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LETTER OF DEPUTY CHAIRMAN OF OAO GAZPROM MANAGEMENT COMMITTEE

Dear readers!

On behalf of OAO Gazprom Management Committee I am presenting you our corporate Environmental Report 2009.

We annually prepare and publish our environmental performance on the basis of the information transparency principle, as provided by OAO Gazprom Environmental Policy.

The present report encompasses information on the corporate environmental management system, data of the environmental impact resultant from *Gazprom Group* activities, the environmental impact assessment referring to the crucial projects, measures implemented during the reporting period as well as the most promising directions in environmental safety ensuring and environmental funding.

Being in compliance with the national and international legal framework and with the legislation of countries, where our companies are performing, we have been intensively developing the system of corporate environmental standards.

Our ongoing construction and production modernization suggests a rule that we follow: all *Gazprom Group* facilities must be characterized by a high level of industrial and environmental security, aimed at application of the advanced energy efficient and resource saving technologies.

All data of our project related impact on natural systems are exposed to a thorough analysis; we avoid decisions which lead to unknown results, steadily reduce our industrial operation impact on the environment, make accurate risk evaluation.

Gazprom Group companies make a great contribution into the Russian economy and ensure the achievement of the state sustainable development objectives by the application of innovative and advanced technologies. Our cooperation with regional authorities, participation in environmental programs and activities provide for the population living and conservation of genuine peoples' traditional ways of life, as well as the conservation of biodiversity.

This all is based upon our crucial task: synchronize high economic performance with the most possible care of natural richness, which is the life essence of the present and future generations.

Deputy Chairman of
Management Committee of OAO Gazprom,
Chairman of Coordination Committee
for Environmental Protection and Energy Efficiency

A.G. Ananenkov

INTRODUCTION

The Environmental Report 2009 integrates information about substantial environmental aspects of *Gazprom Group* companies' activities; it contains data on current environmental impact and undertaken mitigation measures, environmental management and funding, investments in research and development, technical modernization, which were aimed at elevating of environmental security of the production complex. The Report highlights the issues of *Gazprom* Environmental Policy implementation, interaction with governmental authorities and public relations, participation of *Gazprom Group* companies in regional programs, as well as the issues of the environmental monitoring system modernization.

The environmental data performed by the production activities were formally collected from *Gazprom Group* companies and exposed to an accurate processing. The Report provides the data performed in total by *Gazprom Group*, OAO Gazprom (including the retrospective analysis of 5 years) and single *Gazprom Group* companies, which contribute much to the analyzed scope of activities. As it has proved to be to the paramount importance in terms of environment, the Report presents the activities of Sakhalin Energy Investment Company Ltd. and Nord Stream AG.

Hereinafter the term "OAO Gazprom" refers to the heading company of *Gazprom Group*, i.e. Open Joint Stock Company Gazprom with its 100% subsidiary companies and organizations. The term "*Gazprom Group*" or "*Gazprom*" hereinafter refers to the companies incorporated by OAO Gazprom itself and additional group of subsidiary companies. The term "*Gazprom Neft Group*" or "*Gazprom Neft*" hereinafter likewise stands for the company of OAO Gazprom Neft and its subsidiaries. The term "*Gazprom energoholding*" stands for the company of OOO Gazprom energoholding and its subsidiaries (OAO Mosenergo, OAO OGK-2, OAO OGK-6, OAO OGK-1, OAO TGK-1).

The list of OAO Gazprom subsidiary companies and organizations, which have reported on their environmental protection activities, is given below:

"Gazprom dobycha Astrakhan"
"Gazprom dobycha Krasnodar"
"Gazprom dobycha Krasnoyarsk"
"Gazprom dobycha Nadym"
"Gazprom dobycha Noyabrsk"
"Gazprom dobycha Orenburg"
"Gazprom dobycha Urengoy"
"Gazprom dobycha Yamburg"
"Gazprom bureniye"
"Gazprom pererabotka"
"Novo-Urengoy gas chemical complex"
"Gazprom UGS"
"Gazprom liquefied natural gas"
"Gazprom avia"
"Gazpromtrans"
"Gazflot"
"Gazprom invest Vostok"
"Gazprom invest Zapad"
"Gazprom invest Yug"
"Gazprom podzemremont Orenburg
"Gazprom podzemremont Urengoy"
"Gazprom energo"
"Gazprom transgaz Volgograd"
"Gazprom transgaz Yekaterinburg"
"Gazprom transgaz Kazan"
"Gazprom transgaz-Kuban"
"Gazprom transgaz Makhachkala"
"Gazprom transgaz Moscow"
"Gazprom transgaz Nizhny Novgorod"
"Gazprom transgaz Samara"
"Gazprom transgaz Saint-Petersburg"
"Gazprom transgaz Saratov"
"Gazprom transgaz Stavropol"
"Gazprom transgaz Surgut"
"Gazprom transgaz Tomsk"
"Gazprom transgaz Ufa"
"Gazprom transgaz Ukhta"
"Gazprom transgaz Tchaikovsky"
"Gazprom transgaz Yugorsk"
"Gazprom neft shelf"
"Gazprom dobycha shelf"
"Gazprom tsentrremont"
"Gazprom sotsinvest"
"Yamalgazinvest"

Gazprom Group will stand for OAO Gazprom (all above mentioned subsidiaries) and the following companies:

"Purgaz"
"Tsentrgaz"
"Gazpromregiongaz"
"Regiongazholding"
"Zapsibgazprom"
Vostokgazprom Group
Gazprom Neft Group
Gazprom energoholding and its subsidiaries
"Mosenergo"
"OGK-2"
"OGK-6"
"TGK-1"
"Daltransgaz"
"Sakhalin Energy Investment Company Ltd"
"SeverEnergia" and its subsidiaries
"Kaunasskaya HPS"
"Severneftegazprom"
"Gazprom neft Orenburg"
"Gazpromtrubinvest"

ENVIRONMENTAL PROTECTION MANAGEMENT

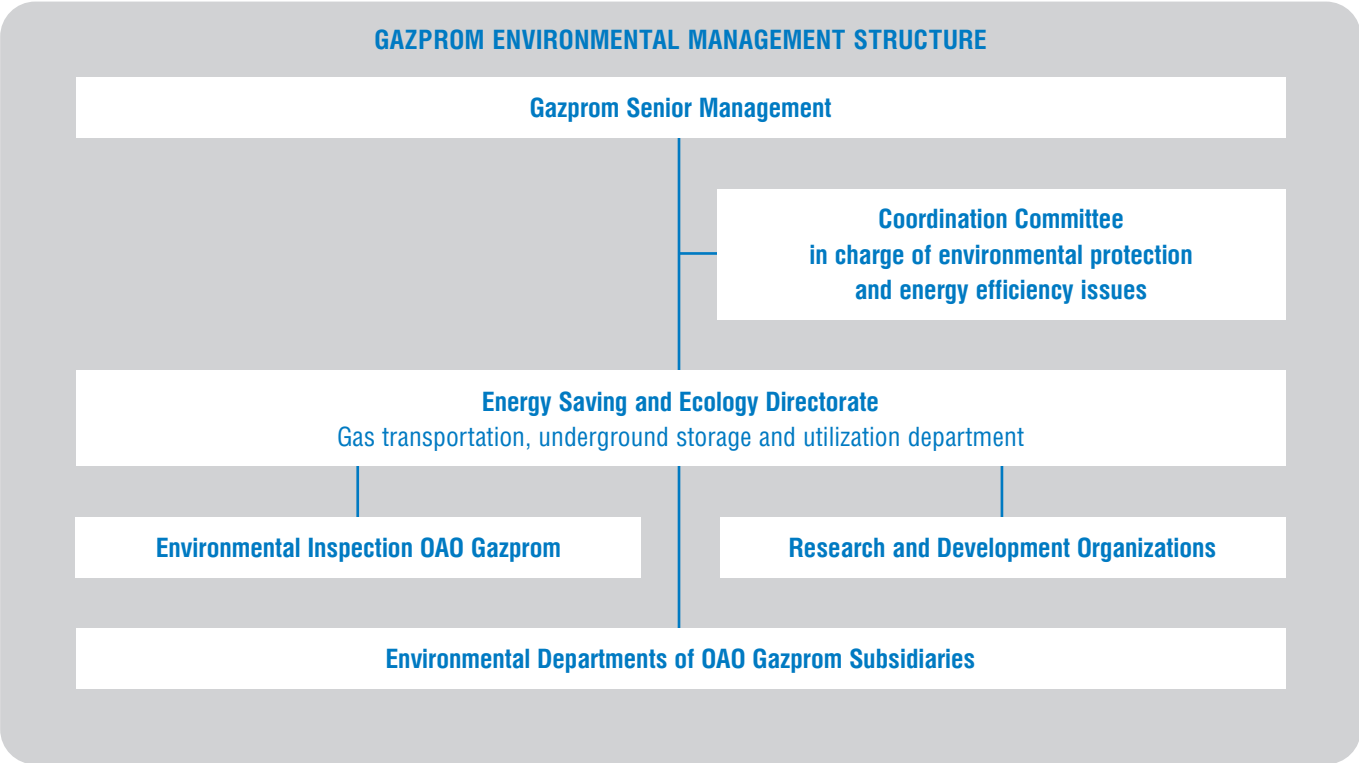
ENVIRONMENTAL PROTECTION MANAGEMENT SYSTEM

Progressive improvement of the environmental management system enables *Gazprom Group* to set new environmental targets and objectives, which leads to a better environmental performance of production activities.

The *Gazprom* environmental management system (EMS) is a highly developed structure, which integrates various environmental management units ranging from OAO Gazprom Administration and subsidiaries to environmental departments of affiliated companies.

The environmental protection and security are based on the provisions of the Corporate Environmental Policy and duties taken by OAO Gazprom to lower its impact on the environment. The company has been developing its own base of normative and guiding documents on environmental protection, rational nature use and energy saving. One of the *Gazprom* EMS elements is the Environmental Inspection, which is in charge of the corporate-level environmental control and supervision. All project materials are exposed to the environmental determination in prior to be submitted to the state environmental control. The systems of industrial environmental monitoring have a good technical support. All ecologists have regular trainings, which elevate their qualification.

In 2007, *Gazprom* set up a Coordination Committee (headed by A.G. Ananenkov, Deputy Chairman of Management Committee of OAO Gazprom) to settle issues of environmental protection and energy saving. The Coordination Committee is in charge of environmental protection complex, cooperation of OAO Gazprom with environmental authorities and non-governmental organizations, as well as the implementation of the corporate Environmental Policy. The Committee discusses problems and solutions, defines targets and objectives and gives an assessment to the efficiency of the company's progress in environmental protection and energy saving. The protocol decisions generated by the Committee are the basis for the *Gazprom* decision-makers.



In 2009 the Coordination Committee held a number of meetings, which were dedicated to the priority subjects:

- problems of energy and resource saving;
- stimulation of associated gas use;
- environmental security in the *Gazprom* construction projects of gas transport system "Sakhalin – Khabarovsk – Vladivostok", gas supply system of Kamchatka Region, sports and tourist facilities and gas pipeline "Dzhubga – Lazarevskoye – Sochi";
- development of environmental insurance system;
- prevention and liquidation system of oil spills;
- strengthening of control over subcontractors in terms of compliance with the environmental protection legislation, corporate environmental standards and accomplishment of environmental activities, provided by the construction projects.

One of the most strategically important issues, which became the top of the Committee agenda, was the Plan of primary environment protection measures in 2009–2010, which was developed to meet the Environmental Policy of OAO Gazprom.

These measures are aimed at minimizing the production impact on the environment, development of environmentally friendly production, establishment of environmental management system under the international standard ISO 14000, effective managing of environmental risks, resolving environmental problems of past years, enhancement of control over the subcontractors' activities in environmental protection area, providing the operational information support and others.

The Plan foresees the preparation of an OAO Gazprom complex environmental target program for 2011–2014 and the Energy Saving Concept of OAO Gazprom for 2011–2013.

The crucial measures hereunder are approved to be the certification of the OAO Gazprom EMS in compliance with the ISO 14001, establishment of a corporate environmental monitoring centre based on the integrated electronic connection media, development of a corporate system of oil accident spills prevention and liquidation, inventory of main environmental production assets and environmental framework activities within the Eastern Gas Program. Additionally, a number of target projects have been identified to reduce the greenhouse gas emissions, for instance, by means of mobile compressor stations, which enable to remove gas venting emissions during repair work.

The activities, determined by the Plan, will be implemented in the frames of OAO Gazprom research and development projects initiated by its subsidiary organizations.

LEGAL FRAMEWORK OF GAZPROM RATIONAL NATURE USE AND ENVIRONMENTAL PROTECTION

As it was mentioned *Gazprom Group* companies have been developing their base of corporate standards (STO Gazprom), guiding documents (Quality Standard, QS) and recommendations (R Gazprom) on environmental protection.

In 2009 **OAO Gazprom** developed and endorsed corporate standards of the series "Guiding documents for design, construction and operation of OAO Gazprom facilities". Environmental protection at OAO Gazprom facilities:

- STO Gazprom 2-1.19-297-2009 "Industrial control over ambient air protection. Coordination and implementation";
- STO Gazprom 2-1.19-307- 2009 "Production manual on calculation of emissions, discharges and industrial wastes at gas transport and underground gas storage facilities";
- STO Gazprom 2-1.19-332-2009 "Technical norms of emissions. Gas pumping aggregates of OAO Gazprom";
- STO Gazprom 2-1.19-333-2009 "Guidelines on development of the document "Environmental impact assessment for investments, design, reconstruction and operation underground gas storage facilities" ";
- STO Gazprom 2-1.12-339-2009 "Guidelines on development of the chapter "Environmental protection measures" of the project design document for construction of gas distribution facilities " ;
- STO Gazprom 2-1.19-345-2009 "Guidelines on environmental monitoring of the potential anthropogenic impact area of underground gas storages in mineral salt bed";
- STO Gazprom 060-2009 "Classificatory of pollutant emission sources at subsidiary companies and organizations of OAO Gazprom ";
- R Gazprom 2-3.5-373-2009 "Recommended limit values of anthropogenic radioactive nuclides in gas condensate delivered to processing";
- STO Gazprom 2-1.12-386-2009 "Development scheme of rehabilitation project document sets for construction of gas distribution facilities";
- STO Gazprom 2-1.19-387-2009 "Industrial environmental control over water objects protection. Coordination and implementation";
- R Gazprom 2-3.5-373-2009 "Anthropogenic radioactive nuclide content limit in gas condensate delivered to processing".

Within the Program of integrated management system development to ensure security of production, environment, population and labor safety, **OAO "Gazprom neft"** developed and is planning to introduce the primary corporate environment protection standards:

- QS-16.01.05 "Management system to ensure security of production, environment, population and labor safety. General provisions and structure";
- QS-16.02.01 "Rules of risk identification, assessment and minimization in security of production, environment, population and labor safety";
- QS-16.01.01 "Corporate guidelines on measures which ensure environmental security of the company's production operations";
- QS-16.02.16 "Audit procedures for management system of production, environment and population security, as well as the labor safety. Development and implementation of corrective and preventive activities".

The following documents were additionally endorsed in 2009:

- methodological recommendations "Complex of measures aimed at reducing production and consumption waste and energy efficiency enhancement";
- instruction "Corporate system of production and consumption waste treatment";
- methodological recommendations on environmental licensing, permission approval, accounting and reporting;
- methodological document "Production manual on identification of naturally recovered sites and self-recoverable oil contaminated sites, which are able to recover without specific rehabilitation measures";
- methodological document "Production manual on quality standards application towards land rehabilitation after oil contamination".

The Program of integrated management system development to ensure security of production, environment, population and labor safety enabled *Gazprom neft* to launch the integrated management system "Azimut", which will

indicate all data on labor safety, production security and environmental security, as well as malfunctions and accidents. The system operation resulted in increase of reporting data reliability and management efficiency in prevention and precaution of accidents and pipeline outbursts especially at the most vulnerable sites.

ENVIRONMENTAL MANAGEMENT SYSTEM IN PROGRESS

The Corporate Environmental Policy stipulates the introduction and provision of efficient environmental management system under the international standard ISO 14000 is a way to reach the strategic targets of environmental protection.

The OAO Gazprom list of primary environment protection measures was endorsed by the *Gazprom* Provision as of September 25, 2008 #45 foresees the development of OAO Gazprom environmental management system (EMS) and its certification under the ISO 14001. This in its turn was a reason to create an ad hoc working group to improve OAO Gazprom EMS.

In 2009 a set of documents was developed which regulates the system functioning:

- Guidelines on OAO Gazprom environmental management system;
- Rules of environmental aspects identification within the corporate environmental system;
- Internal audit procedures for OAO Gazprom environmental management system;

All *Gazprom* subsidiaries, which have no operational EMS, received the basic set of the system documents for an affiliate (for example Gazprom transgaz Stavropol), which contains 9 corporate standards.

Gazprom endorsed the scope of the corporate system operation, which is "Coordination of the environmental management and energy saving systems at (100%) subsidiary companies, which are involved in gas and condensate extraction, transport, underground storage and processing, as wells as the auxiliary activities".

The corporate environmental management system has a two-level hierarchy. The upper (corporate) level is the coordination the subsidiaries' EMS. And the lower level is the subsidiaries' control of environmental aspects of their own activities.

The EMS was either introduced or brought in line with OAO Gazprom system in all 29 subsidiaries, which are covered by the operation scope.

A unified methodology was applied to identify environmental aspects in the subsidiaries, which are covered by OAO Gazprom environmental management system operation scope. This resulted in a list of the most substantial environmental aspects. The identification showed the most substantial aspects in 2009 were methane released during gas main pipelines repair work, compressor operation-related nitrogen oxides emissions, exceeding of water discharge and some wastes disposal limit values.

Considering its capabilities each subsidiary developed a Plan of the environmental management system introduction. Based on these Plans a three-year "Schedule of environmental management systems development under the corporate system of OAO Gazprom".

The EMS certified under the ISO 14000 was introduced in a number of *Gazprom Group* subsidiaries, such as: Gazprom dobycha Astrakhan, Gazprom dobycha Orenburg, Gazprom transgaz Stavropol, Gazprom transgaz Samara, Gazprom transgaz Saint-Petersburg, Gazprom transgaz Ukhta, OAO Tomskneft VNK (*Gazprom neft Group*), OAO Mosenergo, Sakhalin Energy Investment Company Ltd..

Gazprom Group environmental departments employ 1173 people and 926 of them are ecologists of OAO Gazprom subsidiary companies and organizations. In 2009 *Gazprom Group* arranged environmental trainings for 2984 employees, OAO Gazprom arranged trainings for 2140 employees.

As a result of the annual corporate contest of the best environmental department and ecologist Gazprom transgaz Yugorsk won in the "Best Environmental Department of 2009" nomination. The "Best Ecologist of 2009" prize was won by: G.S. Akopova, Head of the Laboratory of environmental protection and resource saving at Gazprom VNIIGAZ LLC; I.V. Tyuryakhin, Head of the Department of environmental protection at Gazprom transgaz Saratov; S.V. Yuretskiy, Head of the Department of environmental protection at Gazprom transgaz Ukhta.

In 2009 OOO Gazprom dobycha Yamburg won the prize of "National Environmental Award" for the development of a technique complex, which enables to reduce the anthropogenic environmental impact during the exploitation of gas fields.

Gazprom VNIIGAZ LLC won the contest of innovation projects in 2009 organized by the Yamal – Nenetsk Autonomous District (YNAD) authorities and took the first place in "Best Innovation Idea in Construction" (development of hydro technical measures to regulate river stream flows for the periods of highly intensive floods on the Yamal Peninsula) and the second place in "Best Innovation Idea in waste utilization, recycling" (prospective scheme of waste treatment in hydrocarbon field exploitation on the Yamal Peninsula).

Together with the United States Environmental Protection Agency and a number of the Methane to Markets Partners Gazprom VNIIGAZ LLC won a certificate in "The Best Paper Award" of the 24th World Gas Conference for the article "Methane's Role In Promoting Sustainable Development In The Oil And Natural Gas Industry".

The joint project of Sakhalin Energy Investment Company Ltd. and the Wild Salmon Center won the premier award of the contest "Corporate Donor of Russia" in "Best Practice in Charity and Social Investments".

The "Oil Terminal Prize 2009" in "Environmental Security" was awarded to the oil expert terminal of Sakhalin Energy Investment Company Ltd. The modern media of oil spill prevention, leakage and evaporation detection installed at the terminal say much for the company's being highly concerned about the region environment conservation.

SCIENTIFIC FRAMEWORK OF THE ENVIRONMENTAL PROTECTION ACTIVITIES

***Gazprom Group* supports profound researches of applied science and innovation developments, which nowadays are the crucial factor of the production efficiency enhancement and environmental impact reduction.**

Gazprom is a modern state-of-the-industry company. *Gazprom* is considered to be not only the Russian energy leader in research and development investments, but also one of the world's five biggest investors in this field. *Gazprom* has a tight cooperation with national and international leading research and developments centers.

The major targets of these researches in the environment protection and security fully match with the strategic goal of the Corporate Environmental Policy – the Company's sustainable development in line with the ensured energy efficiency and environmental security.

As a result of research and development surveys and implemented projects on primary branches of OAO Gazprom scientific activities a number of advanced energy saving and environmentally friendly technologies were put into service in 2009.

The opportunities for application of energy saving technologies and equipment were studied within the "Program of scientific and technical cooperation of OAO Gazprom and the state cooperation Rosatom through 2009–2011", a federal target program "Development of high technological equipment and service provision for fuel and energy industries on the basis of research and development potential of the defense and production complex" (Ministry of Production and Trade of Russia), as well as the cooperation with the Sberbank of Russia Directorate of energy saving and nature use regarding energy projects and the company of Energogazovaya Kompaniya ENEKO, which is specialized in implementation of joint projects on energy saving and OAO Gazprom operation efficiency enhancement.

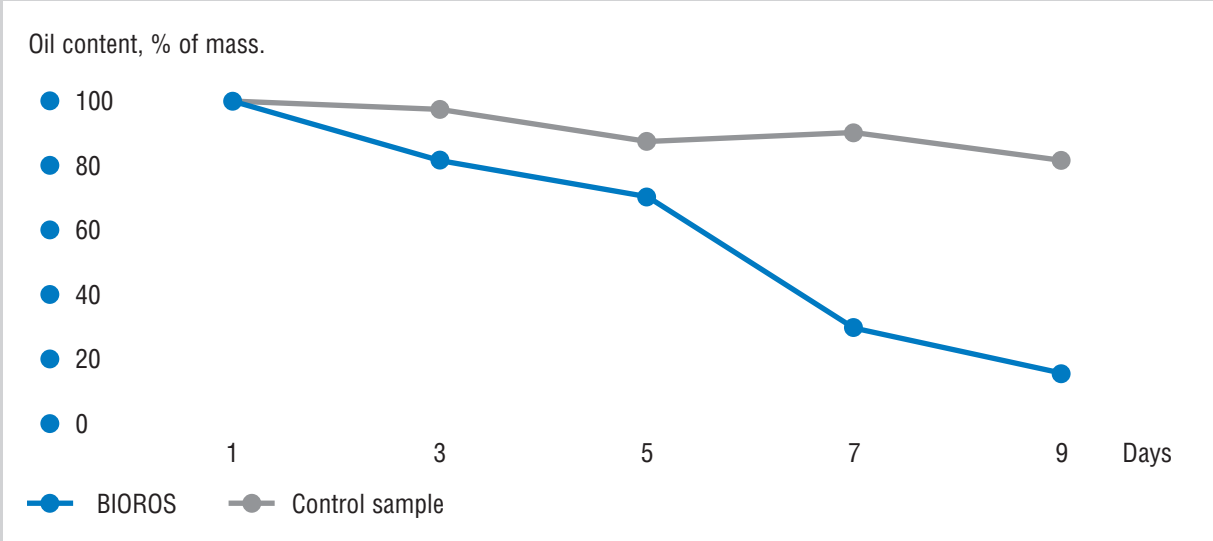
In 2009 a complex ecological and technological expedition "Yamal-2009" was organized in accordance with the Program of the major field exploration in Yamal Peninsula and the adjacent waters, and the Program of scientific and technical cooperation between OAO Gazprom and the YNAD administration in 2009. The expedition was participated in by Gazprom VNIIGAZ LLC and a number of leading institutes such as the MSU n.a. M.V. Lomonosov, the State Hydrology Institute (St.-Petersburg), Institute of Plant and Animal Ecology of the Russian Academy of Science (RAS) Ural Department and others.

The expedition enabled to carry out geological and ecological surveys, collect data on the current status of the environment and identify main environmental problems in the area of the Bovanenkovo oil gas and condensate (BOGC) field and the Bovanenkovo – Ukhta pipeline section in Baidaratsk Bay. A number of meteorological and hydrometric researches, assessment of hazardous geocryological processes development mostly referring to the BOGC, also became the results of the expedition, as well as the filming of flora and soil peculiarities, the fauna researches and inspection of

the crucial pipeline sections. One of the Yamal expedition main objectives was the efficiency assessment of the BIOROS biopreparation (Gazprom development) application for treatment of environmental areas contaminated with hydrocarbon pollutants (fuel oil). The preparation proved to be effective at low temperature of 7°C and reached 85% treatment utility after 9 days, whereas the control sample effect value was 20%. These results report the effectiveness of biotechnologies in the Northern regions in resolving the remediation problems of polluted territories.

The expedition mainly resulted in development of special information system "SIS-Yamal", which is aimed at processing, storing and distribution information on the environmental status, gas extraction and transport technologies. The

OIL PRODUCTS DESTRUCTION RATE IN SOIL IN CASE OF THE BIOROS PREPARATION USE IN THE YAMAL CONDITIONS



SIS-Yamal enables the information exchange with other systems; mathematic modeling of engineering facilities impact on the environmental based on new data. Through its information blocks the system allows to develop an optimal environmental solution for design, construction and operation of the BOGC and gas main pipeline infrastructure facilities.

As demanded by OAO Gazprom and its subsidiaries, Gazprom VNIIGAZ LLC carried out a few research and development environmental activities, which are crucial for the industry at large. They include:

- development of protected version of special information system ("SIS-Yamal") aimed at resolving environmental protection and production challenges in design, construction, operation and control of hydrocarbon extraction and transport facilities of the Yamal field and environment;
- development of scientific and methodological, legal and technical basis, which ensures design and application of highly effective technologies and technical media for the construction of gas main pipeline systems from the Yamal Peninsula;
- development of Implementation Program for the *Gazprom* strategy in liquefied natural gas (LNG) production and delivery;
- energy efficiency monitoring and calculation of energy saving potential at gas main pipeline facilities; Development of an STO Gazprom "Regulation of natural gas consumed by the gas main pipeline complex";
- calculation guidelines for the fuel and energy resource saving effect, which are allocated for the needs of gas main pipelines;
- environmental protection requirements to the operation of untreated sulfurous gas and unstable condensate pipelines;
- classificatory of emission, pollutant discharges and hazardous waste sources of production and consumption for OAO Gazprom and its subsidiary organizations in compliance the nation wide and international requirements and many other activities.

During the reporting period TyumenNIIgiprogas Ltd. accomplished the following for the cluster site 18-n of Bovanenkovo OGC: hydrogeological survey and technological scheme design of the experimental industrial complex for

underground storage of gas condensate and benzene fraction; project of underground storage landfill for condensate and benzene fraction; environmental impact assessment of projected activities, recommendations on environmental control. The organization developed the technological guidelines on the waste water pumping into the sewage treatment facility of the production site GF-1 on Bovanenkovo OGC; carried out an assessment of past and present environmental status, environmental and social impact assessment of waste water in-pumping, suggested measures to ensure reliability and environmental security of waste water underground disposal; developed a monitoring program. TyumenNIIgiprogas supervised and updated the draft of the technological guideline for waste water disposal into alb-cenomanian sediments of the Zapolyarnoye OGC; developed a project of experimental and industrial waste water pumping at comprehensive gas treatment units (CGTU) 1C – 3C of Zapolyarnoye field; projected the construction of artesian wells for water supply of Yubileynoye, Padinskoye, Yamsoveyskoye and Medvezhiye fields. The organization composed environmental protection parts of the projects, received all necessary permissions and expertise approval, as a part of its supervision over the development of Yuzhno-Russkoye field made a list of recommendations on the site-specific environmental monitoring and a preliminary environmental impact assessment of experimental and industrial exploitation of the Zapolyarnoye OGC lower cretaceous sediments. TyumenNIIgiprogas Ltd. filled in the environmental protection part of the development projects of Urengoyskoye and Yeniakhenskoye fields as a part of its project supervision. The environmental impact assessment parts were also filled in for the Plan of an exploration well pilot operation on the Kamovskaya site of Omorin license area, and for the Program of the field complex exploration in YNAD and Krasnoyarsk region (Urengoy and Yamburg zone). The above mentioned works contain a description of main types of environmental impacts and their sources. These works are finalized with development of environment protection measures for construction and operation of field facilities, and determination of environmental and economic indicators (liquidating of environmental and household damage, land rehabilitation costs).

Gazprom dobycha Astrakhan was a demander for a number of research and development works. In 2009 a survey was carried out to study possible land detoxification technologies to remove sulfur pollution from sulfur storage, unloading and transport areas. Along with it on the basis of the natural and climate, land and geochemical analysis of the Astrakhan gas-condensate complex (AGC) environment, a new cost effective and environmentally neutral way of sulfur storage for over 10 years was developed. The profound scientific study of *Gazprom* land pollution with oil products, salts of heavy metals and their technological liquidation in the Southern regions of Russia resulted in a development of a sorbent improver based on local natural stuff (gaize and glaukonite), as well as the agrotechnical available ways of land detoxification adapted to the soil conditions of Astrakhanskoye gas condensate (AGC) field.

Gazprom transgaz Saratov. The company approved the Catalog of gas transport and storage related technological operations, which are associated with methane emissions, and the list of the methane emission reduction measures (Gazprom VNIIGAZ LLC).

Gazprom transgaz Stavropol. For the optimization of production environmental control, the company completed two blocks of the research (2009–2010) “Development of guiding document on environmental coordination of methane instant release sources at gas transport facility”. Along with it the company determined and implemented the Program of field measurements of methane air concentration and from emission sources at Gazprom transgaz Stavropol facilities. The Program included a comprehensive measurement of the methane concentration in atmosphere surface layer, the atmospheric impact assessment of gas transport facilities and control optimization of methane instant releases.

Based on the international standard ISO 14001:2004 an energy efficiency management system was developed at Gazprom transgaz Stavropol. The environmental management systems of 12 subsidiaries were subject to the improvement.

Gazprom dobycha Yamburg. The research and development work “Development and design of the region wide industrial environmental management system for the exploration of hydrocarbon fields in hyperborean conditions, which ensures environmental risks minimization” allowed to build up a structure of the corporate environmental system adapted to the natural components of Gazprom dobycha Yamburg area. The company also demonstrated its solid environmental position by endorsing the “Concept of the region wide industrial environmental management system in YNAD”, as well as the development of the “Guidelines on interaction between the region wide industrial environmental system in YNAD and the corporate system of Gazprom dobycha Yamburg”. Based on the complex assessment of the methane emissions, including leakages, and the Program of greenhouse gas emissions assessment at Gazprom dobycha Yamburg facilities, the corporate Registry of greenhouse gas emissions was developed for the company’s facilities. Gazprom dobycha Yamburg undertook measures to design a digital map of the ecosystem change dynamics over the last 40–50 years. The company substantiated the economic efficiency, which refers to the integration of the digital map, bioindentification and biotesting techniques in terms of the ecosystem resilience;

prepared a report of the anthropogenic pollutant impact assessment on the water objects against the region specifications. Gazprom dobycha Yamburg developed and received a patent for the innovative method of emissions free gas well cluster researching.

The primary scientific and technical objective of Gazprom transgaz Tomsk was to design an industrial and foul water treatment unit with a productivity of 1 m^3/h. The unit should be based on the compact impulse electron accelerator applicable for a gas transport facility's compressor stations. In 2009 the unit prototype was assembled and certified under the GOST R system. The set of the necessary documents was also developed and approved; the prototype was exposed to the laboratory and field tests. The developers applied for the patent for the treatment technique and the industrial and foul water treatment unit.

GAZPROM SCIENCE AND ENGINEERING AWARD

In 2009 23 scientific works applied for the *Gazprom* award. The works were assessed by an expert group against the following criteria: relevance, innovativeness and scientific contribution. Such features as the potential scale and economic efficiency were also considered in terms of the compatibility of the ideas with OAO Gazprom system, as well as the marketability, use of national materials, technologies and equipment.

According to the Provision of the Management Committee of OAO Gazprom as of September 29, 2009 #45 the *Gazprom* prizes in science and engineering, the following projects with a substantial environmental effect became the award winners:

"Theory and practice of biopreparations application and production for removal of hydrocarbon environmental pollution"

G.S. Akopova – chief scientist, I.V. Balakirev, S.I. Kozlov, S.H. Komarova, E.L. Listov, A.M. Prokofieva Gazprom VNIIGAZ LLC"; A.G. Ishkov OAO "Gazprom"; P.B. Avchieva, I.A. Butorova OAO "GosNIIsintezbelok").

The research resulted in the development of an environmentally effective technology of biopreparation application for treatment of hydrocarbon contaminated soils.

Based on selection results new strains a new biopraparation BIOROS was developed. Its main advantage is a unique capability of soil treatment from crude oil, gas condensate and other oil products in hyperborean conditions. The technology enables a complete removal of hydrocarbon pollution resultant from regular operations, accidents and emergency.

"Development and operation of a retrievable air-gas channel 3H-6-25-2,2 for GP GTN-6, installed at boosting compressor stations on Medvezhiye field"

(N.A. Gafarov – chief scientist, OAO "Gazprom"; R.Z. Akhmadiev, V.K. Golubkin, I.B. Levin, V.V. Medko, S.N. Menshikov, I.S. Morozov Gazprom dobycha Nadym; A.N. Kozintsev OAO "Gazprom", G.N. Zatkovetsky, K.Y. Markov TMZ-Turboservis).

The new construction of the retrievable air-gas channel for GPAs GTN-6 provides a more effective GPA work of boosting compressor stations, when operated on natural gas fields at a late processing stage. The operation of the innovation allowed a decrease of operational costs via the reduction of fuel and start up gas, turbine lubricants and energy consumption. It also leads to pollutant emissions reduction.

"Selection and substantiation of the optimal parameters of gas main pipelines from the Yamal Peninsula, as a showcase of shift to 11.8 MPa – higher working pressure for gas superflow transport".

(V.I. Milovanov – chief scientist, V.B. Vasiliev, OAO "VNIPIgazdobycha"; A.M. Serebryakov OAO "Gazprom"; S.A. Dzyuba Gazprom invest Vostok; V.M. Anisimov, A.S. Lando, B.A. Sumskiy YUZHNIIGIPROGAZ; V.S. Safonov, O.P. Stureiko Gazprom VNIIGAZ LLC; S.A. Kaufman Giprospetsgaz).

The crucial technical solutions were substantiated within the project of the Yamal gas transport system, which ensure effective gas transport in permafrost conditions. The effectiveness of K65 (X80) steel was proved for pipes with the working pressure of 11.8 MPa and a smooth interior; a number of measures have been developed for gas permanent cooling in permafrost areas to prevent the land and pipeline damage. The developed solutions enabled to reduce project costs via reduction of metal consuming and compressor houses, ensured increase of specific productivity of gas transport system and decreased operational costs.

The project also allowed a minimizing of negative environmental impact sources and elevation of gas transport system security.

"Profound research of operational reliability grade of new pipes K65 (X80)"

(D.D. Gaidt – chief scientist, O.L. Mishin, S.V. Trapeznikov Gazprom transgaz Yekaterinburg, S.V. Alimov, A.B. Arabey, T.P. Lobanova, N.B. Nesterov, A.V. Shipilov OAO "Gazprom", V.I. Bespalov Gazprom VNIIGAZ LLC, I.Y. Pyshmintsev OAO "RosNITI".

A number of *Gazprom* challenging scientific and engineering issues were settled in order to equip the Bovanenkovo – Ukhta pipeline with advanced pipes.

The research included unique field tests, which allowed to determine the practical effective use of the K65(X80) pipes with the diameter of 1420 mm for gas transport at the pressure of 11.8 MPa and the necessary values for the pipe product, which prevent long distant accidents on the Bovanenkovo - Ukhta pipeline. The decrease of the accident risk on the linear parts of pipelines will result in a lower environmental damage.

"Development of automated fire alert security system for a comprehensive gas treatment unit involving drencher firefighting system and specific fluorine synthetic film-forming foamers "

(B.Y. Dovbnya – chief scientist, A.V. Pavlenko, R.M. Tagiev Gazprom Gazobezopasnost, Y.Y. Golko, S.V. Poddubsky, V.I. Sorkin OAO "Gazprom", Z.S. Salihov, O.N. Shologin Gazprom dobycha Yamburg, Y.N. Deshyovikh EMERCOM Russia, A.N. Zagidullin Pairokul)

An advanced automated fire alert security system was developed for industrial facilities. Comparing with the existing analogs, the system requires 20 times as less time to secure the object on fire, ensuring the object safety, cooling and prevents the subsequent fire.

The lower fire damage resultant from the system operation will lead to the environmental risks decline, as well as lower capital investments into the new firefighting system installation and the reduction of fire-related damage to the environment.

ENVIRONMENTAL PROTECTION TECHNOLOGIES AND EQUIPMENT

***Gazprom Group* is highly concerned about the modernization of main production assets, implementation of progressive technologies and equipment, which assist in resolving environmental security issues of the production.**

In 2009 *Gazprom Group* companies undertook a great number of activities to modernize their environment protection assets, replace technological equipment and endorse best environmental practices.

Gazprom dobycha Yamburg reconstructed its sewage lift station with the heating supply point. The increase of the waste water treatment rate required the overhaul repair of the biological treatment unit. The company was progressively constructing a sewage lift station for industrial and foul water.

Gazprom dobycha Nadym. In 2009 the Bovanenkovo OGC sewage treatment facility (II line) with the capacity of 1400 m^3/y was constructed; the commissioning and start up of CGTU-6 and CGTU-8 sewage treatment facilities was completed. The Bovanenkovo OGC landfill (I line, 31.1 kilotons/year) for solid domestic and industrial wastes was put into operation, the construction of the II line landfill was in progress. The company launched a research on the facility "Household waste landfill on the Novoportovskoye field". Three waste combustion facilities (25 kg/h) were installed at Labytnanginskaya, Nadymskaya, Pangodinskaya production and technological equipment and procurement bases.

The company undertook a number of program measures towards energy and resource saving, such as:

- implementation of resource saving technology of the exploitation well column temperature heating;
- partial modification of industrial sewage utilization scheme (sewage pumping into the lost circulation horizon instead of burning in gas flare units);
- application of utilizing boilers for the heat supply of CGTU Yubileyniy GP and production zone of Yamsoveyskiy GP instead of boiler houses;
- modification of gas pumping aggregates (GPA) electric engine drive control scheme;
- use of new replaceable parts for GTN-6 GPAs to equalize their power with reciprocating pumps and gas turbine units;
- purchasing of scaling machines for vapor and water heating boilers;
- modernization of burners;
- variable frequency drive installation at electric engine of the main pipeline pumping unit;
- launch of the condensate branch system for the diethyleneglycol recover system, which blocks the water condensate heat loss and reduces fuel gas consumed by the vapor boilers.

Gazprom dobycha Orenburg. In order to minimize the waste water discharge at Orenburg gas processing plant (GPP), the treatment facilities were reconstructed and equipped with a discharge free water use system.

Gazprom dobycha Krasnodar. New surface active agents (SAA) were put into operation to avoid possible gas emissions. These SAAs create a better availability to remove the bed fluids from the well. The company completed the first stage of the coast embedment of the Yasen Spit in the region of Primorsk and Akhtarsk.

Gazprom transgaz Volgograd finished the montage of tubular reagents, as well as the PST-100-03 burners at GTK-10-4, which enable to reduce nitrogen oxide emissions during the GPA operation. 15 vehicles were switched to compressed natural gas (CNG).

Gazprom transgaz Yekaterinburg has been intensively switching its railway transport to the natural gas. One the company's scientific achievements was the development of the natural gas fluidizer prototype NGF-3-3-0,6 for the gas distribution station GDS-4 in Yekaterinburg. The company also designed a damage detector pig for DDC-4M-1420y – damage detection complex of gas main pipelines with the diameter 1420 mm. It allows to detect depreciation and corrosion damages of lengthways and diametric seams and make a digital assessment of the damage scale and possible hazard on the computer. The treatment facilities were subject to the overhaul repair.

Gazprom transgaz Nizhny Novgorod conducted the overhaul repair of treatment facilities on the Morkinsk and Volzhsk linear production controls of gas main pipelines (LPCGMP), which resulted in reduction of pollutant amount in the waste water.

Gazprom transgaz Stavropol acquired 3 car washes equipped with water recycling system; 39 vehicles were switched to gas motor fuel.

Gazprom transgaz Saint-Petersburg installed and tested a water deferrizer on the Volkhov LPCGMP; conducted the overhaul repair of drinking water treatment facilities and equipped them with a deferrizer on the main site.

Gazprom transgaz Samara installed burners PST-100-03 at GTK-10-4 as a nitrogen oxide emission reduction solution and calibrated gas heaters and boilers at GDS.

Gazprom transgaz Surgut. Among its environment protection measures the company conducted the overhaul repair of waste water treatment facilities STF-50 and equipped them with an addition water treatment block, the isolation utilization network and forcemain. The company also replaced the water pipe system.

Gazprom transgaz Ufa. In 2009 many system and odorizing block repairs were carried out. The company replaced GTK-10-4 with GPA-16R on the Polyansk LPCGMP and switched its vehicles to gas motor fuel.

Gazprom transgaz Ukhta modernized combustion chambers of GPA GTK-10, GTK-10 IR during the reporting period. The oil contaminated land and drainage grooves of the Sindorsk LPCGMP CS-11 site were treated with biopreparations and the oil contaminated lands of the Gryazovets LPPGMP were biologically remediated.

Gazprom transgaz Yugorsk introduced the noise reduction system at PAES-2500 with the AI-20 engine of the Priozerie and Nadym LPCs. In compliance with the corporate list of water protection measures the company conducted the overhaul repair of treatment facilities; Gazprom transgaz Yugorsk exposed its licensed sites of Berezovskoye and Deminskoye gas fields to the environmental monitoring.

Gazprom energoholding. Mosenergo reached the pollutant emission reduction by means of: application of low toxic burners, modernization smoke gas recirculation scheme at energy boilers, use of gas analyzing complex to control toxic emissions SOV-1 with a KGA-8C gas analyzer. The has been developing an automated environmental system, which will deliver the data to the Moscow public facility Mosecomonitoring. In order to complete the system all power station boilers are getting additionally equipped with stationary gas analyzers. The company also installed over 20 isolators on its power station to reduce the impact on Moscow buildings. Mosenergo reconstructed its waste water neutralizers, repaired the waste water treatment schemes and modernized salted waste water diluting units.

TGK-1. The biological waste water treatment facilities Bioksi 5 and Bioksi 8 were put into operation at the company's subsidiary "Kolsky" Cascade of Niva hydroelectric power stations. The all type reverse and discharge free water supply system was launched at the company's subsidiary "Nevsky" Pravoberezhnaya heat power plant HPP-5.

Gazprom neft Group. **Omskiy OPP** completed the reconstruction of the hydrotreatment unit for diesel. This resulted in the company' being capable of producing pure diesel, which meets Euro-5 standard, and enabled to elevate the quality of the entire fuel produced at Omskiy OPP. According to the Program of Omskiy OPP development through 2010, the company launched a number of project aimed at the improve of all vehicle fuels to meet the Euro-4 and Euro-3 standards.

ENVIRONMENTAL MONITORING

Permanent environmental screening in the production impact zones enables *Gazprom* to get the adequate information on the environment and undertake the appropriate preventive measures.

According to the requirements of the Russian legislation and internal normative documents, all *Gazprom Group* companies are subject to the regular environmental monitoring, which is aimed at identification of environmental negative impact factors, determination of necessary measures to minimize them and remove.

Environmental monitoring of *Gazprom* is mainly a production highly integrated control system. It encompasses stationary and mobile laboratories, meteorological and aerological control posts, automated control posts and monitoring wells. The corporate environmental system is designed to monitor: pollutant emissions from organized sources, air quality within the sanitary protection zone and settlements, noise impact, quality of underground and surface waste and domestic water, geological and soil cover status. The rules, procedures and peculiarities of the environmental monitoring system operation are regulated by the industrial and legal documents, including the internal guidelines of *Gazprom*.

The corporate system has been constantly progressing. In 2009 Gazprom dobycha Astrakhan, Gazprom dobycha Orenburg, Gazprom transgaz Kazan, Gazprom transgaz Kuban, Gazprom transgaz Stavropol and Gazprom transgaz Yugorsk launched the operation of the automated environmental monitoring systems. The project versions of the automated systems were designed for the following production facilities: Gazprom transgaz Samara assimilated the environmental monitoring in the total management system; Gazprom transgaz Saratov integrated the monitoring into the industrial system of the operative dispatch control; Gazprom transgaz Ufa included the monitoring into the regional system of the operative dispatch control.

The functioning of automated environmental monitoring systems is stipulated by the construction project documentation of the following gas main pipelines: Yamal – Europe, SRTO – Torzhok, Nord Stream (the Gryazovets – Vyborg section), Altay, Pochinki – Gryazovets, Bovanenkovo – Ukhta, Minsk – Vilnius – Kaunas – Kaliningrad, as well as the exploration project documentation of Bovanenkovo, Yamburg and Zapolyarnoye OGC and Shtokman gas and condensate fields.

In 2009 OAO Gazprom carried out the environmental monitoring of 8 licensed sites in Yamal region (Nyakkhobsky, Padinsky, Vostochno-Medvezhy, Nerutinsky, Yuzhno-Padinsky, Mariettinsky, Zapodno-Yubileyny and Zapadno-Yagenetsky). The environmental monitoring of these sites implied sampling and chemical analysis of all natural components: grund waters, sediment beds, soil, snow cover. A number of draft environmental monitoring systems were developed for:

- gas main pipelines: South Stream, Sakhalin – Khabarovsk – Vladivostok, Ukhta – Torzhok, Nord Stream (II line);
- fields: Severo-Kamenomysskoye and Zapadno-Tarkosalinskoye, Bovanenkovo and Kharasavey;
- gas main pipeline compressor stations: Bovanenkovo – Ukhta and the I line of Nord Stream.

Gazprom dobycha Orenburg conducted a technical modernization of the environmental monitoring system: the first launch site was put into service, 3 new air quality automated control posts were installed. The company ensured the monitoring along its pipeline section, made an environmental impact assessment of its facilities and the ecological hygienic assessment of the Orenburg gas chemical complex, fulfilled the supervision of the disrupted land remediation.

Gazprom transgaz Kazan completed the experimental operation of the multimode production emission automated control system (PEACS) at Arskaya CS, which was a big contribution into the development of permanent tool control systems for compressor station emissions. The whole set of documents which are necessary for the system creation was prepared, to ensure its compliance with modern requirements of the *Gazprom* gas transport subsidiaries.

Gazprom transgaz Volgograd has been intensively developing the complex automated program of the environmental impact data collection, processing and systemizing. The system will enable a detailed analysis of the environmental performance, in order to support organization, technical and information decision on the protection measures.

Within the system of diagnostic maintenance, environmental monitoring and testing (SDM-EMT) **Gazprom dobycha Nadym** put into an experimental operation an exhaust gas control system at boost compressor stations (BCS) GPAs on the I line of the Yubileynoye OGC. In order to meet the license agreement provisions on the mineral resources use, in 2009 the company carried out the environmental monitoring of 8 sites and a radiological assessment of its facilities.

Fulfilling its environmental duties **Sakhalin Energy Investment Company Ltd.** has been constantly monitoring its environmental impact and undertaking measures on conservation of the surrounding flora and fauna natural balance.

Through the year of 2015 **JSC Gazprom Space Systems** is planning to develop the current system of satellite and TV network Yamal into a broad scale space information system Yamal, which will integrate low orbit satellites of space observation and mapping Smotr. The project is included into the Russian Federation space program through 2006–2015 and is being fully implemented. The system Smotr will consist of: four low orbit satellites on the sun synchronous round orbits, which will ensure the observation over production – primarily gas industry – facilities. The system is specifically designed to enable the control over the pipeline and infrastructure technical conditions, remote field exploration, handling of property, land use and others. The system will also be able to detect and monitor processes, which threaten facility security, monitor extreme situations and assess environmental damage resultant from accidents and acts of God.

Mosenergo is the **Gazprom energoholding** most experienced subsidiary in coordinating of the environmental systems. All power stations are equipped with emission control devices. The automated environmental monitoring system is fully operational at: HPP-8, 9, 11, 12, 16, 20, 21, 23, 25, 26. These systems transfer environmental performance data to Mosecomonitoring (Department of Nature Use and Environmental Protection, Moscow)

ENVIRONMENTAL IMPACT ASSESSMENT

The environmental impact assessment researches of *Gazprom Group* companies' projected activities are aimed at consideration of natural objects status and include minimization measures on the environmental impact into projects.

In 2009 *Gazprom* prepared materials on environmental impact assessment (EIA), held public hearings and submitted project materials on gas transport and extracting facilities to the general state expertise and state environmental expertise.

Bovanenkovo – Ukhta gas pipeline system. The environmental impact assessment documentation was prepared within the construction project of solid household waste landfills on the CS sites of the Bovanenkovo – Ukhta pipeline. In addition public hearings on the EIA were held in residential settlements of YNAD.

Severo-Kamenskoye gas field. The environmental impact assessment materials were prepared as one of the crucial parts of the investment program of the field development; public hearings were held in Nadym. The engineer research performed preliminary data on the chemical composition of water environment, soil structure, biological variability, in particular flora, fauna and water biota of the future construction sites.

Nord Stream pipeline. Section of Gryazovets – Vyborg, II line. The environmental impact assessment materials were prepared for the project purposes. The project of "Gryazovets – Vyborg, II line" was approved by the state expert committee to construct a pipeline across the territory of the "Cancer Lakes" natural area. The project was put on the agenda during public hearings in Vyborg.

South Stream pipeline. The environmental impact assessment materials were prepared as one of the crucial parts of the project investment program. The materials included the impact assessment of the on-shore and off-shore pipeline sections.

Sakhalin – Khabarovsk – Vladivostok gas main pipeline. The construction project documentation included the environmental impact assessment materials, which were presented at public hearings and approved by the state environmental expertise.

#2 Kirinskaya exploration well. The separate construction project of the off-shore exploration well in the Okhotsk Sea included the development of the environmental impact assessment materials, which were presented at public hearing, where the issue of the waste collection and disposal was raised. The facility's waste disposal site was agreed with the Federal fishing agency. The project materials received a positive conclusion of the state environmental expertise and the drilling permission from the Federal Agency on Nature Use Supervision.

When the submarine passage through the Baydaradskaya Bay and the Baydaradskaya CS of the **Bovanenkovo – Ukhta** pipeline system was under construction, the complex monitoring measures were undertaken (including marine

expeditions) to study sea and on-shore ground water, seafloor beds, sea biota, on-shore soil, hazardous exogenous geological (geocryological as well) and hydrological processes, as well as the local flora and fauna of ground and sea ecosystems. In addition, the project included an industrial environmental control of the construction to be conducted every quarter.

In 2009 *Gazprom* continued supporting the complex environmental marine researches for projecting exploration facilities of **Shtockman GC field**, which were suggested by Shtokman Development AG in 2008. Based on the simulation model (specifically designed within the EIA for the Shtokman GS marine basin and the pipeline project area) the Environmental Monitoring Program was developed, which focused on the conservation of the marine biota and inhabitant. In the program continuation the monitoring scope included the quality of the sea water, status of the sea floor, changes in feeding resources of fish, fish population change dynamics. The project involved vessels were exposed to regular inspections to ensure their compliance with the environmental national and international legal framework. The researches and precautious measures undertaken at the project development stage enabled to make the entire project significantly safer for the environment.

The harmonization of standard regulation in environmental restricting of emissions and discharges of pollutants was one of the main objectives under **Barents-2020. Assessment of international oil and gas production standards for the Barents Sea**. For this purpose an working group of Russian and foreign experts was formed (Statoil Hydro, DNV, Eni Norge, Transocean, Gazprom VNIIGAZ LLC). The experts concluded that further work on the Barents shelf would require additional modification and limit values unification, which will cover all types of activities ranging from exploration to the field development.

The group recommended that new standards should be developed in:

- Undertaking of measures, which reduce the vessel rubbish and oil discharge to meet the requirements of Highly Vulnerable Regions as per the Annex I and V of International Convention for the Prevention of Pollution from Ships (IMO MARPOL)
- Regional industry standards for vessels and marine facilities, which contain fuel use requirements and prohibition to utilize heavy fuel oils
- Standards, which prohibit fluid burning nearby the ice cover
- New standards on the vessel underwater noise reduction.

ENVIRONMENTAL INSURANCE

***Gazprom Group* considers environmental insurance as one of the paramount environment protection mechanisms and a warranty of compliance with the human rights.**

The Insurance Group SOGAZ offers to insure environment risks within programs of complex insurance for hazardous industrial facilities. The SOGAZ programs enables insurants to meet the requirements of the Russian legislation on the possible environmental damage and have it fully reimbursed from external financial reserves.

All *Gazprom* operated industrial facilities are currently insured in compliance with the Federal Law provisions as of 21.07.1997 #116 “On the industrial security of hazardous production sites”. Within the insurance program of *Gazprom* subsidiaries, which operate hazardous industrial facilities, in 2007–2008 SOGAZ environmental insurance premium made 127.41 million rubles and 40 million rubles in 2009.

Many *Gazprom Group* companies, realizing their environmental responsibility for the industrial facilities operation and new construction, apply for the volunteer environmental insurance of their activities. In 2009 Gazprom dobycha Orenburg insured its environmental responsibility for the value of 100 million rubles, OGK-2 insurance value made 8.9 million rubles for the reporting period.

Gazprom also focuses on the development of the environmental insurance system. The *Gazprom* Coordination Committee for the environment protection and energy efficiency concluded the following upon the environmental insurance system: make a comprehensive assessment of risks, which *Gazprom* industrial facilities including CNG transporting

both on the territory of the Russian Federation and abroad; develop an environmental insurance program for *Gazprom*; ensure the environmental insurance of *Gazprom* industrial facilities primarily in the regions of Far East and the Russian shelf, as well as the facilities located in special protection areas.

INTERNATIONAL COOPERATION

***Gazprom* international cooperation on the environmental protection is an important integral part of the corporate activity aimed at ensuring its sustainable development.**

International environmental cooperation has become one of the crucial aspects of *Gazprom* performance. In 2009 *Gazprom* went on further to work with international organizations such as the International Gas Union, European Business Congress (including Committees of Environment and Health, Production and Construction), United Nations Economic Commission for Europe, the Shanghai Cooperation Organization Business Council, UNIDO.

Gazprom is a member of regular negotiations within the intergovernmental cooperation on energy efficiency: the Russian and Italian joint committee on energy efficiency and renewable energy use, joint Committee on the implementation of the Memorandum on the cooperation in energy efficiency and renewable energy signed by the Dutch Ministry of Economic Affairs and the Ministry of Production and Economy of Russia, committee on the development of cooperation in energy efficiency and renewable energy under the Memorandum signed by the Ministry of Energy of Russia and Ministry of Energy and Climate Change of the United Kingdom of Great Britain and Northern Ireland.

Gazprom has contracts and agreements with international research centers and organizations. These agreements foresee the cooperation in environmental security. The cooperation framework programs are implemented with E.on Ruhrgas, BASF/Wintershall, Statoil Hydro, Total, Gasunie, Siemens, Vietnam Oil and Gas Corporation Petrovietnam and others.

During the reporting period the cooperation of Russia and the Kingdom of the Netherlands was intensified. The Intergovernmental Session on Economic Cooperation between Russia and the Netherlands took place in December 9–10, 2009. The session was chaired by V.A. Zubkov, First Deputy Chair of the Russian Government and Chair of OAO Gazprom Board of Directors. The appropriate protocol was signed in the session conclusion. In order to develop a long term cooperation to achieve the energy sources sustainable extraction, transport and market deliveries, Dutch companies and research organizations formed a group “Project Delta”, a joint seminar on “Yamal Peninsula and Kara Sea – Sustainable development of hydrocarbon fields and infrastructure was held”.

In 2009 *Gazprom* continued its cooperation with BASF/Wintershall Holding AG, which was directed at optimization of gas consumption and greenhouse gas emissions reduction in the Russian Federation, development and enhancement of an environmental management system, industrial security, optimization of gas transport system operation mode on the basis of risk analysis.

The scientific and technical cooperation of *Gazprom* and E.on Ruhrgas results in environment protection and energy saving projects. In 2009 the following technical dialogues were developed:

- “Showcase initiative aimed at substantial saving of fuel energy in households as climate mitigation action”;
- “Reduction of energy consumption in the gas main pipeline system”; “Analysis of energy saving potential at OAO Gazprom facilities”;
- “Climate change initiative”;
- “Methane emission reduction from the compressor seals”;
- “Environmental efficiency assessment and researches of practical application of hydrogen technologies at natural gas extraction facilities”;
- “CO_2 emissions assessment and control techniques for gas extraction and transport facilities”.

In order to meet the provisions of the Russian and German Memorandum on cooperation in project/processes initiation/development in energy saving and energy efficiency *Gazprom* and E.on Ruhrgas formed a working group, which prepared a list of suggestions on establishment of an energy efficiency joint venture.

In compliance with the Stockholders' working plan in 2009 *Gazprom* continued participating in the Nord Stream AG stockholders meetings on labor safety, industrial security and environmental protection.

In 2009 the cooperation with Eni S.p.A. caught up on the South Stream project and a research and development joint program, which foresees the support of technical dialogues on the Blue Corridor project, working on a construction of a broad vehicle gas fueling compressor stations network in Europe, preparing the list of most prospective energy saving technologies.

The cooperation with Asian companies has been recently intensified.

In 2009 *Gazprom* signed a research and development agreement with Natural Resources Agency and the Ministry of Economy, Trade and Industry of Japan. This agreement focuses on energy and resource saving as well as the environment protection measures. The Working group meeting (November 17–20, Tokyo) was dedicated to prospects of the cooperation within the technical dialogue on greenhouse gas emission reduction potential, application of modern methods in environmental management for the production coordination, including the construction of infrastructure objects under strict environmental requirements.

In 2009 the Research and development Cooperation Program of *Gazprom* and the Chinese National Oil and Gas Corporation through 2009–2010 was started. The Program is anticipated to result in a guideline of quantitative geoecological risk assessment for implementation of oil and gas projects in China.

In 2009 within the cooperation agreement with the Federal Service for Hydrometeorology and Environmental Monitoring of Russia *Gazprom* representatives participated in the 15th Conference of the Parties of the United Nations Framework Convention on Climate Change serving as the 5th Meeting of the Parties to the Kyoto Protocol (Copenhagen, Denmark). *Gazprom* also took part in preparation of final materials for the Great Eight Summit. The low carbon technologies development and promotion workshop (April 22, 2009, Syracuse – Italy) included the *Gazprom* presentation on corporate energy saving and greenhouse gas emissions reductions measures.

INFORMATION DISCLOSURE

***Gazprom Group* ensure the information transparency concerning their production activities to maintain awareness of the employees, authorities, wide audience and many other stakeholders.**

The annual publication of the corporate reports, statements, messages, environmental articles published in mass media, presented at meetings and conferences and other environment protection forums, as well as public hearings says much for the company's information transparency.

On its corporate web site www.gazprom.com *Gazprom* publishes much information on the corporate environment protection policy, annual environmental reports, updated meeting agenda and decision made by the *Gazprom* Coordination Committee for the environment protection and energy efficiency.

In order to meet the provisions of the United Nations Framework Convention on Climate Change and the Kyoto Protocol in 2009 *Gazprom* revealed some information materials for the V National Report of the Russian Federation. The Report contains greenhouse gas emissions forecast indicators up to 2030, as well as the appropriate mitigation measures for the period. In addition *Gazprom* took part in the Carbon Disclosure Project, which testified the company's progress in ensuring the information transparency and disclosure of environmentally important data to raise investment attractiveness. In line with other largest international corporations *Gazprom* submitted its report on the carbon emissions. The detailed information is published on www.cdproject.net.

The project **Nord Stream** arouses much talks and discussions in the society at large and is spotlighted by mass media. In April 2009 the company of Nord Stream AG presented the project EIA materials at an open meeting. The meeting was participated in by experts of Nord Stream AG, representatives of Ministry of Natural Resources, Rostechnadzor, public environmental organizations, citizens and journalists. The attendees had a chance to discuss hot points and suggestions with the project coordinators in an open dialogue. In the cross-border context (Espo Report) The Ministry of Natural Resources accepted the participants' remarks and comments on the project EIA in the written form.

Shtokman Development AG company is highly concerned of making the project information on Shtokman gas condensate field publicly available. Therefore it presented the "Review Plan of the environmental and social impact assessment" and the "Plan of Interaction with the Stakeholders". The guidelines on the information disclosure included reporting on all stages of the project, feedback with all the project stakeholders, presentation of public hearings and consultations outcomes, mass media releases. More detailed project information is available on the Internet web site http://www.shtokman.ru/eng (Environment and Safety).

During the reporting period the company of **Sakhalin Energy Investment Company Ltd.** reported regularly to the population of Sakhalin region on the environmental performance of its activities. Together with a group of experts on the conservation of the grey whale population in the Okhotsk and Korean region the company made a huge effort to coordinate and manage the interaction of all interested Parties to preserve and restore the population of grey whales. The project information was regularly updated on the corporate web site.

The information on the environmental policy, labor safety, and industrial security of **Gazprom dobycha Astrakhan** was published in the regional newspaper "Pulse of Aksaraisk". In 2009 the company's representatives took part in the Astrakhan Public Chamber's session on "Environment protection status in the region and urgent measures to undertake". The Public Chamber's working group visited the key facilities of Astrakhan Gas Complex. During the reporting period the company managed to take the first place in "Mass Media and Environment" nomination of the "National Environmental Award 2009".

As the Complex Exploration program of the Yamal Peninsula and adjacent waters was launched in 2009 **Gazprom dobycha Nadym** participated in public hearings on the interaction of industrial facilities and the indigenous nomadic population of Yamal. The issue of the population adaptation to the intensive development and exploration of the region is catching up. The vice-president of the Northern YNAD Indigenous People Association Yezyngi Khatyako visited the staff involved in the exploration and development of the Bovanenkovo field. The employees of industrial facilities and wide audience were suggested watching a video "No Harm", filmed up in the studio of Gazprom dobycha Nadym. The event organizers handed out leaflets, which contained the labor rules at the corporate facilities in Yamal.

Public hearings on the issues of deer passages improvement on the territory of Bovanenkovo field were held. The company accepted the recommendations of the passages broadening and railways construction.

The Russian mass media and Internet spotlighted the environmental aspects of the company and published the corporate environmental policy of Gazprom dobycha Nadym. Besides the press release in the "Gazovik" newspaper, 37 broadcasts and stories were prepared for the Broadcast Studio of Gazprom dobycha Nadym.

Gazprom dobycha Orenburg has published environmental reports for many years and spotlighted the priorities of the *Gazprom* environmental policy on regional radio stations. Journalists of leading press agents are regularly invited to the "Doors Open Day". The environment protection materials are published in regional newspapers "Yuzhniy Ural", "Vecherny Orenburg", local newspapers "Oreburgskaya Nedelya", "Orenburzhiye", federal printing mass media: "Argumenty i Fakty v Orenburzhiye", "Moskovsky Komsomolets", "Komsomolskaya Pravda"; TV channels "GTRK Orenburg", "Oren-TV", "Planeta", "Domashniy", "STS" broadcasted over a dozen stories on popular environmental subjects.

Gazprom dobycha Yamburg activities in ensuring the environment protection were included in the chapter "Corporate contribution into the environment protection" of the Social Report, which was published as a special edition. The film "25 Years of Russia's Wealth Encouragement", the CD and book "Yamal Gas Giant" were coincided with the company's anniversary and dedicated to the corporate innovations in environment protection. During the reporting period the company's activities were showed and described in 16 TV reportages, 24 press releases and the Internet articles. More detailed information was regularly updated on the corporate web site http://eng.yamburg.ru/.

In 2009 **Gazprom pererabotka** added a new category "Environment" in the corporate newspaper "Gazprom pererabotka". Mass media of Komi Republic of Russia, Khanti Mansi autonomous district, Yugra and YNAD reported a lot about the corporate Environmental policy, which was endorsed in the previous year. The April edition of the magazine "Tekhnadzor" contained a press release on the company's activities in environment protection, industrial security and labor safety.

During the reporting period regional regular press agents made releases on the energy saving, environment protection and industrial security of **Gazprom transgaz Kazan**. In those articles the company's environmentalists shared their successful experience in utilization of compressed natural gas vehicles and CNG auto rallies with wide audience, as well as provided "Ecodiplomacy Lessons".

Gazprom transgaz Moscow arranges regular industrial tours around its facilities for press agents. The updated information of the company's environmental aspects is provided on the corporate web site http://www.msk-tr.gazprom.ersca.ru. The web site contains a separate category, which dedicated to the issues of the corporate environmental policy and the environmental management concept.

In order to meet its environmental duties **Gazprom transgaz Saratov** published its endorsed environmental policy in a printing edition "Golubaya magistral". In 2009 together with RPF Teplofizika Gazprom transgaz Saratov were contesters of the "National Environmental Award" and won a special prize for the application of chambers, which reduce nitrogen oxide emissions form gas pumping aggregates.

The corporate environmental policy of **Gazprom transgaz Stavropol** was published the company's environmental report and made available on the corporate web site on the Internet and information boards of the administration and subsidiaries. "Stavropolskaya Pravda" in its issue as of April 1, 2009 reported on the Gazprom transgaz Stavropol newly endorsed environmental policy. The population, employees and wide audience had a chance to get familiarized with the environmental report, which contained the environmental impact factors, mitigation and environment protection measures undertaken in the company's operation area. The young employees held a concert, which children from kinder gardens, people from young creative groups took part in. One of the Privolnenskay LPCGMP young employees' initiatives was the ecological movement "Green Patrol". The movement is aimed at rubbish removing, planting and population agitating.

In 2009 **Gazprom transgaz Tomsk** prepared 143 reports to be published in regional mass media and the Internet. "Sovetskaya Sibir" and "Vecherny Novosibirsk" published the company's articles on the importance of minding the protection areas. A few releases with illustrations were dedicated to the consequences of the indifferent attitude to this issue. A number of press releases and video broadcasts on TV spotlighted the development of gas motor fuel market in the region. Specialists of several project institutes and *Gazprom* subsidiaries took part in a session on the methane promotion to the motor fuel use. One of the session outcomes was the construction of a vehicle gas fueling compressor station (VGFCS). The company arranged a site tour for journalists, who made 12 reports for printing and digital mass media in Tomsk, Kemerov, Novosibirsk regions.

The corporate environmental policy of **Gazprom transgaz Ukhta** was updated, brought in line with the *Gazprom* Environmental Policy and made publicly available. The company prepared and published its environmental report on its corporate web site. The company's environmental performance is regularly published in regional mass media. Gazprom transgaz Ukhta set up a virtual competition "Ecoerudite" for students of general education schools in Ukhta, Arkhangelsk in order to arouse their interest in environmental problems.

Gazprom transgaz Yugorsk environmental performance is regularly published and broadcasted in ITKC "Nord" and "Transport gaza" newspaper. In 2009 the research engineering magazines "Geoengineering" and "Ekologicheskaya strategia" released articles on the successful environment projects. The corporate committee on the work with youngsters arranged "Water Cleaning Day" in all subsidiaries within the International Water Cleaning Day.

Gazflot held public hearings in YNAD, Sakhalin and Murmansk regions, which were dedicated to the issues of the company's business activities and environmental impact assessment. In 2009 Gazflot made a feedback with citizens and representatives of public organizations ("Yamal for Descendants!", WWF Russia, International Social and Environmental Union, public fund "Grazhdanin"), provided a sponsorship to indigenous peoples of Northern territories to organize "Fisherman Day" and "Reindeer Herdsman Day".

At the end of 2009 **Limited Liability Company Scientific Research Institute of natural Gases and Gas Technologies Gazprom VNIIGAZ** held an international conference "Environmental Safety in Gas Industry" (ESGI-2009). The event managed to attract many participants from 11 countries, representatives from Committees, environmental funds and international organizations. The conference process was spotlighted and broadcasted in local and federal mass media.

Zapsibgazprom has been following its principle of information transparency and is highly concerned in arranging site tours for press agents and open meetings. The company's participation in reliable environmental information gathering and distribution and participation in business-specific and industrial exhibitions says much for the corporate green image. Zapsibgazprom received many medals and Diplomas for a great contribution into the gas industry technical modernization in Tyumen region. Every year the company takes part in the environment protection sessions held by the Environment Department of Tymen Administration.

Podzemgazprom arranged public hearings involving representatives from public organizations, when new production facilities were projected for construction. Public hearings were also held in the Administration of Yamal district in Yar-Sale, which were dedicated to the operation of drilling waste underground reservoirs of Bovanenkovo OGC, expansion of fuel lubricant materials warehouses with a capacity of 22 thousand m3 on Bovanenkovo OGC and the construction of diesel underground storage with a capacity of 10 thousand m3.

Sakhalin Energy Investment Company Ltd. published its Environmental Reports with information on the environmental programs. In 2009 the company established corporate information centers in 20 settlements on the basis of district and local libraries. The population is kept aware of the company's environmental performance by means of regular open

meetings. In 2009 open meetings were organized in 21 settlements. The company arranges tours to PK “Prigorodnoye” for the population of Korskov district. In 2009 over 10 meetings were held with the chairman of cooperative “Stroitel”, where the environmental monitoring results were presented. The corporative program “Energia” is annually broadcasted. In general 35 articles were dedicated to the company’s environmental performance. Two environmental projects received a grant funding: “Sakhalin Green Pearl” and “We Learn from the Sea”. By means of open information provision and distribution for the wide audience, as well as new forms of environmental education, the project attracted attention of Uglegorsk region population to the problems of forest community variability, sea coastline pollution.

Gazprom neft constantly broadcasts its environmental performance in compliance with the Russian legislation and the corporate environmental policy. In 2009 a number of articles were published in “Severnaya zvezda”, “Tomskaya neft”, “Nash gorod”, “Slovo neftyaninka” newspapers, corporate edition “Neftegazeta” and others.

In 2009 **Mosenergo** published information on fuel consumption, emissions, pollutant discharges, production and consumption waste generation; declining dynamics of pollutant emissions, waste water discharges into surface water objects and waste generation for last few years. Regional and federal mass media spotlight the environmental performance of the world largest heat generator. An updated and detailed information of the corporate environmental performance is also available on http://www.mosenergo.ru/Eng/Default.aspx.

Every year **OGK-2** publishes Social and Annual reports, where a few chapters are dedicated to the company’s environmental performance. The press reported a lot of information on various subjects, the film “Overcome” about the affiliated company Troitsk GRES was showed by central and regional mass media. An updated and detailed information of the corporate environmental performance is also available on http://www.ogk2.ru/eng/index.wbp.

OGK-6 had a tight cooperation with non-governmental organization Greenpeace and International Social and Environmental Union. Involving governors and local authorities, the management committee of an OGK-6 affiliated company Novochrsk GRES held an open meeting on "Power Station Modernization as an Environmental Solution". The annual Environmental Reports of Novocharsk GRES are published in an environmental newsletter of Don. Within the program of FRT "Novosti Ryazanskoy GRES" channel a number of reports were made on the Ryazan GRES environmental service, EMERCOM civil defense and oil spills liquidation trainings at the Ryazan GRES site, as well as the environment protection measures undertaken by Ryazan GRES.

ENVIRONMENTAL PERFORMANCE OF PRODUCTION ACTIVITIES

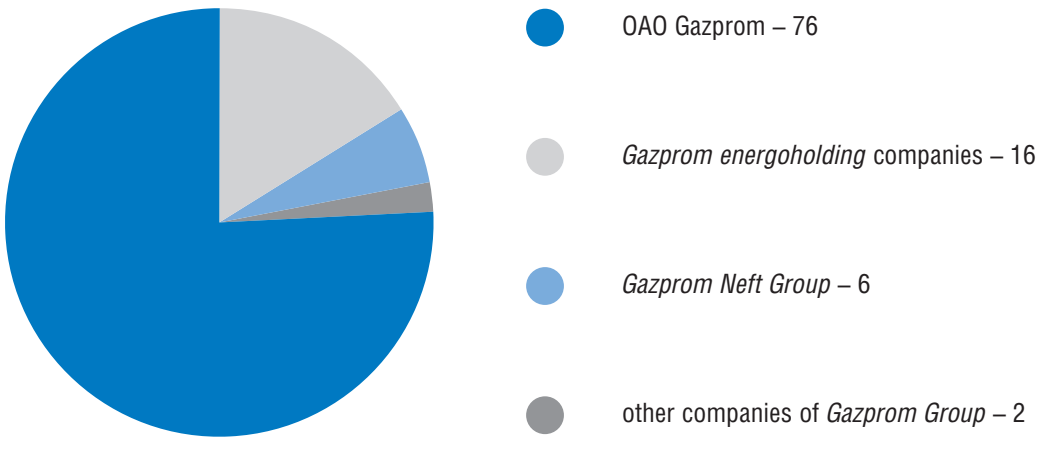
AMBIENT AIR PROTECTION

The atmosphere impact is the most substantial environmental aspect of *Gazprom Group* production activities, which is in the corporate focus. *Gazprom* finds solutions to this problem in resource saving and environment protection measures.

In 2009 the total pollutant emissions from *Gazprom Group* companies' stationary sources amounted for 3391.14 kilotons, including: carbon oxide – 645.79 kilotons, nitrogen oxide – 335.29 kilotons, hydrocarbons – 1859.75 kilotons, including methane 1831.2 kilotons.

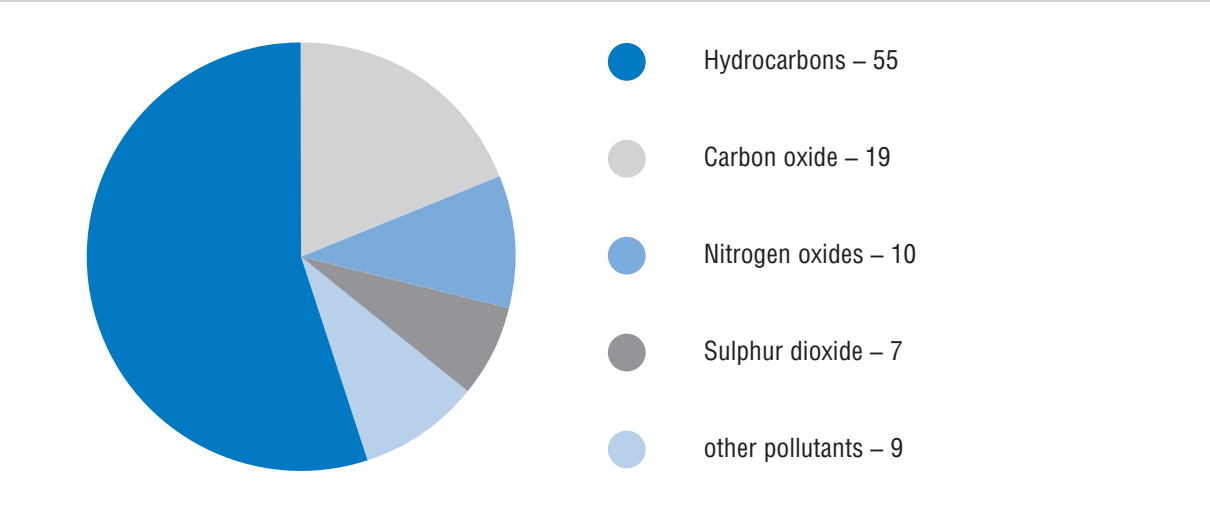
Gazprom pollutant emissions from stationary sources made 2581.48 kilotons, of which 553.98 kilotons was shared by *Gazprom energoholding* companies, *Gazprom neft Group* – 201.51 kilotons and other companies of *Gazprom Group* amounted for 54.17 kilotons.

GAZPROM GROUP COMPANIES' SHARES IN TOTAL AMOUNT OF EMISSIONS, 2009, %



Gazprom subsidiary organizations are responsible for the majority of pollutant emissions, which determines the high hydrocarbon content (mainly methane) in the emissions component structure.

COMPONENT STRUCTURE OF GAZPROM GROUP MAIN POLLUTANT EMISSIONS, 2009, %

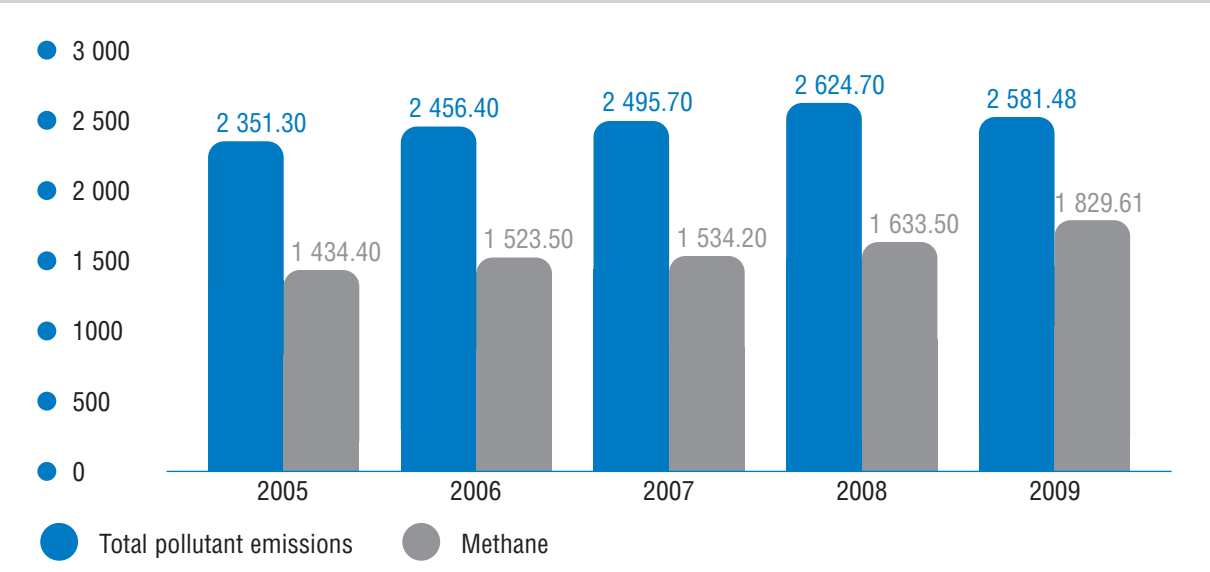


The amount of other pollutants made 301.24 kilotons, the majority of which was shared by *Gazprom neft Group* stationary sources – 61 kilotons of volatile organic compounds, as well as OGK-2 – 48 kilotons of particulate matters (ash).

In 2009 the carbon oxide and nitrogen oxides emissions from stationary sources were 24% lower than in 2008 due to the hydrocarbon extraction and transport reduction, as well as the implementation of air protection measures at *Gazprom* subsidiaries.

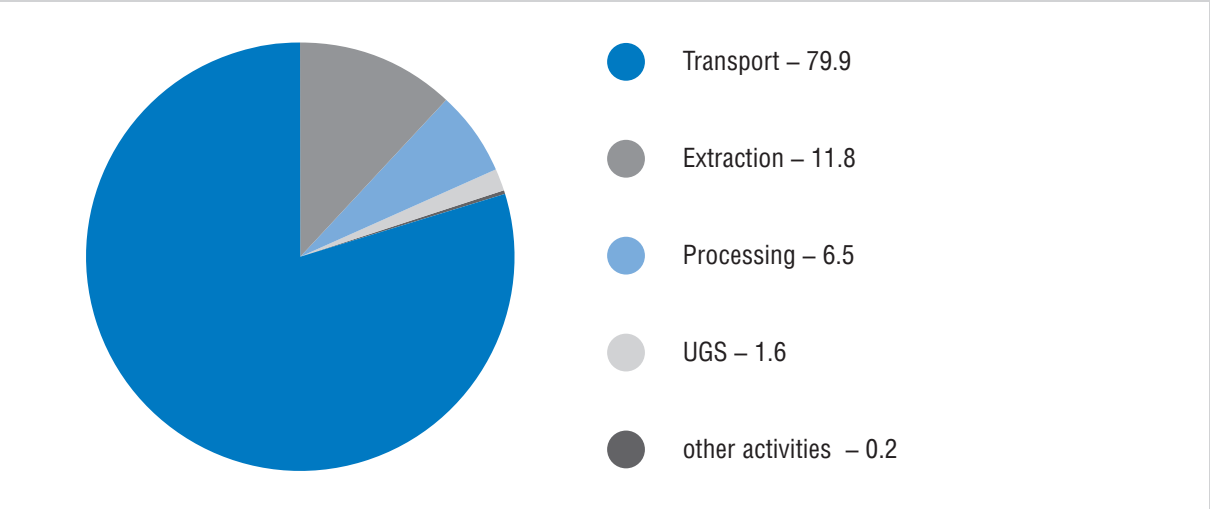
In the reporting year *Gazprom* methane emissions were proved to grow due to the maintenance and overhaul repair at natural gas transport and extraction facilities. However, The incident-related natural gas loss reduced by 23%.

DYNAMICS OF OAO GAZPROM AIR POLLUTANT EMISSIONS IN 2005–2009, KILOTONS



The majority of pollutant emissions was shared by *Gazprom* subsidiary organizations, which operate in gas main pipeline transport and natural gas extraction.

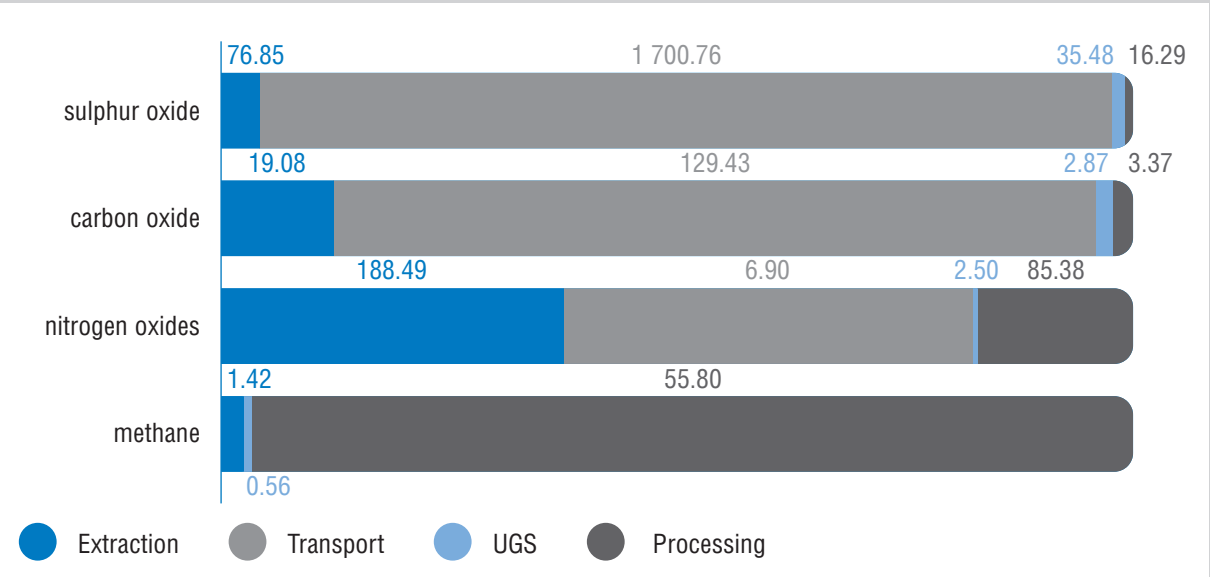
TOTAL POLLUTANT EMISSIONS DISTRIBUTION AMONG OAO GAZPROM MAIN ACTIVITIES, 2009, %



The total share of gas industry-related pollutant emissions was 96.4% (70.8% of which was shared by methane, carbon oxide – 19.5%, nitrogen oxides – 6.1%).

It is noteworthy, the component structure varies among *Gazprom* activities. For instance, the methane emission share is the biggest in the organizations, which operate in gas transport and storage; the carbon oxide emission share in contrast is the biggest in organizations, which operate in gas extraction and processing.

STRUCTURE OF MAIN POLLUTANT EMISSIONS FROM OAO GAZPROM ACTIVITIES, 2009,% OF THE AMOUNT



Gazprom Group companies carry out regular tool control of pollutant emissions limit values and gas cleaning unit efficiency. In 2009 *Gazprom Group* companies implemented a number of measures, aimed at lowering the environmental impact.

For instance, Gazprom transgaz Volgograd, Gazprom transgaz Samara, Gazprom transgaz Ukhta installed sets of tubular regenerators and burners PST-100-03 at GTK-10-04. Gazprom transgaz Saratov and Gazprom transgaz Ukhta

replaced the combustion chambers units of GT-750-6, which causes nitrogen oxides emission reduction. In order to reduce the natural gas losses Gazprom transgaz Makhachkala, Gazprom transgaz samara, Gazprom transgaz Yugorsk implemented the technology of gas maximum depression in the repair sections of pipelines to generate gas for consumers. Gazprom dobycha Krasnodar put into operation new multicomponent structures of SARs, which enable a better removal of the sediment fluid from the well, which eliminates or substantially reduces possible gas emission.

All Mosenergo (a *Gazprom energoholding* affiliate) HPPs were equipped with complexes of gas analysis control and toxic pollutant emissions screening. In order to decrease the noise impact on the environment, the company installed specific devices and isolators at HPP-9, HPP-16 and HPP-26.

OGK-2 launched the exhaust gas pollutant catching and treatment units with a capacity of 2574 thousand m^3/h. In compliance with the pollutant emissions reduction plan the following was accomplished at Troitskaya GRES: replacement of electro filters, scrubbers of boiling units, application of modern 2nd generation emulsifiers on I line, overhaul repair of aspiration units. This all enabled Troitskaya GRES to drop its total emissions by 26% comparing with 2008.

For the reporting period *Gazprom Group* charges on the air protection made 1885.99 million rubles, 1134.49 million rubles of which were shared by *Gazprom*. The *Gazprom Group* costs of facilities overhaul repair, equipment installation for air pollutants catching and treatment made 468.66 million rubles, and *Gazprom* covered 356.56 million rubles of these costs.

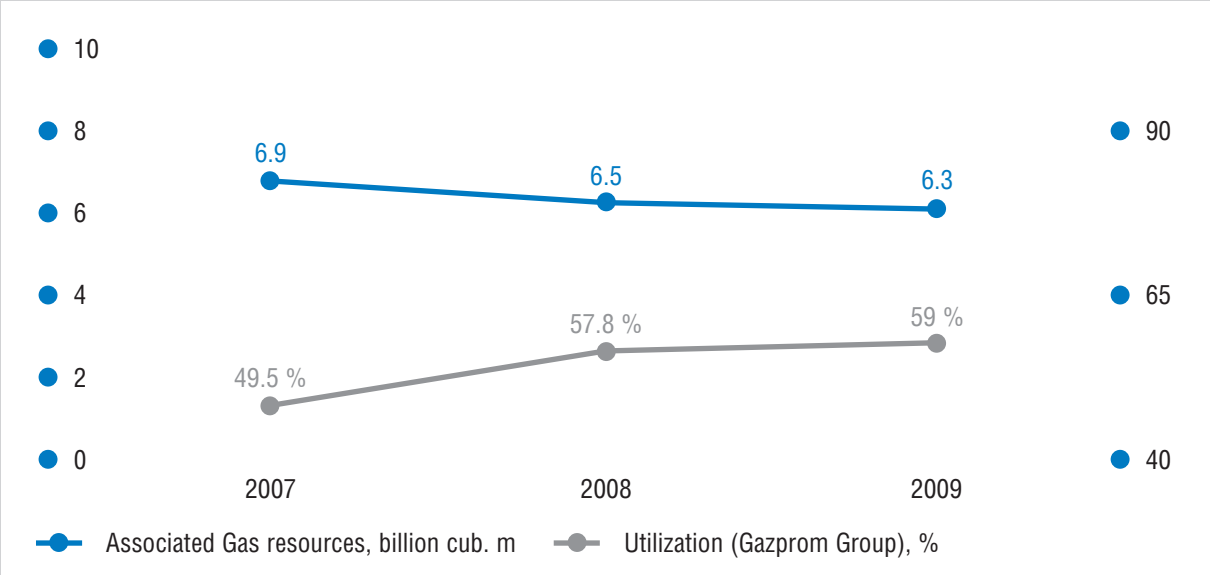
ASSOCIATED GAS IN USE

***Gazprom Group* progressive working on issue of the most possible utilization of associated gas facilitates the environmental impact decrease and goes in line with the national strategy of the processing industry share increase in the Russian economy.**

Gazprom has been implementing its corporate energy saving policy in all its activities as per the Environmental strategy of Russia through 2030 and the Environmental Doctrine of the Russian Federation. The issues of energy and resource saving were prioritized, they cover the problems of fuel and energy resources saving as well as the reduction of greenhouse gas emissions.

Gazprom is implementing investment projects, which are directed at elevating the use of associated gas. The *Gazprom* subsidiaries' share of associated gas use made 82.4%. *Gazprom Group* associated gas resources amounted for 6336.94 million $м^3$, including the utilization of 3743.40 million $м^3$ and the loss of 2593.54 million $м^3$. The total share of associated gas utilization in *Gazprom Group* was 59%. A number of subsidiaries (Gazprom dobycha Orenburg, Gazprom pererabotka and Gazprom neft Orenburg) reached a 100% utilization of associated gas.

GAZPROM GROUP DYNAMICS OF ASSOCIATED GAS UTILIZATION



Main directions of associated gas utilization on *Gazprom Group* fields are:

- development of additional compressor capacities for associated gas delivery to the simultaneous processing with the natural gas form oil gas and condensate fields;
- development of energy units for satisfaction of own needs and delivery the unified gas supply system (UGSS);
- development of new gas processing plants and ensuring the subsequent processed product delivery to the existing and projected oil chemlcal capacities to carry out a profound reprocess, which will come out with a high added value product;
- associated gas pumping into the productive sediment to intensify the oil extraction;
- development of gas chemical capacities to liquefy associated gas in those regions which are not covered by the gas transport system such as the Eastern Siberia.

In 2009 Gazprom dobycha Urengoy completed the construction and put into service compressor stations # 1,2 at CPS-1,2 of Urengoy OGC, which enabled a 95% associated gas utilization.

By the 2011 Gazprom dobycha Krasnodar is planning to complete the construction and put into operation an oil and condensate comprehensive treatment unit, which will enable a 100% associated gas utilization.

The Coordination Committee for environment protection and energy efficiency as of 19.06.2009 concluded on the measures to undertake in terms of associated gas utilization in the *Gazprom* system through 2020 and the outlook of 2030. A list of recommendations was developed for each hydrocarbon field considering the necessary investment and economic effect. The recommended measures are to result in at least 95% associated gas utilization.

Gazprom neft is implementing a medium term program for 2008–2010 "Utilization and enhancement of associated gas", which is aimed at elevating the associated gas use up to 95% by 2012. The crucial projects hereunder are:

- joint construction of a 1 billion m^3/year GPP capacity with Sibur Holding for associated gas processing coming from Yuzhno-Priobskaya oil field;
- construction of Yuzhno-Priobskaya GTPS (install capacity: I line – 48 MW, II line – 48 MW);
- construction of "Muravlekovskaya" GTPS 60 MW;
- construction of a pipeline system towards Vyngapur CS and a CS construction in Yarainer field area;
- construction of a pipeline system for utilization of ООО "Газпромнефть-Восток" associated gas.

Gazpromneft-Noyabrskneftegaz held public hearing on the project of associated gas utilization on Ety-Purovsk field. The project foresees a construction of two associated gas pipelines to the processing capacities of Sibur company. Only 0.4% of associated gas is utilized, but the project is anticipated to elevate this value up to 95 %.

Tomskgazprom (Vostokgazprom Group) has bridged the associated gas issue with the construction of a compressor station, a pipeline of Kazanskoye – Severo-Ostankinskoye – Myldzhino (200 km) and gas engine generator plant on the

Kazanskoye and Sever-Ostankinskoye fields. In 2009 the company launched the operation of a gas engine generator plant with a capacity of 6 MW, started the construction of the compressor station and pipeline, which is expected to be completed in 2011.

Implementation of the recommended measures will enable *Gazprom Group* to ensure a 95% associated gas utilization in 2012.

GREENHOUSE GAS EMISSION REDUCTION

***Gazprom Group* caters for a stepwise greenhouse emissions reduction by participating in the national Earth climate policy.**

Considering the Russian Energy Strategy through 2030, the Climate and Environmental Doctrine of the Russian Federation, *Gazprom* greatly provides for the achievement of Russia's greenhouse gas emission reduction targets.

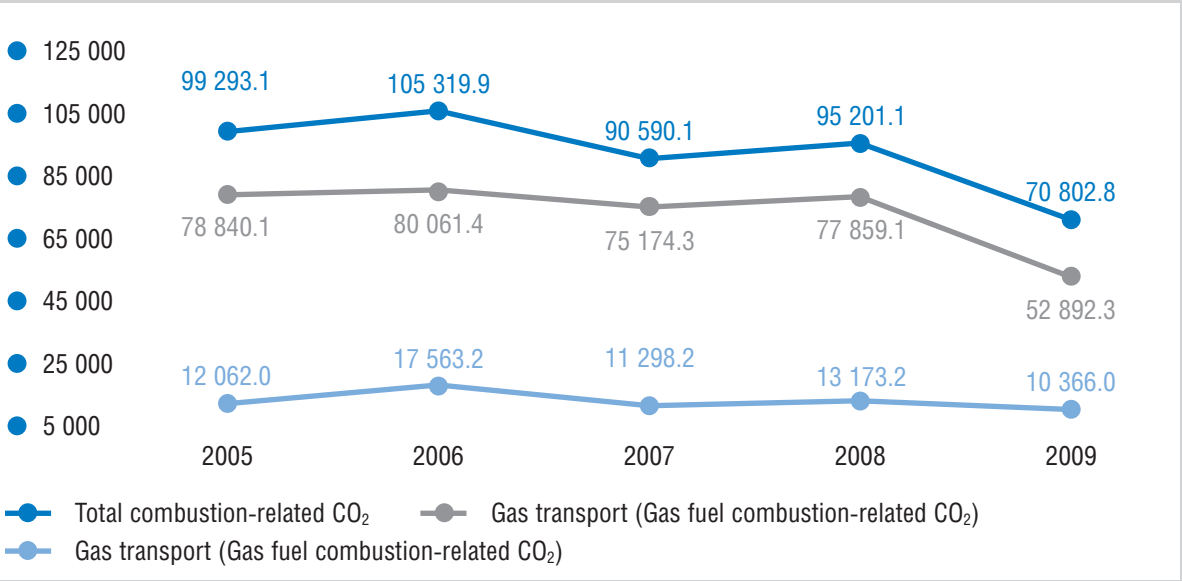
The natural gas utilization results in a lower greenhouse gas (GHG) emission if compared with other fossil fuels. *Gazprom* project of the Russian regions gasification is a great contribution into the GHG emission reduction by means of shifting the fuel balance towards natural gas. The natural gas delivery to the European countries is already providing for the GHG emission reduction and hence the European climate policy.

Gazprom is progressively working on shifting the vehicle park to gas motor fuel. Through its corporate program *Gazprom* is also expanding the network of gas fueling stations. The company keeps developing the basis of Euro Autogas company and implementing the Blue Corridor project, which foresee the natural gas use as a motor fuel of cross border cargo and passenger vehicles.

The production activities of *Gazprom* are associated with GHG emissions such as: methane (main compound of natural gas) and carbon dioxide (one of the energy equipment combustion product compound). The carbon dioxide isa predominant element of many combusted fuels. The methane emissions are mainly caused by the technological operations of natural gas extraction, processing, transport and distribution.

The *Gazprom* production-related carbon dioxide emission dynamic has recently had a declining trend. The GHG emission reduction is carried out by the corporate measures undertaken within the programs of energy saving, production modernization and reconstruction, enhancement of the UGSS reliability and security, as well as elevating the associated gas utilization. The fuel gas saving alone provided for the *Gazprom* big contribution into the carbon dioxide emission reduction, which comparing with the 2005 performance of extraction and transport made 14% and 33% respectively.

GAZPROM DYNAMIC OF CARBON DIOXIDE EMISSION REDUCTION THROUGH 2005–2009, KILOTONS



The draft General scheme of gas industry development through 2020 was based on the assessment of carbon dioxide emission dynamics for 2008. The forecast value of the carbon dioxide emissions for natural gas extraction and transport in 2020 was assessed to be 91 million tons. The major emission reductions hereunder were projected to reach nearly 93% via energy saving in natural gas main transport system.

Gazprom Group companies regularly submit the data on greenhouse gas emissions and mitigation measures to be included into the Russian Federation National Report to the international authorities of the UNFCCC.

Within the materials preparation for the V National Report of the Russian Federation to the UNFCCC *Gazprom* made a GHG emission assessment on: methane as the natural gas major compound, combustion-related methane and carbon dioxide from energy technological equipment. The National Report included the data on the emissions and mitigation measures undertaken in 2005–2008, emission forecast through 2030 and GHG emission mitigation measures to be undertaken through 2030. The GHG emission forecast was processed considering the Nord Stream pipeline construction, operation of the Yamal and Shtokman OGC fields and the natural gas production in the Caspian Sea shelf.

Gazprom determined target projects on GHG emissions reduction: "Application of the mobile compressor stations for capture of previously vented natural gas and prevention of fugitive methane emissions during repair works on trunk gas pipelines" and "Associated gas recovery on the Urengoy oil gas and condensate field".

The implementation of the project "Associated gas recovery on the Urengoy oil gas and condensate field" the company will be mostly avoiding the gas combustion at flare units, which will facilitate a substantial reduction of CO_2 и CH_4 emissions.

A *Gazprom* subsidiary Gazprom Marketing and Trading is a participant of the world carbon market. The subsidiary's activities elevate the Russian gas market compatibility by means of multiproduct contracts "gas – power – carbon units".

In 2009 *Gazprom* prepared widely available data on the performance and GHG emission mitigation measures for the international investment partnership Carbon Disclosure Project (CDP).

Gazprom prepared data on "Methane emissions accounting and reporting in terms of the methane emissions reduction prospects in the Russian oil and gas sector" for the World Wildlife Fund (WWF-Russia) overview analysis.

Gazprom has been intensively participating in activities of an international partnership Methane to Markets, such as methane emissions reduction programs, international conferences dedicated to methane emission problems.

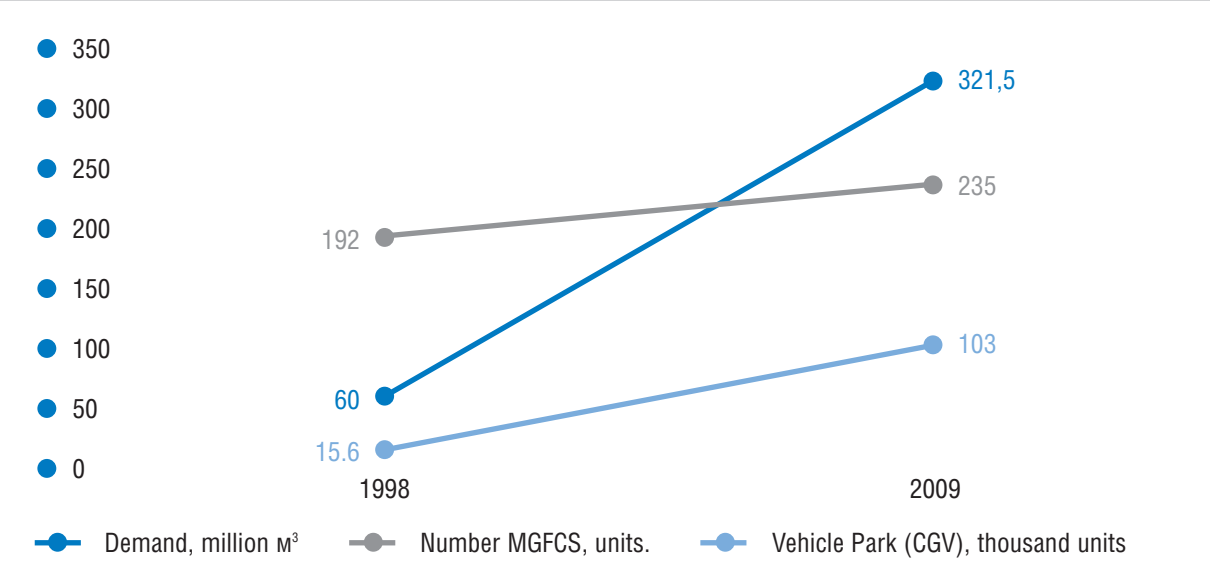
Comparing with the 2005 performance *Gazprom* reduced its carbon dioxide emissions by 29% or 28.5 million tons.

TRANSPORT AIR IMPACT REDUCTION

Natural gas or methane is a universal and most available alternative to internal combustion engines and can be used in any motor vehicle.

As the gas motor market of Russia *Gazprom* has been intensively cooperating with the regions of the Russian Federation on the gas motor fuel expansion. Many regions have already started converting their public communications and agriculture vehicles to gas fuel.

RUSSIAN GAS MOTOR MARKET PROGRESS THROUGH 1998–2009



Gazprom has been closely cooperating with international specialized and public organizations, which work on use of natural gas as a vehicle motor fuel such as International Gas Union (IGU), European Business Congress (EBC), gas working group of the United Nations Economic Commission of Europe (UNECE), International Associations for Natural Gas Vehicle (IANGV), Asia Pacific Natural Gas Vehicles Association (ANGVA).

In 2006–2009 35 MGFCS were constructed, of which 15 were constructed by *Gazprom*.

The Russian gas vehicle park includes 103 thousand units, 4% of which belong to *Gazprom*. In 60 regions of Russia 235 MGFCS are operational, 202 of which belong to *Gazprom*.

In April 20–23, 2009 a non-commercial partnership "National gas vehicle association" and OAO Gazprom, in order to popularize *Gazprom* initiatives on introduction of gas as motor fuel, an auto drive Blue Corridor was held through Rostov-na-Donu – Krasnodar – Novorossiysk – Sochi. The drive involved factory manufactured gas tank vehicles (cargo and passengers foreign and domestic vehicles). Research seminars were held, which were participated in by the local administrative managers, representatives of auto car industry, science experts, during the city stops.

The Blue Corridor was aimed at attracting the attention of local authorities, vehicle producers, mass media and wide audience towards the natural gas as a cheap, available, green and technically safe hydrocarbon fuel. The auto drive participants had an opportunity to showcase the natural gas engine vehicle advantages and learn the regional experience in CNG utilization. As a result of the auto drive the Krasnodar administration 25 NEFAZ gas run buses were acquired.

Gazprom transgaz Yekaterinburg is working on its rail transportation shift to natural gaas fuel. This project will result in a substantial reduction of soot, nitrogen oxides, hydrocarbon and sulphur dioxide emissions. It is noteworthy that the

gross toxicity of processed gases comparing with the diesel fuel combustion-related emissions is 3–5 as low. This in its turn leads to the air quality improve, provides for the sickness decrease of both rail transportation employees and nearby population, as the dispersal zone of pollutant emissions is 160-200 meters.

In 2009 the Gazprom VNIIGAZ LLC transport base opened a Gas Engine Vehicle Reconstruction Maintenance and Diagnostic Center for vehicles, which run on natural and liquefied gas. During the preparation of the center opening together with MADI (STU) Gazprom VNIIGAZ LLS specialists developed all the necessary regulating documentation, which was the basis for Service Certificate approval.

The gas-to-liquid (GTL) technology development is a primary innovation activity of *Gazprom*, which provides for the product line diversification objectives and its added value increase. In June 2009 the Management Committee of OAO Gazprom assigned its profile organization to complete the experimental research on the GTL by the fourth quarter of 2010 and prepare the recommendations on its full operation reasonability by the first quarter of 2011. The GTL implementation, based on chemical converting hydrocarbon gases (natural gas, associated gas etc.) into liquid hydrocarbons, comes out with:

- high quality environmentally friendly diesel fuel (Euro-5)
- light oil fraction, which can be use as an environmentally friendly component motor fuels (alternative to the benzene fraction);
- synthetic oil (in place of synthetic motor fuels), which if mixed with traditional oil will result in lower operation costs and a product with higher consuming and environmental quality.

Gazprom neft Group, which encompasses Russia's largest oil processing plants, considers it highly important to develop gas motor fuel market in the short run as well as the production of Euro-3 and Euro-5 benzenes and diesel fuels.

Omsk oil processing power plant completed the reconstruction of a diesel fuel hydrotreating unit, which enabled the production of the Euro-5 diesel fuel and enhance the entire output fuel quality. The sulphur content in the output quality does not exceed 10 ppm. The aroma hydrocarbon content also meets the Euro-5 requirements.

Gazpromneft-Tyumen, which runs the petrol filling station chain in Tyumen region, launched a retail marketing of new benzenes Normal-80 and Regulyar-92. By means of its advanced environmental properties the application of the new benzenes results in lower emissions of carcinogens, sulphur compounds and other hazardous substances. The company started the marketing of Premium Euro-95 and Super Euro-98 benzenes (Euro-3) instead of Ai-96 and Super-98. *Gazprom* neft sees its outlook in the production and marketing of Euro-4 and Euro-5 fuels.

WATER USE AND WATER PROTECTION

Pure water is the human life essence and the crucial resource of production development. *Gazprom* takes much care of water object resilience.

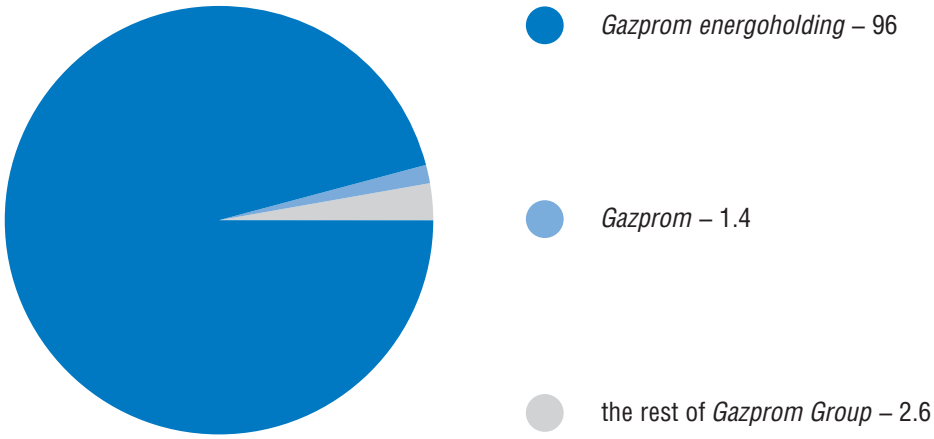
In 2009 *Gazprom Group* companies took in (consumed) 5791.3 million m^3 of water, 96% of which was shared by *Gazprom energoholding*. *Gazprom* and the rest of *Gazprom Group* companies' shares were 1.4 % and 2.6 % respectively.

The *Gazprom Group* outflow structure goes in line with the inflow structure: *Gazprom energoholding* companies cover the major amount of water discharges 5265.9 million m^3, hence the shares of *Gazprom* and other the rest of *Gazprom Group* are not at all big.

GAZPROM GROUP WATER USE IN 2009

	Water inflow		Water outflow (total)	
	million m^3	%	million m^3	%
***Gazprom Group*, total**	**5 791.3**	**100 %**	**5 336.3**	**100 %**
Gazprom energoholding	5 563.4	96.0 %	5 265.9	98.7 %
Gazprom	**79.2**	**1.4 %**	**25.5**	**0.5 %**
the rest of *Gazprom Group*	148.7	2.6 %	44.9	0.8 %

GAZPROM GROUP WATER INFLOW STRUCTURE, 2009, %

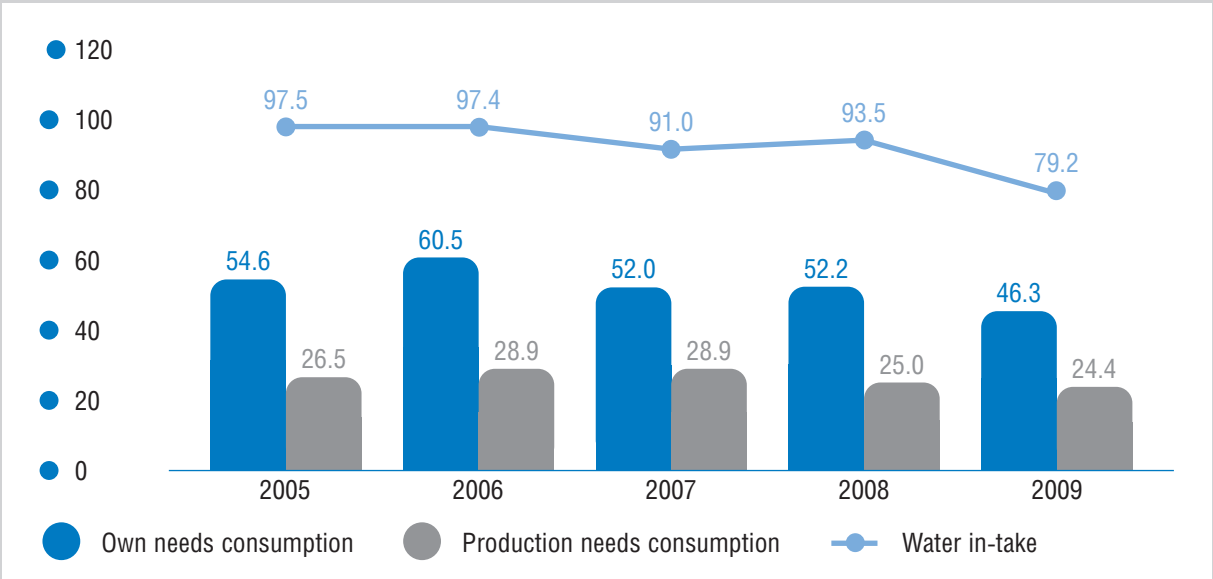


The discharge water quality is an important indicator of environmental impact on water objects. *Gazprom Group* water discharge into ground water objects made 5175.9 million m^3 (98.7% of total water outflow), 5031.3 million m^3 of which was normatively clean (no treatment) and normatively treated at the facilities. Thus the major part of water (97%) discharged by *Gazprom* has no negative impact on water objects.

97 % of *Gazprom Group* water outflow into surface water objects meets the requirements of normatively clean and normatively treated categories.

The indicator dynamics of water inflow and outflow performed by the *Gazprom* subsidiaries for 2005–2009 has a sustainable declining trend. The measures undertaken towards effective water use, including the conformity with the water use regulations, enabled to significantly reduce the water use (15%) comparing with the performance of the previous year. *Gazprom* dropped its water auxiliary consumption by 11%.

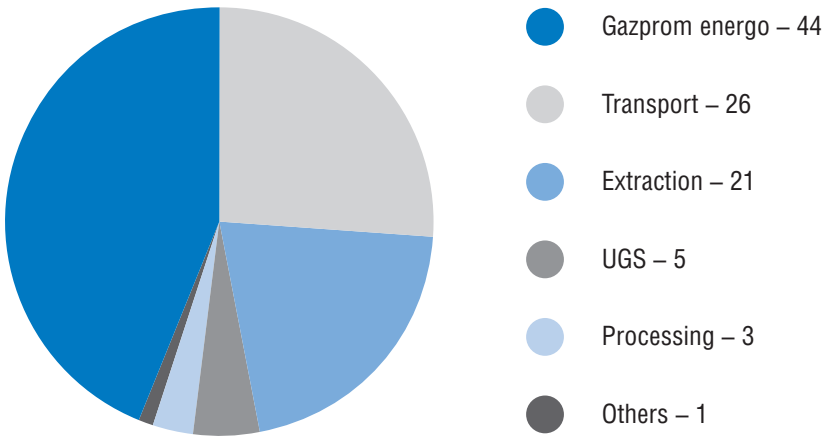
INDICATOR DYNAMICS OF WATER INFLOW AND CONSUMPTION PERFORMED BY THE GAZPROM SUBSIDIARIES FOR 2005–2009, MILLION M³



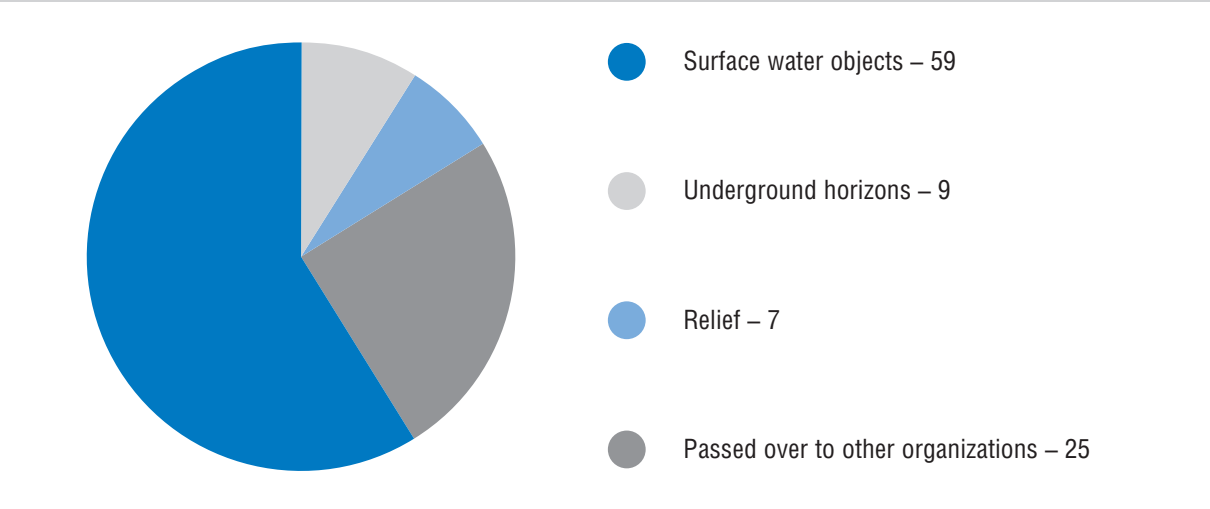
Comparing with 2008, *Gazprom* water consumption structure change was caused by the waste water accounting system modification (consolidating accounting of storm water) in 2009. The water structure made the major emphasis on Gazprom pererabotka facilities, data of *Gazprom* bureniye were included into the natural gas and condensate extracting facilities, the data on the gas and condensate processing plants of Gazprom dobycha Orenburg and Gazprom dobycha Astrakhan were covered by the processing segment.

The water consumption structure of *Gazprom* subsidiaries is determined by the production specifications. *Gazprom* most substantial water users are Gazprom energo, gas transport and extracting subsidiaries.

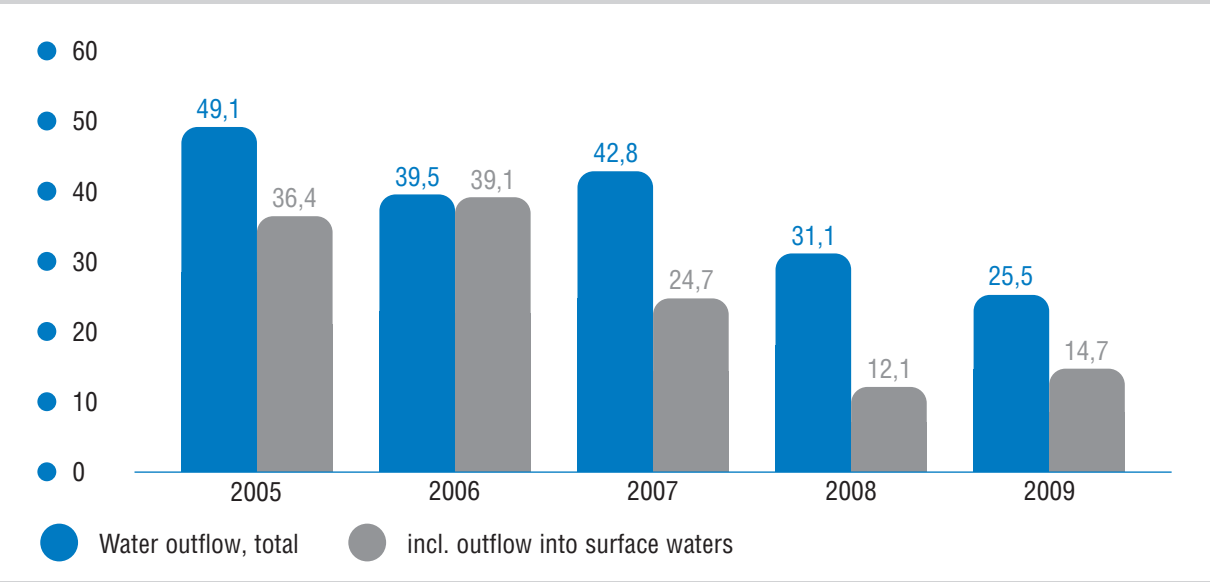
GAZPROM WATER USE STRUCTURE BY PRODUCTION ACTIVITIES IN 2009, %



GAZPROM WATER OUTFLOW STRUCTURE BY RECEIVING DRAINAGE IN 2009, %

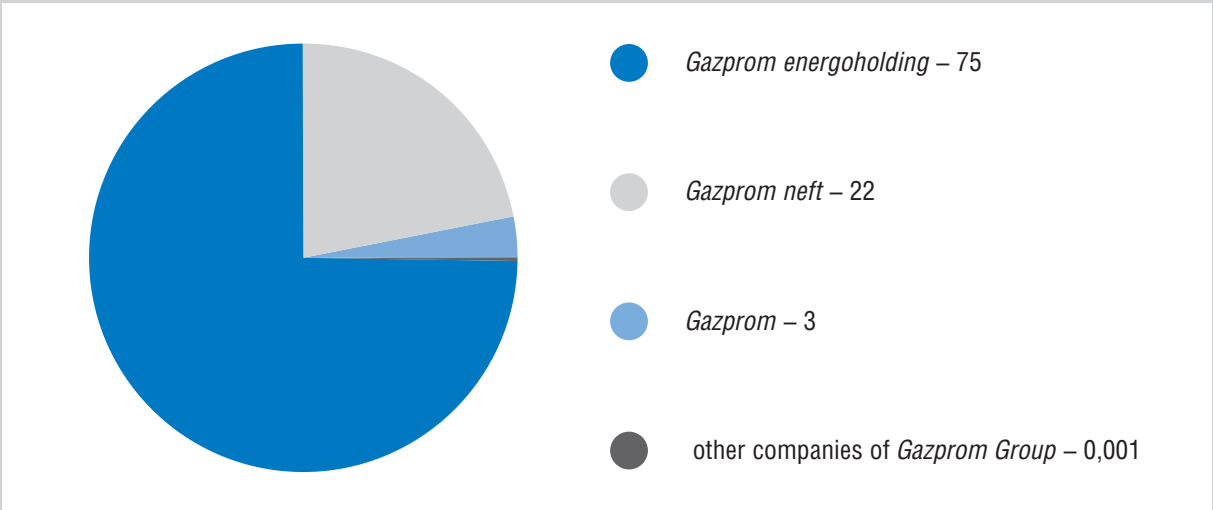


GAZPROM WATER OUTFLOW DYNAMICS IN 2005–2009, MILLION M³



Water saving and water objects protection is carried out through water recycling and sequential reuse. In 2009 *Gazprom Group* design water flow was 10054.77 million m³.

GAZPROM GROUP WATER USE IN RECYCLING AND SEQUENTIAL REUSE IN 2009, %



In 2009 new capacities were launched:

- waste water treatment facilities with the productivity: *Gazprom Group* total – 840.23 thousand m³/day, including: 817.68 thousand m³/day – *Gazprom neft*; *Gazprom* – 22.25 thousand m³/day;
- water recycled supply – 9728.8 thousand m³/year, including *Gazprom neft* – 9647.60 thousand m³/year.

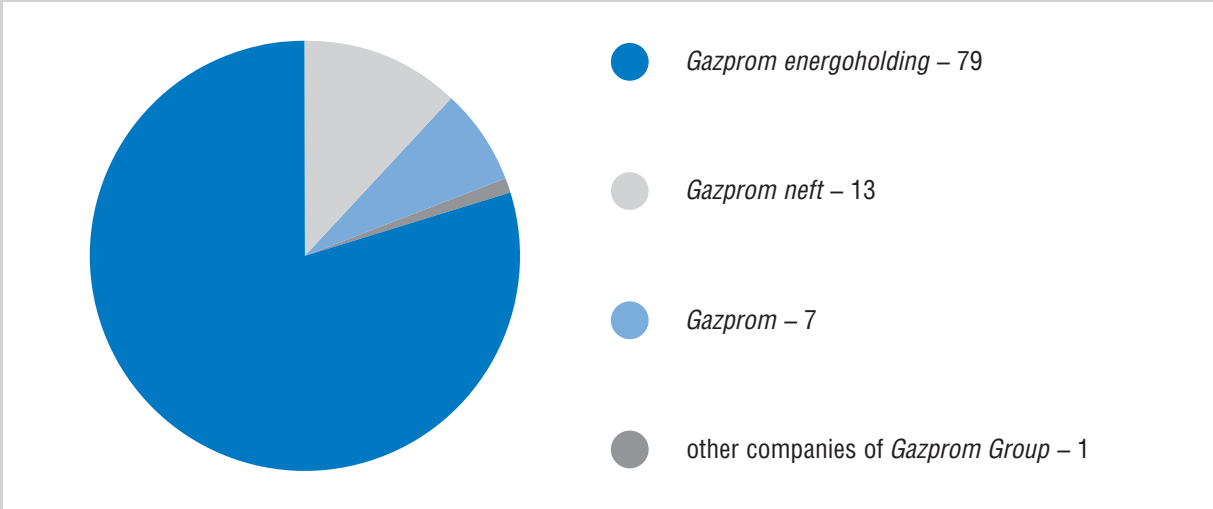
The environment protection and water use charges of *Gazprom Group* made 6101.82 million rubles, including *Gazprom* – 3991.12 million rubles; overhaul repair costs were 418.39 million rubles и 320.29 million rubles respectively.

WASTE MANAGEMENT

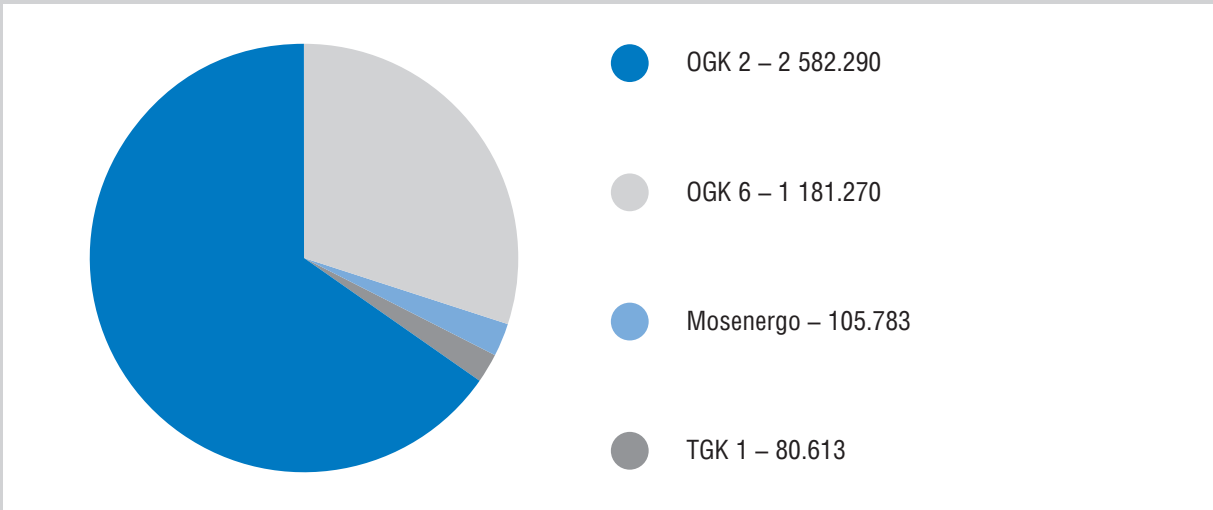
***Gazprom Group* strives for the waste amount reduction, which both relates to the production and other activities, as well as to the disposal and landfilling.**

In 2009 *Gazprom Group* companies waste amounted for 5210.8 kilotons. The most waste emissions were shared by *Gazprom enrgoholding* – 79%, however the majority of these wastes were low hazardous ash and sludge waste (ASW). The ASW made 3.9 million tons.

GAZPROM GROUP COMPANIES' WASTE SHARES IN 2009 %



THE ASH AND SLUDGE WASTE STRUCTURE OF GAZPROM ENERGOHOLDING COMPANIES IN 2009 Г., KILOTONS



In order to reduce its ASW-related environmental impact OGK -2 launched the dust catching systems, and is rehabilitating ash-disposal areas and restoring the area protection facilities. In 2009 the Basic design on Triotskaya GRES (ASW – 45%) shift to the dry ASW removal (except the I line station because of technological specifications). The Basic design was started at the block #7 of Troitskaya GRES in 2009. The project will enable the separation of dry ashes and subsequent utilization, which will decrease the ASW amount in as-disposal areas. The main ASW utilization directions are: production of construction materials, infrastructure construction, production of land improvers for agriculture.

OGK-6 also focuses on the ASW. In 2009 the 1st section of the Novocherkasskaya GRES ash-disposal area was rehabilitated, the piezometer wells in the ASW disposal area are regularly checked together with the water quality. The environmental monitoring is placed in the ash-disposal impact zone (Ryazanskaya, Cherepovetskaya GRES). The company carried out maintenance (repairs of ash separators and ASW pipe systems) at Krasnoyarskaya and Cherepovetskaya GRES. In 2010 Krasnoyarskaya GRES is expected to receive the certificate on the ash downstream product.

In 2009 *Gazprom* companies amounted for 364.99 kilotons of waste, which depicted an increase by 97.49 kilotons (36.4%) comparing with the performance of 2008 (267.5 kilotons). The increase was mainly caused by the extracting

subsidiaries (drilling waste), which made 96.34 kilotons. The 4 and 5 hazard class waste cover the most of the total amount – 338.79 kilotons (93%).

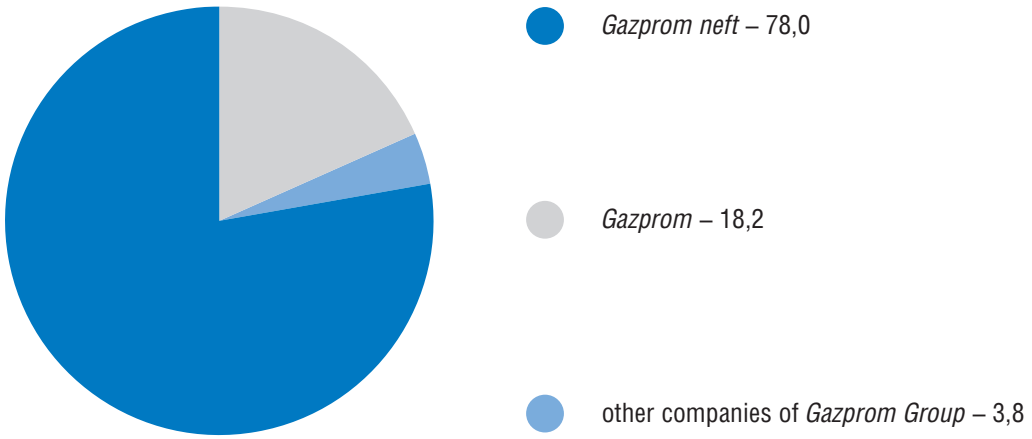
In 2009 *Gazprom* passed over to external organizations 198.07 kilotons, disposed 6.79 kilotons and landfilled 143.79 kilotons of waste. Thus in 2009 *Gazprom* reported the waste amount increase, over 20% delivery to external organizations, the cumulative waste indicator more than a double drop.

OIL CONTAMINATED WASTE HANDLING

In 2009 *Gazprom Group* amounted for 47.69 kilotons of oil sludge. Due to the technological specifications, the majority of this amount was shared by *Gazprom neft Group* subsidiaries and *Gazprom*.

Oil waste of the Group mainly refers the 3 class of hazard and is depicted by the sludge of oil separators, grinding oil contaminated fluids, pipeline and reservoir treatment facilities, oil catching units waste.

GAZPROM GROUP COMPANIES' SHARES OF OIL WASTE IN 2009



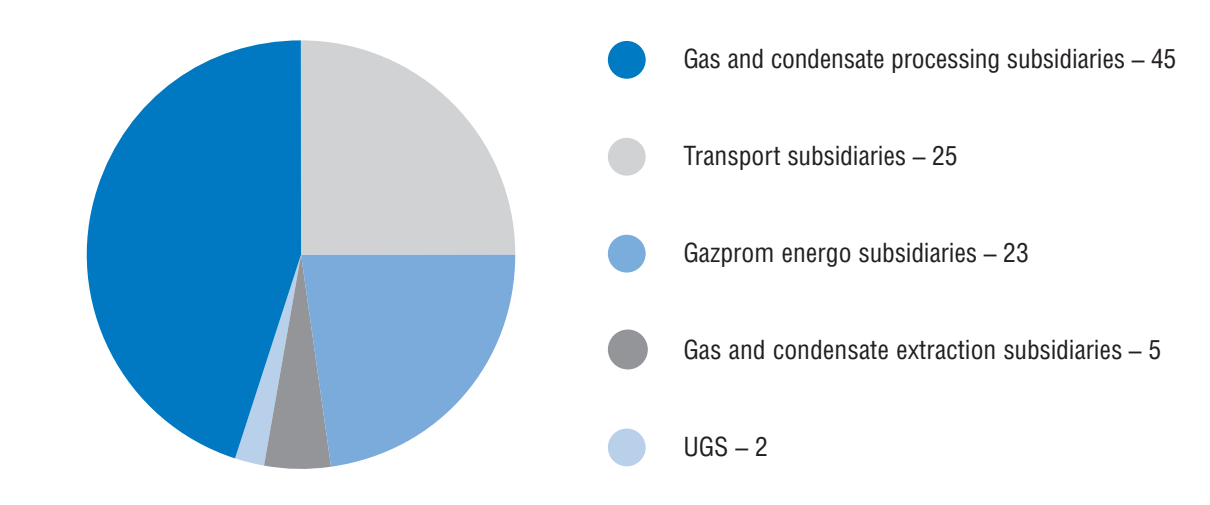
The majority of *Gazprom Group* oil waste is resultant from equipment cleaning from oil – 43.4% and oil catcher film coming out on the surface – 36%, 10% is shared by equipment cleaning from oil products. The oil separator sludge and other oil waste share 11% of the total amount.

In 2009 *Gazprom* subsidiaries handled 12.17 kilotons of oil waste, of which 71% (8.66 kilotons) formed in 2009 and 29% (3.51 kilotons) was the remaining from the previous period.

The *Gazprom* oil waste was mainly shared by the subsidiaries of gas and condensate processing, transport and Gazprom energo. The main oil waste sources at *Gazprom* are waste water treatment, reservoir and pipeline cleaning.

The most of the oil waste handled by *Gazprom* and *Gazprom neft* subsidiaries has no production utility and so get passed over to external organizations. The waste disposed on own sites (before treatment or transfer to external organizations) made about 76.99 kilotons, 95% of which was shared by *Gazprom neft Group*.

GAZPROM SUBSIDIARIES' OIL WASTE STRUCTURE IN 2009, %



Gazprom neft Group makes an emphasis on oil waste handling and is developing treatment capacities. In 2009 500 tons of oil waste was processed by the Alfa-Laval unit in Yaroslavl region (OAO Slavneft-Yaroslavneftesitez, Novo-Yaroslavl oil processing plant). Tomsk neft got a plasma catalytic oil waste utilizing unit up to the technological mode. The unit is installed in the Karpinskoye field area.

Orenburg GPP of Gazprom dobycha Orenburg launched a 405 tons/year oil waste utilizing unit, which generates mineral substance used in road construction.

Gazprom energo oil contaminated residual matters of waste water are regularly transported to specific sludge site for treatment with oil destructing biopreparations. The technology allows to decrease the hazard grade and utilize the processed ground as isolation for road and ditch construction.

In order to separate hydrocarbons from pipeline cleaning-related sludge, Gazprom dobycha Nadym uses oil and reservoir separators. The hydrocarbon output is a ready product. For example, in 2009 Medvezhinskoye gas field control processed 0.28 tons of sludge.

In 2009 *Gazprom* bureniye started the application of mobile waste combustion units Forsage-1, which enabled a waste thermal treatment, including oil waste.

Gazprom Group spent 1541.65 million rubles on environment protection from production and consumption waste, including *Gazprom* – 756.85 million rubles. The maintenance costs of facilities, units and equipment for production and consumption waste treatment made 75.64 million rubles and 51.29 million rubles respectively.

LAND RECLAMATION

Operating in the regions with high and low population density in the European and Asian parts of Russia, exploring new fields and constructing new pipelines in virgin areas *Gazprom Group* applies system approaches towards the conservation of land and soil natural resilience.

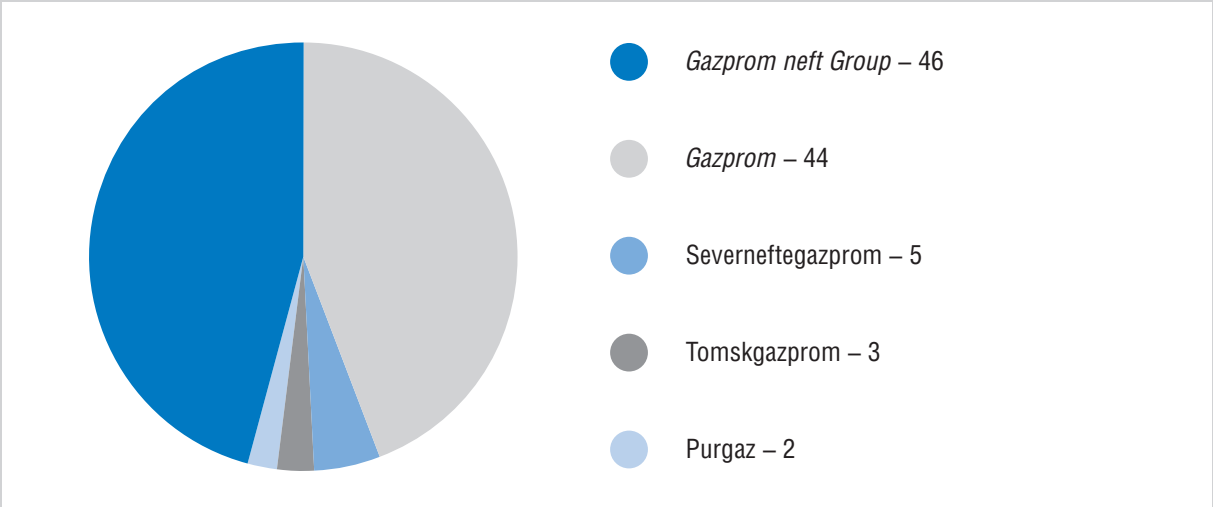
The land and soil protection in *Gazprom Group* companies is based on the principle of "environmental impact limitation", which is especially important in the Northern regions of Russia.

The land protection is considered at early project design stages, which include information on environmental impact intensity, climate peculiarities, geomorphology of soils and lands, as well as the recommendations on the disturbed territory minimizing and appropriate reclamation and rehabilitation measures.

The measures on the land protection are based on the national regulation, methodological recommendations and corporate standards. They foresee the application of technical solutions, which enable to avoid surplus land disturbing and apply rational technical and biological rehabilitation.

At the beginning of the reporting period *Gazprom Group* disturbed territory made 41.8 thousand ha, including waste lands – 6.5 thousand ha; the end of the reporting period – 48.6 thousand ha, including waste lands – 5.1 thousand ha. The company rehabilitated 12.6 thousand ha.

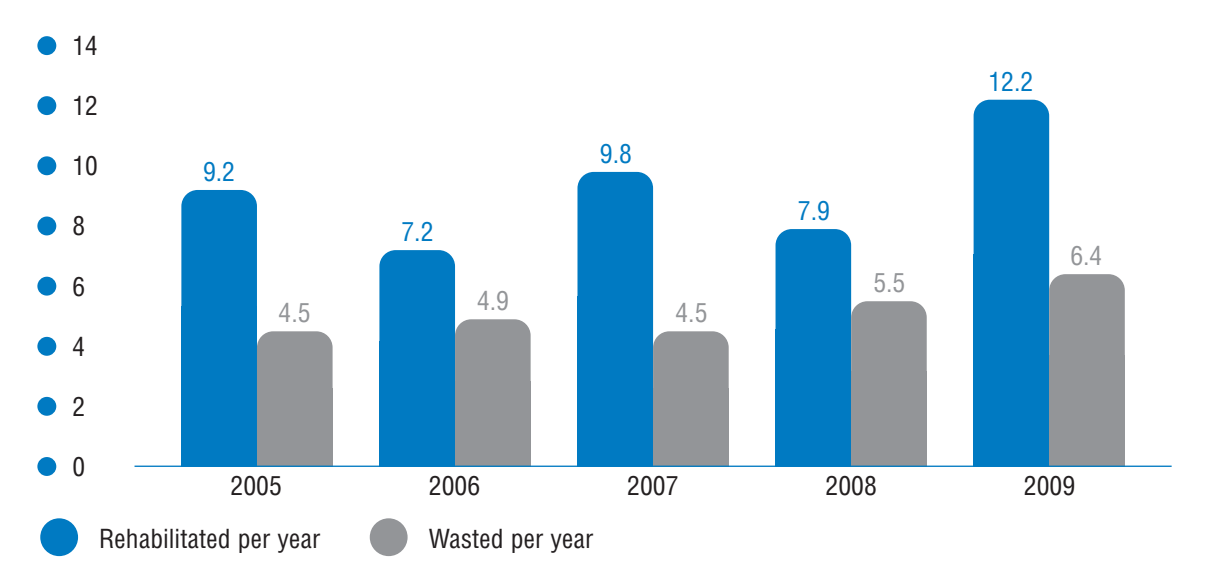
DISTRIBUTION OF DISTURBED LANDS BY GAZPROM GROUP COMPANIES IN 2009 (END OF THE REPORTING PERIOD), %



Due to the large scale exploration of new fields *Gazprom neft Group* and *Gazprom* shared the most of the disturbed lands, 22.49 thousand ha and 21.66 thousand ha respectively. For example, in *Gazprom* extracting segment 60.7% of disturbed lands was covered by Gazprom dobycha Nadym (4.18 thousand ha) due to the launch of the Yamal mega project.

Gazprom subsidiaries rehabilitated nearly 12.2 thousand ha of lands, which was 97% of the *Gazprom Group* total and thus performed a 54% improve if compared with 2008. In 2009 the rehabilitation rate was observed to exceed the disturbance rate (10.04 thousand ha), which comparing with the beginning of 2009 enabled to reduce the disturbed territory at the end by 2.7 thousand ha.

GAZPROM LAND REHABILITATION DYNAMICS THROUGH 2005–2009, THOUSAND HA



The companies have been progressively implementing advanced technologies to minimize land disturbing and protect natural ecosystems. For instance, the construction of the Blue Stream pipeline was the first project in the Russian oil and gas industry to foresee a construction of tunnels 3260 m long under the mountain chains of Mare and Unnamed. These constructions allowed to save over 4 ha of old-growth forest.

Gazprom dobycha Nadym applies a road construction complex "Polar Elephant" for paving temporal winter roads. The complex converts winter cover into a homogeneous plastic mass and compresses it with a specific ski. The technique makes the winter road paving less time consuming, increases the road operational characteristics, including life service, road throughput and vehicle mean speed, as well as minimizes environmental impact on vulnerable Northern lands.

One of *Gazprom Group* main focuses is the prevention of land contamination with oil. That is why *Gazprom Group* oil spill alert system integrates all the necessary equipment and technical media. The company also endorsed Accident Oil Spills Liquidation Plan, created accident oil spill crews, which are aimed at land reclamation and rehabilitation.

Gazpromneft-Noyabrskneftegaz (*Gazprom neft Group*) completed the rehabilitation program of oil contaminated lands and 120 sludge pits. The company has also exposed its roads, cluster site areas, paths, service utility corridors to the rehabilitation, as well as the pipeline oil spill disturbed lands. The rehabilitation funding program in Noyabrsk region alone made over 100 million rubles.

Gazprom Group rehabilitation costs in 2009 made 847.45 million rubles, including *Gazprom* – 275.20 million rubles.

PROTECTION OF BIODIVERSITY AND THE TERRITORIES OF TRADITIONAL NATURE USE

Expanding its production Gazprom Group stresses the paramount importance of ecosystems studying and protection, environmental impact minimizing.

The companies' environmental activities directed at conservation of biodiversity and traditional nature use of indigenous peoples can be clearly showcased.

The projects of the Sakhalin shelf have lately received the public scrutiny in terms of environment protection. The

project zone of Sakhalin-2 is inhabited by 34 kinds of birds, which are included into the international Red Book, such as Steller's sea eagle, spotted greenshank – the most vulnerable kinds. The North-Eastern shelf of the island is situated on the cross-way of salmon migration routes.

In 2009 the "Sakhalin Salmon Initiative" – four-year program of wild salmon conservation – was continued working. This included two large scale research expeditions, which applied all necessary measuring tools of the salmon population diversity and number, as well as the monitoring of the fish inhabitation in the Sakhalin Rivers. The program of the Sakhalin salmon fishery assistance is being conducted to facilitate benefits from the advantages on the international market demand for sea products. The program is based on the principles of smart nature use. The necessary measures on breeding grounds restoration were undertaken, which also included preservation activities. Among the certain 8 projects were financed in order to attract public attention to the environmental friendliness, cooperation with the salmon conservation and rational use of water resources. The world's first international salmon camp has been established, which was visited by young environmentalists from the USA.

In February 18, 2009 the Russia's first liquefied natural gas plant was launched. The unique neighborhood of the vulnerable ecosystem and modern state-of-the-art production is in the public focus. The breeding brook Blue starts on the territory of the production complex "Prigorodnoye". A system of fish tunnels was built underneath the complex terminal. The brook is constantly monitored by a group of ecologists.

The following programs are included in the **Sakhalin Energy Investment Company Ltd.** project list:

- monitoring research and measures on conservation of erne and Steller's sea eagle, which inhabit the North-East of the Sakhalin.
- local monitoring of rare and protected kinds of birds in the area of the pipeline, OBTK, NKS-2 and LNG during their operation.
- monitoring of rare and protected kinds of birds in the periods of migration and breeding in the area of Chaivo.
- local monitoring of mammals in the area of OBTK, NKS-2 and LNG.
- environmental impact monitoring of waste water on the marine flora and fauna in the area of Prigorodnoye (Aniva Bay).
- the Sakhalin taimen population monitoring along the on-shore pipelines.
- local monitoring of flora and rare plants in the area of the pipeline, OBTK, NKS-2 and LNG during their operation.
- study of indigenous shade-enduring softwoods along the on-shore pipelines.
- environmental monitoring of ground damping in the Aniva Bay area.

In accordance with the monitoring program of Okhotsk and Korean population of grey whales specific protection mode is installed in nursery, migration and reproduction areas, which eliminates all noises, negative vibrations and water pollutions. One of the whale habitats is situated near the company's Piltun-Astokhskoye field. In order to protect them Sakhalin Energy Investment Company Ltd. and Exxon Neftegaz Ltd. attract national and international researchers and conduct profound monitoring. Based on the expert group on conservation of the Okhotsk and Korean population of grey whales Sakhalin Energy decided to put off the four-dimension seismic exploration till 2010.

The high level responsibility applied for the grey whales in the Sakhalin region will be ensured by Gazprom Group for the implementation of the **Nord Stream** project, as the Baltic Sea is the habitat of many marine mammals, such as seals and dolphins, which were registered in the Red Book of Russia.

Yamal mega project. Within the program of compensating and environmental measures stipulated by the project Gazprom developed measures on the ecosystems conservation of Ob and Tar Bay and the Pechora Sea shelf through 2009–2013. In August 2009 the unique bridge crossing over the Yuribey River floodplain was commissioned. The river water and coastline build a unique ecosystem and are a great asset for culture and history. The Yuribey water is a breeding ground of fine fishes, such as nelma (Siberian white salmon), whitefish; the river brinks is the nesting area of rare birds, registered in the Red Book of Russia; the lower reaches is the area of deer summer pastures. The project design considered the bridge construction to have zero impact on indigenous people's traditional way of life and the Yamal Peninsula environment. The most advanced technical solutions were applied during the construction process in the aim of preserving the floodplain ecosystem of the Yuribey River. In particular, the crossing was constructed avoiding the traditional deposition of soil, which enabled to retain the floodplain's original environment. The construction of the Obskaya – Bovanenkovo railroad section included stationary deer passages across the railroad.

Gazprom project of the **Kamchatka region** gasification foresees a complex of measures on the biodiversity conservation. Hereunder the company stresses the conservation issue of the region valuable fish resources. For instance, the pipeline CGTU-2 Nizhne-Kvakchikskoe GC field – automated GDS of Petropavlovsk-Kamchatsky will cross breeding ground areas through special bridges, which will eliminate the negative impact on salmon. Gazprom invest Vostok financed environment protection activities within the cooperation with the administration of wildlife reserve "Kol River".

Due to the optimal method of crossing the coastline (horizontal directional drilling) the construction of the pipeline **Dzhubga – Lazarevskoye – Sochi** has a soft environmental impact on the resort. None of the construction works will result in the original relief change, which is important for the ecosystem resilience.

In its current operations Gazprom finances measures directed at protection of flora and fauna. For example, within the Regional Concept of Komi Gazprom pererabotka sponsored on the program of the taimen population restore in the local rivers. This included the calculation of the fish resources damage and fish-rearing substantiation of the fish population restoration in the Komi water basins. In the republic of Komi, sponsored by Gazprom pererabotka, the national park Yugyd Va held a seminar "Integration of highly vulnerable territories into the region social and economic development" and released a collection of scientific articles.

Within the program of conservation and protection of the great white crane in the YNAD area Gazprom dobycha Yamburg donated 1 million rubles to the Sterkh Foundation (great white crane fund).

Gazprom transgaz Nizhny Novgorod equipped the 6-10 kW power transfer wires with bird protecting media.

Gazprom dobycha Irkutsk held a traditional activity "Environmental Descent" on the Baikal Lake coastline cleaning from the rubbish with motto "Tide Up Your Planet!".

OGK-2 designed a project of fish protection devices for the coast pumping of the 1st ascend.

OGK-6 developed a program of ichthyologic study of the water resources in the Ryazanskaya GRES water in-flow, as well as the action plan for the reclamative activities at the Novomichurinsk water storage. The environment protection measures plan for Ryazanskaya GRES of OGK-6 through 2009–2013 was coordinated with the Federal Fishery Agency (Rosrybolovstvo).

ENVIRONMENTAL CONTROL

In its operations Gazprom Group will strictly follow the national and international legal framework.

In 2009 the federal authorities of state control (supervision) (Rostekhnadzor, Rosnedvizhimost, Rospotrebnadzor, Rosselkhoznadzor, EMERCOM of Russia, public prosecution) and environment protection authorities carried out over 200 inspections at Gazprom Group facilities. The inspections identified 193 disconformities with the environmental legislation, which are liquidated within the prescribed terms. Total penalties and fares made 2.03 million rubles, which appeared to be a half of the 2008 performance.

For the past few years Gazprom subsidiaries managed to substantially drop environmental penalty charges: in 2007 the total penalties made – 9.6 million rubles, in 2008 – 1.8 million rubles, in 2009 – 0.8 million rubles.

Gazprom has been successfully operating the corporate control structure Environmental inspection of OAO Gazprom, which is an operational division of Gazprom gaznadzor.

In 2009 the division made 507 inspections, 288 of which were planned, 190 inspection were jointly conducted with gas transport and extracting subsidiaries to ensure the conformity with the waste management legislation; 29 inspections of the primary facilities under construction to ensure the conformity with the environmental legislation. OAO Gazprom subsidiary companies and organization (17 gas transport, 8 gas extracting companies, facilities of Gazprom UGS, Gazprom bureniye, Gazprom energo, Gazprom pererabotka, Novo-Urengoy gas chemical complex and 24 procurement organizations were subject to inspections. Comparing with the 2008 performance the inspection number of the UGSS facilities under construction and repair substantially increased, including the gas main pipelines Dzuarikau – Tskhinval, Pochinki – Gryazovets, Bovanenkovo – Ukhta, Nord Stream, CGTU-2 of Nizhne-Kvakchikskoe GC field – automated GDS of Petropavlovsk-Kamchatsky, Sobolevo – Petropavlovsk-Kamchatsky, development facilities of Kshukskoe and Nizhne-Kvakchikskoe gas condensate fields, development facilities of the Cenomanian-Aptian beds of the Bovanenkovo OGC field on the Yamal Peninsula".

The inspection resulted in the list of 1475 recommendations on the Gazprom subsidiaries' environment activities improve. The company reported on the following environment control achievements: stricter conformity of the subsidiaries' production facilities and the UGSS facilities under construction with the environmental requirements;

adjustment of permission, project and reporting documentation on environment protection and strengthening of the environmental control in *Gazprom* subsidiaries, as well as high performance of unconformities liquidation. The average timely liquidation is nearly 96%.

The number decrease of unconformities and penalties, which relate to the state control, says much for the effectiveness of the *Gazprom* Environmental Inspection.

ACCIDENTS AND INCIDENTS

In 2009 *Gazprom* registered 14 accidents (incl. 11 accidents with natural gas ignition) and 67 incidents with gas losses (incl. 9 natural gas ignitions). In 2009 the total number of accident cases associated with gas ignitions and emissions decreased by 4.8% comparing with 2008. Hereunder the accident-related natural gas losses (53800.34 thousand m^3) and environmental damage (11630.81 thousand rubles) were also below the performance of 2008.

The accident-related natural gas losses was 23% lower than in 2008.

ENVIRONMENTAL PROTECTION COSTS AND CHARGES

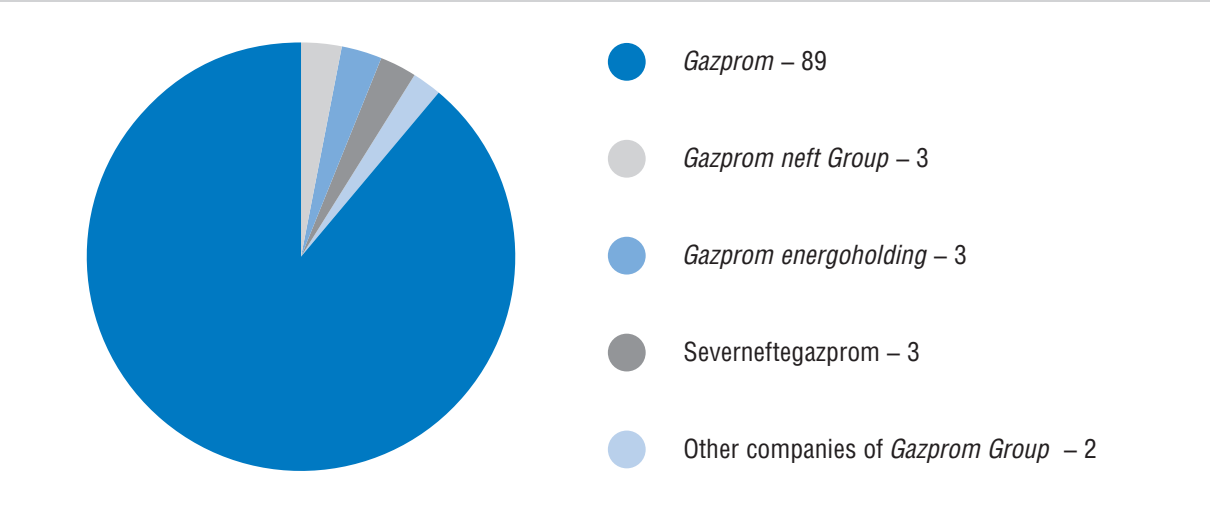
Investing in environmental protection *Gazprom Group* contributes into the friendly inhabitation and health of the Russian population.

In 2009 *Gazprom Group* environmental costs, including environment protection charges, decreased by 5882.37 billion rubles if compared with the performance of 2008. The decrease was caused by the reduction of hydrocarbon extraction, transport and energy generation. Despite the background reduction of maintenance and overhaul costs, *Gazprom*, however, increased its environment protection and nature use investments, which in 2009 exceeded the values of 2008 by 3151.78 million rubles.

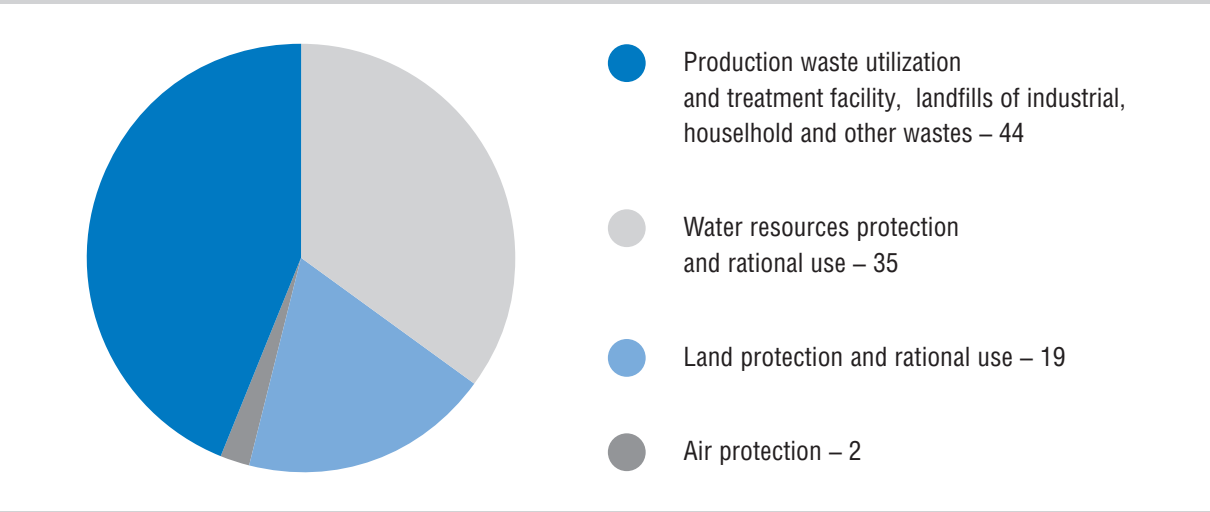
GAZPROM GROUP ENVIRONMENTAL COSTS AND CHARGES, MILLION RUBLES

Costs and charges	*Gazprom Group*		*Gazprom*	
	2008	2009	2008	2009
Current costs	17 162.25	10 376.47	6 598.10	6 141.97
Overhaul repair costs of environmental protection facilities	1 428.77	962.68	879.68	728.15
Capital investment in environment protection and nature use	3 493.70	6 323.59	2 497.99	5 649.77
Charges for negative impact	2 678.80	1 218.41	647.44	616.22
TOTAL	**24 763.52**	**18 881.15**	**10 623.21**	**13 136.11**

SHARES OF GAZPROM GROUP COMPANIES INVESTMENT IN ENVIRONMENTAL PROTECTION AND NATURE USE IN 2009



GAZPROM GROUP STRUCTURE OF INVESTMENTS IN ENVIRONMENTAL PROTECTION AND NATURE USE BY THE INVESTMENT ACTIVITIES IN 2009, %



The majority of *Gazprom Group* environmental costs is shared by *Gazprom* – 59%, *Gazprom energoholding* – 19.4%; *Gazprom neft Group* – 17.7%. In 2009 Sakhalin Energy current costs made 724 million rubles, the Sakhalin-2 project required environmental investments of 63.13 million USD, 50% of which was invested in land forest protection; 21% – water resources protection, 17% – air protection, nearly 12% – fish reserve protection, population restoration of wild animals. In 2009 the company provided funding of 18 environmental projects, the biggest of which was the Sakhalin Salmon Initiative.

In 2009 *Gazprom Group* companies transferred 1218.41 million rubles in all national budgets as the environmental negative impact charge (*Gazprom* – 616.22 million rubles), 374.36 million rubles of which was charged for exceeding environmental norms (*Gazprom* – 201.02 million rubles). The exceeding was caused by the lack of regulation norms on emissions and waste discharge and disposal permissions, as well as the deficit of guidelines and methodology in limitation values setting and permission issuance for emissions, which relate to pipeline repairs and strom water discharge onto the relief.

ENERGY SAVING

Efficient energy use and saving is the crucial factor of Russia's sustainable development. Gas saving is thus the priority issue, as gas resources share in the Russian fuel balance is over 50%.

Gazprom implements energy saving activities on the basis of the "Gazprom energy saving concept through 2001–2010". The energy saving potential is ensured by in corporate target programs, such as:

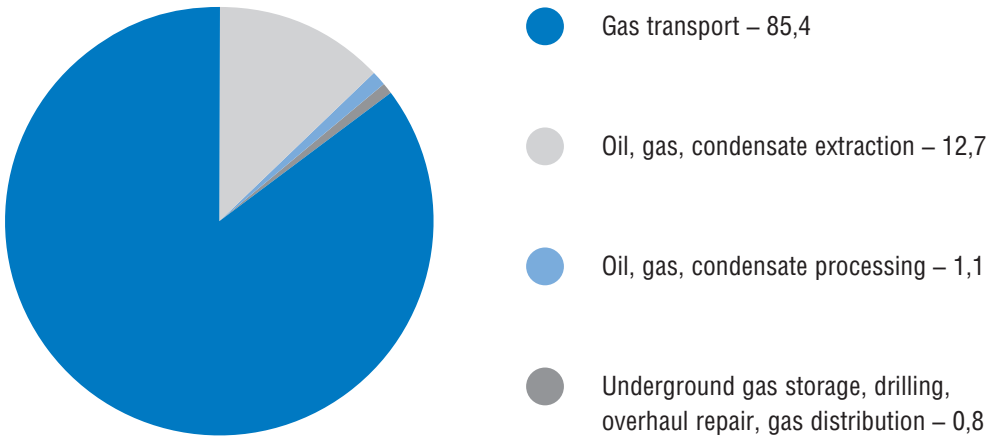
- Complex program for 2007–2010 of reconstruction and technical re-equipment of gas transport objects and compressor stations units of underground storages;
- Complex program of reconstruction and technical re-equipment of gas extraction objects till 2010;
- Energy saving program of OAO Gazprom for the period 2007–2010.

GAZPROM ENERGY SAVING PROGRAM PERFORMANCE IN 2009

Due to the situation change on the financial and energy markets in 2009 *Gazprom* endorsed "Amendments to the energy saving program of OAO Gazprom through 2007–2010"

The implementation of the program measures in 2009 enabled a 2.6 million t.c.e. fuel and energy resource saving including: natural gas – 2179.3 million m^3; power – 171.6 million kWh; thermal energy – 181.4 thousand Gcal; diesel fuel – 5154.1 t.c.e.; burner and furnace fuel (BFF) – 2876.1 t.c.e. The most of the saving effect was reached in gas transport and extracting, which amounted for 84.7% and 12.4% of the total energy resource saving:

GAZPROM ENERGY SAVING EFFECT BY MAIN PRODUCTION ACTIVITIES IN 2009, %



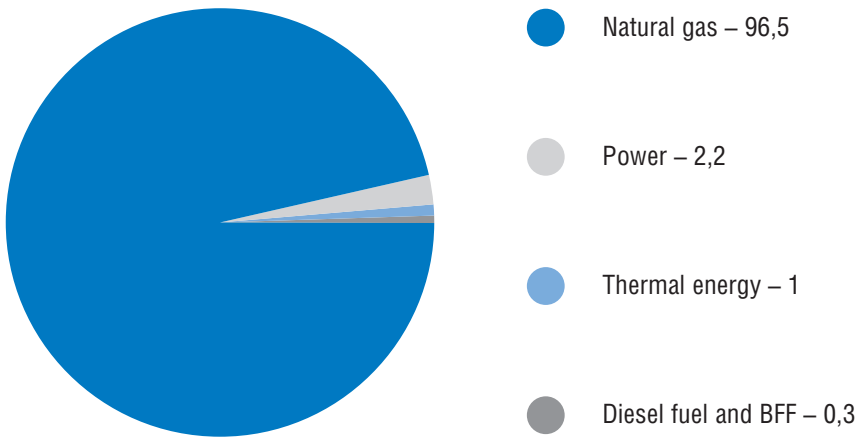
GAZPROM ENERGY RESOURCE SAVING PERFORMANCE BY PRODUCTION ACTIVITIES IN 2009

Activities	Natural gas, million m³	Power, million kWh	Fuel energy, thousand Gcal
Oil, gas, condensate extraction	276.5	2.5	18.2
Gas transport	1 860.4	138.3	96.8
Underground gas storage	11.1	1.4	1.8
Oil, gas, condensate processing	24.2	5.9	47.7
Drilling and well overhaul repair	0.1	16.0	12.5
Gas distribution	5.4	5.5	0.4
Others	1.5	1.8	4.1
Total	**2 179.3**	**171.6**	**181.4**
Total, thousand t.c.e	**2 484.4**	**55.8**	**25.9**
GROSS*, thousand t.c.e			**2 574.2**

*Reference: considering the saving of diesel duel and BFF during drilling and wells overhaul repair (5.15 and 2.9 thousand t.c.e. respectively).

The saving effect was mostly resultant from the main energy resource – natural gas, which amounted for 96.8%, the power saving share was 2.2 %, the rest was shared by the thermal energy – 1%, diesel fuel and BFF – within 0.3%.

ENERGY SAVING RESOURCE STRUCTURE, %



The analysis of energy saving measures and implementation of advanced energy saving technologies enabled *Gazprom* to endorse the corporate Provision as of November 25 2099 #399, which dropped the gas specific auxiliary consumption rate of gas transport and extracting subsidiaries 23% below the rate stipulated by the Order of the Russian Ministry of Energy as of 07.02.2003 # 60.

The energy saving effect was achieved by *Gazprom* through the implementation of the Energy saving Program, Facilities Reconstruction Program, Development of Innovative Technological Solutions and Application of Research and Development products.

In 2009 the major saving effect (1860.4 million m³ or 85.4% of the total natural gas saving) was reached through the implementation of the Energy Saving Program in gas transport.

EFFICIENCY OF ENERGY SAVING TECHNOLOGIES IMPLEMENTATION IN GAS TRANSPORT IN 2009

Energy saving area	Natural gas savings	
	million m^3	%
Optimization of technological modes of gas transport	738.1	39.7 %
Reduction of gas auxiliary consumption	473.2	25.5 %
Reconstruction and modernization of technological equipment	253.8	13.6 %
Technical state improve of GPAs	185.1	9.9 %
Reduction of technological losses	142.3	7.6 %
Reduction of gas consumption for technological needs of auxiliary industry	40.2	2.2 %
Enhancement of pipelines hydraulic efficiency	23.3	1.3 %
Introduction of AMS systems and telemechanics, improve of gas accounting tools	4.4	0.2 %
Total	**1 860,4**	**100 %**

Optimization of working modes of the technological objects of gas transport system, which involves modern complexes of modeling:

- distribution of gas flows among the pipelines;
- "compressor station – pipeline" mode;
- load distribution among the compressor stations of each pipeline;
- load distribution among compressor units at multiunit compressor stations and gas pumping aggregates in the units;
- work of gas transport system involving intersystem crosspieces and regulators.

Reduction of gas consumption for the technological needs of compressor stations, linear parts of pipelines, gas distribution stations, which is achieved via:

- gas pumping from linear parts of pipelines, which are under repair;
- gas use for compressor unit auxiliaries during the regular repair work of the unit;
- technologies of cutting-in under pressure;
- repair technologies of damaged parts involving strengthening muffs.

Progressively increasing costs on overhaul repair of main facilities due to the obsolescent equipment, especially referring to the linear parts of gas main pipelines, determine the necessity to substantiate the choice of parts to be repaired first.

Gazprom has introduced a pipeline diagnostic system, which brings up to 6 billion rubles per year by means of warning against possible accidents, accompanied by the corresponding gas losses (atmospheric emissions). In 2005–2008 Gazprom transgaz Moscow, Gazprom transgaz Ukhta, Gazprom transgaz Yekaterinburg were supplied with the complex equipment for the repair work based on the technology of cutting-in under pressure (by "T.D.Viliamson").

Reconstruction and modernization of technological equipment, which includes:

- replacement, modernization and reconstruction of gas pumping aggregates (GPA);
- reconstruction (overhaul repair) of linear telemchanics systems;
- replacement of basic laminar regenerators of gas pumping aggregates with the tubular ones.

Technical improve of GPA

- replacement of damaged ball-gage cocks of compressor stations and linear parts of gas main pipelines;
- removal of unsealed ball-gage valves by means of modern sealing components and equipment etc.

Reduction of gas consumption for technological needs of auxiliary industry by means of:

- overhaul repair of boilers in boiler houses with the change of heating tubes;
- replacement of morally and physically obsolescent boilers;
- cleaning (washing) of boilers in boiler houses;
- mode calibration of boiler houses etc.

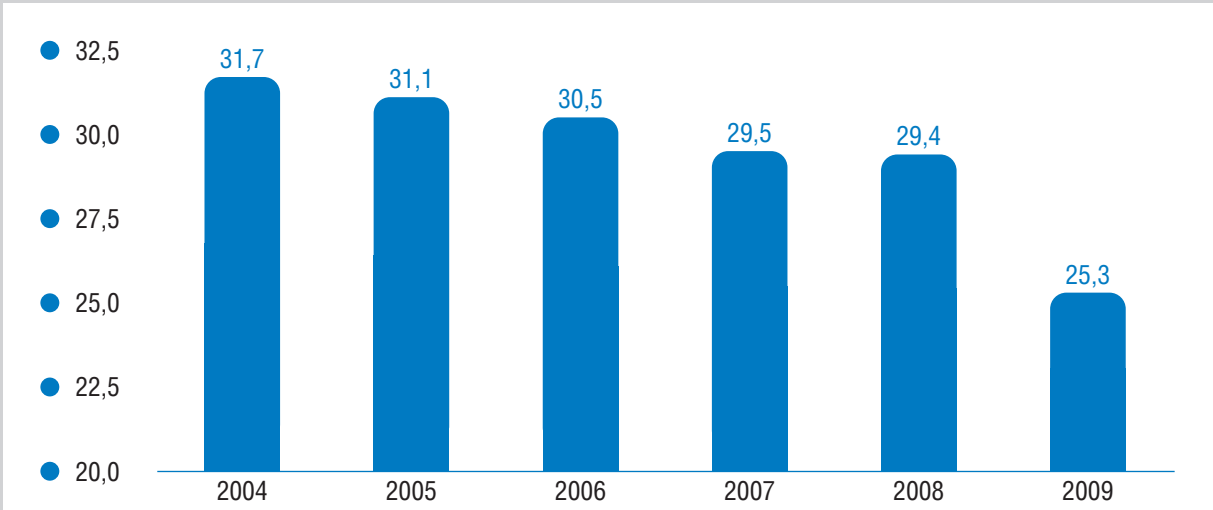
Enhancement of gas pipelines hydraulic efficiency, which resulted from the pipelines cleaning through pistons.

Introduction of automated managing systems and telemchanics, improve of gas account tools. The examples of the most efficient AMS are:

- System of automatic management and regulation (SAM and R) provided by "Compressor Controls Corporation" (USA) for: SAM of GPA (enables to reduce gas fuel consumption of a GPA by 0.4–0.5 %, overhaul repair and operative repair costs by 2.5 %) and SAM of compressor units (enables to reduce gas auxiliary consumption of compressor units down to 1 %);
- Program complex "Energy efficiency of objects of gas transport system "Magistral" (Gazprom transgaz Yugorsk)", which provides for the indicators control of energy consumption and energy efficiency of the gas transport objects in the on-line mode.

Introduction of energy saving measures under the Energy saving program in gas transport leads to the reduction of unit gas auxiliary consumption (per unit of a product transport work). In 2004–2009 this indicator has decreased by 20.2 %, which says for the energy efficiency enhancement of gas transport.

REDUCTION OF GAS AUXILIARY CONSUMPTION PER UNIT, M³/MILLION M³·KM



REQUIREMENTS STRENGTHENING TO GAZPROM ENERGY SAVING AND EFFICIENCY

***Gazprom* energy saving policy is aimed at creation of necessary organizing, legal and financial conditions for the fuel energy resources smart use and saving. The energy efficiency enhancement of technological process and compliance with major environmental requirements is hereunder the priority aspect.**

Today the company is intensively working on the research and development of innovative technologies. They include compressor station heat utilization technologies, derivation of liquid fuels from depleted wells, and the subsequent transport and storage in the form of gas hydrate. The substantial energy saving and environmental effect is achieved through the implementation of new technologies for the gas transport repair.

Considering the Federal order provisions as of November 23, 2009 "On the energy saving and energy efficiency enhancement" # 261-FZ *Gazprom* keeps undertaking energy efficiency measures, accounting the involved energy resources, regular researching the subsidiaries' energy facilities and developing energy passports of organizations, buildings and facilities.

The further gas and energy saving will enable *Gazprom* to not only benefit from resource saving, but also lower its environmental impact.

In order to boost the energy saving *Gazprom* endorsed the order as of October 23, 2009 #340 "Temporal procedure of gas and energy saving monetary encouragement at OAO Gazprom", which provides bonuses for employees of gas transport and extracting subsidiaries for actually achieved gas and energy saving.

Gazprom is developing its Energy Saving Concept through 2011–2020, which is based on the provisions of the Russian Energy Strategy through 2030 and the Federal order as of November 23, 2009 #261-FZ.

The preliminary assessment made for the Concept development shows the *Gazprom* technical energy saving potential – 26.6 million t.c.e.

GAZPROM ENERGY SAVING POTENTIAL BY THE PRODUCTION ACTIVITIES THROUGH 2011–2020

Types of activities	Natural gas, gas, million m^3,	Power, million kWh	Thermal energy, thousand Gcal	BFF and diesel fuel, thousand t.c.e.	Total, t.c.e.
Extraction of gas, condensate and oil	4 557	302.7	484		5 301
Gas transport	17 131	3 446.2	1 300		20 139
Processing of gas, condensate and oil	62	883.3	4 500		822
Underground gas storage	30	65.6	50		41
Gas distribution	132	51.0	20		160
Drilling and well overhaul repair	1	20.0	30	9.6	17
Others	128	80.0	75		166
Total	**22 034**	**4 848.9**	**6 459**	**9.6**	**26 647**

Reference: the applied conversion factors for t.c.e. are: 1 thousand m^3 = 1.14 t.c.e.; 1 kWh = $0.123 \cdot 10^{-3}$ t.c.e.; 1 Gcal = 0.143 t.c.e.

Gazprom Group companies are also working on the production energy efficiency enhancement. For instance, Mosenergo energy efficiency performance was determined by the subsidiaries' following annual energy saving measures:

- regular operational measures, which refer to the sealing of furnaces, gas flow channels and turbine vacuum systems, cleaning of condensers and heaters pipe cross-points, conservation of equipment;

- power plant equipment loading modes optimization;
- measures based on main and auxiliary equipment tests aimed at efficiency improve;
- replacement, reconstruction and launch of new equipment.

In 2009 Mosenergo energy saving measures resulted in the total fuel energy resources saving amount of 34.2 thousand t.c.e. (70.9 million rubles saved). The energy saving measures costs hereunder made 50.6 million rubles, which says for the measures efficiency, as the investment lag was less than one year.

One the energy saving crucial elements is the studying of a power station energy efficiency. In 2008 Mosenergo started researching of its energy facilities. In 2009 the researching scope included HPP-6 (affiliated by GRES-3) and HPP-12.

RENEWABLE ENERGY USE

Gazprom is highly concerned about using cost effective renewable energy resources. This would be especially helpful in energy supply of single facilities and settlements, which are out of the energy network range.

Gazprom operates wind and solar power generators in order to ensure the pipeline reliability, prevent malfunction-related accidents. For instance, 27 complexes of energy dependant devices of gas well telemetric system were put into operation for the Yamburg GC field. The devices involve renewable energy resources (solar modules, wind generators, thermal power generators).

Information and managing systems, which use renewable energy sources, are aimed at automated data collection on the transport parameters of condensate pipelines, electric and chemical protection of pipelines, alert system support, coordination of executing units.

***Gazprom* energy saving measures enable to enhance the production energy efficiency, achieve reduction of pollutant and greenhouse gas emissions.**

ENVIRONMENTAL ASPECTS OF GAZPROM PROJECTS IMPLEMENTATION

GAZPROM CRUCIAL PROJECTS AND ENVIRONMENTAL PROTECTION

***Gazprom Group* pays much attention to regional features and ensures environmental security of production planning and development.**

The **Nord Stream** project stresses the peculiarities of the Baltic Sea region. In 2009 the environmental impact assessment was completed. It was made in compliance with the Convention on the Environmental Impact Assessment in the cross border context (Espo Convention); the project was approved by the participating governments of the region. In 2009 together with the Ministry of Defense of Russia *Gazprom* started securing the sea flow along the pipeline route.

Bovanenkovo oil, gas and condensate field. The priority of environmental issues is the basis of environment security ensuring of the Bovanenkovo OGC field development on the Yamal Peninsula. The project implementation was actually launched in 2009; the framework investments made 3.5 billion rubles. The waste water discharges into channels are totally eliminated, the project included radial gas collecting from gas well clusters, and GHG emissions mitigation measures for gas pipelines; a number of technical solutions were developed, which enable a safe utilization of wastes. The project was designed against the conservation of geocryological conditions.

In 2009 the environment support was provided for the shelf field development projects of (**Prirazlomnoye oil field and Shtokman gas and condensate field**). The projects included the development of specific environmental and fishery requirements for geological and ecological studies, explorations and extraction of hydrocarbon resources in West Kamchatka areas. All projects also foresee the most possible on-shore recycling and utilization of wastes and installation of oil spills alert security systems.

In 2009 the project materials on **Sakhalin – Khabarovsk – Vladivostok** pipeline were exposed to the state environmental expertise. The trainings on competent and adequate ensuring of environmental security were organized for project sub-contractors at the pipeline construction stage. The air protection measures included:

- application of advanced GPAs, which meet the NOx and CO emission criteria;
- natural gas venting (methane emission) avoiding in case of the pipeline repair;
- application of non-odorized natural gas as a fuel for GPA and boilers of production sites and linear pipeline sections (if equipped with automated detectors) in order to avoid sulphur dioxide emissions;
- application of a blow free discharge scheme for gas treatment to avoid drainage wastes;
- use of automated and remote shutdown systems for accidents and emergencies;
- use of automated control and shut down system for emergency gas transport pipeline sections in the most seismic dangerous areas.

The water protection measures included:

- elimination domestic water discharges into natural water objects via the application of mobile sanitary units Kedr and others, used for waste water collection and storage;
- installation of water removal rollers for working in open trenches;
- ensuring the water easy flow from the construction site;
- the rubbish removal from the water steams and floodplains after the construction;
- water treatment after the endurance and sealing hydro tests;
- application of water recycling supply systems at car washes etc.

The protection measures of geological environment, soil, flora and fauna included:

- selection of the optimal pipeline route, which will enable the minimum damage to the nearby ecosystems;

- minimum new road construction and maximum use of existing roads, construction of necessary water level control units, which eliminate the location flooding;
- provision of construction groups with reservoirs for exhaust fuel and lubricant materials and domestic waste;
- restricted visits of territories, which are out of construction bounds;
- principal compliance with the fire and sanitary safety rules;
- other soil preservation measures.

The major source of impact on flora and fauna is anticipated to take place at the pipeline construction stage of sections, which will cross the special protected areas (SPA). The possible environmental damage was scaled to the pipeline section area in the SPA. Therefore the project included:

- avoiding installation of any linear section valves or production facilities in the SPA;
- the shortest terms of construction work in these areas;
- the pipeline laying nearby the existing transport and technical channels;
- staff training on the environmental rules of working in the SPA and on the nearby territories (the SPA visits will not be allowed for hunting, fishing such like);
- subsequent liquidation of temporal access roads, used at the construction stage;
- full compensation of the environmental damage.

Although no direct environmental impact on the SPA is expected from the facilities standard operation, the project foresees the environmental monitoring of these areas, in order to undertake measures in case it is necessary.

Environmental security of the Kamchatka region gasification project. The project will enable to:

- switch the region fuel consumption from fuel oil, coal, diesel and benzene to natural gas;
- reduce the thermal energy and power costs;
- improve the quality and reliability of the energy supply for the region population;
- get the liquefied natural gas;
- reduce emissions as a result of the shift to a more environmentally friendly fuel.

The switch (primarily fuel oil and other fuels) will lead to a 24% pollutant emissions reduction, including: soot – 62.9 %, sulphur dioxide – 63.9%, carbon oxide 9.4%, benz(a)pyrene – 25%, suspended particulate matters – 6.6 %, fuel oil ash – 67.4%, coal ash – 8%, carbon dioxide – 8%. In 2009 together with region public organizations within the project implementation control *Gazprom* inspected the project subcontractors' activities to ensure their conformity with the federal and regional environment protection legal requirements. The inspection did not identify any substantial infringements.

The project of the **Dzhubga – Lazarevskoye – Sochi** pipeline was included into the Governmental Program of the Olympic facilities construction and the development of Sochi city into the mountain resort. The operation of the pipeline will certainly change the environmental situation in the region for the better by means of shift from the fuel oil and coal to natural gas. The project will also enable to meet the requirements of the International Olympic Committee on the event-related facilities energy supply with zero increase in greenhouse gas emissions. The project design included a thorough and detailed analysis of possible environmental impact on natural components (air, water, soil, geological environment and biota) during the pipeline construction, operation and accidents. Therefore a complex of measures was developed for the pipeline safe construction and further operation.

PARTICIPATION IN REGIONAL ENVIRONMENTAL PROGRAMS AND INITIATIVES

Cooperation with the Russian regional authorities in environmental protection, support of indigenous people and consideration of their legal interests allows finding solutions to current environmental problems and taking every possible precaution for future.

In 2009 *Gazprom* and the Administration of Yamal-Nenets Autonomous District signed the Program of research and development cooperation through 2010–2012. The Program stipulates a number of environment protection measures towards the development of the oil and gas fields of the Yamal Peninsula. The measures include: a comprehensive

dynamic assessment of climate and nature, geocryologic and anthropogenic conditions, which limit the hydrocarbon extraction and transport in the *Gazprom* operation zone of the Yamal area and the adjacent water area of the Kara Sea; application of the waste utilization research and development solutions and schemes adapted to the local conditions (waste pickup to consumers, construction of landfills, operation of thermal utilization units); climate and ecosystem status forecast during the Yamal fields development.

Gazprom dobycha Nadym makes agreements with the Administration of Yamal District every year "…on the participation in the social and economic development of the Yamal Municipal District", Purov District "…on the measures to be undertaken as a compensation for the complex damage, which relate to the company's operation on the territory of the Purov Municipal District" and Nadym District "on the social partnership of the Nadym Municipal District and Gazprom dobycha Nadym". In 2008 in accordance with the contract №2008/12/0861 made with the Administration of YNAD Gazprom dobycha Nadym donated 7,414,620,000 rubles to undertake compensation measures during the development of the Yamal peninsula fields under the program of the complex development of the Yamal Peninsula fields and the adjacent water area through 2008–2011.

Gazprom VNIIGAZ LLC won the contest of innovation projects in 2009 held by the Government of the YNAD and took the first place in "Best Innovative Idea for Construction" (development of hydrotechnic measures on the water stream regulation under the extreme river floods on the Yamal Peninsula) and the second place in "Best Innovative Idea for Waste Utilization and Recycling" (prospective scheme of waste treatment for the evelopment of hydrocarbon fields on the Yamal Peninsula).

Gazprom dobycha Orenburg takes a great part in the region's environmental status improvement. For example, the company provided a sponsorship of 4.095 million rubles to the settlement nearby the Orenburg gas chemical plant. Pavlovka settlement received 822.4 thousand rubles from Gazprom dobycha Orenburg to have the treatment facilities reconstructed. In addition 3 air quality control posts were installed in Rychkovka, Shuvalovsky, Zauralny.

The company has been intensively cooperating with the region's administration. *Gazprom* and Orenburg Administration signed the agreement № 33-c as of 30.03.2006, which provide the main principles of the cooperation on the environment protection and rational nature use. On 23.08.2009 an operative group of Gazprom dobycha Orenburg liquidated the pollution of the Berdyanka River. The pollution did not relate to the company's operations. The head department of the Russian EMERCOM express the gratitude for the operative and solid water pollution liquidation.

The company prepared and submitted its recommendations on the "Enhancement Program of the environmental situation in Orenburg region through 2011–2015" to the Orenburg Ministry of Natural Resources, Environment and Property Relations. The company's recommendation on the target program "Waste" through 2011–2016 were also submitted.

Gazprom dobycha Urengoy sponsored 57.8 million rubles for the region of Purov in compliance with the agreement with the Administration of Purov, as well as 15 million rubles for the region of Nadym to meet the agreement with ZAO Nydinskoye and the "Yamal for Descendants" received 11 million rubles as the company's donation.

Gazprom Dobycha Yamburg made a General agreement through 2005–2010 under the cooperation with the Administration of Tar district. The environment protection interaction is regulated by the Additional agreement of the company and the Administration for 2009.

In 2009 OOO Gazprom dobycha Yamburg won the prize of "National Environmental Award" for the development of a technique complex, which enables to reduce the anthropogenic environmental impact during the exploitation of gas fields.

Gazprom transgaz Kazan participates in a Gazprom VNIIGAZ LLC program "Tatarstan Republic vehicle park shift to gas motor fuel". The program resulted in a 98.71% gasification of the region, including the rural area 97.27%. The gas motor fuel is now utilized by 15040 industrial, public and agricultural enterprises (2.5% more than in 2008), 1196 heating station (1.36% more in 2008). This enabled to substantially decrease pollutant emissions in the region by means of the fuel shift.

Gazprom transgaz Stavropol. In 2009 together with the Stavropol Ministry of Industry, Energy, Transport and Communication the affiliated company Kavkazavtogaz was developing the regional program "Utilization of the compressed natural gas in Stavropol region as a motor fuel through 2010–2012". A *Gazprom* target program "Development of gas fueling station network and natural gas vehicle park through 2007–2015" foresees the construction of 14 vehicle gas fueling compressor stations.

Kamysh-Burunsk LPCGMP submitted recommendation on the development of the target program "Environment protection on the territory of Neftekumsk Municipal District of in Stavropol region through 2010–2012" to the Neftekumsk department of household and environment protection.

Gazprom transgaz Tomsk. In 2009 a vehicle gas fueling compressor station was put into operation under a *Gazprom* program "Development of gas fueling station network and natural gas vehicle park through 2007–2015".

Gazprom transgaz Ukhta procured planting stocks of trees for a kinder garden "Akyonushka" in Vologda region. The employees of Pereslavl LPCGMP participated in "Day of Earth 2009", which was held in the national park of "Lake Plesheevo". Gryazovets LPCGMP provided a great support in improvement of cedar grove area. Sheksna LPCGMP participated in the cleaning of the pond and the nearby area, which is situated in Barbach. The employees of Sheksna LPCGMP received 1st grade certificates from the Administration of Sheksna Municipal District for their contribution into the environment protection.

Gazflot developed a program "Compensation and environment protection measures for the indigenous people of Northern territories" in 2009. The program includes reclamative fishing of rapacious, coarse and low value kinds of water flora in Ob and Tar Bays; assessment of river and lake water bioresources in Yamal area; installation of water treatment facilities with the capacity of 500 m3/day in Gaz-Sal; construction of a container refrigerator with a capacity of 100 tons in Gyda; small business support aimed at craftsmanship development of indigenous peoples of the Northern territories.

Gazprom neft, in 2009 undertook measures within the Program of ensuring environmental security of its facilities, as a contribution into resolving of environmental problems in the regions of operation. The company was cooperating with the department of natural resources and environment protection of Tomsk Administration on the development, agreeing upon and approval of the regional limit on the oil content in the soil after the rehabilitation.

In 2009 a target program "Wastes" was developed for Tomsk region. The company developed and launched the program of the environment improvement on the fields of Tomskneft VNK in Khanti-Mansi Autonomous District through 2012. The rehabilitation program of sludge pits and oil contaminated lands of *Gazprom neft* fields was also implemented.

Mosenergo is a constant participant of Moscow energy saving program and contributes a lot into the energy efficiency enhancement and improve of energy resources use.

OGK-2 is implementing the regional program "Action Plan of OGK-2 affiliated company Troitskaya GRES on the environmental impact decrease by means of bringing the ash-disposal, located in the Shobarkul Lake area, in line with the project technical indicators". Within the Plan in 2009 the 1st stage of disturbed lands rehabilitation (177.7 ha) was completed, the 1st, 2nd and 3rd section dams were restored, the ash shore dust suppression system was installed and put into service.

CONCLUSION

Gazprom Group operations meet the strategic priorities of Russia's environmental and energy policy, as well as the framework international principles of sustainable development.

Gazprom is an absolute leader of the Russian fuel and energy complex and makes a substantial contribution into the country's economy. *Gazprom* achievements are the essence of Russia's sustainable development at the current stage. Along with it the company is aimed at synchronizing high economic performance and the most careful and responsible nature resources use and environment protection.

Gazprom Group industrial facilities, which are involved in hydrocarbon extraction, processing, transport, and storage, as well as energy generation, refer to crucial sources of environmental anthropogenic impact. Therefore the company applies sector-specific measures on reduction of pollutant emissions and discharges, waste disposal and disturbed territories. Hereunder, considering *Gazprom* projects scope and scale, the research and development solutions are a crucial aspects of the company's development.

Gazprom Group shares in Russia's environment pollution are: air pollution – nearly 17% of stationary emission sources; waste water discharges into water objects – less than 0.1%; of the country's total production and consumption waste – 0.14 %. The company's performs its best to reduce its environmental impact and accomplish the environmental targets. This gets evident from the achieved environmental performance and substantial investments in environment protection, which amount for billions of rubles.

Gazprom Group keeps the following strategic directions in the environment protection area, which initiate a vast cross country environmental effect for the Russian Federation:

- further development of energy and resource saving;
- modernization and launch of new production capacities, based on the best available technologies, which enables to radically reduce the environmental impact;
- development of an advanced motor fuel market sector, which involves a more environment effective fuel, including gas;
- participation in research and development on the restoration and conservation of biosphere balance, as well as flora and fauna;
- undertaking preventive measures on the emergencies associated with an environmental negative effect;
- development and implementation of corporate programs, participation in regional and federal programs, which ensure environmental security;
- improvement of the environmental management systems.

***Gazprom Group* responsible approach to the problems of environmental security is our conscious contribution into the ongoing and progressive sustainable development of the Russian society into the welfare of the present and future generations.**

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