

**MANAGEMENT REPORT
PJSC GAZPROM
FOR 2018**

CONTENTS

THE GROUP'S POSITION IN THE GLOBAL ENERGY INDUSTRY.....	3
OPERATING RESULTS	4
Reserves and Development of Hydrocarbons	4
Transportation	13
Underground Gas Storage	15
Distribution of Gas	17
Refining	20
Power Generation	23
INNOVATION-DRIVEN DEVELOPMENT	26
PERSONNEL	27
OCCUPATIONAL SAFETY	28
ENVIRONMENTAL PROTECTION	30
MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATION	33
SHAREHOLDING STRUCTURE AND STOCK MARKET OF PJSC GAZPROM.....	43
CORPORATE GOVERNANCE.....	45
RISK MANAGEMENT	52
BRANCHES AND REPRESENTATIVE OFFICES OF PJSC GAZPROM.....	58
CONVERSION TABLE.....	59
GLOSSARY OF KEY TERMS AND ABBREVIATIONS	60
CONTACTS.....	62

Note:

This Management Report determines some operating and economic parameters in accordance with the International Financial Reporting Standards (IFRS) principles for the Group's entities included in the IFRS consolidated financial statements of PJSC Gazprom for the year ended 31 December 2018. Therefore, they may differ from similar parameters in reports of PJSC Gazprom prepared under Russian statutory requirements.

Moreover, some operating parameters of PJSC Gazprom and its subsidiaries are determined in accordance with the principles underlying management reporting.

Analysis of financial results should be read in conjunction with the audited consolidated financial statements of PJSC Gazprom for the year ended 31 December 2018 prepared in accordance with IFRS.

Among other things, the Management Report discloses information on the future production and economic activities of Gazprom Group, based on the management's forecasts and estimates considering the current situation. Actual results may differ from the said forecasts and estimates due to the effect of various objective factors.

PJSC Gazprom and its subsidiaries (“Gazprom Group”, “Gazprom”, or the “Group”) is one of the world’s largest vertically integrated energy companies.

THE GROUP’S POSITION IN THE GLOBAL ENERGY INDUSTRY

Gazprom remains a global leader in terms of natural gas reserves (ca. 16% of global gas reserves) and gas production (ca. 11% of global gas production). Gazprom’s share in total Russian production stands at 69% for gas and 12% for oil and gas condensate.

Gazprom operates in 24 countries, and its products are supplied to more than 130 markets around the world.

The Unified Gas Supply System (UGSS) of Russia is a centrally operated system of natural gas treatment, transportation and storage. The UGSS incorporates the world’s longest network of high-pressure trunk pipelines covering European Russia and Western Siberia. As at the end of 2018, the combined length of trunk pipelines and connections operated by the Group’s gas transportation subsidiaries in Russia totalled 172.6 thousand km.

In Russia, Gazprom Group accounts for more than a half of all natural and associated petroleum gas processing and 18% of oil and stable gas condensate refining.

Gazprom is the dominant supplier of gas to consumers in Russia and countries of the former Soviet Union (FSU). In addition, the Group is Europe’s major supplier of natural gas. The share of PJSC Gazprom’s gas sales under contracts signed by LLC Gazprom export and under direct contracts with GAZPROM Schweiz AG in the total gas consumption in European far abroad countries is 36.8%.

The Group also owns electricity generating assets, which provide 14% of all the electrical power generated in Russia. Gazprom is the largest Russian heat producer.

Gazprom Group’s key operational and financial indicators for 2018 and 2017 are presented in the tables below:

	As at and for the year ended 31 December		Change, %
	2018	2017	
Reserves of hydrocarbons under PRMS standards⁽¹⁾			
Proved and probable gas reserves, bcm	24,255.13	24,146.57	0.4
Proved and probable gas condensate reserves, mm tonnes	1,090.15	1,105.68	–1.4
Proved and probable crude oil reserves, mm tonnes	1,335.37	1,360.02	–1.8
Total proved and probable hydrocarbon reserves, ⁽²⁾ bboe	176.12	175.72	0.2
Operating indicators			
Natural and associated petroleum gas production, ⁽¹⁾ bcm	498.7	472.1	5.6
Crude oil production, ⁽¹⁾ mm tonnes	48.3	48.6	–0.6
Unstable gas condensate production, ⁽¹⁾ mm tonnes	15.9	15.9	–
Total hydrocarbon production, ^{(1),(2)} mm boe	3,720.7	3,550.2	4.8
Natural and associated petroleum gas processing, bcm	31.1	30.8	1.0
Liquid hydrocarbons refining, mm tonnes	67.4	64.1	5.1
Electricity generation, billion kWh	153.19	156.55	–2.1

	As at and for the year ended 31 December		Change, %
	2018	2017	
Key financial results, RUB mm			
Sales	8,224,177	6,546,143	25.6
Operating profit	1,930,030	871,405	121.5
Profit for the year attributable to the owners of PJSC Gazprom	1,456,270	714,302	103.9
Adjusted EBITDA	2,599,284	1,467,692	77.1
Balance Sheet highlights, RUB mm			
Cash and cash equivalents	849,419	869,007	-2.3
Total debt	3,863,822	3,266,518	18.3
Net debt	3,014,403	2,397,511	25.7
Total assets	20,810,440	18,238,770	14.1
Total equity (including non-controlling interest)	13,776,153	12,015,481	14.7
Ratios			
Basic and diluted earnings per share attributable to the owners of PJSC Gazprom, RUB	65.89	32.32	103.9
Total debt to equity ratio (including non-controlling interest)	0.28	0.27	3.7
Adjusted EBITDA margin, %	31.6	22.4	41.1
Profit margin for the year attributable to the owners of PJSC Gazprom, %	17.7	10.9	62.4

Note:

- (1) Including the Group's share in the reserves and production volumes of entities in which Gazprom has investments classified as joint operations.
- (2) For management accounting purposes, Gazprom Group measures hydrocarbon reserves and production in metric units. In this Management Report, gas reserves and production are converted from metric units to barrels of oil equivalent at a ratio of 1,000 cubic metres to 6.49 boe.

OPERATING RESULTS

Reserves and Development of Hydrocarbons

The table below shows assets and capital expenditures in the Production of gas and Production of oil and gas condensate segments:

	As at 31 December	
	2018	2017
Production of gas		
Assets, RUB million	2,743,944	2,677,231
Share in the Group's total assets, %	14.3	15.2
Production of oil and gas condensate		
Assets, RUB million	2,898,071	2,516,019
Share in the Group's total assets, %	15.1	14.3
For the year ended 31 December		
Production of gas		
Capital expenditures, RUB million	308,007	216,450
Share in the Group's total capital expenditures, %	17.2	14.4
Production of oil and gas condensate		
Capital expenditures, RUB million	257,932	330,424
Share in the Group's total capital expenditures, %	14.4	22.0

Reserves

According to an audit of Gazprom Group's hydrocarbon reserves under PRMS standards performed by DeGolyer and MacNaughton, as at 31 December 2018 proved and probable hydrocarbon reserves of Gazprom Group (including the share in the reserves of entities in which Gazprom has investments classified as joint operations) are estimated at 176.12 bboe. The audit covered 93.0% of gas reserves, 94.1% of condensate reserves, and 93.9% of oil reserves in A, B₁, and C₁ reserve categories.

The table below shows proved and probable reserves of Gazprom Group (including the share in the reserves of entities in which Gazprom has investments classified as joint operations) under PRMS standards:

		As at 31 December	
		2018	2017
Gas			
Share of A+B ₁ +C ₁ reserves covered by the audit under PRMS standards, ⁽¹⁾ %		93.0	94.1
Proved			
	bcm	17,890.38	18,253.39
	bboe	116.11	118.46
Probable			
	bcm	6,364.75	5,893.18
	bboe	41.31	38.25
Proved and probable			
	bcm	24,255.13	24,146.57
	bboe	157.42	156.71
Gas condensate			
Share of A+B ₁ +C ₁ reserves covered by the audit under PRMS standards, ⁽¹⁾ %		94.1	92.7
Proved			
	mm tonnes	759.69	797.75
	bboe	6.21	6.52
Probable			
	mm tonnes	330.46	307.93
	bboe	2.70	2.52
Proved and probable			
	mm tonnes	1,090.15	1,105.68
	bboe	8.91	9.04
Oil			
Share of A+B ₁ +C ₁ reserves covered by the audit under PRMS standards, ⁽¹⁾ %		93.9	93.5
Proved			
	mm tonnes	712.32	736.80
	bboe	5.22	5.40
Probable			
	mm tonnes	623.05	623.22
	bboe	4.57	4.57
Proved and probable			
	mm tonnes	1,335.37	1,360.02
	bboe	9.79	9.97

	As at 31 December	
	2018	2017
Total		
Share of A+B ₁ +C ₁ reserves covered by the audit under PRMS standards, ⁽¹⁾ %	93.1	94.0
Proved, bboe ⁽²⁾	127.54	130.38
Probable, bboe ⁽²⁾	48.58	45.34
Proved and probable, bboe ⁽²⁾	176.12	175.72

Notes:

- (1) The A+B₁+C₁ reserve classification accepted in Russia is based on geological factors and technological indicators of development analysis and estimates the actual hydrocarbon reserves contained in geological formations and the technological possibility of their extraction. PRMS standards take into account the economic feasibility of extracting reserves, which is determined based on exploration and drilling costs, operating expenses for production and transportation, taxes, current hydrocarbon prices, and other factors.
- (2) For management accounting purposes, Gazprom Group measures hydrocarbon reserves and production in metric units. In this Management Report, gas reserves are converted from metric units to barrels of oil equivalent at a ratio of 1,000 cubic metres to 6.49 boe.

Gazprom Group's PRMS proved and probable hydrocarbon reserves increased by 0.4 bboe from the previous estimate as at 31 December 2017. In addition to the annual production from the fields operated by Gazprom, the key factors behind the changes in reserve estimates under international standards included a review of geological models following exploration activities and re-estimation at the Tambeyskoye, Yen-Yakhinskoye, Taldinskoye, and Gubkinskoye fields, new development solutions at the Yen-Yakhinskoye, Gubkinskoye, and Taldinskoye fields, transfer of the Semakovskoye field license to the books of LLC RusGazAlyans, as well as PJSC Gazprom Neft's investment decisions on gas transportation and sale for the Novoportovskoye field.

The bulk of the Group's hydrocarbon reserves is concentrated within its licence areas in Russia.

As at 31 December 2018, Gazprom Group held 274 subsoil licences for conducting geological surveys, prospecting, exploration, and production of hydrocarbons in the Russian Federation. These licence blocks aggregately cover the area of 559.3 thousand square km. In addition, entities in which Gazprom has investments classified as joint operations held a total 36 licences covering a total area of 23.1 thousand square km.

As at 31 December 2018, Gazprom Group's A+B₁+C₁ hydrocarbon reserves in Russia were 35,195.3 bcm of natural gas, 1,604.4 mm tonnes of gas condensate, and 2,015.7 mm tonnes of oil, including the share in the reserves of entities in which Gazprom Group has investments classified as joint operations – 23.9 bcm of gas, 2.8 mm tonnes of gas condensate, and 190.9 mm tonnes of oil.

The Group's share in A+B₁+C₁ hydrocarbon reserves of associates and joint ventures as at 31 December 2018 was 1,146.7 bcm of natural and associated gas, 110.1 mm tonnes of gas condensate, and 592.0 mm tonnes of oil.

The table below shows changes to A+B₁+C₁ reserves of natural gas, gas condensate, and oil (including the share in the reserves of entities in which Gazprom Group has investments classified as joint operations) contained within the licenced areas of Gazprom Group in Russia in 2018:

	Natural gas, bcm	Gas condensate, mm tonnes	Oil, mm tonn es	Total, mm boe
Reserves as at 31 December 2017	35,355.4	1,595.6	2,045.3	257,500.6
including non-controlling interests⁽¹⁾	517.9	4.2	71.2	3,917.4
Exploration-based additions to reserves	796.6	21.8	19.4	5,490.5
Transfer of reserves discovered in 2018 to the Russian open acreage, ⁽²⁾ to the books of other companies; acquisition from other companies	-409.3	-0.6	-5.7	-2,703.0
Obtaining of licences	-	-	0.8	5.9
Licence returns	-	-	-	-
Acquisition of assets	-	-	0.1	0.7
Disposal of assets	-	-	-	-
Re-estimation	-49.6	0.1	3.1	-298.4
Production (including losses)	-497.8 ⁽³⁾	-12.5 ⁽⁴⁾	-47.3	-3,679.7
Reserves as at 31 December 2018	35,195.3	1,604.4	2,015.7	256,316.6
including non-controlling interests⁽¹⁾	455.8	2.5	70.0	3,491.7

Notes:

- (1) Non-controlling interest as at the end of the year is calculated based on Gazprom Group's effective interest in the share capital of the relevant subsidiary which is a subsoil use licence holder.
- (2) Under the Russian laws, a subsoil user does not have any vested right to develop reserves it discovers within the areas covered by its exploration licences or beyond the licenced areas. Such reserves are to be transferred to the open acreage of the Russian Federation, with the subsoil user granted the pre-emptive right to subsequently obtain a licence for developing the relevant discovery.
- (3) Excluding dissolved gas.
- (4) Any production-driven changes in gas condensate reserves are recognized following conversion into stable gas condensate (C₅₊). In 2018, Gazprom Group produced 15.9 mm tons of unstable gas condensate.

Re-estimation of reserves

Gazprom continued revising gas recovery factors (GRFs) under the new Russian Classification of Reserves and Resources of Oil and Flammable Gases. The revision did not have any significant impact on the changes in natural gas reserves in 2018 since it covered the fields comprising a minor share of Gazprom Group's total gas reserves. As at 31 December 2018, Gazprom completed the GRF estimation for the fields containing 19% of the Group's total A+B₁+C₁ reserves. Revision of GRFs for Gazprom Group's other fields in the coming years may have a significant impact on the size of its recoverable gas reserves.

Exploration

The table below shows summary information on the exploration activities completed in 2018 across Gazprom Group's licenced areas in Russia and within the foreign projects implemented with the Group's participation:

For the year ended 31 December 2018

	In Russia	Abroad⁽¹⁾
Exploration drilling, thousand m	157.6	21.9
Completed exploration wells, units	25	10
including successful wells	20	9
2D seismic surveys, thousand km	5.7	–
3D seismic surveys, thousand square km	9.5	1.1
Financing for exploration (including VAT), RUB billion	86.4	4.7

Note.

- ⁽¹⁾ The consolidated data reflecting the physical metrics of the exploration activities carried out by Gazprom Group in foreign countries include the data for projects in which the Group's subsidiaries act as operators.

In addition, for entities in which Gazprom has investments classified as joint operations, exploration drilling stood at 28.7 thousand m, with eight exploration wells completed and five of them flowing, and 3D seismic was acquired on 0.5 thousand square km.

In 2018, exploration-driven additions to Gazprom Group's A+B₁+C₁ hydrocarbon reserves in Russia totalled 796.6 bcm of natural gas, 21.8 mm tonnes of gas condensate, and 19.4 mm tonnes of oil.

Significant growth in gas reserves was achieved at the Leningradskoye field in the Kara Sea (+667.4 bcm) and the Yuzhno-Kirinskoye field in the Sea of Okhotsk (+100.9 bcm).

The Group made three new field discoveries during 2018: the Neptune and Triton fields in the Sea of Okhotsk and the Blizhnenovoportovskoye field in the Yamal-Nenets Autonomous Area, as well as identified 12 new deposits at the previously discovered fields in the Yamal-Nenets Autonomous Area, Khanty-Mansi Autonomous Area – Yugra, the Tomsk and Orenburg Regions, and the Kara Sea. In addition, entities in which Gazprom has investments classified as joint operations discovered the Vostochno-Talovoye field in the Tomsk Region and three deposits in the Khanty-Mansi Autonomous Area – Yugra.

The results of exploration activities at the Nyarmeysky and Rusanovsky license blocks in the Kara Sea allow Gazprom to expect more discoveries in the areas.

The reserve replacement ratio for the Group's assets in Russia was 1.60 for natural gas, and 0.69 for gas condensate and oil.

During 2018, Gazprom Group carried out a number of geological and geophysical (G&G) surveys under the relevant contracts in FSU countries, Europe, Southeast Asia, Africa, the Middle East, and South America.

Exploration campaigns conducted by Gazprom Group on the Group-operated projects included drilling in Serbia and Iraq, as well as 3D seismic surveys in Serbia.

Under the Agreement of Strategic Cooperation between PJSC Gazprom and JSC Uzbekneftegaz, hydrocarbon potential of six investment blocks, as well as the Paleozoic deposits in the Bukhara-Khiva region in Uzbekistan was assessed.

In Algeria, Gazprom Group optimised the technical and economic parameters of the ZERN and ZER field development (including negotiations with the Algerian party on amending the contract terms), which led to the decision to transfer the blocks to the state. In 2018, Gazprom Group also returned licences for the Shohambary and Sarikamysh prospects in Tajikistan, and the Kugart and Eastern

Mailu-Suu IV licence blocks in Kyrgyzstan since PJSC Gazprom resolved that further exploration would be unviable.

Transfer of reserves

In 2018, the transfer of subsoil licences for the Severo-Parusovoye and Semakovskoye fields located in the Tazovsky and Nadymsky districts of the Yamal-Nenets Autonomous Area and in the Taz Bay of the Kara Sea to LLC RusGazAlyans (a joint venture between LLC Gazprom dobycha Yamburg and JSC RusGazDobycha) was a major factor behind the changes in natural gas reserves vs the estimate as at 31 December 2017. The transaction was made under the Master Agreement on the implementation of a joint project for the development of the Parusovoye, Severo-Parusovoye and Semakovskoye fields located in the Yamal-Nenets Autonomous Area, signed between PJSC Gazprom and JSC RusGazDobycha.

Production

The table below shows information on the volumes of natural gas and liquid hydrocarbons produced by Gazprom Group, its associates and joint ventures in Russia:

	Natural and associated gas, bcm	Unstable gas condensate, mm tonnes	Oil, mm ton nes	Total, mm boe
For the year ended 31 December 2018				
Production of Gazprom Group, including the share in production volumes of entities in which Gazprom has investments classified as joint operations	498.7	15.9	48.3	3,720.7
Gazprom Group's share in production volumes of associates and joint ventures	26.9	4.9	11.2	296.8
For the year ended 31 December 2017				
Production of Gazprom Group, including the share in production volumes of entities in which Gazprom has investments classified as joint operations	472.1	15.9	48.6	3,550.2
Gazprom Group's share in the production volumes of associates and joint ventures	27.0	5.0	10.9	296.0

In 2018, Gazprom Group produced 498.7 bcm of natural and associated gas in Russia, demonstrating an increase driven by higher demand.

Gazprom Group produced 48.3 mm tonnes of oil and 15.9 mm tonnes of gas condensate in 2018. Gazprom Group's oil and gas condensate production volumes in 2018 remained almost flat year-on-year.

In 2018, associates and joint ventures produced 26.9 bcm of natural and associated gas, 4.9 mm tonnes of gas condensate, and 11.2 mm tonnes of oil (share attributable to Gazprom Group). The increase in the oil production volumes of associates and joint ventures was driven by higher production from JSC Messoyakhneftegas-operated Vostochno-Messoyakhskoye field, put into commercial development in 2016 (a joint venture between PJSC Gazprom Neft and PJSC Rosneft).

The table below shows information on the number of Gazprom Group's field developments and production well stock (excluding entities in which Gazprom has investments classified as joint operations):

	As at 31 December 2018	
	In Russia	Abroad
Fields in commercial development	138	47
Gas production wells (active)	7,418	126
Oil production wells (active)	8,489	734

In addition, as at 31 December 2018, entities in which Gazprom has investments classified as joint operations had 38 fields in commercial development.

Abroad, the number of fields in commercial development amounted to 47. These fields are developed by Naftna Industrija Srbije (NIS), a Serbian subsidiary of Gazprom Neft Group.

Gazprom Group also has stakes in a number of oil and gas projects at the production stage in a number of foreign countries.

In terms of natural gas and gas condensate production, the largest of them include the following projects:

- Moc Tinh and Hai Thach fields in the Vietnamese section of the South China Sea bed (49% held by Gazprom Group). Total gas production in 2018 from these fields was 2.2 bcm of gas.
- Ipati and Aquio licence blocks in Bolivia (20% held by Gazprom Group). Total gas production in 2018 from the Incahuasi field was 2.6 bcm of gas.

The Badra field development project in Iraq (30% held by Gazprom Group) is the largest asset by production of oil and associated petroleum gas among the foreign projects implemented with the Group's participation. In 2018, a total 4.0 mm tonnes of oil were produced from the Badra field.

Naftna Industrija Srbije (NIS), a Serbian subsidiary of Gazprom Neft Group, produced 0.9 mm tonnes of oil and 0.5 bcm of natural and associated gas in 2018.

Wintershall Noordzee B.V. joint venture (50% held by the Group) produced 0.7 bcm of gas in the North Sea in 2018.

In Lybia, the Group's associate Wintershall AG (49% owned by the Group) operates six fields on oil concessions C96 and C97. This company still faces challenges due to the ongoing political crisis in Lybia, which resulted in limited oil production and export: in the reporting year, 2.1 mm tonnes of oil and 0.3 bcm of associated gas were produced.

Major capex projects

The bulk of gas production capex was spent on field construction to develop the Chayandinskoye oil and gas condensate field (OGCF), the Cenomanian-Aptian deposits at the Bovanenkovskoye OGCF, as well as the Achimov deposits at the Urengoy OGCF while oil and gas condensate production capex was mostly directed toward field construction to develop the oil rim at the Chayandinskoye OGCF, and the implementation of Gazprom Neft Group's projects, including construction and production drilling at the Novoportovskoye and Prirazlomnoye fields, building of hi-tech ice breakers, participation in auctions for subsoil licences, as well as capex projects for conventional assets.

Within its gas production capex projects, in 2018 Gazprom commissioned:

- a 30 bcm per year comprehensive gas treatment unit (CGTU) at the Bovanenkovskoye OGCF
- two booster compressor stations at the Zapolyarnoye and Bovanenkovskoye fields with a combined capacity of 237 MW
- 102 gas production wells in Russia.

Production drilling for gas in Russia totalled 304.4 thousand m.

Within its oil and gas condensate production projects, Gazprom commissioned:

- Phase 2 facilities of a compressor station with a CGTU at the Novoportovskoye OGCF and Phase 1 facilities of the TL-4 compressor station at the Orenburgskoye OGCF's Eastern block
- 578 oil production wells in Russia,
- the second train of the CGTU at the Badra field in Iraq.

Production drilling for oil in Russia totalled 2,202.6 thousand m

Oil and gas condensate sales

In 2018, Gazprom Group sold 25.6 mm tonnes of crude oil and stable gas condensate. Total net sales (net of VAT and customs duties) reached RUB 735.0 bn, up by RUB 195.0 bn, or 36.1% year-on-year, a significant increase over 2017 driven mostly by an increase in average selling prices.

The table below shows the volumes of oil and gas condensate sales by Gazprom Group in the domestic and foreign markets:

(Mm tonnes)	For the year ended 31 December		Change, %
	2018 ⁽¹⁾	2017 ⁽¹⁾	
Russia	2.7	4.3	-37.2
including Gazprom Neft Group	1.2	2.8	-57.1
FSU countries	1.7	1.7	-
including Gazprom Neft Group	1.7	1.7	-
Europe and other countries	21.2	21.6	-1.9
including Gazprom Neft Group	18.3	19.3	-5.2
Total	25.6	27.6	-7.2

Note.

- ⁽¹⁾ The volumes of oil and gas condensate sales do not include intra-group sales.

The decline in sales of oil and gas condensate was due to increased volumes of processed liquid hydrocarbon feedstocks following the completion of scheduled overhaul programme at Russian refineries operated by Gazprom Neft Group in 2017.

Events in the reporting year

Gazprom continued its efforts to create Russia's main prospective gas production hub on the Yamal Peninsula. In December 2018, the third and final gas production site with a design capacity of 30 bcm per year was commissioned at the core Bovankenkovskoye field. This will bring the Cenomanian-Aptian deposits of the field to the design level of gas production - 115 bcm of gas per year.

New Neptune and Triton oil fields were discovered in the Sea of Okhotsk and included into the State Register of Mineral Reserves of the Russian Federation, and the construction of production wells commenced at the Yuzhno-Kirinskoye field using the Polyarnaya Zvezda (Polar Star) and Severnoye Siyaniye (Northern Lights) semi-submersible drilling rigs.

Outlook for the Production of gas and Production of crude oil and gas condensate segments

Gas reserves contained in the conventional hydrocarbon fields operated by Gazprom Group represent over 70 years of supply to the domestic and foreign markets at the current production rate.

Strategic priorities in exploration and production of gas:

- Building gas production hubs in eastern Russia. The Chayandinskoye OGCF is the core field for the future Yakutia gas production hub, and the Kovyktinskoe gas and condensate field is key to the future Irkutsk gas production hub. These fields will comprise the resource base for the Power of Siberia trunk pipeline. The priority developments to add production capacity at the Sakhalin gas production hub include Sakhalin-3 fields – the Kirinskoye gas and condensate field put into commercial development in 2014, and the Yuzhno-Kirinskoye gas and condensate field, one of Gazprom's priority projects in gas production over the longer term

- Bringing into development the Yamal Peninsula's unique, large fields (Cenomanian-Aptian deposits of the Kharasaveyskoye field, Neocomian-Jurassic deposits of the Bovanenkovskoye and Kharasaveyskoye fields, and the Kruzenshternskoye field)
- Bringing online new fields in the Nadym-Pur-Taz region
- Further exploration of deposits in deep-lying Achimov and Jurassic sediments and above the Cenomanian sediments in fields under development in the Yamal-Nenets Autonomous Area
- Bringing into development continental shelf fields in Russian northern seas (fields in the Ob and Taz Bays, primarily the Severo-Kamennomys'skoye and Kamennomys'skoye-Sea fields, and the offshore Shtokman field in the Barents Sea)

2019 and mid-term objectives in exploration and production of gas in the context of strategic priorities:

- Ensuring increased reserve replacement rates
- Further building of new gas production hubs in Russia
- Upgrades and retrofits of existing gas production facilities to maintain target gas production levels

In particular, the start of commercial development of the Chayandinskoye field has been scheduled for 2019, and that of Blocks 4 and 5 of the Achimov deposits at the Urengoyskoye field – for 2020, the completion of well commissioning to provide for the ramp-up to design capacity of the Cenomanian-Aptian deposits at the Bovanenkovskoye field and that of the Kirinskoye field – for 2021, the start of commercial development of the Kovyktinskoye field has been scheduled for 2022, and that of the Cenomanian-Aptian deposits at the Kharasaveyskoye field – for 2023.

Strategic priorities in exploration and production of oil:

- Efficient development of mature assets
- Developing the resource base of the Yamal Peninsula
- Bringing into development and monetising the uniquely vast liquid hydrocarbon reserves in the Nadym-Pur-Taz region
- Building a hydrocarbon production hub in the Sea of Okhotsk
- Developing technology for cost-effective development of the Bazhenov suite, Domanic and Paleozoic deposits
- Bringing into operation the remaining recoverable reserves that are currently economically unrecoverable through development and deployment of new technologies
- Building up the resource base to support production beyond 2025

2019 and mid-term objectives in exploration and production of oil in the context of strategic priorities:

- Driving mature asset performance and implementing the enhanced oil recovery programme
- Further exploration of blocks in the Sea of Okhotsk
- Development of the Novoportovskoye field and the Vostochno-Messoyakhskoye OGCF in the Nadym- Pur-Taz region, including the infrastructure development
- Developing technology for cost-effective development of hard-to-recover hydrocarbon reserves

In particular, the ramp-up to design capacity of the Novoportovskoye field has been scheduled for 2020, and that of the Vostochno-Messoyakhskoye field and the Eastern block of the Orenburgskoye field – for 2021.

Transportation

The table below shows information on the assets and capital expenditures in the Transportation segment:

	As at 31 December	
	2018	2017
Assets, RUB million	7,023,399	6,721,549
Share in the Group's total assets, %	36.6	38.1

	For the year ended 31 December	
	2018	2017
Capital expenditures, RUB million	640,063	498,550
Share in the Group's total capital expenditures, %	35.6	33.1

Gas transportation system

The Unified Gas Supply System (UGSS) of Russia is a centrally operated system of natural gas treatment, transportation and storage. The UGSS incorporates the world's longest network of high-pressure trunk pipelines covering European Russia and Western Siberia. In addition, the Group owns trunk pipelines in the Russian Far East: Sakhalin–Khabarovsk–Vladivostok, and Sobolevo–Petrovsk-Kamchatsky pipelines.

As at the end of 2018, the combined length of trunk pipelines and connections operated by the Group's gas transportation subsidiaries in Russia totalled 172.6 thousand km (taking into account technological jumpers). The gas transportation system (GTS) comprises 254 compressor stations, equipped with a total 3,812 gas pumping units with a combined capacity of 47,1 MW.

The table below shows age breakdown of Gazprom Group's gas transport subsidiaries' trunk gas pipelines in Russia:

Age of trunk gas pipelines	As at 31 December 2018	
	Length, thousand km	Share, %
10 years or less	16.7	9.7
11 to 20 years	15.7	9.1
21 to 30 years	34.8	20.2
31 to 40 years	59.1	34.2
41 to 50 years	26.3	15.2
Over 50 years	20.0	11.6
Total	172.6	100.0

During 2018, a total 693.1 bcm of gas were supplied into Gazprom's GTS in Russia, up 3.1% year-on-year. The growth was driven by higher demand and subsequent increase in gas supplies by Gazprom and non-Group companies. In 2018, the amount of natural gas consumed for the GTS' own operational needs was 40.1 bcm.

As the owner of the Russian section of the GTS, PJSC Gazprom leases out free pipeline capacity (subject to its availability) to independent companies outside Gazprom Group provided they have a gas production licence and a supply contract with the buyer of the supplied gas. Such third-party gas also needs to meet relevant technical standards.

In 2018, the volume of gas transported via Gazprom Group's GTS in Russia by companies outside Gazprom Group was 136.4 bcm (137.9 bcm in 2017).

Gazprom Group subsidiaries own the gas transportation systems in Belarus, Armenia, and Kyrgyzstan. The gas transportation system in Belarus, which is owned by PJSC Gazprom's subsidiary OJSC Gazprom transgaz Belarus, supplies natural gas to consumers in Belarus, and carries transit supplies of gas to Europe and Russia's Kaliningrad Region.

The table below shows the volumes of gas injected into the gas transportation systems in Belarus:
(bcm)

	For the year ended 31 December	
	2018	2017
Belarus (OJSC Gazprom transgaz Belarus and the Yamal – Europe trunk gas pipeline)	62.6	61.2
including gas in transit	42.3	42.2

Nord Stream (operated by joint venture Nord Stream AG) and Blue Stream (operated by Blue Stream Pipeline Company B.V., which is included in the list of entities in which Gazprom has investments classified as joint operations), offshore cross-border pipeline systems constructed with Gazprom's involvement, secure gas supplies to consumers in Northwest and Central Europe, as well as in Turkey. The key drivers of gas pipeline capacity utilisation include demand from European consumers and regulatory restrictions by supervisory authorities on access to pipeline capacity for transit supplies. In the reporting year gas supplies to consumers in Northwest and Central Europe (Nord Stream, 58.7 bcm of gas in 2018) and Turkey (Blue Stream, 13.3 bcm of gas in 2018) were provided.

Major capex projects

Most gas transportation capex was spent to finance the construction of the Power of Siberia and the Ukhta–Torzhok 2 trunk gas pipelines, the UGSS expansion project for the Gryazovets–Slavyanskaya CS section in the North-West region, and the construction of the TurkStream and Nord Stream 2 trunk gas pipelines.

Within its gas transportation capex projects, in 2018 Gazprom commissioned the following facilities:

- Four compressor shops with a combined capacity of 371 MW at the compressor station of Bovanenkovo–Ukhta trunk gas pipeline
- 890.8 km of trunk gas pipelines and connections in Russia, including 361.7 km following upgrades
- Eleven gas pumping units with a combined capacity of 79.5 MW and two upgraded gas distribution stations in Russia.

Events in the reporting year

In September 2018, work started to install the Nord Stream 2 deep water gas pipeline, a new export route to Europe. Just like Nord Stream, the new pipeline will provide Russian gas fields with a direct connection to European gas consumers, ensuring the high reliability of Russian gas supplies.

In November 2018, Gazprom completed the offshore installation of two strings of the TurkStream gas pipeline. The pipeline is scheduled for commissioning in late 2019. The project will significantly increase reliability of gas supplies to Turkey, and to Southern and South-Eastern Europe. Construction of a receiving terminal near Kiyikoy in Turkey is in progress.

Construction of the linear section of the Power of Siberia gas pipeline, from the Chayandinskoye field to the Chinese border in the Amur Region, was mostly completed. The project is part of Gazprom's efforts to ensure Russian gas supplies to China via the eastern route.

In December 2018, Gazprom commissioned the linear part of the new high-tech 970 km Ukhta–Torzhok 2 trunk gas pipeline with an annual capacity of 45 bcm. The new Northern Gas Transmission Corridor pipeline will be the key route of the Unified Gas Supply System (UGSS) of Russia.

Outlook for the Transportation segment

Strategic priorities in gas transportation:

- Comprehensive expansion in tandem with the expansion of gas production and storage, taking into account the degree of readiness to receive gas shown by new consumers, as well as export projects
- Diversification of gas export routes

- Construction of new gas transportation capacity
- Upgrades and retrofits of existing gas transportation facilities.

2019 and mid-term objectives in gas transportation in the context of strategic priorities:

- Construction of gas transportation facilities ensuring diversification of gas export routes
- Construction of new gas transportation capacity in Russia to ensure gas supplies to the domestic market and meet obligations under export contracts, including gas transportation capacity intended to carry gas from the Yamal fields to the Nord Stream 2 gas pipeline
- Implementation of comprehensive reconstruction programmes and upgrades and retrofits of existing gas transportation facilities
- Decommissioning of excess capacity of the Central Gas Transmission Corridor.

In particular, the commissioning of the Power of Siberia gas pipeline, the Nord Stream 2 gas pipeline, and the TurkStream gas pipeline as well as the development of gas transportation facilities envisaged by GTS development project at the Gryazovets–Slavyanskaya CS section have been scheduled for 2019. Besides, the ramp-up to full capacity of the Ukhta–Torzhok 2 gas pipeline have been scheduled for 2020, that of the Bovanenkovo–Ukhta 2 gas pipeline – for 2021, the start of the phased commissioning of the Bovanenkovo–Ukhta 3 gas pipeline and the Ukhta–Torzhok 3 gas pipeline – for 2023.

Underground Gas Storage

The table below shows information on the assets and capital expenditures in the Gas storage segment:

	As at 31 December	
	2018	2017
Assets, RUB million	393,700	347,929
Share in the Group's total assets, %	2.1	2.0
	For the year ended 31 December	
	2018	2017
Capital expenditures, RUB million	19,391	37,694
Share in the Group's total capital expenditures, %	1.1	2.5

Underground gas storage facilities (UGSFs) are located in key gas consumption areas. Peak and base load gas storage facilities improve reliability of the UGSS infrastructure, and optimise technical parameters and capital intensity of gas transportation systems. UGSFs have been constructed and are used by Gazprom Group for process purposes, as well as to ensure reliability of gas supplies during seasonal consumption peaks and level off seasonal and daily fluctuations in demand.

In Russia, Gazprom operates 23 UGSFs. Their operation is supported by 20 compressor stations with an aggregate capacity of 942.3 MW, and the operating well stock of 2,705 units. As at 31 December 2018, Gazprom Group's UGSFs in Russia had an aggregate total gas storage capacity of 75.0 bcm.

During 2018, withdrawal and injection amounts for Russian UGSFs totalled 52.0 bcm and 49.5 bcm of gas, respectively.

The maximum aggregate daily deliverability was registered on 1 March 2018 at 555 mmcm. By the start of the 2018/2019 withdrawal season, the potential maximum daily deliverability was increased to 812.5 mmcm of gas, an increase of 7.2 mmcm from the previous year. By the 2018/2019 withdrawal season, operating gas reserves in Russian UGSFs increased by 0.088 bcm from the previous season to 72.2 bcm.

The improved performance was driven by a recovery in target well productivity and revamps of the existing Kasimovskoye, Sovkhoznoye, Kaliningradskoye, Elshano-Kurdyumskoye, and Peschano-Umetzkoye UGSFs, as well as the construction of the new Volgogradskoye UGSF.

The UGSFs outside Russia enable Gazprom Group to build strategic natural gas reserves mitigating transit risks.

In the FSU countries, Gazprom operates UGSFs in Belarus (Pribugskoye, Osipovichskoye, and Mozyrskoye), and Armenia (Abovyanskaya underground gas storage station), and also has access to Inčukalns UGSF's capacity in Latvia.

As at 31 December 2018, the operating gas reserves in FSU-based UGSFs totalled 1.6 bcm. During 2018, withdrawal and injection amounts for FSU-based UGSFs totalled 1.2 bcm and 1.2 bcm of gas, respectively.

To secure reliable and flexible gas supplies, PJSC Gazprom makes extensive use of gas storage facilities located abroad: in Austria (Haidach), Germany (Jemgum, Rehden, Katarina, and Etzel), Serbia (Banatski Dvor), the Netherlands (Bergermeer), and the Czech Republic (Dambořice).

By the start of the 2017/2018 withdrawal season, PJSC Gazprom owned gas storage capacity in far abroad European countries totalled approximately 5 bcm of working gas while the additional gas storage contracts signed in autumn and winter of 2018/2019 added 5.8 bcm in gas inventories by 1 December 2018. In 2018, a total of 6.6 bcm of PJSC Gazprom's gas were pumped into UGSFs in far abroad European countries under LLC Gazprom export contracts, with a total gas withdrawal of 7.2 bcm.

Major capex projects

The bulk of capital expenditures on underground gas storage in Russia was spent on the construction of the new Volgogradskoye UGSF, revamp of the Sovkhoznoye UGSF, revamps of existing and construction of new facilities at the Kaliningradskoye UGSF in Russia, as well as on capacity expansions at the Katharina and Jemgum UGSFs in Germany, and the Dambořice UGSF in the Czech Republic.

Within its gas storage capex projects, in 2018 Gazprom commissioned the following facilities in Russia:

- Working gas capacity of 0.08 bcm at the Volgogradskoye UGSF
- Ten wells at the Sovkhoznoye, Volgogradskoye, and Peschano-Umetskoye UGSFs
- A 12 MW compressor plant at the Volgogradskoye UGSF

Within its gas storage capex projects abroad, in 2018 LLC Gazprom export commissioned working gas capacity of 0.08 bcm at the Dambořice UGSF in the Czech Republic

Outlook for the Gas storage segment

Strategic priorities in gas storage:

- Sustaining the capacity levels achieved for the UGSF network, improve the flexibility of the UGSF system, and provide UGSF capacity to Russian regions where such capacity is in short supply
- Expanding Gazprom Group's UGSF capacity outside Russia.

2019 and mid-term objectives in gas storage in the context of strategic priorities:

- Revamps and replacement of worn-out and obsolete fixed assets at existing UGSFs
- Construction and expansion of the peak-shaving Kaliningradskoye, Volgogradskoye, and Novomoskovskoye UGSFs, as well as the Udmurtskoye reserve complex
- Providing UGSF capacity to regions where such capacity is in short supply (the prospective areas for the construction of new UGSFs are Russia's Northwestern, Siberian, and Far Eastern Federal Districts)

Distribution of Gas

The table below shows information on the assets and capital expenditures in the Distribution of gas segment:

	As at 31 December	
	2018	2017
Assets, RUB million	1,719,640	1,669,202
Share in the Group's total assets, %	9.0	9.5

	For the year ended 31 December	
	2018	2017
Capital expenditures, RUB million	39,078	51,675
Share in the Group's total capital expenditures, %	2.2	3.4

The table below shows Gazprom Group's natural gas sales volumes by geographic segment:

(bcm)	For the year ended 31 December		Change, %
	2018	2017	
Russia	239.7	229.9	4.3
FSU countries ⁽¹⁾	38.1	35.0	8.9
Europe and other countries ⁽¹⁾	243.3	242.0	0.5
Total	521.1	506.9	2.8

Note:

- ⁽¹⁾ Sales to FSU countries, and to Europe and other countries include both gas exports from the Russian Federation, and sales of gas purchased by the Group outside Russia.

In 2018, Gazprom Group sold 243.3 bcm of natural gas to Europe and other countries. Gas sales showed significant growth in the UK and the Netherlands. At the same time, sales to Turkey decreased due to the influence of the weather factor, the growth of LNG supplies to this market in Q4 2018 and deterioration of the state of the country's economy.

Net sales (net of excise tax and customs duties) was RUB 2,951.2 bn, up 32.9% year-on-year.

The natural gas sold to Europe and other countries in 2018 accounted for 47% of Gazprom Group's total gas sales (48% in 2017) and 69% of total gas sales (66% in 2017).

PJSC Gazprom is a major supplier of natural gas to the European market.

PJSC Gazprom's gas supplies in 2017 to European far abroad countries under the contracts with LLC Gazprom export and direct contracts with GAZPROM Schweiz AG totalled 201.9 bcm, up by 7.5 bcm, or 3.8%, year-on-year. The share of PJSC Gazprom's gas sales under contracts with LLC Gazprom export and direct contracts with GAZPROM Schweiz AG in the total gas consumption in European far abroad countries was 36.8% for 2018.

The Group's exports are diversified by markets, the largest consumers being Germany, Great Britain and Turkey.

The increase in PJSC Gazprom's gas supplies to European far abroad countries was driven by the following factors:

- A year-on-year increase in demand for natural gas in European countries in February and March 2018 due to cold weather
- Gas injections into UGSFs in European countries exceeding withdrawals
- Declining domestic gas production in far abroad European countries as compared to 2017, and higher net gas imports in Europe
- Limited capabilities of other gas exporters and decrease of net imports of LNG supplies in Q1–Q3 2018

According to management estimates, large-scale LNG sales from Gazprom Group's trading portfolio totalled 3.88 mm tonnes, or 5.18 bcm, in 2018, an increase of 16% as compared to 2017.

Corporates in India (20%), Japan (16%) and China (16%), were the key buyers of LNG in 2018.

Gazprom is the largest natural gas supplier on the Russian market. In 2018, gas consumption in Russia totalled 493.2 bcm, up by 5.3% year-on-year. The increase in consumption was mostly driven by colder weather in Q1 and Q4 2018 compared with the same periods in 2017.

In 2018, Gazprom Group sold 239.7 bcm of gas to consumers in the Russian Federation, with net sales (excluding VAT) at RUB 954.5 bn, up by 9.0% year-on-year.

Natural gas sold to Russian consumers in 2018 accounted for 46% (45% in 2017) of Gazprom Group's total gas sales and 22% of total gas sales (26% in 2017).

Major consumers of natural gas in Russia include electricity and heat generating companies, households, oil industry, utilities, and steel-makers.

Gazprom Group covers a significant portion of natural gas demand in FSU countries.

In 2018, Gazprom Group sold 38.1 bcm of gas to the FSU countries, with net sales (net of customs duties) at RUB 348.6 bn, up by 19.1% year-on-year.

Natural gas sold to the FSU countries in 2018 accounted for 7% (7% in 2017) of Gazprom Group's total gas sales and 8% of total gas sales (9% in 2017).

The increase in gas supplies to FSU countries in 2018 resulted from higher demand and gas withdrawals in Belarus, gas sales to Azerbaijan within the framework of a contract signed in November 2017 with SOCAR (Azerbaijan) and an increase in the supply of Uzbek gas to Kazakhstan.

Domestic natural gas prices

The table below shows the average prices of natural gas sold by Gazprom Group in the domestic market:

	For the year ended 31 December	
	2018	2017
	(net of VAT)	
RUB per mcm	3,981.3	3,808.3

In accordance with applicable Russian laws, end consumers buy gas at regulated prices which are differentiated between consumer groups (households vs industrial consumers), as well as by price zone, based on the relative distance from the gas production region to the consumer. In 2018, wholesale gas prices for subsequent resale to household consumers were 16% lower than wholesale gas prices for industrial consumers.

In Russia, gas is sold and purchased using two different pricing approaches, which results in the existence of two gas sales sectors – with prices fixed by the Government or unregulated prices.

Gas produced by PJSC Gazprom subsidiaries is sold mostly at prices fixed by the Government. In accordance with applicable Russian laws, wholesale prices of gas produced by PJSC Gazprom and its associates are subject to regulation.

The Forecast of Russia's Socio-economic Development drafted by the Russian Ministry of Economic Development and approved by the Government in September 2018 assumes increases in domestic regulated wholesale gas prices.

The table below shows changes in the average regulated wholesale gas prices for industrial and household consumers as per the Forecast of the Ministry of Economic Development of the Russian Federation between 2019 and 2021, annual average increase vs the previous year:

(%)	2019	2020	2021
Change in the average regulated wholesale prices for all Russian consumer groups	1.4	3.0	3.0
Change in the average regulated wholesale prices for all consumers excluding households	1.4	3.0	3.0
Change in the average regulated wholesale prices for households	1.4	3.0	3.0

Note.

Indexation has been scheduled as of 1 July in accordance with the Forecast of Russia's Socio-economic Development drafted by the Russian Ministry of Economic Development and approved by the Government in September 2018.

As part of the efforts to create a level playing field in the domestic market, PJSC Gazprom works toward partial deregulation of wholesale gas prices.

PJSC Gazprom and its affiliates are allowed to use unregulated wholesale prices in marketing produced natural gas to industrial consumers in Russia if the gas is supplied (1) for producing liquefied natural gas from natural gas in a gaseous state for exports (Resolution of the Russian Government No. 1663 dated 27 December 2017); (2) with the use of liquefaction and (or) regasification technology (Resolution of the Russian Government No. 1442 dated 30 November 2018); (3) for producing methanol from natural gas in a gaseous state for exports under contracts signed after 1 November 2018 and providing for first natural gas supplies after 1 January 2020 (Resolution of the Russian Government No. 1282 dated 29 October 2018).

To promote market-driven pricing principles, PJSC Gazprom is actively in exchange-based gas trade at the Saint Petersburg International Mercantile Exchange (SPIMEX). For instance, PJSC Gazprom's gas volumes sold through the exchange totalled 13.6 bcm, which is within the allowable limits placed on PJSC Gazprom's gas sales through the exchange-based trading channel.

Natural gas prices in FSU, Europe and other countries

The table below shows the average prices of natural gas sold by Gazprom Group to FSU, Europe and other countries:

	For the year ended 31 December	
	2018	2017
	(including excise tax and customs duties)	
Natural gas sales to Europe and other countries ⁽¹⁾		
USD per mcm ⁽²⁾	246.4	200.2
RUB per mcm	15,499.5	11,670.5
Natural gas sales to FSU countries ⁽¹⁾		
USD per mcm ⁽²⁾	162.6	158.4
RUB per mcm	10,225.9	9,237.0

Notes:

⁽¹⁾ VAT is not charged on sales to Europe and other countries, as well as to FSU countries.

⁽²⁾ Calculated based on the year-average RUB/USD exchange rate.

Major capex projects

The bulk of capital expenditures for the Distribution of Gas segment was spent on the construction of an LNG production, storage, and shipping complex with an annual production capacity of 1.5 mm tonnes near the Portovaya compressor station in the Leningrad Region, gas infrastructure expansion in Russia, and the implementation of a series of projects to ensure gas supplies in the Kaliningrad Region (an LNG receiving terminal and a floating storage and regasification unit).

In 2018 an LNG receiving terminal and a floating storage and regasification unit in the Kaliningrad Region was commissioned.

Events in the reporting year

In 2018, gas exports to Europe set an all-time high of 201.9 bcm, with PJSC Gazprom's share amounting to 36.8%.

In August 2018, LLC Gazprom export launched its Electronic Sales Platform (ESP) to sell natural gas both on standard market terms and on its own terms. Contracts for gas supply at any delivery point (both at trading platforms or facilities with slow-moving inventories located close to the borders) with delivery periods starting from one day can be offered via the ESP. LLC Gazprom export holds daily trading sessions and offers contracts for the supply of natural gas to various delivery points to pre-qualified companies registered on the ESP. As a result of trading sessions held in 2018, LLC Gazprom export sold about 1.1 bcm of gas with delivery in the reporting year.

Refining

The table below shows information on the assets and capital expenditures in the Refining segment:

	As at 31 December	
	2018	2017
Assets, RUB million	2,059,715	1,715,485
Share in the Group's total assets, %	10.7	9.7

	For the year ended 31 December	
	2018	2017
Capital expenditures, RUB million	309,417	225,240
Share in the Group's total capital expenditures, %	17.2	15.0

Processing of hydrocarbons and production of refined products

The table below shows the volumes of Gazprom Group's hydrocarbon processing:

	For the year ended 31 December	
	2018⁽¹⁾	2017⁽¹⁾
Natural and associated gas, bcm	31.1	30.8
Liquid hydrocarbon feedstocks, mm tonnes	67.4	64.1

Note:

⁽¹⁾ Excluding tolling arrangements.

In 2018, Gazprom Group processed 31.1 bcm of natural and associated gas (almost flat year-on-year), excluding tolling arrangements. Processing of liquid hydrocarbon feedstocks (crude oil, gas condensate, and fuel oil) was up by 5.1% to 67.4 mm tonnes mainly due to higher processing volumes across Gazprom Neft Group and due to the completion in 2017 of the program of planned overhauls at Russian refineries, as well as at the facilities and on the facilities of Gazprom neftekhim Salavat Group.

The table below shows production volumes of major refined products of Gazprom Group:

	For the year ended 31 December			
	2018 ⁽¹⁾		2017 ⁽¹⁾	
	Total	including abroad	Total	including abroad
Dry gas, bcm	23.6	–	23.6	–
Liquefied petroleum gases, mm tonnes	3.6	0.1	3.5	0.1
including Gazprom Neft Group	0.8	0.1	0.7	0.1
Natural gas liquids, mm tonnes	1.4	–	1.3	–
Stable gas condensate and crude oil, mm tonnes	8.2	–	8.7	–
Oil products, mm tonnes	51.4	3.7	48.9	3.5
including Gazprom Neft Group	40.4	3.7	37.8	3.5
including Gazprom neftekhim Salavat Group	5.3	–	5.2	–
Helium, mmcm	5.1	–	5.1	–
Sulphur, mm tonnes	5.2	0.0 ⁽²⁾	5.0	0.0 ⁽²⁾
including Gazprom Neft Group	0.2	0.0 ⁽²⁾	0.1	0.0 ⁽²⁾

Notes:

(1) Excluding tolling arrangements.

(2) Less than 0.05.

The table below shows Gazprom Group's output of oil products:

(mm tonnes)

	For the year ended 31 December	
	2018 ⁽¹⁾	2017 ⁽¹⁾
Diesel fuel	15.7	14.3
Motor gasolines	12.0	11.7
Fuel oil	6.9	6.6
Aviation fuel	3.6	3.1
Marine fuel	2.9	3.4
Bitumens	3.1	2.7
Lubricants	0.5	0.5
Other oil products	6.7	6.6
Total	51.4	48.9

Notes:

(1) Excluding tolling arrangements.

Sales of refined products

In 2018, Gazprom Group's sales of oil and gas refined products were 68.9 mm tonnes. Net sales amounted to RUB 2,179.8 bn (net of excise tax, VAT, and customs duties). The increase in net sales of refined products was due to an increase in average prices in all geographic segments and an increase in Gazprom Neft Group sales volumes to customers in the Russian Federation, Europe and other countries.

The table below shows sales of refined and petrochemical products by Gazprom Group:

(mm tonnes)	For the year ended		Change, %
	31 December		
	2018	2017	
Russia	43.2	40.8	5.9
including Gazprom Neft Group	29.6	27.8	6.5
FSU countries	4.4	4.3	2.3
including Gazprom Neft Group	3.0	3.1	-3.2
Europe and other countries	21.3	20.9	1.9
including Gazprom Neft Group	13.2	12.4	6.5
Total	68.9	66.0	4.4

Notes:

Excluding helium sales and intra-group sales.

The table below shows Gazprom Group's sales of helium:

	For the year ended		Change, %
	31 December		
	2018	2017	
Gaseous helium, mmcm	3.4	3.3	3.0
Liquid helium, tonnes	260.1	289.6	-10.2

Notes:

Excluding intra-group sales.

In 2018, total sales of refined oil and gas products by Gazprom Group increased due to a higher output of refined products at Gazprom Neft Group's refineries and a respective increase in sales volumes.

Sales of liquid helium declined due to lower exports associated with the growing demand in the domestic market and volume redistribution in favour of gaseous helium.

Major capex projects

The bulk of capital expenditures for processing was used towards the construction of the Amur GPP, implementation of projects to enable liquid hydrocarbon transportation from the Nadym-Pur-Taz region, construction and upgrade of oil refining and petrochemical facilities at Gazprom neftekhim Salavat Group (construction of a catalytic cracking complex and a hydrogen production unit), construction and upgrade of production facilities at Moscow Refinery (construction of Euro+ combined refining unit), and at Omsk Refinery (construction of a primary refining unit, an advanced oil refining facility, and a delayed coking unit), and the construction of a delayed coking unit at Pančevo Refinery in Serbia.

Within its processing capex projects, in 2018 Gazprom commissioned:

- 187.1 km of the Urengoy–Surgut gas condensate pipeline (Line 2). 107 km–288 km section
- a hydrogen production unit (intended to increase the output of premium Euro-5 fuels) and a diesel fuel hydrotreating unit (upgraded) at the Astrakhan GPP
- a hydrogen pressure swing adsorption facility at the refinery (allowing to increase hydrogen concentration in the plant's network and the hydrotreating severity of motor fuels across units, as well as reduce the amount of gases discharged to flare) and a sulfur-alkaline wastewater neutralisation units at Gazprom neftekhim Salavat Group's refinery and Monomer plant.

Events of the reporting year

In May 2018, PJSC Gazprom and JSC RusGazDobycha signed the Heads of Agreement on cooperation in implementing a joint project to construct new gas processing facilities relying on PJSC Gazprom's current hydrocarbon resource base in the Nadym-Pur-Taz region. The Agreement specifies the key terms of a GPP construction near the seaport of Ust-Luga intended to process ethane-containing natural gas produced from the Achimov and Valanginian deposits. In 2018, a joint venture,

LLC RusKhimAlyans, was established to implement this project, and a pre-investment study was carried out to support the main investment decision making.

Outlook for the Refining segment

Strategic priorities in processing of gas and gas condensate:

- Constructing new gas processing facilities to support hydrocarbon developments in Eastern Siberia and the Far East
- Processing the projected volumes of liquid hydrocarbons produced at fields in Western Siberia

2019 and mid-term objectives in processing of gas and gas condensate in the context of strategic priorities:

- Construction of new gas processing facilities to support hydrocarbon developments in Eastern Siberia and the Far East as well as processing of the projected volumes of liquid hydrocarbons produced at fields in Western Siberia
- Revamps of existing facilities

In particular, the commissioning of projects to enable liquid hydrocarbon transportation from the Nadym-Pur-Taz region has been scheduled for 2019, and the commissioning of the Amur GPP has been scheduled for 2021.

Strategic priorities of oil refining:

- Increasing the refining depth and yields for light products
- Enhancing the efficiency of processing and marketing
- Improving conventional business sustainability through developing petrochemical businesses

Upgrades and capacity expansions across refineries are the 2019 and mid-term objectives of oil refining in the context of strategic priorities.

In particular, the commissioning of Euro+ combined refining unit at Moscow Refinery and the commissioning of a delayed coking unit at Pančevo Refinery have been scheduled for 2019, the commissioning of a primary refining unit, an advanced oil refining facility, and a new delayed coking unit at Omsk Refinery – for 2020, the commissioning of the catalyst production business in Omsk – for 2021, and that of the advanced oil refining facility at Moscow Refinery – for 2023.

Power Generation

The table below shows information on the assets and capital expenditures in the Electric and heat energy generation and sales segment:

	As at 31 December	
	2018	2017
Assets, RUB million	911,036	868,933
Share in the Group's total assets, %	4.8	4.9
	For the year ended 31 December	
	2018	2017
Capital expenditures, RUB million	72,907	58,110
Share in the Group's total capital expenditures, %	4.1	3.9

Russia's largest vertically integrated power generation holding company has been established within PJSC Gazprom and has consolidated electricity and heat generating assets, heat transmission and distribution assets, as well as assets in related segments.

Gazprom Group's generating assets are consolidated within its 100% subsidiary, LLC Gazprom energoholding. Gazprom energoholding manages the following companies: PJSC TGC-1, PJSC Mosenergo, PJSC WGC-2, and PJSC MIPC.

Outside Russia, the Group owns Unit 5 at the Hrazdan TPP through its subsidiary CJSC Gazprom Armenia.

The table below shows information on Gazprom Group's key generating assets:

	As at 31 December 2018	
	Installed electrical capacity, GW	Installed heat capacity, thousand Gcal/h
Gazprom energoholding Group including	38.58	67.91
PJSC Mosenergo	12.80	43.14
PJSC MIPC and subsidiaries	–	7.09
PJSC WGC-2	18.83	3.93
PJSC TGC-1 and subsidiaries	6.95	13.75
Other generating assets in Russia and abroad	1.38	2.88
Total	39.96	70.79

The table below shows the volumes of Gazprom Group's electricity generation:

(billion kWh)	For the year ended 31 December	
	2018	2017
Gazprom energoholding Group including	146.56	150.81
PJSC Mosenergo	58.31	57.87
PJSC MIPC and subsidiaries	–	–
PJSC WGC-2	58.92	63.43
PJSC TGC-1 and subsidiaries	29.33	29.51
Other generating assets in Russia and abroad	6.63	5.74
Total	153.19	156.55

Note. The table shows power generation, i.e. the amount of power generated by power stations.

The table below shows the volumes of Gazprom Group's heat generation:

(million Gcal)	For the year ended 31 December	
	2018	2017
Gazprom energoholding Group ⁽¹⁾ including	124.36	120.77
PJSC Mosenergo	82.29	79.45
PJSC MIPC and subsidiaries*	10.17	9.85
PJSC WGC-2	7.01	6.76
PJSC TGC-1 and subsidiaries	24.89	24.71
Other generating assets in Russia and abroad	6.89	6.57
Total	131.25	127.34

Note.

The table shows heat supply from TPPs, i.e. the amount of heat supplied by a power station to consumers at the asset ownership / interface boundary points.

⁽¹⁾ Heat generation figures include PJSC MIPC's subsidiaries LLC TSK Novaya Moskva and LLC TSK Mosenergo. For data comparability, the figures for 2016 take into account the volumes of these entities.

The table below shows the volumes of Gazprom Group's electricity and heat generation in Russia and abroad:

	For the year ended 31 December	
	2018	2017
Power generation, billion kWh		
including	153.19	156.55
in Russia	151.50	155.46
abroad	1.69	1.09
Heat generation, mm Gcal		
including	131.25	127.34
in Russia	131.25	127.34
abroad	–	–

During 2018, the Group generated 151.50 billion kWh of electricity (in 2017 – 155.46 billion kWh of electricity) and 131.25 million Gcal of heat (in 2017 – 127.34 million Gcal of heat) at its generating assets in Russia. The decline in electricity generation by the Group was due to the streamlining of the load factors for Gazprom energoholding's inefficient generating equipment. Heat generation increased due to cooler average temperatures during the heating season.

Electricity produced by the Group's Russian generating companies is sold mainly in Russia, with a small portion exported to Norway and Finland.

Outside Russia, Gazprom Group generated 1.69 billion kWh of electricity. The year-on-year increase was due to increased power output from Unit 5 at Hrazdan TPP, reflecting the actual operation modes of Armenia's national grid in the context of extended repair operations at the Armenian NPP and Yerevan CHPP, as well as the need to meet both domestic and export demand.

In 2018, Gazprom Group's net electricity and heat sales (net of VAT) was RUB 522.1 bn, with the increase mostly due to higher competitive (unregulated) electricity prices and tariffs for capacity under capacity supply agreements (CSAs) in the Russian market.

Major capex projects

The bulk of capital expenditures was spent on the construction of two new GTU-180 power unit projects at the Grozny TTP, Svobodnenskaya TPP, Pančevo CHPP in Serbia, as well as on the upgrade of the existing generating equipment (particularly, the upgrade of the Verkhne-Tulomskaya HPP of PJSC TGC-1, and the equipment upgrade of Power Unit 9 at CHPP-22 operated by PJSC Mosenergo) and implementation of a series of projects to ensure the reliability and safety of generating facilities and maintain the heat network infrastructure.

Within its power generation capex projects, in 2018 Gazprom commissioned:

- Unit 1 at the Grozny TTP with an installed capacity of 176 MW.

Events in the reporting year

In June 2018, PJSC Gazprom's Board of Directors approved PJSC Gazprom's Power Generation Strategy for 2018–2027.

In December 2018, Gazprom energoholding commissioned the first (with a capacity of 176 MW) of the two power units at the Grozny TPP which is crucial for power supply to Russian southern regions.

Outlook for the Electric and heat energy generation and sales segment

Power generation sector is a strategic line of business for Gazprom Group. Enhanced presence in the power generation sector facilitates the entire Group's business sustainability over the longer term and provides additional revenue streams.

Strategic priorities in production and sales of electric and heat energy:

- Optimising the generation capacity mix
- Improving operational efficiency and optimising costs

- Constructing new and upgrading existing generating capacity, and decommissioning low-performing facilities
- Improving technology
- Diversifying the power market by entering promising markets in Russia and abroad

2019 and mid-term objectives in production and sales of electric and heat energy in the context of strategic priorities:

- Completion of an ambitious programme to build new generating capacity under CSAs
- Upgrade of generating capacity
- Decommissioning of over 2 GW of low-performing capacity by 2022
- Implementation of measures to improve operational efficiency and optimise costs

The commissioning of Unit 2 at the Grozny TTP has been scheduled for 2019, commissioning of the Svobodnenskaya TPP for power supply of the Amur GPP – for 2020, and the commissioning of Pančevo CHPP in Serbia for power supply of Gazprom Neft Group subsidiary NIS – for 2020.

INNOVATION-DRIVEN DEVELOPMENT

In its evolution as a global energy company and a reliable energy supplier, Gazprom focuses on research and application of new knowledge and technology, as well as on continuous improvement of its innovation capabilities and acceleration of innovation to address a number of strategic, technological, and economic challenges that such leadership involves.

PJSC Gazprom’s Innovative Development Programme until 2025 is a fundamental instrument for long-term planning and management of innovations embedded into Gazprom’s strategic development planning and covering the gas, oil, and power generation business of PJSC Gazprom. PJSC Gazprom, PJSC Gazprom Neft, LLC Gazprom energoholding, and other subsidiaries and associates implement R&D programmes (plans) to achieve the priority technology and organisational priorities set out in the Programme.

Technological priorities (key areas of technological development) set by PJSC Gazprom’s Innovative Development Programme:

Gas business:

- Hydrocarbon field exploration and appraisal, including development of unconventional resources
- Brownfield enhancement technologies
- Offshore hydrocarbon development technologies
- Greenfield development technologies
- Efficiency enhancement of trunk gas pipelines, and diversification of gas distribution methods
- Enhancement of gas storage
- Enhancement of gas and gas condensate processing
- LNG production technologies
- Gas marketing and utilisation technologies

Oil business:

- Development of multiphase fields
- Production from low-permeability reservoirs
- Effective and safe work on the shelf in ice conditions;
- Development and production of catalysts for refining processes

Power generation business:

- Increasing energy efficiency in power generation

- Reducing the environmental footprint of operations
- Implementing advanced engineering solutions

Gazprom has in place an extensive innovation management framework. The R&D Committee of PJSC Gazprom serves as a platform to discuss all matters related to R&D performance through comprehensive review and collective decision-making driven by the principles of openness, fairness, and independence while balancing the interests of Operations, Economics, and Prospective Development.

As part of its Corporate Framework for Management of Innovations at Subsidiaries of PJSC Gazprom, PJSC Gazprom focuses on further use (roll-out) and commercialisation of R&D results and protected intellectual property that deliver a positive and meaningful impact for PJSC Gazprom as well as on reviewing and following up compliance of its subsidiaries' innovation efforts with Russian laws and internal documents of PJSC Gazprom. The total number of patents for patent objects owned by PJSC Gazprom and its subsidiaries as of 31 December 2018 was 2,555.

PJSC Gazprom has designed and successfully maintains an intellectual property management framework, which is essentially intended to determine company-wide principles governing the creation, legal protection, registration, commercialisation, and monitoring of the use of intellectual property across Gazprom Group, as well as to provide incentive schemes encouraging employees of Gazprom Group companies to create intellectual property.

The Group allocates significant amounts for its annual R&D budgets, and R&D results are applied in its priority projects across different lines of business. The Group's R&D efforts aim to develop and implement high-tech equipment and sophisticated engineering complexes unrivalled in the world, as well as to create advanced R&D solutions.

In 2018, RUB 9.0 bn worth of R&D was carried under R&D projects commissioned by Gazprom Group entities (RUB 8.2 bn in 2017).

PERSONNEL

Governed by the standards of the International Labour Organisation, Gazprom respects the fundamental rights and principles set forth in ILO conventions and recommendations, covering in particular:

- freedom of association and the effective recognition of the right to collective bargaining
- elimination of all forms of forced or compulsory labour
- effective abolition of child labour
- elimination of discrimination in respect of employment and occupation.

Gazprom also adheres to international standards on hours and conditions of work, occupational safety, remuneration for work, social security, and holidays with pay.

Personnel structure

As at 31 December 2018, the total headcount of the Group was 466.1 thousand employees (469.6 thousand in 2017) (excluding entities in which Gazprom has investments classified as joint operations)

The table below shows the gender balance of Gazprom Group's workforce:

	As at 31 December 2018
Women	29.2
Men	70.8

Note.

Excluding entities in which Gazprom has investments classified as joint operations.

The table below shows the age balance of Gazprom Group's workforce:

	As at 31 December 2018
Under 30 years	14.4
30 to 40 years	32.0
40 to 50 years	29.4
50 years and older	24.2

Note.

Excluding entities in which Gazprom has investments classified as joint operations.

The table below shows the profile of Gazprom Group's workforce (excluding joint operations):

	As at 31 December 2018
Employees with a higher education degree, %	51.1
Candidates of Sciences	2,531
Doctors of Sciences	172
Mean age, years	41.3

Note.

Excluding entities in which Gazprom has investments classified as joint operations.

Employee training and development

Gazprom Group has in place a corporate Continuous Vocational Education and Training System designed to upgrade employee skills to meet the ever growing operational and performance requirements, support deployment of new technologies and professional standards, digital transformation across business operations and expansion of the Group's regional footprint.

In 2018, 381.1 thousand employees of Gazprom Group were trained under career enhancement and retraining programmes.

Gazprom runs targeted employee training programmes tailored for specific activities, such as development of offshore hydrocarbon fields, GTS dispatch control, LNG production, use of NGV fuels, and use of innovative process equipment.

Remuneration and social security

PJSC Gazprom has in place the Remuneration Management Policy for Employees of PJSC Gazprom's Entities, which sets out unified corporate remuneration standards for Gazprom Group's employees. Its purpose is to provide a framework for attracting and retaining people with required skills, and motivate employees to perform as expected.

Current remuneration schemes link fixed salaries and pay rates to qualifications and business skills, and also provide for monthly performance bonuses, premiums and additional allowances for work scope and conditions, as well as ad hoc and annual bonuses.

PJSC Gazprom's social policy provides it with a competitive advantage in the employment market, aims to form stable workforce and seeks to retain and motivate employees for strong and sustainable performance.

The mechanism of social partnership between employees and employers is central to implementing PJSC Gazprom's social policy, with its key aspects set out in the General Collective Bargaining Agreement of PJSC Gazprom and in the collective bargaining agreements of its subsidiaries. These provide for a set of employee social support measures, including social benefits, personal insurance, and healthcare benefits.

To attract and retain key and highly skilled employees PJSC Gazprom runs a number of special corporate programmes, including:

- a corporate housing programme funded by both employees and the employer through bank mortgage lending facilities (using a co-financing approach)
- a private pension arrangement run through Non-State Pension Fund GAZFOND.

OCCUPATIONAL SAFETY

PJSC Gazprom puts the health and safety of its employees at the top of its operational agenda. In its activities, PJSC Gazprom is guided by its Occupational Health, Industrial and Fire Safety Policy.

The key objectives of PJSC Gazprom's Occupational Health, Industrial and Fire Safety Policy are to:

- create safe working conditions and protect the health and safety of employees
- reduce the risks of accidents and incidents at hazardous industrial facilities
- ensure fire safety.

Unified Occupational Health and Safety Management System

PJSC Gazprom has in place a Unified Occupational Health and Safety Management System (UOHSMS), which forms part of PJSC Gazprom's integrated management system developed and adopted to manage occupational health, industrial and fire safety risks and meet the objectives and commitments under its Occupational Health, Industrial and Fire Safety Policy.

The scope of the UOHSMS covers PJSC Gazprom, its major gas exploration, production, processing, transportation, underground storage, and energy subsidiaries, as well as subsidiaries supporting the operation of the Russian UGSS, with a total headcount of around 319 thousand employees.

In 2014, the UOHSMS was certified to OHSAS 18001:2007. PJSC Gazprom annually expands the certification scope by including new subsidiaries and entities. By the end of 2018, the number of subsidiaries certified to OHSAS 18001:2007 reached 56 entities, with their total headcount over 270 thousand people.

Gazprom makes consistent efforts to prevent injuries, occupational diseases, accidents, incidents, and fires.

Based on the identified critical and material risks, PJSC Gazprom develops and approves its occupational health, industrial and fire safety targets for the year, and develops programmes to achieve the annual targets while all its subsidiaries and entities develop programmes to improve labour conditions and action plans to ensure occupational safety at hazardous industrial facilities.

Pre-FEED and design documents are reviewed by internal experts for compliance with PJSC Gazprom's requirements to occupational safety.

Compliance with PJSC Gazprom's OHS standards and regulations by suppliers and contractors operating at the facilities of PJSC Gazprom and its subsidiaries is an essential requirement of occupational safety. In its activities, Gazprom engages suppliers and contractors who share the principles set out in Gazprom's Occupational Health, Industrial and Fire Safety Policy.

The total number of people injured in accidents across entities covered by the UOHSMS in 2018 was 89 (61 in 2017). During 2018, causes for injury mainly included traffic accidents (47% of the total number of injured) and same-level falls (34%).

Three fatalities were reported in 2018 (six in 2017). All of them were due to traffic accidents.

A number of actions were taken as a follow up to injury investigations. Specifically, additional requirements were imposed on passenger and freight transport service providers; and procedures established for controlling the entire process, from trip planning, releasing vehicles, speed monitoring, and driver work and rest hours, to return of the vehicles to the parking area. Also, requirements were set down for the purchased vehicles; specifically, a number of restrictions were introduced on the active and passive vehicle safety systems: a ban on using a vehicle without safety belts and restrictions related to routes, driver qualifications, and replacement of motor vehicles.

A total of 16 industrial safety incidents were reported in 2018 at hazardous industrial facilities of entities covered by the UOHSMS (26 in 2017).

A plan that included organisational and technical measures to ensure fire safety was implemented in the reporting period. The plan consisted of 50 measures and resulted from a root cause analysis of, and contributing factors to, fires that happened in the previous periods. The number of fires that broke out at the entities covered by the UOHSMS decreased from four in 2017 to three in 2018.

Occupational Health and Safety at Gazprom Group entities outside the UOHSMS

Gazprom Group has in place the Occupational Health and Safety Management System across its oil, power generation, and petrochemical businesses.

Gazprom Neft Group benefits from a vertically integrated industrial and environmental safety, occupational health and civil protection management system compliant with ISO 14001, ISO 9001, and OHSAS 18001. PJSC Gazprom Neft's operations are aligned with the in-house policy on industrial, fire and transport safety, environmental protection, health and workplace safety, and civil protection, and are coordinated by the Occupational Safety Department at the Corporate Centre. Gazprom Neft Group has in place a Health, Safety and Environmental Protection Board.

At Gazprom energoholding Group and its subsidiaries, occupational health and safety issues are addressed in line with the requirements of Russian Federation laws and applicable statutory regulations. CEOs are responsible for compliance with these requirements while relevant activities are coordinated by Chief Engineers of subsidiaries and their branches (power stations).

PJSC Gazprom's common goals, operating principles and commitments are also reflected in Gazprom neftekhim Salavat Group's existing OHS Policy. Gazprom neftekhim Salavat Group implements them in line with the requirements of federal, regional, and industry-related laws and international standards. LLC Gazprom neftekhim Salavat has in place an OHS management system certified to OHSAS 18001:2007.

A total of 35 people and 18 people were injured in accidents across entities of Gazprom Neft Group and Gazprom energoholding Group, respectively. Gazprom neftekhim Salavat Group reported no occupational injuries in 2018.

ENVIRONMENTAL PROTECTION

PJSC Gazprom puts sustainable use of natural resources and environmental protection are one of the key principles that underpin PJSC Gazprom's operations as a socially and environmentally responsible energy company when operating in Russia and abroad.

The Environmental Policy is the primary document setting out PJSC Gazprom's corporate policy and environmental commitments across its operating regions. PJSC Gazprom's Environmental Policy was recommended by the Board of Directors for adoption across Gazprom Group companies.

Environmental Management System

The Environmental Management System (EMS) is a key tool to implement PJSC Gazprom's Environmental Policy. EMS covers 34 wholly-owned subsidiaries which are engaged in the core activities of exploration, production, transportation, storage and processing of gas and gas condensate or are managing capital projects.

In 2018, PJSC Gazprom's EMS underwent an independent audit, receiving a certificate of compliance with ISO 14001:2015, valid until December 2020.

Corporate Environmental Targets are set within PJSC Gazprom's EMS based on the annually updated list of significant environmental aspects, and environmental activities are grouped into programmes for focused implementation.

Four out of the six set targets set for 2017–2019 were met in 2018:

No.	Corporate Environmental Target	Entities within the EMS scope	Progress against the target (vs the 2014 baseline)
1.	Reduction of methane emissions	All subsidiaries engaged in natural gas transportation	Down 3.8%
2.	Reduction of specific emissions of nitrogen oxides	All subsidiaries engaged in natural gas transportation	Down 2.2%
3.	Reduction of waste and effluent water discharge into surface water bodies	All subsidiaries	Down 23.5%
4.	Reduction of landfill share	All subsidiaries	Down 5.3%
5.	Reduction of above-limit impact charges	All subsidiaries	Up 2.7%
6.	Reduction of specific fuel & energy consumption for own operational needs	All subsidiaries engaged in natural gas transportation	Up 1.8%

The growth in above-limit impact charges against the 2014 baseline was due to a failure to obtain necessary environmental permits on time, which did not result in higher environmental impact. The rise in specific fuel & energy consumption for own operational needs was driven by a disproportionate increase in fuel & energy consumption along with higher natural gas transportation volumes (up 15.5% in 2018). Analysis of energy consumption by trunk gas pipelines under comparable operating conditions confirmed that specific fuel & energy consumption is going down. Those Gazprom Group companies that are not covered by PJSC Gazprom’s EMS also have in place their own effective, business-specific environmental management systems.

The table below shows key metrics for the environmental impact from Gazprom Group’s operations in the Russian Federation:

Key metrics	For the year ended 31 December	
	2018	2017
Air pollutant emissions, thousand tonnes	2,894.0	2,795.9
GHG emissions, mm tonnes of CO ₂ equivalent	239.9	233.8
Waste water discharge into surface water bodies, mmcm	3,658.4	3,905.3
Waste generation, thousand tonnes	3,555.1	4,130.3
Area of land disturbed during the year, thousand ha	25.8	42.2
Area of land rehabilitated, thousand ha	15.8	19.6

The rise in GHG emissions in Russia is due to increased production across all production operations segments.

The decrease in waste generation was due to lower Class 5 bottom ash waste levels at Gazprom energoholding Group’s facilities (due to substituting coal with natural gas in its fuel mix) and less drilling waste produced by Gazprom Neft Group.

The area of land disturbed was smaller in the reporting year as most of the area affected by the construction of the Power of Siberia trunk gas pipeline was reflected in the figures for the previous period. The decrease in land remediation in 2018 was due to repairs and construction work in progress on the land leased in the previous periods.

Presented below is information on the environmental protection costs related to Gazprom Group's operations in the Russian Federation:

(RUB bn)

	For the year ended	
	31 December	
	2018	2017
Current environmental protection costs	39.15	34.47
Capital expenditures for environmental protection and sustainable use of natural resources	29.19	35.58
Negative environmental impact charges	0.62	0.77
Total	68.96	70.82

Gazprom Group's current environmental protection costs in Russia grew in 2018 as a result of higher operating costs and overhaul costs for fixed capital assets used in environmental protection. The growth is mainly due to the activities of the Gazprom Neftekhim Salavat Group, which carried out the commissioning of the sulphide-alkaline wastewater treatment plant of the oil refinery and the Monomer plant, as well as the technical re-equipment of the elemental sulfur production plant.

The decline in capital investments in environmental protection and sustainable use of natural resources was primarily due to lower investments by Gazprom Neft Group during the year, including due to the completion of the capital-intensive construction of water treatment facilities at refineries in 2017.

The decrease in negative environmental impact charges paid by Gazprom Group in 2018 was largely driven by lower charges for discharge of pollutants into water bodies during APG flaring at Gazprom Neft Group's fields, reduction of landfill, and a decline in the above-limit impact charges for discharge of pollutants into water bodies.

Since the date Gazprom Group gained control of its gas transportation subsidiaries in FSU countries (OJSC Gazprom transgaz Belarus, LLC Gazprom Kyrgyzstan, and CJSC Gazprom Armenia), it has been engaged in major efforts to upgrade production facilities and improve environmental management systems to bring them in line with PJSC Gazprom's corporate standards and ISO 14001. When prospecting, exploring and developing hydrocarbon fields outside Russia, Gazprom Group applies technological and scientific innovations, including innovations aimed at reducing its environmental footprint. In 2018, operations of PJSC Gazprom's subsidiaries outside Russia did not have a significant environmental impact.

MANAGEMENT’S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATION

The official Russian Ruble (“RUB”) to US Dollar foreign exchange rates as determined by the Central Bank of the Russian Federation were as follows:

- as of December 31, 2018 – 69.4706;
- as of December 31, 2017 – 57.6002.

The official RUB to Euro foreign exchange rates as determined by the Central Bank of the Russian Federation were as follows:

- as of December 31, 2018 – 79.4605;
- as of December 31, 2017– 68.8668.

The average exchange rates of RUB for the year ended December 31, 2018 and for the year ended December 31, 2017 were:

- to US Dollar – 62.7078 and 58.3529, respectively;
- to Euro – 73.9546 and 65.9014, respectively.

RESULTS OF OPERATION

(in RUB million)	Year ended December 31,	
	2018	2017
Sales	8,224,177	6,546,143
Net gain (loss) from trading activity	18,015	(16,352)
Operating expenses	(6,181,191)	(5,697,056)
(Impairment loss) reversal of impairment loss on financial assets	<u>(130,971)</u>	<u>38,670</u>
Operating profit	1,930,030	871,405
Finance income	503,091	426,705
Finance expense	(813,042)	(407,044)
Share of profit of associates and joint ventures	<u>232,483</u>	<u>126,940</u>
Profit before profit tax	1,852,562	1,018,006
Current profit tax expense	(278,233)	(241,817)
Deferred profit tax expense	<u>(45,333)</u>	<u>(9,310)</u>
Profit tax	(323,566)	(251,127)
Profit for the year	1,528,996	766,879
Other comprehensive income (loss):		
Items that will not be reclassified to profit or loss:		
Gain (loss) arising from changes in fair value of financial assets measured at fair value through other comprehensive income, net of tax	148,963	(30,404)
Remeasurement of provision for post-employment benefits	<u>19,854</u>	<u>(5,064)</u>
Total other comprehensive income (loss) that will not be reclassified to profit or loss	168,817	(35,468)
Items that may be reclassified subsequently to profit or loss:		
Share of other comprehensive income of associates and joint ventures	13,923	2,967
Translation differences	222,221	23,290
Gain from hedging operations, net of tax	<u>10,082</u>	<u>13,601</u>
Total other comprehensive income that may be reclassified subsequently to profit or loss	246,226	39,858
Total other comprehensive income for the year, net of tax	415,043	4,390
Comprehensive income for the year	1,944,039	771,269
Profit for the year attributable to:		
Owners of PJSC Gazprom	1,456,270	714,302
Non-controlling interest	<u>72,726</u>	<u>52,577</u>
	1,528,996	766,879
Comprehensive income for the year attributable to:		
Owners of PJSC Gazprom	1,858,486	710,840
Non-controlling interest	<u>85,553</u>	<u>60,429</u>
	1,944,039	771,269

Sales

The following table sets out volumes and sales prices:

(in RUB million unless indicated otherwise)	Year ended	
	December 31, 2018	2017
Sales of gas		
<i>Europe and other countries</i>		
Gross sales ⁽¹⁾	3,770,291	2,823,939
Customs duties	(764,395)	(550,849)
Excise tax	(54,681)	(51,873)
Net sales	2,951,215	2,221,217
Volumes in bcm	243.3	242.0
Average price, US Dollar per mcm ⁽²⁾ (including excise tax and customs duties) ⁽³⁾	246.4	200.2
Average price, RUB per mcm ⁽²⁾ (including excise tax and customs duties)	15,499.5	11,670.5
<i>Former Soviet Union countries</i>		
Gross sales ⁽¹⁾	389,217	323,037
Customs duties	(40,592)	(30,260)
Net sales	348,625	292,777
Volumes in bcm	38.1	35.0
Average price, US Dollar per mcm ⁽²⁾ (including customs duties) ⁽³⁾	162.6	158.4
Average price, RUB per mcm ⁽²⁾ (including customs duties)	10,225.9	9,237.0
<i>Russian Federation</i>		
Gross sales (net of VAT)	954,493	875,685
Net sales	954,493	875,685
Volumes in bcm	239.7	229.9
Average price, RUB per mcm ⁽²⁾ (net of VAT)	3,981.3	3,808.3
<i>Total sales of gas</i>		
Gross sales (net of VAT)	5,114,001	4,022,661
Customs duties	(804,987)	(581,109)
Excise tax	(54,681)	(51,873)
Retroactive gas price adjustments	49,338	(49,092)
Net sales	4,303,671	3,340,587
Volumes in bcm	521.1	506.9
Net sales of refined products (net of excise tax, VAT and customs duties)	2,179,772	1,687,090
Net sales of crude oil and gas condensate (net of VAT and customs duties)	734,953	539,958
Electric and heat energy net sales (net of VAT)	522,095	503,819
Gas transportation net sales (net of VAT)	225,673	235,061
Other sales (net of VAT)	<u>258,013</u>	<u>239,628</u>
Total sales (net of excise tax, VAT and customs duties)	8,224,177	6,546,143

Notes:

⁽¹⁾ VAT is not charged on sales to Europe and Other countries as well as Former Soviet Union countries.

⁽²⁾ One mcm is equivalent to 35,316 cubic feet.

⁽³⁾ Calculated on the basis of average exchange rate between the RUB and US Dollar.

Total sales (net of excise tax, VAT and customs duties) increased by RUB 1,678,034 million, or 26 %, to RUB 8,224,177 million for the year ended December 31, 2018 compared to the prior year. The increase in sales was mainly due to an increase in sales of gas, refined products, crude oil and gas condensate.

Net sales of gas accounted for 52 % of total net sales for the year ended December 31, 2018 (51 % for the prior year).

Net sales of gas increased by RUB 963,084 million, or 29 %, from RUB 3,340,587 million for the year ended December 31, 2017 to RUB 4,303,671 million for the year ended December 31, 2018.

Net sales of gas to Europe and other countries increased by RUB 729,998 million, or 33 %, to RUB 2,951,215 million for the year ended December 31, 2018 compared to the prior year. The change was mainly due to the increase in average prices (including excise tax and customs duties) denominated in the Russian Ruble by 33 % for the year ended December 31, 2018 compared to the prior year. At the same time average prices denominated in US Dollar increased by 23 % compared to the prior year.

Net sales of gas to Former Soviet Union countries increased by RUB 55,848 million, or 19 %, to RUB 348,625 million for the year ended December 31, 2018 compared to the prior year. The change was due to the increase in average prices (including customs duties) denominated in the Russian Ruble by 11 % and the increase in volumes of gas sold by 9 % for the year ended December 31, 2018. At the same time average prices denominated in US Dollar increased by 3 % compared to the prior year.

Net sales of gas in the Russian Federation increased by RUB 78,808 million, or 9 %, to RUB 954,493 million for the year ended December 31, 2018 compared to the prior year. This change is mainly explained by the increase in average prices by 5 % and the increase in volumes of gas sold by 4 %.

Net sales of refined products (net of excise tax, VAT and customs duties) increased by RUB 492,682 million, or 29 %, to RUB 2,179,772 million for the year ended December 31, 2018 compared to the prior year. The increase in net sales of refined products was due to an increase in average prices in all geographic segments and an increase in Gazprom нефт Group sales volumes to customers in the Russian Federation, Europe and other countries.

Net sales of crude oil and gas condensate (net of VAT and customs duties) increased by RUB 194,995 million, or 36 %, to RUB 734,953 million for the year ended December 31, 2018 compared to the prior year, that was mainly due to an increase in average prices.

Operating expenses

Operating expenses increased by RUB 484,135 million, or 8 %, to RUB 6,181,191 million for the year ended December 31, 2018 compared to RUB 5,697,056 million for the prior year. Operating expenses as a percentage of sales decreased from 87 % for the year ended December 31, 2017 to 75 % for the year ended December 31, 2018. The table below presents a breakdown of operating expenses in each period:

(in RUB million)	Year ended December 31,	
	2018	2017
Taxes other than on profit	1,498,278	1,246,059
Purchased gas and oil	1,468,885	1,236,201
Transit of gas, oil and refined products	650,829	593,327
Depreciation	647,993	613,160
Staff costs	600,812	682,060
Materials	264,190	261,642
Cost of goods for resale, including refined products	249,911	207,689
Repairs and maintenance	137,821	154,785
Electricity and heating expenses	114,465	109,485
Social expenses	42,789	34,461
Rental expenses	37,177	37,723
Insurance expenses	32,628	30,491
Transportation services	24,544	27,253
Impairment loss (reversal of impairment loss) on non-financial assets	21,743	(16,252)
Processing services	18,961	16,261
Research and development expenses	13,591	16,175
Derivatives loss (gain)	1,849	(18,344)
Foreign exchange rate differences on operating items	(28,029)	(14,487)
Other	427,990	610,005
	6,226,427	5,827,694
Change in balances of finished goods, work in progress and other effects	(45,236)	(130,638)
Total operating expenses	6,181,191	5,697,056

Taxes other than on profit

Taxes other than on profit consist of:

(in RUB million)	Year ended December 31,	
	2018	2017
Mineral extraction tax	1,163,882	915,228
Property tax	162,928	154,639
Excise tax	157,113	162,140
Other taxes	14,355	14,052
Total taxes other than on profit	1,498,278	1,246,059

Mineral extraction tax (MET) increased by RUB 248,654 million or 27 % to RUB 1,163,882 million for the year ended December 31, 2018 compared to RUB 915,228 million for the prior year. MET for the year ended December 31, 2018 increased compared to the prior year mainly as a result of a rise in crude oil prices, an increase in the adjusting coefficient in the MET formula for crude oil and an increase in coefficient values in the MET formula for gas.

Purchased gas and oil

Cost of purchased gas and oil increased by RUB 232,684 million, or 19 %, to RUB 1,468,885 million for the year ended December 31, 2018 compared to RUB 1,236,201 million for the prior year.

Cost of purchased gas included in the purchased gas and oil increased by RUB 102,983 million, or 12 %, to RUB 976,849 million for the year ended December 31, 2018 compared to RUB 873,866 million for the prior year. The change was mainly due to an increase in average prices.

Cost of purchased oil included in the purchased gas and oil increased by RUB 129,701 million, or 36 %, to RUB 492,036 million for the year ended December 31, 2018 compared to RUB 362,335 million for the prior year. This change was mainly due to an increase in prices of oil.

Staff costs

Staff costs decreased by RUB 81,248 million, or 12 %, to RUB 600,812 million for the year ended December 31, 2018 compared to RUB 682,060 million for the prior year. The change was mainly due to the recognition of income from change in provision for post-employment benefits for the year ended December 31, 2018 caused by the increase in a retirement age according to the legislation of the Russian Federation.

Cost of goods for resale, including refined products

Cost of goods for resale, including refined products increased by RUB 42,222 million, or 20 %, to RUB 249,911 million for the year ended December 31, 2018 compared to RUB 207,689 million for the prior year. The increase in cost was mainly due to an increase in prices of petroleum products that was partially compensated by a decrease in refined products purchases by Gazprom Neft Group due to an increase in the refining.

Impairment loss (reversal of impairment loss) on non-financial assets

Impairment loss on non-financial assets amounted to RUB 21,743 million for the year ended December 31, 2018 compared to the reversal of impairment loss in the amount of RUB 16,252 million for the prior year. The change was mainly due to the impairment loss recognition for objects of property, plant and equipment and assets under construction for the year ended December 31, 2018 compared to the reversal of impairment loss for the prior year.

Foreign exchange rate differences on operating items

Foreign exchange rate gain increased by RUB 13,542 million, or 93 %, to RUB 28,029 million for the year ended December 31, 2018 compared to the foreign exchange gain in the amount of RUB 14,487 million for the prior year. This change was mainly due to the appreciation of US Dollar and Euro against the Russian Ruble by 21 % and 15 %, respectively, for the year ended December 31, 2018 compared to the depreciation of US Dollar against the Russian Ruble by 5 % and the appreciation of Euro against the Russian Ruble by 8 % for the prior year.

Other operating expenses

Other operating expenses decreased by RUB 182,015 million, or 30 %, to RUB 427,990 million for the year ended December 31, 2018 compared to RUB 610,005 million for the prior year. Expenses related to the recognition of liabilities in accordance with the court decisions for NJSC Naftogaz Ukraine were included in other expenses for the year ended December 31, 2017. Other expenses include gas and gas condensate production expenses, services from gas distribution companies, bank charges, security services, legal and consulting services, charity and financial aid and advertising.

Change in balances of finished goods, work in progress and other effects

The line item Change in balances of finished goods, work in progress and other effects increased by RUB 85,402 million, or 65 %, to the negative amount of RUB 45,236 million for the year ended December 31, 2018 compared to the negative amount of RUB 130,638 million for the prior year. The change in this line item is explained by the less increase in balances of finished goods for the year ended December 31, 2018 compared to the increase in balances of finished goods for the prior year.

(Impairment loss) reversal of impairment loss on financial assets

Impairment loss on financial assets amounted to RUB 130,971 million for the year ended December 31, 2018 compared to the reversal of impairment loss on financial assets in the amount of RUB 38,670 million for the prior year. The change is mainly due to an increase in the accrual of the allowance for expected credit losses on receivables due from NJSC Naftogaz of Ukraine and JSV Moldovagaz for the year ended December 31, 2018 compared to the reversal of the allowance for expected credit losses on receivables due from NJSC Naftogaz of Ukraine for the prior year.

Operating profit

As a result of the factors discussed above, operating profit increased by RUB 1,058,625 million, or 121 %, to RUB 1,930,030 million for the year ended December 31, 2018 compared to RUB 871,405 million for the prior year. The operating profit margin increased from 13 % for the year ended December 31, 2017 to 23 % for the year ended December 31, 2018.

Net finance (expense) income

(in RUB million)	Year ended December 31,	
	2018	2017
Foreign exchange gain	430,439	342,984
Foreign exchange loss	<u>(762,664)</u>	<u>(353,712)</u>
Net foreign exchange loss	(332,225)	(10,728)
Interest income	72,652	83,721
Interest expense	<u>(50,378)</u>	<u>(53,332)</u>
Net finance (expense) income	<u>(309,951)</u>	<u>19,661</u>

The net foreign exchange loss increased by RUB 321,497 million to RUB 332,225 million for the year ended December 31, 2018 compared to the net foreign exchange loss of RUB 10,728 million for the prior year. The change was due to the appreciation of US Dollar and Euro against the Russian Ruble by 21 % and 15 %, respectively, for the year ended December 31, 2018 compared to the depreciation of US Dollar against the Russian Ruble by 5 % and the appreciation of Euro against the Russian Ruble by 8 % for the prior year.

Interest income decreased by RUB 11,069 million, or 13 %, to RUB 72,652 million for the year ended December 31, 2018 compared to RUB 83,721 million for the prior year.

Interest expense decreased by RUB 2,954 million, or 6 %, to RUB 50,378 million for the year ended December 31, 2018 compared to RUB 53,332 million for the prior year.

Share of profit of associates and joint ventures

Share of profit of associates and joint ventures increased by RUB 105,543 million, or 83 %, to RUB 232,483 million for the year ended December 31, 2018 compared to RUB 126,940 million for the prior year. This change was mainly caused by an increase in the share of profit of JSC Arcticgas, Sakhalin Energy Investment Company Ltd. and JSC Messoyakhaneftegas.

Profit tax

Total profit tax increased by RUB 72,439 million, or 29 %, to RUB 323,566 million for the year ended December 31, 2018 compared to RUB 251,127 million for the prior year. The effective profit tax rate was 17.5 % and 24.7 % for the years ended December 31, 2018 and December 31, 2017, respectively.

The change in the effective profit tax rate was mainly driven by an increase in share of profit of associates and joint ventures and other income non-deductible for tax purposes for the year ended December 31, 2018 compared to the prior year.

Profit for the year attributable to owners of PJSC Gazprom

As a result of the factors discussed above, profit attributable to owners of PJSC Gazprom increased by RUB 741,968 million, or 104 %, to RUB 1,456,270 million for the year ended December 31, 2018 compared to RUB 714,302 million for the prior year.

Profit for the year attributable to non-controlling interest

Profit attributable to non-controlling interest increased by RUB 20,149 million, or 38 %, to RUB 72,726 million for the year ended December 31, 2018 compared to RUB 52,577 million for the prior year.

Liquidity and capital resources

The following table summarises the cash flows for the year ended December 31, 2018 and December 31, 2017:

(in RUB million)	Year ended December 31,	
	2018	2017
Net cash from operating activities	1,617,384	1,187,022
Net cash used in investing activities	(1,617,718)	(1,368,131)
Net cash (used in) from financing activities	(96,070)	149,944

Net cash from operating activities

Net cash from operating activities increased by RUB 430,362 million, or 36 %, to RUB 1,617,384 million for the year ended December 31, 2018 compared to RUB 1,187,022 million for the prior year. This change was mainly driven by an increase in cash from operating activities before working capital changes compared to the prior year primarily caused by the increase in the operating profit.

Net cash used in investing activities

Net cash used in investing activities increased by RUB 249,587 million, or 18 %, to RUB 1,617,718 million for the year ended December 31, 2018 compared to RUB 1,368,131 million for the prior year. The change was mainly due to an increase in capital expenditures for year ended December 31, 2018 compared to the prior year.

Net cash (used in) from financing activities

Net cash used in financing activities amounted to RUB 96,070 million for the year ended December 31, 2018 compared to net cash from financing activities in the amount of RUB 149,944 million for the prior year. This change was mainly due to the increase in the ratio of repayment of borrowings to proceeds from borrowings for the year ended December 31, 2018 accounted for 92%, compared with the same ratio for the prior year accounted for 63%.

Working Capital

The working capital surplus (current assets less current liabilities) was RUB 1,738,535 million as of December 31, 2018 and RUB 879,750 million as of December 31, 2017. The increase in the working capital by RUB 858,785 million in the year ended December 31, 2018 was mainly due to an increase in short-term deposits within other current assets and also due to a decrease in the current portion of long-term borrowings.

Management believes that the working capital is sufficient to meet the requirements of the Group for at least next twelve months, however, the Group is dependent on the short-term credit markets to finance the working capital.

Capital expenditures

Total capital expenditures (excluding the effect of acquisitions of subsidiaries) by segments for the years ended December 31, 2018 and 2017 in denominated in the Russian Ruble are presented in the following table:

(in RUB million)	Year ended December 31,	
	2018	2017
Transportation	640,063	498,550
Refining	309,417	225,240
Production of gas	308,007	216,450
Production of crude oil and gas condensate	257,932	330,424
Electric and heat energy generation and sales	72,907	58,110
Distribution of gas	39,078	51,675
Gas storage	19,391	37,694
All other segments	149,089	86,457
Total	1,795,884	1,504,600

Total capital expenditures increased by RUB 291,284 million, or 19 %, from RUB 1,504,600 million for the year ended December 31, 2017 to RUB 1,795,884 million for the year ended December 31, 2018.

The largest portion of capital expenditures refers to the "Transportation" segment. The amount of capital expenditures of "Transportation" segment increased by RUB 141,513 million, or 28 %, to RUB 640,063 million for the year ended December 31, 2018.

Debts obligation

Net debt balance (defined as the sum of short-term borrowings, current portion of long-term borrowings, short-term promissory notes payable, long-term borrowings, long-term promissory notes payable, net of cash and cash equivalents) increased by RUB 616,892 million, or 26 %, from RUB 2,397,511 million as of December 31, 2017 to RUB 3,014,403 million as of December 31, 2018. This change was mainly due to an increase in the amount of long-term borrowings denominated in the Russian Ruble caused by the appreciation of US Dollar and Euro against the Russian Ruble.

The following table shows borrowings and promissory notes as of December 31, 2018 and December 31, 2017:

RUB million unless indicated otherwise)	As of December 31,	
	2018	2017
Long-term borrowings		
Fixed interest rate borrowings	2,709,599	2,355,672
Weighted average interest rates for fixed rate borrowings	5.97%	6.26%
Variable interest rate borrowings	1,079,332	824,665
Weighted average interest rates for variable rate borrowings	<u>2.88%</u>	<u>3.54%</u>
Total long-term borrowings	3,788,931	3,180,337
Russian Ruble denominated borrowings	694,548	558,509
Foreign currency denominated borrowings	<u>3,094,383</u>	<u>2,621,828</u>
Total long-term borrowings	3,788,931	3,180,337
Less: current portion of long-term borrowings	<u>(494,170)</u>	<u>(788,624)</u>
Total long-term debt obligations	3,294,761	2,391,713
Short-term borrowings		
Fixed interest rate borrowings	31,877	47,789
Weighted average interest rates for fixed rate borrowings	7.92%	8.49%
Variable interest rate borrowings	43,014	38,392
Weighted average interest rates for variable rate borrowings	<u>8.82%</u>	<u>8.19%</u>
Total short-term borrowings	74,891	86,181
Russian Ruble denominated borrowings	66,839	74,374
Foreign currency denominated borrowings	<u>8,052</u>	<u>11,807</u>
Total short-term borrowings	74,891	86,181
Add: current portion of long-term borrowings	<u>494,170</u>	<u>788,624</u>
Total short-term debt obligations	569,061	874,805
Total borrowings	3,863,822	3,266,518

The following table shows the breakdown by currency of foreign currency denominated long-term borrowings as of December 31, 2018 and December 31, 2017 as well as the same balances expressed in Russian rubles:

	As of December 31,	
	2018	2017
U.S. dollar denominated (expressed in millions of U.S. dollars)	15,813	20,544
Euro denominated (expressed in millions of U.S. dollars) ⁽¹⁾	24,001	20,953
Other currencies denominated (expressed in millions of U.S. dollars)	<u>4,729</u>	<u>4,021</u>
Total long-term foreign currency denominated borrowings expressed in millions of U.S. dollars	44,543	45,518
Total long-term foreign currency denominated borrowings expressed in millions of Russian Rubles⁽²⁾	3,094,383	2,621,828

Notes:

(1) Converted at euro to U.S. dollar exchange rates of 1.14 and 1.20 as of December 31, 2018 and as of December 31, 2017, respectively.

(2) Converted at the exchange rate as of period-end.

The following table shows the schedule of repayments of long-term borrowings as of December 31, 2018 and December 31, 2017:

(in RUB million)	As of December 31,	
	2018	2017
Between one and two years	607,775	481,070
Between two and five years	1,654,576	1,087,239
After five years	<u>1,032,410</u>	<u>823,404</u>
Total	3,294,761	2,391,713

SHAREHOLDING STRUCTURE AND STOCK MARKET OF PJSC GAZPROM

PJSC Gazprom's share capital is RUB 118,367,564,500 divided into 23,673,512,900 ordinary shares with a par value of RUB 5 each. PJSC Gazprom has no preferred shares.

As a major shareholder of PJSC Gazprom, the Russian Federation holds a more than 50% controlling stake (including direct and indirect ownership) in PJSC Gazprom. The Russian Federation does not have a special right to manage PJSC Gazprom's affairs (a "golden share").

The following table summarises quotations for PJSC Gazprom shares and ADRs:

(%)	As at 31 January	
	2018	2017
The Russian Federation represented by the Federal Agency for State Property Management	38.37	38.37
JSC ROSNEFTEGAZ ⁽¹⁾	10.97	10.97
JSC Rosgazifikatsiya ⁽¹⁾	0.89	0.89
ADR holders ⁽²⁾	24.13	25.20
Other registered holders	25.64	24.57

Notes:

(1) As at 31 December 2017 and 31 December 2018, the cumulative share in PJSC Gazprom directly or indirectly controlled by the Russian Federation totals 50.23% and is owned through the full ownership of JSC ROSNEFTEGAZ which also holds a 74.55% stake in JSC Rosgazifikatsiya.

(2) The Bank of New York Mellon issued ADRs on PJSC Gazprom's shares.

As at 31 December 2018, the holders of American depositary receipts (ADRs) on the PJSC Gazprom's shares accounted for 24.1% of PJSC Gazprom's charter capital.

As at 31 December 2018, there were no PJSC Gazprom shares the title to which was transferred to PJSC Gazprom. At the same time, as at the said date, PJSC Gazprom's subsidiaries held 934 million ordinary shares of PJSC Gazprom, and American depositary receipts representing 639 million ordinary shares of PJSC Gazprom, which in total represents 6.6% of the total number of ordinary shares of PJSC Gazprom.

PJSC Gazprom shares are included in the first (top) level quotation list of the Moscow Exchange and PJSC Saint Petersburg Exchange.

In October 1996, PJSC Gazprom listed depositary receipts on the London Stock Exchange. The ADRs certifying the rights to PJSC Gazprom ordinary shares under foreign law were issued by The Bank of New York Mellon as depositary bank. An ADR stands for two PJSC Gazprom shares.

ADRs on PJSC Gazprom shares are traded on the London, Berlin, and Frankfurt exchanges, the Moscow Exchange, the US OTC market, and on the Singapore OTC market among qualified institutional buyers (QIBs). The London Stock Exchange accounts for the bulk of trade in PJSC Gazprom ADRs.

The following table summarises quotations for PJSC Gazprom shares and ADRs:

	As at 31 December		Change, %
	2018	2017	
Moscow Exchange			
Share closing price, RUB			
at year-end	153.50	130.50	17.6
minimum	132.20	115.35	14.6
maximum	172.11	157.97	9.0
Average daily trading volume, mm	26.40	28.87	-8.6
Average daily trading volume, RUB bn	3.91	3.72	5.1
London Stock Exchange			
ADR closing price, USD			
at year-end	4.43	4.41	0.5
minimum	4.14	3.85	7.5
maximum	5.31	5.27	0.8
Average daily trading volume, mm	9.19	11.96	-23.2
Average daily trading volume, USD mm	43.27	53.11	-18.5

In 2018, PJSC Gazprom's market capitalisation increased by 17.6% year-on-year; as at 31 December 2018, its capitalisation stood at RUB 3.6 tn.

As at 31 December 2018, dividend payouts in 2018 based on PJSC Gazprom's performance results for 2017 were as follows:

	Accrued, RUB thousand	Paid, RUB thousand	Unpaid, RUB thousand ⁽¹⁾	Unpaid to accrued, %
Total	190,335,044	190,005,139	329,905	0.17
including dividends on shares:				
held by the Russian Federation represented by the Federal Agency for State Property Management	73,037,986	73,037,986	-	-
held by individuals and corporate entities whose rights to shares are accounted for in the register	27,100,385	26,916,208	184,177	0.68
held by individuals and corporate entities whose rights to shares are accounted for by the depository maintaining a nominee holder account in the issuer's register ⁽²⁾	90,196,521	90,050,945	145,576	0.16
held by unidentified persons	152	-	152	100.00

Notes:

- (1) No dividend payouts were made to individuals or corporate entities who had failed to provide clear payout details as per clauses 8 and 9 of Article 42 of Federal Law No. 208-FZ On Joint Stock Companies dated 26 December 1995. Dividends accrued on shares held by unidentified persons are paid out as soon as the title to securities is established.
- (2) PJSC Gazprom paid out RUB 90,196,521 thousand in dividends to nominee holders on 2 August 2018 in execution of the Annual General Shareholders Meeting resolutions on dividend payouts based on PJSC Gazprom's 2017 results, which was held on 29 June 2018. As at 31 December 2018, the amount of dividends nominee holders failed to transfer as prescribed by the securities laws of the Russian Federation for reasons beyond their control (clause 8 and clause 9, Article 42 of Federal Law No. 208-FZ dated 26 December 1995) totalled RUB 145,576 thousand.

CORPORATE GOVERNANCE

The rights of PJSC Gazprom's shareholders and the regulatory framework for PJSC Gazprom's management bodies are determined and exercised in accordance with Russian laws and may differ from the regulatory practice applicable to UK companies.

Key documents of PJSC Gazprom ensuring protection of shareholder rights:

- Articles of Association of Public Joint Stock Company Gazprom
- Code of Corporate Governance of PJSC Gazprom
- Code of Corporate Ethics of PJSC Gazprom (as amended in 2018)
- Regulations on the General Shareholders Meeting of PJSC Gazprom (as amended in 2018)
- Regulations on the Board of Directors of PJSC Gazprom
- Regulations on the Board of Directors' Audit Committee of JSC Gazprom
- Regulations on the Board of Directors' Nomination and Remuneration Committee of PJSC Gazprom
- Regulations on the Management Committee of PJSC Gazprom
- Regulations on the Chairman of the Management Committee of PJSC Gazprom
- Regulations on the Audit Commission of JSC Gazprom, new version
- Regulations on the Internal Control System of PJSC Gazprom
- External Audit Policy for PJSC Gazprom, its subsidiaries and entities
- Procedures for Documenting of Proposals and Requests of Shareholders Related to the Convocation of the General Shareholders Meeting of PJSC Gazprom
- Dividend Policy of Joint Stock Company Gazprom
- Regulations on the Information Disclosure of PJSC Gazprom (as amended in 2018)
- Procedure for Providing Information about PJSC Gazprom to Shareholders (as amended in 2018)
- JSC Gazprom's Regulation on Control of Compliance with the Laws on Countering the Unlawful Use of Insider Information and Market Manipulation
- Anti-Corruption Policy of PJSC Gazprom
- Regulations on the Hotline for Fighting Fraud, Corruption, and Embezzlement at Gazprom Group

These documents are available on PJSC Gazprom's website (<http://www.gazprom.ru/investors/documents/>).

Enhancement of corporate governance at PJSC Gazprom in 2018

In 2018, PJSC Gazprom enhanced its corporate governance standards in the following development areas:

- Strategic (long-term) planning: strategic performance targets lists for Gazprom Group's oil and power generation business were approved
- Shareholder rights: (1) changes to the Regulations on the General Shareholders Meeting of PJSC Gazprom were introduced allowing to use additional premises equipped for TV broadcasts of the General Shareholders Meeting and allowing shareholders to pose questions to spokespersons and make announcements concerning their participation in debates; (2) changes to the Regulations on the Information Disclosure of PJSC Gazprom were introduced to include information on amendments to the Articles of Association and PJSC Gazprom's internal documents on the list of additional information subject to disclosure to the participants of the General Shareholders Meeting in the form of a comparison between the current and proposed versions of the documents; (3) changes to the

Procedure for Providing Information about PJSC Gazprom to Shareholders (Resolution of the Management Committee of PJSC Gazprom No. 36 dated 27 September 2018) were introduced – the document was aligned with the current version of the Federal Law on Joint Stock Companies including in terms of shareholders’ access to PJSC Gazprom’s information and documents

- Assessment of management bodies’ performance: an internal assessment of the performance of PJSC Gazprom’s Board of Directors, Audit Committee, and Nomination and Remuneration Committee (recommended by the Russian Corporate Governance Code) was initiated. Members of the Board of Directors commended PJSC Gazprom for the current development level of the Board of Directors and its committees. The assessment results were reviewed at the Board of Directors’ meeting held in November 2018
- Information disclosure: Gazprom Group’s Sustainability Report passed its first professional external audit and was subjected to a public verification procedure
- Procurement: (1) a provision on the predominantly competitive procurement of independent valuator services to evaluate facilities was set out in PJSC Gazprom’s internal document on the independent evaluation procedure; (2) in line with fundamental changes in the Russian legislation on procurement, which came into force in 2018, a new version of the Regulations on the Procurement of Goods, Works, and Services by PJSC Gazprom and Gazprom Group subsidiaries was approved
- Corporate ethics: an online training course with regular tests for knowledge of ethics standards was developed for PJSC Gazprom’s employees. A provision on regular tests was included in the Code of Corporate Ethics of PJSC Gazprom
- Insider information protection: the List of Insider Information of PJSC Gazprom was extended
- Shareholder and investor relations: (1) targeted investor meetings were arranged for the independent directors Timur Kulibaev and Viktor Martynov; (2) a road show on environmental protection, social policy and corporate governance was run.

Corporate governance model

The corporate governance model in place at PJSC Gazprom relies on Russian laws, the requirements of Russian stock exchanges applicable to issuers whose shares have been included in the first (top) level quotation list.

PJSC Gazprom’s corporate governance model ensures efficient corporate governance while protecting the interests of shareholders and maintaining the highest standards of disclosure. The model also implies the establishment and continuous operation of an efficient risk management and internal control system and provides for a clear division of roles and responsibilities and a performance assessment framework for each management body of PJSC Gazprom.

PJSC Gazprom’s corporate governance pillars include management and supervisory bodies: General Shareholders Meeting, Board of Directors, Management Committee, Chairman of the Management Committee, and Audit Commission.

PJSC Gazprom’s Board of Directors has set up the Audit Committee and the Nomination and Remuneration Committee of the Board of Directors of PJSC Gazprom to preview the most important matters of PJSC Gazprom’s business reserved to the Board of Directors.

PJSC Gazprom’s financial and business performance is independently reviewed by an external auditor.

The main task of the Department responsible for internal audit is to provide the Board of Directors (through the Audit Committee of the Board of Directors) and PJSC Gazprom’s management independent and objective guarantees and consultations aimed at improving PJSC Gazprom’s operations.

The Risk Management and Internal Control Unit of PJSC Gazprom provides the consolidation and methodological support for the implementation of a unified risk management and internal control policy.

In order to maintain a transparent and constructive dialogue with the investment community, PJSC Gazprom has in place the Coordinating Committee for Shareholder and Investor Relations (set up by JSC Gazprom's Order No. 292 dated 17 November 2008). Relations with the investment community are governed by the annual plan of the Coordinating Committee.

PJSC Gazprom has in place the role of Corporate Secretary (Resolution of the Board of Directors No. 2817 dated 30 September 2016). The responsibilities of Corporate Secretary are distributed, to the extent recommended by the Russian Corporate Governance Code, among several business units of PJSC Gazprom, in line with the regulations governing their functions as approved by the Board of Directors.

Membership of the Board of Directors

As at 31 December 2018, the membership of PJSC Gazprom's Board of Directors was as follows:

Name	Year of birth	Position
Viktor A. Zubkov	1941	Chairman of PJSC Gazprom's Board of Directors; Russia's Special Presidential Representative for Cooperation with the Gas Exporting Countries Forum Deputy Chairman of the Board of Directors of LLC Gazprom gazomotornoe toplivo
Alexey B. Miller	1962	Deputy Chairman of PJSC Gazprom's Board of Directors Chairman of PJSC Gazprom's Management Committee
Andrey I. Akimov	1953	Chairman of the Management Board of Gazprombank (Joint-stock Company)
Timur A. Kulibaev	1966	Chairman of Association of Legal Entities Kazakhstan Association of Oil, Gas and Energy Sector Organisations (KAZENERGY) Chairman of the Presidium of the National Chamber of Entrepreneurs of the Republic of Kazakhstan (Atameken)
Denis V. Manturov	1969	Minister of Industry and Trade of the Russian Federation
Vitaly A. Markelov	1963	Deputy Chairman of PJSC Gazprom's Management Committee
Viktor G. Martynov	1953	Rector of the Federal State Autonomous Educational Institution of Higher Education "Gubkin Russian State University of Oil and Gas (National Research University)"
Vladimir A. Mau	1959	Rector of the Russian Presidential Academy of National Economy and Public Administration (Federal State Budgetary Educational Institution of Higher Education)
Alexander V. Novak	1971	Minister of Energy of the Russian Federation
Dmitry N. Patrushev	1977	Minister of Agriculture of the Russian Federation

Mikhail L. Sereda	1970	Deputy Chairman of PJSC Gazprom's Management Committee – Head of PJSC Gazprom's Management Committee Administration
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There were no changes to the Board of Directors in 2018.

In 2018, the Board held a total of 53 meetings, including 13 meetings held in person and 40 meetings held in absentia. At these meetings, 142 resolutions were passed, including 51 resolutions in person and 91 resolutions in absentia.

Audit Committee of the Board of Directors

In 2018, the Audit Committee of PJSC Gazprom's Board of Directors continued its work. The Audit Committee reports to the Board of Directors. As at 31 December 2018, the Board of Directors' Audit Committee had three members of PJSC Gazprom's Board of Directors: Viktor Martynov, Mikhail Sereda, and Vladimir Mau. Viktor Martynov was the Chairman of the Committee.

During the year, the Committee held 9 meetings, all of them in absentia. The most important matters discussed by the Committee in 2018 included LLC FBK's information on critical audit issues at PJSC Gazprom and its subsidiaries, along with the external auditor's reports on ensuring independence and on the effectiveness of external audit.

The Audit Committee maintained close contact with the external auditor LLC FBK, the Audit Commission, and PJSC Gazprom's Department responsible for internal audit.

Nomination and Remuneration Committee of the Board of Directors

In 2018, the Nomination and Remuneration Committee of PJSC Gazprom's Board of Directors continued its work. As at 31 December 2018, the Board of Directors' Nomination and Remuneration Committee had three members of PJSC Gazprom's Board of Directors: Mikhail Sereda, Vladimir Mau, and Viktor Martynov. Mikhail Sereda was the Chairman of the Committee.

In 2018, the Committee held 9 meetings, all of them in absentia. The Committee reviewed the following matters: election of members of PJSC Gazprom's Management Committee; approval of the PJSC Gazprom's actual 2017 KPI values for the purposes of the annual bonus scheme for the management of PJSC Gazprom as well as target (planned), threshold, and maximum KPI values for 2018; remuneration of members of PJSC Gazprom's Board of Directors and Audit Commission; assessment of Board of Directors' and its committees' performance, etc.

Membership of the Management Committee

Members of PJSC Gazprom's Management Committee as at 31 December 2018:

Name	Year of birth	Position
Alexey B. Miller	1962	Chairman of PJSC Gazprom's Management Committee
Elena A. Vasilieva	1959	Deputy Chairwoman of PJSC Gazprom's Management Committee – Chief Accountant of PJSC Gazprom
Valery A. Golubev	1952	Deputy Chairman of PJSC Gazprom's Management Committee
Andrey V. Kruglov	1969	Deputy Chairman of PJSC Gazprom's Management Committee
Vitaly A. Markelov	1963	Deputy Chairman of PJSC Gazprom's Management Committee
Alexander I. Medvedev	1955	Deputy Chairman of PJSC Gazprom's Management Committee
Mikhail E. Putin	1967	Deputy Chairman of PJSC Gazprom's Management Committee

Sergey F. Khomyakov	1953	Deputy Chairman of PJSC Gazprom's Management Committee, Director General of PJSC Gazprom's Corporate Security Service Branch
Oleg E. Aksyutin	1967	Head of Department (prospective development)
Vladimir K. Markov	1955	Head of Department (relations with the Russian Federation authorities)
Elena V. Mikhailova	1977	Head of Department (asset management and corporate relations), Deputy Director General for Corporate Relations and Asset Management at LLC Gazprom mezhregiongaz
Vyacheslav A. Mikhalenko	1965	Head of Department (gas transportation and underground storage)
Sergey F. Prozorov	1958	Head of Department (managing construction of production facilities)
Kirill G. Seleznev	1974	Head of Department (marketing; gas and liquid hydrocarbons processing; developing electric power and heat generation), Director General of LLC Gazprom mezhregiongaz
Igor Y. Fyodorov	1965	Head of Department (legal support)
Vsevolod V. Cherepanov	1966	Head of Department (hydrocarbon exploration and production)

Changes to the Management Committee in 2018 were as follows:

Name	Change
Mikhail E. Putin	Elected by the Board of Directors' decision of March 23, 2018, No 3089

Remuneration of key executives

Pursuant to the Regulations on the Board of Directors of PJSC Gazprom approved by the annual General Shareholders Meeting (Minutes No. 1 dated 30 June 2016) and PJSC Gazprom's Articles of Association, members of the Board of Directors, during the period of their service, may be remunerated and/or reimbursed for expenses incurred by them as members of the Board of Directors. The amount of remuneration and/or reimbursement is determined by the General Shareholders Meeting.

Members of the Board of Directors holding public or civil office in the Russian Federation receive no remuneration from the PJSC Gazprom.

Remuneration of members of the Management Committee (including Chairman of the Management Committee) and other executives of PJSC Gazprom is determined by their employment agreements. Short-term remuneration of PJSC Gazprom's key executives (members of the Board of Directors and Management Committee), including salaries, bonuses, and remuneration for their service on management bodies of PJSC Gazprom's entities amounted to ca. RUB 4,312 mm and RUB 4,537 mm for the years ended on 31 December 2018 and 31 December 2017, respectively.

Liability insurance of directors, officers, and PJSC Gazprom

PJSC Gazprom insures the liability of its directors (excluding directors holding public office), officers, and PJSC Gazprom.

The terms of the 2018 liability insurance programme for directors, officers, and PJSC Gazprom are as follows:

Insurance coverage	USD 100 mm
Insurance premium	USD 900 thousand
Persons insured	<ul style="list-style-type: none">• members of the Board of Directors (excluding directors who hold public office)• PJSC Gazprom's Management Committee members• heads of PJSC Gazprom's Departments who are not members of PJSC Gazprom's Management Committee.
Risks insured	<ul style="list-style-type: none">• risk of third-party claims against the insured for losses arising from unintentional errors made by the insured in their management roles• risk of third-party claims against PJSC Gazprom for losses arising from unintentional errors made by the insured in their management roles: claims related to PJSC Gazprom's securities; claims initially made against the insured.

The insurance coverage under the current liability insurance policy is in line with PJSC Gazprom's needs and Russian and international insurance standards in terms of risk coverage and indemnity limits.

PJSC Gazprom shares held by members of the Board of Directors and Management Committee

As at 31 December 2018, members of the Board of Directors, Management Committee, and the Chairman of the Management Committee had a shareholding of 0.012036 % in PJSC Gazprom's equity.

Audit Commission

The Audit Commission's authority is set forth in the Federal Law On Joint-Stock Companies and PJSC Gazprom's Articles of Association. The Audit Commission operates under the Regulations on the Audit Commission of JSC Gazprom approved by the Resolution of JSC Gazprom's Annual General Shareholders Meeting (Minutes No. 1 dated 28 June 2013).

Key roles of the Audit Commission:

- monitor the fairness of presentation of PJSC Gazprom's financial and accounting statements and other information on PJSC Gazprom's financial and business operations and condition of its assets
- supervise statutory compliance of PJSC Gazprom's accounting practices and of submission of its financial statements and information to relevant authorities and shareholders
- prepare proposals on enhancing PJSC Gazprom's asset management and other financial and business operations of PJSC Gazprom, mitigate financial and operating risks, and improve internal controls.

The Audit Commission is accountable to the General Shareholders Meeting and coordinates its activities with the Audit Committee of the Board of Directors.

Following an audit of PJSC Gazprom's financial and business operations, the Audit Commission presented its opinion confirming the fairness of data in PJSC Gazprom's statements and other financial documents.

The Audit Commission of nine members is elected by the General Shareholders Meeting.

Internal Audit

Internal audit assists in achieving the PJSC Gazprom's goals through applying a holistic consistent approach to assessment and improvement of risk management, internal control, and corporate governance processes.

To improve the internal audit function and in accordance with Directive of the Russian Government for persons representing interests of the Russian Federation No. 3984p-P13 dated 24 June 2015, PJSC Gazprom developed and approved the Regulations on Internal Audit of PJSC Gazprom in 2015 (Resolution of the Board of Directors No. 2621 dated 6 November 2015).

These Regulations determine the goals, objectives, status, powers, and liability of the Department responsible for internal audits at PJSC Gazprom, as well as the scope of internal audit.

Pursuant to the Regulations, the internal audit in PJSC Gazprom is organised by the relevant Department, a business unit of PJSC Gazprom, and by internal audit units – in PJSC Gazprom's subsidiaries.

The key priority of the Department is to provide the Board of Directors (through the Audit Committee of the Board of Directors) and management of PJSC Gazprom with independent and unbiased assurances and advice as to the improvement of PJSC Gazprom's operations.

The Department is administratively accountable to the Chairman of PJSC Gazprom's Management Committee within the Management Committee Administration and functionally accountable to the Board of Directors (through the Board of Directors' Audit Committee). The Head of the Department is appointed and removed from office by the Chairman of PJSC Gazprom's Management Committee upon recommendation of the Deputy Chairman of the Management Committee – Head of the Administration of PJSC Gazprom's Management Committee, as approved by the Board of Directors (through the Board of Directors' Audit Committee).

External Auditor

PJSC Gazprom selects its auditor annually by a public tender in accordance with applicable Russian laws. Assessment of potential auditors is one of the main duties of the Audit Committee of PJSC Gazprom's Board of Directors.

LLC FBK won the public tender for the service contract to audit PJSC Gazprom's accounting (financial) statements, Gazprom Group's consolidated accounting statements, and Gazprom Group's consolidated IFRS financial statements for 2018, and was approved as auditor by the Annual General Shareholders Meeting of PJSC Gazprom on 29 June 2018. The contract price offered by the winner was RUB 195,000,000 (exclusive of VAT) and was approved by Resolution of the Board of Directors No. 3113 dated 16 May 2018.

In 2018, LLC FBK provided other audit-related services to PJSC Gazprom outside its audit contract. In 2018, a fee of RUB 44,284,438.44 (inclusive of VAT) was paid for other audit-related services.

Anti-corruption efforts

PJSC Gazprom has developed and adheres to the anti-corruption framework while effective in-house regulations adopted as part of anti-corruption measures help foster negative sentiment towards corrupt conduct, prevent or resolve conflicts of interest, and prevent unlawful behaviour.

PJSC Gazprom's anti-corruption practices comply with the main international and Russian regulations.

PJSC Gazprom's primary anti-corruption document is its Anti-Corruption Policy approved by the Board of Directors.

PJSC Gazprom's management is consistently focused on improving existing procedures for preventing and revealing corrupt practices in Gazprom Group.

In 2018, PJSC Gazprom's Board of Directors approved the Anti-Corruption Plan for 2018–2020.

PJSC Gazprom has adopted its Code of Corporate Ethics developed with due account for Russian and international corporate governance best practices. The document details PJSC Gazprom's corporate

values and determines the fundamental rules of business conduct stemming from such values, which rule out any conflicts of interest or corrupt practices and, in particular, impose restrictions on nepotism, employee engagement with PJSC Gazprom's competitors, their serving on elected government bodies, acceptance of gifts. Most of PJSC Gazprom's subsidiaries have developed and adopted similar documents based on the Code.

The Code specifies the procedure to be followed by PJSC Gazprom's employees in the event of a conflict of interest, declares zero tolerance for corrupt conduct, affirms environmental responsibility and non-discriminatory principles, establishes implementation and supervision practices on compliance with corporate ethics standards.

The Code's provisions are mandatory for PJSC Gazprom's employees (including all members of the Management Committee and the Board of Directors who are PJSC Gazprom's employees) and the Group-controlled corporate entities. The Code's provisions are not mandatory for employees of PJSC Gazprom's affiliates which are not under the Group's control, and employees of PJSC Gazprom's counterparties.

The permanent Corporate Ethics Commission of PJSC Gazprom is responsible for supervising compliance with the Code's requirements and provisions. Most of PJSC Gazprom's subsidiaries and associates have similar commissions in place.

The Commission's performance is reported to the Chairman of PJSC Gazprom's Management Committee on an annual basis. The Chairman of PJSC Gazprom's Management Committee may impose sanctions stipulated by the Code at his own initiative or at the Commission's suggestion, or at the initiative of the violator's immediate superior.

PJSC Gazprom and its subsidiaries organise awareness days to communicate to their employees the effective rules of business, including anti-corruption corporate ethics. Subsidiaries gather and consolidate information on efforts made to comply with requirements and restrictions established by codes of corporate ethics/

RISK MANAGEMENT AND INTERNAL CONTROL

PJSC Gazprom acknowledges that its operations are exposed to uncertainties such as risks, and implements measures to provide adequate assurance that the goals set for PJSC Gazprom by its management bodies are achieved.

PJSC Gazprom has developed an effective risk management and internal control system (RMICS) which helps promptly identify, assess, and respond to, potential events, circumstances, and internal and external factors that may influence the achievement of goals.

PJSC Gazprom's risk management and internal control system complies with the corporate governance principles set forth in the Russian Corporate Governance Code.

RMICS is an integral part of PJSC Gazprom's corporate governance and is embedded into the planning and project management systems, and occupational health and safety management programmes. RMICS covers all operations of PJSC Gazprom and Gazprom Group entities, as well as all management levels, business segments, and risks across PJSC Gazprom and Gazprom Group entities.

Strategic and country risks

Risks related to the global economy

An unfavourable economic environment can lead to a slowdown in energy demand and drive the cost of borrowed capital.

Risk management / mitigation

To ensure growth of energy sales, PJSC Gazprom considers numerous markets and distribution channels and expands the uses of natural gas. To maintain its financial stability, PJSC Gazprom optimises leverage.

European gas market risks

The European Union pursues a policy of diversifying its gas supply sources and increasing the share of natural gas exchange trade, which affects PJSC Gazprom as one of the main suppliers of natural gas to the EU countries.

Risk management / mitigation

To minimise the risk of lower supply levels, a set of initiatives continues to be implemented to both build new infrastructure and bolster demand for natural gas, as well as strengthen PJSC Gazprom's position in the sectors with a potential for extra supplies.

Political risk

Starting from 2014, Russia is under sanctions imposed by the EU, the United States, and other countries.

Risk management / mitigation

PJSC Gazprom pursues a policy of ensuring technological independence.

Natural gas transit risks

Gas transmission via third countries is associated with the risks of the counterparties defaulting on their transit obligations, as well as uncertainty about the future conditions of transit contracts, which exposes Gazprom Group to the risk of improper performance of its obligations under gas supply contracts.

Risk management / mitigation

A number of measures are taken such as diversification of export routes, expanding access to UGSFs abroad, and development of LNG trade.

Russian regulatory risks for the gas industry

PJSC Gazprom's operations are regulated by Federal Law No. 147-FZ On Natural Monopolies dated 17 August 1995.

Risk management / mitigation

PJSC Gazprom is engaged in intensive dialogue with government authorities to improve the pricing and tariff policy; objective supporting cases are prepared to inform decision making by PJSC Gazprom's Board of Directors.

Unconventional gas development risks

Unconventional gas production has been growing since mid-2000's, primarily from shale deposits in the US. Shale gas appeals mostly to countries with limited conventional gas reserves and resources; however, the risk that these countries will reduce gas imports in the mid-term is assessed as insignificant.

Risk management / mitigation

PJSC Gazprom continuously monitors the evolution of the shale gas industry and developments in other unconventional hydrocarbons industries around the world. The monitoring results, including the economics of unconventional gas production and its potential as a competition to PJSC Gazprom

in its existing or prospective markets, are reviewed by PJSC Gazprom's management bodies on a regular basis, which enables PJSC Gazprom to efficiently implement its marketing policy in respective regions taking into account various mechanisms of gas sales.

Renewable energy risks

Renewable energy output can be expected to grow in some countries, which may squeeze gas consumption in these markets.

Risk management / mitigation

The use of natural gas, inter alia, for power generation offers consumers economic, technological, and environmental benefits, which, PJSC Gazprom believes, will support natural gas as common energy source. In most cases, renewable power generation supplements power generation from other sources and may entail certain risks for the natural gas market if subsidising renewable energy is maintained at national and/or supranational levels.

Customs, currency, and tax regulation risks

Risk of changes in the Russian currency regulation and tax legislation

Currency regulation and tax legislation risks persist, along with the risk of a heavier tax burden on companies operating in the fuel and energy sector. Changes in the Russian currency regulation and tax legislation, as well as tax legislation changes in the countries in which Gazprom Group has a presence may affect the operations of PJSC Gazprom and Gazprom Group's entities.

Risk management / mitigation

Changes in currency and tax laws are consistently monitored. PJSC Gazprom liaises with government authorities to ensure timely adjustment of its operations in line with changes in Russian and international laws.

Risks related to changes in Russian rules on customs control and duties

Customs authorities may introduce additional customs requirements if the rules of customs control and export duty payment are amended.

Risk management / mitigation

PJSC Gazprom complies with the requirements of customs laws and communicates with government authorities.

Financial risks

Foreign exchange risks and inflation rate risks

Potential cash flow reduction due to adverse change in foreign exchange rates. High exchange rate volatility coupled with income and expenses denominated in different currencies affect PJSC Gazprom's performance.

The current inflation rate has no significant influence on PJSC Gazprom's financial position.

Risk management/mitigation

PJSC Gazprom ensures the optimal ratio of assets and liabilities denominated in foreign currency, calculates earnings considering the foreign exchange risk, and forecasts exchange rates to develop a forecast balance.

To minimise losses from exchange rate volatility, PJSC Gazprom hedges its foreign exchange and interest rate risks.

Credit and liquidity risks

Delayed or incomplete discharge of contractual obligations by some counterparties entails risks for PJSC Gazprom's operations.

Risk management / mitigation

Relations with credit institutions are subject to credit risk limits revised on a regular basis and reflecting, inter alia, the calculated credit rating. Performance of contractual obligations is monitored and credit quality of counterparties is assessed with the adoption of measures to reduce risks in case of low creditworthiness.

Market risks

If oil prices and gas exchange quotations drop and (or) maintain at current levels for a long time, resulting risks may lead to a decline in revenues. There are also volume risks associated with a certain flexibility that buyers have in terms of gas offtake.

Risk management / mitigation

These risks are managed by adjusting contract terms and conditions or entering into new contracts, determining approved types of transactions and financial instruments and counterparties to enter into such transactions.

PJSC Gazprom's operating risks

Risks of early termination and suspension of subsoil licences

Non-compliance with the licence agreements exposes PJSC Gazprom to risks of early termination or suspension of subsoil licences for the survey, exploration, and production of hydrocarbons.

Risk management / mitigation

Regular monitoring, control of compliance with licence requirements, and timely amendment of licence agreements minimise the likelihood of licence revocation and suspension.

Risks of failure to reach peak gas withdrawal capacity at UGSFs

Failure to reach necessary gas supply volumes in the context of steep increase in gas consumption.

Risk management/mitigation

UGSFs are tested to confirm their maximum daily deliverability.

Risk of power outages at UGSS facilities

Internal and external factors may lead to power outages at UGSS facilities.

Risk management/mitigation

PJSC Gazprom implements comprehensive programmes to enhance reliability of power supply facilities, insure equipment, and create reserves to cover potential losses.

Risks related to occupational health and industrial safety

PJSC Gazprom's performance depends on its occupational health and industrial safety practices.

Risk management / mitigation

PJSC Gazprom has in place and operates a Unified Occupational Health and Safety Management System integrated into its management system. The Unified Occupational Health and Safety Management System has been developed and introduced to manage OHS risks and meet the objectives and commitments relating to occupational health, industrial and fire safety.

Cost risks

Increased prices for equipment, technical devices, spare parts, as well as works and services, which form the actual cost of capital construction projects, constitute one of the most significant investment risks.

Risk management / mitigation

Competitive procurement, whereby the suppliers offering goods of adequate quality and submitting the most competitive price bids are selected, helps cut the costs of procurement and sourcing of feedstock, materials, spare parts, works, and services.

Facilities risks

The key operations, including hydrocarbon production, transportation, processing/refining, and storage, carry process and engineering, natural and climatic risks, as well as risks of adverse actions by personnel or third parties.

Risk management / mitigation

The Unified Gas Supply System (UGSS) ensures reliable gas supplies. Stable operation of the system is achieved by implementing advanced and innovative diagnostic methods, carrying out timely overhaul and maintenance, revamping and upgrading existing facilities. Insurance coverage is provided to protect PJSC Gazprom's subsidiaries' property interests, which includes property insurance (including offshore facilities), business interruption insurance, and liability insurance for construction, repair, and operation of production facilities.

Hydrocarbon reserve estimation risks

PJSC Gazprom's strategic and financial goals depend on hydrocarbon reserves. Thus, inaccurate reserve estimation bears potential risks for PJSC Gazprom's operations.

Risk management / mitigation

Independent reserve estimation procedures have been developed and are implemented in accordance with the Petroleum Resources Management System (PRMS) standards. Gazprom's reserves estimated under Russian reserves classification standards are recorded in its books after the annual review and approval by the State Reserves Commission of the Russian Ministry of Natural Resources.

Environmental risks

The key operations, including hydrocarbon production, transportation, refining/processing, and storage, carry environmental risks (risks of environmental pollution, non-compliance with environmental regulations) that may lead to legal, financial, and reputational implications.

Risk management / mitigation

PJSC Gazprom implements a unified Environmental Policy, programmes, and initiatives to reduce its environmental footprint, takes out voluntary environmental liability insurance, introduces best available innovative technology for mitigating the environmental impact.

PJSC Gazprom has developed and operates an efficient environmental management system combining environmental controls of both the parent company and subsidiaries. Efforts taken by PJSC Gazprom help maintain high levels of environmental risk manageability.

BRANCHES AND REPRESENTATIVE OFFICES OF PJSC GAZPROM

The list of branches and representative offices of PJSC Gazprom as at 31 December 2018:

Name	Location
Branch Avtopredpriyatie of PJSC Gazprom	Saint Petersburg
Branch Corporate Premises Management of PJSC Gazprom	Saint Petersburg
Branch Bogorodskoye Reception House	Moscow
Branch Souyz Holiday Hotel	Moscow Region
Branch Morozovka Holiday Hotel	Moscow Region
Branch Corporate Security Services of PJSC Gazprom	Saint Petersburg
Branch Central Interregional Security Division of PJSC Gazprom	Moscow Region
Branch Main Security Division of PJSC Gazprom in Saint Petersburg	Saint Petersburg
Branch Southern Interregional Security Division of PJSC Gazprom	Krasnodar
Branch Volga Interregional Security Division of PJSC Gazprom	Samara
Branch North Urals Interregional Security Division of PJSC Gazprom	Novy Urengoy
Branch South Urals Interregional Security Division of PJSC Gazprom	Yekaterinburg
Branch Siberian Interregional Security Division of PJSC Gazprom	Tomsk
Branch Far Eastern Interregional Security Division of PJSC Gazprom	Khabarovsk
Branch Office 333 of PJSC Gazprom in Saint Petersburg	Saint Petersburg
Representative office in Ukraine	Kiev
Representative office in the People's Democratic Republic of Algeria	Algiers
Representative office in the Islamic Republic of Iran	Tehran
Representative office in the Republic of Turkey	Ankara
Representative office in the People's Republic of China	Beijing
Representative office in the Republic of India	New Delhi
Representative office in Turkmenistan	Ashgabat
Representative office in the Republic of Kazakhstan	Astana
Representative office in the Republic of Latvia	Riga
Representative office in the Federative Republic of Brazil	Rio de Janeiro
Representative office in the Republic of Moldova	Chişinău
Representative office in the State of Qatar	Doha
Representative office in the Kingdom of Belgium	Brussels
Representative office in Japan	Tokyo
Representative office in Azerbaijan ⁽¹⁾	Baku

Note:

⁽¹⁾ As at 31 December 2018, details of the Representative office in Baku, the Republic of Azerbaijan, were not recorded in the Unified State Register of Legal Entities.

CONVERSION TABLE

Metric measure	U.S. measure
1 bcm of natural gas	6.49 barrels of oil equivalent (boe)
1 tonne of oil	7.33 barrels of oil equivalent (boe)
1 tonne of gas condensate	8.18 barrels of oil equivalent (boe)

GLOSSARY OF KEY TERMS AND ABBREVIATIONS

Terms and abbreviations	Description
A+B ₁ +C ₁ hydrocarbon reserves	Explored reserves estimated under the Russian Classification of Reserves and Resources with high geological certainty and corresponding to the previously used A+B+C ₁ reserves. Recovery factors for oil, gas, and gas condensate reserves are determined based on field geology with account for existing technologies
Adjusted EBITDA	Operating profit less depreciation and less impairment loss on assets (excluding accounts receivable, advances paid and prepayments)
ADR of PJSC Gazprom	American Depositary Receipt issued for PJSC Gazprom shares
APG	Associated petroleum gas
Associates	Entities over which the Group has significant influence and that are neither a subsidiary nor an interest in a joint arrangement. Significant influence occurs when the Group has the power to participate in the financial and operating policy decisions of an entity but has no control or joint control over those policies
boe	Barrel of oil equivalent
CGTU	Comprehensive gas treatment unit
CHPP	Combined heat and power plant
CS	Compressor station
CSA	Capacity Supply Agreement
cubic m	A cubic metre of natural gas measured at 1 Pa pressure and 20°C.
EMS	Environmental Management System
ESP	Electronic Sales Platform
Europe and other countries	Foreign countries other than FSU countries
European far abroad countries	25 EU countries (excluding Latvia, Lithuania, and Estonia), such non-EU countries as Turkey, Norway, and Switzerland, and the Balkan states of Bosnia, Bosnia and Herzegovina, Macedonia, and Serbia
FSU	Former Soviet Union republics, except for the Russian Federation
Gazprom Group, the Group, Gazprom	An aggregate of entities which includes PJSC Gazprom (parent company) and its subsidiaries
Gazprom energoholding Group	An aggregate of entities which includes LLC Gazprom energoholding (parent company) and its subsidiaries. Gazprom Group controls Gazprom energoholding Group
Gazprom neftekhim Salavat Group	An aggregate of entities which includes LLC Gazprom neftekhim Salavat (parent company) and its subsidiaries. Gazprom Group controls Gazprom neftekhim Salavat Group
Gazprom Neft Group	An aggregate of entities which includes PJSC Gazprom Neft (parent company) and its subsidiaries. Gazprom Group controls Gazprom Neft Group
GHG	Greenhouse gases
GPP	Gas and/or condensate processing plant
GRF	Gas recovery factor
GTS	Gas Transportation System
GW	Gigawatt
IFRS	International Financial Reporting Standards
ISO 14001	International Organization for Standardization, the international environmental management standard

ISO 9001	International Organization for Standardization, the international quality management standard
Joint operation	Joint arrangement whereby the parties that have joint control of the arrangement have rights to the assets, and obligation for the liabilities, relating to the arrangement. Where the Group acts as a joint operator, the Group recognises in relation to its interest in a joint operation: its assets, including its share of any assets held jointly; its liabilities, including its share of any liabilities incurred jointly; its revenue from the sale of its share of the output arising from the joint operation; its share of the revenue from the sale of the output by the joint operation; and its expenses, including its share of any expenses incurred jointly
Joint venture	Joint arrangement whereby the parties that have joint control of the arrangement have rights to the net assets of the arrangement. With regards to joint arrangements, where the Group acts as a joint venture, the Group recognises its interest in a joint venture as an investment and accounts for that investment using the equity method
km	Kilometre
kWh	Kilowatt hour
LNG	Liquefied natural gas
m	Metre
MW	Megawatt
Net debt	The sum of short-term borrowings, current portion of long-term borrowings, short-term promissory notes payable, long-term borrowings, long-term promissory notes payable, net of cash and cash equivalents
OGCF	Oil and gas condensate field
OHSAS 18001	Occupational Health and Safety Management Systems, the international standard for occupational health and safety management systems
PRMS standards	International classification and assessment of hydrocarbon reserves under PRMS (Petroleum Resources Management System).
R&D	Research and Development
RMICS	Risk Management and Internal Control System
RUB	Russian rouble
sq km	Square kilometre
tonne	Metric ton
Total debt	The sum of short-term borrowings, current portion of long-term borrowings, short-term promissory notes payable, long-term borrowings, long-term promissory notes payable
TPP	Thermal power plant
UGSF	Underground gas storage facility
UGSS	Unified Gas Supply System of Russia
USD	United States (US) dollars
UOHSMS	Unified Occupational Health and Safety Management System
VAT	Value Added Tax

CONTACTS

Full name

Public Joint Stock Company Gazprom

Abbreviated name

PJSC Gazprom

Location

Moscow, Russian Federation

Address: 16 Nametkina str., GSP-7, Moscow, 117997, Russian Federation

Postal address: BOX 1255, Saint Petersburg, 190900, Russia

Delivery address: 156 Moskovsky av., bld. A, Saint Petersburg, 196105, Russian Federation

Phone: +7 495 719 3001

Fax: +7 495 719 8333

+7 812 413 7333

Website

www.gazprom.ru (in Russian)

www.gazprom.com (in English)

E-mail

gazprom@gazprom.ru

Certificate of entry into the Unified State Register of Legal Entities

by the Moscow Department of the Ministry of Taxation dated 2 August, 2002, OGRN 1027700070518

Taxpayer Personal Identification Number (INN)

7736050003

Contact for shareholders

Phone: +7 812 609 7657 (for shareholders of PJSC Gazprom)

Contact for investors

Phone: +7 812 609 4129

Fax: +7 812 609 4334

E-mail: ir@gazprom.ru

Auditor

Limited Liability Company Financial and Accounting Consultants (LLC FBK).

LLC FBK is a member of the self-regulated organisation of auditors Auditor Association Sodruzhestvo

Location address: 44/1 Myasnitskaya str., bld. 2 AB, Moscow, 101990, Russian Federation

Phone: +7 495 737 5353

Website: www.fbk.ru.

Registrar

Joint Stock Company Specialised Registrar – Register Keeper for Gas Industry Shareholders (JSC DRAGa)

Location and postal address: 71/32 Novocheryomushkinskaya str., Moscow, 117420, Russian Federation

Phone: +7 495 719 4044

Fax: +7 495 719 4585

Website: www.draga.ru

Depository bank (PJSC Gazprom ADRs)

Bank of New York Mellon

Website: www.bnymellon.com