSAS 18001:2007, ISO 9001:2015	

\* Data according to RAS statements.

# OUR POLICY



Gazprom Energoholding Group is guided by **the Sustainable Development Policy of Gazprom Group**,<sup>4</sup> according to which:



## THE GROUP'S MISSION IS

*to make a positive contribution to the social and economic development of Russia and other regions of the Group's operation in line with environmental and social responsibility standards*



## KEY GOALS:

- › **Social and economic development** of regions in which we operate
- › **Taking into account the rights and interests** of stakeholders, including our own employees and local communities
- › **Improving** corporate governance and preventing corruption
- › **Environmental protection** and resource and energy saving

# OUR VALUES

GRI 102-16

- **Caring about people's lives and health**  
Injury-free operation and safety compliance are key to a long and healthy life for everyone of us, with no exceptions
- **Teamwork and development**  
Solidarity, support, open collaboration, joint development as a team, complementing each other, and achieving more for a common cause
- **Respect for people**  
Trust, friendliness and respect towards each employee regardless of their position
- **Determination**  
Responsibility for the future, clear vision, proactiveness, leadership, and openness to innovation
- **Professionalism**  
A deep understanding of one's specialisation, prompt and high-quality completion of tasks and continuous development of professional knowledge and skills
- **Proactiveness**  
A proactive and self-reliant approach taken by employees in streamlining the production process
- **Lean thinking**  
A responsible and lean approach when using the Group companies' assets, one's own work time and that of fellow employees
- **Openness to dialogue**  
Open and fair exchange of information and willingness to develop the best solutions through joint efforts
- **Succession**  
Respect for the accomplishments and experience of industry veterans, and their engagement in communication, professional training and mentoring with younger employees
- **Image**  
The use of techniques and strategies to help build a positive image of the Group

Gazprom Energoholding Group's corporate values are outlined in Gazprom Energoholding's Code of Corporate Ethics, which is further supported by similar Codes of the Group's generating companies. Together, they cover conflicts of interest, nepotism, gifts, competitor and counterparty relations, anti-corruption, and other guidance on business conduct.

## **In 2021, the Boards of Mosenergo, OGC-2 and MIPC approved new versions of their respective codes of corporate ethics.**

Compliance with the requirements and provisions of the Codes of corporate ethics is supervised by the corporate ethics commissions, which comprise the heads of HR, corporate governance, legal, corporate security, and other functions.

The Group employees are required to read the Code of Corporate Ethics when signing the employment contract as well as updates to the Code as they are

published. The corporate principles, standards and norms of behaviour are incorporated in onboarding programmes for younger employees. In 2019, Gazprom Energoholding developed its Code of Corporate Ethics online course. Every three years since 2020, all employees of Group companies, including Board members, take targeted training on the corporate Unified Remote Learning platform.

<sup>4</sup> Approved by Resolution of PJSC Gazprom's Board of Directors No. 3576 dated 30 April 2021.

# 01. Sustainability MANAGEMENT



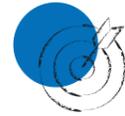
Development Strategy of Gazprom Energoholding Group.....	24
Key Outcomes of the Strategy in 2020 .....	26
Corporate Governance and Remuneration Policy .....	30
Risk Management.....	34

*The right  
path*

# DEVELOPMENT STRATEGY

of Gazprom Energoholding Group

EU10



## STRATEGIC GOAL –

ensuring steady profit growth while maintaining highly reliable power supply to consumers.

## PJSC GAZPROM'S POWER GENERATION STRATEGY FOR 2018–2027

In 2020, PJSC Gazprom continued its Power Generation Strategy for 2018–2027, which provides for projects to build new or upgrade existing generating facilities and decommission economically unviable ones, all while further enhancing operational efficiency, using import-substituting equipment, and diversifying operations into high-potential domestic and international markets.

### Gazprom Energoholding Group's Involvement in New Capacity Construction and Modernisation Programmes

#### Implementation Costs

CSAS. OUTCOMES (2007–2019)

**450** RUB bn

COMPETITIVE SELECTION OF CAPACITIES FOR MODERNISATION. OUTLOOK (2018–2027)

**140** RUB bn

#### Capacity Commissioning under the Programme

CSAS. OUTCOMES (2007–2019)

**+8.9** GW

COMPETITIVE SELECTION OF CAPACITIES FOR MODERNISATION. OUTLOOK (2018–2027)

**+3.4** GW

#### Decommissioning under the Programme

CSAS. OUTCOMES (2007–2019)

**-4.3** GW

COMPETITIVE SELECTION OF CAPACITIES FOR MODERNISATION. OUTLOOK (2018–2027)

**-4.1\*** GW

\* Including the 0.8 GW decommissioned in 2018–2020.

## Pillars of Strategy 2018–2027



### STRATEGY IN THE DOMESTIC MARKET

#### + Generating capacity upgrades (Competitive Selection of Capacities for Modernisation)

- Installed capacity post modernisation **3.4 GW**

#### + Operational efficiency improvements

- Decommissioning of up to **4.1 GW** of low-performing capacity
- Cost cutting: **+RUB 10.0 bn** savings in 2018–2020

#### + Investment in the heat supply infrastructure

- Replacing up to **1,800 km** of heat networks



### TECHNOLOGY

#### + Measures to ensure a reliable electricity supply to Gazprom Group companies

- Construction of two major power generating plants to supply PJSC Gazprom's processing facilities: **160 MW** Svobodnenskaya TPP (commissioned) and **200 MW** Pančevo CHPP (Serbia)

#### + Import substitution

- Priority of Russian equipment is a strategic goal as it helps capture opex savings from capex projects

#### + Redistribution of heat loads from boiler houses to CHPPs

- Up to **150 MW**
- According to the approved heat supply plan for St. Petersburg (updated for 2022), **360 Gcal/h** of heat capacity will be switched before 2027 from SUE TEK SPb boiler houses to TGC-1 facilities under relevant contracts

#### + Embedding more innovative technology in operations



### INTERNATIONAL EXPANSION

#### + Capturing synergies with Gazprom Group's core business – production and distribution of natural gas – is key to building a successful international business

##### Key projects:

- Construction of Pančevo CHPP in Serbia – about **200 MW**
- Construction of a wind farm in Serbia – about **200 MW**
- Construction of Quảng Trị TPP in Vietnam (jointly with Gazprom EP International) – **350 MW**



### DIVERSIFICATION

#### + Entering adjacent segments synergetic with the core business

##### The strategic goal is to bolster demand for electricity and heat:

- Business clusters within GRES service territories – inviting businesses to locate production near a source of energy
- Entering new distribution markets
- Developing the machine building business

#### + Effective communication within Gazprom Group

- Efficient use of natural gas in the UGSS of Russia – load optimisation during peak consumption periods in winter (re-allocation of up to 9 mmcm of natural gas a day)
- Potential controlling stakes in other companies taken for non-payment for supplied natural gas



### ALTERNATIVE ENERGY (GREEN GENERATION)

#### + New green generation plants

- Feasibility studies for new green generation plants – small HPPs in the Northwestern Federal District and a wind farm in the Leningrad Region with a capacity of up to **100 MW**. The projects are planned as part of the CSA-2 mechanism for renewable projects
- Feasibility study for a wind farm with an installed capacity of up to **200 MW** in the Republic of Serbia
- More green electricity supply contracts with industrial consumers

# KEY OUTCOMES

of the Strategy in 2020<sup>5</sup>

## COST OPTIMISATION PROGRAMMES

*Gazprom Energoholding is working to improve operational efficiency while running cost optimisation programmes to enhance its financial performance.*

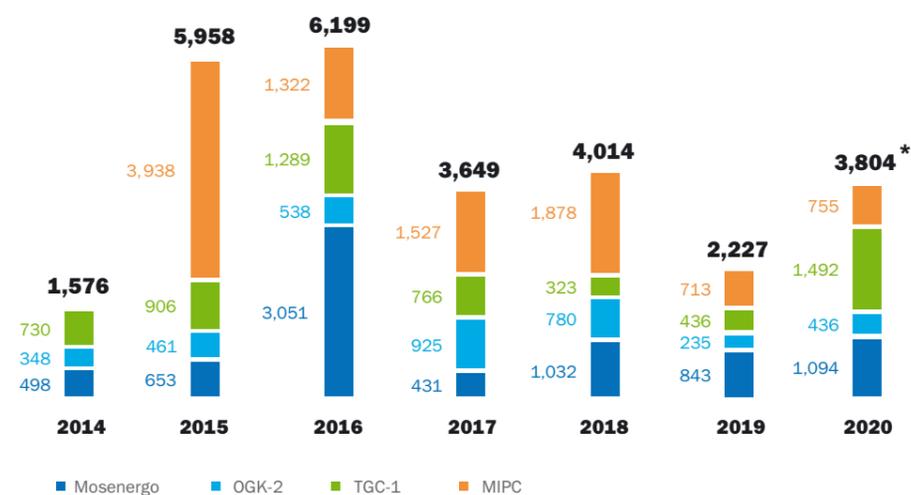
### THE IMPACT OF OPTIMISATION INITIATIVES IMPLEMENTED IN 2020 TOTALLED

**3.8** RUB billion

(compared to RUB 2.2 billion in 2019)

Our generating companies develop and implement annual plans across a number of areas, including operational improvements, cost optimisation, disposal of non-core assets, cutting the cost of supplies (goods and services) through competitive procurement processes, and import substitution.

### Benefits from Optimisation Initiatives in 2014–2020, RUB mm



\* Including OOO Gazprom Energoholding.

## INVOLVEMENT OF GAZPROM GROUP COMPANIES IN MAJOR PROJECTS FOR THE CONSTRUCTION OF GENERATING FACILITIES



Despite all the headwinds of 2020, including COVID-19 restrictions, challenging natural and climatic conditions, and distance from equipment manufacturers, Gazprom Energoholding Group started the final phase of the construction of Svobodnenskaya TPP in the Amur Region to supply power to the Amur Gas Processing Plant, current-

ly under construction by PJSC Gazprom. Russia-made equipment was widely used in the construction of this thermal power plant, including core installations: three steam power boilers, two steam turbine generators, end-to-end digital monitoring and control system, and much more.

## ENVIRONMENTAL PERFORMANCE

Gazprom Energoholding Group is strongly committed to reducing its environmental footprint by improving its environmental management, fostering environmental safety and stewardship, and implementing energy saving measures. Generating companies are replacing coal in their fuel mixes with greener natural gas to reduce environmental impact.

The sale of Krasnoyarskaya GRES-2 coal-fired power plant was completed in early 2020, further improving the Group's environmental portfolio as it remains strongly focused on reducing pollutant emissions.

Between 2007 and 2020, Gazprom Energoholding Group's generating companies reduced their total

gross pollutant emissions by 67%, and GHG emissions by 28% as a result of our investment programmes for capacity construction and modernisation (about 9 GW), fleet structure optimisation and environmental protection.

Equally important for building an energy efficient and green business are TGC-1's partnerships with AO Siburerenergomanagement, AO Apatit, PhosAgro Group, and AB InBev Efes, which involve the supply of hydroelectricity to export-oriented operations. This practice also boosts the competitiveness of Russian enterprises in European markets.

<sup>5</sup> A background note for the Power Generation: Development Priorities press conference (14 May 2021): <https://energoholding.gazprom.ru/d/textpage/3f/63/background-press-conf-2021-05-14-ru.pdf> (available only in Russian).

## CONSTRUCTION OF NEW CAPACITY AND MODERNISATION SUBJECT TO ECONOMIC INCENTIVES IN THE INDUSTRY

Gazprom Energoholding Group's generating companies continue upgrading their generating equipment as part of the Competitive Selection of Capacities for Modernisation for 2022–2027 (Mosenergo: at CHPP-22, CHPP-23, CHPP-25, and CHPP-21; TGC-1: Avtovskaya CHPP, Vasileostrovskaya CHPP and Severnaya CHPP; OGK-2: Kirishskaya GRES and Surgutskaya

GRES-1). The Group is also embarking on a project to build two combined cycle gas turbine facilities (CCGT-324 and CCGT-170) at OGK-2's Novocherkasskaya GRES as part of selecting facilities with innovative Russian gas turbines for 2027–2029. Group companies also intend to participate in the selection process for 2028–2031.

## BUSINESS DIVERSIFICATION

### Entering Adjacent and High-potential Markets

In 2020, Gazprom Energoholding Group diversified its business by entering adjacent and promising markets in Russia. For example, since November 2020,

Gazprom Energoholding has been providing portfolio management services for AO Gazprom Teploenergo, the parent company of a small-scale thermal power generation group. The group combines regional enterprises that operate thermal power facilities across 20 Russian regions with a total installed heat capacity of 8.6 thousand Gcal/h (as at 31 December 2020). We are planning to improve the operational and business performance of Gazprom Teploenergo, including through investments in revamping and upgrading its heat supply systems.

**TOTAL INSTALLED HEAT CAPACITY  
AO GAZPROM TEPLOENERGO**

**8.6** thousand Gcal/h

### Launching an Integrated Machine Building, Repair and Maintenance Business

In 2020, Gazprom Energoholding Group integrated REP Holding Group, a leading manufacturer in the power engineering industry, with Gazprom Group's corporate-wide standards and policies on management, procurement, finance, business planning, and investment planning introduced across the new asset as part of the integration process. As a result, in a first since 2012, REP Holding was able to close the year with a net profit (REP Holding Group's consolidated net profit for the year was RUB 716 mm).

REP Holding has been integrated into OOO Gazprom Energoholding Industrial Assets, which now combines all machine building, repair and maintenance assets of Gazprom Energoholding Group. Development priorities of OOO GEH Industrial Assets include building a system to manage the entire life cycle of gas turbine and compressor facilities operated by Gazprom Group, from design to maintenance.

**Gazprom Group's corporate-wide standards and policies on management, procurement, finance, business planning, and investment planning were introduced as part of the integration process.**

## INVOLVEMENT IN INTERNATIONAL PROJECTS

Among its international projects, the Group continued the construction of a CHPP in Pančevo, Serbia, with an installed electric capacity of about 200 MW (scheduled for commissioning in 2021).

## OPERATING IN THE COVID-19 ENVIRONMENT

**In 2020, the Group invested serious effort to promptly adapt its operations to the new normal of the COVID-19 world by expanding its daily business practices with measures to protect the health of its operational staff and reduce the risk of virus spread.**

As restrictions were imposed, most celebrations, sports and training events scheduled by the Group moved online.

supply to all customers. As we were hit by the most challenging first wave of the pandemic, MIPC promptly arranged heat supply to additional healthcare facilities in Moscow, including newly converted and rapidly deployable COVID-19 wards. A total of 21 healthcare centres were connected, including a backup facility at City Clinical Hospital No. 40 (Kommunarka).

We strictly complied with the new sanitary requirements, which helped us maintain continuous operation of power plants and uninterrupted electricity



# CORPORATE GOVERNANCE

## and Remuneration Policy

### CORPORATE GOVERNANCE CODE<sup>6</sup>

Gazprom Energoholding Group continuously improves and develops its corporate governance practice while tracking and complying with the principles and best Russian standards of the Corporate Governance Code recommended by the Bank of Russia's Letter No. 06-582/2463 dated 10 April 2014.

### CORPORATE GOVERNANCE BODIES

GRI 102-18

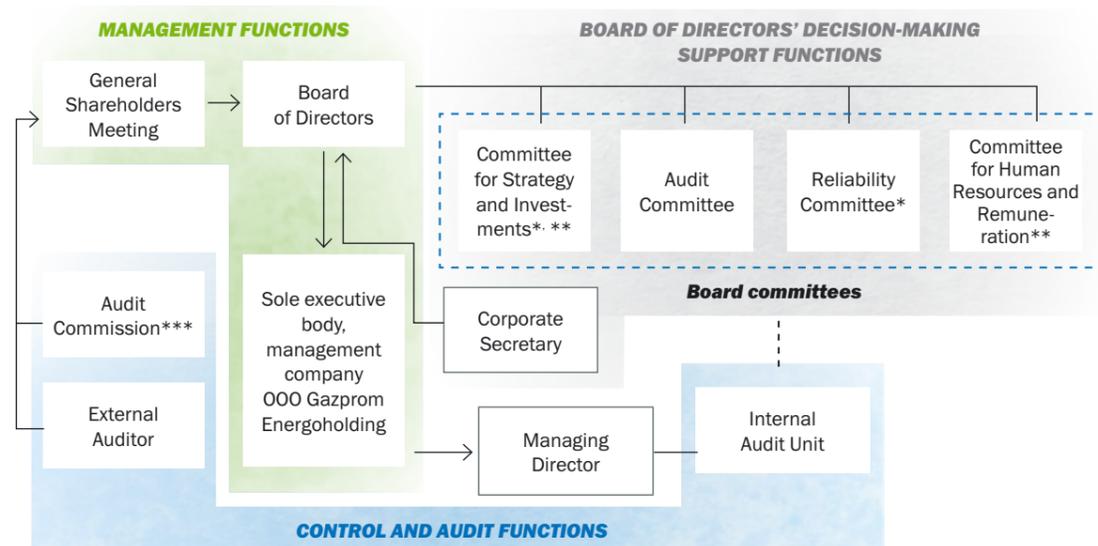
The governance structure of the Group's generating companies is built to uniform standards.

Protecting shareholder and investor rights, and promoting transparency and disclosure across all areas of activity are key priorities for the companies' Boards and for Gazprom Energoholding as a management company.

**For more details on governing bodies, their powers, membership and activities, see the 2020 annual reports of Gazprom Energoholding Group's generating companies.**

Roles and responsibilities for day-to-day economic, environmental and social matters may be partially delegated and re-distributed within the corporate structure of the Group's generating companies.

#### Corporate Governance Structure



\* The Committee for Budget Planning and Investments, and the Reliability and Efficiency Committee at TGC-1.  
 \*\* MIPC has neither Committee for Strategy and Investments nor Committee for Human Resources and Remuneration.  
 \*\*\* Only exists at Mosenergo. The Audit Commission does not exist any longer at TGC, OGC-2 and MIPC.

For more details on units responsible for the environmental, social and economic agenda across Group companies, see Appendix 6.

<sup>6</sup> For more details on compliance with the Bank of Russia Corporate Governance Code, see the 2020 annual reports of the Group's generating companies.

### In June 2021

**the Steering Committee for Sustainable Development of Gazprom Energoholding Group Companies (the "Committee") led by Pavel Shatski, First Deputy General Director of Gazprom Energoholding, was set up at OOO Gazprom Energoholding.**

The Committee comprises top managers representing PJSC Gazprom and Gazprom Energoholding as well as managing directors of Mosenergo, TGC-1, OGC-2, and MIPC.

#### The new Committee will focus on

**Determining the principles and key areas of** sustainable development across Gazprom Energoholding Group companies as well as the procedure for their implementation

**Promoting a corporate-wide sustainability policy and overall coordination of** sustainability efforts across Gazprom Energoholding Group companies

### KEY PERFORMANCE INDICATORS

*A unified KPI-based executive motivation and incentive system has been introduced at Gazprom Energoholding Group companies to achieve their long- and short-term business goals.*

Gazprom Energoholding Group's priorities comprise process safety, personnel development, minimising environmental impact, promoting the efficient use of resources, regional development, stakeholder interests, and economic growth, which are fully aligned with the sustainability agenda and are reflected in our KPI system.

#### KPIS LINKED TO THESE GOALS INCLUDE:



**Implementation of Development Projects**



**Process Safety**



**Employee Training and Development**



**Customer Satisfaction**

The Implementation of Development Projects KPI covers energy efficiency, suggestions and innovation, carbon footprint reduction, diversification, and stakeholder engagement initiatives selected by Gazprom Energoholding. The 2020 highlights include our involvement in competitive procedures for renewable energy capacity supply agreements (CSAs).

Performance against the Customer Satisfaction Index (Connection) KPI and the Customer Satisfaction Index (Heat Supply) KPI is assessed based on the quality of relationships with heat consumers. The targets for these KPIs were met in 2020, with further work ongoing to enhance customer focus across Group companies.

The Process Safety KPI covers initiatives to reduce injury rates and improve safety culture. No fatal injuries were reported in 2020, with the actual lost time injury frequency rate within the acceptable levels.

In 2021, the guidelines for measuring the satisfaction index applicable at Gazprom Energoholding Group companies will be aligned with Gazprom Group's Rules for Determining, Monitoring, Measuring, and Analysing the Customer Satisfaction Index approved by PJSC Gazprom.

The Group's largest companies have met their 2020 targets for the Employee Training and Development KPI despite restricted access to training due to COVID-19.

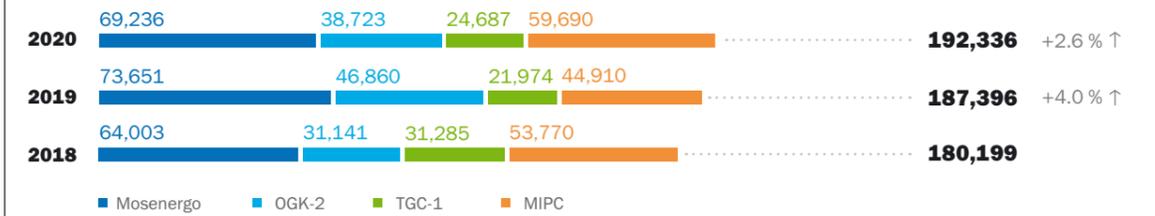
**In the short term, Gazprom Energoholding plans to develop an executive motivation and incentive system through an automated KPI setting and tracking procedure with an improved set of KPIs and KPI calculation methods to meet the requirements of owners, customers and investors.**

## REMUNERATION POLICY

GRI 102-35

The amounts of remuneration and compensations to Board members at generating companies are set forth by the Regulations on the Guidelines on Remuneration and Compensations of the Board of Directors. As stipulated by the Federal Law On Joint Stock Companies and the Regulations above, remuneration to Board members is paid by resolution of the General Shareholders Meeting of respective companies and depends on both the generating companies' general and Board members' individual performance in the reporting period.

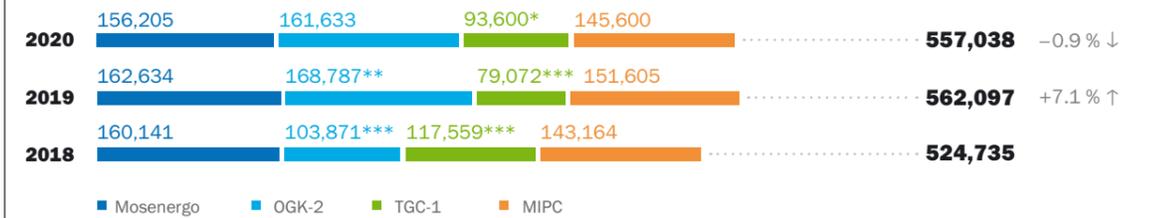
### Remuneration to Members of the Boards of Directors at Generating Companies in 2018–2020, RUB thousand



For more details on the remuneration and compensation policy for Board members, see the 2020 annual reports of the generating companies.

Financial incentives to Gazprom Energoholding as the management company of the Group's generating companies are regulated by agreements on delegating the powers of a sole executive body.

### Remuneration to the Management Company (the Management Board) of Generating Companies in 2018–2020, RUB thousand including VAT



\* By the resolution of the Extraordinary General Shareholders Meeting of TGC-1 dated 27 September 2019, the powers of the General Director of TGC-1 were delegated to the management company – Gazprom Energoholding, as of 30 September 2019. By the resolution of the Board of Directors of TGC-1 dated 17 September 2019 (Minutes No. 9 dated 18 September 2019), the powers of the Management Board were terminated as of 29 September 2019.

\*\* By the resolution of the Annual General Shareholders Meeting of OGK-2 dated 26 June 2018, the powers of the General Director of OGK-2 were delegated to the management company – Gazprom Energoholding, as of 28 June 2018. By the resolution of the Board of Directors of OGK-2 dated 21 May 2018 (Minutes No. 195 dated 22 May 2018), the powers of the Management Board were terminated as of 26 June 2018.

\*\*\* Remuneration to the General Director and members of the Management Board before the powers of a sole executive body were delegated.



# RISK MANAGEMENT

GRI 102-15

## APPROACH TO RISK MANAGEMENT

*The Risk Management and Internal Control System at Gazprom Energoholding Group covers a range of interrelated activities and processes across all governance levels at the Group companies.*

These processes include risk identification, assessment and prioritisation, as well as developing risk mitigants and controls, monitoring risks and implementing risk management and internal control initiatives to provide reasonable assurance that strategic and operational goals are met. This process involves concerted efforts from both managers and employees across all corporate governance levels at Gazprom Energoholding Group companies.

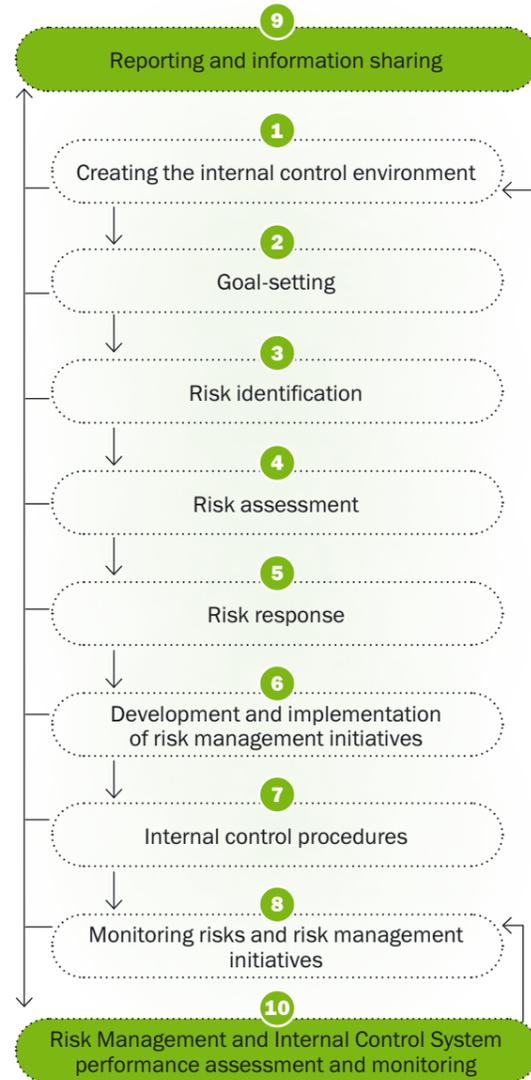
In 2019, Gazprom Energoholding approved the current Risk Management and Internal Control Policy. To promote uniform principles and approaches to the risk management and internal control system, the Boards of Directors at the Group's generating companies approved their respective risk management and internal control policies detailing consistent goals and objectives and assigning respective roles.

In 2020, the risk management system was improved in accordance with the Action Plan for Risk Management System Development; risk owners were designated at OOO Gazprom Energoholding, and a project was implemented to transition Group companies to tax control in the form of tax monitoring.

### Internal Documents on the Risk Management System Approved at Gazprom Energoholding Group Companies in 2020

- Regulations on operational risk management
- Risk classifiers
- Various guidelines on risk management (including identification of key risk indicators, use of qualitative assessments, risk management and internal control system reporting, self-assessment of the system's performance, as well as procedures for interaction and database manuals)

### Key Components of the Corporate Risk Management and Internal Control System



## THREE LINES OF DEFENCE

GRI 102-29

*Gazprom Energoholding Group's Risk Management and Internal Control Policy provides for three lines of defence.*

### FIRST LINE OF DEFENCE

Risk management and internal control at the business process level. Implemented by business process owners in business units and owners (co-owners) of risks and internal control procedures.

### SECOND LINE OF DEFENCE

Providing implementation guidelines for a uniform risk management and internal control policy, and coordinating risk management and internal control activities at business units. Defining a uniform risk management and internal control policy. Implemented by the Risk Management and Internal Control Centre.

### THIRD LINE OF DEFENCE

Internal assessment of the system performance. Performed by the business unit responsible for duly organising and conducting internal audits.

### The Risk Management and Internal Control System applies to all activities of Gazprom Energoholding Group's generating companies.

To identify, assess and manage risks, the sole executive body – the Management Company's Risk Management and Internal Control Centre (RMICC) – engages with risk owners (co-owners), as well as with risk management centres at subsidiaries and affiliates and PJSC Gazprom's Risk Management and Internal Control Unit.

Internal Control Office. At the Group's generating companies, these roles were also assigned to risk management and internal control units established in 2020. The RMICC's activities are functionally separated from other business units involved in risk management, as well as from the activities related to internal audit function and supervisory units.

In 2020, the RMICC roles at OOO Gazprom Energoholding were performed by the Risk Management and

**The Group is committed to the ongoing development of its risk management and internal control system. Employees across the Group are provided with regular training to improve their skills in this area.**

We recognise that risk events at Gazprom Energoholding Group's other companies also expose stakeholders to potential risks, therefore a similar policy is applied when managing risks for key stakeholders related to operations of Group companies.

## Key Participants of the RMICS of Gazprom Energoholding Group's Generating Companies

### BOARD OF DIRECTORS

- ✓ Approves the overall risk management and internal control policy, including the principles and approaches to organisation, functioning and development of the system.
- ✓ Establishes upper tolerable and threshold limits of risks.
- ✓ Reviews matters pertaining to RMICS organisation, functioning and effectiveness, including the results of system assessment and self-assessment, and provides recommendations to improve the system as necessary.

### AUDIT COMMITTEE OF THE BOARD OF DIRECTORS

- ✓ Monitors the reliability and effectiveness of the system. Preliminarily reviews and provides advice to facilitate decision-making of the Board of Directors on matters related to the Risk Management and Internal Control System.

### SOLE EXECUTIVE BODY (MANAGEMENT COMPANY)

- ✓ Ensures the functioning of the Risk Management and Internal Control System.

### MANAGING DIRECTOR OF THE COMPANY

- ✓ Facilitates the functioning of an effective risk management and internal control system, follows up decisions of the Board of Directors related to the organisation of the system and approves reports on key risks and risk management initiatives.

### RISK MANAGEMENT AND INTERNAL CONTROL CENTRE (RMICC)

- ✓ Coordinates risk management and internal control activities at business units, defines guidelines to handling risk management processes and internal control procedures and prepares consolidated reports on the system for governing bodies.

### OWNERS OF BUSINESS PROCESSES

- ✓ Ensure the functioning of the Risk Management and Internal Control System within their respective business processes.

### OWNERS (CO-OWNERS) OF RISKS

- ✓ Implement risk management stages.

### OWNERS (CO-OWNERS) OF INTERNAL CONTROL PROCEDURES

- ✓ Ensure the implementation, execution and continuous monitoring of the effectiveness of internal control procedures.

## ASSESSMENT PROCEDURE FOR POTENTIAL AND ACTUAL DAMAGE FROM RISK MATERIALISATION

Damage from risk materialisation at the Group is assessed by looking at financial and non-financial consequences. Non-financial consequences are assessed in terms of reputational impact, damage to human health, and environmental impact. Assessment of financial consequences is performed using a two-dimensional matrix of absolute and relative deviations of actual values of financial indicators from the planned ones.

### Key Risks of Gazprom Energoholding Group Companies

#### INDUSTRY-SPECIFIC RISKS

- Risk of reduced demand for electricity or increased competition leading to lower margins
- Reduced income due to high air temperatures during the heating season
- Risk of the regulator making adverse changes in capacity tariffs
- Risk of lower prices in the Day-Ahead Market (DAM)
- Risk of deteriorating performance as a result of statutory regulations adopted/modified to regulate the Rules of the Wholesale Electricity and Capacity Market or regulations for electricity or heat supply

#### LEGAL RISKS

- Risk of a court decision giving rise to liabilities
- Risk of delay in receiving/suspension of permits (licences)

#### FINANCIAL RISKS

- Credit risk (risk of an increase in accounts receivable due to untimely or incomplete performance of financial obligations by counterparties)
- Foreign exchange risk
- Tax risks
- Risks associated with managing non-core/non-performing assets

#### ENVIRONMENTAL RISKS

- Risk of sanctions from supervisory authorities for breaching the requirements of environmental laws

#### RISKS OF SUPPORTING PROCESSES

- Risk of IT system and technological communication failure

#### STRATEGIC RISKS

- Risk of failure to implement production programmes
- Approval of heat supply schemes that do not correspond with the interests of the Group's development

#### OPERATIONAL AND TECHNICAL RISKS

- Risk of failure of capital equipment or process disruptions
- Risk of process failures and accidents caused by employee errors
- Risk of unscheduled equipment repairs
- Fire risk or risk of non-compliance with statutory requirements for civil defence, emergency response, and fire safety being identified by regulatory audits
- Risk of project cost overruns

#### STAFF AND SOCIAL RISKS

- Risks of work-related injuries
- Asset loss risk
- Risk of the novel coronavirus
- Reputational risk
- Risk of shortage of qualified staff
- Corruption risk

#### COUNTERPARTY (PROCUREMENT) RISKS

- Risk of failure to meet the Company's needs for works, goods and services due to a rise in material and component prices
- Violation of inventory or equipment delivery terms

For more details on risks and risk management measures, see Appendix 7.

## SUSTAINABILITY RISKS

The Risk Management and Internal Control System of Gazprom Energoholding Group covers, among other things, identification, monitoring and management of sustainability risks.

The Group companies are committed and contribute to the UN's Sustainable Development Goals (SDGs), including through timely identification, assessment and response to sustainability risks.

The Group's identified risks include environmental, social, reputational and other sustainability risks.

GRI 201-2

### Climate Change Risk

Climate change can impact the productivity, efficiency, and costs of electricity and heat producers.

#### Higher air temperatures can give rise to the following risks for Group companies:

- Warmer cooling water reduces turbine efficiency and, accordingly, the overall cycle efficiency
- Lower CCGT performance
- In summer, higher cooling air temperatures limit available capacity
- An increase in average annual temperatures results in the redistribution of electricity and heat generation, with more electricity occasionally required for air conditioning in summer and lower heat consumption in winter
- Higher air temperatures increase thermal pollution of water bodies

#### A risk analysis run by an expert team comprising representatives from Group companies, has shown the following:

- Higher average air and water temperatures will not have a significant negative impact on the Group's electricity generation efficiency. At the same time, generating companies are exposed to the risk of lower marginal profit from electricity and heat sales due to higher outside air temperatures during the heating season
- Where climate change leads to reduced availability of cooling water, the Group's power plants can be upgraded to reduce water intake or switch to a closed water loop. Exposure to such risk is also low, with most power plants operated by the Group already using a closed cooling water loop
- Warmer winters decrease the likelihood of switching to the backup fuel (fuel oil), resulting in an extra positive effect – lower emissions

**The analysis shows that no special initiatives to manage these risks or costs to implement preventive measures are currently required.**

#### The Programme for Adapting 000 Gazprom Energoholding to Climate Change for 2017–2020 was developed in 2017 to preclude other climate change risks. The programme provides for measures to be taken by the Group companies to reduce GHG emissions. Key mechanisms under the emission reduction programme include:

- taking environmental aspects into account (including GHG emission reduction) and assessing the footprint of operations when planning, developing and implementing investment projects
- environmental oversight and monitoring of operations, assessing the environmental impacts of the Group's operations
- the Group's involvement in environmental programmes and sustainability projects across its operating regions

- encouraging research and implementing innovative projects in energy efficiency, renewables and alternative energy sources
- using the best available technologies at different phases of operations, including procurement of technologies, materials and equipment.

According to the assessments, the Group's facilities in the north such as AO Murmanskaya CHPP, Surgutskaya GRES-1, an OGK-2 branch, and Apatitskaya CHPP, TGC-1 Kolsky Branch, are located outside permafrost areas and therefore run low risks of geocryological changes.

### Biodiversity Risks

One of the environmental aspects exposed to risks from the operation of power plants is the impact on aquatic biological resources during withdrawal of natural water from surface water bodies and during the operation of hydropower plants.

Fish-protection systems are installed at the Group's power plants withdrawing water to reduce negative impacts on aquatic biological resources. Hydropower plants also feature fishways.

Risks of damage to aquatic habitats across the Company's footprint are managed and monitored across all phases of Gazprom Energoholding Group's operations.

### Gazprom Energoholding Group's Case Examples

Facilities with the highest potential environmental impacts are subject to independent biodiversity assessments. The condition of reserves, the biology and changes in the amount of water resources in the area of the spillway gate (currently being revamped) of Nizhne-Tulomskaya HPP of the Kolsky Branch is being studied on an ongoing basis at TGC-1 in order to assess the impact on fish reserves and prepare recommendations to prevent damage to them. The global research is carried out jointly with the Kola Science Centre of the Russian Academy of Sciences. Reports in the period between 2018 and 2020 conclude that the spillway gate revamp does not have any additional impact on aquatic biological resources and their habitats. However, further revamp of Nizhne-Tulomskaya HPP up to the project's completion will require annual monitoring of the condition of the fish fauna, other hydrobionts and their habitats.

The Group's power plants are stocking fish into local water bodies. In 2020, the Group stocked the Krasnoyarsk Reservoir in the Yenisey River basin with 10,900 young sturgeon as part of a restoration initiative to recover damage to aquatic biological resources. For the period from 2021 to 2023, Novochoerkasskaya GRES developed a programme for stocking the Don River basin, which provides for the release of 679,300 young sterlet.

### Information Security Risk

Information security is an integral part of Russia's national security, which is becoming increasingly important as technological and business processes are digitised globally. Deploying cutting-edge technology, including automation, computerisation and digitisation across the Group's operations will increase its reliance on the correct and efficient performance of information systems and information security systems.

and import substitution programmes. Group companies have in place relevant policies, rules, instructions and action plans guiding their employees how to act in case of failure of IT infrastructure or automated process control systems, including failures caused by computer attacks.

All Group companies are guided in this area by applicable federal regulations, Gazprom Group's standards

All new hires are briefed and introduced to applicable local regulations in this area, while information security employees are trained under related programmes on a regular basis.

# 02. Stakeholder

## ENGAGEMENT



Stakeholder Map..... 42

Memberships of  
Associations and Organisations..... 47

Open  
dialogue

# STAKEHOLDER MAP

GRI 102-40, 102-42

*Gazprom Energoholding Group's operations imply constant interaction with a wide range of stakeholders. Maintaining an open and actionable dialogue with every stakeholder while carefully reflecting their interests in strategic decisions are key to sustainability and for boosting the Group's profile.*

## Stakeholders Most Relevant to the Activities of Gazprom Energoholding Group's Generating Companies



### Main principles for defining stakeholder groups



## REGULAR STAKEHOLDER ENGAGEMENT

GRI 102-43, GRI 102-44



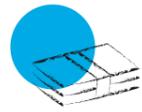
### Shareholders, Investors and Analysts

#### Topics

- Financial and operational results
- Investment programmes
- Dividend policy
- Shareholder value growth
- Operational efficiency improvement and cost reduction
- Business development strategy
- Potential M&A transactions

#### Events and their Frequency

- General shareholders meetings of Mosenergo, TGC-1, OGK-2 and MIPC to discuss all critical operational matters:
  - Annual general shareholders meetings are held once a year
  - Extraordinary general shareholders meetings (one meeting held by MIPC in 2020–2021)
- The Boards of Directors and their committees at Mosenergo, TGC-1, OGK-2 and MIPC function as platforms for continuous communication between the representatives of major shareholders to consult, search for a compromise and reach agreements on the most urgent issues. Preparations to the meetings of the governing bodies and committees include discussions and collecting proposals from major shareholders on matters to be discussed and candidates to participate. Meetings are convened on a regular basis and conducted in line with established corporate procedures.
- Regular IR events where top managers of Gazprom Energoholding, Mosenergo, TGC-1 and OGK-2 meet shareholder representatives, investors and analysts:
  - PJSC Gazprom's Investor Day;
  - PJSC Gazprom's Energy Day (not held in 2020–2021 due to the COVID-19 pandemic);
  - Gazprom Energoholding Group's Analyst and Investor Day (not held in 2020–2021 due to the COVID-19 pandemic).
- Regular conference calls were held in 2020–2021 to present the 1H and FY IFRS results of Mosenergo, OGK-2 and TGC-1.
- One-off individual and group conference calls and meetings with shareholders, analysts and investors of Gazprom Energoholding, Mosenergo, TGC-1, OGK-2 and MIPC as part of events by banks and investment funds.
- Timely disclosures on the corporate websites of Gazprom Energoholding, Mosenergo, TGC-1, OGK-2 and MIPC in line with the Russian legislation and provision of all the information required by the relevant foreign legislation to depository banks.
- Publication on the corporate websites of Gazprom Energoholding, Mosenergo, TGC-1, OGK-2 and MIPC, as well as newsletters to shareholders, analysts and investors with presentations, informational and explanatory materials whose disclosure is not required by law.
- Phone conversations and informing shareholders, analysts and investors upon their request.



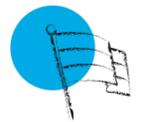
## Lenders and Rating Agencies

### Topics

- Financial and operational results
- Investment programmes
- Debt ratios and debt portfolio structure
- Credit policy
- Business development strategy
- Potential M&A transactions

### Events and their Frequency

- Meetings between the management of Mosenergo, TGC-1 and OGK-2 and representatives of rating agencies (ACRA, Fitch Ratings, S&P Ratings, Expert RA), providing all the necessary information upon their request to change or affirm ratings.
- Negotiations to place bonds and secure bank loans.
- Publication of annual and quarterly reports on the Group companies' financial performance, liabilities and potential risks.



## The Government of the Russian Federation, Industry Regulators, Ministries and Agencies, and Regional Executive Authorities

### Topics

- Uninterrupted heat and electricity supply
- Financial and operational results
- Investment programmes
- Efficiency improvement
- Business development strategy
- Potential M&A transactions

### Events and their Frequency

- Participation in meetings of the Government Commission on the Development of the Electric Power Industry and meetings of the Ministry of Energy Conciliation Committee, the Energy Working Group of the State Council of the Russian Federation, the Interdepartmental Working Group on Utilities, State Duma expert panels and committees.
- Interaction with organisations that regulate the Russian heat and electricity market (the Russian Federal Antimonopoly Service, Ministry of Economic Development, Ministry of Energy), as well as with the Trading System Administrator and System Operator.
- Cooperation with NP Market Council, Council of Power Producers and Power Industry Strategic Investors, commissions and committees of RSPP.
- The ongoing cooperation is aimed at enhancing the existing regulations and developing the heat and electricity market.



## Environmental Organizations

### Topics

- Compliance with environmental regulations and standards
- Reductions and increases in all environmental impacts from operations
- Environmental protection programmes and measures
- Investment programmes
- Energy efficiency enhancement
- Business development strategy

### Events and their Frequency

- Gazprom Energoholding Group's generating companies develop their corporate environmental and energy management systems, comply with ISO 14001:2015 and ISO 50001:2018 and regularly undergo recertification audits.
- Participation in environmental contests and ratings:
  - The Environmental Transparency Rating of Fossil-Fuel Power Generating Companies Operating in Russia prepared by WWF Russia and the National Rating Agency (Mosenergo was ranked second, OGK-2 third, while MIPC and TGC-1 secured the sixth-and-seventh and eighth-place finishes in the rating, respectively);
  - The All-Russian Ecological Dictation.
- When planning construction projects at their industrial sites, the Group companies inform local communities in line with the law about the planned operations and their potential environmental impacts in order to identify public preferences and reflect them in their impact assessment.



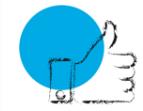
## Local Communities, Including Residents, Civil Society Organisations, Local Authorities, and Social Media

### Topics

- Uninterrupted heat and electricity supply
- Compliance with environmental regulations and standards
- Energy saving and energy efficiency
- Environmental safety and protection
- Compliance with safety standards and rules
- Job creation and wage levels
- Taxes
- Philanthropy
- Joint activities with NGOs and local authorities
- Participation in local infrastructure development
- Business development

### Events and their Frequency

- Regular participation in expert discussions, meetings and working groups for regional development at municipal governing bodies.
- Regular informational meetings with the governments in the regions of the Group companies' operation.
- Public hearings every time the construction of a new industrial facility begins.
- Publication of annual and quarterly reports on the Group companies' performance, investment and social projects, including those to develop the regions of their facilities operation.
- At least once a month – outreach events that help educate local residents on:
  - electricity and heat generation;
  - activities of the Group companies in regions of their operations;
  - ways to increase energy efficiency and safe energy use;
  - action plan in case of an emergency at the Group's facilities;
  - Participation of the Group employees in events by local authorities and NGOs.
- Regular reports to local authorities and the public upon request on the Group companies' environmental protection activities, key environmental targets, including information on emission levels, measures to reduce emissions in case of unfavourable weather.
- Regular reports on the quality of hot water to local authorities and consumers upon request.
- Publication on the corporate websites of Gazprom Energoholding, Mosenergo, TGC-1, OGK-2 and MIPC and circulation through the media of information affecting the interests of local communities, other companies and local authorities in the operating regions of the Group companies when called for by a newsworthy event.



## Heat, Electricity and Capacity Buyers, Suppliers of Last Resort and Major Industrial Consumers

### Topics

- Uninterrupted heat and electricity supply
- Operational performance
- Investment programmes
- Connection terms
- Efficiency improvement
- Business development strategy

### Events and their Frequency

- Interactions with buyers on matters relating to the connection, sale and purchase of heat, electricity and capacity under standard contracts or under free bilateral contracts through the intermediary Trading System Administrator and System Operator – on an ongoing basis under existing contracts.



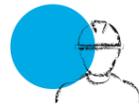
## Suppliers of Goods and Services

### Topics

- Creditworthiness
- Procurement policies and transparency
- Environmental, technical and other regulations and standards for supplier selection
- Investment programmes
- Business development strategy

### Events and their Frequency

- All information on each procurement by any company of Gazprom Energoholding Group and on the supplier selection procedure is fully disclosed to all potential suppliers at a time and without access limitations at <http://zakupki.gov.ru>, in the GazNefteorg.ru online trading system (<http://www.gazneftorg.ru/>) and on the company's corporate website.
- Gazprom Energoholding Group companies<sup>7</sup> comply with OHSAS 18001:2007 and ISO 14001:2015, particularly in procurement. All companies of Gazprom Energoholding Group establish tender committees to select suppliers of goods and services when making procurements for critical lines of business.
- All information on previous procurement contracts, including the amount and total price of goods and services, is publicly and permanently available at the websites of Gazprom Energoholding Group companies.



## Employees, Trade Unions and Industry-Related Universities

### Topics

- Uninterrupted heat and electricity supply
- Compliance with environmental regulations and standards
- Compliance with safety standards and rules
- Job creation and wage levels
- Social security and healthcare
- Professional growth and development opportunities
- Corporate culture
- Business development

### Events and their frequency

- Gazprom Energoholding Group companies have in place:
  - collective bargaining agreements;
  - employee incentive schemes;
  - employee professional training and upskilling;
  - occupational health and safety measures: compulsory medical examinations, special health and safety assessments, briefings on occupational safety;
  - sports and cultural activities;
  - employee social security: voluntary health insurance, accident insurance, recreation for employees and their families, and corporate pension schemes.
- The Group communicates with trade unions on an ongoing basis.

<sup>7</sup> Except for TGC-1.

# MEMBERSHIPS OF ASSOCIATIONS AND ORGANISATIONS

GRI 102-12, 102-13

## Associations and their Line of Action

### Regulation of the power generation market

- NP Market Council\* ..... ✓ ✓ ✓
- Council of Power Producers and Power Industry Strategic Investors ..... ✓

### Enhancing the efficiency and reliability of heat supply in Russia

- Russian Heat Supplying ..... ✓

### Protection of the interests of the renewable energy sector

- Russia Renewable Energy Development Association ..... ✓
- Hydropower of Russia Association ..... ✓

### Protection of employer interests

- Russian Industry Association of Energy Supply Employers ..... ✓ ✓ ✓

### Promotion of natural gas as motor fuel

- National Gas Vehicles Association ..... ✓ ✓ ✓ ✓

### Business development in regions

- Russian Union of Industrialists and Entrepreneurs (RSPP) ..... ✓ ✓ ✓
- Chamber of Commerce and Industry of the Leningrad Region ..... ✓ ✓
- Chamber of Commerce and Industry of St Petersburg ..... ✓

### Regulation and joint responsibility in the design and construction markets

- SRO Construction Association STROY ALLIANCE ..... ✓
- SRO Engineering Association StroyAllianceProject ..... ✓ ✓
- SRO Interregional Association of Engineering Designers ..... ✓
- SRO Construction Companies Association Interregional Construction Complex ..... ✓
- Self-Regulatory Regional Organisation of the Builders of the North Caucasus ..... ✓

### Enhancing property management

- Corporate Owners Club ..... ✓

### Consolidation of PR efforts

- RPRA – Public Relations ..... ✓ \*\*

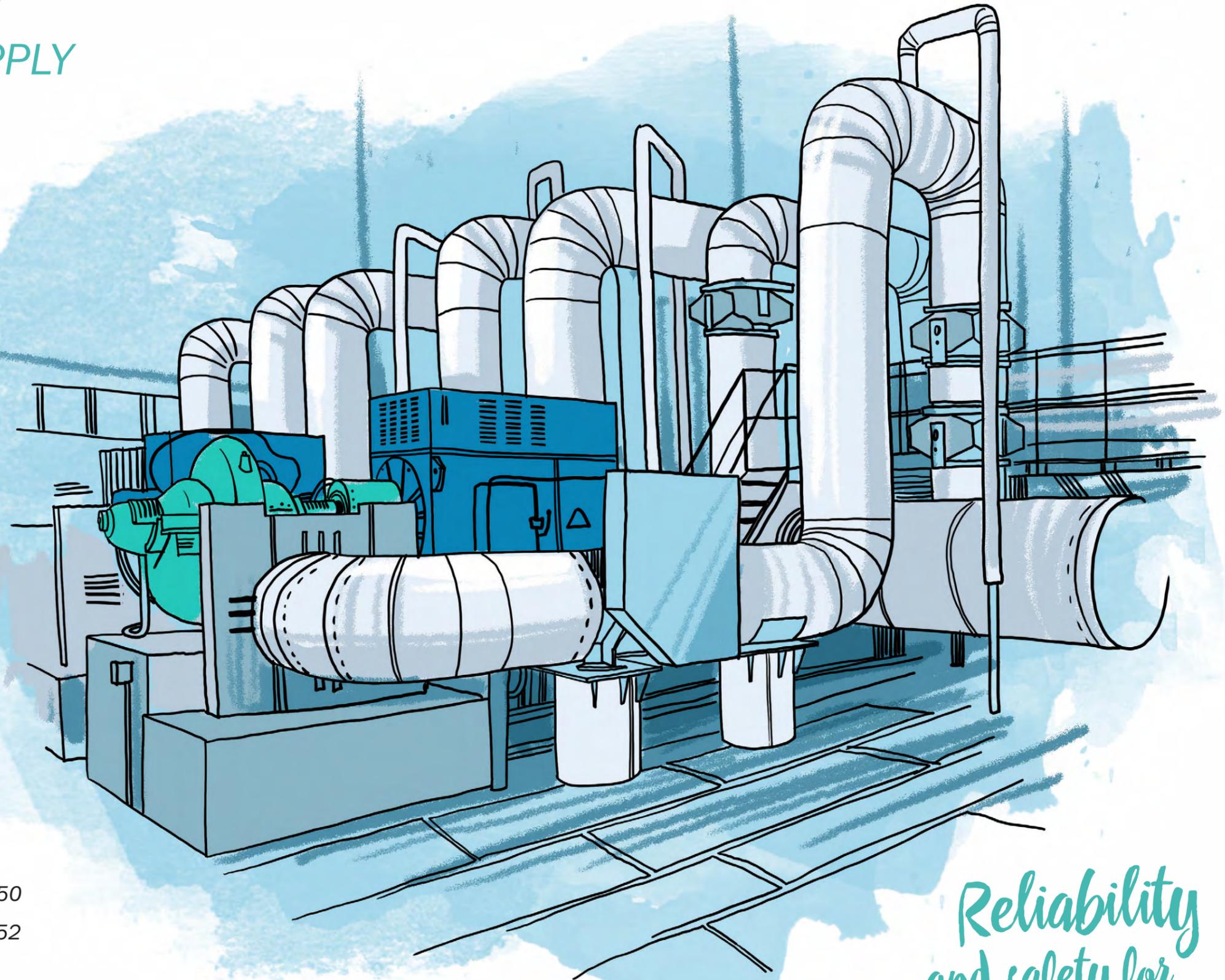
- ✓ PAO Mosenergo      ✓ PAO OGK-2      ✓ PAO Centerenergyholding
- ✓ PAO TGC-1      ✓ PAO MIPC      ✓ OOO Gazprom Energoholding

\* Mosenergo, TGC-1 and OGK-2 are on List V of the Chamber of Electric Power Sellers of NP Market Council in line with clause 1 of Article 35 of the Federal Law On Electric Energy.

\*\* North-Western branch.

# 03. Responsible

## ENERGY SUPPLY



Reliable Energy Supply and Consumer Safety During the Pandemic .....	50
Emergency Prevention .....	52
Government Relations and Engaging Other Market Participants .....	53
Innovative Development .....	54

*Reliability  
and safety for  
the consumer*

# RELIABLE ENERGY SUPPLY

## and Consumer Safety During the Pandemic

G4-DMA (previously EU6)

*Reliable energy supply is an essential aspect of social sustainability in the regions in which the Group's power plants operate. To boost operational continuity, Gazprom Energoholding Group's generating companies conduct repairs and preventive maintenance on a regular basis.*

Amid the spread of the novel coronavirus (COVID-19), Group companies implemented a range of measures to ensure reliable energy supply to consumers. The measures primarily aimed at reducing the risk of mass infection among staff.

### **In spring 2020, Gazprom Energoholding Group set up an Emergency Response Centre to prevent the spread of viral infections at its facilities and issued relevant regulations.**

The Company approved a Safety Standard that was developed to keep its workers safe during the COVID-19 pandemic through enhanced workplace cleaning and hygiene measures including cleaning protocols and requirements to access to facilities, personal hygiene standards, catering for workers, cleaning procedures for premises, and the provision of protective equipment to workers, as well as other measures to curb the spread of the coronavirus.

Temperature taking is done for all visitors at the entrance to administrative offices and production facilities.

Employees are provided with personal protective equipment (masks, gloves, etc.) and sanitiser products.

Employee are informed on disease prevention and required to strictly follow COVID-19 guidance from state and local authorities.

The number of employees working in the workplace was minimised.

TEMPERATURE TAKING IS DONE FOR

**100%**

persons, entering the facilities

**The Company identified critical power generation facilities and key staff – a special category of employees vital for operational continuity and uninterrupted operation of critical facilities, scheduled on-call shifts and prepared generating facilities for the switchover to autonomous operation with the operational staff isolating at their respective facilities.**

Contacts between the teams of various Group facilities, business units and shifts were minimised, with mass events cancelled. Working groups moved their

meetings to the videoconferencing format. Business travel was restricted, with recommendations to refrain from personal trips abroad.

### **Enhanced disinfection protocols were deployed for the Group's premises, vehicles and equipment.**

Group companies set up call centres to daily monitor the location and health of their employees. Employees who had contact with COVID-19 cases and/or showed respiratory signs are isolated.

These measures have helped to effectively keep the incidence rate down among employees. Gazprom Energoholding Group companies have reported no process disruptions due to coronavirus outbreaks.



# EMERGENCY PREVENTION

G4-DMA (previously EU21)

*In 2020, measures to protect the employees and generating assets of Gazprom Energoholding Group companies from natural and industrial emergencies were planned and implemented, taking into account the requirements, instructions and recommendations by the EMERCOM of Russia, the Russian Ministry of Energy and PJSC Gazprom.*

Gazprom Energoholding's effort was focused on improving the Group's civil protection system during the reporting period. Regulations and instructions specifying measures to protect the employees and generating facilities from the impacts of potential emergencies were implemented.

Coordination of emergency response and prevention measures at the facilities operated by the Group's generating companies is done by respective commissions for emergency response and prevention, and fire safety.

Courses have been developed at Gazprom Energoholding Group companies to educate employees in civil defence and emergency response, while new employees take relevant briefings. In delivering relevant training, Group companies focus on further enhancing the employees' ability to properly and adequately respond to threats and hazards related to emergencies that are specific to the areas in which the power facilities are located.

Exercises and drills are also run to improve employees' practical skills, involving Gazprom Energoholding Group

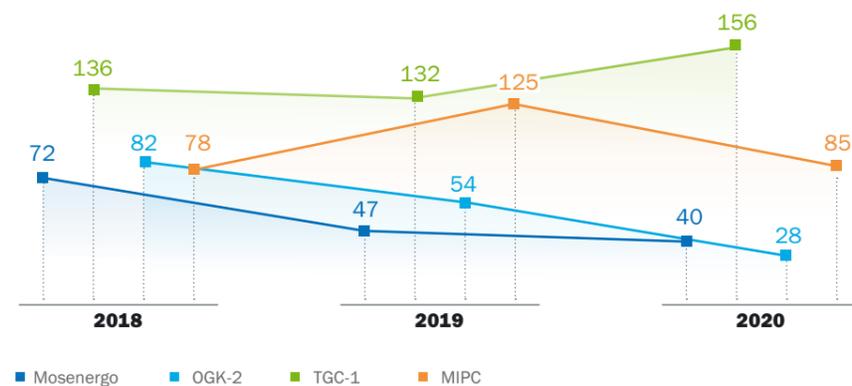
employees, volunteer emergency response teams, emergency service representatives and the teams and equipment of EMERCOM's local units. During the course of the exercises and drills, Gazprom Energoholding's emergency response management teams proved their ability to promptly make reasonable decisions while employees acted in an organised way and demonstrated well-developed practical skills.

**ACCORDING TO MIPC, THERE WERE HEAT SUPPLY DISRUPTIONS IN 2020**

**631** including:

**550** – hot water supply,  
**81** – district heating

**Emergency Response and Prevention Exercises and Drills in 2018–2020**



# GOVERNMENT RELATIONS

## and Engaging Other Market Participants

Gazprom Energoholding Group is always open to discussion of proposed legislation affecting the Group's business. To this end, experts from Group companies are actively involved in discussions held on various platforms to ensure the Group's interests are taken into account.

**In 2020, Gazprom Energoholding Group's representatives upheld the Group's corporate interests during the discussion of proposed amendments to legislation related to:**

- a salvo selection of projects to be upgraded with Russian-made innovative turbines as part of the Competitive Selection of Capacities for Modernisation programme (heat generation);
- improving the procedures for taking generating equipment out of service for maintenance or decommissioning;
- paying for electricity transmission services with due consideration of payments for reserved maximum capacity;
- establishing a common electricity market of the Eurasian Economic Union;
- extending the mechanism stimulating the development of renewable energy sources until 2035;
- stimulating the development of renewable energy sources in the retail electricity market;
- developing a mechanism to support voluntary demand for renewable energy (introduction of green certificates);
- improving the mechanisms of the wholesale electricity and capacity markets;
- transferring infrastructure facilities, including ownerless heat sources, to heat supply companies;
- amending the Russian Urban Development Code to improve the connection procedure to centralised heat supply;
- improving the procedure for signing and implementing concession agreements;
- imposing restrictions when recovering debt in the utilities sector;
- amending legislation on energy saving and energy efficiency as regards payments for energy resources, installation, maintenance and replacement of metering equipment at consumers' premises;
- building the concept for a new heat supply regulation method based on benchmarks and supporting legal acts;
- determining consumer responsibility for paying for electricity transmission services with due consideration of payments for reserved maximum capacity;
- determining the legal framework for recovering overdue debt from individuals;
- preparing the positions on Russia's Energy Strategy to 2035 and the Development Strategy of the Housing and Utility Sector to 2035.

### PENDING MATTER

One of the 2020 highlights was adopting a set of decisions that helped achieve for the first time a 100% payment collection rate in the North Caucasus, with the recovery of debt owed to Group companies started in the region. This was enabled through financial support from PAO ROSSETI and a range of additional measures to promote payment discipline in problem regions.

However, after 8 months, power grid operators in the region required additional financing to perform their cur-

rent obligations. As a result, in May 2021, the region's power suppliers, including OGK-2, were once again forced to impose penalties, block accounts and recover debts through courts.

Thus, the initial successes in recovering the region's debts achieved in 2020 were undone, and the situation once again requires a solution.

# INNOVATIVE DEVELOPMENT

*Technology innovation is key to achieving the Group's main goals: reduce costs and improve the efficiency of business processes. Gazprom Energoholding Group has a huge research and engineering capabilities, with specialists across a range of domains and dedicated talented people capable of developing the most advanced technologies and solutions.*

Gazprom Energoholding Group's innovation policy is aligned with the Russian national policy on innovation, which aims to accelerate the transition of the country's economy towards innovation-driven development.

The Concept of the Technical Policy and Development of Generating Companies (published on

24 May 2011) serves as key guidance for the development and implementation of R&D and technical policies of the Group companies.

The key purpose of the Concept is to increase the competitiveness of the Group companies in the energy sector by optimising the operating and technological capabilities of its power plants.

## AREAS, THE GROUP FOCUSES ON TO ACHIEVE THE CONCEPT GOALS:



**MINIMISING** specific fuel consumption for heat and electricity generation by implementing cutting-edge technology and advanced, high-efficiency equipment



**INCREASING** automation in heat and electricity generation to reduce process control and production costs



**STREAMLINING** plant repair and maintenance of property, plant and equipment at power plants



**COMPLYING** with environmental requirements in line with international commitments and national standards

## INNOVATIVE TECHNOLOGIES CURRENTLY APPLIED BY THE GROUP INCLUDE:

- »»»» Upgrading the existing equipment through streamlining the cycle design for power units, turbines, boilers and auxiliary equipment;
- »»»» Using CCGTs with efficiencies over 55%;
- »»»» Revamping boilers and gas turbines leveraging leading-edge solutions and replacing individual heating surfaces and turbine cylinders.

In 2020, Group companies explored opportunities to improve energy and fuel efficiency, develop innovative solutions, test equipment, draft methodologies, etc. under 43 R&D contracts.

**IN 2020, THE AMOUNT OF COMPLETED R&D ROSE BY**

**355.2** RUB mm

net of VAT  
(in 2019: RUB 258.4 mm net of VAT)

**IN 2020, THE AMOUNT OF COMPLETED R&D ROSE BY**

**37.5%**

from 2019

The amount of successful R&D in 2020 totalled RUB 355.2 million net of VAT (2019: RUB 204.4 million net of VAT).

G4-DMA (previously EU8)

Engagements between generating companies and researchers have resulted in the implementation of R&D projects to enhance efficiency and rational use of resources.

## Gazprom Energoholding Group's Case Example

Mosenergo is implementing a combined flue gas heat recovery system for regasification of backup fuel and the plant's operational needs, which will enable using power plants' secondary energy resources in the production of liquefied natural gas (LNG) for its further use as backup fuel for power plants and commercial sale in the regional market.

The first stage of the project has already been completed, which included the development of technical specifications and operating modes of an LNG regasification facility. In 2019–2020, efficiency calculations were carried out for several power plants, and a pilot LNG regasifier using reused water heat was manufactured and tested. The facility is expected to deploy Russian-made equipment only.

## EMBEDDING DIGITAL SOLUTIONS INTO OPERATIONS OF THE GROUP'S GENERATING COMPANIES

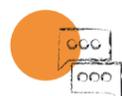
In 2020, Gazprom Energoholding Group companies made efforts to improve and further develop previously implemented digital solutions:



Energy consumption metering systems;



Single Online Account, a digital remote service for corporate clients;



Chatbot, an interactive tool to communicate with customers, and automated customer request processing systems.

In IT projects, Gazprom Energoholding Group companies gradually switch to predominantly using Russian-made software included in the Unified Register of Russian Programmes for Electronic Computers and Databases, as well as the equipment included in the Unified Register of Material and Technical Resources approved for use at Group companies' facilities and complying with PJSC Gazprom's requirements.

When procuring software and IT equipment, priority is given to Russian-made goods and works and services performed by Russian entities<sup>8</sup>.

In 2020, Gazprom Energoholding Group implemented a range of digital solutions to automate and improve the operational efficiency of its business processes. The most significant of them are the following.



- A system for information and analytical modelling of operating modes, planning of optimal modes, and calculation of Mosenergo TPPs' technical and economic performance (TEP) as part of implementing the Profit Margin module. The system automates calculations of actual, nominal, reference and forecast TEP indicators, enables the selection of optimal equipment and operating mode online, thus driving fuel savings through maintaining an optimal mode and margins through accurate calculation of electricity costs and optimal schedules of electricity and heat generation.
- Mosenergo's process information system collects primary process data from various sources, stores these data, feeds them into analytics tools, and transfers them to related industry systems.



- Employees have been provided with digital radio equipment – a reliable prompt communications solution supporting maintenance and operation of distributed energy facilities.



- The generating company's corporate geographic information system supports the management of its distributed assets and improves the performance of its branches through a geographic approach and 3D visualisation.



- Improvement of the Enterprise Service Bus modules for integrating MIPC's Unified Information System of Heat Supply Facilities Accounting with the Open Data Portal of the Moscow Government. Implementation of functionality to inform the Moscow Government online about hot water shutdowns in summer.
- Development of the Upravdom 2.0 automated information system. Implementation of Federal Law No. 59-FZ On Amendments to the Housing Code of the Russian Federation, dated 3 April 2018, which stipulates the obligation of resource suppliers to sign direct utility service contracts with owners of apartments in blocks of flats.

<sup>8</sup> Pursuant to Resolution No. 925 of the Russian Government On Priority of Goods of Russian Origin and Work Done and Services Provided by Russian Persons Over Goods Originating From a Foreign State and Work Done and Services Provided by Foreign Persons, dated 16 September 2016.

# 04. Economic PERFORMANCE



Economic Performance .....	60
Financial and Operating Results .....	62
Supply Chain .....	66
Anti-corruption .....	68

Effective  
solutions

# ECONOMIC PERFORMANCE

GRI 103-2

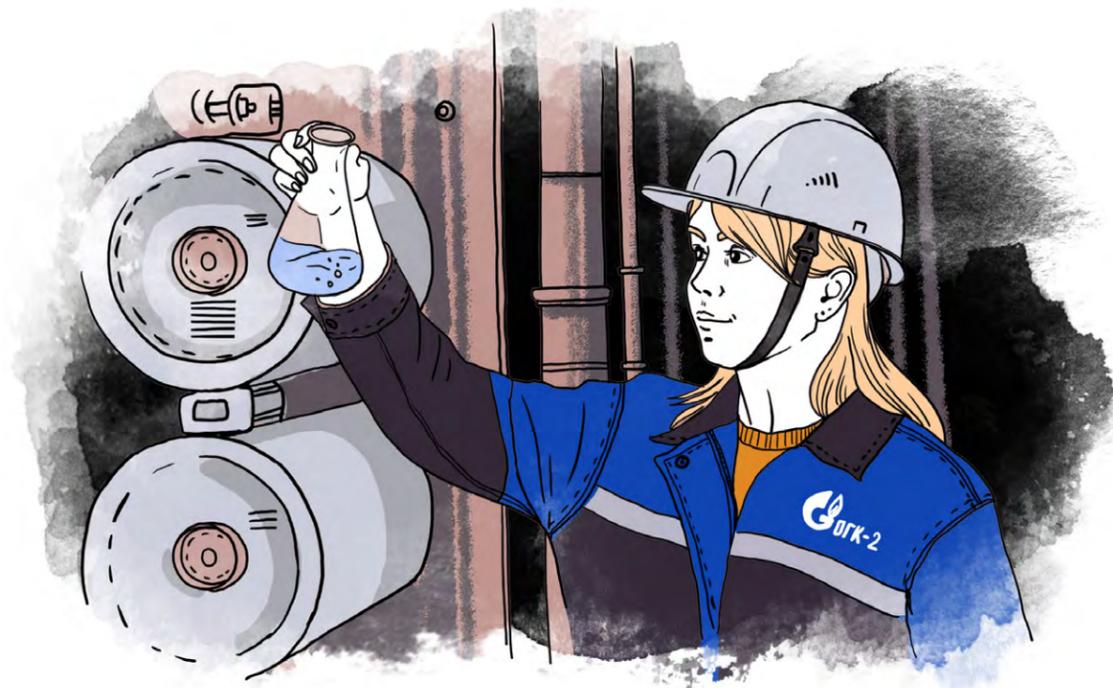
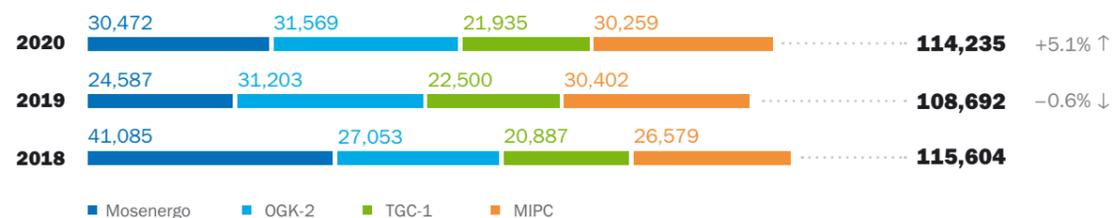
*The Group's generating companies are the principal heat and electricity suppliers to both households and industrial consumers in their operating regions.*

The economic sustainability and performance of our companies has therefore an important social impact on all heat and electricity consumers.

KPIs are central to tracking economic sustainability and performance metrics by top management

of Gazprom Energoholding Group. The annually updated KPI targets of top management include, among others, indicators reflecting both the current status and potential economic performance of the Group companies. In 2020, most of the targets were met or even significantly exceeded.

## EBITDA (IFRS), RUB mm



## Performance against KPI targets for top management<sup>9</sup>

	Mosenergo				TGC-1			
	2019		2020		2019		2020	
	Plan	Actual	Plan	Actual	Plan	Actual	Plan	Actual
EBITDA, RUB mm	32,557	32,866	26,601	30,582	18,513	19,603	15,824	17,340
Net debt/EBITDA	-0.70	0.44	0.49	0.25	0.33	0.66	0.81	0.74
Net profit, RUB mm <sup>10</sup>	13,391	16,464	9,131	14,266	9,451	9,495	6,426	6,763
Return on average capital employed (ROACE)	0.043	0.043	0.026	0.038	0.076	0.088	0.060	0.070
Net working capital, RUB mm	71,584	80,766	73,460	82,063	12,099	11,813	6,985	17,901
Inventory turnover, days	47.4	46.4	55.0	52.3	37.1	36.7	41.0	41.0
Accounts receivable growth to revenue growth ratio (excluding Group sales)	1.09	1.14	1.37	1.15	1.00	0.85	1.23	1.09
Ordinary expenses, RUB mm	175,628	172,248	169,097	165,739	79,562	78,988	74,584	74,190
Maximum wage growth rate	104.6	104.6	103.4	103.0	110.7	109.5	108.2	107.2

	OGK-2				MIPC <sup>11</sup>			
	2019		2020		2019		2020	
	Plan	Actual	Plan	Actual	Plan	Actual	Plan	Actual
EBITDA, RUB mm	29,275	32,762	27,542	29,895	22,052	22,281	10,780	11,586
Net debt/EBITDA	0.76	1.33	1.62	1.50	1.11	1.18	2.75	2.56
Net profit, RUB mm <sup>10</sup>	11,556	11,852	12,139	12,741	8,355	11,629	10,363	12,274
Return on average capital employed (ROACE)	0.083	0.097	0.064	0.067	0.069	0.065	-0.005	0.000
Net working capital, RUB mm	8,055	792	1,461	21,605	-41,791	-15,715	-26,130	-17,865
Inventory turnover, days	79.5	80.0	103.0	99.0	136.0	130.0	148.0	141.0
Accounts receivable growth to revenue growth ratio (excluding Group sales)	1.20	1.00	1.48	1.04	0.91	0.97	1.18	0.99
Ordinary expenses, RUB mm	116,631	112,472	105,517	102,026	143,312	137,547	139,960	138,870
Maximum wage growth rate	105.9	105.4	106.2	104.7	98.8	98.7	104.9	104.8

<sup>9</sup> KPI data taken from RAS statements.

<sup>10</sup> Data for OGK-2 exclude unplanned income/expenses.

<sup>11</sup> 2020 metrics (EBITDA, Net Debt/EBITDA, ROACE) exclude the uncontrollable factor (connections).

# FINANCIAL AND OPERATING RESULTS

GRI 103-3, 201-4

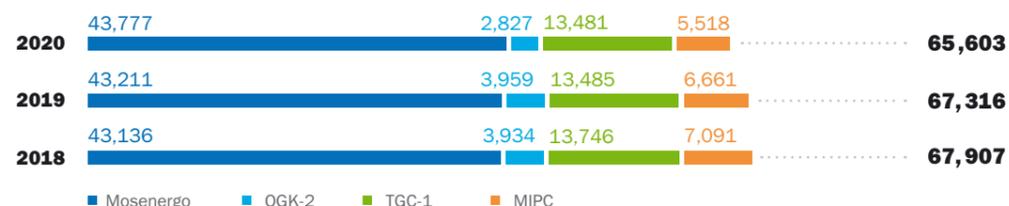
## OPERATING PERFORMANCE

Sustainable performance of power plants and heat networks of the Group companies ensured reliable heat and electricity supply to consumers in relevant operating regions, including Moscow and St. Petersburg.

### Installed Electricity Capacity, MW



### Installed Heat Capacity, Gcal/h



BY THE END OF 2020 TOTAL INSTALLED ELECTRICITY CAPACITY OF GAZPROM ENERGOHOLDING GROUP COMPANIES<sup>12</sup> WAS

# 37,358

MW

down 3.6% year-on-year

BY THE END OF 2020 TOTAL INSTALLED HEAT CAPACITY OF GAZPROM ENERGOHOLDING GROUP COMPANIES WAS

# 65,603

Gcal/h<sup>13</sup>

down 2.6% year-on-year

Installed capacity was affected by the following opposing factors:

Commiss-ioning	Decom-missioning	Comments
1,080	-	Sale of the Tushino-1, 2, 3 and 4 district heating stations (240, 180, 480 and 180 Gcal/h) to Mosenergo as from 1 May 2020
-	480	Return of the Biryulevo district heating station as from 1 April 2020 back to MIPC following the lease expiry, with subsequent decommissioning
-	34	Decommissioning of the Severnaya subdistrict heating station as from 1 November 2020 – 34 Gcal/h

<sup>12</sup> Only for Mosenergo, TGC-1 and OGK-2, as MIPC does not have installed electricity capacity.

<sup>13</sup> Including MIPC's installed heat capacity of 5,518.6 Gcal/h.



Commiss-ioning	Decom-missioning	Comments
6	-	Re-rating of Unit No. 10 at Troitskaya GRES as from 1 March 2020
-	110	The GTE-110 gas turbine unit and the TG-2 turbine of Unit No. 1 at GRES-24 (part of Ryazanskaya GRES), as from 1 September 2020
-	40	The TG-6T turbine generator of the R-40-130-7 turbine at Kirishskaya GRES, as from 1 October 2020
-	1,260	Termination of lease for Krasnoyarskaya GRES-2 as from 1 October 2020
7.4	-	The water-to-water heat exchanger at Adlerskaya TPP, as from 19 March 2020
-	976	Termination of lease for Krasnoyarskaya GRES as from 1 October 2020
-	164	The TG-6T turbine generator of the R-40-130-7 turbine at Kirishskaya GRES, as from 1 October 2020

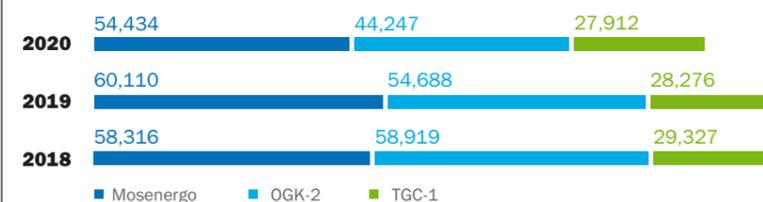


Commiss-ioning	Decom-missioning	Comments
8	-	Upgrade of the hydropower unit of Unit No. 4 at Verkhne-Tulomskaya HPP-12 as from 8 March 2020
-	1.1	Re-rating of the GA-1 and 2 hydropower units at Niva HPP-1 as from 1 January 2020
20	-	Re-rating of the peak water boiler at Severnaya CHPP-21 as from 1 January 2020
7.5	-	Re-rating of the PTWM-50 boiler of Unit No. 9 at Murmanskaya CHPP as from 1 January 2020
-	30	Decommissioning of the GM-50-14/250 boiler unit of Unit No. 3 at Tsentralnaya CHPP (Power Plant No. 1) as from 1 July 2020
0.94	-	Revamp of the Vilga, Vilga (Military Camp) and Sheltozero boiler houses (Karelsky Branch)
-	2.75	Ladva (vocational school) – closed for revamp as from 1 October 2020 (Karelsky Branch)

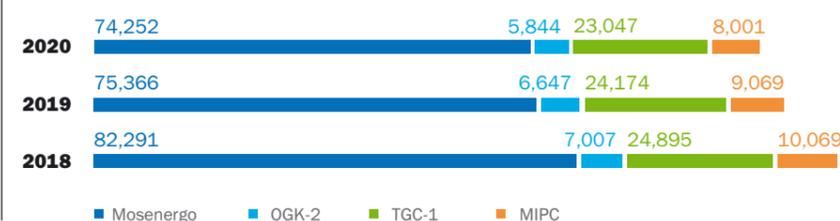


Commiss-ioning	Decom-missioning	Comments
-	15.1	Facilities of the Ministry of Defence, as from 3 February 2020; diesel-fired steam boilers, as from 1 January 2020
-	1,080	Sale of the Tushino-1, 2, 3 and 4 district heating stations (240, 180, 480 and 180 Gcal/h) to Mosenergo as from 1 May 2020
0.119	-	Retrofit of the Zakharyino subdistrict heating station as from 1 November 2020
-	47.5	The Kaskadnaya minor boiler house, the Kosino subdistrict heating station, the MK-321 minor boiler house decommissioned

### Electricity Output, mm kWh



### Net Heat Supply, thousand Gcal



**TOTAL ELECTRICITY GENERATED<sup>14</sup> IN 2020**

**126,593** million kWh

down 11.5% year-on-year

This reduction was uneven across regions. Following oil production curbs in May 2020, the biggest drops in electricity consumption were observed in the Tyumen region (-8.0%) and the Urals Integrated Power System (-5.4%) due to the local concentration of oil companies, followed by the Central Volga (-4.2%), North-West (-2.9%), Centre (-0.8%), and South (-0.6%) integrated power systems.

The largest decrease in prices in the day-ahead market (DAM) vs rest of Russia was recorded in 2020 within the North-West Integrated Power System (-9.1%). The key factors included the increase in cheap supply from hydro-

The reduced level of electricity generation by the Group was due to a 4% year-on-year decrease in electricity demand within the first price zone caused by restrictions affecting the operations of enterprises and organisations, including OPEC+ restrictions, lower exports to Finland and the Baltic states, and an abnormally warm winter.

power generation, as well as falling electricity exports to neighbouring countries. A significant year-on-year drop in DAM prices was seen in the South (-7.6%) and Centre (-7.3%) power systems. Lower prices within the Centre Integrated Power System were due to an 8% increase in NPP generation across the power system, with the doubling of renewable generation in the South Integrated Power System further contributing to suppressed DAM prices in the region. Switching off some of the operating equipment at major power plants including Permskaya, Karmanovskaya, Yuzhnouralskaya, Nizhnevartovskaya GRESs partially offset the decrease in demand and minimised the price drop in the Urals Power System (-3.6%).

**The changes in electricity generation were due to the following opposing factors:**



- A 2% increase in capacity utilisation at hydropower plants due to high water levels;
- Priority capacity utilisation of nuclear power plants (up 2% year-on-year);
- A decrease in consumption by 0.8% in the Centre Integrated Power System, and by 1.4% in the power system of Moscow and the Moscow Region<sup>15</sup>;
- Higher air temperatures (the average air temperature in the autumn and winter of 2020 was +2.7°C compared to +2.1°C in 2019);
- A 4% decrease in electricity demand within the first price zone due to COVID-19 restrictions;
- Optimisation of equipment mix and operation modes by increasing the share of CCGTs in generation.



- Restrictions affecting the operations of enterprises and organisations during the pandemic;
- Reduced exports to Finland and the Baltic States;
- A significantly warmer heating season in the regions of operation;
- High river levels in the Karelsky and Kolsky Branches.



- Energy prices outpacing electricity sales prices;
- Minimising the amount of operating generating equipment at Ryazanskaya GRES, Novochoerkasskaya GRES, Stavropolskaya GRES, and Pskovskaya GRES to reduce the operating time of non-marginal equipment, by forming price bids during the procedure to optimise operating generating equipment;
- Reducing the utilisation of equipment at Krasnoyarskaya GRES-2 and transferring said equipment to the new owner;
- Reducing the utilisation of equipment at Surgutskaya GRES-1, Kirishskaya GRES, Cherepovetskaya GRES, and Troitskaya GRES as requested by the System Operator due to a lower demand for generation within the Integrated Power System.

**THE TOTAL HEAT SUPPLY BY GAZPROM ENERGOHOLDING GROUP'S GENERATING COMPANIES IN 2020 AMOUNTED TO**

**111,145** thousand Gcal

down 3.6% year-on-year

As heat supply levels are seasonal and highly contingent on weather, the key factors affecting the output across Gazprom Energoholding Group companies included higher air temperatures in 2020 compared to 2019. In addition, Mosenergo's and MIPC's performance was affected by consistent switching from boiler houses to CHPPs for heat production and connection of new consumers in the Moscow region.

**FINANCIAL PERFORMANCE**

GRI 201-1

**Direct Economic Value Generated and Distributed, RUB mm**

	Mosenergo			TGC-1		
	2018	2019	2020	2018	2019	2020
<b>Direct economic value generated</b>	<b>202,316</b>	<b>193,965</b>	<b>185,838</b>	<b>92,661</b>	<b>97,563</b>	<b>89,470</b>
Revenue	198,870	189,777	180,908	92,455	97,256	88,889
Income from financial investments	3,760	4,412	4,013	167	296	566
Income from sale of assets	-314	-224	917	39	11	15
<b>Economic value distributed</b>	<b>179,150</b>	<b>188,629</b>	<b>179,144</b>	<b>82,546</b>	<b>92,494</b>	<b>83,993</b>
Operating costs	153,512	166,755	158,539	67,177	74,766	65,255
Employee wages and benefits	10,953	11,540	12,070	8,225	9,234	9,930
Payments to providers of capital	6,566	8,307	4,784	2,913	4,318	5,167
Payments to government	8,110	2,007	3,751	4,216	4,161	3,627
Community investments/philanthropy	9	20	-	15	15	14
<b>Economic value retained</b>	<b>23,166</b>	<b>5,336</b>	<b>6,694</b>	<b>10,115</b>	<b>5,069</b>	<b>5,477</b>

	OGK-2			MIPC		
	2018	2019	2020	2018	2019	2020
<b>Direct economic value generated</b>	<b>143,734</b>	<b>135,701</b>	<b>122,407</b>	<b>163,459</b>	<b>159,901</b>	<b>156,603</b>
Revenue	143,227	134,579	120,687	162,841	159,378	156,132
Income from financial investments	507	1,122	895	618	523	471
Income from sale of assets	-	-	825	-	-	-
<b>Economic value distributed</b>	<b>135,520</b>	<b>127,121</b>	<b>114,354</b>	<b>148,056</b>	<b>149,635</b>	<b>142,000</b>
Operating costs	114,426	103,910	89,563	125,552	126,467	120,742
Employee wages and benefits	8,824	9,375	9,485	17,069	16,938	16,951
Payments to providers of capital	5,927	7,808	8,955	355	2,002	1,014
Payments to government	6,336	6,022	6,344	5,080	4,228	3,293
Community investments/philanthropy	7	7	7	-	-	-
<b>Economic value retained</b>	<b>8,214</b>	<b>8,580</b>	<b>8,053</b>	<b>15,403</b>	<b>10,266</b>	<b>14,603</b>

<sup>14</sup> Mosenergo, TGC-1 and OGK-2 only, as MIPC does not generate electricity.

<sup>15</sup> According to the System Operator of the United Power System.

# SUPPLY CHAIN

GRI 102-9, GRI 301-1

Fuel is the key resource in generating heat and electricity. Fuel costs also dominate the variable cost structure<sup>16</sup> of each of the Group's generating companies, excluding MIPC.

	2019			2020		
	Fuel costs, RUB mm	Variable costs, RUB mm	Share of fuel costs in variable costs, %	Fuel costs, RUB mm	Variable costs, RUB mm	Share of fuel costs in variable costs, %
Mosenergo	113,985	127,536	89.4	108,020	121,011	89.3
TGC-1	36,437	49,519	73.6	31,877	43,634	73.0
OGK-2	58,620	67,725	86.4	50,763	58,134	87.3
MIPC	6,881	100,277	6.9	6,208	97,057	6.4

The structure of the Group's fixed costs is dominated by staff, maintenance and repair, and tax costs.

## Gazprom Energoholding Group's fuel procurement strategy is aimed at optimising the fuel mix to minimise costs.

Diversifying supplies to Gazprom Energoholding Group depends on the fuel mix used and distances between generating facilities. For example, low supply diversification levels at Mosenergo and TGC-1 are due to the high regional concentration of their generation fleets as well as the use of gas as a primary fuel by the majority of power plants operated by the companies. One exception is Apatitskaya CHPP of TGC-1, which sources coal under long-term contracts from the Kuznetsky coal basin, Sayano-Partizanskoye field (Krasnoyarsk Territory) and Chernogorskoye bituminous coal field of the Minusinsky coal basin (Republic of Khakassia).

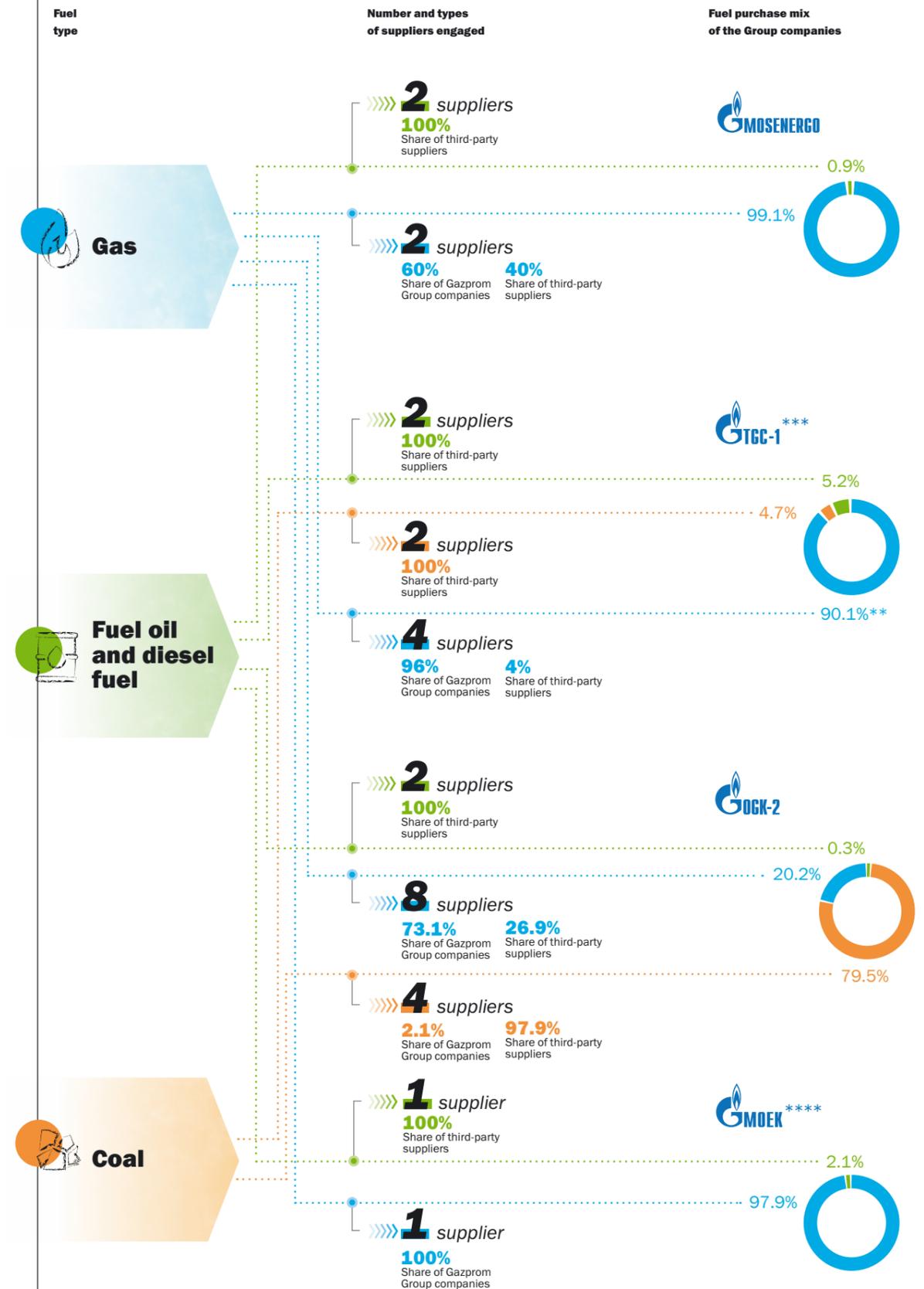
OGK-2 is focused on partnerships with regional coal suppliers to optimise fuel costs by sourcing gas and various types of coal as feedstock for its power plants. In 2020, different branches of the Company sourced coal from the Kansko-Achinsky, Podmoskovny, Ekibas-

tuzsky and Kuznetsky coal basins, Borodinsky, Pereyaslovsky, Lvovsky, and Ekibastuzsky open-pit coal mines as well as from Eastern Donbass under long-term supply contracts.

There were no material changes in the supply chain of Gazprom Energoholding Group companies in 2020.

Counterparties enjoying excellent reputation and complying with legislation as well as corporate and business ethics are given unconditional priority. Gazprom Energoholding Group selects suppliers and contractors mostly through competitive bidding. All supplier relations are based on a responsible partnership approach, regardless of their share in the supply chain structure. The Group is committed to maintaining long-term, stable and mutually beneficial relations with its suppliers.

# SUPPLY CHAIN DIAGRAM\*



\* The supply chain diagram above shows major suppliers and their shares in the Group's purchasing costs for key fuels (natural gas and coal) used for power generation in 2020. The Group used a materiality threshold to identify major suppliers: the diagram shows suppliers whose share in the Company's costs for any given fuel exceeds 5%.  
 \*\* Including agreements signed following trading on the Saint Petersburg International Mercantile Exchange.  
 \*\*\* Including AO Murmanskaya CHPP, a subsidiary.  
 \*\*\*\* Including subsidiaries and affiliates.

<sup>16</sup> The table data includes subsidiaries covered by IFRS reporting.

## PROCUREMENT FROM SMES

GRI 204-1

In 2015, the Regulations on the Procurement of Goods, Works and Services by PJSC Gazprom and Gazprom Group Companies were amended to provide small and medium-sized enterprises (SMEs) with exclusive access to certain procurement opportunities and to introduce procurement tenders that require bidders to ensure engagement of SMEs as sub-suppliers (sub-contractors or co-contractors).

**IN 2020, THE SHARE OF FUEL PROCURED FROM LOCAL SUPPLIERS ACROSS THE OPERATING REGIONS<sup>17</sup> OF GAZPROM ENERGOHOLDING GROUP COMPANIES STOOD AT**

**96%**  
up 1% year-on-year

**The Share of SMEs in All Procurement Contracts Awarded During the Year, %**

	2019	2020	Statutory minimum
Mosenergo	25.00	29.79	20.00
TGC-1	27.00	39.00	20.00
OGK-2	22.00	25.00	20.00
MIPC	59.00	34.20	20.00

# ANTI-CORRUPTION

*Gazprom Energoholding Group has embedded and fosters a culture of zero tolerance for corruption. Employees of the Group's generating companies, both in Russia and abroad, abide by established requirements and restrictions of anti-corruption laws.*

The Group companies have a zero tolerance for any forms of illegal influence on the decisions of government agencies, including bribes, unacceptable gifts, employing family members of public officials, and charitable support and sponsorship upon the request of public officials employed at government agencies.

All anti-corruption efforts at the Group are implemented in strict compliance with applicable Russian laws.

The Group takes active and consistent measures to prevent corrupt practices involving its employees. Anti-corruption policies and methods have been included in the Group's internal documents and communicated to employees at all levels. Specific business units and officers were assigned corruption prevention responsibilities. New hires are required to provide a signed acknowledgement of reading the Code of Corporate Ethics which covers, inter alia, anti-corruption issues.

GRI 205-3

## No confirmed corrupt practices involving employees of Gazprom Energoholding Group companies were identified in 2020.

There were no instances of non-renewal or termination of contracts with business partners due to corruption, nor corruption-related legal action against the Group's generating companies or their employees in the reporting period.

Gazprom Energoholding has developed dedicated training courses to help the Group employees master the Code of Corporate Ethics and anti-corruption policies and methods. All employees at Mosenergo, OGK-2, TGC-1, MIPC and Gazprom Energoholding, the Group's parent company, have access to these courses. The training includes both in-person and distance learning classes.

IN 2020

**> 30,000**

blue-collar employees, managers and specialists underwent training in anti-corruption policies and methods

The Group companies provide specialised training to their anti-corruption officers. A total of four employees from dedicated business units specialised in protecting corporate interests of the Group companies were trained on anti-corruption policies and methods in 2020. MIPC additionally organised individual consultations for employees on the application of (compliance with) anti-corruption procedures and standards of conduct.

GRI 102-17

### The Group companies operate



**HOTLINE**



**EMAIL ADDRESS**

**for reporting on violations of the Code of Corporate Ethics, including cases of actual or attempted acts of corruption.**

**Information of this kind is promptly escalated to the Corporate Ethics Commission and the Corporate Security Directorate.**

The list of documents governing anti-corruption activities at the Group's generating companies is provided in Appendix 9.

<sup>17</sup> Local suppliers across the operating regions mean suppliers based (having a legal address) in the operating regions of OGK-2's branches and territorial companies of TGC-1, Mosenergo and MIPC.

# 05. Environmental PROTECTION



Environmental Policy and Standards.....	72
Energy Efficiency and Resource Conservation.....	79
Emissions of Greenhouse Gases (GHG) and Pollutantsy.....	84
Waste Generation and Disposal.....	87
Water Efficiency .....	91
Biodiversity Protection .....	94

*Responsibility  
to future  
generations*

# ENVIRONMENTAL POLICY AND STANDARDS

GRI 103-2

Gazprom Energoholding Group is committed to sustainability principles based on a socially acceptable balance between maintaining economic growth whilst preserving a healthy environment for future generations. These commitments are part of the Environmental Policy of Gazprom Energoholding as approved by its Research and Development Council on 31 March 2017.



**As part of the People for Nature project supported by the EU, since 2019, WWF Russia has been publishing an environmental transparency rating of fuel-based power and heat generating companies operating in Russia.**

**The results of the 2020 rating were announced in December:**

Rank	Company	Final score	Dynamics of ranks*
1	Irkutskenergo	1.65	0
<b>2</b>	<b>Mosenergo</b>	<b>1.52</b>	<b>-</b>
<b>3</b>	<b>OGK-2</b>	<b>1.40</b>	<b>-</b>
4	Enel Russia	1.30	-1
5	Inter RAO	1.21	2
6-7	Lukoil (energy assets)	1.11	-1
<b>6-7</b>	<b>MIPC</b>	<b>1.11</b>	<b>-</b>
<b>8</b>	<b>TGK-1</b>	<b>1.03</b>	<b>-</b>
9	Tatenergo	0.98	-5
10	Unipro	0.75	0
11	Siberian Generating Company	0.65	-3
12	TGK-14	0.61	-6
13	RAO ES of East	0.52	-11
14-15	T Plus	0.36	0
14-15	TGK-2	0.36	-2
16	Fortum	0.32	-7
17	TGK-16	0.31	-4
18	Quadra	0.14	-

The rating looks at the quality of corporate environmental management, using evaluation criteria that are more often than not significantly stricter than the requirements of Russian environmental laws. The rating seeks to promote the efforts to reduce environmental footprint and enhance the efficient use of natural resources, and foster socially responsible business in Russia.

\* In the 2019 rating Mosenergo, TGC-1, OGK-2 and MIPC were evaluated as part of Gazprom Energoholding.

The Group's generating companies directly use natural resources in their operations and impact the environment. Their environmental footprint is a straightforward result of their core operations, i.e. electricity and heat generation, to include:

- emissions of pollutants and greenhouse gases (GHG)
- wastewater discharge into water bodies

- industrial waste generation and disposal
- physical factors: noise, heat, vibration, electromagnetic fields.

Being fully aware of its responsibility for preserving a healthy environment and environmental safety towards society, the Group made certain commitments in line with its Environmental Policy goals.

## Environmental Policy Goals and Commitments

### Legal compliance

Ensure compliance with the legal requirements of international environmental laws, Russian laws, laws of the Company's operating regions, and internal rules of the Company and its subsidiaries related to the environment.

### Precautions and prevention

Prevent negative environmental impacts, which means that prevention takes precedence over response to such impacts.

### Mitigation

Mitigate negative environmental impacts, make best efforts to preserve biodiversity.

### GHG emission commitments

Reduce specific GHG emissions.

### Effectiveness and efficient use of resources

Improve the energy efficiency of production processes.  
Use natural and energy resources efficiently.

### Employee engagement

Engage employees in environmental risk mitigation. Commitment to continuously improve environmental performance.

### Precautionary approach to investment projects

Embed environmental risk mitigation measures across all stages of investment project implementation, including for impacts on vulnerable natural sites and sites whose protection and conservation are of special importance.

### Transparency

Ensure transparency and availability of information on environmental protection activities and decisions.

### Training

Build employee environmental protection skills and awareness.

### Use of advanced technology

Use the best available technology throughout production processes.

GRI 102-11

In its activities, the Group applies the precautionary principle as approved by the 1992 United Nations Conference on Environment and Development<sup>18</sup>.

**The environmental policies of Group companies take into account the specifics of existing facilities and their regions of operation.**

- Mosenergo's Environmental Policy as approved by its Managing Director on 5 December 2016 defines the company's objectives in negative impact mitigation and its environmental protection commitments.
- TGC-1's Environmental Policy was approved by resolution of the Board of Directors on 20 March 2017. The key objectives of the Environmental Policy are to reduce the company's environmental footprint and increase its level of social responsibility.
- OGK-2's Environmental Policy was updated and introduced by an order of its Managing Director on 31 August 2020. The key objectives of the Environmental Policy are to reduce the company's negative environmental impacts and increase its level of social responsibility.
- MIPC's Environmental Policy was updated and introduced on 1 March 2020. The document defines key focus areas for improving the efficiency of using non-renewable resources and minimising potential negative impacts.

**ENVIRONMENTAL MANAGEMENT SYSTEM**

The Director for Production section of Gazprom Energoholding is in charge of environmental protection management. Activities include providing supervision, methodological support, timely notification of changes in environmental laws and analysis of risks associated with legislative changes to support well-informed managerial decision-making, as well as responding to information requests from PJSC Gazprom, the Russian Ministry of Energy and Ministry of Natural Resources and Environment, gathering reports from the Group's generating companies and preparing the Group's

summary and consolidated reports. The negative impacts of Gazprom Group's power generation business segment are monitored.

A standing Coordinating Committee for Environmental Protection was set up in 2016 to ensure a holistic approach to environmental protection and coordination of efforts within the Group's generating companies. In 2016, the Group established regular annual meetings of extended leadership teams of technical managers and heads of environmental units of Gazprom Energoholding subsidiaries.

In 2006, Mosenergo was certified to **ISO 14001:2015** Environmental management systems and has been annually renewing its certificate since then. A recertification audit of Mosenergo for compliance with the standard's requirements was conducted in November 2020.

**QUALITY MANAGEMENT SYSTEM**

Gazprom Energoholding is implementing a Quality Management System (QMS) to improve performance and provide a solid foundation for its sustainability initiatives.

Gazprom Energoholding and the Group's generating companies are scheduled to undergo certification for compliance with QMS requirements as well as with **STO Gazprom 9001-2018** and **ISO 9001:2015 (GOST ISO 9001-2015)** standards in 2021.

A QMS has been in place at **OGK-2 since 28 December 2020**. The QMS covers all operations.

Since 2020, the QMS has been audited to confirm its compliance. Efforts are made during the QMS rollout to ensure that the relevant systems of Gazprom Energoholding and Group companies are mutually aligned and harmonised.

**ENERGY MANAGEMENT SYSTEM**

The Group continues to roll out its energy management system (EnMS) across its companies in accordance with GOST R ISO 50001-2012 Energy management systems – Requirements with guidance for use.

The system's purpose is to support faster managerial decisions to achieve energy saving and energy efficiency targets set by energy saving programmes.

Mosenergo certified its EnMS to **ISO 50001:2011** in 2019. TGC-1 and OGK-2 were also successfully certified in 2020. In February 2021, OGK-2 successfully confirmed its compliance with international and Russian standards. MIPC is planning to certify its system to **ISO 50001:2011** in 2021.

**EXTERNAL INITIATIVES**

GRI 102-12

**Representatives of Gazprom Energoholding Group companies participate in the activities of multiple environmental protection working groups, including:**

- a working group of the Power Engineering Inter-departmental Coordination Council;
- the Inter-Departmental Council on the Transition to the Principles of Best Available Technologies and Implementation of Modern Technologies;
- RSPP's Committee on Ecology and Environment Management;
- RSPP's Committee on Energy Policy and Energy Efficiency;
- the Environmental Engineering Expert Group of the Scientific and Technical Council for Development of the Heavy Machine Building Industry at the Ministry of Industry and Trade of the Russian Federation;
- the Environmental Protection Section of the Scientific and Technical Council of the Unified Power System;
- the environmental protection group of the Council of Power Producers and Power Industry Strategic Investors.

In 2020, the Group's representatives took part in the work of various sections of expert councils at the Russian State Duma's committees on environmental protection, in particular on legislative support for improving the environmental footprint of coal-based generation, legislative regulation of safety in the energy industry, ecology and environmental protection, power engineering, and the electrical and cable industry.

<sup>18</sup> Principle 15. "Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation."

## ENSURING COMPLIANCE WITH ENVIRONMENTAL LAWS AND REGULATIONS

GRI 307-1

*Gazprom Energoholding Group companies operate in accordance with environmental laws, taking appropriate measures to prevent damage to the environment and seeking to minimise potential issues identified by supervisory authorities conducting environmental inspections.*

For this purpose, the Group conducts cross-audits, with environmental compliance in one generating company audited by environmental engineers from other generating companies. The cross-audits focus on facility-specific compliance: availability of necessary permits, in-process control, timely reporting, conformity with requirements for primary records of negative environmental impacts such as air emissions, discharges into water bodies, procedure for tempo-

rary storage and disposal of waste, site inspections, temporary waste storage areas, water withdrawal by plants.

The Group's generating companies also run internal environmental compliance inspections. Inspection results are summarised and communicated to all companies of the Group, and a gap analysis is run to prevent similar issues from occurring again at other companies of the Group.

For more details on the administrative fines imposed on Group companies for environmental offences, see Appendix 10.

### Environmental Compliance Inspections by Supervisory Authorities

	Mosenergo		TGC-1		OGK-2		MIPC	
	2019	2020	2019	2020	2019	2020	2019	2020
Total inspections, including	11	18	38	24	16	23	13	4
– scheduled inspections	2	0	0	1	11	10	2	1
– unscheduled inspections	9	18	38	23	5	13	11	3
Identified non-compliances	7	8	21	13	17	13	15	4

### Environmental Complaints Received by the Group Companies in the Reporting Period and Resolution Thereof

	Total number of public complaints			Complaints for which corrective actions were started in the reporting period, number/percentage of total			Complaints resolved within the reporting period, number/percentage of total		
	2018	2019	2020	2018	2019	2020	2018	2019	2020
Mosenergo	15	19	25	15/100	19/100	25/100	15/100	19/100	25/100
TGC-1	2	9	4	2/100	9/100	4/100	2/100	9/100	4/100
OGK-2	3	–	–	3/100	–	–	3/100	–	–
MIPC	–	–	–	–	–	–	–	–	–

## NEGATIVE IMPACT MITIGATION TARGETS

The Group implements projects to switch to less carbon-intensive fuels, including the decommissioning of the coal-fired units of Cherepovetskaya GRES, an OGK-2 branch, phase one of Troitskaya GRES, an OGK-2 branch, and the coal-fired units of Mosenergo's CHPP-22.

Fuel combustion efficiency is improved by reducing the share of equipment with inferior technical, economic and environmental performance in the generation mix, and programmes are implemented to reduce energy consumption and improve energy efficiency, with increased utilisation of the CCGT fleet.

### Performance Against Environmental Targets by Group Companies

Corporate environmental target	2018 baseline	2020 target	2020 actual	Progress against targets in 2020
Reduction of NO <sub>x</sub> emissions (vs a 2018 baseline)	0.37	0.34	0.34	0 Target fully met.
Reduction of the landfill share (vs a 2018 baseline)	0.95	0.93	0.91	–0.02 Target met. Work is ongoing to organise the use of coal ash as a valuable resource.
Reduction of the above-limit negative environmental impact charges (vs a 2018 baseline)	0.39	0.31	0.33	0.02 Target not met. Due to the reduction of the above-limit negative environmental impacts since 2020, the surcharge rates have been increased fourfold.

## ENVIRONMENTAL PROTECTION COSTS

Gazprom Energoholding Group fully finances environmental costs as required by environmental laws. Adequate investments are made to make sure equipment parameters are in line with best available technology (BAT), regulatory limits are met, and environmental performance improvement notices issued by supervisory authorities are complied with. Significant environmental impacts of the Group's facilities include nitrogen oxides, petroleum product discharges and noise pollution. Necessary investments are made to comply with regulatory limits for nitrogen oxide emissions, petroleum product discharges and noise levels with adequate funds allocated for this purpose.

An environmental protection cost breakdown at Group companies can be found in Appendices 11 and 12.

## MONITORING OF SUPPLIER AND CONTRACTOR ENVIRONMENTAL COMPLIANCE

GRI 308-1

Mosenergo, TGC-1, OGK-2, and MIPC communicate their Environmental Policy to their respective counterparties. The Environmental Policy of the Group companies establishes the principle that its provisions shall be complied with by both the Group companies and their partners, contractors and counterparties.

All products supplied to the Group companies are accompanied by applicable safety data sheets describing potential product handling hazards and necessary precautions.

Our standard-form contracts stipulate that all counterparties of the Group companies comply with the environmental laws of the Russian Federation. Counterparty environmental assessments are conducted at the bidding and expert bid review stages.

Service contracts contain a waste management clause. Appendices to contracts contain information

on fines for environmental non-compliance. Environmental engineers inspecting production sites monitor contractor compliance with waste management requirements.

The Group companies do not conduct environmental audits of their suppliers. If contractors working at the Group's facilities fail to comply with environmental requirements, they are required to remedy the identified breaches and their compliance is followed up. No contracts were terminated due to environmental breaches in 2020.

**Gazprom Energoholding Group employs a total of 149 environmental engineers. To encourage environmental engineers to maximise their performance, improve their skills, and share best practices, Gazprom Energoholding Group has been holding the Best Environmental Officer professional skills contest since 2017.**

In 2020, the contest partially moved online and was partially postponed until 2021 due to the COVID-19 pandemic.



# ENERGY EFFICIENCY

## and Resource Conservation

### ENERGY SAVING AND ENERGY EFFICIENCY PROGRAMMES

GRI 302-4, GRI 302-5

*Gazprom Energoholding's energy efficiency and energy saving policy is a package of measures to create organisational, legal, financial, physical, and other conditions for the rational use and efficient consumption of energy resources.*

All companies of the Group have in place energy saving and energy efficiency programmes, which regulate their energy saving goals, objectives and key focus areas. The programmes aim to save energy resources and improve the energy efficiency of production processes through energy saving initiatives.

Gazprom Energoholding Group is one of Russia's largest producers of electricity and heat, which emphasises the importance of its energy saving and energy efficiency efforts.

Economic benefits of the above initiatives arise both from the economic impact from energy saving investments and as a by-product of upgrades, revamps and overhauls.

**IN 2020, THE GROUP'S ENERGY SAVING PROGRAMMES SAVED A TOTAL**

**43.1** mm GJ

- 1,224.5 thousand toe of fuel saved, including 1,049.5 mmcm of natural gas
- 655.8 mm kWh of electricity saved
- 353.8 thousand Gcal of heat saved

**THE VALUE OF ENERGY SAVINGS TOTALLED**

**6,758** RUB mm

For more details on energy saving and energy efficiency efforts by the Group and its performance against the energy saving programme targets in 2019–2020, see Appendices 13 and 14.

Key energy saving initiatives at power plants include optimisation of combined cycle equipment operation as well as initiatives to increase the share of cogeneration at the companies' plants, etc.:



Significant energy savings are achieved by shifting heat loads from district and sub-district heating stations to Mosenergo's CHP plants, with 2020 savings at 584.5 thousand toe, 12.8% above the target (518.0 thousand toe). The previously installed fluid couplings and LED lighting contributed to reduced electricity consumption for operational needs of CHP plants.



Energy savings were primarily achieved through measures to reduce leakages into the gas and air ducts of boiler units. Additional energy savings come from the adoption of LED lighting, use of energy efficient equipment at heat networks and advanced heat insulation technologies for newly built heat networks and when repairing damaged heat insulation. The resulting savings are estimated at 7,652 thousand toe, 14,578 thousand kWh and 109 Gcal at TGC-1, 58 Gcal and 115 thousand kWh at AO Murmanskaya CHPP, and 1,913 thousand kWh and 73,257 Gcal at AO St Petersburg Heating Grid.



Heat savings from revamping heat networks and district heating substations and from replacing expansion joints and heat metering units totalled 64.765 thousand Gcal. The installation of LED lamps saved 1,083.5 thousand kWh of electricity for process and auxiliary purposes, with the resulting savings totalling an equivalent of 9,205 thousand toe.



Energy savings totalling 13,643 thousand toe were driven by upgrades, retrofits and repairs of core and auxiliary equipment at power plants.

### Gazprom Energoholding Group's Case Example

MIPC is adopting smart technologies to improve the energy efficiency of its heat supply operations. For instance, in 2020, the company completed the development of an algorithm to predict and detect hidden leaks in secondary heat networks based on the analysis of data from the Dispatch automated system.

The online analytics application monitors for slightest changes in over 40 thousand network parameters during night hours, when hot water consumption is the lowest. This enables operators to estimate heat losses as accurately as possible while identifying the area with minor leaks, which initially are not visible, to timely dispatch a repair crew to fix everything.

The use of this approach allows for running predictive maintenance, addressing heat losses and minimising disruptions in heat and hot water supply to consumers, all while preventing uncontrolled emergencies.

## FUEL USE

GRI 302-1

*The heat and electricity generation process requires various fuels (gas, fuel oil and coal) as the main feedstock and considerable water consumption for process and auxiliary purposes.*

All feedstocks and materials used by the Group fully meet the existing national standards and do not contain polychlorinated biphenyls or similar substances. Energy consumption and energy efficiency management at Group companies is in line with the requirements of Federal Law No. 261-FZ On Energy Saving

and Enhanced Energy Efficiency as well as Amendments to Certain Legislative Acts of the Russian Federation, dated 23 November 2009. All generating companies of the Group conducted energy audits of their facilities to make sure they meet the requirements of Federal Law No. 261-FZ.

### Energy Performance Certificates Issued After Audits

	Issued by	Certificate No.	Issue date
Mosenergo	OOO MEKOM	2017-E-038-079-17	November 2017
TGC-1	OOO A-1 Energo	019-012-1172/400	October 2016
AO Murmanskaya CHPP	OOO Megapolis	EP 26/02-18	February 2018
AO St. Petersburg Heating Grid	OOO A-1 Energo	E-015/274-18	November 2018
OGK-2	OOO Technology Centre	428-GPE/16	November 2016
MIPC	OOO Closed Analytical Association Yurenergo	E-015/006-17	May 2017

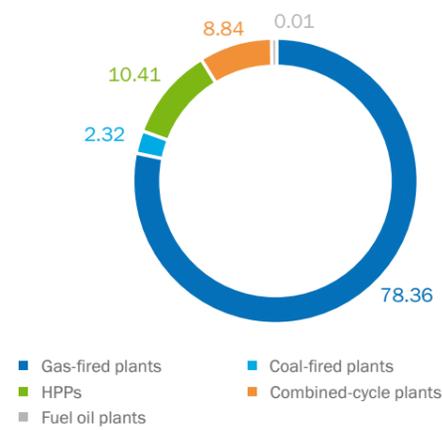
### Gazprom Energoholding Group's Case Example

Due to its unique mix of generating assets (with hydropower generation accounting for 40% of installed capacity and totalling about 3 thousand MW), TGC-1 can supply carbon-free electricity to industrial consumers, giving a competitive edge to their exports in the European market by minimising the risk of carbon tax payment.

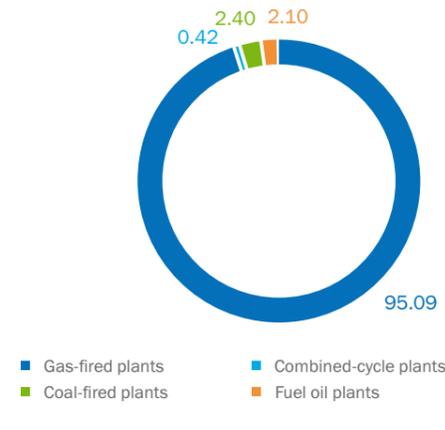
In December 2020, TGC-1 entered into its first free power-purchasing agreement with AO Siburenergomangement (part of SIBUR Holding), under which Lesogorskaya HPP located in the Leningrad Region will supply the company's generating facilities with clean green electricity.

PAO TGC-1 also entered into free power-purchasing agreements with the mining and processing plant of AO Apatit (the Kirovsk branch of AO Apatit, part of PhosAgro Group) and the AB InBev Efes brewery. Green electricity is supplied from Niva HPP-3 and Iovskaya HPP in the Murmansk Region and Volkhovskaya HPP-6 in the Leningrad Region.

**Electricity Generation by Fuel Type in 2020, %**



**Heat Supply by Fuel Type in 2020, %**

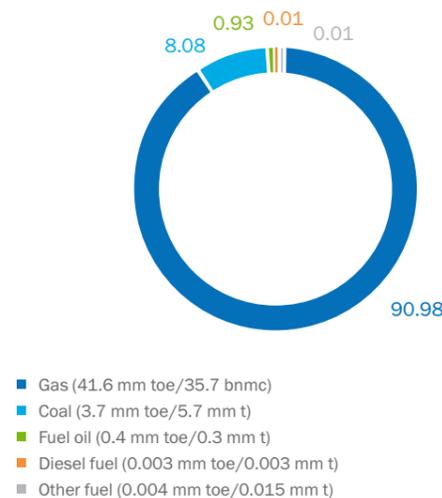


**Gazprom Energoholding Group's Case Example**

Green international renewable energy certificates (I-RECs), the internationally used standard to certify the renewable origin of electricity, are now available in Russia for issue and sale. I-REC certificates<sup>19</sup> allow companies that generate electricity from renewable sources to sell green attributes of their electricity. Each instrument certifies the production of 1 MWh of renewable electricity. Potential consumers can purchase and redeem these certificates to meet their corporate sustainability goals. I-REC green certificates are available for sale both under direct purchasing agreements and via Sber's blockchain platform, which includes an option for trading in green certificates.

In April 2021, TGC-1 made its first sale of green I-REC certificates via Sber's blockchain platform. The certificates were issued for PAO Polyus companies and confirm that the energy supplied is sourced from renewable generation. As a result, PAO Polyus has become the world's first major gold miner to fully meet its electricity needs from renewable energy sources. TGC-1 is gearing up to further roll out these transactions, involving Sber and a number of major industrial electricity consumers.

**Fuel Mix of Gazprom Energoholding Group in 2020, %**

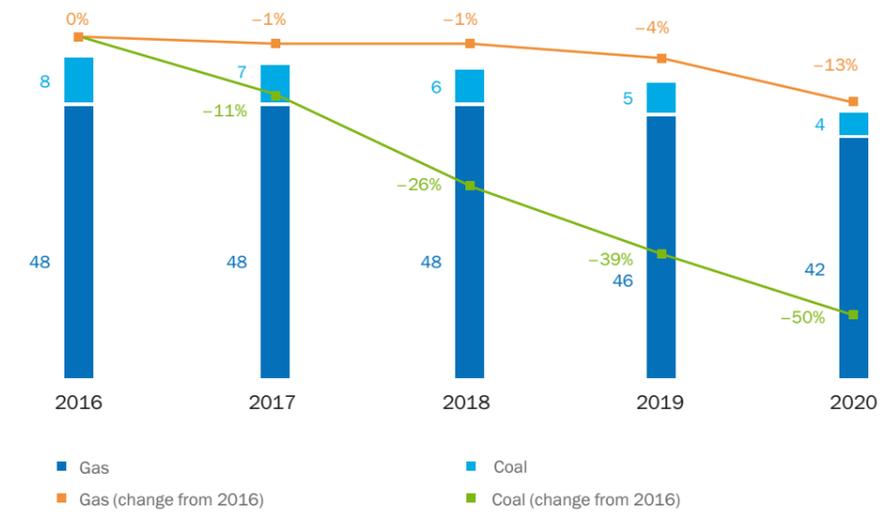


**IN 2020, GAZPROM ENERGOHOLDING GROUP'S CONSUMPTION OF NON-RENEWABLE FOSSIL FUELS TOTALLED**

**45.7** mm toe

- Gas (41.6 mm toe/35.7 bnmc)
- Coal (3.7 mm toe/5.7 mm t)
- Fuel oil (0.4 mm toe/0.3 mm t)
- Diesel fuel (0.003 mm toe/0.003 mm t)
- Other fuel (0.004 mm toe/0.015 mm t)

**The Group Has Halved the Share of Coal in its Fuel Mix**



**Total Energy Consumption for Operations by Gazprom Energoholding Group's Generating Companies**

		2018	2019	2020
Total electricity consumption	mm kWh	11,814.6	11,590.2	10,814.5
	mm GJ	42.5	41.7	38.9
Total heat consumption	thousand toe	1,451	1,244	1,328
	thousand Gcal	11,310.4	10,131.8	10,034.0
Total gas consumption	mm GJ	47.3	42.4	42.0
	thousand toe	1,614	1,447	1,433
<b>Total</b>	mmcm	-	-	-
	mm GJ	-	-	-
	thousand toe	0.03	0.02	0.03
<b>Total</b>	<b>mm GJ</b>	<b>89.9</b>	<b>84.1</b>	<b>80.9</b>
	<b>thousand toe</b>	<b>3,066</b>	<b>2,870</b>	<b>2,761</b>

For more details on fuel consumption and SRFC of Gazprom Energoholding Group's generating companies, see Appendices 15 and 16, respectively.

<sup>19</sup> The green certificates were developed and rolled out by the International REC Standard Foundation, a non-profit organisation. I-REC certificates are issued by accredited organisations in 35 countries worldwide.

# EMISSIONS OF GREENHOUSE GASES (GHG)

## and Pollutants

### POLICY FOR REDUCTION OF GHG AND POLLUTANT EMISSIONS

The Group's Environmental Policy includes commitments to reduce negative environmental impacts and specific GHG emissions.

concentrations above natural levels and regulatory limits are harmful for people and the environment.

Therefore, we believe it is important to monitor the environmental impacts of our business and take measures to cut emissions. Air pollutants with

Every year, Group companies approve future environmental targets, including GHG and pollutant emissions.

#### Targets of Generating Companies for GHG Emission Reduction, thousand tonnes of CO<sub>2</sub> equivalent/mm kWh<sup>20</sup>

Company	2020 Target	2020 Actual	2021 Target
Mosenergo	0.266	0.264	0.265
TGC-1	0.212	0.202	0.202
OGK-2	0.569	0.545	0.532
MIPC	0.215	0.215	0.215

Mosenergo's and MIPC's generating facilities operate automated systems to monitor the quality and amount of pollutant emissions. The data captured by the system are used for both internal control and informed managerial decision-making, and are also submitted to specialised supervisory and regulatory authorities responsible for management of natural resources and environmental protection.

monitoring compliance with emission standards for each source of emissions. Accredited environmental laboratories regularly monitor the air quality in the areas affected by our power plants, both at emission sources and at selected points within relevant urban areas.

In addition, our power plants regularly monitor the content and amount of pollutant emissions in line with the schedule approved by supervisory authorities for

Group companies analyse data on the intensity and composition of pollutant emissions, the condition of instruments and equipment, implemented initiatives and the best available technologies to inform planning of air protection measures.

**In 2020, Gazprom Energoholding Group companies did not buy or sell any carbon quotas as the country has no domestic carbon quota market and Russian companies have no access to the international quota trading market.**

<sup>20</sup> Specific emissions are calculated as a ratio of CO<sub>2</sub> equivalent emissions to total electric energy output.

### EMISSIONS OF GREENHOUSE GASES (GHG) AND POLLUTANTS

*In response to growing consumer demand, the Group is implementing ambitious investment projects on an annual basis by launching new high-performance generating facilities and decommissioning outdated and low-performance units.*

As a consequence, our generation becomes more environmentally friendly and uses less fuel. For this reason, we are also studying changes in the total emissions per output unit.

Each of the Group's generating companies implements environmental initiatives on a regular basis to reduce pollutant and greenhouse gas emissions by existing facilities. To measure our progress in this area, we separately track changes in emissions from the base year (2008) for the facilities that had been owned by the Company in the base year and are owned today.

GRI 305-1, GRI 305-4

For more details on changes and intensity of GHG emissions from Gazprom Energoholding Group's generating companies, see Appendix 17.

The weight of emissions is calculated in accordance with Appendix No. 2 to the Methodological Guidance on the Quantification of Greenhouse Gas Emissions by Entities Engaging in Business and Other Activities in the Russian Federation approved by the Russian Ministry of Natural Resources and Environment by its Order No. 300 dated 30 June 2015.

GRI 305-5

#### Reduction in GHG Emissions Achieved by Gazprom Energoholding Group's Generating Companies, thousand tonnes of CO<sub>2</sub>-equivalent

Company	Year-on-year change in emissions		Key causes for change in 2020
	2019	2020	
<b>Total</b>	<b>-5,030</b>	<b>-11,041</b>	
Mosenergo	-1,295	-2,548	Lower fuel consumption and energy efficiency initiatives implemented
OGK-2	-3,465	-6,932	Sale of Krasnoyarskaya GRES-2, OGK-2's branch (environmental impact from this operation has been excluded since 1 October 2020) Lower electricity and heat generation and reduced fuel combustion, including as a result of fully decommissioning the coal-fired generation equipment at Serovskaya GRES
TGC-1	11	-1,296	Lower electricity and heat generation at TPPs and reduced fuel combustion
MIPC	-281	-265	The decrease in pollutant emissions was driven by the transfer of four district heating plants in Tushino to Mosenergo, as well as the decommissioning of two minor boiler houses and two subdistrict heating stations

GRI 305-6

No ozone-depleting substances are produced or used by Group companies.

**Measures to Reduce the Volume and Intensity of Pollutant Emissions Taken in 2020**



- Shifting heat loads from district and subdistrict heating stations to Mosenergo's CHP plants
- Equipping buildings and facilities with LED lights
- Energy efficiency engineering initiatives
- Retrofits of HPP-1, CHPP-12 and CHPP-22
- Replacement of burners at CHPP-8, CHPP-12, CHPP-22, CHPP-23, and CHPP-25
- Retrofit of flue-gas stacks at the Kuntsevo and Krylatskoye district heating stations



- Energy efficiency engineering initiatives



- Final decommissioning of coal-fired generation equipment of OGK-2's Serovskaya branch



- Decommissioning of two minor boiler houses and one subdistrict heating station

Main pollutants from fuel combustion:

- nitrogen oxides (from combustion of any organic fuel);
- sulfur dioxide (from combustion of coal and fuel oil);
- fuel oil ash (from combustion of fuel oil);
- ash (from combustion of coal).

For more details on emissions of NO<sub>x</sub>, SO<sub>x</sub> and other significant pollutants, see Appendix 18.

**Gazprom Energoholding Group's Case Example**

Moscow plans to build Russia's largest public network of EV charging stations. EV charging stations will be placed within paid parking areas in downtown Moscow as well as in high footfall destinations attracting potential EV users (restaurants, cinemas, etc.).

In 2014, Mosenergo and the Moscow Government entered into an agreement to promote the use of electric vehicles in Moscow. As part of the agreement, Mosenergo participated in the installation of EV charging stations in Moscow. The connected EV charging stations are operated in test mode. During the test operation, Mosenergo's EV charging stations are activated with the Troika card, with no fee paid for charging.

The development of electric vehicles and charging infrastructure will help improve the environmental situation in the city. Currently, motor vehicles with internal combustion engines in Moscow account for about 90% of total emissions while heat generation facilities represent just about 2.5%.

# WASTE GENERATION AND DISPOSAL

## WASTE MANAGEMENT POLICY

GRI 103-2

All business units of the Group companies closely control waste management. Industrial waste is placed in designated containers or at designated temporary waste storage areas. Waste is collected by duly

licensed contractors. Subsequently, Hazard Classes 1, 2 and 3 wastes and certain types of Hazard Class 4 and 5 wastes are disposed of or recycled by specialist companies.

**Most waste from our operations is represented by Hazard Classes 4 and 5 wastes. 92.4% of all generated waste is ash from coal combustion, which is classified as Hazard Class 5 waste – virtually non-hazardous. Coal ash is stored at the Group's own sites – ash dumps.**

The Group companies have in place action plans to reduce waste landfilling and increase the share of recycled and disposed waste, and also focus on waste management, including waste the landfilling of which is prohibited, providing, in particular, for sepa-

rate temporary storage of waste by waste type, waste group, similar waste group, as well as the collection of waste paper and cardboard from paperwork and document management activities for disposal by third-party entities.

## WASTE GENERATION

GRI 306-2

All power plants have allocated areas for temporary storage of waste, signed contracts for waste collection and disposal, keep records of waste generation, and monitor waste collection and management. Scrap metal and mercury-containing waste, the landfilling of which has been prohibited since 2018, are sent for recycling under relevant contracts. Separate collection of mercury-containing waste, petroleum-contaminated waste, rubber waste and used office equipment had been introduced long before the Federal Law on Waste Management was amended.

**THE GROUPS WASTE GENERATION IN 2020 TOTALED**

**1.28** mm tonnes

down 23% year-on-year

Coal ash is conveyed by hydraulic transport to waste storage facilities listed in the State Register of Waste Storage Facilities. All fly ash removed by dry systems is sold to consumers as a product.

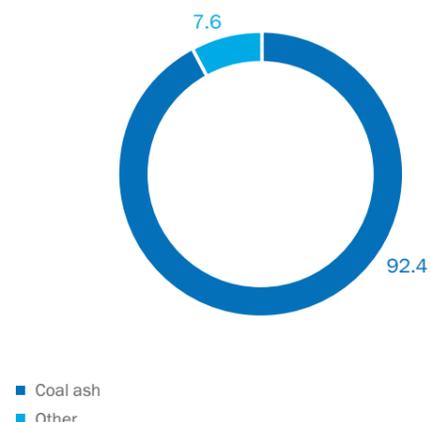
Coal ash waste (recycled coal ash) of Ryazanskaya GRES has been sold since 2008; and ash of Novocherkasskaya GRES, Troitskaya GRES, Cherepovetskaya GRES of OGK-2, Mosenergo's CHPP-22 and Apatitskaya CHPP of TGC-1 – since 2009.

**COAL ASH WASTE GENERATION IN 2020 WAS DOWN**

**2.3** times

from 2016

**Waste Mix of Gazprom Energoholding Group's Generating Companies in 2020, %**



**Coal Ash Disposal, mm tonnes**



In order to mitigate negative impacts of coal ash waste on the environment, a coal ash management working group was set up (Order No. 6-GEH dated 6 February 2018) to coordinate coal ash waste disposal and recycling into valuable materials, as well as identify best practices and share learnings.

**At the end of 2020, in order to be able to use existing ash dumps without their expansion, Gazprom Energoholding Group used accumulated coal ash for the following purposes:**

- as a component for concrete, dry mixes and foam concrete blocks (Ryazanskaya GRES, Novocherkasskaya GRES of OGK-2);
- landfill remediation (Apatitskaya CHPP, Ryazanskaya GRES);
- own operation (Krasnoyarskaya GRES-2, Cherepovetskaya GRES);
- remediation of Borodinsky open-pit coal mine with coal ash from Krasnoyarskaya GRES-2;
- road construction (Mosenergo's CHPP-22, Novocherkasskaya GRES of OGK-2).

**Waste of Hazard Classes 1–4 is managed in line with the following documents:**

- perpetual licence No. 077 121 dated 6 August 2018 for storage/landfilling of Hazard Class 4 waste in Mosenergo;
- perpetual licence No. (78)-8333-TR dated 20 September 2019 for collection, transport, treatment, disposal, neutralisation, and storage/landfilling of Hazard Classes 1–4 waste in TGC-1;
- perpetual licence No. D 26 00003/P dated 26 August 2018 for neutralisation of Hazard Class 2–4 waste and storage/landfilling of Hazard Class 3–4 waste in OGK-2;
- perpetual licence No. 077 74 dated 26 June 2020 for transport of Hazard Classes 1–4 waste in MIPC.

In addition, licenced organisations are contracted to carry out activities not covered by licences of Group companies.

Branches of Gazprom Energoholding Group companies developed Proposed Waste Generation Rates and

Waste Storage/Landfilling Limits (Permits) and got them approved by governmental supervisory agencies. The documents specify waste neutralisation methods applied and waste storage/landfilling locations. Waste is sent to third parties for neutralisation, disposal or storage at special waste storage facilities.

For more details on waste generation and disposal, see Appendix 19.

A large number of OGK-2's power plants are coal-fired; therefore, coal ash storage issue is particularly important for this company. In order to reduce the number and maintain the useful capacity of existing ash dumps, OGK-2 branches using coal-fired generation (Novocherkasskaya, Ryazanskaya, Cherepovetskaya and Troitskaya GRESs) look for opportunities to ship coal ash from ash dumps or to ship dry ash directly from under electrostatic precipitators.

Coal ash from OGK-2's Troitskaya GRES is taken to an ash dump at the salt lake of Shubarkol. Since it

is located in the Kostanay Region of Kazakhstan, all relevant environmental measures are taken in accordance with the Environmental Code of the Republic of Kazakhstan. The Group monitors emissions from the ash dump on a regular basis as well as conducts environmental operational control of environmental impacts from the ash dump, slurry and water pipelines of Troitskaya GRES, which are also located in the Republic of Kazakhstan.

**The following air protection measures have been taken to reduce dust emissions from the ash dump:**

- sowing perennial herbs on the dam slopes of Section 2 of the ash dump;
- planting shrubs and trees on the dams of Section 2 of the ash dump;
- sowing perennial herbs on ash storage areas of Section 3 of the ash dump.

All measures are taken in accordance with the Troitskaya GRES, an OGK-2 Branch, Plan to Mitigate Negative Environmental Impacts of the Ash Dump at Lake Shubarkol in 2020–2021 approved by the Ministry of Environmental Protection of the Republic of Kazakhstan. At the end of its term, a similar plan will be adopted for 2022–2023 (and further on until the ash dump

closure). The condition and pollution of the environment within waste storage and landfill facilities (ash dumps) and affected areas are monitored on a regular basis in accordance with applicable monitoring programmes at all ash dumps of Gazprom Energoholding Group's power plants.

## LAND REMEDIATION

Solid fuel combustion at power plants requires storage of ash waste in ash dumps. When an ash dump is filled to capacity, it should be remediated to restore disturbed ecosystems.

In 2020, land remediation efforts covered the ash dump of OGK-2's Troitskaya GRES located at the lake of Shubarkol in the Republic of Kazakhstan. This complex process includes different stages from technical remediation to sowing perennial herbs and planting trees and shrubs that prevent wind erosion of the ash dump surface. After remediation, ash dumps are usually quickly populated by local fauna.

**THE TOTAL AREA OF WASTE STORAGE SITES (DISTURBED LANDS) ACROSS BRANCHES OF GAZPROM ENERGOHOLDING GROUP'S GENERATING COMPANIES WAS**

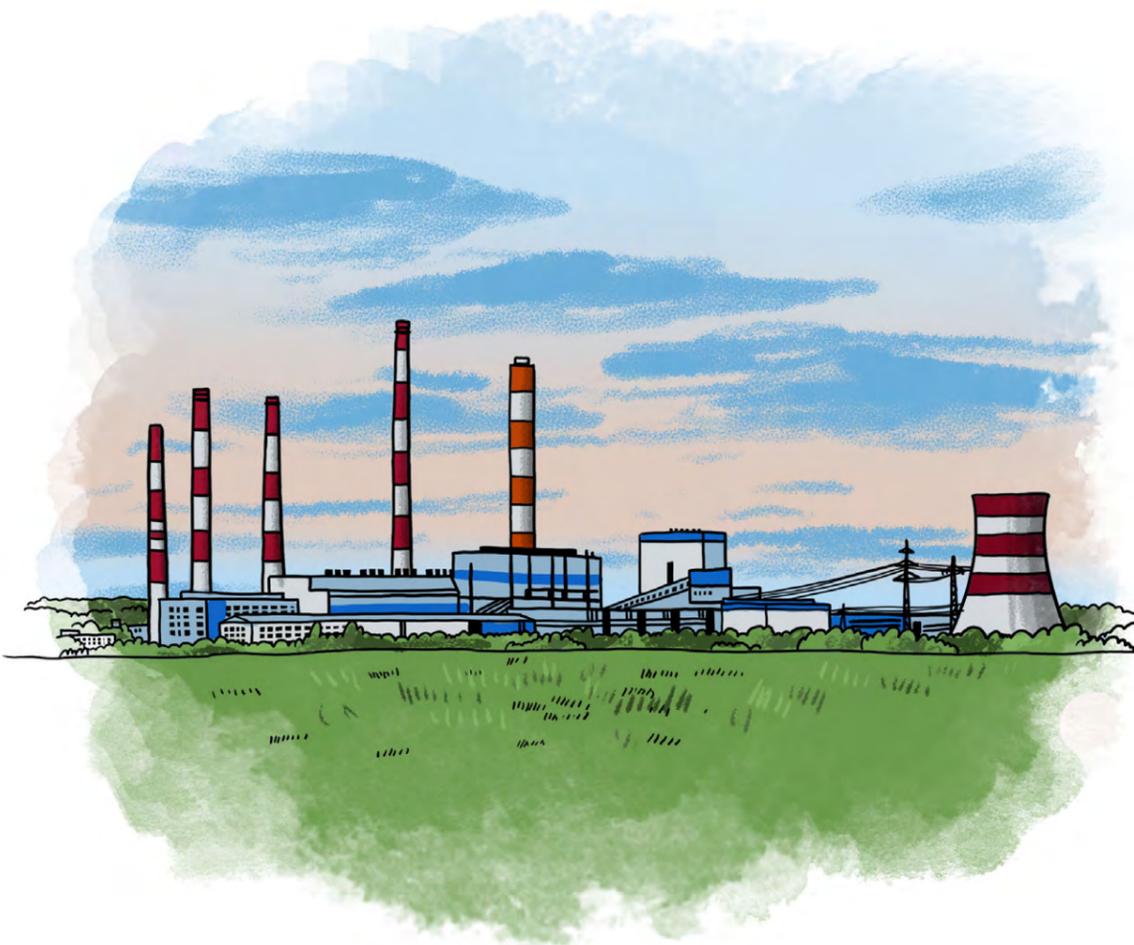
**1,755.9** ha

**AS AT YEAR-END 2020, HA HAD BEEN REMEDIATED**

**660.8** ha

(technical remediation completed)

For more details on ash dump (disturbed land) areas of the Group, see Appendix 20.



# WATER EFFICIENCY

GRI 306-1

*Gazprom Energoholding Group uses water resources in accordance with applicable Russian and international laws and strives to minimise impacts from operations of its companies on water bodies. All operating processes comply with the Water Code of the Russian Federation.*

The process of heat and electricity generation is associated with heavy process water consumption and discharge of wastewater. At steam power plants, process water is used to condense steam, cool and wash the equipment, while at coal-fired power plants – to transport generated ash and slag to ash dumps.

Most thermal power plants draw process water from surface water bodies, while some power plants use process water pipelines and get water for sanitary purposes from municipal water pipelines.

Facilities owned and operated by Group companies have the following permits for water withdrawal from natural sources and water discharge to surface water bodies:

- water use contracts;
- decisions on granting water bodies for use;
- discharge limits;
- pollutant discharge permits.

Gazprom Energoholding Group keeps records of water withdrawal from water bodies, wastewater discharge volumes and its quality on a continuous basis.

**To reduce water consumption and water discharge, 13 power plants of Mosenergo, 6 power plants of TGC-1 and 7 power plants of OGK-2 have implemented circulation cooling systems – cooling towers, cooling ponds and spray ponds.**

All generating facilities of Group companies have set up oily and greasy wastewater collection systems and local treatment facilities.

Surface water bodies used by power plants for water withdrawal and discharge are not classified as protected areas or indigenous territories. Fishery value categories (premium to second) were assigned to all surface water bodies.

## Projects Implemented in 2020 and Aimed at Water Resource Protection and Conservation



- > **Installation** of wastewater metering units at HPP-1, CHPP-9 (FEED), CHPP-11, and CHPP-20.
- > **Revamp** of process water metering units with the replacement of metering equipment and sensors at the water intake of CHPP-12.
- > **Revamp** of the neutralisation basin at CHPP-16.
- > **Retrofit** of a sewage disposal system with the installation of water metering equipment at water discharge outlets of CHPP-16.
- > **Revamp** of cooling tower No. 6 at CHPP-22.
- > **Retrofit** of cooling tower No. 7 at CHPP-22.
- > **Retrofit** of circulation pipelines at CHPP-22.
- > **Retrofit** of VTI-630U clarifier tanks of the ultrafiltration units and increase in the capacity of phase 1 and 2 chemical water treatment desalters at CHPP-22.



- > **Revamp** of sewage networks, installation of chemical water treatment liquid residue dewatering facility, construction of local treatment facilities at the point of discharge to the city sewer at TGC-1's Pravoberezhnaya CHPP.
- > **Construction** of water treatment facilities at TGC-1's Tsentralnaya CHPP.
- > **Revamp** of sewage network with wastewater treatment facility construction at TGC-1's Vasileostrovskaya CHPP.
- > **Revamp** of sewage network with wastewater treatment facility construction at the point of discharge to the Neva River at TGC-1's Vasileostrovskaya CHPP.
- > **Upgrade** of local water treatment facilities at the point of discharge to the city sewer at Pervomayskaya CHPP.
- > **Revamp** of sewage networks with sewer separation and construction of treatment facilities at the point of discharge to water bodies and the city sewer at Avtovskaya CHPP.
- > **Upgrade** of the water treatment complex at Severnaya CHPP.
- > **Upgrade** of local water treatment facilities at Yuzhnaya CHPP.
- > **Revamp** of the water discharge system and construction of water treatment facilities at Petrozavodskaya CHPP.
- > **Revamp** of water treatment facilities at discharge outlets 2 (KC-1), 3 (KC-2) and 1 (KTC) at AO Murmanskaya CHPP.



- > In order to ensure the rational use of water resources, Novocherkasskaya GRES, an OGK-2 branch, **performed metrological certification and maintenance** of the SIRENA cooling water metering system. The branch also takes measures to reduce water use in operations, i.e. by reusing wastewater from the discharge channel.

### Gazprom Energoholding Group's Case Example

In June 2021, TGC-1 took part in Water of Russia, All-Russian campaign to clean up the banks of water bodies. The campaign has been held by the Russian Ministry of Natural Resources and Environment together with the Federal Water Resources Agency since 2014 and is part of the Preservation of Unique Water Bodies federal project under the Ecology national project.

In Murmansk, employees of Murmanskaya CHPP together with students of Murmansk State Technical University cleaned up rubbish on the Kola Bay shoreline adjacent to the Yuzhnaya Boiler House. The bay is an important water body primarily because it lies in the path of seasonal migration of the Atlantic salmon, a valuable fish species featured in the Red Data Book of the Murmansk Region.

## WATER CONSUMPTION AND WITHDRAWAL

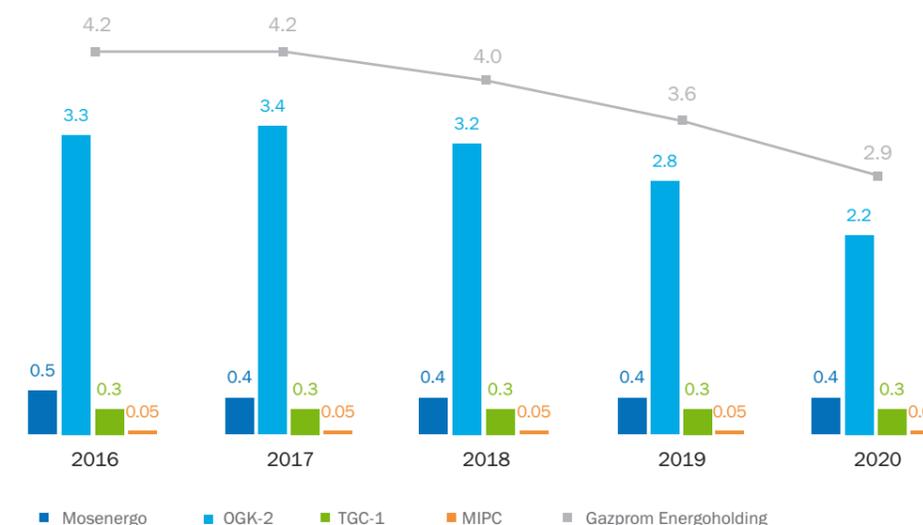
GRI 303-1

For more details on total water withdrawal by source and water reuse, see Appendix 21.

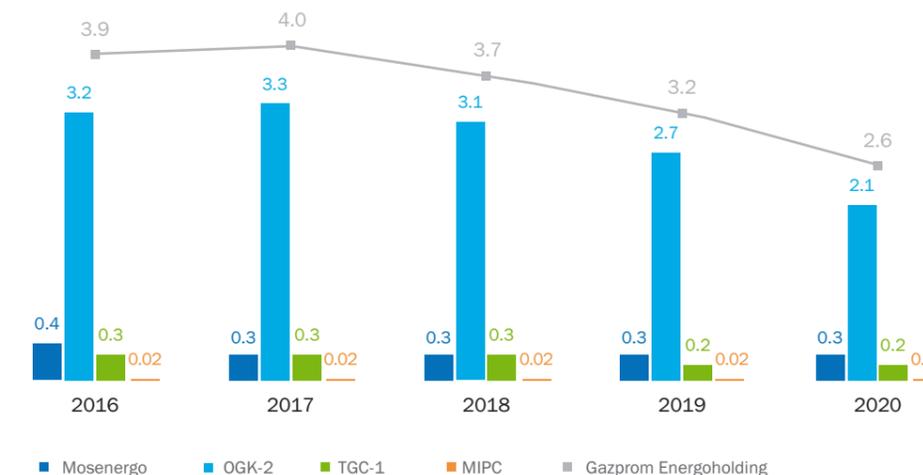
### Records of water resources are kept in accordance with the following regulations:

- Procedure for Keeping Records of the Volume of Water Resources Withdrawal (Intake) from Water Bodies, as well as Wastewater and/or Discharge and the Quality Thereof by Owners of Water Bodies and Users of Natural Resources approved by Order of the Russian Ministry of Natural Resources and Environment No. 205 dated 8 July 2009;
- Instructions on filling in Form 2-TP (water management) approved by Order of Rosstat No. 81 On the Approval of the Federal Statistical Monitoring Form with Guidance on Completing It for the Federal Water Resources Agency to Organise Federal Statistical Monitoring of Water Use, dated 27 December 2019.

### Water Withdrawal, bcm: Down 31% from 2016



### Water Discharge, bcm: Down 33% from 2016



## WASTEWATER DISCHARGE

### Wastewater Treatment System at Pravoberezhnaya CHPP, TGC-1's Nevsky Branch

Design volume of 120 cubic metres per hour of treated wastewater (1,051.2 thousand cubic metres per year) is recirculated as makeup water for the plant's circulating water system to improve the efficiency of water use. With the construction of local treatment facilities, CHPP-5 no longer discharges wastewater to surface water bodies.

### Annual Decrease in the Amount of Discharged Pollutants (to the City Sewage System)



For more details on water discharge by quality and destination, see Appendix 22.

# BIODIVERSITY PROTECTION

GRI 304-2

### TO REDUCE NEGATIVE IMPACTS FROM THE GROUP'S POWER PLANTS ON AQUATIC BIOLOGICAL RESOURCES WE IMPLEMENTED



fish-protection systems have been installed



fishways have been provided



fish stocking activities are undertaken

Gazprom Energoholding Group makes efforts to preserve biodiversity in its regions of operation across all phases of operations.

Management of aquatic biological resource preservation is distributed among the following functional units:

- Chief Engineer section;
- Industrial Safety section;
- Environmental Protection section.

Managers and authorised employees of the above sections plan activities, set tasks and monitor their achievement. Tasks are then assigned to capital construction and repair sections.

**No animals in Red Data Books of various levels have been detected around the Group's power plants, and their habitats are not affected.**

### Measures implemented by Mosenergo, OGK-2 and TGC-1 to reduce their negative impact on aquatic biological resources:



- All Mosenergo CHP plants withdrawing water from rivers are equipped with fish-protection systems, which are highly reliable, efficient and effective (72%–85% vs the reference value of 70%).



- Water intake facilities of CHP plants are equipped with fish-protection systems consisting of physical screens.
- Ignoyla HPP has a fishway for seasonal passage for spawning salmon from Lake Onega.
- Verkhne-Tulomskaya HPP also has a fishway, but due to a large difference in elevation (70 metres), very few fish swim through it.
- Under a contract with Kola Science Centre of the Russian Academy of Sciences, a report was prepared in 2020 on the condition of fish stocks, the biology and changes in the amount of aquatic resources within the area of the spillway gate (currently being revamped) of the Kolsky Branch's Nizhne-Tulomskaya HPP. The report concludes that the spillway gate revamp does not have any additional impact on aquatic biological resources and their habitats.

### Gazprom Energoholding Group's Case Example

TGC-1's Nizhne-Tulomskaya HPP 1 maintains the efficient operation of a unique fishway, which is one of its kind in the North-West. The structure is designed for seasonal passage of spawning salmon. This is a 513-metre long man-made stream with a level difference of 20 metres, featuring rapids and 66 wells. The fishway allows salmon to swim to the upper reaches of the river to spawn and return to the sea with the new generation of fish at the end of summer. An average of 6 to 7 thousand fish pass through the fishway annually.



- Ryazanskaya GRES, Cherepovetskaya GRES, Serovskaya GRES, Stavropolskaya GRES and Novocherkasskaya GRES have all installed fish-protection systems.
- In 2020, the fish-protection system of Novocherkasskaya GRES was inspected. Plans for 2021 include the development of design documentation for its revamp.



- The company's area of responsibility covers the buffer zones of natural historical parks such as Tushinsky, Tsaritsyno, Kuzminki-Lyublino, Moskvoretsky, Setun River Valley, Bitcevsy Les and Teply Stan.
- No relevant biodiversity conservation plans (programmes) have been developed as the substations do not affect biodiversity in these parks. All operations fully comply with environmental laws.
- The following mitigation measures are implemented on a regular basis:
  - land cleaning and upkeep in accordance with sanitary regulations (the company continuously keeps protected areas clean and controls waste collection in accordance with signed agreements);
  - beautification, construction and restoration in accordance with a project pre-approved by the Department for Environmental Management and Protection (post-construction beautification is performed by contracted third-parties approved by the Moscow Department for Environmental Management and Protection);
  - participation in the city's cleanup events (no city cleanup days were held in 2020 due to the pandemic);
  - contract in place for regular waste collection. (Contracts are signed via tendering. For 2020–2022, waste collection contract No. 10-00/20-59 dated 19 November 2019 was signed with 000 Ekoprom);
  - interactions with inspectors of Mospriroda and the Department for Environmental Management and Protection (in 2020, there were no interactions with inspectors and no audits due to the pandemic).

# 06. Health AND SAFETY



Workplace Safety Management .....	98
Training and Testing on Occupational Health and Safety .....	100
Work-Related Injuries .....	101
Industrial Safety and Occupational Health Spending.....	103

*Process  
safety*

# WORKPLACE SAFETY

## Management

GRI 103-2, GRI 403-8

*People's life and health are the Group's top priority, and our strategic goal is zero injury rate in the workplace.*

To this end, we pursue health and safety activities across several areas: strict compliance with federal health and safety regulations and own initiatives to improve safety culture and raise safety awareness in the workplace.

GRI 103-2, GRI 403-1

Each Group company has in place Occupational Health and Safety (OHS) Management System<sup>21</sup> regulations that take account of the company's organisation, key work processes and separation of duties.

### The OHS Management System was implemented to:

- comply with legal requirements (Article 212 of the Russian Labour Code);
- enforce Order of the Russian Ministry of Labour and Social Protection No. 438n Standard Regulations on Occupational Health and Safety Management System, dated 19 August 2016.

### The OHS Management System covers all units and all employees of Gazprom Energoholding Group companies.

Companies' managing directors ensure the operation of the OHS Management System and encourage employees to get involved. Deputy Managing Director – Chief Engineer is responsible for OHS-related employee interactions. The heads of business units provide leadership on OHS matters and activities to create safe and healthy work environment in their respective units.

The OHS Management System comprises functions that implement managerial decisions on legal, social and economic, organisational, technical, health, healthcare, rehabilitation, and other measures to ensure occupational health and safety as well as favour-

able working conditions for Company employees who operate or provide maintenance for generating units, organise and conduct commissioning, repairs, tests, and measurements.

The OHS Management System involves planning and tracking health and safety indicators, measures to prevent injuries and occupational diseases, monitoring of the OHS performance and review of its outcomes, as well as its continuous improvement. The regulations also establish the occupational health and safety roles of officers and business units within the governance framework of the Company.

GRI 403-4

### Employer-employee cooperation on health and safety is an essential element of Gazprom Energoholding Group's occupational health and safety policy.



#### Employee involvement in the OHS Management System is achieved by:

- engaging employees and OHS specialists in consultations, providing information and training on all OHS aspects specific to their jobs, including response to possible accidents;
- allowing time and opportunities for employees to get actively involved in organisational processes, planning and implementation of measures to improve the OHS Management System and assess its performance;
- establishing, staffing and ensuring the effective work of the Occupational Safety and Safety Commission, recognising and strengthening the authority of employees' OHS representatives;
- defining specific OHS-related competency requirements for employees.



#### Employee communication is carried out by:

- including relevant provisions in employees' employment contracts (working conditions at the workplace, terms of additional compensations and benefits linked to working conditions, etc.);
- familiarising employees with the results of special assessments of working conditions at their workplaces;
- posting consolidated results of special assessments of working conditions at workplaces;
- holding meetings, round-table discussions, workshops, conferences, stakeholder meetings, and negotiations;
- producing and distributing newsletters, posters, other printed materials, video and audio content;
- posting relevant information in publicly accessible places.

The employer cooperates with employees' representatives to establish public OHS management bodies.

Group companies have in place occupational health and safety committees and commissions, both company-wide and business unit-specific.



#### This element of the OHS Management System aims, within its area of responsibility, to:

- ensure the implementation of the occupational health and safety policy;
- review occupational health and safety throughout the company overall and across business units, along with the performance of the OHS Management System;
- develop proposals to amend the OHS Management System;
- assess the results of activities aimed at creating safe working conditions;
- develop measures to ensure compliance with state regulatory requirements for OHS, to prevent work-related injuries and occupational diseases based on proposals of Committee/commission members;
- approve proposals to incentivise employees for active involvement in improving the OHS Management System.

<sup>21</sup> The OHS Management System is part of a corporate-wide management system, responsible for workplace health and safety.

# TRAINING AND TESTING

## on Occupational Health and Safety

GRI 403-5

*Gazprom Energoholding Group companies are committed to continuously training employees of all categories on occupational health and safety. The training is tailored to the specifics of a given employee category.*

Occupational health and safety training and testing (briefings, training in safe work methods and techniques, apprenticeships, etc.) are integrated with other forms of education. Employees' training in oc-

cupational health and safety is based on the specifics of their work profile, as well as the qualification and competencies required to perform their duties safely.

### Occupational Health and Safety Training, people

	Mandatory			Additional		
	2018	2019	2020	2018	2019	2020
Mosenergo	2,186	2,995	2,487	941	1,653	1,311
TGC-1	1,588	2,236	2,792	590	379	736
OGK-2	6,525	6,158	4,550	695	36	35
MIPC	4,210	4,742	3,654	107	480	15
<b>Total</b>	<b>14,509</b>	<b>16,131</b>	<b>13,483</b>	<b>2,333</b>	<b>2,548</b>	<b>2,097</b>

GRI 403-2

**The Group companies have put in place and apply mechanisms to identify occupational hazards and assess and mitigate occupational risks for standard and non-standard situations, and train employees to recognise, identify and define hazards and risks.**

Once the risks are identified, Roadmaps are built and measures are developed to eliminate the identified hazards.

# WORK-RELATED INJURIES

## WORK-RELATED INJURIES AT GAZPROM ENERGOHOLDING GROUP'S GENERATING COMPANIES

GRI 403-2

### Injury Rate

	Mosenergo			TGC-1		
	2018	2019	2020	2018	2019	2020
FIFR <sup>22</sup>	0.00	0.00	0.00	0.00	0.00	0.00
LTIFR <sup>23</sup>	0.07	0.07	0.14	0.28	0.36	0.00
ODR <sup>24</sup>	0.07	0.00	0.00	0.00	0.00	0.00
LDR <sup>25</sup>	0.76	2.85	11.27	34.90	26.53	0.00
Total hours worked by all employees, thousand hours	14,541.17	13,673.93	12,685.34	10,715.70	11,006.27	11,113.03

	OGK-2			MIPC		
	2018	2019	2020	2018	2019	2020
FIFR <sup>22</sup>	0.00	0.00	0.00	0.00	0.00	0.00
LTIFR <sup>23</sup>	0.21	0.07	0.00	0.45	0.08	0.12
ODR <sup>24</sup>	0.07	0.00	0.00	0.00	0.00	0.00
LDR <sup>25</sup>	11.31	0.92	0.00	12.50	26.80	7.05
Total hours worked by all employees, thousand hours	14,150.49	14,084.71	12,760.46	24,178.04	25,647.12	24,959.88

**In 2020, the Group registered four accidents due to fault of employees and one accident with no person at fault identified.**

For more details on work-related injuries by type and the lost time across Gazprom Energoholding Group, see Appendices 23 and 24.

<sup>22</sup> Fatal Injury Frequency Rate (FIFR) = the number of work-related fatalities / total hours worked by all employees × 1,000,000.

<sup>23</sup> Lost Time Injury Frequency Rate (LTIFR) = the number of injuries / total hours worked by all employees × 1,000,000.

<sup>24</sup> Occupational Disease Rate (ODR) = the frequency of new occupational diseases / total hours worked by all employees × 1,000,000.

<sup>25</sup> Lost Days Rate (LDR) = the total lost days / total hours worked by all employees × 1,000,000.

**Investigation mechanisms have been defined for:**

- accidents – in Articles 227–231 of the Russian Labour Code (No. 197-FZ dated 30 December 2001), as well as in the Provision on the Peculiarities of the Investigation of Occupational Accidents in Certain Industries and Organisations approved by Decree of the Russian Ministry of Labour and Social Development No. 734 dated 24 October 2002;
- industrial accidents and incidents at a hazardous facility – in Rostekhnadzor’s Order No. 503 On Approval of the Procedure for Technical Investigation of Causes of Accidents, Incidents and Loss of Industrial Explosives, dated 8 December 2020;
- accidents at power generation facilities – in Resolution of the Russian Government No. 846 On Approval of the Rules for Investigating Causes of Accidents in the Power Generation Industry, dated 28 October 2009.

EU25

**No cases of injuries sustained by third parties when interacting with assets of Gazprom Energoholding Group companies were registered.**

**WORK-RELATED INJURIES AMONG CONTRACTOR EMPLOYEES**

GRI 403-2

Certain types of activities related to the construction and operation of Gazprom Energoholding Group’s generating facilities are performed by contractor employees.

**Relevant contract agreements include a mandatory appendix stipulating the contractor’s liability for breaching occupational health, fire safety and environmental requirements, based on which fines may be imposed, and serious offences may have a contractor’s pass to the power plants’ premises revoked.**

**Regular supervision of contractors’ employees includes:**

- ✓ checking the availability of employees’ certificates in occupational health, fire and industrial safety during operations at generating facilities, as well as authorisations to conduct special operations with core and auxiliary equipment;
- ✓ introductory (primary, targeted) briefings;
- ✓ joint Occupational Health and Fire Safety Days;
- ✓ unscheduled workplace inspections (including at night-time) by in-house occupational health specialists;
- ✓ workplace inspections as part of internal and external technical audits;
- ✓ joint meetings between the Group’s occupational health services and contractors to address occupational health and industrial safety issues;
- ✓ joint field visits and in-process inspections at hazardous facilities.

In 2020, the Group’s generating companies did not maintain statistics on the number of injuries and fatalities among contractor employees when interacting with their assets, but plan to include their contractors into the OHS management system.

# INDUSTRIAL SAFETY

## and Occupational Health Spending

GRI 403-2

**Occupational health and safety spending covers:**

- periodical medical checks (examinations);
- training in occupational health;
- purchase of protective clothing and footwear, personal protective equipment, detergents and disinfectants;
- storing, cleaning, washing and drying protective clothing;
- special assessment of working conditions;
- operational control over compliance with sanitation rules and healthcare (preventive) measures, including measurements and analysis of occupational hazards and harmful factors;
- other measures, including those covered by programmes (agreements) to improve labour conditions.

**Industrial safety spending covers:**

- purchase of licences for certain activities;
- registration of hazardous facilities;
- third-party liability insurance against injuries resulting from accidents at hazardous facilities;
- industrial safety reviews;
- employee training and certification in industrial safety;
- other purposes.

**Allocation of Occupational Health and Industrial Safety Spending, RUB thousand**

		2018	2019	2020
Mosenergo	Health and safety	739,547	731,308	774,959
	Industrial safety	122,344	150,125	143,698
TGC-1	Health and safety	103,748	107,200	114,392
	Industrial safety	32,139	13,343	9,061
OGK-2	Health and safety	317,638	362,413	414,974
	Industrial safety	39,211	44,119	45,833
MIPC	Health and safety	372,623	425,242	538,213
	Industrial safety	24,240	259,991	313,952
<b>Total</b>	<b>Health and safety</b>	<b>1,533,556</b>	<b>1,626,163</b>	<b>1,842,538</b>
	<b>Industrial safety</b>	<b>217,934</b>	<b>467,579</b>	<b>512,544</b>

# 07. Professional

## DEVELOPMENT AND SOCIAL SUPPORT FOR EMPLOYEES

HR Policy .....	106
Human Resources .....	108
Performance Reviews .....	109
Employee Turnover .....	110
Respect for Human Rights and Equal Opportunities .....	111
Employee Remuneration .....	112
Employee Professional Development and Training .....	113
Young Talent Acquisition and Onboarding .....	115
Protection of Employee Interests and Rights .....	117
Social Spending and Pension Benefits .....	119



Unlocking  
potential

# HR POLICY

GRI 103-2

*The HR policy and personnel management system of Gazprom Energoholding Group companies are aligned with the strategic goal of PJSC Gazprom: to become a leader among global energy companies.*

**We strive to build a team of professionals capable of delivering their objectives efficiently through achieving and sustainably maintaining the status of a preferred employer that attracts committed and highly efficient people.**

## Key HR policy principles



Transparency and openness



Pursuing industry leadership



Effective investments in people



Continuous improvement



Organisational discipline

**Internal documents of the Group companies are aligned with:**

- the Human Resources Management Policy of PJSC Gazprom, its Subsidiaries and Entities (approved by Resolution of PJSC Gazprom's Management Committee No. 49 dated 7 November 2006);
- requirements of Russian laws.

HR management issues are assigned to dedicated functions and business units of Group companies, while a relevant function of Gazprom Energoholding provides the necessary methodological support and monitors HR activities across the Group companies. Gazprom Energoholding's representatives sit on the governing and advisory bodies of its subsidiar-

ies, who are authorised to approve the companies' organisational structures and staffing, management compensation plans, key performance indicators, and collective bargaining agreements. This enables the Company to pursue a uniform policy in terms of organisational development, goal-setting and compensation paid to top managers.

**HR management documents effective across the Group include:**

- HR Management Policy;
- Code of Corporate Ethics;
- Regulations on Competency-Based HR Management at Gazprom Energoholding's Subsidiaries and Entities;
- Gazprom Energoholding's unified competency model;
- Regulations on Managing the Talent Pool to Fill Management Positions at Gazprom Energoholding, Its Subsidiaries and Entities;
- Regulations on the Certification of Managers, Specialists and Other Employees of Gazprom Energoholding;
- Regulations on Employee Training at Gazprom Energoholding;
- Rules for HR Management at Companies of the Russian Electricity Industry;
- Guidelines on Implementing Professional Standards Across PJSC Gazprom;
- Action Plan to Introduce Professional Standards Across Gazprom Energoholding, Its Subsidiaries and Entities.

In 2020, the Group continued integrating professional standards. These consistent efforts are guided by annual plans of PJSC Gazprom and Gazprom Energoholding. In total, Gazprom Energoholding Group uses over 64 professional standards, including:

**18** Mandatory professional standards

**46** Non-mandatory professional standards

## HR Management System at Gazprom Energoholding Group's Generating Companies



# HUMAN RESOURCES

GRI 102-8

As at 31 December 2020, the headcount of Gazprom Energoholding Group was 37,116 employees (including those employed under independent contractor agreements and part-time employees) versus 39,353 employees as at 31 December 2019. Between 31 December 2019 and 31 December 2020, the headcount decreased by 5.7%, or 2,237 employees.

GRI 102-8

## Total Number of Employees by Employment Contract and Gender, persons

### Permanent employees

	Employment contract with a full-time employee					
	2018		2019		2020	
	Male	Female	Male	Female	Male	Female
Mosenergo	2,509	5,436	2,550	5,494	2,612	5,540
TGC-1 <sup>26</sup>	2,241	4,947	2,294	5,003	2,334	5,077
OGK-2	2,773	5,643	2,756	5,655	2,480	4,861
MIPC	4,733	9,490	5,271	10,135	4,528	9,506
<b>Total</b>	<b>12,256</b>	<b>25,516</b>	<b>12,871</b>	<b>26,287</b>	<b>11,954</b>	<b>24,984</b>

	Employment contract with a part-time employee					
	2018		2019		2020	
	Male	Female	Male	Female	Male	Female
Mosenergo	8	9	9	11	8	12
TGC-1 <sup>26</sup>	5	18	9	19	24	13
OGK-2	4	34	8	11	12	13
MIPC	12	35	3	16	1	5
<b>Total</b>	<b>29</b>	<b>96</b>	<b>29</b>	<b>57</b>	<b>45</b>	<b>43</b>

### Temporary employees

	Independent contractor agreement					
	2018		2019		2020	
	Male	Female	Male	Female	Male	Female
Mosenergo	27	36	26	29	22	31
TGC-1 <sup>26</sup>	13	23	9	19	14	12
OGK-2	0	2	0	2	1	5
MIPC	14	7	12	12	2	3
<b>Total</b>	<b>54</b>	<b>68</b>	<b>47</b>	<b>62</b>	<b>39</b>	<b>51</b>

<sup>26</sup> Including AO Murmanskaya CHPP.

GRI 405-1

## Total Number of Employees by Position, Age Group and Gender

2018

	Managers		White collar		Blue collar	
	Female	Male	Female	Male	Female	Male
Under 30 years old	124	430	901	735	317	2,612
30–50 years old	1,200	3,629	3,203	2,111	2,190	6,904
Over 50 years old	690	2,123	1,370	785	2,420	6,292
<b>Total</b>	<b>2,014</b>	<b>6,182</b>	<b>5,474</b>	<b>3,631</b>	<b>4,927</b>	<b>15,808</b>

2019

	Managers		White collar		Blue collar	
	Female	Male	Female	Male	Female	Male
Under 30 years old	127	376	802	718	297	2,487
30–50 years old	1,257	3,917	3,586	2,260	2,173	7,305
Over 50 years old	690	2,056	1,348	859	2,602	6,336
<b>Total</b>	<b>2,074</b>	<b>6,349</b>	<b>5,736</b>	<b>3,837</b>	<b>5,072</b>	<b>16,128</b>

2020

	Managers		White collar		Blue collar	
	Female	Male	Female	Male	Female	Male
Under 30 years old	113	323	729	654	262	2,167
30–50 years old	1,212	3,711	3,455	2,211	1,750	6,342
Over 50 years old	723	2,025	1,429	903	2,114	6,111
<b>Total</b>	<b>2,048</b>	<b>6,059</b>	<b>5,613</b>	<b>3,768</b>	<b>4,126</b>	<b>14,620</b>

The headcount reduction was mainly due to optimising organisational structures at the Group companies, which included centralising and automating of business processes, outsourcing support functions,

changing the organisational structure of operating branches, as well as disposal of non-core assets and sales optimisation. Growth was driven by commissioning new facilities and insourcing certain functions.

For more details on human resources, see Appendices 25 and 26.

# PERFORMANCE REVIEWS

GRI 404-3

*In 2020, 751 employees of the Group were reviewed against reward targets/KPIs and individual goals and objectives.*

We also review the performance of employees from the talent pool and/or engaged in other development programmes. In 2020, about 1,250 people were reviewed through aptitude tests at the Review and Development Centre and then trained in line with individual plans.

**Number of Employees Who Passed the Efficiency (Performance) Review**



The reduction in the number of Gazprom Energoholding Group employees who passed the competency tests and were certified in 2020 is due to COVID-19 restrictions regarding offline meetings. As these tests require personal attendance by the employee and all committee members, they were suspended for the duration of the pandemic-induced restrictions.

# EMPLOYEE TURNOVER

GRI 401-1

*During 2020, the average employee turnover<sup>27</sup> at Gazprom Energoholding Group was about 6.49%.*

For more details on employee turnover, see Appendix 27.

Some of the Group companies plan to take additional measures to retain employees and reduce employee turnover in 2020.

**Our methods for sourcing and retaining employees include providing decent pay and social security in our operating regions, as well as non-financial incentives such as:**

- corporate health insurance programmes and pension plans;
- employee training and development programmes;
- engaging third-party credit organisations to provide services to employees, such as special loan terms and property and life insurance;
- corporate entertainment events (including sporting contests);
- health and recreation for employees and their family members.

In sourcing employees and selecting candidates for management positions, Gazprom Energoholding Group companies focus exclusively on individual professional skills, without regard for social status or maintaining statistics on their sociodemographics. The majority of Group employees live in regions where power plants are located, with the exception

of a small number of employees engaged for the construction or operation of new generating facilities.

All new employees undergo an induction and onboarding programme. Employees on probation are given a job assignment for the probation period and are assessed based on their performance.

<sup>27</sup> The ratio of employees who have resigned or have been dismissed due to absenteeism or consistent breaches of labour discipline to the average headcount over the reporting period.

# RESPECT FOR HUMAN RIGHTS and Equal Opportunities

GRI 412-2; 412-3; 405-2; 406-1

*Respect for Human Rights is set forth in Russian laws, particularly in the Constitution of the Russian Federation.*

Gazprom Energoholding Group believes that respect for its employees' rights is inherent to stable performance and development. The Group guarantees employees' rights to work and rest, retirement and disability pensions. Labour rights are provided in line with

the Labour Code of the Russian Federation, industry regulations and companies' collective bargaining agreements.

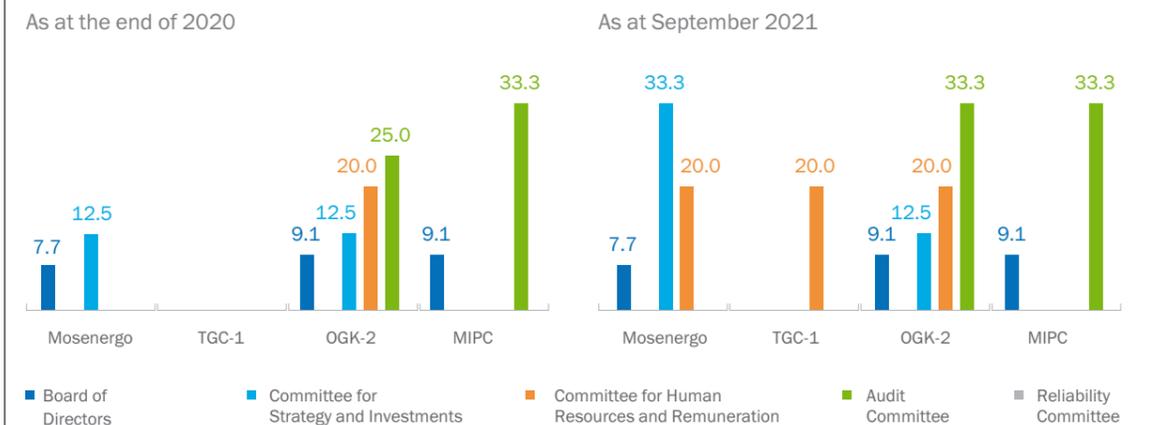
In 2020, no training in human rights policies or procedures for security employees was conducted.

**Gazprom Energoholding Group has a zero tolerance for gender, age, nationality, creed and other types of discrimination throughout its operations.**

**The Group companies apply equal principles for men and women in all labour aspects:**

- positions (including the possibility to take managerial positions);
- working conditions;
- remuneration;
- social benefits.

**Share of Women on Highest Governance Bodies of Gazprom Energoholding Group Companies, %**



No cases of discrimination by gender, ethnic origin or other aspects across Gazprom Energoholding Group companies were identified in 2020.

# EMPLOYEE REMUNERATION

*Employee remuneration at Gazprom Energoholding Group companies is based on the employee's qualifications, job complexity and individual performance as well as the performance of their business unit and the Group company in general. The forecasted consumer price index growth is considered when planning payroll costs for future periods.*

GRI 401-2

The remuneration system at Group companies comprises **a fixed part** and **a variable part**.

### FIXED PART

payable to employees includes compensation payments depending on working conditions and the nature of the specific job.



### VARIABLE PART

comprises increments and incentive payments, including bonuses accrued at the end of the reporting period (for the month, quarter or year) subject to performance measured against individual and corporate KPIs.

**Core employees such as operators and specialists**

**80 / 20**

**Managers**

**40 / 60**

KPIs typically include financial and economic targets, operational efficiency, safety and reliability metrics, as well as performance against investment programmes in general and against individual priority investment projects. The KPIs are continuously refined to accommodate for the current and strategic objectives of each of the Group companies, and serve as a tool to appraise employee performance and motivation.

Mosenergo<sup>28</sup>, TGC-1 and OGC-2 calculate fixed remuneration using a wage rate system (or a wage rate scale), which reflects the differences among employees depending on the complexity of their job duties and individual performance against work targets. MIPC does not have a wage rate system (a wage rate scale) and uses grades that determine the complexity of a job for workers and categories for specialists.

GRI 202-1

Under Russian law, the regions where our generating companies operate employ the unified minimum wage rate (MWR), which remains the same for all employees regardless of gender.

**The wage rate for entry-level positions with the Group companies is above the MWR in each region and is not affected by an employee's gender or age.**

The average wage rate at the Group's generating companies is also maintained at a level above the regional average.

For more details on entry-level wage ratios (including compensation and incentive payments) compared to local minimum wage rates, see Appendix 28.

The eligibility criteria and agreements signed by the Group's generating companies with suppliers and contractors do not stipulate minimum wage rates for employees.

<sup>28</sup> Mosenergo is shifting to the wage rate system.

# EMPLOYEE PROFESSIONAL

## Development and Training

GRI 103-2, 404-2

**Gazprom Energoholding Group offers its employees extensive opportunities to unlock their personal potential and achieve career growth**

### Onboarding

programme for new hires and a mentoring scheme

### Implementing

unified approaches and methods in employee training and appraisal

### Maintaining

a talent pool and transparent principles of talent promotion

### Continuous education

and training system

### Corporate skills

contests and innovative project competitions

Continuous education is essential to achieving the Group companies' goals and objectives and ensuring their future development. Our companies have specialised programmes for their management, talent pools and high-potential employees, providing training in developing effective management tools, improving personal efficiency and business communication skills, and motivating own employees to improve their professional level.

The Regulations on the Continuous Vocational Education and Training System govern the relations between Gazprom Energoholding and its generating companies in employee education and development. The Educational and Methodological Council determines key development areas for continuous corporate education and training.

### Gazprom Energoholding Group's Case Example

*In line with the current Collective Bargaining Agreement, OGC-2 can pay education fees for its employees' studying at state-accredited higher and secondary vocational educational institutions on a part-time (evening) and distance basis in industry-related courses relevant to the company.*

*In 2020, about 25% of vacancies were filled through internal job rotations of company employees.*

## CHANGES IN THE EMPLOYEE TRAINING SYSTEM DURING THE PANDEMIC

*Most face-to-face employee training has moved online: technical capabilities were built and adjusted to enable online training, along with the revision of educational programmes to prevent any loss in the quality of training delivered in this new format.*

- ✓ The Automation of Employee Training and Development project was developed and launched at Mosenergo, TGC-1, OGK-2 and MIPC, covering the following areas: Employee Assessment, Employee Qualification Management, Competency-Based Management, Training and Development, Relations with Educational Institutions, Onboarding Management, Human Resources Cost Management, Reporting and Analysis, and Integration with External Systems .
- ✓ Mosenergo developed the Internal Coaching Institute programme and built up a pool of coaches.
- ✓ The first virtual firefighting training simulator was developed.
- ✓ MIPC implemented training for the participants of the HR Planning project in the format of on-line sessions and distance learning courses.
- ✓ Training films were made on the following jobs: water boiler operator, CCGT turbine technician, turbine operator, and steam boiler operator.
- ✓ Simulator training for boiler and turbine shop staff was launched by means of remote access to Cross-Connection Thermal Power Plant, CCGT-450, and Block-100 simulators.
- ✓ An upskilling programme was developed for the managers and specialists responsible for the simulator training programme Instructor for Simulator Training of Operational Staff of Automated Systems and Metering Units at TGC-1 power plants.

### IN 2020 WERE DELIVERED

**> 120,000**

In 2021, the Group plans to continue its successful distance learning programmes in talent pool building and the development of simulator training at the Training Centre and business units of Group companies.

distance learning person-courses

GRI 404-1

### Average Hours of Training per Year per Employee, by Employee Category

	Managers			White collar			Blue collar		
	2018	2019	2020	2018	2019	2020	2018	2019	2020
Mosenergo	144	168	96	144	168	96	85	89	76
TGC-1	38	44	54	38	44	54	49	88	64
OGK-2	35	51	59	46	28	23	34	52	25
MIPC	42	81	137	34	42	58	31	66	64

### Average Training and Professional Development Costs per Employee, RUB

	2018	2019	2020
Mosenergo	2,415.00	2,735.00	2,390.00
TGC-1	3,689.14	3,653.33	4,169.34
OGK-2	5,450.00	5,310.00	5,097.48
MIPC	1,443.91	1,476.14	641.00

The Group holds skills contests for our operational staff on an annual basis. The key objectives of the contests are to improve the operational staff's professional skills in ensuring the energy system's reliability, sharing best corporate practices in organising and running day-to-day management of thermal power

plant equipment, and improving the forms and methods of ensuring high quality, reliable equipment maintenance. In 2020, the Company also moved a contest for operational staff online, using training simulators and the corporate remote learning system.

## YOUNG TALENT Acquisition and Onboarding

G4-DMA (previously EU14)

*The Company's HR policy aims at maintaining an optimal age mix and ensuring the succession of employee generations as a strategic objective.*

### The Group's key methods for attracting young talent:

- regular contact with educational institutions to attract and recruit high-potential graduates; contracted targeted training programmes;
- traineeships and internships for students of relevant higher and specialised education institutions;
- diploma project contests among students of higher education institutions;
- Company Days and round tables with the Group's leading specialists;
- participation in Career Fairs and posting information about career opportunities for graduates on information boards at higher education institutions, on social networks, and in the mass media;
- targeted onboarding and development programmes for young talent.

Onboarding programmes at the Group companies focus on corporate values, the Group's corporate ethics and etiquette, and energy industry basics. Onboarding (induction) courses and mentoring programmes are also provided to young specialists and new employees. Tours to the Group's museums and generating facilities are organised for all new hires.

## CONTESTS AND EVENTS

**Gazprom Energoholding Group regularly holds events and programmes to attract young talent and develop their potential**

- Gazprom Energoholding's annual Contest of Young Talent and Innovators
- Young Professionals School
- TRIZ School: Theory of Inventive, Management and Operational Problem Solving

In 2020, all Group companies adopted regulations on managing young talent and employees, setting out the main approaches to engaging young people: targeted training programmes at universities/colleges, apprenticeships, onboarding and development programmes.

**Young people are actively engaged in the #VmesteYarche (#TogetherBrighter) all-Russia energy saving festival. Young specialists participated in the Russian Energy Week International Forum, organised career guidance events and open days for university and school students across the Group's footprint.**

### Gazprom Energoholding Group's Case Example

OGK-2's Kirishskaya GRES set up an interactive job fair at the #VmesteYarche festival in 2020. Within four hours, guests of the regional #VmesteYarche festival in Gatchina had an opportunity to try out various jobs at the booth of Kirishskaya GRES: they treated water, learned about the evolution of the block valve control system, and connected plant equipment into a single electric circuit.

The Group has Young Specialist Councils that operate on a regular basis, with their members participating in similar councils at the industry and regional levels. For example, members of MIPC's Council take part in the activities of the Youth Council under the Moscow Department of Housing, Utilities and Amenities.

# PROTECTION OF EMPLOYEE

## Interests and Rights

GRI 403-4

*The social security of employees is a key priority of Gazprom Energoholding Group's HR policy.*

The concept of social partnership that underpins the policy provides for various social payments, personal insurance, healthcare benefits, and private pension plans offered to employees.

### Key available social benefits and payments



Voluntary health insurance



Accident insurance



Recreation for employees and/or their children



Private pension plans



Support for war and homefront veterans of the Great Patriotic War (WWII)

Relations with trade unions are crucial to protecting the interests of employees and maintaining a social partnership between management and employees.

**The primary trade union organisations at TGC-1 and OGK-2 branches are part of the All-Russian Electric Trade Union.**

**The primary trade unions at Mosenergo branches are part of the Moscow Electric Trade Union, and MIPC's trade unions are part of the NGO Moscow Municipal Workers Trade Union.**

The Group companies have special commissions that oversee the regulation of social and labour relations. In close cooperation with trade unions, the Group actively implements its social policy, organising cultural, sports and recreational events.

GRI 102-41

**IN 2018-2020 COLLECTIVE BARGAINING AGREEMENTS COVER**

**99%**

of employees, while other internal regulations apply to administrative office employees.

The Group's generating companies have active collective bargaining agreements and are committed to the mutual obligations contained in them. When developing contractual relations between social partnership stakeholders, the Group aims to secure the social and economic rights of, and guarantees for, employees, increase labour efficiency and productivity, improve the quality of work, and comply with established labour and process procedures as well as occupational health, safety and hygiene standards.

Company	Share of employees covered by collective bargaining agreements	Share of employees who are members of trade unions	Companies' trade unions
<b>MOSENERGO</b>	<b>100%</b>	<b>21%</b>	Moscow Electric Trade Union
<b>TGC-1</b>	<b>100%</b>	<b>58%</b>	Primary trade union organisation under the All-Russian Electric Trade Union
<b>OGK-2</b>	<b>93%</b>	<b>72%</b>	Primary trade union organisation of Surgutskaya GRES-1 Primary trade union organisation of Stavropolskaya GRES Troitskaya GRES, primary trade union organisation under the Electric Trade Union in the Chelyabinsk Region Primary trade union organisation of Serovskaya GRES Pskovskaya GRES, primary trade union organisation Primary trade union organisation of Adlerskaya TPP Primary trade union organisation of Kirishskaya GRES Primary trade union organisation of Novocherkasskaya GRES Primary trade union organisation of Ryazanskaya GRES under the Electric Trade Union in the Ryazan Region Primary trade union organisation of Cherepovetskaya GRES under the All-Russian Electric Trade Union Primary trade union organisation of OGK-2 under the Electric Trade Union in Saint Petersburg and the Leningrad Region
<b>MOEK</b>	<b>100%</b>	<b>21%</b>	Moscow Municipal Workers Trade Union

All stakeholders are involved in the Group's efforts to monitor compliance with collective bargaining agreements via periodical (quarterly, biannual or annual) reports and conferences.

The companies' collective bodies discuss matters related to collective bargaining agreements and include representatives of employers, employees (through trade unions) and representatives of Gazprom Energoholding in some cases. Collective bargaining agreements with Group employees include the following key elements:

- Standard work and rest hours: working hours per week, statutory leave and extra leave;

- Minimum monthly wage rates for Grade 1 blue-collar workers are determined taking account of the consumer price index for past periods and the company's balance sheet strength<sup>29</sup>;
- Occupational safety: employer's commitments on safety, medical examinations, supply of working clothes/footwear, accident insurance, etc.;
- Benefits, guarantees and compensations.

GRI 402-1

**The Group's generating companies provide employees a minimum two months' notice on material changes.**

The trade union organisations' elected governing bodies receive a minimum three months' notice on rightsizing or staff optimisation decisions that may lead to large-scale redundancies. Additionally, the Group generating companies' collective bargaining agreements state that trade unions are to be informed of any forthcoming reorganisation within 20 days following the Shareholders Meeting at which the relevant decision was made.

# SOCIAL SPENDING and Pension Benefits

GRI 201-3

**THE CORPORATE PENSION PROGRAMMES COVERED ABOUT**

**20%**

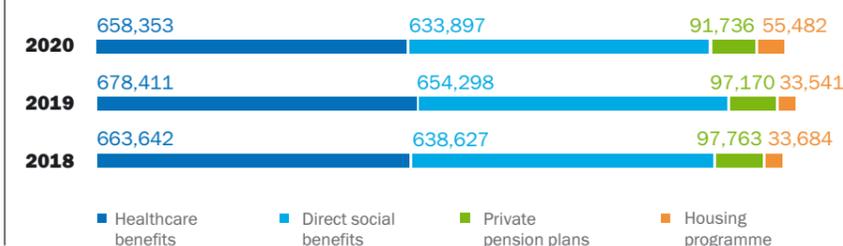
of employees in 2019–2020.

The Group engages NPF GAZFOND as its main non-state pension fund and maintains pension schemes provided by NPF Otkritie earlier.

The Group companies apply both corporate and parity pension programmes.

Gazprom Energoholding Group's<sup>30</sup> pension liabilities totalled RUB 1,463.4 mm in 2019 and RUB 1,439.5 mm in 2020.

**Social Spending, RUB thousand**

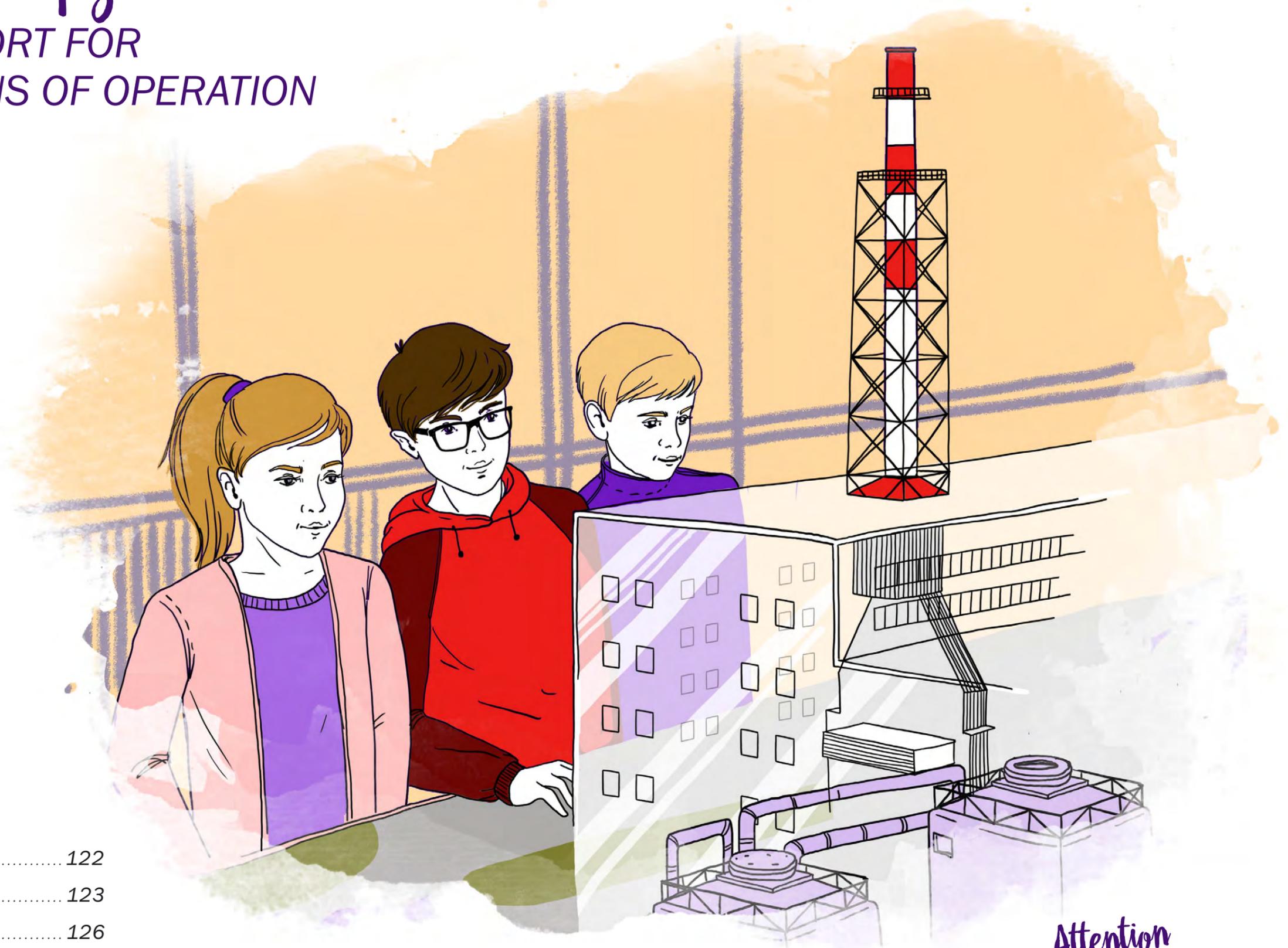


<sup>29</sup> Except for PAO MIPC.

<sup>30</sup> PAO MIPC does not have a pension programme.

# 08. Philanthropy

## AND SUPPORT FOR REGIONS OF OPERATION



Contribution to Regional Development .....	122
Philanthropy .....	123
Corporate Volunteering .....	126
Digital Social and Educational Projects .....	127

*Attention  
and care*

# CONTRIBUTION TO REGIONAL DEVELOPMENT

GRI 103-2, GRI 203-1

*Social aspects are an important focus area of Gazprom Energoholding Group, in addition to financial and operational performance.*

The generating companies actively engage with municipal authorities, not-for-profit organisations and local communities and take account of their interests in decision-making. The Group companies regularly act as sponsors and support charity projects that promote social and humanitarian causes.

GRI 415-1

Gazprom Energoholding Group does not engage in politics or make contributions to political parties and organisations. However, the Group sets no restrictions on its employees' right to participate in social and political life unless it needs their attention during work time or the use of Group companies' resources.

Power plants and the Group's other generating facilities are large industrial enterprises that affect the environment and society in the regions of operation, despite all measures to prevent negative impacts. The Group companies' infrastructure investment projects may cause inconvenience to local residents. Each time the construction of a new industrial facility begins, Group companies hold open public consultations,

which involve local communities and environmental organisations, industry regulators, federal and municipal authorities.

The Group companies are major employers and taxpayers in their operating regions and thus have an overall positive impact on local communities and economies. The Group companies invest in the construction of small, but socially significant infrastructure facilities pro bono. These investments are insignificant for the companies' budget and financial performance, but deliver high social impact and improve both the quality of life for local communities and the Group generating companies' image.

# PHILANTHROPY

GRI 413-1

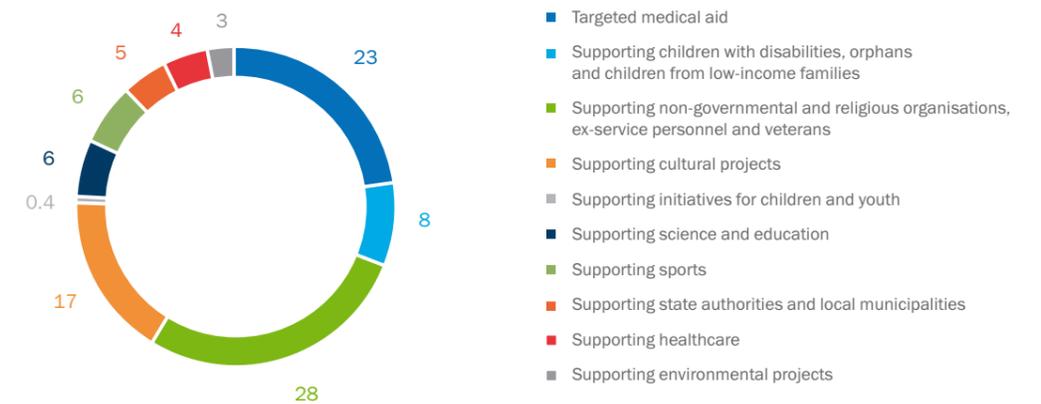
**The Group companies participate in charitable projects on a constant basis, helping organisations and individuals in the following areas:**

- targeted medical aid (purchasing medicines and medical equipment);
- supporting children with disabilities as well as orphans and children from low-income families;
- supporting environmental and recreational projects;
- supporting non-governmental and religious organisations, ex-service personnel and veterans;
- cultural projects;
- supporting initiatives for children and youth;
- supporting science and education;
- supporting sports;
- supporting community initiatives and local municipalities.

**THE FUNDS DIRECTED TO PHILANTHROPY**

**> 2.8** RUB mm

**Structure of Gazprom Energoholding Group Philanthropy Expenses in 2020, %**



**Recognising its social responsibility and being committed to the principles of sustainability, Gazprom Energoholding Group consistently supports organisations and individuals in need across the regions of operation through philanthropy and sponsorship.**

Area	Amount, RUB thousand
Targeted medical aid	6,482.00
Supporting children with disabilities, orphans and children from low-income families	2,198.00
Supporting non-governmental and religious organisations, ex-service personnel and veterans	8,067.00
Supporting cultural projects	5,000.00
Supporting initiatives for children and youth	106.00
Supporting science and education	1,862.00
Supporting sports	1,745.00
Supporting state authorities and local municipalities	1,300.00
Supporting healthcare	1,078.00
Supporting environmental projects	782.00
<b>TOTAL</b>	<b>28,620.00</b>



To celebrate the 75th anniversary of the victory in the Great Patriotic War (World War II), Gazprom Energoholding and Mosenergo renovated the war memorial in the Verigino village, Zubtsovsky District, Tver Region. The project included installing and painting of 530 meters

of fencing and 55 pedestals for memorial plaques with the names of the Red Army soldiers and commanders. A ceremony to rebury the remains of 462 soldiers and officers who perished in the Zubtsovsky District during the Great Patriotic War took place on 23 August 2020.



In 2020, TGC-1 continued to fund major charitable projects aimed at preserving Russia's great historical legacy and cultural heritage, supporting talented scientists, teachers and students, conserving biodiversity, and developing social infrastructure in its host region. The most significant of these projects are:

- upgrading the lighting and power supply systems in the exhibition halls and restoration laboratories of the State Hermitage Museum;
- the Gazprom Class project, run since 2018 at Gymnasium No. 426 of the Petrodvortsovy District of Saint Petersburg to provide to the most capable and motivated students in-depth training for exams to enter energy industry-related higher education institutions;
- Kazarov Scholarship for talented students and teachers of industry-related subjects and courses at Saint Petersburg State University of Industrial Technologies and Design and Peter the Great St. Petersburg Polytechnic University;

- supporting the Pasvik State Nature Reserve (Rayakoski village, Pechengsky District, Murmansk Region) and the Nizhne-Svirsky State Nature Reserve (Lodeynopolsky District, Leningrad Region);
- contributing to building a favourable living environment in remote communities across TGC-1's footprint;
- supporting Saint Petersburg's state healthcare facilities – the Children's Municipal Multi-Specialty Clinical Centre of High Medical Technology, the Paediatric Research and Clinical Centre for Infectious Diseases under the Federal Medical Biological Agency, and the Turner National Medical Research Centre for Children's Orthopaedics and Trauma Surgery (St. Petersburg).



In 2020, OGC-2 continued its charitable activities in its regions of operation, focusing on the following areas:

- supporting sick and disabled children and children's educational and sports institutions in the Pskov, Vologda, Sverdlovsk, Rostov Regions, Krasnodar Territory and Khanty-Mansi Autonomous Area – Yugra;
- taking part in the repairs and renovation of war memorials and monuments in Kirishi (Leningrad Region) and Novomichurinsk (Ryazan Region) to celebrate the 75th anniversary of the victory in the Great Patriotic War;

- creating the Sambek Heights national military and historical museum complex of the Great Patriotic War in the Rostov Region and the Partisan Glory Memorial in the Pskov Region.



In 2020, MIPC did not finance any charitable projects.

# CORPORATE VOLUNTEERING

*At the end of 2020, Gazprom Energoholding launched the corporate volunteering development project at TGC-1 to mark the Power Engineers' Day and the New Year. Under the #DobroPomoshch-TGC-1 initiative, employees of the Saint Petersburg office and plants collected New Year gifts for those in need – children with disabilities in Komarovo hospitals and elderly people in nursing homes.*

In spite of the challenges related to the pandemic and most employees shifting to remote work, over 200 people supported the initiative. Such volunteering projects that do not require financing from Group companies will continue in 2021.

social project to support shelters for animals with disabilities, across OGK-2's footprint.

MIPC's Young Specialist Council takes part in volunteer projects of the Youth Council under the Moscow Department of Housing, Utilities and Amenities and also holds its own various events.

In 2020, the Youth Council of OGK-2 launched the Special Friend: With the Energy of Kindness, a major

## The largest events held by MIPC's Young Specialist Council in 2020

- Volunteer visit to the Zelenograd animal shelter
- Visit to the Rodnik social rehabilitation centre and Skolkovsky rehabilitation orphanage, including collecting gifts and hosting educational games for children

### Gazprom Energoholding Group's Case Examples

MIPC employees take part in the Volunteers for Children project, helping both orphanages and families in difficult situations to deliver the principle "No one should be alone". The project participants visit the children they support every week and help them improve their socialisation skills, learn new things, and explore the world.

In June 2021, MIPC employees joined the Patrons Nearby donor event, dedicated to World Blood Donor Day, by supporting the Moscow donor movement and donating blood.

# DIGITAL SOCIAL and Educational Projects

*In 2020, due to the spread of the coronavirus and related restrictions, online projects and activities became particularly important.*

Gazprom Energoholding Group companies pay particular attention to projects that tell the history of the industry and promote jobs in the energy industry. Many of these projects are voted best at various industry-related contests.

### Gazprom Energoholding Group's Case Examples

Virtual Mosenergo Historical Museum won first place in the Best Communications Projects Among Energy and Industrial Companies category at the KonTEKst 2020 awards.

Mosenergo's another project, What Is GOELRO, timed to coincide with the 100th anniversary of GOELRO (State Commission for Electrification of Russia), included printed publications, a multimedia web portal and a dedicated historical film. In addition, there were dedicated exhibitions at Mosenergo Historical Museum, lectures and lessons for school students. In November 2020, the project won the federal round of MediaTEK 2020, All-Russian contest for the media, energy sector press services and regional administration (the Best Social and Environmental Initiative category), held for the sixth time under the auspices of the Russian Ministry of Energy.

In 2020, OGK-2 launched the Life with Energy digital project, comprising a series of video clips showcasing jobs at OGK-2 plants which are shown through life stories of company employees who have succeeded both in their career and in their personal life. The project is dedicated to energy workers, their daily challenging tasks, aspects of their daily work, and their hobbies.

In autumn 2020, members of the Youth Council of OGK-2's Ryazanskaya GRES took part in the Walk the City, a city online quest, where they discussed the power plant's operations with school students.

# APPENDICES

## APPENDIX 1. IDENTIFYING MATERIAL TOPICS

GRI 102-46, 102-47

When preparing this Report, Gazprom Energoholding Group jointly with stakeholders identified material topics to be disclosed in the Report. The Report's content has been determined in accordance with the GRI Guidelines. A survey was conducted to assess the level of impact/influence on a scale of "Critical–Extreme–Significant–Negligible–None". Responses were converted into points, and for each topic an average point was calcu-

lated that characterises its materiality for disclosure. The topics with the Significant or higher level of influence on at least one axis of the materiality matrix were recognised as material. A total of 21 topics were selected for disclosure in the Report, with two of them (with the Extreme and Critical levels of influence) selected for the most granular coverage.

### MATERIALITY MATRIX

Impact/influence of Gazprom Energoholding Group companies on stakeholders within sustainability topics as assessed by the management



Impact/influence of Gazprom Energoholding Group companies on stakeholders within sustainability topics as assessed by stakeholder representatives

Identified material topics and brief description of the disclosed information in line with the GRI Guidelines	Level of impact/influence of Gazprom Energoholding Group companies on stakeholders within each topic	
	As assessed by management of Group companies	As assessed by stakeholders of Group companies
<b>1. CATEGORY: ECONOMIC</b>		
<b>1.1. ECONOMIC PERFORMANCE</b> Influence on stakeholders from the way Group companies' revenues are generated and distributed.	Significant	Significant
<b>1.2. REGIONAL PRESENCE</b> Influence on stakeholders from remuneration levels at Group companies and the number of local residents employed in the regions where the companies operate.	Negligible	Negligible
<b>1.3. INDIRECT ECONOMIC IMPACTS</b> Influence on stakeholders from Group companies' indirect economic impacts (including non-monetary forms) on society (e.g. changes in the production potential of the region's economy and long-term prospects for regional development, investments by Group companies in regional infrastructure, etc.).	Significant	Significant
<b>1.4. PROCUREMENT MANAGEMENT</b> Influence on stakeholders from the sourcing criteria and procedures established by Group companies.	Significant	Significant
<b>1.5. ANTI-CORRUPTION</b> Importance for stakeholders of Group companies' efforts to combat corruption, bribery, fraud, extortion, and money laundering.	Significant	Extreme
<b>1.6. ANTI-COMPETITIVE BEHAVIOUR</b> Influence on stakeholders from risks of non-competitive behaviour or violation of anti-trust laws by Group companies (e.g. employees of Group companies colluding with competitors to limit the market effects of competition, agreeing prices or bids in tenders, creating barriers to market entry, or dividing spheres of influence).	Significant	Significant
<b>1.7. TAXATION</b> Influence on stakeholders from Group companies' tax strategy, including taxation regimes and tax optimisation practices used.	Negligible	Significant
<b>2. CATEGORY: ENVIRONMENTAL</b>		
<b>2.1. USE OF RAW MATERIALS AND SUPPLIES</b> Influence on stakeholders from Group companies' natural resource conservation activities implying the use of renewable resources, reuse and recycling.	Significant	Significant
<b>2.2. ENERGY EFFICIENCY AND ENERGY SAVING</b> Influence on stakeholders from the type of energy sources (renewable or conventional) used by Group companies to generate electricity, and the type of energy (from renewable or conventional sources, including purchased energy) they use for own needs.	Significant	Significant
<b>2.3. WATER USE AND WASTEWATER MANAGEMENT</b> Influence on stakeholders from the volume and sources of water withdrawal and water consumption, and the quality of discharged water.	Significant	Significant
<b>2.4. BIODIVERSITY CONSERVATION</b> Influence on stakeholders from Group companies' impact on biodiversity (various plant and animal species, ecosystems) in the regions where they operate, and companies' efforts to conserve and promote biodiversity.	Negligible	Negligible

	Identified material topics and brief description of the disclosed information in line with the GRI Guidelines	Level of impact/influence of Gazprom Energoholding Group companies on stakeholders within each topic	
		As assessed by management of Group companies	As assessed by stakeholders of Group companies
2.5.	<b>AIR EMISSIONS</b> Influence on stakeholders from emissions by Group companies, including emissions of greenhouse gases, ozone-depleting substances, nitrogen oxides, and sulfur oxides.	Significant	Significant
2.6.	<b>EFFLUENTS AND WASTE</b> Impact on stakeholders from waste produced by Group companies and their suppliers, efforts to recycle, recover and reuse this waste.	Significant	Significant
2.7.	<b>COMPLIANCE WITH LEGAL AND REGULATORY ENVIRONMENTAL REQUIREMENTS</b> Influence on stakeholders from Group companies' compliance with environmental legislation, including international conventions and declarations as well as federal, regional and local standards.	Significant	Significant
2.8.	<b>ENVIRONMENTAL REQUIREMENTS FOR SUPPLIERS AND CONTRACTORS</b> Influence on stakeholders from Group companies' efforts to minimise environmental damage caused by their suppliers and contractors when manufacturing and supplying goods and providing services to Group companies.	Significant	Significant
<b>3. CATEGORY: SOCIAL</b>			
3.1.	<b>ENSURING DECENT WORKING CONDITIONS FOR EMPLOYEES</b> Influence on stakeholders from new jobs creation and long-term employment and working conditions provided by Group companies.	Significant	Significant
3.2.	<b>INTERACTION WITH EMPLOYEES IN CASE OF SIGNIFICANT CHANGES IN EMPLOYMENT RELATIONS</b> Impact on stakeholders from Group companies' practices in communication with employees (and/or their representatives, including trade unions) in case of significant changes in Group companies' operating conditions such as the notice period as regards relevant changes.	Significant	Significant
3.3.	<b>HEALTH AND SAFETY OF EMPLOYEES IN THE WORKPLACE</b> Influence on stakeholders from Group companies' efforts to prevent physical or mental harm to their employees in the workplace, including injuries and occupational diseases, and to promote employee health, including management systems, policies and programmes in place at Group companies, that are appropriate to their scale, and the involvement of employees and trade unions in their development and implementation.	Significant	Significant

	Identified material topics and brief description of the disclosed information in line with the GRI Guidelines	Level of impact/influence of Gazprom Energoholding Group companies on stakeholders within each topic	
		As assessed by management of Group companies	As assessed by stakeholders of Group companies
3.4.	<b>EMPLOYEE UPSKILLING AND PROFESSIONAL TRAINING</b> Influence on stakeholders from Group companies' efforts to train employees and further develop their professional skills, including assistance programmes to support employees who change positions or roles within Group companies or end their career at Group companies, including due to retirement.	Significant	Significant
3.5.	<b>EQUAL CAREER OPPORTUNITIES</b> Influence on stakeholders from Group companies' diversity and equality policies, regardless of gender, age or any other characteristics, and ensuring equal remuneration and representation at senior management level regardless of the above characteristics, and avoiding any form of discrimination.	Significant	Significant
3.6.	<b>FREEDOM OF ASSOCIATION AND COLLECTIVE BARGAINING FOR EMPLOYEES</b> Influence on stakeholders from the protection by Group companies of employees' rights to join or independently form organisations, conduct collective bargaining with representatives of Group companies, without prior authorisation or interference from anyone, including the government.	Negligible	Negligible
3.7.	<b>RESPECT FOR HUMAN RIGHTS</b> Impact on stakeholders from Group companies' and their suppliers' and contractors' efforts to ensure respect for human rights in line with the UN Principles (e.g. assessment of impact on human rights and provision of relevant trainings).	Significant	Significant
3.8.	<b>IMPACT ON SOCIAL DEVELOPMENT IN THE REGIONS OF OPERATION</b> Influence on stakeholders from Group companies' impact on local communities and indigenous peoples in the regions of operation, interaction of Group companies with local residents, the Group's efforts to minimise the negative impact of Group companies' operations on local residents.	Significant	Significant
3.9.	<b>THE COMPANY'S COMPLIANCE WITH ECONOMIC AND SOCIAL LEGISLATION</b> Influence on stakeholders from risks of violations by Group companies of laws and international conventions and declarations other than environmental ones (e.g. relating to taxation, competition, bribery, supplies, labour matters).	Significant	Extreme

## APPENDIX 2. GRI CONTENT INDEX

GRI 102-55

### GENERAL STANDARD DISCLOSURES

Disclosure	Section of the Report	Page of the Report
101	Basic information about the Report	Report Profile p. 4
<b>GRI 102</b>		
102-1	Name of the organisation	Appendix 3. Names, Corporate Forms, and Addresses of Group Companies Covered in the Report p. 138
102-2	Primary brands, products and services	Gazprom Energoholding Group Today p. 10
102-3	Location of the organisation's headquarters	Appendix 3. Names, Corporate Forms, and Addresses of Group Companies Covered in the Report p. 138
102-4	Location of operations	Gazprom Energoholding Group Today p. 12 Appendix 5. Regions of Operation and Distribution Markets of Gazprom Energoholding Group Companies p. 138
102-5	Ownership and legal form	Appendix 3. Names, Corporate Forms, and Addresses of Group Companies Covered in the Report p. 138
102-6	Markets served	Appendix 5. Regions of Operation and Distribution Markets of Gazprom Energoholding Group Companies p. 138
102-7	Scale of the organisation	Gazprom Energoholding Group Today p. 6
102-8	Information on employees and other workers	Human Resources p. 108 Appendix 25. Total Number of Employees by Employment Type and Gender p. 159 Appendix 26. Total Number of Employees by Age Group and Region p. 160
102-9	Supply chain	Supply Chain p. 66
102-10	Significant changes to the organisation in the reporting period	Year Highlights p. 14
102-11	Precautionary principle or approach	Environmental Protection p. 74
102-12	Externally developed economic, environmental and social charters, principles, or other initiatives to which the organisation subscribes, or which it endorses	Membership of Associations and Organisations p. 47, 75
102-13	Membership of associations, industry and/or national or international advocacy organisations	Membership of Associations and Organisations p. 47
<b>STRATEGY</b>		
102-14	Statement from senior decision-maker	Statement from the CEO of Gazprom Energoholding Group p. 5
102-15	A brief analysis of key risks and opportunities	Risk Management p. 34
<b>ETHICS AND INTEGRITY</b>		
102-16	Values, principles, standards, and norms of behaviour	Sustainability Management p. 23

Disclosure	Section of the Report	Page of the Report
102-17	Internal mechanisms for seeking advice about ethical and lawful behaviour, and reporting concerns about unethical or unlawful behaviour	Anti-corruption p. 69
<b>GOVERNANCE</b>		
102-18	Governance structure	Corporate Governance and Remuneration Policy p. 30
102-29	Highest governance body's role in identifying economic, environmental and social risks	Risk Management p. 35
102-35	Remuneration of members of the board of directors and top managers of the organisation	Remuneration Policy p. 32
<b>STAKEHOLDER ENGAGEMENT</b>		
102-40	List of stakeholder groups	Stakeholder Engagement p. 42
102-41	Percentage of total employees covered by collective bargaining agreements	Protection of Employee Interests and Rights p. 118
102-42	The basis for identifying and selecting stakeholders	Stakeholder Engagement p. 42
102-43	Approach to stakeholder engagement: engagement frequency and practice for each stakeholder group	Stakeholder Map. Regular Stakeholder Engagement p. 43
102-44	Key topics and concerns raised by stakeholder groups	Stakeholder Map. Regular Stakeholder Engagement p. 43
<b>REPORTING PRACTICE</b>		
102-45	List of entities included in the organisation's consolidated financial statements	Appendix 4. List of Subsidiaries Included in IFRS Financial Statements of Gazprom Energoholding Group's Generating Companies p. 138
102-46	Defining report content	Report Profile p. 4 Appendix 1. Identifying Material Topics p. 128
102-47	List of material topics	Appendix 1. Identifying Material Topics p. 128
102-48	Restatements of information	Report Profile p. 4
102-49	Significant changes from previous reporting periods in the list of material topics, topic boundaries, or estimation methodologies used in the report	Report Profile p. 4
<b>BASIC INFORMATION ABOUT THE REPORT</b>		
102-50	Reporting period (fiscal/calendar year) for the information provided	Report Profile p. 4
102-51	Previous sustainability reports	Report Profile p. 4
102-52	Reporting cycle	Report Profile p. 4
102-53	Contact point for questions regarding the report or its content	Appendix 3. Names, Corporate Forms, and Addresses of Group Companies Covered in the Report p. 138
102-54	Claims of reporting in accordance with the GRI Standards	Report Profile p. 4
102-55	GRI content index	Appendix 2. GRI Content Index p. 132
102-56	External assurance	There was no external independent assurance of the Report nor public hearings on its content. The quality and reliability of information disclosed in the Report are ensured by the internal control systems in place at Group companies. —

Disclosure	Section of the Report	Page of the Report
<b>MANAGEMENT APPROACH</b>		
103-1	Explanation of the material topic and its boundary	Report Profile p. 4 Economic Performance p. 60 Environmental Protection p. 72, 87
103-2	The management approach and its components	Occupational Health and Safety p. 98 HR Policy p. 106 Professional Development and Social Support for Employees p. 113
103-3	Evaluation of the management approach	Philanthropy and Support for Regions of Operation p. 122
<b>ECONOMIC</b>		
<b>ECONOMIC PERFORMANCE</b>		
201-1	Direct economic value generated and distributed	Economic Performance p. 65
201-2	Risks due to climate change	Risk Management p. 38
201-3	Defined pension plan obligations	Social Spending and Pension Benefits p. 119
<b>MARKET PRESENCE</b>		
202-1	Ratios of standard entry level wage compared to local minimum wage	Employee Remuneration p. 112 Appendix 28. Entry-Level Wage Ratios (Including Compensation and Incentive Payments) Compared to Local Minimum Wage Rates p. 161
<b>INDIRECT ECONOMIC IMPACTS</b>		
203-1	Infrastructure investments and services supported and other indirect impacts	Year Highlights p. 14 Philanthropy and Support for Regions of Operation p. 122
<b>PROCUREMENT PRACTICES</b>		
204-1	Percentage of the procurement budget spent on local suppliers	Procurement from SMEs p. 68
<b>ANTI-CORRUPTION</b>		
205-3	Confirmed incidents of corruption and actions taken	Anti-corruption p. 69
<b>ENVIRONMENTAL</b>		
<b>MATERIALS</b>		
301-1	Materials used by weight or volume	Supply Chain p. 66
<b>ENERGY EFFICIENCY</b>		
302-1	Total fuel consumption within the organisation from renewable and non-renewable sources by fuel type used, electricity consumption, heating consumption, cooling consumption	Fuel Use p. 81
302-4	Amount of reductions in energy consumption achieved as a direct result of conservation and efficiency initiatives	Energy Efficiency and Resource Conservation p. 79
302-5	The organisation's initiatives to enhance energy efficiency, and reduction in energy requirements during the reporting period as a result of those initiatives	Energy Efficiency and Resource Conservation p. 79

Disclosure	Section of the Report	Page of the Report
<b>WATER</b>		
303-1	Total water withdrawal by source	Water Efficiency. Water Consumption and Withdrawal p. 93
303-2	Water sources / water bodies used by the organisation for withdrawal – whether they are designated as protected areas, as well as their value and importance	Appendix 21. Total Water Withdrawal by Source p. 157
<b>BIODIVERSITY</b>		
304-2	Impacts on biodiversity	Biodiversity Protection p. 94
<b>EMISSIONS</b>		
305-1	Direct GHG emissions	Emissions of Greenhouse Gases (GHG) and Pollutants p. 85 Appendix 17. GHG Emissions Rate and Intensity p. 154
305-4	Emissions intensity by type of gas	Emissions of Greenhouse Gases (GHG) and Pollutants p. 85 Appendix 17. GHG Emissions Rate and Intensity p. 154
305-5	GHG emission reduction initiatives and their results versus the base year	Emissions of Greenhouse Gases (GHG) and Pollutants p. 85
305-6	Emissions of ozone-depleting substances by weight	Emissions of Greenhouse Gases (GHG) and Pollutants p. 86 Appendix 18. Emissions of NO <sub>x</sub> , SO <sub>x</sub> and Other Significant Pollutants p. 154
<b>EFFLUENTS AND WASTE</b>		
306-1	Water discharge by quality and destination	Water Efficiency Appendix 22. Water Discharge by Quality and Destination p. 157
306-2	Total weight of waste by type and disposal method	Waste Generation p. 87 Appendix 19. Waste Generation and Disposal p. 155
<b>ENVIRONMENTAL COMPLIANCE</b>		
307-1	Monetary value of significant fines and total number of non-monetary sanctions for non-compliance with environmental laws and regulations	Ensuring Compliance with Environmental Laws and Regulations p. 76
<b>SUPPLIER ENVIRONMENTAL ASSESSMENT</b>		
308-1	New suppliers that were screened using environmental criteria	Monitoring of Supplier and Contractor Environmental Compliance p. 77
<b>SOCIAL</b>		
<b>EMPLOYMENT</b>		
401-1	Total number and rates of new employee hires and employee turnover by age group, gender and region	Employee Turnover p. 110, 112 Appendix 27. Employee Turnover by Age Group and Gender p. 161
401-2	Benefits provided to full-time employees that are not provided to temporary or part-time employees	Employee Remuneration p. 112

Disclosure	Section of the Report	Page of the Report
<b>LABOUR/MANAGEMENT RELATIONS</b>		
402-1	Minimum notice periods typically provided to employees and their representatives regarding significant operational changes, and whether these are specified in collective agreements	Protection of Employee Interests and Rights p. 119
<b>OCCUPATIONAL HEALTH AND SAFETY</b>		
403-1	Information on procedures to ensure occupational health and safety	Occupational Health and Safety p. 98
403-2	Injury rate. Types of injury	Training and Testing on Occupational Health and Safety p. 100
		Work-Related Injuries p. 101
		Work-Related Injuries Among Contractor Employees p. 102
		Allocation of Occupational Health and Industrial Safety Spending p. 103
		Appendix 23. Injuries by Severity p. 159
	Appendix 24. Workdays Lost Due to All Types of Accidents p. 159	
403-4	Health and safety topics covered in formal agreements with trade unions	Protection of Employee Interests and Rights p. 99, 117
403-5	Worker training on occupational health and safety	Training and Testing on Occupational Health and Safety p. 100
403-8	Workers covered by an occupational health and safety management system	Occupational Health and Safety p. 98
<b>TRAINING AND EDUCATION</b>		
404-1	Average hours of training per year per employee by gender and by employee category	Employee Professional Development and Training p. 114
404-2	Programmes for skills management and lifelong learning that support the continued employability of employees and assist them in managing career endings	Employee Professional Development and Training p. 113
404-3	Percentage of employees receiving regular performance and career development reviews – by gender	Performance Reviews p. 109
<b>DIVERSITY AND EQUAL OPPORTUNITIES</b>		
405-1	The organisation's governance bodies and employees by gender and age group	Human Resources p. 109
405-2	Ratio of basic salary of women to men	Respect for Human Rights and Equal Opportunities p. 111
<b>NON-DISCRIMINATION</b>		
406-1	Incidents of discrimination and corrective actions taken	Respect for Human Rights and Equal Opportunities p. 111

Disclosure	Section of the Report	Page of the Report
<b>RESPECT FOR HUMAN RIGHTS</b>		
412-2	Employee training on human rights policies or procedures	Respect for Human Rights and Equal Opportunities p. 111
412-3	Significant investment agreements and contracts that include human rights clauses or that underwent human rights screening	Respect for Human Rights and Equal Opportunities p. 111
<b>LOCAL COMMUNITIES</b>		
413-1	Operations with local community engagement (including business development)	Philanthropy p. 123
<b>PUBLIC POLICY</b>		
415-1	Total monetary value of financial and in-kind contributions to political parties, politicians and related organisations by country	Philanthropy and Support for Regions of Operation p. 122
<b>REGULATORY COMPLIANCE</b>		
419-1	Significant fines and non-monetary sanctions for non-compliance with laws and/or regulations	Appendix 8. Fines and Non-monetary Sanctions for Non-compliance with Laws and Regulations p. 147
<b>SECTOR DISCLOSURES FOR ELECTRIC UTILITIES</b>		
Disclosure	Section	Page of the Report
EU2	Installed capacity by primary energy source and regulatory regime	Gazprom Energoholding Group Today p. 12
EU4	Length of overhead and underground electric grids	Gazprom Energoholding Group Today p. 12
G4-DMA (previously EU6)	Position of management on ensuring reliability and availability of electricity supply in the short and long term	Responsible Energy Supply p. 50
G4-DMA (previously EU8)	Research activities and expenses aimed at ensuring stable energy supply and sustainable development in the future	Innovative Development p. 85
EU10	Planned capacity increase vs projected long-term demand growth	Gazprom Energoholding Group's Development Strategy p. 24
G4-DMA (previously EU14)	Programmes aimed at attracting highly qualified workforce	Young Talent Acquisition and Onboarding p. 115
G4-DMA (previously EU21)	Taking measures in case of emergency situations, capacity restoration in case of damage in emergency situations	Emergency Prevention p. 52

## APPENDIX 3. NAMES, CORPORATE FORMS, AND ADDRESSES OF GROUP COMPANIES COVERED IN THE REPORT

GRI 102-1, 102-3, 102-5, 102-53

Name, corporate form	Registered address	Actual address
PAO Mosenergo	101 Vernadskogo Ave., Bld. 3, Moscow, 119526, Russian Federation	101 Vernadskogo Ave., Bld. 3, Moscow, 119526, Russian Federation
PAO TGC-1	16 Dobrolyubova Ave., Bld. 2A, Office 54H, St. Petersburg, 197198, Russian Federation	16 Dobrolyubova Ave., Bld. 2A, Arena Hall Business Centre, St. Petersburg, 197198, Russian Federation
PAO OGK-2	Solnechnodolsk, Izobilnensky District, Stavropol Territory, 356126, Russian Federation	66 Peterburgskoye Highway, Bld. 1A, St. Petersburg, 196140, Russian Federation
PAO MIPC	101 Vernadskogo Ave., Bld. 3, Floor 20, Office 2017, Moscow, 119526, Russian Federation	101 Vernadskogo Ave., Bld. 3, Floor 20, Office 2017, Moscow, 119526, Russian Federation

## APPENDIX 4. LIST OF SUBSIDIARIES INCLUDED IN IFRS FINANCIAL STATEMENTS OF GAZPROM ENERGOHOLDING GROUP'S GENERATING COMPANIES

GRI 102-45

Subsidiary	Interest	
	2019	2020
<b>MOSENERGO</b>		
OOO Tsentralny Remontno-Mekhanichesky Zavod	100.0000%	100.0000%
OOO MosEnergoProekt	100.0000%	100.0000%
OOO Remontproekt	99.0000%	99.0000%
<b>TGC-1</b>		
AO Murmanskaya CHPP	98.8536%	98.8536%
AO St Petersburg Heating Grid	71.5734%	65.5814%
OOO TsTP North-West	71.5734%	65.5814%
<b>OGK-2</b>		
OOO Centre 112	100.0000%	100.0000%
OOO OGK-Investproekt	100.0000%	100.0000%
OOO Novomichurinskoye ATP	100.0000%	100.0000%
OAO Novomichurinskoye PPZhT	75.0000%	75.0000%
<b>MIPC</b>		
OAO Mosgorenergo <sup>31</sup>	100.0000%	100.0000%
OOO MIPC-Finance	100.0000%	100.0000%
OOO TSK MIPC <sup>32</sup>	100.0000%	–

<sup>31</sup> Changed name to AO MIPC Accounting Systems on 9 April 2020.<sup>32</sup> Dissolved on 7 July 2020.

Subsidiary	Interest	
	2019	2020
OOO TsTP MIPC	100.0000%	100.0000%
OOO TsUN	100.0000%	100.0000%
OOO TSK Mosenergo	77.6400%	74.6400%

## APPENDIX 5. REGIONS OF OPERATION AND DISTRIBUTION MARKETS OF GAZPROM ENERGOHOLDING GROUP COMPANIES

GRI 102-4, 102-6

Branches	Distribution markets/ Free power flow zones	Energy generating regions
<b>MOSENERGO</b>		
PG. Smidovich HPP-1, R.E. Klasson GRES-3, CHPP-8, CHPP-9, M.Ya. Ufayev CHPP-11, CHPP-12, CHPP-16, CHPP-17, CHPP-20, CHPP-21, N.I. Serebryanikov, CHPP-22, CHPP-23, CHPP-25, CHPP-26, CHPP-27	Moscow	Moscow and the Moscow Region
<b>TGC-1</b>		
<b>NEVSKY BRANCH:</b>		
Tsentralnaya CHPP, Pravoberezhnaya CHPP, Severnaya CHPP, Pervomayskaya CHPP, Avtovskaya CHPP, Narvskaya HPP, Vyborgskaya CHPP, Vasileostrovskaya CHPP, Ladoga HPP Cascade, Yuzhnaya CHPP, Vuoksa HPP Cascade	West	St. Petersburg and the Leningrad Region
<b>KOLSKY BRANCH:</b>		
Apatitskaya CHPP, Niva HPP Cascade, Tuloma and Serebryansky HPP Cascade, Paz HPP Cascade	Kolskaya	Murmansk Region
<b>KARELSKY BRANCH:</b>		
Petrozavodskaya CHPP, Kem HPP Cascade, Vyg HPP Cascade, Suna HPP Cascade	West	Republic of Karelia
<b>AO MURMANSKAYA CHPP</b>		
	Murmansk	Murmansk
<b>OGK-2</b>		
Surgutskaya GRES-1	Tyumen	Tyumen Region
Ryazanskaya GRES	Centre	Ryazan Region
Cherepovetskaya GRES		Vologda Region
Stavropolskaya GRES	Kuban	Stavropol Territory
Adlerskaya TPP		Krasnodar Territory
Kirishskaya GRES	West	Leningrad Region
Pskovskaya GRES		Pskov Region
Troitskaya GRES	Ural	Chelyabinsk Region
Serovskaya GRES		Sverdlovsk Region
Novocherkasskaya GRES	Rostov	Rostov Region
Groznenskaya TPP	Caucasus	Chechen Republic
Svobodnenskaya TPP	–	Amur Region
<b>MIPC</b>		
	Moscow	Moscow and the Moscow Region

TGC-1 also exports wholesale volumes under existing contracts with major energy companies based in Norway and Finland.

Export contracts	Counterparty <sup>33</sup>	Country	Contract date
2016–2020	Fortum Power and Heat	Finland	27 December 2016
1 November 2012–31 December 2020	RAO Nordic Oy	Norway	31 October 2012
1 November 2012–31 December 2020	RAO Nordic Oy	Finland	31 October 2012

## APPENDIX 6. UNITS RESPONSIBLE FOR ENVIRONMENTAL, SOCIAL AND ECONOMIC MATTERS

Economic matters	Social matters <sup>34</sup>	Environmental matters
<b>GAZPROM ENERGOHOLDING</b>		
<ul style="list-style-type: none"> <li>▶ Economics Directorate</li> <li>▶ Production Directorate</li> <li>▶ Regulation and Methodology Directorate</li> <li>▶ Energy Distribution Directorate</li> <li>▶ Heat Generation Business section</li> </ul>	<ul style="list-style-type: none"> <li>▶ Motivation and Social Policy Directorate</li> <li>▶ Employee Training Directorate</li> <li>▶ Human Resources and Organisational Development Directorate</li> </ul>	<ul style="list-style-type: none"> <li>▶ Director for Production section</li> </ul>
<b>MOSENERGO</b>		
<ul style="list-style-type: none"> <li>▶ Efficiency and Control section</li> <li>▶ Marketing section</li> <li>▶ Production section</li> <li>▶ Development section</li> </ul>	<ul style="list-style-type: none"> <li>▶ Human Resources Office</li> <li>▶ Benefits and Compensations Office</li> <li>▶ Employee Development Office</li> <li>▶ Public Relations and Government Relations section</li> <li>▶ Training Centre</li> <li>▶ Occupational Health and Safety Directorate</li> </ul>	<ul style="list-style-type: none"> <li>▶ Occupational Health, Safety and Environment Directorate</li> <li>▶ Environmental Service (a unit within the General Directorate, part of the Occupational Health, Safety and Environment Directorate)</li> <li>▶ Officers responsible for environmental protection across the company's branches</li> <li>▶ Environmental Team responsible for on-site day-to-day environmental protection activities across branches (as part of the Branch Standards Service)</li> </ul>

<sup>33</sup> Contracts with RAO Nordic Oy were signed through PAO Inter RAO acting as an agent on its own behalf, but for the account of TGC-1 (principal).

<sup>34</sup> Social matters may be partially delegated to other functions.

Economic matters	Social matters <sup>34</sup>	Environmental matters
<b>TGC-1</b>		
<ul style="list-style-type: none"> <li>▶ Chief Engineer section</li> <li>▶ Electricity Sales section</li> <li>▶ Heat Generation Business section</li> <li>▶ Economics and Finance section</li> <li>▶ Karelsky Branch Economics and Finance Director section</li> <li>▶ Development and Property Management section</li> </ul>	<ul style="list-style-type: none"> <li>▶ Remuneration and Employment Office: social benefits and guarantees</li> <li>▶ Social and Labour Relations Directorate: voluntary health insurance (VHI), accident insurance, and private pension plans; employee health and recreation programmes, including for families; the Veterans Council; and the housing policy</li> <li>▶ Joint permanent commission for developing and monitoring the Collective Bargaining Agreement</li> <li>▶ Public Relations Department: charitable and sponsorship activities</li> <li>▶ Committee for Charitable and Sponsorship Support</li> <li>▶ Training Centre</li> </ul>	<ul style="list-style-type: none"> <li>▶ Deputy General Director – Chief Engineer</li> <li>▶ Environmental Service (administratively reporting to the Director of Yuzhnaya CHPP, Nevsky Branch; functionally reporting to the Head of the Power Plant Operation Department)</li> <li>▶ Environmental functions of Karelsky and Kolsky Branches (reporting to the chief engineers of relevant branches)</li> <li>▶ Environmental officers in business units (typically, chief engineers)</li> <li>▶ All business units have environmental engineers reporting to the chief engineers of relevant units</li> </ul>
<b>OGK-2</b>		
<ul style="list-style-type: none"> <li>▶ Production Directorate</li> <li>▶ Energy Distribution Directorate</li> <li>▶ Economics Directorate</li> <li>▶ Quality Management System (QMS) and Business Solution Assessment Project Centre, Business Project Office</li> </ul>	<ul style="list-style-type: none"> <li>▶ Human Resources Directorate of the Executive Office: social benefits, guarantees and compensations, voluntary health insurance (VHI), accident insurance, private pension plans, and employee training and development</li> <li>▶ Commission on the Regulation of Social and Labour Relations: focuses on maintaining the company's social partnership in labour relations and aligning the interests of parties to labour relations</li> <li>▶ Commission for Charitable Sponsorship Support: considers charitable support requests sent to the company and approves the programme of charitable and sponsorship support activities</li> </ul>	<ul style="list-style-type: none"> <li>▶ Within the executive office, the Environmental Team (part of the Production Directorate) is responsible for ecology and environmental protection</li> <li>▶ Branches have environmental protection offices (teams)</li> </ul>
<b>MIPC</b>		
<ul style="list-style-type: none"> <li>▶ Economics and Finance section</li> <li>▶ Strategy section</li> <li>▶ Marketing section</li> <li>▶ Technical section</li> </ul>	<ul style="list-style-type: none"> <li>▶ Human Resources Directorate</li> </ul>	<ul style="list-style-type: none"> <li>▶ The Technical section, represented by the Ecology and Environmental Protection Office (part of the Production Directorate of the Administrative Office, directly reporting to the First Deputy General Director – Chief Engineer)</li> <li>▶ Production offices at branches have environmental engineers reporting to the chief engineers of relevant branches</li> </ul>

## APPENDIX 7. KEY RISKS OF GAZPROM ENERGOHOLDING GROUP COMPANIES

Risk	Description	Risk management/mitigation
<b>INDUSTRY-SPECIFIC RISKS</b>		
Risk of reduced demand for electricity or increased competition leading to lower margins	Reduced demand and/or increased competition in the electricity and capacity market may lead to the replacement of CHPP generation by increased generation by HPPs and NPPs and, as a consequence, to lower margins of the Group's generating companies.	Optimise the equipment mix. Decommission economically unviable equipment. Redistribute heat loads among sources. Apply the most suitable trading strategies in the wholesale electricity and capacity market.
Reduced income due to high air temperatures during the heating season	Change in margins when the outdoor temperatures increase compared to the temperatures assumed in the business plan.	Improve the quality of forecasting and estimating the impact of the temperature factor.
Risk (tariff risk) of the regulator making adverse changes in capacity tariffs	Risks arising from changes in legislation during the new tariff regulation period.	Monitor legislative initiatives, develop positions and reports on identified risks of adverse impact.
Risk of lower prices in the Day-Ahead Market (DAM)	Lower margins from electricity sales due to pricing headwinds in the Wholesale Electricity and Capacity Market (WECM).	Apply suitable trading strategies in the WECM. Streamline the supply schedule based on prices depending on the time of day.
Risk of deteriorating performance as a result of statutory regulations adopted/modified to regulate the Rules of the Wholesale Electricity and Capacity Market or regulations for electricity or heat supply	Changes in legislation on electricity or heat supply have a material impact on the Company's performance. The industry is recognised as a socially significant sector and is regulated by the state, thus legislative actions have a strong impact on the activities of its business entities.	Regularly monitor and analyse changes in the regulatory framework. Prepare and submit positions to minimise the risks impacting the industry. Actively participate in consultative events to discuss draft regulations with regulatory and legislative bodies.
<b>STRATEGIC RISKS</b>		
Approval of heat supply plans, electricity generation plans and development programmes, and other industry specific plans that are not in the interests of the Group or are in conflict with its growth plans	Harm to the Group's interests caused by the development of centralised heating plans in its regions of operation (limitation of sales market expansion, emergence of liabilities for inefficient heat supply to consumers).	Arrange for the participation of Gazprom Energoholding Group's responsible units in working groups at all stages of the development, coordination and approval of centralised heating plans in its regions of operation.
<b>OPERATIONAL AND TECHNICAL RISKS</b>		
Risk of failure to implement production programmes	Shortage of repair capacity. Failure to comply with deadlines for work completion and commissioning of equipment. Insufficient funding for scheduled service/maintenance.	Ensure continuous work progress monitoring. Ensure control over the supply of equipment (materials). Amend contract agreements to include penalties for schedule overruns. Develop a delivery schedule for equipment (materials). Monitor milestones. Ensure timely signing of maintenance contract agreements.
Risk of failure of capital equipment or process disruptions	Risk of equipment breakdowns, heating emergencies or process disruptions.	Carry out repairs, upgrades, revamps, and retrofits on a timely basis. Train and upskill employees. Regularly inspect equipment and identify equipment that requires replacement (repair). Implement an investment programme to replace outdated capacity. Run exercises to build emergency skills. Brief employees and contractors.

Risk	Description	Risk management/mitigation
Risk of process failures and accidents caused by employee errors	Employee errors committed when operating core and auxiliary equipment resulting in its shutdown or damage.	Ensure high-quality training and establish levels for admission to unsupervised work with equipment. Effectively balance work and rest. Organise workplaces ergonomically. Deliver briefings, run emergency drills, analyse emergency-related data.
Risk of unscheduled equipment repairs	Shutdowns for repairs of core equipment or capacity reducing equipment shutdowns due to defects.	Plan repairs taking into account the equipment's technical condition index. Ensure timely signing of contracts and high-quality repair scheduling.
Fire risk or risk of non-compliance with statutory requirements for civil defence, emergency response, and fire safety being identified by regulatory audits	Non-compliance with the requirements or initiatives related to civil defence; non-compliance with the requirements, standards or rules for emergency response and prevention, civil defence, and protection of populations and territories against emergencies.	Ensure timely compliance with standards or rules, take timely measures related to civil and emergency response. Set up local fire services at major power plants to be provided with necessary equipment, inventory and staff. Train and upskill employees at specialised training centres. Train and certify employees for industrial safety and energy security. Develop, test and regularly review emergency prevention and response plans.
Risk of project cost overruns	Works or services undercharged based on labour costs quoted when determining the guaranteed maximum price.	Analyse the pricing environment in the relevant procurement market. Use all available information sources to collect data for determining guaranteed maximum prices. Use bidding procedures to contract works and services. Train employees of the procurement initiating unit on advanced pricing techniques.
<b>LEGAL RISKS</b>		
Risk of a court decision giving rise to liabilities	Complaints and claims (to recover debt, indemnify for losses, or protect property rights) against/by the Company being upheld/dismissed by the court.	Participate in training workshops, roundtable discussions and forums. Hold meetings to discuss legislative changes and changes in judicial practice. Monitor the review by federal executive authorities of the draft legislative initiative to amend the Federal Law On Insolvency (Bankruptcy), and the results of the relevant public discussion. Develop an opinion on the reasons for recovery of debt /unjust enrichment/ losses and a proposal to minimise an unfavourable outcome in the future.
Risk of delay in receiving/suspension of permits (licences)	Changes to requirements for the licensing of the Company's core activities or expiry of licences.	Thoroughly examine the requirements of document drafting rules and changes to licensing requirements. Thoroughly prepare the package of documents in line with the requirements of licensing authorities. Monitor the validity terms of licenses and licensing requirements. Ensure timely payment of state duties.
<b>FINANCIAL RISKS</b>		
Credit risks (risk of an increase in accounts receivable due to untimely or incomplete performance of financial obligations by counterparties)	Increase in accounts receivable under contracts for heat and heat carriers.	Monitor timely discharge of obligations by counterparties. Educate consumers on payment requirements describing liabilities for delay in payment. Involve the administrations of the regions of operation in addressing the issue. Manage claims to recover debt in court, initiate bankruptcy of the Company's debtors. Apply heat supply limitation measures to certain categories of consumers, with resumption after the debt is paid in full. Shift to direct contracts with end consumers of energy.

Risk	Description	Risk management/mitigation
Foreign exchange risk	Risk of adverse change in the value of liabilities denominated in a foreign currency due to a change in foreign exchange rates. Risk of changes in expenses denominated in a foreign currency.	Assess and monitor the foreign exchange risk. Optimise the currency mix of the portfolio, and plan cash flows to minimise the need for borrowings.
Tax risks	Disagreements with relevant regulatory authorities on matters that are open to ambiguous interpretation. Risk of an additional property tax charge.	Monitor changes in tax legislation, judicial and administrative practices. Assessment of planned transactions in terms of tax risk mitigation. Potentially take measures to settle claims in court depending on the results of a field tax audit after the decision is received.
Risks associated with managing non-core/non-performing assets	Disposal of non-core/non-performing assets at a cost lower than planned. Reduced yield from leasing non-performing/non-core assets. Claims/sanctions following inspections by regulatory/supervisory bodies relating to property management	Analyse non-core assets to ensure timely registration of property rights. Develop and implement programmes for the disposal of non-core assets.
<b>ENVIRONMENTAL RISKS</b>		
Risk of sanctions from regulatory authorities for breaching the requirements of environmental laws	The number of breaches of environmental laws identified by environmental supervision authorities, which have not been timely remedied through the fault of the risk owner.	Follow up timely implementation of measures to remedy breaches of environmental laws.
<b>RISKS OF SUPPORTING PROCESSES</b>		
Risk of IT system and technological communication failure	Failures of IT systems related to the operation of desktop PCs, installed software, and electronic signature keys. Failures of dispatch communication channels or transmission of telemetry data.	Procure additional mains-independent laptops with long battery life and unlimited high-speed connectivity in case of IT system or software failures at the Company's office. Allocate redundant communication channels to transmit telemetry data.
<b>COUNTERPARTY (PROCUREMENT) RISKS</b>		
Risk of failure to meet the Company's needs for works, goods and services due to a rise in material and component prices	A rise in material and component prices due to sharp exchange rate fluctuations, inflation growth, and other factors.	Sign long-term supply contracts with fixed prices. Negotiate with suppliers. Create a centralised emergency minimum stock of equipment.
Violation of inventory or equipment delivery terms	Delays in delivering inventory or equipment can delay scheduled repairs or disrupt equipment operation.	Improve the system for preliminary counterparty risk analysis before deciding on contracting with them (before awarding them procurement tenders). Streamline the follow-up of obligations.

Risk	Description	Risk management/mitigation
<b>STAFF AND SOCIAL RISKS</b>		
Risks of work-related injuries	Breaches of occupational health and safety standards by employees.	Brief employees and provide them with personal and collective protective equipment. Check the use of personal protective equipment. Check the availability of personal protective equipment to employees. Provide accident and health insurance for employees. Run special assessments of working conditions, minimise occupational hazards and harmful factors. Raise employee awareness of safe behaviours. Deploy industrial safety, occupational health, and environmental protection systems. Run regular performance audits for these systems.
Asset loss risk	Unlawful interference at a generating facility.	Organise and maintain the necessary level of the facility's physical security (install a security system, engage physical security services, and maintain access control at the facility).
Risk of the novel coronavirus	Due to the potential increase in coronavirus incidence rate, isolation of employees, and a shift to remote work, there may be a shortage of employees to ensure sustainable operation.	Implement measures to protect the health of operational staff and train on-call staff. Implement measures to reduce the risk of viral infection. Organise and supervise the staff's remote work. Organise trainings for on-call shift staff.
Reputational risk	Deterioration of the corporate image.	Align communications between responsible business units and the information function. Draft a regulation outlining the procedure for aligning and disclosing information to the media.
Risk of shortage of qualified staff	Reliance on, and loss of, key employees. Lack of new hires.	Build and develop a talent pool under a comprehensive programme. Implement joint programmes with educational institutions. Educate and retrain employees. Review and provide attractive working conditions and competitive wages.
Corruption risk	Misuse of office or other unlawful use of position by individuals.	Take comprehensive measures to prevent and detect corruption.

Risks inherent to Gazprom Energoholding Group are reassessed twice a year. Critical risk maps and risk management action plans for the Group's generating companies are reviewed by the companies' boards of directors following a preview by the boards' audit committees, and are approved by the sole executive body. In 2020, the Group reassessed its risks, having changed the significance of certain risks and identified a new risk related to the spread of the coronavirus disease.

#### INFORMATION ABOUT RISK MATERIALISATION AT GAZPROM ENERGOHOLDING GROUP

Company	Risk materialisation in 2020	Description of critical risks materialised in 2020 and mitigation measures
Mosenergo	1 critical risk, 12 significant risks and 1 insignificant risk materialised.	<p>During the reporting period, the risk of equipment accidents materialised. In the reporting period, the following activities were carried out to reduce the likelihood / mitigate the consequences of risk occurrence:</p> <ul style="list-style-type: none"> <li>▶ A repair programme, as well as supervision and incoming inspection of equipment, spare parts and materials at all stages of revamp and repair</li> <li>▶ Revamp and retrofit programme</li> <li>▶ Emergency drills for the operational staff</li> <li>▶ Unscheduled staff briefings and testing</li> <li>▶ Communication of the reasons behind and causes of accidents to the staff of other branches to help prevent similar events</li> <li>▶ Follow-up measures based on the results of accident investigation in the reporting period</li> <li>▶ Programmes to improve equipment reliability in 2020</li> </ul> <p>In order to mitigate the impact of equipment accident risk materialisation (reduce repair costs resulting from emergency shutdowns) PAO Mosenergo insures property risks.</p>
TGC-1	2 significant risks and 1 insignificant risk materialised	No critical risks materialised in 2020.
OGK-2	1 critical risk, 3 significant risks and 2 risks with insignificant consequences materialised	Provisions for accounts receivable were accrued as a result of reduced solvency of electricity consumers in the North Caucasus. Claims are filed against consumers who fail to comply with payment deadlines, and North Caucasus electricity consumers were invited to sign a memorandum with PAO ROSSETI in 2020.
MIPC	1 critical risk and 1 significant risk materialised	Reduced margins due to higher air temperatures during the heating season. In the current tariff system, this risk is defined as uncontrollable. In 2020, to reduce the consequences of the risk for the Company, algorithms were developed and tested that allow building heat energy consumption forecasts depending on the air temperature for each consumer and type of service, using mathematical modelling.

## APPENDIX 8. FINES AND NON-MONETARY SANCTIONS FOR NON-COMPLIANCE WITH LAWS AND REGULATIONS

GRI 419-1

	Mosenergo			TGC-1		
	2018	2019	2020	2018	2019	2020
Number of non-monetary sanctions	20	59	59	7	14	41
Total monetary value of fines, RUB thousand	2,994.5	4,353.0	4,475.0	1,419.0	1,493.4	648.0
Total number of cases brought against the company for non-compliance with laws and regulations	8	–	3	14	63	14
	OGK-2			MIPC		
	2018	2019	2020	2018	2019	2020
Number of non-monetary sanctions	28	41	28	59	66	50
Total monetary value of fines, RUB thousand	1,531.5	803.0	2,214.0	18,281.8	41,590.3	58,132.8
Total number of cases brought against the company for non-compliance with laws and regulations	2	2	7	–	–	–

## APPENDIX 9. DOCUMENTS GOVERNING ANTI-CORRUPTION ACTIVITIES AT THE GROUP'S GENERATING COMPANIES

Documents	Adopted/amended on
<b>MOSENERGO</b>	
Regulations on the Audit Committee	16 November 2020
Regulations on the Procurement Committee	20 December 2011
Regulations on Procurement	29 December 2018, amended on 21 February 2020
Code of Corporate Ethics	14 November 2019
Regulations on the Internal Audit Directorate	30 September 2016
Internal Audit Policy	30 September 2016

Documents	Adopted/amended on
<b>TGC-1</b>	
Regulations on the Audit Committee	14 May 2021
Regulations on the Procurement Committee	9 November 2011
Regulations on Procurement	27 December 2018, amended on 11 March 2020
Procedure for Engaging Counterparties for Information on the Chain of Ownership, Including Beneficiaries (and Ultimate Beneficiaries) and/or Members of the Counterparty's Executive Bodies	10 November 2020
Regulations on the Conflict of Interest Commission	10 November 2020
Regulations on the Internal Audit Service	3 October 2016
Internal Audit Policy	3 October 2016
Risk Management and Internal Control Policy	11 November 2020
Code of Corporate Ethics	4 December 2019
Regulations on the Corporate Ethics Commission	4 December 2019, amended on 30 October 2020
<b>OGK-2</b>	
Regulations on the Audit Committee	9 November 2020
Code of Corporate Ethics	14 October 2019
Procedure for Engaging Counterparties for Information on the Chain of Ownership, Including Beneficiaries (and Ultimate Beneficiaries) and/or Members of the Counterparty's Executive Bodies	22 September 2014
Regulations on the Procurement Committee	28 August 2014
Regulations on Procurement	26 December 2018, amended on 28 February 2020 and 1 June 2020
Regulations on the Internal Audit Directorate	30 September 2016
Internal Audit Policy	30 September 2016
Risk Management and Internal Control Policy	30 September 2019
Risk Management Policy	27 June 2018
Regulations on the Conflict of Interest Commission	3 December 2014
Regulations on Contract Management	30 November 2010, amended on 28 June 2019
<b>MIPC</b>	
Regulations on the Audit Committee	21 December 2020
Code of Corporate Ethics	22 October 2019
Regulations on the Procurement Committee	2 December 2019
Regulations on Procurement	26 December 2018, amended on 10 March 2020
Regulations on the Risk Management System	21 February 2020
Regulations on the Internal Audit Directorate	31 December 2019

## APPENDIX 10. ADMINISTRATIVE FINES FOR ENVIRONMENTAL NON-COMPLIANCE

	Mosenergo			TGC-1			OGK-2			MIPC		
	2018	2019	2020	2018	2019	2020	2018	2019	2020	2018	2019	2020
Number of breaches identified in the reporting year that led to fines which were paid in the same year	9	0	4	5	7	8	11	10	7	3	3	-
Number of non-monetary sanctions	1	7	1	-	-	2	1	6	5	-	-	-
Total monetary value of fines, RUB thousand	496	100	270	590	650	1,122 <sup>35</sup>	544	450	350	520	440	-
Cases of non-compliance settled through dispute resolution mechanisms	-	-	1	-	63	12 <sup>36</sup>	-	2	1	-	-	-

## APPENDIX 11. ENVIRONMENTAL PROTECTION COST BREAKDOWN AT GAZPROM ENERGOHOLDING GROUP COMPANIES BY INVESTMENT TYPE, RUB THOUSAND

	Mosenergo			TGC-1		
	2018	2019	2020	2018	2019	2020
Capital expenditures on environmental protection	12,761	242,186	653,029	377,339	46,865	50,499
Current environmental protection costs	857,302	890,902	819,917	378,711	307,299	383,241
Total cost	870,063	1,133,088	1,472,946	756,050	354,164	433,740
	OGK-2			MIPC		
	2018	2019	2020	2018	2019	2020
Capital expenditures on environmental protection	984,445	16,636	25,879	-	-	-
Current environmental protection costs	609,239	864,818	692,111	358,522	351,699	360,149
Total cost	1,593,684	881,454	717,990	358,522	351,699	360,149

<sup>35</sup> Total monetary value of fines imposed but not paid.

<sup>36</sup> Court decisions regarding the audit of AO Murmanskaya CHPP, which resulted in the cancellation of fines.

## APPENDIX 12. ENVIRONMENTAL PROTECTION COST BREAKDOWN AT GAZPROM ENERGOHOLDING GROUP COMPANIES BY INVESTMENT AREA, RUB THOUSAND

	Mosenergo			TGC-1			OGK-2			MIPC		
	2018	2019	2020	2018	2019	2020	2018	2019	2020	2018	2019	2020
Design and approval of permits	33,569	52,975	28,122	6,584	3,558	12,381	16,501	22,019	6,435	5,521	28,927	49,881
Environmental operational control and monitoring	20,543	18,369	22,641	17,386	15,760	14,188	22,095	25,483	24,179	19,216	18,623	19,761
Negative environmental impact charges, including fines and remediation costs	496	100	80	-	-	-	1,771	-	-	-	248	-
Capital expenditures on environmental protection, including:	12,762	242,186	653,029	377,339	46,865	50,499	984,445	16,636	25,879	-	-	-
water protection	10,662	5,884	262,426	377,339	46,865	50,499	-	-	-	-	-	-
air protection	2,100	236,302	359,923	-	-	-	975,916	16,636	-	-	-	-
land protection	-	-	-	-	-	-	4,101	-	25,879	-	-	-
fish protection and stocking	-	-	-	-	-	-	4,428	-	-	-	-	-
toxic waste disposal, treatment and landfilling	-	-	-	-	-	-	-	-	-	-	-	-
Current (operating) environmental protection costs, including:	857,302	890,902	819,917	307,299	378,711	383,241	609,239	864,818	692,111	358,522	351,699	360,149
air protection and action on climate change	107,774	79,404	83,743	14,912	15,192	21,439	154,128	302,248	295,624	33,482	27,571	28,953
wastewater collection and treatment	681,136	729,404	655,374	126,696	141,519	173,973	299,967	305,619	286,143	293,750	308,544	309,544
waste disposal	66,593	72,717	73,177	116,709	142,412	132,069	80,106	87,309	51,742	24,182	13,075	16,629
land, surface and ground water protection and restoration	291	6,111	1,101	18,123	1,255	2,427	41,427	41,753	11,715	-	-	-
environmental protection from noise, vibration and other kinds of pollution	1,508	3,266	5,985	2,760	1,609	2,257	4,992	4,725	4,970	1,358	870	1,545

## APPENDIX 13. ENERGY SAVINGS AND ENERGY EFFICIENCY PERFORMANCE OF GAZPROM ENERGOHOLDING GROUP'S GENERATING COMPANIES

	Actual 2019	Plan 2020	Actual 2020
Consumption of energy (excluding water), thousand toe	64,170	62,189	58,220
Consumption of energy (excluding VAT), RUB thousand	315,080,371	325,468,161	303,954,440
Costs of energy saving and energy efficiency initiatives (excluding VAT), RUB thousand	10,707,079	10,029,273	9,903,045
Total fuel and energy savings under the energy efficiency programme, thousand toe	1,615	577	1,470
Value of energy savings under the energy efficiency programme, RUB thousand	7,390,522	2,780,296	6,757,564
Total electricity savings, mm kWh	671	66	656
including due to lower costs related to:			
plants' own operational needs, mm kWh	669	63	653
Total heat savings, thousand Gcal	297	46	354
Total fuel savings, thousand toe	1,376	553	1,225
including, by fuel type:			
Coal, thousand toe	6	10	10
Gas, thousand toe	1,365	540	1,211
Fuel oil, thousand toe	6	3	3
Gas savings, mmcm	1,182	468	1,050

## APPENDIX 14. ENERGY EFFICIENCY PERFORMANCE INDICATORS IN 2019–2020

	Mosenergo				TGC-1			
	Plan 2019	Actual 2019						
Costs of energy saving and energy efficiency initiatives (excluding VAT), RUB thousand	99,451	83,892	78,982	67,321	2,998,356	2,923,954	4,602,678	3,441,359
Total fuel and energy savings under the energy efficiency programme, thousand toe	428	1,559	506	1,366	28	30	16	22
	OGK-2				MIPC			
	Plan 2019	Actual 2019						
Costs of energy saving and energy efficiency initiatives (excluding VAT), RUB thousand	303,109	160,884	358,162	291,036	4,811,357	7,499,317	4,967,381	6,004,169
Total fuel and energy savings under the energy efficiency programme, thousand toe	22	14	19	14	8.1	12	6	9

## APPENDIX 15. FUEL CONSUMPTION

	Mosenergo			TGC-1 (including AO Murmanskaya CHPP)		
	2018	2019	2020	2018	2019	2020
Gas, mmcm	21,694.0	21,241.2	19,731.43	5,797.9	5,765.2	5,139.6
Fuel oil and diesel fuel, thousand tonnes	58.8	70.1	47.2	254.3	265.1	252.3
Coal, thousand tonnes	237.8	0.7	98.544	451.6	482.4	444.2
Wood, thousand solid cubic metres	–	–	–	15.6	15.4	15.5
	OGK-2			MIPC (including OOO TSK Mosenergo and OOO TSK Novaya Moskva)		
	2018	2019	2020	2018	2019	2020
Gas, mmcm	12,180.8	11,478.4	9,732.3	1,371.5	1,220.9	1,076.3
Fuel oil and diesel fuel, thousand tonnes	25.3	16.0	14.5	2.1	0.63	0.63
Coal, thousand tonnes	8,700.6	7,442.3	5,151.3	–	–	–
Wood, thousand solid cubic metres	–	–	–	–	–	–

## APPENDIX 16. SPECIFIC REFERENCE FUEL CONSUMPTION (SRFC)<sup>37</sup>

	2019				2020			
	Proportional method		Physical (thermal) method		Proportional method		Physical (thermal) method	
	SRFC for electricity supply, goe/kWh	SRFC for heat supply, kg/Gcal	SRFC for electricity supply, goe/kWh	SRFC for heat supply, kg/Gcal	SRFC for electricity supply, goe/kWh	SRFC for heat supply, kg/Gcal	SRFC for electricity supply, goe/kWh	SRFC for heat supply, kg/Gcal
<b>MOSENERGO</b>								
Gas	265.0	133.6	228.0	164.5	265.6	132.7	224.1	164.5
Dual fuel (gas + coal)	–	–	–	–	–	–	–	–
Diesel fuel	1,348.7	–	1,393.0	–	988	–	1,021.6	–
<b>TGC-1</b>								
Gas	262.1	137.4	219.6	167.8	255.5	136	207.2	167.7
Coal	323.6	148.4	187.6	181.0	323.3	148.8	187.6	181.0
Fuel oil (Murmanskaya CHPP)	–	174.0	–	174.0	–	174.0	–	174.0
Wood	–	308.9	–	308.9	–	308.1	–	308.1
<b>OGK-2</b>								
Gas	310.1	142.4			307.8	156.6		
Coal	416.1	166.8	The physical method was not used for OGK-2's total calculations		448.5	179.9	The physical method was not used for OGK-2's total calculations	
Dual fuel (gas + coal) <sup>38</sup>	357.5	231.1			354.6	236.4		
<b>MIPC<sup>39</sup></b>								
Gas				157.3				157.5
	No generation	The proportional method was not used for MIPC	No generation		No generation	The proportional method was not used for MIPC	No generation	
Diesel fuel				145.8				163.9

<sup>37</sup> SRFC calculations are based on the total volumes of fuel burned for generation, including fuel oil and diesel fuel.

<sup>38</sup> Novocheboksinskaya GRES, Cherepovetskaya GRES and Serovskaya GRES of OGK-2 use both gas and coal in heat generation to balance their fuel mix to reflect fluctuations in prices for these fuels.

<sup>39</sup> SRFC for self-generation of heat (non-combined generation) at MIPC. The data include OOO TSK Mosenergo.

## APPENDIX 17. GHG EMISSIONS RATE AND INTENSITY, TONNES OF CO<sub>2</sub>-EQUIVALENT

GRI 305-1, 305-4

	Mosenergo			TGC-1		
	2018	2019	2020	2018	2019	2020
Total GHG emissions, thousand tonnes of CO <sub>2</sub> equivalent, including:	40,950	39,655	37,107	12,363	12,374	11,078
stationary combustion of fuel – CO <sub>2</sub> , thousand tonnes of CO <sub>2</sub> equivalent	40,950	39,655	37,107	12,363	12,374	11,078
Emissions in CO <sub>2</sub> equivalent per unit of output, tonnes of CO <sub>2</sub> / mm kWh	266	268	264	212	219	202

	OGK-2			MIPC		
	2018	2019	2020	2018	2019	2020
Total GHG emissions, thousand tonnes of CO <sub>2</sub> equivalent, including:	38,195	34,730	27,798	2,549	2,269	2,004
stationary combustion of fuel – CO <sub>2</sub> , thousand tonnes of CO <sub>2</sub> equivalent	38,195	34,730	27,798	2,549	2,269	2,004
Emissions in CO <sub>2</sub> equivalent per unit of output, tonnes of CO <sub>2</sub> / mm kWh	569	556	545	216	215	215

## APPENDIX 18. EMISSIONS OF NO<sub>x</sub>, SO<sub>x</sub> AND OTHER SIGNIFICANT POLLUTANTS, TONNES

GRI 305-6

	Mosenergo			TGC-1		
	2018	2019	2020	2018	2019	2020
Total emissions of pollutants	42,079.5	35,901.5	33,624.7	53,777.1	51,486.6	49,369.5
Particulate matter	527.3	128.2	233.5	3,359.2	3,184.2	3,097.6
Gaseous and liquid pollutants	41,552.3	35,773.4	33,391.2	50,417.9	48,302.4	46,271.9
Nitrogen oxides (converted into NO <sub>2</sub> )	35,578.0	30,809.6	29,121.1	20,241.9	18,106.7	17,468.0
Carbon oxide	1,684.9	1,297.9	1,207.2	9,055.7	9,456.0	9,263.6
Sulfur dioxide	4,248.8	3,628.1	3,023.3	21,065.5	20,687.8	19,495.7
Hydrocarbons (net of volatile organic compounds)	0.9	0.5	3.0	0.7	1.8	1.8
Volatile organic compounds	37.3	35.4	34.7	48.3	47.8	40.5
Other gaseous and liquid pollutants	2.3	1.9	1.9	5.8	2.3	2.3
Benzapyrene	0.02	0.02	0.02	0.003	0.011	0.009

	OGK-2			MIPC		
	2018	2019	2020	2018	2019	2020
Total emissions of pollutants	227,192.2	188,494.5	138,561.2	2,209.2	1,979.4	1,579.3
Particulate matter	50,111.9	43,022.0	26,832.9	2.9	1.3	0.9
Gaseous and liquid pollutants	177,080.3	145,472.5	111,728.3	2,206.3	1,978.1	1,578.4
Nitrogen oxides (converted into NO <sub>2</sub> )	50,360.6	43,641.3	35,761.9	2,015.6	1,860.0	1,504.9
Carbon oxide	17,639.5	15,802.3	12,067.9	166.9	112.7	69.4
Sulfur dioxide	108,632.9	85,575.7	63,236.8	0.2	0.04	0.8
Hydrocarbons (net of volatile organic compounds)	143.0	238.5	474.5	–	–	0.01
Volatile organic compounds	300.1	210.6	182.9	3.2	3.6	3.2
Other gaseous and liquid pollutants	4.2	4.1	4.3	20.3	1.8	0.073
Benzapyrene	0.05	0.10	0.09	0.04	0.02	0.02

## APPENDIX 19. WASTE GENERATION AND DISPOSAL, TONNES

GRI 306-2

	Mosenergo			TGC-1		
	2018	2019	2020	2018	2019	2020
Hazard Class 1	14.2	12.7	10.7	10.5	13.9	9.8
Hazard Class 2	43.2	1.7	0.1	3.9	14.6	4.3
Hazard Class 3	1,044.4	1,030.6	959.6	1,377.0	1,834.5	899.6
Hazard Class 4	4,595.9	4,437.1	4,062.3	7,092.7	7,157.6	6,261.5
Hazard Class 5	73,032.3	22,694.1	29,595.2	98,250.2	99,402.5	98,410.3
Total	78,730.0	28,176.2	34,627.9	106,734.2	108,423.1	105,585.5
Including:						
oil sludge	1,190.7	1,115.2	1,136.8	1,092.7	2,304.7	784.1
ash	50,041.3	142.3	17,204.4	63,912.0	63,040.0	57,119.0
Total delivered to third parties:	57,660.5	56,936.9	30,022.1	75,867.9	76,025.6	71,780.3
for treatment	–	–	–	59.1	261.1	457.3
for disposal	47,182.7	46,874.0	20,914.6	34,070.8	38,807.4	41,005.5
for neutralisation	1,064.9	1,076.0	1,028.8	681.4	940.9	105.0
for storage	–	–	–	76.6	0	–
for landfilling	8,689.3	9,710.6	8,078.6	40,980.0	36,016.2	30,212.5
Landfilled at the company's sites	21,792.7	60.7	4,605.7	30,880.3	32,365.2	34,049.0
Disposed by the company	–	–	–	0.4	0.4	15.9
Neutralised by the company	–	–	–	–	–	–

	OGK-2			MIPC		
	2018	2019	2020	2018	2019	2020
Hazard Class 1	11.4	12.0	10.8	5.2	4.0	4.6
Hazard Class 2	5.4	1.2	0.3	4.2	3.0	0.1
Hazard Class 3	963.6	903.5	1,042.5	23.0	42.3	16.0
Hazard Class 4	10,640.4	13,647.6	12,345.6	1,947.5	1,609.7	1,267.2
Hazard Class 5	1,797,728.3	1,507,418.4	1,120,337.9	1,607.1	1,479.6	1,299.9
<b>Total</b>	<b>1,809,349.1</b>	<b>1,521,982.7</b>	<b>1,133,737.1</b>	<b>3,587.0</b>	<b>3,138.6</b>	<b>2,587.8</b>
Including:						
oil sludge	81.3	85.0	123.4	-	-	-
ash	1,771,394.5	1,406,295.0	1,105,057.5	-	-	-
<b>Total delivered to third parties:</b>	<b>76,806.0</b>	<b>79,276.1</b>	<b>67,273.4</b>	<b>3,587.0</b>	<b>3,138.6</b>	<b>2,587.8</b>
for treatment	44.8	2.2	710.6	-	-	-
for disposal	57,995.4	59,205.7	51,602.0	3,587.0	3,138.6	1,089.4
for neutralisation	414.3	525.8	526.4	67.2	146.3	45.4
for storage	316.7	799.6	104.8	-	-	-
for landfilling	18,034.8	18,742.8	14,329.6	3,225.5	1,801.2	1,453.0
Landfilled at the company's sites	1,767,369.5	1,363,904.1	1,080,769.3	-	-	-
Disposed by the company	7,733.1	90,425.0	12,028.6	-	-	-
Neutralised by the company	7.4	2.8	2.8	-	-	-

## APPENDIX 20. AREA OF DISTURBED AND REMEDIATED LAND IN RUSSIA, HA

	Mosenergo			TGC-1		
	2018	2019	2020	2018	2019	2020
Area of disturbed land as at year-end	114.9	114.9	124.9	67.0	67.0	67.0
Area of remediated land	-	-	-	-	-	-

	OGK-2			MIPC		
	2018	2019	2020	2018	2019	2020
Area of disturbed land as at year-end	1,121.2	999.8	1,564.0	-	-	-
Area of remediated land	121.4	-	-	-	-	-

## APPENDIX 21. TOTAL WATER WITHDRAWAL BY SOURCE, THOUSAND CUBIC METRES

GRI 303-2

	Mosenergo			TGC-1		
	2018	2019	2020	2018	2019	2020
<b>Total water withdrawal, including:</b>	<b>393,445.0</b>	<b>402,342.9</b>	<b>412,760.5</b>	<b>308,168.7</b>	<b>308,181.1</b>	<b>281,673.3</b>
surface water	343,514.0	352,006.9	363,037.1	218,705.6	217,640.0	192,543.5
ground water	129.8	125.5	107.4	0.3	0.2	0
public water supply systems	7,282.6	7,105.4	7,381.7	87,919.4	89,605.0	86,704.0
other water supply systems	42,518.5	43,105.2	42,234.3	1,543.5	935.9	2,425.8
Water reuse	23,899.7	24,664.4	21,646.5	2,669.1	2,396.8	2,300.9

	OGK-2			MIPC		
	2018	2019	2020	2018	2019	2020
<b>Total water withdrawal, including:</b>	<b>3,244,972.7</b>	<b>2,802,315.6</b>	<b>2,150,973.2</b>	<b>50,427.6</b>	<b>50,010.4</b>	<b>48,649.8</b>
surface water	3,234,878.4	2,792,364.8	2,142,137.5	-	-	-
ground water	1,395.9	1,294.8	1,568.1	22,157.6	22,110.1	22,133.1
public water supply systems	5,708.9	5,706.3	4,690.4	8,169.4	8,005.8	7,880.6
other water supply systems	2,989.4	2,949.8	2,577.2	20,100.6	19,894.5	18,636.1
Water reuse	111,921.3	108,318.8	116,222.4	-	-	-

## APPENDIX 22. WATER DISCHARGE BY QUALITY AND DESTINATION, THOUSAND CUBIC METRES

GRI 306-1

	Mosenergo			TGC-1		
	2018	2019	2020	2018	2019	2020
<b>Total water discharge, including:</b>	<b>284,858.7</b>	<b>308,765.8</b>	<b>296,839.9</b>	<b>270,791.2</b>	<b>205,439.6</b>	<b>178,360.7</b>
<b>Total water discharged to surface water, including:</b>	<b>255,696.1</b>	<b>280,747.0</b>	<b>271,757.9</b>	<b>202,422.0</b>	<b>202,196.1</b>	<b>171,345.5</b>
polluted (untreated)	-	10,889.8	9,601.2	53,884.6	54,304.7	48,392.7
polluted (insufficiently treated)	15,706.1	16,029.7	13,715.5	2,273.5	2,323.5	1,292.7
clean-to-standard (untreated)	227,745.5	241,903.3	234,886.3	146,260.9	145,566.3	121,589.9

	Mosenergo			TGC-1		
	2018	2019	2020	2018	2019	2020
total treated-to-standard, including:	12,244.5	11,924.2	13,554.9	3.0	1.6	70.3
at biological wastewater treatment facilities	-	-	-	3.0	1.51	6.1
at physical-chemical wastewater treatment facilities	-	-	-	-	-	64.1
at mechanical wastewater treatment facilities	12,244.5	11,924.2	13,554.9	-	0.09	0.11
Total water discharge over land, including:	-	-	-	-	-	-
Total deep well injection, including:	-	-	-	-	-	-
Water discharge to irrigation fields	-	-	-	-	-	-
Water discharge to drain fields	-	-	-	-	-	-
Water discharge to wastewater stabilisation ponds	-	-	-	2.19	2.84	4.40
Water discharge to sewage	29,162.7	28,018.8	25,082.0	50,735.2	2,263.6	4,551.4
Water discharge to other systems	-	-	-	17,631.8	977.1	2,459.4
	OGK-2			MIPC		
	2018	2019	2020	2018	2019	2020
Total water discharge, including:	3,133,870.7	2,680,715.0	2,082,327.6	23,216.7	23,487.6	23,418.6
Total water discharged to surface water, including:	3,128,926.5	2,678,832.8	2,080,637.4	107.4	107.4	107.7
polluted (untreated)	2,445.5	2,528.9	2,091.0	-	-	-
polluted (insufficiently treated)	2,631.5	1,563.6	1,036.6	-	-	-
clean-to-standard (untreated)	3,118,727.0	2,669,803.4	2,072,471.4	-	-	-
total treated-to-standard, including:	5,122.6	4,936.8	5,038.4	107.4	107.4	107.7
at biological wastewater treatment facilities	3,402.2	3,402.7	3,335.5	-	-	-
at physical-chemical wastewater treatment facilities	-	-	0	-	-	-
at mechanical wastewater treatment facilities	1,720.3	1,534.1	1,702.9	107.4	107.4	107.7
Total water discharge over land, including:	-	-	-	-	-	-
Total deep well injection, including:	-	-	-	-	-	-
Water discharge to irrigation fields	-	-	-	-	-	-
Water discharge to drain fields	-	-	-	-	-	-
Water discharge to wastewater stabilisation ponds	355.8	243.6	250.2	-	-	-
Water discharge to sewage	3,904.6	797.9	804.2	22,759.9	23,061.1	23,076.1
Water discharge to other systems	683.8	840.7	635.9	349.4	319.1	234.8

## APPENDIX 23. INJURIES BY SEVERITY

GRI 403-2

	Fatal		Severe		Non-severe	
	2019	2020	2019	2020	2019	2020
Mosenergo	0	0	0	0	1	2
TGC-1	0	0	1	0	3	0
OGK-2	0	0	0	0	1	0
MIPC	0	0	1	0	1	3

## APPENDIX 24. WORKDAYS LOST DUE TO ALL TYPES OF ACCIDENTS

GRI 403-2

	2018	2019	2020
Mosenergo	11	39	143
TGC-1	374	292	0
OGK-2	380	13	0
MIPC	302	687	176

## APPENDIX 25. TOTAL NUMBER OF EMPLOYEES BY EMPLOYMENT TYPE AND GENDER

GRI 102-8

	Full-time employees					
	2018		2019		2020	
	F	M	F	M	F	M
Mosenergo	2,508	5,434	2,514	5,480	2,597	5,536
TGC-1	2,075	4,404	2,107	4,457	2,153	4,530
OGK-2	2,751	5,641	2,730	5,653	2,465	4,859
MIPC	4,720	9,473	5,256	10,117	4,523	9,497
	Part-time employee					
	2018		2019		2020	
	F	M	F	M	F	M
Mosenergo	1	2	36	14	15	4
TGC-1	5	10	19	6	14	10
OGK-2	22	2	26	2	15	2
MIPC	13	17	15	18	5	9

## APPENDIX 26. TOTAL NUMBER OF EMPLOYEES BY AGE GROUP AND REGION

GRI 102-8

Region	Headcount as at 31 December of the reporting period	2019				2020				
		Age group				Age group				
		Under 30 years	30-40 years	40-50 years	Over 50 years	Under 30 years	30-40 years	40-50 years	Over 50 years	
<b>OGK-2</b>	8,324	884	2,389	2,825	2,226	7,372	722	2,015	2,489	2,146
Amur Region	-	-	-	-	-	122	18	53	43	8
Krasnodar Territory	199	21	89	53	37	209	19	89	58	43
Chechen Republic	124	35	42	26	24	128	35	45	24	24
Leningrad Region	794	89	258	215	232	790	86	237	226	241
Krasnoyarsk Territory	905	65	296	299	249	16	1	2	7	6
Rostov Region	1,174	167	328	357	326	1,153	139	318	356	340
Pskov Region	282	26	66	88	103	283	18	64	89	112
Ryazan Region	1,112	82	253	424	355	1,022	59	216	406	341
Saint Petersburg	275	36	113	98	29	294	27	128	101	38
Sverdlovsk Region	242	22	119	77	63	231	13	98	71	49
Stavropol Territory	755	60	170	291	261	738	59	162	276	241
Tyumen Region	942	171	277	254	242	935	161	276	258	240
Chelyabinsk Region	979	46	242	413	280	950	35	217	388	310
Vologda Region	533	64	129	193	148	496	52	108	184	152
Moscow	8	1	4	3	0	5	0	2	2	1
<b>MOSENERGO</b>	8,044	1,204	2,003	1,866	2,971	8,153	1,118	2,037	1,944	3,054
Moscow	6,352	981	1,648	1,438	2,285	6,463	912	1,672	1,506	2,373
Moscow Region	1,692	223	355	428	686	1,690	206	365	438	681
<b>MIPC</b>	15,406	1,719	3,746	3,304	6,637	14,026	1,491	3,537	3,214	5,784
Moscow	15,406	1,719	3,746	3,304	6,637	14,026	1,491	3,537	3,214	5,784
<b>TGK-1</b>	6,589	940	1,649	1,480	2,520	6,707	920	1,726	1,506	2,555
Saint Petersburg	7,297	1,037	1,854	1,676	2,730	7,411	1,021	1,931	1,694	2,765
Leningrad Region	3,555	548	872	636	1,499	3,623	534	920	655	1,514
Republic of Karelia	586	83	111	109	283	620	83	132	126	279
Murmansk Region <sup>40</sup>	1,018	134	303	309	272	1,019	122	307	314	276

<sup>40</sup> In the Murmansk Region, TGK-1's headcount includes AO Murmanskaya CHPP.

## APPENDIX 27. EMPLOYEE TURNOVER BY AGE GROUP AND GENDER

GRI 401-1

	Under 30 years			30-50 years			Over 50 years			
	2018		2019	2018		2019	2018		2019	
	F	M	F	M	F	M	F	M	F	
<b>NEW HIRES IN 2018-2020</b>										
Mosenergo	75	337	155	471	155	385	142	299	146	266
TGC-1 including AO Murmanskaya CHPP	126	217	106	209	83	209	117	203	120	235
OGK-2	93	161	75	241	55	204	128	224	166	182
MIPC	152	410	231	539	124	305	304	607	624	971
<b>DISMISSALS IN 2018-2020</b>										
Mosenergo	35	191	90	369	128	280	89	263	92	219
TGC-1 including AO Murmanskaya CHPP	66	136	49	110	33	114	81	167	84	188
OGK-2	55	74	37	181	46	210	152	207	104	194
MIPC	92	272	94	286	92	282	305	515	341	606

## APPENDIX 28. ENTRY-LEVEL WAGE RATIOS (INCLUDING COMPENSATION AND INCENTIVE PAYMENTS) COMPARED TO LOCAL MINIMUM WAGE RATES

GRI 202-1

	2018	2019	2020
<b>MOSENERGO</b>			
Moscow	1.71	1.71	1.63
<b>TGC-1</b>			
St Petersburg	1.01	1.12	1.33
Leningrad Region	1.28	1.55	1.72
Republic of Karelia	1.17	1.32	1.09
Murmansk Region	1.29	1.11	1.08
Murmansk (Murmanskaya CHPP)	1.27	1.33	1.03
<b>OGK-2</b>			
Tyumen Region	1.42	1.47	1.35
Ryazan Region	1.45	1.50	1.60
Stavropol Territory	1.78	1.80	1.50

	2018	2019	2020
Leningrad Region	1.95	2.00	1.78
Chelyabinsk Region	1.54	1.57	1.39
Rostov Region	1.57	1.65	1.17
Vologda Region	1.75	1.81	1.59
Sverdlovsk Region	1.65	1.71	1.70
Pskov Region	1.30	1.34	1.40
Krasnodar Territory	2.48	2.40	2.42
Chechen Republic	–	–	2.76
Amur Region	–	–	2.76
<b>MIPC</b>			
Moscow	1.13	1.05	1.22

## APPENDIX 29. GLOSSARY

**CCGT:** Combined-cycle gas turbine  
**CHPP:** Combined heat and power plant  
**CSA:** Capacity supply agreement  
**EMS:** Environmental management system  
**ENMS:** Energy management system  
**EV:** Electric vehicle  
**GAZPROM ENERGOHOLDING:** OOO Gazprom Energoholding  
**GENERATING COMPANIES:** PAO Mosenergo, PAO TGC-1, PAO OGK-2, and PAO MIPC  
**GRES:** State district power plant  
**GRI:** Global Reporting Initiative  
**GROUP, GAZPROM ENERGOHOLDING GROUP:** OOO Gazprom Energoholding and its generating companies  
**HPP:** Hydropower plant  
**IFRS:** International Financial Reporting Standards  
**KPI:** Key performance indicator  
**LNG:** Liquefied natural gas  
**MIPC:** PAO MIPC  
**MOSENERGO:** PAO Mosenergo  
**MWR:** Minimum wage rate  
**OGK-2:** PAO OGK-2 OHS: Occupational health and safety  
**QMS:** Quality management system  
**R&D:** Research and development

**RAS:** Russian Accounting Standards  
**RSPP:** The Russian Union of Industrialists and Entrepreneurs  
**SME:** Small and medium-sized enterprise  
**SRFC:** Specific reference fuel consumption  
**TEP:** Technical and economic performance  
**TGC-1:** PAO TGC-1  
**VHI:** Voluntary health insurance  
**WECM:** Wholesale Electricity and Capacity Market

### MEASUREMENT UNITS

**GCAL (GIGACALORIE):** a unit of heat  
**GCAL/H (GIGACALORIES PER HOUR):** a unit of heat capacity (load)  
**KWH (KILOWATT HOUR):** a unit of electricity  
**MW (MEGAWATT):** a unit of electric capacity  
**TOE:** tonne of oil equivalent