



METHANE
GUIDING
PRINCIPLES

Methane Guiding Principles Signatory Reporting

Gazprom

May 17th 2021



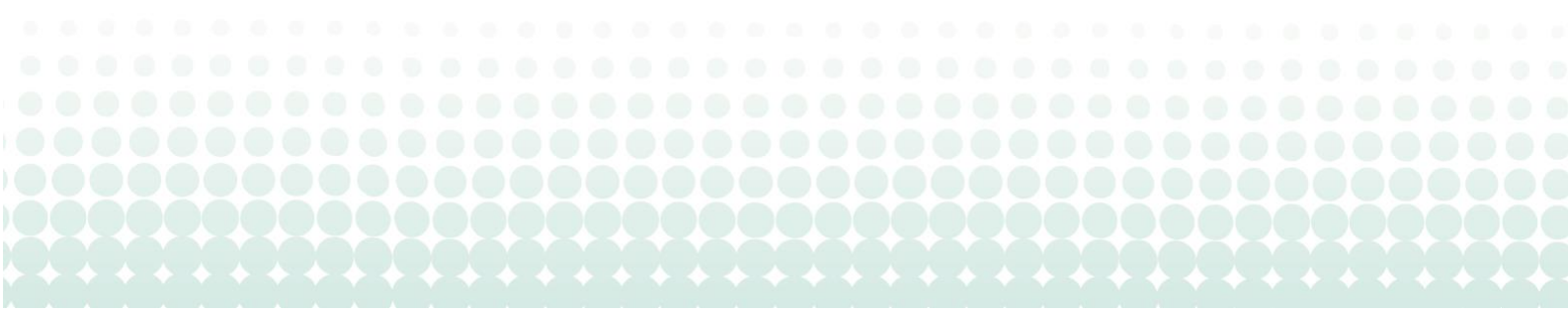


COMPANY: **Gazprom**

DATE: **May 17th 2021**

YEAR OF JOINING METHANE GUIDING PRINCIPLES: **2018**

SENIOR REPRESENTATIVE: **Executive secretary of Gazprom Coordinating committee for Sustainable Resource Management, Head of Division, Dr. Konstantin Romanov**



Principle One:
Continually reduce methane emissions

2020 completed activity	2021 intended activity
<p>Gazprom comprehensive methane emissions policy requires not just an active system to detect and eliminate leaks, but also a program to continuously reduce the level of emissions in ongoing activities, in particular during pipeline maintenance and repairs. Gazprom has implemented such a program. The following gives some illustrations of the type of activities undertaken:</p> <ul style="list-style-type: none"> - The reduction in gas vented from pipeline sections during repair via the removal of gas to an adjoining gas pipeline, the use of mobile compressor stations, gas recovery from gas compressor units for the operational needs of a compressor station, gas recovery through gas distribution stations to consumers; - The replacement of defective shut-off valves in the linear part of the main gas pipeline using the hot tapping technology; - The repair of pipe defects based on the results of in-line flaw detection without gas discharge by means of composite spiral coupling; - Well exploration using telemetry without releasing gas into the atmosphere, etc. <p>The volume of natural gas conservation during repairs of main gas pipelines in 2020 amounted to over 400 million m³.</p>	<p>Gazprom is committed to constantly working on methane emissions reduction and to continue to improve monitoring and reporting.</p>

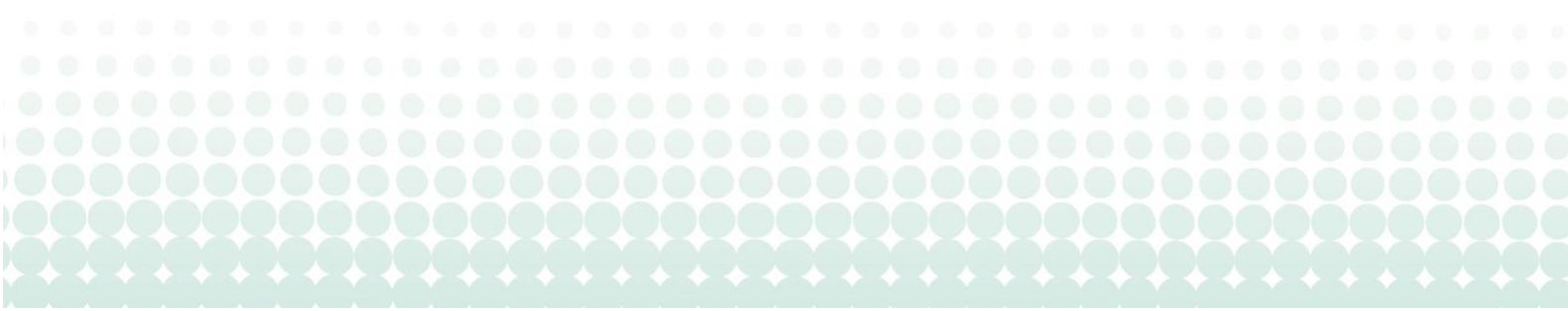


What are your organisation's total methane emissions?

2020 completed activity	2021 intended activity
<p>All Gazprom Group subsidiaries regardless of their business activities have been monitoring and calculating the quantity of methane emissions according to a uniform procedure.</p> <p>Gazprom's methane emissions by activity in 2020:</p> <p>Gas Production – 0.048 million tons of CH₄,</p> <p>Gas Transportation – 0.953 million tons of CH₄,</p> <p>Gas Processing – 0.001 million tons of CH₄,</p> <p>Underground gas storage - 0.017 million tons of CH₄.</p> <p>Gazprom provides, every year, an independent certification of the methane emissions information with the involvement of the KPMG international auditing company. The auditors perform the required procedures in accordance with the International Standard 3410 "Confidence Building Tasks for reporting greenhouse gas emissions" (IES 3410).</p>	

Does your organisation report methane intensity? If so, please specify the intensity.

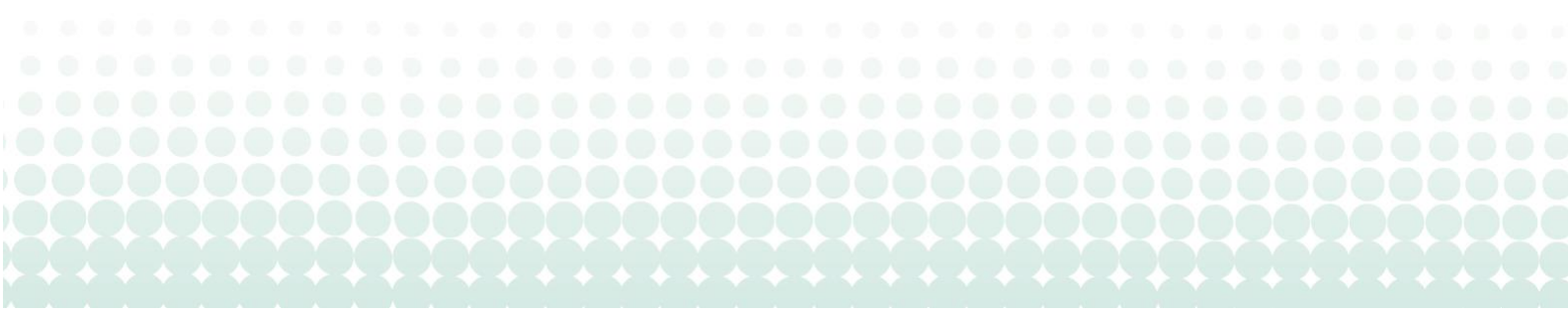
2020 completed activity	2021 intended activity
<p>According to 2020 data, Gazprom emissions were equal to 0.02 % of the gas produced, 0.24 % of the gas transported and 0.03 % of the underground gas storage volumes.</p>	





Do you have a methane emission target?

2020 completed activity	2021 intended activity
<p>A Corporate Environmental Goal of Methane Emissions Reduction has been successfully implemented within the Gazprom environmental management system. This has been certified for compliance with the ISO 14 001 international standard.</p> <p>The corresponding measures are implemented within the Roadmap for Greenhouse Gas Emissions Management in Gazprom Group companies until 2030, resulting in programs of innovative development until 2025, and energy saving and energy efficiency programs.</p> <p>In addition, a bonus system for methane emissions reduction was established for the employees of Gazprom subsidiaries, as an incentive to further improve emissions reduction.</p>	



Principle Two:

Advance strong performance across the gas supply chain

2020 completed activity	2021 intended activity
<p>Pursuant to Russian legislation, methane is considered a pollutant, unlike in other countries. As a consequence, Russia applies strict requirements regarding methane emissions standards, monitoring, accounting and reporting across the gas supply chain.</p> <p>Emissions of methane into the atmosphere are subject to specific charges due to their negative environmental impacts. Permissible methane emission rates are set for business entities in Russia.</p> <p>With respect to natural gas transmission, required limits and standards are set by the Ministry of Energy of the Russian Federation. Regarding gas production, methane emissions are limited in accordance with the “Best Available Technologies Guidebook” approved by the Federal Agency for Technical Regulation and Metrology.</p> <p>The Federal Service for Supervision of Natural Resources Management has the responsibility to ensure the reliability of reported data on methane emissions.</p> <p>The importance given by the Russian State to ensuring accurate measurement and reporting can be seen from the requirements placed on companies to monitor and declare emissions: Data on actual methane emissions are submitted via an annual form of federal statistical observation № 2-TP (air) to the Federal Service for Supervision of Natural Resources Management in the period until January 22 of the following year. The form provides emissions from both organized and unorganized sources. The completed forms are signed by the management of the organizations concerned and are a basis for collecting a payment for negative environmental impact that ensures that legal entities and individual entrepreneurs bear corresponding liability. The said accounting is mandatory for all processes in the oil and gas industry.</p> <p>Resulting data on methane emissions are published on the official websites of the Federal Service for Supervision of Natural Resources Management, the Federal Service for Hydrometeorology and Environmental Monitoring, the Federal State Statistics Service, the Ministry of Energy, and the Ministry of Natural Resources and Environment of the Russian Federation.</p>	<p>It is important to ensure effective monitoring and reporting of methane emissions by all gas producers and across the whole gas chain. Gazprom stands ready to collaborate to make this effective, notably given its aforementioned experience in monitoring and reducing its own emissions to very low levels.</p>



Principle Three: Improve accuracy of methane emissions data

2020 completed activity	2021 intended activity
<p>Gazprom has established a detailed methane emissions monitoring system covering its entire operations, which is enforced via a series of detailed Corporate Regulations. The following list illustrates that these Corporate Regulations cover</p> <p>all aspects of an effective methane emissions strategy:</p> <ul style="list-style-type: none"> - “The standard program for natural gas emissions evaluation at Gazprom facilities”; - “Methods of measuring the volume of methane emissions into the atmosphere at Gazprom facilities”; - “Methodological guidelines for calculation of gross hydrocarbon emissions into the atmosphere at Gazprom (total)” - “Methodology for determining the standard losses of combustible natural gas during production at Gazprom organizations”; - “Methods of natural gas consumption rationing for own technological needs and technological losses of gas trunkline transport”; - “Methodology for the determination of natural gas consumption rates and normative requirements for own technological needs of Gazprom processing facilities”; - “Methods of determining normative technological losses of natural gas, gas condensate, oil at processing facilities”; - “Instruction on calculation and rationing of emissions at gas distribution stations (automated gas distribution stations, gas control units), gas measuring stations”; - “Methodology for determining gas expenditures for technological needs of gas companies and losses in gas distribution systems”; - “Technical standards for natural gas emissions and leaks from the process equipment”; - “Standards for pollutants emissions into the atmosphere from gas production, transportation and storage”, etc. 	<p>Having many years of experience in inventory and verification of methane emissions, Gazprom has repeatedly stressed the need for their objective assessment throughout the whole production chain by all gas producers. It is ready to share its experience and best practices on this issue and collaborate internationally.</p> <p>Gazprom with partners (Wintershall Dea, Gazunie, etc.) are working on improving data accuracy and closing the gap between inventory and companies data.</p> <p>Joint bottoms up measurement campaign in cooperation is planned at Russian-German Joint Ventures.</p>



2020 completed activity	2021 intended activity
<p>Leakages of methane due to leakage of equipment are determined by regular and consistent measurements with the design of relevant protocols.</p> <p>With respect to the task of detecting methane at gas industry facilities, detectors installed on helicopters or drones are also used.</p> <p>Gazprom established a corporate control of gas leaks which is carried out by a specialized Inspection Panel which acts independently of gas transmission and gas production subsidiaries. The inspection results are submitted to the Gazprom management for coordination and control on a monthly basis (or on an ad hoc basis, where necessary).</p> <p>Gazprom is developing its own satellite technology. Nonetheless it is aware that advances are already being made in this area and valuable data are being generated.</p> <p>Based on the materials of the analytical company Kayrros, Gazprom has analysed satellite data of the European Space Agency. This has led to the conclusion that methane emissions detected by such satellites are associated with scheduled diagnostic and repair works at gas transmission system facilities. Such works were carried out in full compliance with industrial safety legislation and the said emissions stayed within the established standards of permissible emissions. According to Kayrros independent verification, the observed volumes of fugitive methane “fall within the rate of transmission losses reported by Gazprom” https://twitter.com/Kayrros/status/1301557809868345344?s=03</p>	<p>A key consideration with respect to measurement of the impact of methane emissions on GHG regarding natural gas is the conversion of methane (the main component of natural gas) emissions into the CO₂ equivalent. It is important to take an objective approach in this respect, compatible with scientific research. It is thus appropriate to follow the decision of the Conference of the Parties serving as the Meeting of the Parties to the Paris Agreement (18/CMA.1, annex, para. 37) which considers that a 100-year time horizon is required. In order to calculate the effect of GHG emissions on the climate in an objective manner 5th IPCC Assessment Report recommends to use the Global Temperature Change Potential. https://www.ipcc.ch/assessment-report/ar5/ It is therefore necessary to apply a conversion factor of 6 to reflect fossil methane (CH₄) emissions in the CO₂ equivalent.</p>



Principle Four:

Advocate sound policy and regulations on methane emissions

2020 completed activity	2021 intended activity
<p>The availability of the statistical data and measurement activities outlined above has enabled the development and testing of national (specific) factors for the oil and gas industry based on actual methane emissions.</p> <p>This has enabled Gazprom to move from Tier 1 (standard emission factors for developed and developing countries) to Tier 2 in the IPCC Climate Change Guidelines for National Greenhouse Gas Inventories (National Greenhouse Gas Inventory Report on anthropogenic emissions by sources and removals of carbon dioxide (GHG)).</p> <p>Furthermore, the availability of detailed methane emissions statistics based on reporting allows Gazprom, in practice, to apply the methodological Tier 3 approach of the IPCC Guidelines.</p> <ul style="list-style-type: none"> - Similarly, these actions enable Gazprom to meet Tier 4 and Tier 5 of the OGMP 2.0 Methane Partnership methodology. 	<p>Gazprom, stating its determination to continue investing in monitoring and reducing methane emissions and continue to improve its existing high standards, suggests the following: effective data exchange between countries will be essential, as well as sharing best practices to ensure methane emission reductions; joint and coordinated action will maximise methane emission reductions throughout the gas industry chain.</p>

Principle Five:

Increase transparency

2020 completed activity	2021 intended activity
<ul style="list-style-type: none"> - Since 1993 Gazprom publishes data on methane emissions in its annual environmental reports https://www.gazprom.com/nature/environmental-reports/ 	<p>Gazprom provides, every year, an independent certification of the methane emissions information with the involvement of the KPMG international auditing company.</p>

Commentary:

More information

<https://www.gazprom.com/f/posts/72/802627/sustainability-report-en-2019.pdf>

