

Climate change

Gazprom Neft supports the Paris Agreement on climate change and complies with national legislation on measuring GHG emissions.¹

Global challenge

Climate change is one of the most pressing global challenges today. The Paris Agreement on climate, signed in 2015, aims to strengthen the global response to the threat of climate change by holding the increase in the global average temperature to well below 2 °C above pre-industrial levels.

Nationally determined contributions (NDC) are a key element of the Paris Agreement and its long-term goals. NDCs reflect the individual efforts of specific countries to reduce emissions and adapt to the impacts of climate change. In November 2020, the Russian Federation announced its first NDC under the Paris Agreement.



Russia announces its first nationally determined contribution to the Paris Agreement

The company's priorities in climate management

- **Reduction of GHG emissions and increased APG utilisation**
- **Increasing the share of low-carbon projects**
- **Launching new renewable energy sources (RES)**

The company continues to implement its Development Strategy to 2030 approved by the Board of Directors, which envisages developing infrastructure at production assets and upgrading refineries with energy-efficient technology, a move that will reduce resource consumption and GHG emissions.

Furthermore, Gazprom Neft aims to increase the share of natural gas production projects in total hydrocarbon production to 45% in 2024-2026. Developing gas projects will reduce the carbon intensity of company products.

Gazprom Neft acknowledges that if no decisive action is taken today, then dealing with the consequences of climate change will require significantly more effort and costs

45% gas share
**in production in
2024-2026**

¹ – Orders of the Russian Ministry of Natural Resources and Environment No. 300 dated 30 June 2015 and No. 330 dated 29 June 2017.

Highest CDP score among Russian oil companies in 2020

In 2020, Gazprom Neft took part in the CDP climate ranking for the first time and joined the group of leaders by scoring “B” (on a scale from “A” to “D-”). This is the highest score among Russian oil companies.



Gazprom Neft ranks among the leaders by CDP score

 Gazprom Neft at a glance

 Sustainable development management

 Customer care

 Health and safety

 Environmental safety

 Employee development

 Social policy

 Appendices

Climate-related risks and opportunities

Gazprom Neft identifies several key climate-related risks and opportunities. The company accounts for both physical risks associated with extreme weather conditions or irreversible changes to the environment, as well as for transition risks (market, reputational, technology, political, and legal).¹

Physical risks²

Acute risks

These risks are related to sudden events, including extreme weather phenomena, such as cyclones, hurricanes and floods.

Chronic risks

Chronic risks to the company are related to possible long-term and mostly irreversible changes in the environment. The thawing of permafrost is one of the most important chronic risks to the company.

To minimise systemic physical risks to the company, Gazprom Neft particularly focuses on solutions for construction projects for the permafrost (preventing

permafrost degradation, thermal stabilisation of permafrost soils, etc.).

The company has also implemented a long-term technology development programme, which guides a continuous cycle of identification, evaluation and application of new and effective technical solutions for field facility construction.

1 – Compliant with the risk classification used by the Task Force on Climate-related Financial Disclosures (TCFD).

2 – Physical risks are risks related to natural phenomena caused by climate change.

Transition risks¹

Policy and legal risks

The applicable Russian laws set strict requirements to achieve targets for atmospheric impacts. Failure to comply with these requirements carries the risk of having additional charges levied by the Government.

Specific mechanisms for governmental regulation of GHG emissions are yet to be set, but the company is

reviewing potential risks related to a federal law regulating GHG emissions, which is currently under development.

The company also participates in developing a climate impact strategy, defining a target vision and GHG emission reduction metrics at the governmental level.

Technology risks

Technology risks are risks of the company losing its market share because its competitors leverage technologies that allow similar or better products to be produced with much lower GHG emissions.

In order to minimise technology risks, the company continually implements advanced innovative technologies to improve efficiency.

In particular, the company is commissioning facilities that utilise APG without flaring by either piping it to a gas processing plant (GPP), or reinjecting it to maintain formation pressure or for underground storage.

The company's refineries run upgrade programmes to reduce emissions.

Market risks

Market risks are determined by current and future changes in supply and demand for specific products, driven by the global push for low-carbon development.

The company is preparing a new agenda to reduce market risks related to product sale on international markets.

One metric in the new agenda is the carbon footprint of the entire supply chain, from feedstocks through intermediates to final products. This information is a prerequisite to entering into sale contracts on international markets (for example, paraxylene sale contracts).

Reputation risks

Reputation risks depend on whether the company is perceived as responsible and responding to climate challenges or otherwise.

Reputation risks are under constant scrutiny due to the priority given to climate impact and management.

The company manages its climate and GHG emission risks, as well as other significant risks, under an integrated risk management framework (IRMF)

+ For more details on the risk management framework, see "Sustainability risk management" on page 31

¹ – Transition risks are risks related to the transition to a low-carbon economy.

Opportunities related to climate change

Increasing the gas component

Natural gas burnt to generate electricity produces almost 50% less greenhouse gases than coal. It will therefore play a key role in the global energy transformation. Gas production at Gazprom Neft grew to 41 bcm in 2019 from 30 bcm in 2015.

The share of gas in company production may exceed 50% by 2030. With OPEC+ production restrictions, gas production becomes the main opportunity for business growth.

APG monetisation

The company expects to earn extra operational income from the sale of APG and the products of APG processing.

Gas infrastructure development and long-term gas-supply contracts will stimulate this process to achieve higher APG utilisation.

Efficient use of resources

The company expects that more efficient production and distribution processes will reduce its operating costs through:

- lower energy consumption by main and auxiliary equipment with given/planned output;
- lower losses in electric equipment and transmission grids;
- better performance of heat exchanger networks and cooling systems;
- lower heat consumption;
- lower hydrocarbon losses and APG flaring.

Clean energy

Alternative energy sources will provide additional generation for company assets, utilise previously unused spaces, and make processes more energy efficient and environmentally friendly.

Additional opportunities can arise from reputational benefits, resulting in higher demand for company products, as well as lower electricity procurement costs.

Climate management

Board of Directors

Strategic management of the company, determining the basic principles and approaches around climate change.

CEO and the Management Board

Developing and implementing the company's corporate climate strategy in line with international and global best practices and standards. Monitoring the implementation of GHG emission reduction projects.

ESG Steering Committee

Climate impact strategy development. Overall management of the strategy's implementation; review of results. Medium and long term planning of climate impact mitigation. The committee includes the Management Board members and key company experts.

Head of the HSE Directorate

Evaluation and management of climate-related risks and opportunities. Their responsibilities include carrying out:

- GHG emissions inventories;
- performance analysis against GHG emission targets;
- CDP reporting;
- analysis into the mitigation of negative environmental impacts from GHG emissions.



Gazprom Neft at a glance



Sustainable development management



Customer care



Health and safety



Environmental safety



Employee development



Social policy



Appendices

In 2020, company management continued its efforts towards building the company's approach to climate change by reviewing the assessment and management of climate-related risks and opportunities, and drafting an action plan to build an environment and climate management system at the company.

Targets for specific GHG emissions were set for the company's subsidiaries, reflecting the profile of their respective operating regions.

We monitor progress against the targets set for assets and the Corporate Centre, with an annual progress review directly contributing to management performance appraisals

Strategy sensitivity to various climate scenarios

The key factors that may impact future scenarios include changes in the climate policy and the decarbonisation of global energy. The company uses a scenario approach in its Development Strategy to 2030.

Strategic scenarios considered by Gazprom Neft include the New World scenario, which assumes harmonised international environmental policy and intensive decarbonisation of both the energy industry and transport all across the world.

Since the future of energy is extremely uncertain, the company uses a proprietary methodology to monitor and assess the situation for various signs of different scenarios playing out. The results of this analysis are taken into account in the annual update of the company's strategic project portfolio, ensuring its sustainability under any external environment development scenario.

The company's project portfolio is stress tested against all possible scenarios of how the external environment may develop, including changes in prices, volumes and regulation

Accounting for greenhouse gas emissions

The energy sector is considered one of the main sources of GHG emissions, including CH₄ and CO₂. The assessment of GHG emissions is a key element of the climate risk management system in place across the company. For this purpose, Gazprom Neft has adopted a Corporate Standard on GHG Emission Monitoring and Accounting aligned with applicable Russian laws and international guidelines.

The approaches used in the Corporate Standard are fully aligned with the GHG Protocol Corporate Standard of the World Business Council for Sustainable Development (WBCSD) and the World Resources Institute (WRI), and ISO 14064-1:2006 (GOST R ISO 14064-1-2007), which are widely recognised in the industry and consistent with Russian legislation. This methodology also takes into account additional recommendations included in the IPIECA/API/OGP Petroleum Industry Guidelines for Reporting Greenhouse Gas Emissions, as well as Global Reporting Initiative (GRI) standards.

Amendment of the GHG emission accounting standard

In 2020, the Corporate Standard on GHG Emission Monitoring and Accounting was amended and supplemented with Scope 3 emission accounting.

Also, regional factors used to calculate indirect energy emissions (Scope 2) were reviewed in line with international recommendations and best practices, helping to amend data on these emissions in 2018 and 2019.

GHG emissions by segment

| Type of emission | 2018 | 2019 | 2020 |
|---|-------------|-------------|-------------|
| Direct (Scope 1) GHG emissions, mt of CO₂ equivalent | 20.0 | 22.0 | 21.7 |
| Upstream Division | 14.09 | 16.26 | 15.25 |
| Downstream Division | 5.28 | 5.38 | 6.17 |
| Energy indirect (Scope 2) GHG emissions, mt of CO₂ equivalent | 4.5 | 6.9 | 4.4 |
| Upstream Division | 2.49 | 5.02 | 2.57 |
| Downstream Division | 1.58 | 1.64 | 1.47 |
| Specific GHG emissions (Scope 1 + Scope 2) | | | |
| Upstream Division, mt of CO ₂ equivalent/mtoe | 0.219 | 0.270 | 0.233 |
| Downstream Division, mt of CO ₂ equivalent/mtoe | 0.196 | 0.207 | 0.231 |

-9.7% reduction in greenhouse gas emissions (Scope 1 + Scope 2)

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GHG emissions, mt of CO₂ equivalent

| Type of emission | 2016 | 2017 | 2018 ¹ | 2019 ¹ | 2020 ¹ |
|--|-------------|-------------|-------------------|-------------------|-------------------|
| GHG EMISSIONS (SCOPE 1 + SCOPE 2) | 23.8 | 22.8 | 24.5 | 28.9 | 26.1 |
| Direct emissions (Scope 1) | 15.4 | 16.2 | 20.0 | 22.0 | 21.7 |
| CO ₂ | 14.5 | 14.9 | 18.8 | 20.9 | 20.7 |
| CH ₄ (methane) | 0.9 | 0.8 | 0.9 | 0.6 | 0.7 |
| Indirect emissions (Scope 2) | 8.4 | 6.6 | 4.5 | 6.9 | 4.4 |
| SCOPE 3 | - | - | - | - | 198.5 |

Projects to reduce GHG emissions

The company is constantly searching for technically feasible and economically viable tools to reduce GHG emissions, principally by implementing projects to increase APG utilisation.

Gazprom Neft aims to ramp up its APG utilisation, despite the planned increase in hydrocarbon production.

Gazprom Neft endorses the key provisions and goals of the Zero Routine Flaring by 2030 initiative, which aims to completely eliminate routine APG flaring by 2030.

In 2020, the APG utilisation rate of the company subsidiaries in Russia stood at 91.1% (up 2.1% year-on-year). If low-depleted fields (some of which showed 5.4% growth year-on-year) are excluded, the APG utilisation rate reached 95.1% through gas infrastructure construction projects and gas infrastructure reliability improvement programmes.

These achievements came on the back of a high on-stream factor for company facilities (over 96%) and ramp-up to full production of new gas infrastructure at a number of fields. The company is pushing ahead with investments into new equipment that improves gas utilisation at producing assets.

The company's Board of Directors has set the ambition of achieving an APG utilisation rate (including new assets) of at least 95%² by 2022 despite growing production.

GHG emissions fell, mainly as a result of lower energy consumption driven by the OPEC+ production cuts and changes in the electricity emission factor

≥ 95%
APG utilisation rate² by
2022

1 – In 2020, energy emissions (Scope 2) were recalculated with amended regional factors. Recalculation included comparable data for 2018 and 2019. The factor change had no material impact on earlier periods.

2 – Within the Russian Federation, excluding the assets of Gazpromneft-Zapolyarye.

Key projects to boost APG utilisation in 2020

- Underground gas storage commissioning at the Zapadno-Messoyakhsky licence block (Messoyakhaneftegaz, a JV). A unique APG utilisation model was implemented at Gazprom Neft: APG produced at the Vostochno-Messoyakhsky licence block is injected into the non-producing gas-bearing formations of the Zapadno-Messoyakhsky licence block, preserving the vulnerable polar ecosystem. A total of 1.5 bcm of gas can be injected into storage per year.
- Commissioning of a gas transmission system at the Urmano-Archinskaya group of fields and the Yuzhno-Pudinsky licence block in the Tomsk Oblast (Gazpromneft-Vostok). The project increased commercial gas delivery by nine times and improved overall APG utilisation.
- Upgrade of low-pressure gas treatment and utilisation equipment at the Vostochny block of the Orenburgskoye oil and gas condensate field. New equipment improved the environmental situation at the field and brought the APG utilisation rate to 98% at the company's largest oil producing asset.
- Yamal Gas project implementation. The expansion of the comprehensive gas treatment unit (CGTU) to a fully-fledged GPP is ongoing. In a project that will keep the APG utilisation rate at 95%, the pipeline across the Gulf of Ob continues to be laid, with 36 km out of the 56 km onshore section and shore facilities already constructed. The company plans to begin supplying gas in to the Unified Gas Supply System (UGSS) of Russia in 2022.



Gazprom Neft consistently improves APG utilisation. We have completed major projects to develop gas infrastructure in the company's key operating regions in recent years. The overall APG utilisation level for Gazprom Neft's current assets is as high as 95% today. We have been able to achieve this level while increasing production every year, which has almost doubled over the last decade.

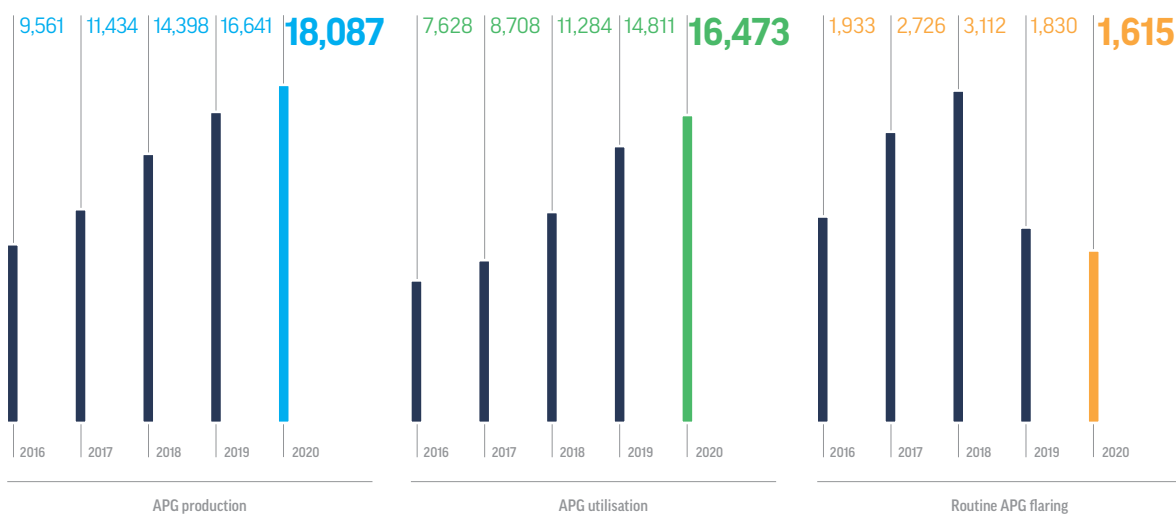
VADIM YAKOVLEV

Deputy CEO for Exploration and Production, Gazprom Neft PJSC



A unique APG utilisation model at Messoyakhaneftegaz

APG production and utilisation,¹ (mcm)



¹ – Within the Russian Federation. Excluding JVs.

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Driving energy efficiency

Energy efficiency is one of the key tools to reduce greenhouse gas emissions and climate impact.

Gazprom Neft's Energy Policy is in place to improve energy efficiency. Certified to ISO 50001, it underpins the company's energy management system (EMS). The EMS is successfully operated at the Gazprom Neft Corporate Centre and 15¹ major subsidiaries, as well as upstream and downstream joint ventures.

The year-on-year growth in energy consumption in 2020 came amid a larger number of subsidiaries being included in energy use calculations, the commissioning of a combined oil refining unit (CORU) at the Moscow Refinery, and the large energy consumption needed for the pre-commissioning of a deep conversion complex at the Omsk Refinery.

The energy management system is continually being updated, by implementing and amending corporate regulations, training personnel, recertifying to the new version of ISO 50001:2018, and certifying new assets. In 2020, the company's subsidiaries passed a third-party audit and were issued new certificates of compliance with ISO 50001:2018. Furthermore, an ISO 9001, 14001, 45001 and 50001-compliant integrated management system was implemented and certified at Noyabrskenergoneft.

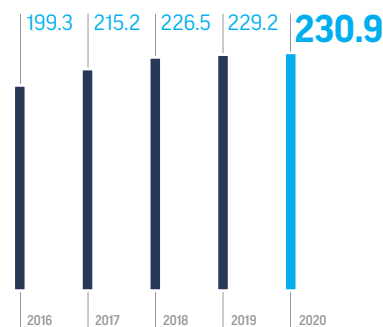
Relevant departments at each production division are responsible for energy consumption and energy efficiency, namely the Department of Energy of the Upstream Division and the Department of Energy of the Downstream Division.

Key technical energy-saving initiatives at the Upstream Division include replacing electric submersible pumps, using brushless DC electric motors, switching to short-term or intermittent well operation, carrying out well interventions to reduce the amount of water used and to reinject any that is produced, and introducing energy-efficient pumps.

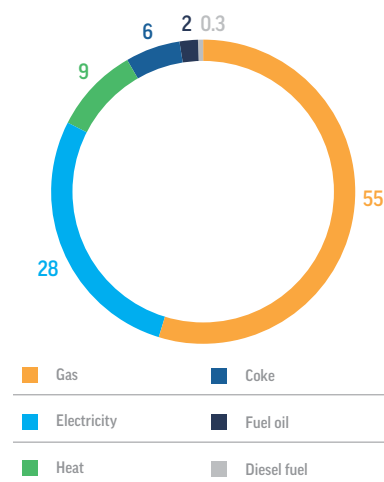
Key energy-saving activities at the Downstream Division include upgrading process furnaces, optimising the recovery system and using secondary energy resources in production processes, boosting efficient fuel use in furnaces through advanced technologies, optimising steam-condensation systems, improving the performance of heat-supply systems, upgrading lighting systems, and adding permeate to condensate.

Key organisational energy-saving initiatives include energy audits, an energy-efficiency monitoring system, optimising the cost of electricity from external grids, replacing diesel power plants with gas-turbine power plants, IT projects aimed at energy saving, and certification/recertification.

Energy consumption (million GJ)



Energy consumption by type (%)



Gazprom Neft participates in Russian campaigns to promote energy-efficient living to its employees and to people in its operating regions; for example, the Russian Energy Week International Forum, the all-Russian #VmesteYarche (#TogetherBrighter) festival, and the worldwide Earth Hour campaign

¹ – Gazprom Neft Moscow Refinery, Gazprom Neft Omsk Refinery, Gazprom Neft Orenburg, the Gazprom Neft Ryazan Bitumen Binders Plant, the Gazpromneft Moscow Lubricants Plant, Gazpromneft-Yamal, Gazpromneft-Khantos, Gazpromneft-Noyabrskneftegaz, Gazpromneft-Vostok, Messoykhaneftegaz (JV), NIS, Noyabrskenergoneft (since 2020), the Omsk Lubricants Plant, Slavneft-Megionneftegaz, and Slavneft-YANOS (JV).

ENERGY SAVED THROUGH ENERGY-SAVING AND ENERGY-EFFICIENCY PROGRAMMES

Upstream Division

1 million GJ

Downstream Division

3.5 million GJ



Solar power plants will add generation capacity to Gazprom Neft's refineries, making them more energy efficient and environmentally friendly.

ANATOLY CHERNER

Deputy CEO for Logistics, Refining and Sales at Gazprom Neft PJSC



Clean energy

Gazprom Neft develops renewable energy generation.

The Omsk Refinery completed the first phase pilot operation of a 1 MW solar power plant. The first power plant in the region covers an area of 2.5 ha and comprises 2,700 solar panels, including panels made by the Russian manufacturer Hevel. This power plant generated more than 1.1 million kWh of electricity in 2020, providing green electricity for 98% of the energy needs at the Omsk Refinery's accommodation complex (houses up to 2,500 people) and reducing CO₂ emissions by 455 tonnes. The plant's capacity is expected to grow to 20 MW in 2021 through regional renewable energy support measures.

In 2020, Gazprom Neft commissioned its first solar-powered filling station, located in the Yaroslavl Oblast. In sunlight, the solar power plant is used as the main source of electricity.



Rolling out energy-efficient technologies at filling stations



Gazprom Neft launched solar power generation at the Omsk Refinery



The first filling station powered by solar panels

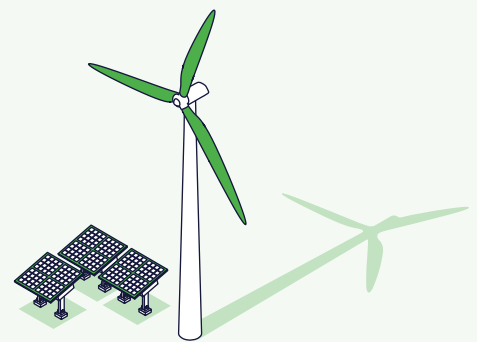
Development of renewable energy generation

In 2020, the Downstream Division completed feasibility studies for over 30 potential renewable energy generation sites, with eight sites shortlisted for priority review.

- Renewable energy generation project launched in Salsk. The project includes a solar power plant with options to improve the energy efficiency of production facilities. Total power output of the project is expected to reach 500 kW, with project completion scheduled for 2021.
- As part of its contribution to the efforts of a working group on renewable energy development, Gazpromneft-Aero plans to develop and launch renewable energy projects using solar panels and solar thermal collectors at several priority sites in 2021.

The Badra project in Iraq uses solar batteries on block valve stations (BVS). Solar panels power 13 BVSs on an oil pipeline and four BVSs on a gas pipeline.

30+ sites analysed



NIS alternative energy projects

NIS, Gazprom Neft's subsidiary in Serbia, has over 60 geothermal wells, which can be used for generating electricity and heat. NIS now operates four wells that provide third-party commercial projects with heat and hot water.

Gazprom Neft continued to develop geothermal generation in Serbia in 2020. The company completed a full analysis of Serbia's geothermal potential and built a 3D model of hot water reservoirs. These efforts resulted in a digital tool for predicting geothermal project potential, unique in the region.

Local municipalities and foreign partners from France, Iceland and Turkey voiced their interest in collaborating with NIS on geothermal projects, with active negotiations already underway. The parties plan to carry out joint evaluation and selection of the best pilot project.

Through cooperation with partners, NIS continues the construction of the Plandište wind farm, which envisages the installation of 34 wind turbines with a total capacity of 102 MW and an expected annual electricity output of 212 GWh. This wind farm will reduce emissions equivalent to 332,000 tonnes of CO₂ per year.

Thanks to the geology of the Pannonian Basin, Serbia has some of the greatest potential for geothermal power generation in continental Europe

332,000
tonne reduction in CO₂ emissions thanks to the Plandište wind farm