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## **GAZPROM PRIORITIES IN THE FIELD OF NATURE MANAGEMENT, ENVIRONMENTAL PROTECTION, OCCUPATIONAL SAFETY AND HEALTH**

Open Joint Stock Company Gazprom is a global leader in hydrocarbons production, processing and transportation. Due to the scope of its operations, the Company has traditionally paid special attention to industrial safety, environmental protection and resource efficiency.

*Gazprom* activities are governed by relevant legislation of Russia and other countries where its projects are located, international conventions and treaties, and corporate environmental commitments, first undertaken in 1995.

*Gazprom* environmental policy focuses on the following priorities:

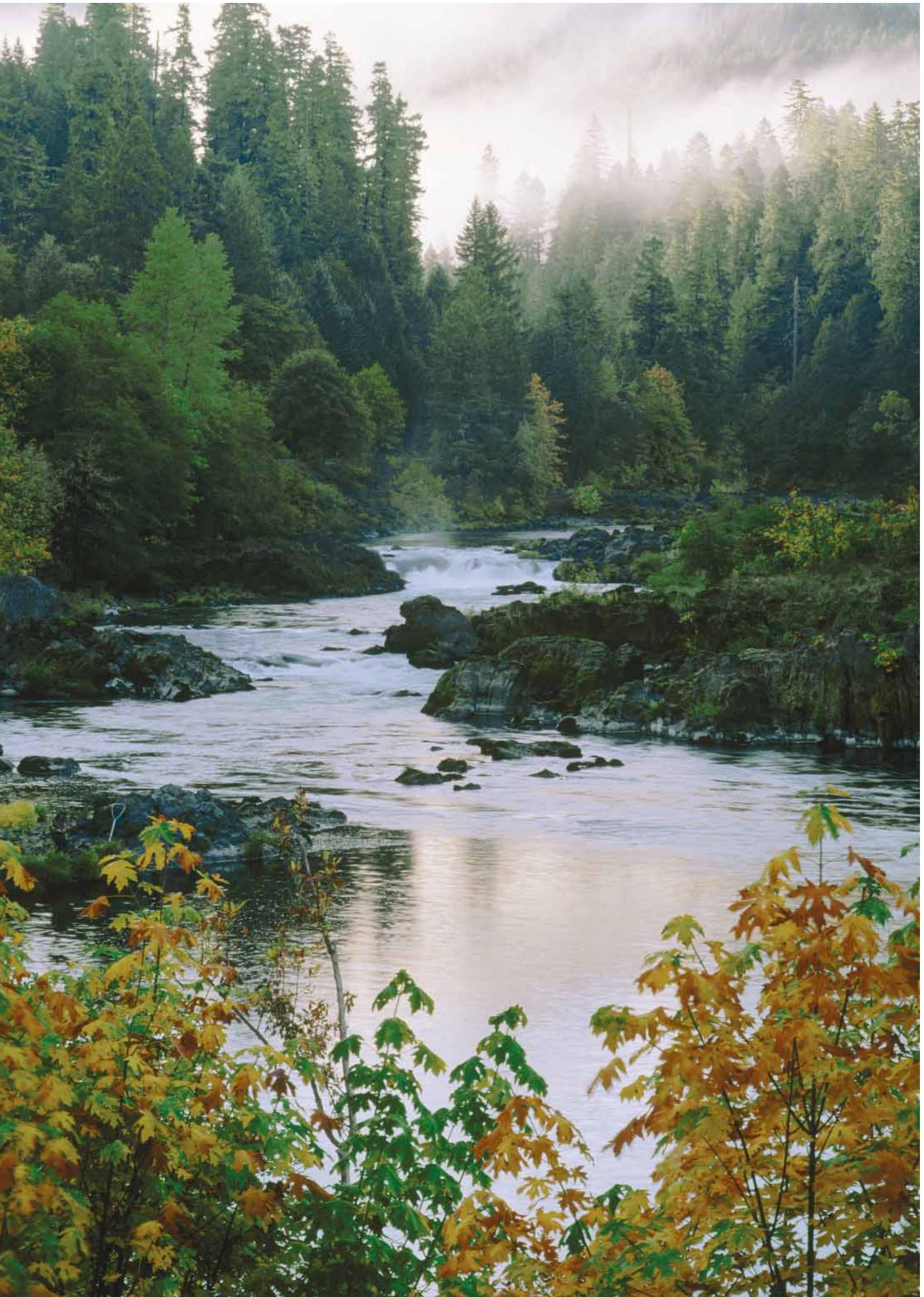
- Sustainable, environmentally responsible economic development
- Conservation of the natural environment in areas housing gas industry facilities, efficient management of the natural resources used by the Company, energy and resource saving
- Ensuring industrial and environmental safety during construction and operation of gas production, processing, transportation and storage facilities
- Providing safe and healthy working conditions for the Company's employees
- Contributing to the environmental safety of *Gazprom's* regions of operation.

In its current operations and strategic initiatives, *Gazprom* seeks to maintain a balance between economic, environmental and social factors.

*Gazprom* understands that it operates in regions characterized by a rich and unique biodiversity. This means that, whatever the operation, the Company has extra responsibility for protecting the environment.

Every year, the Company conducts thorough environmental research, implements advanced energy-saving and eco-friendly technologies and improves its environmental management system in accordance with international standards.

These initiatives enable *Gazprom* to address company objectives, meet short-term and long-term plans in line with international environmental/nature management standards and practices, and – most importantly – contribute to preserving the environment for the generations to come.



## BASIC DOCUMENTS REGULATING GAZPROM ENVIRONMENTAL PROTECTION ACTIVITIES

The principal documents governing *Gazprom* everyday activities include:

- Constitution of the Russian Federation
- Water Code, Land Code, Forest Code and other Codes of the Russian Federation
- Federal Acts On Environmental Protection, On Environmental Impact Assessment, On Air Protection, On Industrial and Domestic Waste, On Environmental Territories Subject to Special Protection, On Protection of Rights of Ethnic Minorities in the Arctic Area, On Energy Saving
- Resolutions of the Russian Government and federal authorities.

In addition, the Company complies with applicable regional and local legislation and ISO 14000 series of environmental management standards.

The requirements of these and other legal documents, together with the Company's voluntary commitments, are set down in a number of corporate documents including, but not limited to:

- Gazprom HSE Policy
- Gazprom Regional Policy Concept
- Gazprom Energy Saving Concept for 2001-2010
- Gazprom Health and Safety Concept
- Gazprom Code of Conduct.

International agreements affecting the implementation of *Gazprom's* transboundary projects include:

- The Convention on the Protection of the Marine Environment of the Baltic Sea
- The Convention on the Protection of the Black Sea against Pollution
- The Convention on Transboundary Effects of Industrial Accidents
- The Convention on Long-Range Transboundary Air Pollution and related protocols
- The Kyoto Protocol to the United Nations Framework Convention on Climate Change
- The Convention on Environmental Impact Assessment in a Transboundary Context
- The World Heritage Convention, etc.

## IMPLEMENTATION OF GAZPROM ENVIRONMENTAL POLICY

To ensure effective implementation of its environmental policy, *Gazprom* complies with the following requirements set out in Article 3 of its Charter:

- In conducting prospection, exploration and development of gas, gas condensate, oil and oil/gas condensate fields, ensure combined gas, gas condensate and oil extraction and employ the best prospection, exploration and development methods; conduct hydrocarbon production in compliance with existing requirements to efficient use and conservation of underground resources and environmental improvement.
- Use energy-efficient and environmentally-friendly technologies and energy-saving equipment for field development, hydrocarbon production, transportation, processing and other operations.
- Develop and implement activities to preserve the natural environment, the traditional habitat and lifestyle of ethnic minorities.
- Implement new tools and methods for preventing accidents, fires and blowouts, providing a safe working environment for company employees, and developing and approving safety rules, standards and instructions.

### ENVIRONMENTAL MANAGEMENT SYSTEM

In order to ensure efficient environmental protection activities, their coordination at all levels and in all operational spheres of the Company, the Environmental Management System (EMS) was established and it continues to operate.

*Gazprom* EMS currently brings together over two thousand environmental protection and nature management professionals.

Activities relating to environmental policy implementation involve all levels within the *Group's* vertically integrated structure.

At *Gazprom* Administration, the central coordinating body is the Energy Saving and Ecology Office of the Gas Transportation, Underground Storage and Utilization Department. The Office coordinates the activities of Administration divisions and *Gazprom* subsidiaries' environmental offices, provides guidance and handles environmental and energy efficiency issues arising in the course of the *Group's* operations.

In addition, environmental policy implementation involves all *Gazprom* Administration divisions, including the Strategic Development Department (provides innovation inputs for environmental and energy-saving initiatives), the Investment and Construction Department (designs and constructs environmental protection facilities, and deals with environmental aspects of construction), and the Information Policy Department (provides information support for environmental policy implementation).

The Ecological & Analytical Center of the Gas Industry, a subsidiary of *Gazprom*, maintains statistical records of natural resource use and waste generation, and analyzes *Gazprom's* environmental performance.

Based on *Gazprom* environmental policy, the Company's subsidiaries have undertaken environmental commitments of their own, and are engaged in planning environmental activities and designing programs to address environmental and energy saving issues.

All *Gazprom* sites have ecology offices, which are continually working to ensure more eco-friendly operation.

## ACHIEVING ENVIRONMENTALLY RESPONSIBLE AND RESOURCE/ENERGY EFFICIENT OPERATION

The scope of *Gazprom's* activities is such that it has a strategic impact on the entire Russian economy and affects a huge number of people. This means greater social responsibility, including in the field of environmental protection.

To ensure environmentally safe operation of its facilities, *Gazprom*:

- Develops and implements safe operating processes and technology for exploration, production, transportation, storage, use and processing of hydrocarbons and hydrocarbon products
- Considers the characteristics of regional climate and nature at all stages in construction decision-making and design of new facilities, and applies advanced research methods to assess possible environmental impact
- Improves the quality of feasibility and design documentation, and ensures that environmental impact assessment (EIA) is performed by relevant company departments, to reduce the environmental impact of new facilities.

To minimize the environmental damage caused by its operations, *Gazprom*:

- Ensures that all its projects use the most efficient and environmentally friendly processes and equipment
- Performs comprehensive rehabilitation of natural systems after decommissioning
- Conducts timely inspections and maintenance
- Designs, implements, uses and improves industrial environmental control systems at its operations, and systems for eco-monitoring of affected areas.

To make its environmental activities more effective, *Gazprom* works with:

- Federal legislative and executive bodies – to enhance environmental legislation
- Regional legislative and executive bodies – to enhance regional environmental legislation, develop regional environmental improvement programs and environmental monitoring systems
- Local communities in *Gazprom's* areas of operation – to address local environmental issues.

To ensure efficient resource use, *Gazprom*:

- Implements secondary processes at end-of-life gas fields (usable product recovery from saline ground water, power generation using low-pressure gas)
- Employs enhanced gas and condensate recovery methods
- Uses low-waste and waste-free processes
- Reduces fresh water consumption from natural water sources, including through the use of water recirculation systems.

The above activities form part of *Gazprom's* plans and programs, the most important of which include comprehensive refurbishment and retooling programs for gas production and transportation facilities.

Programs relating to gas production aim to ensure target production levels through the use of energy-saving solutions such as gas recovery during well testing; sidetracking; employing coil tubing units for well interventions; using hydrate and wax inhibitors; increasing gas pumping unit (GPA) compression ratios by means of fluid end replacement; using new-generation GPAs based on new economical drive systems with an efficiency of over 34% and modular compressors with a compression ratio of 1.44...3.0; enhancing mass transfer efficiency of absorbing and stripping units through the use of structured plate packing.

For upgrading gas transportation facilities, the most important energy-saving solutions include:

- Replacing and upgrading outdated, uneconomical gas pumping units
- Special-purpose refurbishment to improve the efficiency of low-pressure transportation at low-flow pipelines
- Refurbishment aiming to eliminate 'energy bottlenecks' at pipelines (i.e. facilities which cause increased energy consumption at downstream compressor stations).

For gas transportation facilities operation, the following energy-saving solutions are employed:

- Optimizing gas pipeline operating modes
- Reducing gas losses at compressor stations, linear portions of transmission pipelines and gas distribution stations during major overhauls
- Improving GPA condition through maintenance.

Other solutions include installing new-generation, highly-efficient GPAs; using flow-coated pipes; increasing the operating pressure.

### **INDUSTRIAL ENVIRONMENTAL CONTROL AND ENVIRONMENTAL MONITORING**

To ensure the effectiveness of *Gazprom* subsidiaries' environmental activities and follow up on their progress, the Company implements systems for acquiring and collecting data on production facilities' environmental impact and the state of the environment in the affected areas. Environmental offices of *Gazprom* subsidiaries organize and perform environmental control and environmental monitoring.

The key elements of industrial environmental control (IEC) are compliance checks and regular measurements to assess the environmental impact of production facilities. Measurements performed by *Gazprom* subsidiaries as part of IEC ensure that alert conditions are identified and addressed in a timely manner, and the performance of gas purification units and wastewater treatment systems is tracked.

Industrial environmental control programs are being implemented by all *Gazprom* organizations and subsidiaries. Gas analyzers are used extensively by environmental offices to perform ongoing analytical monitoring of pollutant emissions, including nitrogen and carbon oxides.

*Gazprom* subsidiaries use chemical analysis equipment to perform a wide range of measurements, monitor the composition of airborne emissions and effluents, the parameters of solid waste, and soil pollution indicators. Astrakhangazprom, Kavkaztransgaz, Urengoygazprom, Yamburggazdobycha and a number of other subsidiaries are particularly well equipped with advanced eco-analytical tools.

Fields with high sulfur content (Orenburgskoye and Astrakhanskoye gas condensate fields) employ fixed air pollution monitoring systems, which include automated fixed monitoring stations, data collection and transmission channels, and data processing terminals.

An automated environmental monitoring system for the Blue Stream transmission pipeline has been launched at Kavkaztransgaz and Kubangazprom. Tyumentransgaz has launched a pilot version of a fixed emission monitoring system.

*Gazprom's* upstream subsidiaries, including Yamburggazdobycha and Nadymgazprom, use fixed environmental monitoring systems to track the impact of production facilities on ground and soil condition. Similar research is being conducted by Astrakhangazprom at sewage farms and landfill sites.

*Gazprom* is aggressively developing hydrocarbon resources in Extreme North – a region with highly vulnerable ecosystems. As part of these activities, the Company implements systems to monitor vegetation degradation, soil profile disruptions, the depth of permafrost and seasonal freezing and thawing.

In 2006, TyumenNIIgiprogaz conducted research at the Vyngayakhinskoye gas field to address issues relating to environmental monitoring systems for arctic operations, such as:

- Creating a network of permanent observation and sampling points to provide the required input data based on a special methodological and metrological framework
- Establishing an information support system using computer databases and electronic maps
- Determining the allowable burden on ecosystems
- Assessing ecosystems' self-regeneration capacity
- Developing optimal operating solutions based on a comprehensive evaluation of the area's ecosystems.

Piter Gaz was developing an industrial environmental control and monitoring methodology for the construction of onshore and offshore gas transportation systems. As a result, monitoring subsystems were developed encompassing such aspects as:

- Sea water and bed sediments (sea)
- Geological environment (sea)
- Biota (sea)
- Surface water and bed sediments (land)
- Vegetation and wildlife (land)
- Soil (land)
- Exogenous geological and hydrological hazards (land)
- Air (land and sea).

To enhance existing environmental monitoring systems, electronic databases are created using the data already collected. For example, in 2006 SevKavNIPigaz created a database on land resources monitoring which covers gas production and transportation facilities in the Caspian Sea and Cis-Caucasian regions.

## ENVIRONMENTAL ASPECTS OF GAZPROM OPERATING ACTIVITIES IN 2006

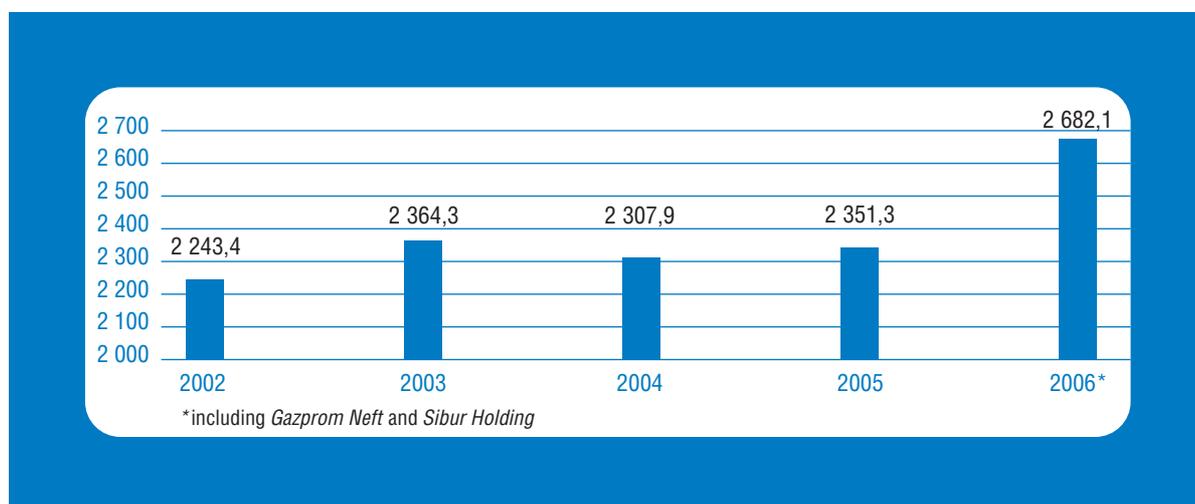
In 2006, the environmental performance of *Gazprom* subsidiaries continued to improve from many perspectives.

On the other hand, this is the first report which takes into account the environmental impact of *Gazprom's* new assets, *Gazprom Neft* and *Sibur Holding*, which is, of course, reflected in the *Group's* overall environmental performance.

### Air

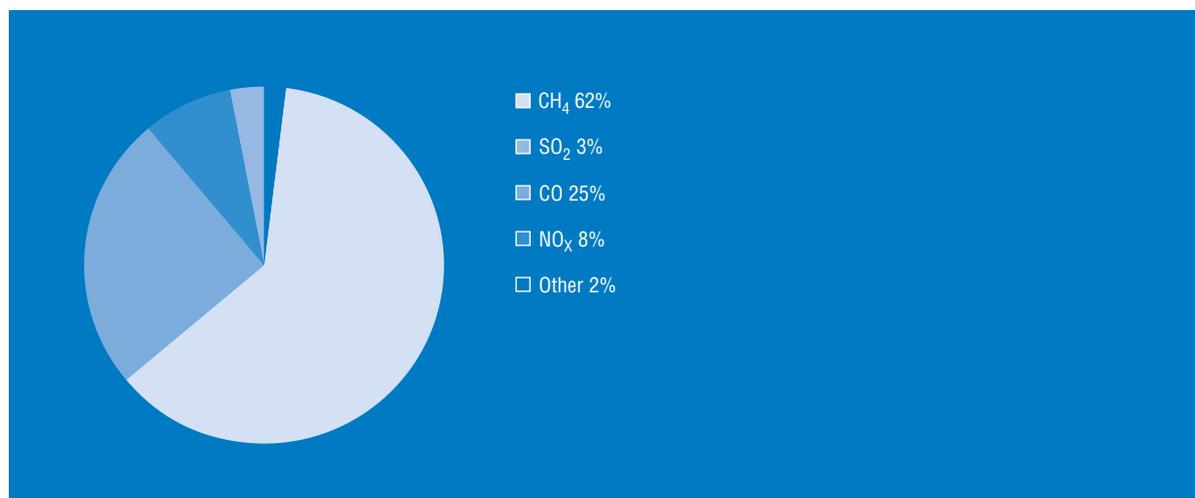
Overall gross emissions of air pollutants in 2006 amounted to 2,682,100 t, which was 14% higher than in 2005.

#### Gross emissions, thousand tons



Pollution structure remained substantially unchanged since 2005. The principal contributor was methane, accounting for 62% of gross emissions. Carbon oxide represented 25% of total emissions by mass. Nitrogen and sulfur oxides represented 8% and 3%, respectively. The total percentage of other solid and gaseous substances, including volatile organic compounds, did not exceed 2%.

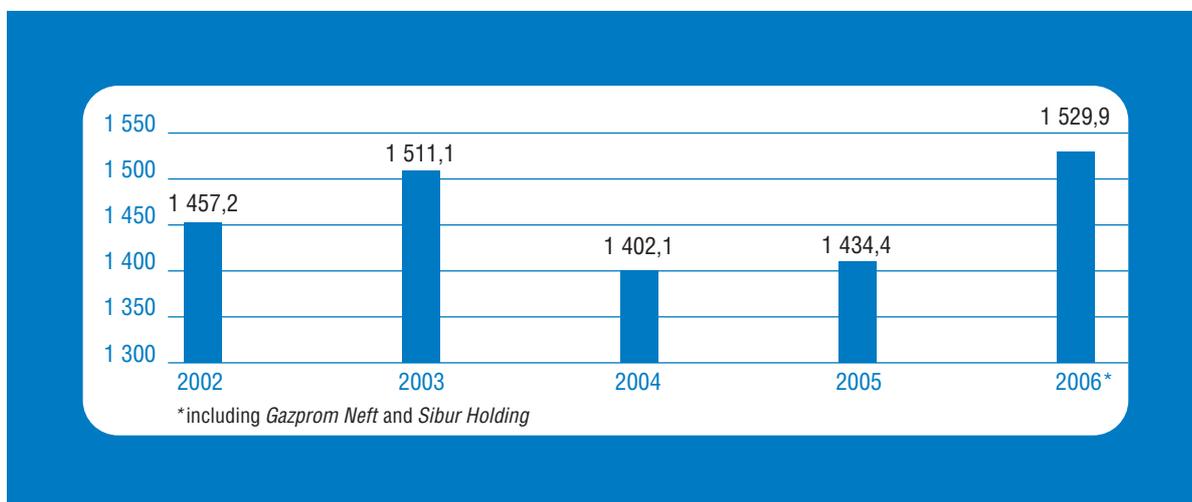
#### Air pollution structure in 2006



Methane emissions increased to 1,529,900 t in 2006, growing 6.7% since last year.

This was due to an increased maintenance and service scope at pipeline linear portions.

**Gross methane emissions, thousand tons**



The increase in gas transportation activity also resulted in greater NO<sub>x</sub> emissions due to more intense operation of compressor stations. Nitrogen oxide emissions grew 16.6% from 180,400 t in 2005 to 210,400 t in 2006.

The principal emitters of sulfur dioxide are Astrakhangazprom and Orenburggazprom, accounting for over 80% of the total. In 2006, Astrakhangazprom and Orenburggazprom reduced their sulfur dioxide emissions by 13.6% and 1.4% respectively. This was mainly due to the optimization of sulfur recovery process parameters.

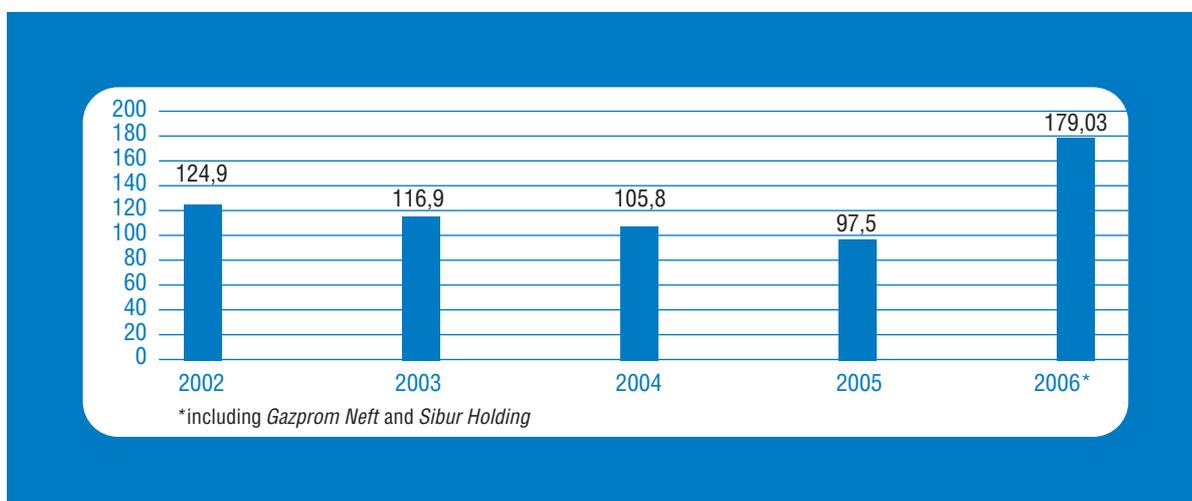
However, total sulfur dioxide emissions (with *Gazprom Neft* and *Sibur Holding*) increased from 71,100 t in 2005 to 77,100 t in 2006.

Carbon oxide emissions rose by 70,100 t, or 11.4%, compared with the previous year.

**Water**

Water consumption by *Gazprom Group* increased in 2006 owing to the impact of newly acquired assets.

**Water consumption, million m<sup>3</sup>**



Overall water consumption grew by 81.5 million m<sup>3</sup>, or 83.6%, as compared with the previous year. The substantial growth was mainly due to *Gazprom Neft*. Water intake from subsurface sources increased considerably, from 59.01 million m<sup>3</sup> in 2005 to 82.84 million m<sup>3</sup> in 2006.

The amount of water used for production needs was 60.2 million m<sup>3</sup> (compared with 26.5 million m<sup>3</sup> in 2005).

The overall quantity of circulating water in the reporting year increased to 566.2 million m<sup>3</sup> (from 263.3 million m<sup>3</sup> in 2005).

Compared with 2005, the quantity of water discharged to surface water bodies increased by 7.3% to 39.1 million m<sup>3</sup>. At the same time, the quantity of water discharged to ground surface decreased to 7.4 million m<sup>3</sup>, which represents 71.7% of the 2005 level.

### Waste

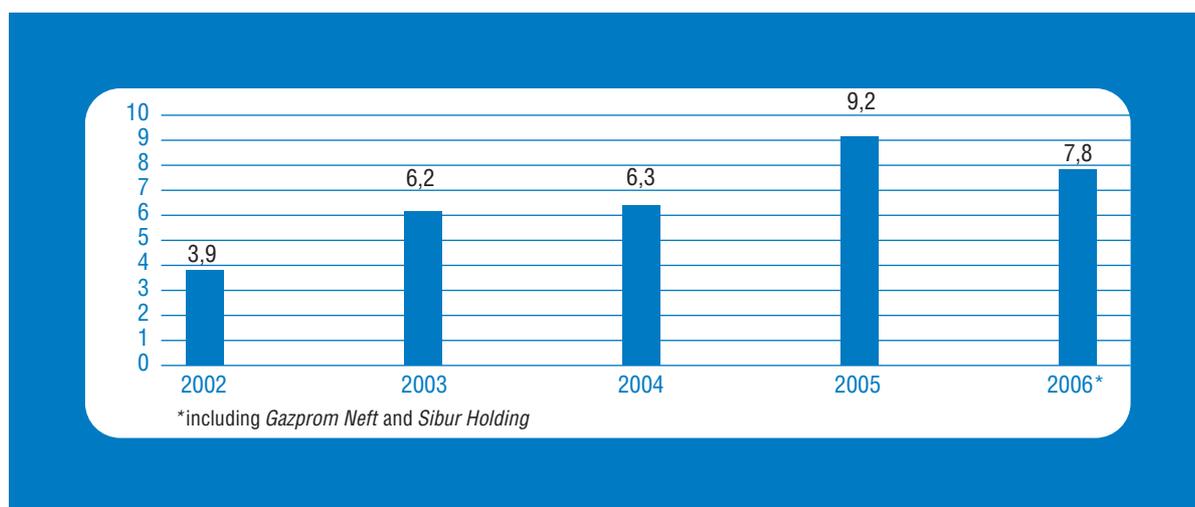
The waste generated by the Company's enterprises is mainly (over 90%) low-toxic and is categorized as the lowest-hazard (class 4 or 5) waste.

The mass of toxic waste stockpiled at *Gazprom* sites at the end of the year increased from 46,800 t in 2005 to 352,000 t in 2006. The mass of toxic waste generated by *Gazprom* operations was 673,700 t (358,300 t in 2005). This increase was due to the inclusion of new assets' indicators.

### Land Reclamation

The total area of land rehabilitated in 2006 was over 7,800 hectares. The area of waste land remained substantially unchanged since 2005 and was equal to 45,600 hectares.

#### Land rehabilitation area, thousand hectares



In 2006, most of the companies fully rehabilitated the waste land. These include *Volgotransgaz*, *Mostransgaz*, *Tatransgaz*, *Permtransgaz*, *Uraltransgaz*, etc. The most considerable volume of reclamation work was done by *Yamburggazdobycha* (1097.77 hectares), *Urengoygazprom* (724.41 hectares), *Mostransgaz* (606.16 hectares) and *Volgogradtransgaz* (610.4 hectares).

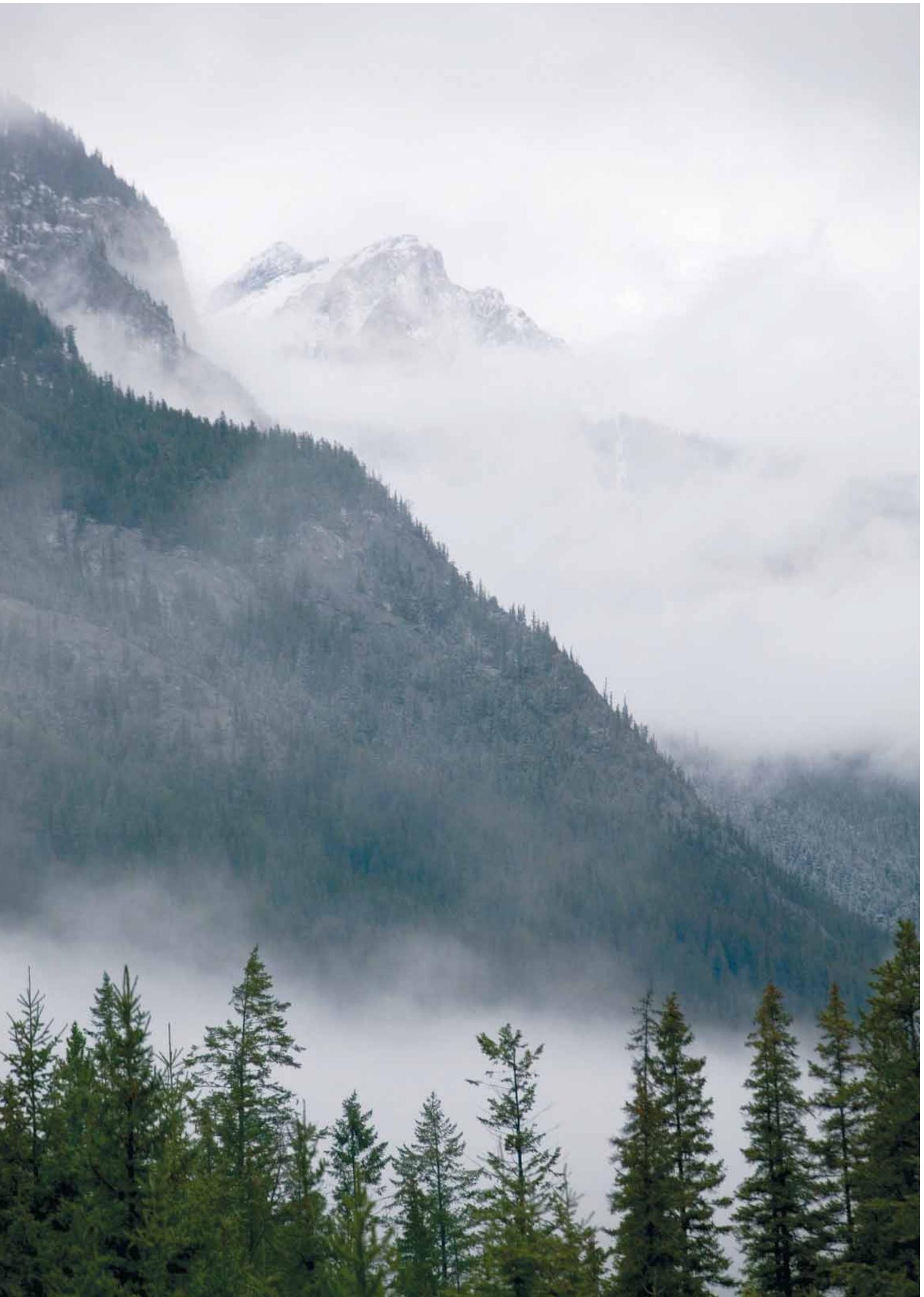
## ENVIRONMENTAL COSTS AND CHARGES

In 2006, *Gazprom's* environmental costs and charges totaled 12.7 bln rubles (9.7 bln rubles in 2005, including *Sibur Holding*) – the biggest environmental spending amount in the Company's history. This is due both to increased environmental costs and charges resulting from the expansion of the *Group* and to a direct increase in current environmental spending.

Capital investment in environmental protection was over 2.5 bln rubles in 2006. More than 1 bln rubles was spent on overhauling capital environmental protection assets, which also considerably exceeds the 2005 figure.

Current environmental protection costs increased almost one-third since 2005, reaching 8.7 bln rubles in 2006.

Environmental charges grew by almost 30% on-year and were equal to 0.5 bln rubles. The growth of charges was mainly caused by the growth of tariffs for methane emissions. Overall charges for allowable emissions (discharge) of contaminants and waste disposal represent 74% of the total (0.4 bln rubles), with charges for excess emissions (discharge) representing 26% (0.1 bln rubles).



## GAZPROM SUBSIDIARIES' ENVIRONMENTAL ACTIVITIES IN 2006

Environmental impact mitigation and resource/energy-saving activities are carried out both through funding by *Gazprom* subsidiaries and investment by *Gazprom Group*.

These activities rely on new processes and technologies developed by *Gazprom's* research centers, and cover a wide range of aspects, some of which are described below.

As part of the drive towards cleaner products and emission reduction, Astrakhangazprom started to build a sulfur pelletizing unit with storage and truck/rail car loading facilities in 2006. The surface portion of the underground effluent storage facility was upgraded in line with the new regulatory requirements. The Company continued to reinforce the banks of the Buzan river water intake area and plant the buffer zone in order to prevent wind erosion.

2006 saw the completion of the research project entitled A Study of Sanitary, Health, Medical, Biological and Environmental Impact of the Astrakhan Gas Complex, which started in 2005 under an agreement with the Russian Medical Postgraduate Education Academy of the Federal Agency for Healthcare and Social Development. The research has confirmed that the boundaries of the gas facilities' buffer zone had been established correctly.

The Company has completed the creation of an environmental management system in accordance with ISO 14 000 standards and is preparing for certification in 2007.

Volgogradtransgaz has installed tubular regenerative heat exchangers and low-emission burners at a number of compressor stations in order to reduce fuel gas consumption and NO<sub>x</sub> emissions. The conversion of motor vehicles to compressed natural gas continued in 2006. A number of filling stations were opened with a capacity of 450,000 m<sup>3</sup>/yr. The work to promote use of gas fuel was carried out under an Agreement on Cooperation between the Volgograd Region Administration and *Gazprom*.

Gazflot has developed and implemented steps to achieve a more eco-friendly operation in 2006. The Company prepared environmental action plans, established the maximum allowable emission and discharge values and waste disposal limits, and assessed the impact of its operations on the environment. Gazflot's design documentation was approved by Rosprirodnadzor, the government agency performing statutory environmental impact assessment. In addition, approval was obtained from the Yamal - Potomkam (Yamal for future generations) Association. No accidental releases or other environmental violations were identified in the course of exploration and appraisal in the Obskaya Bay (in the Kara Sea), and in the course of drilling at the Shtokman gas condensate field in the Barents Sea. Emergency prevention activities included regular inspections of self-elevating floating drilling rigs and well heads, along with training and on-site practice for relevant personnel.

A series of environmental monitoring studies were performed in the Kamennomysky license block in the Obskaya Bay during the autumn/winter, winter/spring and summer season.

Costs relating to the Adjusted Program for Compensatory and Environmental Protection Activities Aimed at Preservation of the Ecological Systems of Obskaya Bay and Tazovskaya Bay in 2004-2008 amounted to 42 mln rubles in 2006.

Kavkaztransgaz has developed and put into effect a package of 7 company standards regarding environmental management in accordance with ISO 14000. An audit was performed at 5 of Company branches to assess compliance with the newly-adopted standards.

The implementation of the environmental monitoring system for the Blue Stream pipeline was completed in 2006. The system is designed for comprehensive monitoring of pollution levels and geological hazards.

Kubangazprom has continued to monitor allowable emissions (discharge) of contaminants and the allowable contaminant content in soil and natural water, and performed geocological monitoring at extraction operations and underground gas storage, in order to prevent accidents and minimize pollution.

In the reporting year, Nadymgazprom continued to monitor the condition of air in the town of Nadym and to conduct hydrochemical observations of potable water sources, the discharge of contaminants in effluents, the condition of water bodies receiving the effluents, the condition of water courses at intersections with gas pipelines, and water areas near handling facilities and fleet anchorage. The Company also assessed the radiation parameters of its facilities.

As part of systematic environmental monitoring of its fields, the Company put in place a process for geotechnical monitoring of the permafrost zone, which includes an evaluation of natural (background) engineering and geocryological conditions of the construction site, a procedure for conducting observations during the construction and operation of facilities, soil condition monitoring, and a forecast of geocryological conditions and the state of the geotechnical system. The use of the geotechnical monitoring technique supports timely decision-making to ensure accident-free field operation and helps to minimize the environmental impact of production activities.

In accordance with the Regulations on Industrial Environmental Control at Nadymgazprom and the approved schedule, an internal environmental audit of some of the Company's branches was performed. Tests were carried out to determine the hazard classes of toxic waste, which served as the basis for preparing and approving the profiles of 18 waste types.

Severgazprom continued to perform environmental monitoring of its production facilities in 2006, and planned its environmental safety activities accordingly. The Company also performed technical and biological rehabilitation of oil-contaminated land.

Surgutgazprom commissioned a produced water treatment plant with methanol recovery and waste water treatment processes. The Company overhauled a number of treatment facilities and the emergency condensate collection pit, performed bank reinforcement activities and technical and biological site rehabilitation.

In accordance with its program, Surgutgazprom measured the parameters of natural environment components at the snow dump site and in the oil sludge storage area of treatment plants, and monitored the composition of effluents.

Tomsktransgaz built a solid waste landfill site at the Severo-Vasyuganskoye gas condensate field and wastewater disposal facilities for injecting up to 120 m<sup>3</sup>/day of effluents underground. Land reclamation activities covered an area of 13.68 hectares.

Tyumentransgaz, as per its environmental safety concept for 2005-2010, continued to upgrade its production facilities and conduct inspections and maintenance in order to reduce the accident rate and environmental impact. Environmental management system operation included Kedr-Gaz automated data preparation systems and Khimik-Analitik (Analytical Chemist) automated workplaces. The industrial control schedule included measurements of GPA-generated hazardous emissions, efficiency and environmental impact assessment of wastewater treatment plants and monitoring of ambient air condition in the areas around compressor stations and adjacent residential areas, performed by a mobile ecological laboratory. In parallel with this, the Company worked to establish a fixed system for monitoring GPA-generated emissions. The noise impact of compressor stations was assessed, and sound reduction systems for mobile power plants were provided.

In accordance with its license agreements, Urengoygazprom continued to monitor ground water hydrogeological and temperature conditions in order to assess the effect of wastewater injection on the aquifer and identify the impact of potential pollution sources. Geochemical and bacteriological soil research at the Urengoykoye oil/gas condensate field continued, too. The Company overhauled a number of facilities, including disposal wells, and conducted operational and geophysical research to assess their condition.

Urengoygazprom developed, together with VNIIGAZ, a process for combined treatment and injection of domestic and industrial effluents at the Urengoy special-purpose wastewater disposal site. A deferrization plant was built to achieve the required potable water quality.

To mitigate and prevent pollutant emissions, Yamburggazdobycha in 2006 performed regular measurements of CO and smoke content of the rolling stock exhaust gases (via a monitoring and control station); quarterly monitoring of maximum allowable emissions (MAE) from gas-consuming and energy/process equipment. To enhance water treatment efficiency and prevent wastewater discharge into water bodies, the Company built new treatment plants and refurbished existing ones at a number of its operations.

In the reporting year, Yamburggazdobycha, in conjunction with the Bashkir State University, completed the development of a methodological and economic framework for region- and industry-based environmental management of gas production in the Yamalo-Nenets Autonomous District. The main outputs of this effort include:

- A legal, scientific and methodological justification of the Concept of Region- and Industry-Based Environmental Management of Hydrocarbon Production in the Yamalo-Nenets Autonomous District
- A Concept of Region- and Industry-Based Environmental Management of Hydrocarbon Production in the Yamalo-Nenets Autonomous District: Interaction Between the District's Environmental Authorities and Yamburggazdobycha
- A Project Implementation Program for the Concept of Region- and Industry-Based Environmental Management of Hydrocarbon Production in the Yamalo-Nenets Autonomous District: Interaction between the District's Environmental Authorities and Yamburggazdobycha in 2007-2009.

Together with TyumenNIIgiprogaz, the Company continued to perform hydrogeological research and develop engineering solutions for the disposal of industrial and domestic wastewater in the Albian-Cenomanian sediments at Yamburggazdobycha production sites.

## ENVIRONMENTAL ASPECTS OF GAZPROM REGIONAL POLICY

The environmental aspect of *Gazprom's* regional policy includes both environmental activities proper and activities which help to mitigate environmental impact (such as gas supplies to the regions and conversion to gas fuel) and promote efficient use of the regions' resources (such as power supply and utilization of local energy resources).

Environmental safety and efficient nature management form an integral part of all cooperation agreements between *Gazprom* and regional authorities.

The provision of gas supplies to Russian regions is a special-priority area within the Company's regional policy.

Considering that the connection of regional consumers to the gas supply network is an issue of huge social importance (currently, the average level is 54.15%, including 61% in urban areas and 36% in rural areas), *Gazprom* management has adopted a Program for Developing Gas Distribution Infrastructure in Russian Regions in 2005-2007.

The program spans 58 regions of Russia and calls for a total investment of 43 bln rubles. It is justly described as Russia's fifth national project, since it will make the cleaner gas fuel available to 13 million Russians.

In 2006, *Gazprom* prepared a Program for Developing the Gas Resources of Eastern Siberia and the Far East, Creating a Gas Supply System for Russia's Eastern Regions and Providing a Single Export Channel to Asia-Pacific Markets. The Program takes into account the Main Provisions of Russia's Energy Strategy up to 2020 and the government's draft of Siberia Development Strategy. The Program is designed to assist in speeding up the social and economic development of republics, regions and districts of the Siberian and Far Eastern Federal Districts, and improve their environmental and energy safety.

In 2006 *Gazprom* continued to work with regional authorities to address issues relating to its large-scale investment projects. The cooperation framework created by *Gazprom* enables the parties to address project-related issues as they arise, including by holding working meetings.

As part of the Shtokman project (in the Republic of Karelia and the Murmansk Region), the Company held public consultations on the environmental impact of gas transportation system development.

Developing the hydrocarbons potential of the Arctic shelf is a completely new phase in Russia's resource and energy industry development in the 21st century. *Gazprom's* Concept for hydrocarbons production from the Russian Arctic shelf calls for an integrated approach to field infrastructure development in the Barents, Kara and Pechora Seas, with high industrial and environmental safety standards. This makes the Prirazlomnoye field a priority project for *Gazprom*, since the infrastructure being built for the project will later provide a framework for resource-efficient development of hydrocarbon resources in the Barents and Kara Seas.

*Gazprom* worked with the Yamalo-Nenets Autonomous District Administration to obtain approvals for the justification of investment in Bovanenkovskoye field development.

The Nord Stream pipeline is a wholly new route for exporting Russian gas to Europe. To link Nord Stream to Russia's Unified Gas Supply System, a new 917 km Gryazovets-Vyborg pipeline will be constructed in the Vologda and Leningrad Regions. The construction of Nord Stream will be governed by the most stringent environmental standards and will not disrupt the Baltic Sea ecosystem. Care will be taken to keep environmentalists informed about the progress of the project.

In March 2006, *Gazprom*, together with the State Duma's Ecology Committee, participated in the Baltic Sea Day international environmental forum and held a roundtable discussion: 'Ensuring Environmental Safety during the Construction of the North-European Gas Pipeline in the Baltic Sea'. The discussion received media coverage and was described in a news release and a number of articles.

In September 2006, *Gazprom*, Yamalgazinvest and Giprospeftgaz held a series of public consultations based on the environmental impact assessment of Nord Stream construction in the Vologda and Leningrad Regions.

In March 2006, during President Putin's visit to China, the heads of *Gazprom* and the China National Petroleum Corporation signed a Protocol on natural gas supply from Russia to the PRC, with the first shipments expected in 2011. Gas will be supplied from Russia's Unified Gas Supply System via two routes, from Russia's traditional gas-producing regions (the western route) and from Sakhalin Island (the eastern route).

The first stage of the project will involve the construction of a new Altai transmission system from Western Siberia. Given the ecological significance of the region, the Company will do its utmost to minimize environmental disruptions. *Gazprom* understands that the region is home to a nature park – a unique mountain plateau Ukok, included in UNESCO world heritage list. In view of this, the Company is conducting thorough research in order to route the pipeline around natural reserves and memorial parks.

In 2006, *Gazprom* and its subsidiaries worked with regional authorities to address a wide range of production, environmental and social issues.

#### Astrakhangazprom

The Company participates in the regional government's program to develop gas supply in the Astrakhan Region in 2006-2007.

In 2006, Astrakhangazprom sponsored the regional division of the Russian Nature Conservation Society.

#### Volgogradtransgaz

Since 2002, a cooperation agreement has been in place between the Volgograd Region Administration and *Gazprom*. In addition to economic cooperation, it provides for a number of environmental and resource efficiency projects, including the conversion of motor vehicles to compressed natural gas.

#### Kavkaztransgaz

In October 2006, Kavkaztransgaz, together with the V.I. Vernadsky Non-Governmental Ecological Foundation, held the EcoErudite contest for 10-11th grade school pupils and 2nd-4th year students. Participants included 150 Stavropol Region school pupils and students from relevant university departments. 20 winners received diplomas and valuable presents. In addition, the participants visited the Company's facilities and divisions, including the Severo-Stavropolskoye underground gas storage facility and the industrial environmental monitoring department.

#### Orenburggazprom

In 2006, a seminar on environmental monitoring was held for Orenburggazprom environment professionals. Invitees included the regional division heads of Rospotrebnadzor, Rostekhnadzor, the prosecutor's office for environmental protection and the Committee for Environmental Protection and Natural Resources of the Orenburg Region government.

Orenburggazprom sponsored the Clean World arts and literature contest in April-November 2006. More than 150 children from Orenburg participated with their drawings, hand-crafted items, short stories, etc.

The Company acted as a sponsor in the field of environmental protection, providing funds to environmental publications and events.

### Severneftegazprom

In March 2006, the Company launched a public consultation in the Krasnoselkupsk District on the Environmental Impact Assessment section of the Yuzhno-Russkoye oil and gas field facilities construction project.

### Tyumentransgaz

The Company took part in the 4th Spasti i Sokhranit (Save and Preserve) International Environmental Event. A visit to the chemical laboratories of the environmental monitoring service and Komsomolskoye LPU (Production Division) was arranged in Yugorsk in order to inform the participants of the Company's environmental protection activities.

Tyumentransgaz participated in the celebration of the 30th anniversary of Malaya Sosva natural reserve in the Khanty-Mansiysk Autonomous District.

### Yugtransgaz

The Company provided quarterly reports on its environmental mitigation activities to the Saratov City Administration (the Committee for Industry, Energy, Transport, Telecommunications and Fuel), for the purposes of effectiveness assessment of Saratov Social and Economic Development Program for 2006-2008.

### Yamburggazdobycha

The Company has been working in cooperation with the Tazovsky District Administration for 15 years now. As part of this cooperation, the parties signed a Framework Agreement for 2005-2010, which includes measures to safeguard the environment.

Environmental activities in the Company's license blocks are carried out in accordance with the Environmental Enhancement Program for Yamburggazdobycha Operations in 2004-2006.

The Company signed a civil liability insurance agreement with regard to damage caused to the life, health and property of third parties or the environment as a result of an accident at a high-risk production site.

The agreement on social cooperation between Nydinskoye company, Nadym district office of Yamal - Potomkam Association and Yamburggazdobycha covers, among other things, environmental relations. The Company acts as an environmental protection sponsor, too.

*Gazprom* and its subsidiaries work in close cooperation with Russia's regions to promote energy saving and efficient use of local energy resources. Plans for the future include conversion to alternative power sources and upgrading heat- and power-generating facilities with gas turbine and steam-gas technology and high-intensity heat generators. Regional energy-saving needs are met through the use of local energy resources, including alternative sources of power.

## GAZPROM RESOURCE- AND ENERGY-SAVING ACTIVITIES

*Gazprom* pursues a consistent energy-saving policy in all its business areas, taking into account Russia's Energy Strategy up to 2020.

Energy saving is especially relevant for *Gazprom* because of the:

- High consumption of fuel and energy resources (FER) by *Gazprom*
- Growing proportion of energy costs in gas extraction, transportation, processing and storage costs.

The principal objective of *Gazprom's* energy-saving initiatives is to increase the energy efficiency of its primary and auxiliary production processes based on commercially viable energy-saving solutions. This is achieved by cutting the share of fuel and energy costs in the overall product costs.

*Gazprom's* internal natural gas consumption is about 63 billion m<sup>3</sup>/yr, including 80% consumed by gas transmission facilities, 11% by gas, condensate and oil extraction operations, and 8% by other operations.

Under *Gazprom's* Energy Saving Concept for 2001-2010, energy-saving solutions for gas extraction and transportation are implemented at the design, construction, refurbishment and operation stages.

In 2002-2006, savings from energy efficiency initiatives in the gas production segment included: 2.1 billion m<sup>3</sup> of natural gas, 388.3 million kWh of electric power, 215,700 Gcal of heat energy.

In gas transportation, energy-saving activities were performed under corporate programs including an Integrated Program for Upgrade and Refurbishment of Gas Transportation Facilities, Booster Compressor Stations and Compressor Stations of Underground Gas Storage Facilities for 2002-2006 and *Gazprom* Energy Saving Program for 2004-2006.

As a result of energy efficiency efforts and the implementation of *Gazprom* Energy Saving Programs for 2002-2006, the Company's gas transportation facilities saved about 15.7 million tons of fuel equivalent (tfe), including: 13.1 billion m<sup>3</sup> of natural gas, 1.6 billion kWh of electric power, 703,900 Gcal of heat energy

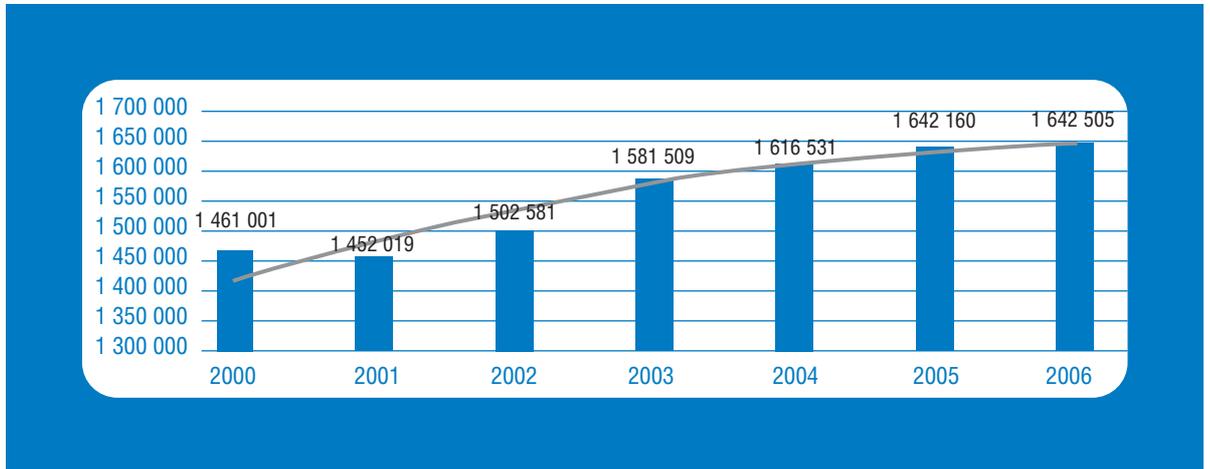
### Energy saving – gas transmission

FER type	2002 r.	2003 r.	2004 r.	2005 r.	2006 r.
Natural gas, million m <sup>3</sup>	2 346,3	2 245,9	2 986,8	2 713,1	2 805,9
Electric power, million kWh	385,8	245,7	410,1	381,8	223,2
Heat energy, thousand Gcal	119,5	48,5	166,4	260,2	109,3
Total, million tfe	2,8	2,7	3,6	3,3	3,3

The internal consumption of FER by the gas transmission network depends on product transportation activity (PTA).

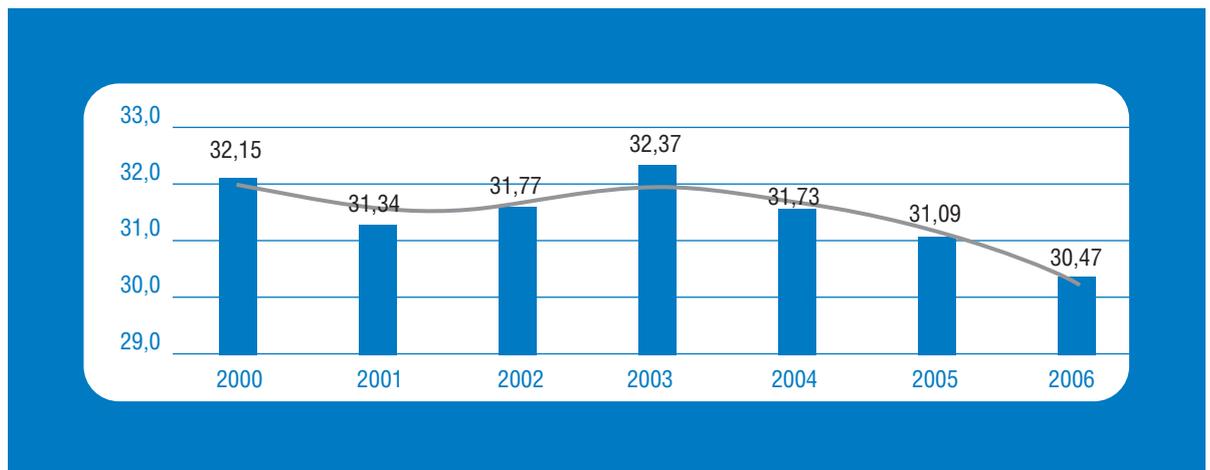
The product transportation activity of Russia's Unified Gas Supply System has been growing steadily since 2000.

**Product transportation activity - gas transmission, 2000-2006, bln m<sup>3</sup>•km**



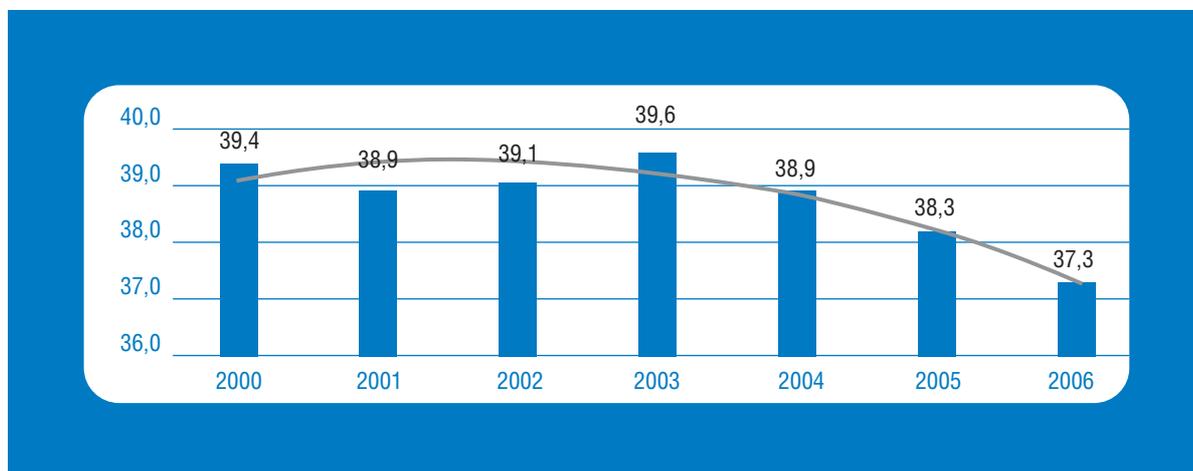
Despite a 12% increase in PTA in 2000-2006, specific internal gas consumption fell by 5.5% in 2006 as compared with 2000.

**Specific internal gas consumption by the gas transportation system, m<sup>3</sup>/mln m<sup>3</sup>•km**



Another indicator of the gas transportation system's energy efficiency is the specific FER (natural gas, electric power and heat energy) consumption per unit of product transportation activity. This value has been declining since 2003. The average specific FER consumption at *Gazprom* was 37.3 kg of fuel equivalent/mln m<sup>3</sup>/km in 2006, representing a 5.6% decrease on 2000.

Internal consumption of FER by the gas transportation system, kg fe/mln m<sup>3</sup>•km



### ENERGY INSPECTIONS AND ENERGY AUDITS

The success of energy efficiency plans for the gas transportation system largely depends on regular assessment of fuel and energy efficiency, which includes: energy audits and energy inspections (performed by Gazpromenergo and independent energy auditors), corporate control over natural gas utilization efficiency and the reduction of unproductive costs and losses (performed by Gaznadzor).

Energy audits and inspections at *Gazprom* cover all business areas including gas extraction, transportation, processing and underground storage.

The purpose of an energy audit is to determine the energy efficiency of *Gazprom* operations and facilities, and develop short-term and long-term action plans.

Energy inspections are held at companies consuming 6,000-plus tons of fuel equivalent or more than 1,000 tons of motor fuel per year.

Energy inspections are performed in accordance with a 5-year Energy Inspections Program for *Gazprom* Subsidiaries. Based on the Program, an Energy Inspection and Energy Audit Plan is developed each year.

An energy audit involves instrumental monitoring of FER utilization efficiency. The auditors determine and analyze the performance of GPAs, compressor plants, compressor stations and other facilities; prepare energy balances for all types of fuel and energy resources; develop energy-saving action plans; prepare energy efficiency certificates of FER-consuming facilities.

The audits involve independent energy audit firms who are properly licensed and accredited with *Gazprom*.

The company responsible for arranging and performing energy inspections and audits is Gazpromenergo.

Independent energy auditors' reports and energy certificates of FER consumers are reviewed by VNIIGAZ and Orgenergogaz.

To establish a framework for energy audits, VNIIGAZ prepared *Gazprom* Standards – A Methodology for Energy Audit of the Gas Transportation System.



Energy audits of subsidiaries were performed in 2006 in accordance with the Energy Audit Plan for the year.

Corporate control was carried out in line with the law On Energy Saving dated 03.04.1996 and the Schedule of selective inspections of gas facilities to be performed together with *Gazprom* gas transportation and gas production divisions in 2006.

In 2006, Gaznadzor assessed the efficiency of internal gas consumption and the efficiency and safety of subsidiaries' energy facilities.

The inspections provided a basis for developing action plans and specific proposals on reducing internal gas consumption, improving energy audit and inspection procedures, conducting audits and inspections, and complying with the standard gas consumption limits. By taking relevant action and complying with Gaznadzor recommendations, *Gazprom* was able to achieve gas savings of 78 million m<sup>3</sup> in 2006.

## NEW POWER GENERATION TECHNOLOGY AND RENEWABLE ENERGY SOURCES

The work performed by *Gazprom* to create new types of power-generating equipment and utilize renewable energy sources seeks to address two important tasks: reducing industrial consumption of non-renewable energy (petroleum products such as motor fuel and fuel oil, and natural gas), reducing greenhouse gas emissions.

Currently, *Gazprom's* operations receive power from both the National Power Grid and the Company's own local power supply systems.

In the future, the Company's gas production will move even further north and to the Arctic shelf. In view of this, there is a growing need for the Company to develop its own power supply systems.

### NEW POWER PLANTS FOR LOCAL POWER SUPPLY SYSTEMS

One alternative to heat engine power plants is the direct conversion of fuel energy to electric power (without the intermediate processes typical of heat machines). This type of plants includes thermoelectric generators, thermophotovoltaic generators and fuel cell electrochemical generators.

Of these, fuel cells are the only type of energy converters that can be used for power generation on an industrial scale.

The main advantages of a fuel cell power plant include:

- A high efficiency coefficient (over 80%)
- Little dependence between efficiency and operating load: load reduction from 100% to 20% would result in a 1% efficiency reduction (at least 50% reduction if a heat engine was used)
- Automatic maintenance-free operation during 6 months
- Excellent economy: consumes 50% less fuel than a heat engine with a similar rating
- Care for the environment

Fuel cell power plants meet all *Gazprom's* requirements to independent power supply facilities; they can be of a modular construction type and require minimum assembly on-site.

In addition, they have unique environmental characteristics and can use any gaseous hydrogen-containing fuel, including biogas, which paves the way for designing new types of treatment plants for production and public facilities.

*Gazprom* has been conducting research and development in relation to fuel cells for several years now.

The Company has created materials for fuel cells, pilot fuel cell stacks, the principal power plant systems, a fuel processor for converting natural gas into hydrogen, a pilot power plant with a 5 kW proton exchange membrane for powering transmission pipeline cathodic protection systems, communication and remote measurement systems.

*Gazprom* will continue R&D aimed at creating fuel cell power plants for commercial applications. This work centers on reliability (life expectancy) enhancement and the creation of fuel cell power plants with different power ratings.

### GAS AS MOTOR FUEL

Today, natural gas is the most acceptable alternative to petroleum fuels in terms of economy, service life and environmental performance. The use of compressed and liquefied natural gas as fuel makes operation of motor vehicles and railway transport both cleaner and more cost-effective.

*Gazprom* is Russia's biggest owner/operator of compressed natural gas (CNG) filling stations. Currently there are 218 CNG stations in 59 regions of Russia, of which 87.6% (191) are owned by *Gazprom*.

CNG sales by these stations increased from 60 to 286 million m<sup>3</sup> between 1998 and 2006 inclusive, and the number of CNG-powered vehicles rose to 60,000.

Following a decision of its Board of Directors, the Company prepared an Integrated Development Program for the Gas Station Network and Natural Gas-Fueled Machine Fleet for 2007-2015. The Program is aimed at developing the CNG stations infrastructure and expanding the fleet of CNG-powered motor vehicles and agricultural machines.

The Program calls for 200 CNG stations and 90 fueling trucks to be put into operation in 47 constituent entities of the Russian Federation in 2007-2015.

As a result of the Program, the number of CNG-fueled vehicles in Russia will double, 1,700 new jobs will be created, about 2.5 million tons of petroleum fuel will be replaced by gas fuel, and total emissions of hazardous substances will be reduced by 1 million equivalent tons (CO equivalent).

The Integrated Development Program for the Gas Station Network is in effect becoming a national program for the utilization of natural gas as motor fuel, and has a special strategic, social and environmental significance.

The conversion of locomotives to gas fuel is considered to be very environmentally friendly, as it dramatically reduces emissions of soot, nitrogen oxides, hydrocarbons and sulfur dioxide. The overall toxicity is reduced by a factor of 3 to 5 as compared with diesel-generated emissions. This contributes to air quality improvement and the reduction of disease incidence among railway workers and local residents.

Compressed natural gas consumption in Russia is growing steadily. CNG sales are increasing by 20-25% per year – a sign of the growing number of gas-fueled vehicles. In 2006, *Gazprom's* CNG stations sold 265 million m<sup>3</sup>, accounting for about 93% of national sales. At the same time, the number of CNG stations owned by other companies is growing, too. Their share of sales has expanded from 5.1% to 7-8%.

*Gazprom's* subsidiaries are actively involved in promoting the use of gas as motor fuel.

Lentransgaz has converted 76 vehicles, including 12 company-owned and 64 third-party vehicles. As at 1 January 2007, the Company owned 107 gas-fueled vehicles.

Tattransgaz, in conjunction with the Cabinet of Ministers of Tatarstan Republic, is running a conversion project in Tatarstan.

Tomsktransgaz has been working to expand the CNG stations network and convert motor vehicles to gas fuel. It also introduced mobile filling units in the Barabinskoye LPUMG (Gas Mains Production Division) and Altaiskoye LPUMG, and 7 filling trucks in the Tomskoye, Novosibirskoye, Novokuznetskoye and Kemerovskoye LPUMG.

Uraltransgaz has been converting motor vehicles to gas fuel since 1987, under the annual Program for Vehicle Conversion to Gas Fuel. Since 1987, 1,703 vehicles have been converted to compressed and liquefied gas, including 405 in 2006 (of these, 36 are owned by Uraltransgaz). In 2004, *Gazprom*, Russian Railways and the Sverdlovsk Region Administration approved a joint Program for Pilot Locomotives Operation at the Sverdlovsk Railroad. In accordance with the Program, testing continued in 2006.

Extensive conversion activities were carried out by other subsidiaries, too.

## ENVIRONMENTAL RESEARCH AND DEVELOPMENT

Process and technology innovation aiming to improve industrial safety, mitigate environmental impact and reduce energy and resource consumption forms an essential part of the Company's strategy.

To achieve these goals, the Company's employees carry out experimental research, perform analysis and develop new regulations.

Environmental research and development involves the leading research and design institutes of *Gazprom*, the Russian Academy of Sciences, and other institutions.

In the field of air protection, Promgaz (together with Notek-holding) in 2005 - 2006 was working to develop catalytic converter technology for the selective treatment of gas-turbine unit off-gases. Testing was performed at a 2.5 mW gas-turbine power plant used for internal power supply. Promgaz has developed the optimum thermo-catalytic converter (TCC) design for NO<sub>x</sub> and CO control; a methodology for calculating TCC flow resistance and the optimum duration of contact between off-gases and the catalyst surface to reduce NO<sub>2</sub> emissions by 90 – 100%, NO emissions by 50 – 60% and CO emissions by 80 – 90%. Promgaz has prepared TCC design drafts for 2.5 mW, 6.0 mW and 10.0 mW turbine power plants manufactured by NPO Saturn. In 2007-2008, the Company plans to run pilot tests of the TCC at an existing gas-turbine unit.

Gazproektengineering has developed and put in place new processes aimed at the preservation and efficient utilization of water resources in the course of produced water treatment at *Gazprom* facilities. Experience shows that the biggest environmental hazard is posed by process effluents and formation water produced at all underground gas storage facilities (UGS). They have a diverse chemical composition, are highly saline and heavily contaminated with petroleum products and reagents. Because of the high salinity and the wide range of contaminants, it is not practical to treat these effluents for subsequent use in water recirculation systems or discharge into open water bodies. Consequently, the most reasonable and efficient option is to inject them into deep underground formations. However, due to the high hydrogen sulfide and ferrous iron content, these effluents are chemically aggressive, which leads to increased corrosion of pipelines and compressor station equipment used for injecting them into formations and disposal wells. This means that extra costs are required to ensure corrosion protection, renovate existing wells and drill new ones.

Gazproektengineering conducted research to determine the maximum allowable content of various ingredients in wastewater being injected underground, develop advanced treatment processes and identify the required equipment. The solution developed as a result of this work was successfully put into practice at the Severo-Stavropolskoye UGS.

Gazproektengineering also developed and implemented new methods for produced water treatment at the Kasimovskoye UGS, and prepared proposals for the Moskovskoye UGS of Mostransgaz.

A great environmental hazard is posed by solid waste landfill leachate. In 2006 Gazproektengineering designed a solution for leachate treatment at the solid waste landfill site of Nyuksenskoye LPUMG (Severgazprom).

The need to address energy saving issues is reflected in Clause 5.3 of the List of Priority Research and Engineering Issues for *Gazprom* in 2006-2010 ('Developing a system for efficient use of fuel and energy resources and promoting gas and energy saving by consumers within *Gazprom*'). Research and development carried out by VNIIGAZ, Promgaz and SevKavNIPigaz as part of this initiative have provided an innovation framework for implementing *Gazprom's* energy-saving policy and the Company's development and modernization plans and programs. In 2006, *Gazprom* prepared energy-saving plans covering all areas of operation, developed appropriate action plans and assessed potential benefits of energy saving.

A number of activities were undertaken in 2006 to develop and enforce *Gazprom* standards (STO) and recommendations (R). Specifically, VNIIGAZ prepared STO *Gazprom* 027-2006 – A Model Program for Evaluating Natural Gas Emissions at *Gazprom* Operations, which contains a list and procedures for standard engineering and operational activities to monitor and record natural gas emissions and assess their actual volume.

In addition, the Company prepared a number of regulations and guidelines on emission and discharge reduction and the decontamination and recycling of production/post-consumer waste, including:

- Regulations on Decontamination and Disposal of Oil Sludge at Gas Industry Facilities – describe the selection of equipment and systems for treating the vapor/gas/air flow to eliminate contaminants, including sulfur compounds
- Guidelines for Applying Methods of Emission (incl. Benzopyrene) Reduction at Gas Industry Facilities
- Guidelines for Applying *Gazprom* Air Protection Regulations. The document details and explains the methodology for organizing and performing development of regulations and promotes a common approach to air protection when setting limits, recording and monitoring toxic emissions.
- Guidelines Regarding the Scope and Procedures for Environmental Documentation Development, Review and Approval as Part of Design Documentation at the Flowsheet, Design, Investment and Construction (Renovation) Stages – describe the general requirements to document development at investment design stages including investment objectives determination, justification of investment and design package development
- Guidelines for Collection, Processing, Utilization and Recycling of Marketable Hydrocarbon Residues and Related Waste When Preparing Tank Cars for Maintenance – describe the process flow for tank car cleaning and steaming using a waste-free biological treatment process; a recommended zero-waste process for cleaning tank cars of hydrocarbons; recommendations on recovering liquefied hydrocarbon gas (LHCG) residues, performing analytical monitoring of hydrocarbons composition, etc.

2006 saw the implementation of industry standards and instructions earlier developed by Promgaz with regard to calculating and regulating emissions from gas distribution stations, CNG filling compressor stations and gas filling stations (STO *Gazprom* 2-1.19-058-2006, STO *Gazprom* 2-1.19-059-2006, STO *Gazprom* 2-1.19-060-2006).

The Company was working to implement new information technology to support its environmental activities, which involved creating information system modules and databases.

In the reporting year, the Ecological & Analytical Center of the Gas Industry (EACGP) completed the first phase of *Gazprom's* environmental information and analytical system (IAS Ecogas) development, including:

- An environmental information unit comprising three factual databases: Environmental Situation in Regions of the Russian Federation; Environmental Impact of *Gazprom* Subsidiaries and Organizations; Environmental Aspects of *Gazprom* Subsidiaries and Organizations' Activities
- A facility for obtaining map views of environmental and other location-related data from the databases
- A facility for searching and processing information held in all modules and databases of IAS Ecogas.

The completion of the first IAS Ecogas development phase has provided users with faster access to up-to-date environmental information that is based on objective, reliable and comparable data about the condition of the environment and natural resources.

TyumenNIIgiprogaz was working to create an information service system using computer databases and electronic maps. Over 180 environmental maps were developed and constructed in 2006.

The Company was also developing approaches to reducing emissions of greenhouse gases (methane, carbon dioxide) and preparing for participation in the Kyoto Protocol market mechanisms.

VNIIGAZ conducted a review of world projects aiming to cut greenhouse emissions in accordance with the Kyoto Protocol, ways of reducing greenhouse gas emissions and approaches to organizing this work, and evaluated potential world markets for such projects. The Institute reviewed the options for developing Kyoto mechanisms in Russia, as well as current research, organizational and preparatory activities, and provided recommendations on the options and scenarios which would allow *Gazprom* to benefit from the implementation of the Kyoto mechanisms. EACGP analyzed up-to-date methods of identifying, evaluating and measuring greenhouse gas emissions, determined the principal approaches and procedures for identifying, evaluating and measuring greenhouse gas emissions, and prepared recommendations on the first-priority steps to develop an emissions monitoring system for the industry.

Promgaz has developed engineering solutions for CH<sub>4</sub> emissions reduction in the gas and coal industries, and for the recovery and disposal of CO<sub>2</sub> produced during fossil fuel combustion.

Experimental research was performed to study this issue, too. VNIIGAZ, together with Kaspiygazprom, carried out comprehensive research to assess natural gas emissions at the gas transportation facilities operated by Kaspiygazprom, including gas distribution stations, gas metering stations and linear portions of gas mainlines. As a result of this work, an inventory of greenhouse gas (CO<sub>2</sub> and CH<sub>4</sub>) sources was taken – the first ever among *Gazprom* subsidiaries - and an emissions register was designed for Kaspiygazprom. A greenhouse emissions reduction plan for 2008-2012 was prepared, as well as a standard plan for reducing methane losses using a mobile compressor station.

VNIIGAZ performed measurements of methane emissions from Surgutgazprom process equipment. It also carried out expert analysis of performance indicators and qualitative and quantitative flowsheets evaluation. The Institute reviewed the results of greenhouse gas sources inventory and prepared a greenhouse emissions reduction program.

Research was underway to assess the current environmental situation at *Gazprom* facilities, identify trends in terms of their environmental impact and environmental costs and charges, and evaluate the sanitary and health conditions in *Gazprom's* regions of operation. These and other research efforts provided a basis for EACGP to prepare proposals on improving current environmental activities and suggest further targets, including: a program for providing the ecology offices of *Gazprom* subsidiaries and organizations with up-to-date technology and methodology in 2007-2010, new approaches to dealing with environmental issues in the course of *Gazprom* strategic projects and current operations.

## DEALING WITH THE ENVIRONMENTAL ASPECTS OF GAZPROM FACILITIES CONSTRUCTION, REFURBISHMENT AND OPERATION

In 2006, TyumenNIIgiprogaz conducted full-scale engineering and environmental research at 5 oil and gas condensate fields, which served as the basis for developing Environmental Impact Assessment sections and industrial environmental monitoring programs for these operations.

A project to establish an environmental monitoring system at the Vyngayakhinskoye gas field was under way.

Environmental Protection and Environmental Impact Assessment sections were developed for the Pestsovoye and Yurkharavskoye fields, certain portions of the Urengoyskoye field and the Komsomolskoye field, which is currently being refurbished.

The Institute's experts were working in close cooperation with the Main Department for Natural Resources and the Environmental Protection Department of the Tyumen Region.

VNIIGAZ has developed solutions to a number of environmental problems relating to gas field development in the Yamal Peninsula, prepared an environmental feasibility study for additional development of some gas areas of the Bolshoy Urengoy fields and the development of the Severo-Kamennomyskoye gas field. The environmental assessment laboratory of VNIIGAZ in 2006 provided expert opinions on the Environmental Impact Assessment and Environmental Protection sections of feasibility and design documentation relating to the construction, refurbishment and retirement of 23 gas industry facilities, and 2 Federal Acts.

In 2006, VNIIGAZ developed Guidelines for Improving the Efficiency of the Oil Sludge Treatment and Recycling Plant at the Orenburg GPZ (gas processing plant), based on the on-site supervision of the treatment plant operation, performed tests to assess the efficiency of chernozem soil rehabilitation in a gas condensate-contaminated area in the South of Russia by introducing various quantities of SK PIKSA biological agent.

YuzhNIIgiprogaz developed environmental sections of design packages for: field infrastructure development at the Kharvutinskaya area of the Yamburgskoye gas condensate field; Bovanenkovskoye and Kharasaveyskoye gas condensate fields; the expansion of the Yareyskaya area of the Yamsoveyskoye field; a pilot liquid hydrocarbons underground storage facility at the Yamburgskoye gas condensate field; certain portions of the SRTO-Torzhok transmission pipeline and many other projects.

In its design and engineering activities, the Institute makes use of innovative environmental protection methods and technologies, such as:

- Geogrids for slope reinforcement and erosion barriers for gully control
- Small-size organic waste recycling units of the Forsazh series
- Biological agents of the Biodestructor series for removing petroleum products from various natural environments (soil, excavated material, water)
- Impervious liners for preventing contaminants from entering soil and water.

PeterGaz continued work on the Nord Stream project in 2006. A comprehensive engineering and environmental study of the offshore route sections was undertaken. This served as the basis for assessing the environmental impact of pipeline construction and operation along the entire offshore section of the route. Together with *Gazprom's* German partners and the Russian/German JV Nord Stream AG, *Gazprom* entered into negotiations on the environmental aspects of the project with the environmental authorities of Finland, Sweden and Denmark. In accordance with international procedures and the UN/ECE Convention on Environmental Impact Assessment in a Transboundary Context, the Company opened negotiations with all Baltic States affected by the project. An environmental impact assessment was completed for the Gryazovets-Vyborg section of Nord Stream, which includes pipelines and compressor stations (Gryazovetskaya, Sheksninskaya, Babaevskaya, Pikalevskaya and Volkhovskaya) in the Vologda and Leningrad Regions, and regulatory approvals were obtained.

A series of engineering and environmental studies were carried out in the Barents Sea in relation to Shtokman field infrastructure development and the construction of a sub-sea pipeline between the Shtokman field and the Vidyaevo village.

Promgaz prepared EIA and Environmental Protection sections for projects to provide gas supplies to more than 30 regions of the Russian Federation, including some districts of the Vladimir and Leningrad regions, the Republic of Karachaevo-Cherkessia, the Republic of North Ossetia-Alania, and a number of other projects.

All of the above efforts and a wide range of other activities helped to improve the environmental acceptability of *Gazprom's* proposed projects and existing operations.

## SAFETY AND HEALTH

*Gazprom's* environmental policy contains a commitment to protect the health of Company employees by minimizing the impact of hazardous substances at *Gazprom* production facilities, maintaining healthy working conditions and acceptable potable water quality, and preventing occupational and climate-induced disease.

Occupational safety and health activities of *Gazprom* organizations and subsidiaries are governed by the Federal Act On Occupational Safety and Health in the Russian Federation, the Labor Code of the Russian Federation and the Unified Occupational and Industrial Safety Management System of *Gazprom* (UO&ISMS).

In accordance with UO&ISMS, in 2006 *Gazprom*, its subsidiaries and organizations pursued initiatives to achieve further improvement of industrial safety, enhance working conditions and workplace health and reduce accident and disease rate. Health and safety spending amounted to 4.5 bln rubles, or 15,000 rubles per employee, representing a 22% increase on 2005.

Over 180,000 employees received safety and health training and took tests at the examination boards of *Gazprom* subsidiaries and organizations.

More than 500 safety and health professionals took advanced training courses in Moscow in 2006.

Health and safety assessment of workplaces was performed at *Gazprom* subsidiaries and organizations, under the supervision of Gazobezопасnost. The assessment covered 159,686 workplaces (86% of a total of over 185,000 workplaces). At gas extraction and gas transportation divisions of *Gazprom*, this work is now complete.

30 *Gazprom* subsidiaries and organizations received safety certificates in 2006. A corporate safety certification system was created.



## INTERNATIONAL SCIENCE AND TECHNOLOGY COOPERATION

To speed up the implementation of leading-edge technology and improve industrial and environmental safety, *Gazprom* works in close cooperation with the major gas companies from a number of countries.

The science and technology cooperation between *Gazprom* and E.ON Ruhrgas AG not only served as a means of implementing joint projects and sharing production experience, but was an important driver for strengthening and improving production and commercial ties between the companies.

A lot of work was done in the Gas Transportation segment. As part of the 2005-2006 cooperation program, the parties worked to develop approaches to performing comprehensive technical condition assessment and ranking pipeline sections in terms of risk. Issues related to transmission pipeline inspection and maintenance were addressed, too.

The two companies plan to refine the existing approach to identifying potentially hazardous gas pipeline sections through a consistent application of stochastic and deterministic models.

Another important area of cooperation was Environmental Protection and Energy Saving. In 2005-2006, the companies carried out the pilot phase of Simone project at Volgotransgaz. Simone is a software package designed to optimize the operation of gas transportation networks, thereby reducing fuel gas consumption and carbon dioxide emissions. Important developments included the delivery of three extra Simone workstations by Ruhrgas and training for Russian operators provided by Simone developer.

2006 saw the successful completion of the Gas Transmission System Energy Audit. Based on the specifications and technical documentation provided by the German company, energy-saving guidelines were developed for *Gazprom*, along with methodologies for energy auditing and energy efficiency assessment of gas transportation facilities and systems. These outputs will be used to assess the potential for energy saving at *Gazprom* facilities within the scope of the two companies' Cooperation Program in the next 2 years.

*Gazprom* is continually strengthening its ties with Wintershall AG, too. Over the past 5 years, the number of cooperation areas and joint projects nearly doubled. The Cooperation Program for 2006-2007 contains 13 aspects from the previous Program and 17 new ones.

One aspect of this cooperation, which has great practical value, is the introduction of information technology for gas distribution and utilization systems. Solutions developed as a result of this work were included in the Program for Upgrade and Refurbishment of *Gazprom* Gas Operations in 2006. They were also be used in designing solutions for the development of gas supply infrastructure in Russian regions.

Experience sharing with regard to the safety of underground gas storage facilities and other natural/manmade systems provided the basis for developing a design concept for a special-purpose ambient air monitoring laboratory.

The science and technology cooperation between *Gazprom* and Verbundnetz Gas AG in 2004-2006 covered a wide range of topical issues. The engineering dialog and joint projects focused, among other things, on gas safety and environmental protection. Recommendations and proposals were prepared, which were used in developing regulations On a System for Managing Non-Standard Scenarios during Well Construction by *Gazprom*. The parties exchanged experience with regard to the creation, certification and operation of environmental management systems, gas saving, and energy efficiency improvement in gas transportation and distribution with a view to reducing greenhouse gas emissions.

Other issues jointly addressed by the companies include: Methods and technology for pipeline inspection, overhaul and refurbishment: Methods and technology for breakdown maintenance of pipelines: The use of aerial thermal and laser survey to identify leakages and risk zones at transmission pipelines.

As part of the Joint Work Program between *Gazprom* and Siemens AG, the Energy Saving and Ecology work group held demos of Siemens software (XHQ platform) and energy-saving equipment at Severgazprom and Tyumentransgaz. As a result, the parties intend to run a pilot implementation of the XHQ platform at Severgazprom.

## ENVIRONMENTAL INFORMATION

Providing stakeholders with timely and accurate information about *Gazprom's* activities, achievements and issues associated with nature management and environmental protection is an essential part of the Company's information policy.

Since 1995, the Company has been producing annual Environmental Reports for its shareholders and the general public. Environmental Reports are sent to federal and regional authorities, specialized and environmental organizations, universities and libraries. *Gazprom* Environmental Reports for 2001-2005 were included in the National Non-Commercial Reports Register of the Russian Federation.

Current information about the environmental impact of *Gazprom* facilities and the environmental activities of *Gazprom* and its subsidiaries is available both on *Gazprom* official website ( [HYPERLINK "http://www.gazprom.ru"](http://www.gazprom.ru) www.gazprom.ru) and on subsidiaries' websites.

Environmental information forms a separate section within the Company's Annual Reports. It is regularly published in corporate fact books, in the monthly *Gazprom* magazine and subsidiaries' publications, and is provided to the national and regional media on a timely basis.

Here are just some examples of *Gazprom* subsidiaries' activities in this area:

### Astrakhangazprom

TV channel 7+ and radio broadcasting program Avtoradio daily broadcast information on the environmental situation in the Astrakhan Gas Complex area.

The Puls Aksaraiska newspaper publishes, on a weekly basis, information on the environmental performance of the Complex and air contamination levels in the nearby residential areas.

The Company publishes annual environmental report booklets (500 copies in 2005), which are sent to *Gazprom* divisions, environmental authorities and non-governmental organizations.

### Burgaz

In 2006, environmental aspects were covered by the Burovik Gazproma corporate newspaper and Burgaz website.

### Volgotransgaz

In 2006, the Company regularly published articles on the environmental aspects of its business in the corporate newsletter Magistral.

### Zapsibgazprom

The Company has a website containing detailed information on steps taken to promote energy efficiency, identify and assess fuel- and energy-saving options, improve production processes and install new equipment.

### Kavkaztransgaz

In 2006, Kavkaztransgaz published 300 copies of its Environmental Protection Report on the occasion of the Company's 50th anniversary. The report describes the core activities, the environmental policy and the environmental management system, and provides environmental protection and industrial environmental monitoring data. A video film describing Kavkaztransgaz industrial environmental monitoring system was made as part of the 50th anniversary celebrations.

Information on Kavkaztransgaz efforts to safeguard the environment is published in Kavkaztransgaz newspaper, which was named the best corporate newspaper in Russia in 2006. Articles on the Company's environmental activities also appeared in the Stavropolskie gubernskie vedomosti newspaper and the Nauchnaya mysl Kavkaza journal.

#### Kubangazprom

Kubangazprom prepared and published a separate collection of environmental research papers, and a number of articles in the Gazovaya Promyshlennost magazine.

#### Lentransgaz

The Company publishes environmental reports on a yearly basis.

During the year, the environmental aspects of Lentransgaz business were covered by periodicals and company website.

#### Mostransgaz

Information on the environmental aspects of the Company's activities was available on its website.

#### Nadymgazprom

The environmental component of Nadymgazprom operations is regularly covered by the regional TV and radio and the corporate newspaper Gazovik. In 2006, selections of materials on the Company's environmental efforts were published in the Gazovaya Promyshlennost magazine and a special Nadymgazprom booklet.

#### Orenburggazprom

In 2006, the Company took consistent steps to keep the public informed about the environmental aspects of its business. The results of environmental condition analysis in the Company's area of operation were reported in the local media, and visits were arranged for journalists to the Company's environmental facilities.

Orenburggazprom has been publishing environmental reports for several years now.

The Company's newspaper Za Orenburgskiy gaz provides substantial coverage of environmental issues. In 2006, 99 articles on Orenburggazprom environmental activities were published in regional newspapers, 46 news reports were broadcast by TV and radio channels, and 113 news releases appeared on various websites.

#### Permtransgaz

Environmental aspects are regularly covered by the corporate newspaper Gaz-express.

The regional media published articles on the Company's environmental efforts throughout the year.

#### Severgazprom

In 2006, Severgazprom published its 9th Environmental Report.

The Company's environmental policy and environmental reports can be viewed at its website.

### SIBUR Holding

The Company's website has a special environment section which includes SIBUR environmental policy, information on environmental activities and ISO 14000 certification, and environmental news.

### Tomsktransgaz

In 2006, the local and regional media carried 35 items about the environmental component of Tomsktransgaz regional operations.

CNG conversion and the expansion of CNG filling stations was covered in 10 articles published by the regional and district media.

### Urengoygazprom

The Company's environmental activities received frequent coverage from the *Gazovaya promyshlennost* magazine, the corporate publication *Gazprom*, the Company's newspaper *Gaz Urengoya* and regional periodicals.

When Urengoygazprom became a National Environmental Award-winner, a news release was published on Company website and in the national and regional media.

Urengoygazprom ecologists regularly met with children from a children's ecological station and young naturalists.

### Yamburggazdobycha

The Company's environmental activities were summarized in an environmental report, which can be found at Yamburggazdobycha website.

In 2006, Yamburggazdobycha released special-purpose information products including:

A booklet entitled *Through the Prism of National Projects* (with an environmental section called *Earth is Our Wealth*)

A multimedia presentation disc with video and audio materials covering all aspects of the Company's operations. The information is available in three languages, Russian, English and German. Environmental aspects are detailed in a separate section called *Our Priorities – Environmental Policy*.

In 2006, 21 items on the environmental aspect of the Company's activities appeared in the national and regional press, on the Web and on regional TV channels.

## CONTESTS, EXHIBITIONS AND AWARDS

In 2006, *Gazprom* participated in many national and international exhibitions, conferences and contests with information stands and presentations describing the Company's major environmental achievements. The Company took part in the 23rd World Gas Congress in Amsterdam, the 11th International Exhibition Neftegaz-2006, the MOGIF international oil, gas and energy exhibition and the New Technologies in the Oil and Gas Industry, Energy and Communications (CITOGIC) Congress.

At the 3rd International Exhibition Ecoefficiency 2006, Kavkaztransgaz received a diploma for its display in the Ecology in Power Engineering section.

At the Russian Fuel and Energy Resources 2006 exhibition and forum in Rostov-on-Don, Kavkaztransgaz was awarded a diploma For the Creation of an Environmental Management System at Gas Facilities.

For its efforts to restore and preserve the natural landscapes of Extreme North, Yamburggazdobycha was named the winner of Russia's Environmental Leader 2006 2nd National Contest.

At the Russian Field Day 2006 exhibition, held on 18 July 2006 in Saransk, Tattransgaz presented programs and methods for converting agricultural machines to gas fuel, and was awarded a gold medal for its contribution. In addition, Tattransgaz received a diploma at the Industrial Ecology and Safety exhibition (Kazan), where it displayed CNG vehicles for municipal services and agriculture.

In September 2006, the Sharansky Production Division of Bashtransgaz won first place at the Environmentally Safe Production in the Republic of Bashkortostan contest.

*Gazprom* subsidiaries are traditional participants of the National Environmental Award contest, which was established by the V.I. Vernadsky Non-Governmental Ecological Foundation and the State Duma's Ecology Committee to discover and encourage the most effective R&D relating to energy/resource efficiency and clean production. In 2006, Orenburggazprom was named the winner in the Ecoefficiency category for its project entitled Ecoefficient Innovative Technologies for an Efficient Water Management System at Orenburggazprom Facilities. The winner in the Contribution to Sustainable Development category was Kavkaztransgaz, with its project entitled Creating a Methodological Framework and Implementing an Environmental Management System at Gas Industry Facilities. Urengoygazprom also received special mention in the Contribution to Sustainable Development category, for a project of urban amenities and infrastructure development in a Far Northern town.

In 2006, *Gazprom* subsidiaries took part in the Health and Safety contest held by the Russian Ministry for Healthcare and Social Development at the 10th International Exhibition Occupational Safety and Health 2006. Three *Gazprom* subsidiaries became award-winners in 5 safety and health categories. Gazobezопасnost received 1 gold and 1 silver medal, Yamburggazdobycha received 2 silver medals and Nadymgazprom received 1 silver medal.



## ENVIRONMENTAL EDUCATION

In accordance with *Gazprom* Environmental Policy, environmental specialist training, re-training and development is one of the Company's priorities. *Gazprom* has its own training facilities and maintains close ties with Russia's leading higher education institutions.

The Gas Industry Research, Education & Simulation Center (GIESC) in Kaliningrad is a leading education institution in *Gazprom's* corporate training system. Its learning materials have received awards and diplomas at many national and international exhibitions and conferences. The Center's employees hold more than 40 inventor's certificates.

Since its establishment, GIESC has provided development and retraining courses for over 13,000 *Gazprom* managers and specialists.

Environmental aspects are covered both during general training and special-purpose seminars. In 2006, the Center held seminars entitled Topical Legal Aspects of Land Relations and Applying Environmental Legislation in Business Operations. Environmental Audit.

A course on the basics of ecology and environmental protection is delivered for the students of the Talent Pool School of *Gazprom* subsidiaries and organizations as part of the Innovation Management. Environmental Management as an Environmental Protection Factor and Business Administration in the Oil&Gas Industry programs. The students prepared and presented graduation papers on environmental protection, resource and energy saving, and industrial safety.

GIESC also holds field training sessions on environmental monitoring and environmental protection.

The Center has developed automated teaching systems, which are successfully used during ecology classes to cover such aspects as: natural environment and its components, environmental impact of the oil&gas industry, regulating the quality of the environment, environmental impact assessment and environmental monitoring.

Another type of learning products is video films. A film called Ecology and Nature Management during Gas Well Drilling and Gas Extraction describes the negative environmental effects of uncontrollable flows in the course of drilling gas and gas condensate wells and shows real-life examples of environmental mitigation activities undertaken by *Gazprom*.

GIESC produces learning materials for gas industry workers and specialists, which are supplied to almost all educational institutions in *Gazprom's* continuous corporate education system (a corporate training network comprising about 30 educational institutions). In addition, the training materials developed by GIESC are used by a number of higher and further education institutions (including the Gubkin Oil and Gas University; Ufa State Oil University; Sakhalin State University; Tyumen State Oil and Gas University; Volgograd Oil and Gas College; Novy Urengoy Gas Industry Technical School), and supplied to other Russian companies such as Rosshelf, LUKOIL, etc.

In 2006, *Gazprom* Managers' Professional Development and Re-Training Institute (Corporate Institute) in Moscow held the following seminars on environmental protection and nature management for about 70 people from *Gazprom* subsidiaries and organizations: Energy Saving in Gas Transportation; Environmental Aspects of Applying Advanced Gas Transportation Technologies; managing the Quality of the Environment and the Environmental Impact of Companies' Operations.

The seminars covered a wide range of topical environmental issues, such as: gas transportation system efficiency and reliability enhancement concepts; methods for cleaning gas pipeline interior during gas transmission, creating systems for environmental monitoring of gas transportation system operation; advanced air pollution measurement tools, advanced noise reduction tools and techniques for compressor station gas-turbine units; implementing a management system in accordance with the ISO 14000 series of international standards and *Gazprom's* corporate environmental management standards.

A lot of attention is given to nature management and environmental protection at the gas industry seminars and courses held by the Institute.

In May 2006, the Corporate Institute held a video conference with GIESC called Innovation Management. Environmental Management as a Factor of Environmental Protection. Possible distance learning options were reviewed, to enable environmental representatives from *Gazprom* subsidiaries to improve their skills while continuing with their day-to-day work.

## OUR ECOLOGISTS

In implementing its environmental policy, plans and programs, *Gazprom* draws on the expertise of its ecologists, who are employed by all operating levels within the Company. Every year, our environmental report tells the readers about the people who contribute most to the Company's environmental activities.

This year, we would like to introduce two of them, E.V. Fridrik (Giprospetsgaz) and Yu.P. Startsev (Yamalgazinvest).

**Evgeniy Vladimirovich Fridrik** graduated from the Geography Department of Leningrad State University in 1964, majoring in ocean science. For more than 20 years, he conducted research in the field of ocean science and participated in many oceanographic expeditions and trips to remote areas.

In 1989, due to the urgent need to improve the environmental sections of oil and gas extraction and transportation projects, E.V. Fridrik was invited to work for the State Transmission Pipeline and Special-Purpose Construction Design Institute, Giprospetsgaz. In 2002, he established, and became head of, the Ecology Department, which was later reorganized into a Combined Ecology, Safety and Construction Management Department.

E.V. Fridrik was actively involved in developing approaches to environmental monitoring system creation at *Gazprom* and implemented these approaches at *Gazprom* subsidiaries and organizations. E.V. Fridrik provided direct input into the feasibility studies for the major transnational gas transportation systems including Yamal-Europe, SRTO-Torzhek, Blue Stream, Nord Stream, Yamal Megaproject, Shtokman project, etc.

Today, Giprospetsgaz takes part in almost all *Gazprom's* major projects as the prime design contractor. As a result, the scope of the environmental tasks addressed by the Institute and the Department has increased. In view of the growing requirements to the environmental safety of *Gazprom* projects, E.V. Fridrik's department works hard to implement new operating practices and expand its area of operation. E.V. Fridrik has always been keen to support and develop newly-hired young specialists. The department has a strong team of professionals (L.P. Plaksina, N.R. Peterson, N.I. Gots, R.N. Mikhailov, A.V. Babenko, etc.), who, together with E.V. Fridrik, prepare the environmental sections of design documentation, ensuring a strong environmental safety performance and full compliance with environmental legislation.

Evgeniy Vladimirovich has earned his colleagues' esteem for his professionalism, helpfulness and a responsive attitude towards his subordinates.

E.V. Fridrik's extensive experience has been reflected in a number of publications. For his practical work, he has received numerous letters of appreciation and recognition from Giprospetsgaz and a certificate of honor from *Gazprom*. E.V. Fridrik was awarded the National Environmental Prize in the category For the Contribution to Strengthening Environmental Safety and Russia's Sustainable Development.

**Yuri Pavlovich Startsev** graduated from Lomonosov Moscow State University and in 1991 joined Nadymgazprom, where he rose from an engineer of the Research and Production Shop to become the Chief Engineer of the Environmental Monitoring Department at the Industrial Geoecological Monitoring Service of Nadymgazprom Research and Development Center. At Nadymgazprom, he was dealing with tasks such as minimizing the environmental impact of gas industry facilities, reducing methane emissions and treating industrial wastewater.

Since 2002, Yu.P. Startsev has been working for Yamalgazinvest, where he deals with the environmental aspects of transmission pipeline construction. In 2006, he became the head of the Environmental Protection Division of the Yamalgazinvest Production Preparation Department. His team successfully resolves environmental issues arising in the course of *Gazprom* investment projects. Yu.P. Startsev's division develops requirements to all sections of design documentation that involve an assessment of the environmental impact at all project stages, and prepares documents for projects being submitted for statutory environmental impact assessment. The division performs environmental monitoring and control at all construction stages to ensure compliance with environmental and nature management legislation.

In accordance with the ISO 14001:2004 international standard, the division headed by Yu.P. Startsev implemented a Procedure for Identifying and Monitoring Legislative, Regulatory and Other Environmental Requirements at Yamalgazinvest. The division has prepared and regularly updates the List of Environmental Legislation, Standards and Methodological Materials and the Consolidated Register of Significant Environmental Aspects of Investment Project Implementation.

Yu.P. Startsev has published a number of research articles on assessing the environmental impact of gas industry operations and environmental control methods.

Yuri Pavlovich is known for his dependability, creativity and a consistent and thorough approach to decision-making, and enjoys the well-earned respect of his colleagues.

On the occasion of Yamalgazinvest 10th anniversary, Yuri Pavlovich received a certificate of honor for his professional achievements, commitment and a great contribution to company success.

## NEW ENVIRONMENTAL TARGETS

At *Gazprom* Management Committee meeting on 21 December 2006, the results of energy-saving and environmental activities undertaken in 2000-2005 were summarized.

During this period, two corporate energy-saving programs (for 2002-2003 and 2004-2006) were developed and implemented.

It was noted that the major outcomes of the 2000-2005 environmental efforts included:

- Stabilization of specific indicators (i.e. indicators per unit of product) of *Gazprom* subsidiaries' and organizations' environmental impact
- Reduction in the number and gravity of environmental violations
- Stabilization of environmental costs (taking into account inflation).

We can say that the principal result of *Gazprom* environmental initiatives in 2000 – 2005 is that the gas industry's environmental impact remains low as compared with other industries.

This means that the adoption of the second version of *Gazprom* Environmental Policy in 2000, along with a series of management and engineering activities, has boosted the effectiveness of *Gazprom's* ongoing environmental efforts.

Today, *Gazprom* is evolving into a global energy company. This process is taking place at a time when Russia's Environmental Doctrine is being implemented, new international environmental standards (including the 2004 version of the ISO 14000 series) are being adopted and new approaches to environmental protection are being put into practice across the globe. This means that in addition to national requirements, *Gazprom* must comply with European and global requirements and approaches to companies of similar standing.

To improve *Gazprom* operating and energy-saving activities, and achieve a more energy-efficient and environment-friendly operation in line with global standards, *Gazprom* Board resolved:

- Develop *Gazprom* Environmental Policy and a List of first-priority environmental activities for 2007-2010
- Establish *Gazprom* Coordination Board for Environmental Protection
- Prepare *Gazprom* Energy-Saving Program for 2007-2010.

The Company has determined the first-priority environmental protection activities for 2007-2010. These include:

Coordination and comprehensive integration of efforts aiming to reduce damage to the environment (emissions, discharge, leaks, etc.)

Improving the environmental management system, optimizing environmental protection practices of *Gazprom* subsidiaries and organizations

Systematic implementation of process, technology and organizational innovations in environmental protection activities, which form an integral part of the Company's operating activities

Increasing the effectiveness of ongoing environmental efforts by providing subsidiaries and organizations with better quality materials, equipment and methodological support

Improving industrial environmental control and monitoring systems

Enhancing information support for environmental activities.

The energy-saving activities planned for 2007-2010 can result in savings of 11.1 mln tons of fuel equivalent, including 9.2 bln m<sup>3</sup> of natural gas, 1296.9 mln kWh of electric power, about 1,212,200 Gcal of heat energy, and 30,000 tfe of diesel and boiler fuel. The most significant benefits – around 84% of total energy savings – are anticipated in gas transmission.

- The expected savings of other operations will be as follows:
- Gas production – 828,700 tons of fuel equivalent (7.6%)
- Gas processing – 784,800 tons of fuel equivalent (7.1%)
- Well drilling and workovers – 56,400 tons of fuel equivalent (0.5%)
- Underground gas storage – 41,000 tons of fuel equivalent (0.4%)
- Non-core operations – 34,400 tons of fuel equivalent (0.3%).

Having reviewed the implementation of the previous 2 programs, the third Program developers place an emphasis on improving energy-saving management methods. The Program is designed as a comprehensive framework which will ensure better implementation of management decisions based on improving energy efficiency control and providing economic incentives to encourage energy saving by employees and companies. The Company has identified the management and operational activities required to ensure successful implementation of *Gazprom* Energy-Saving Program for 2007-2010. These include:

- Improving the organizational structure
- Improving program planning methods
- Improving FER consumption accounting and reporting
- Providing a better methodological and regulatory framework for energy saving
- Improving the financing system
- Providing business incentives for energy saving
- Conducting energy audits and energy inspections at operating sites
- Tracking the efficiency of subsidiaries' internal gas consumption
- Conducting R&D to support energy-saving efforts and develop new-generation energy-saving equipment and processes.

In performing the proposed activities, care will be taken to analyze *Gazprom* performance indicators for 2000-2006 and make use of the best domestic and international practices relating to environmental protection and energy saving. This will enable the Company to decide on further steps to improve its environmental performance.

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