

# The Power of Growth











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Dear readers!



On behalf of the OAO Gazprom Management Committee I present you our Environmental Report 2014.

In the *Gazprom* strategy as both socially responsible and power industry company, we pay special attention to the issues of preservation of nature, environmental protection and energy saving.

Implementation of our Environmental Policy obligations allows *Gazprom* to maintain its positions in the world's leading power companies rating list. OAO Gazprom's subsidiary companies environmental management system complies with the international standard ISO 14001.

In 2014, *Gazprom* significantly increased the major indicators in environmental protection area. Air pollution reduction amounted to 9 per cent as compared to 2013. Total amount of conserved fuel resources in the reporting year reached 12.5 mm t c. e. which is 25 per cent more than in the previous year.

In 2014, *Gazprom* was acknowledged as the best Russian energy industry company in the terms of greenhouse gas emissions decrease and corporate climate strategy in the CDP (Carbon Disclosure Project) rating.

Productive assets reconstruction, implementation of innovative technologies, improvement of technological solutions and corporate environmental management system and accident prevention traditionally play meaningful roles in *Gazprom* environmental efficiency provision.

In the reporting period, *Gazprom* was taking an intensive part in local environmental projects and programmes, contributing to economical growth and solving social and environmental issues in the regions of operation.

The year 2014 was declared an Environmental Awareness Year in OAO Gazprom, thus becoming a follow-up of the Year of Ecology declared in the company earlier. This complex work contributed greatly to environmental conditions improvement in *Gazprom* areas of presence, increasing ecological literacy among the company employees and local citizens. During this year, over 20 thousand environmental and educational activities were implemented, involving about 363 thousand people from over 3500 cities and villages of Russia and abroad.

*Gazprom's* large and systematic work in the environmental area continues. We are committed to providing high responsibility and informational transparency levels in environmental and energy efficiency areas.

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

A handwritten signature in blue ink, consisting of a large, stylized 'V' followed by a cursive 'A' and 'M'.

V.A. Markelov

This report is based on yearly corporate environmental statistics data combined with other information contained in corporate reports on environmental activities, *Group* companies publications in Russian and foreign editions and corporate websites.

The 2014 Environmental Report provides information about the *Gazprom Group* activities in the Environmental Policy implementation, including the current performance and measures undertaken to mitigate the impact on air, water bodies and land. This Report presents data on environmental management and funding of fundamental studies and production complex technical modernization aimed at ensuring the environmental safety of the Gazprom Group operating facilities.

The data are provided in respect of the *Gazprom Group* on the whole, OAO Gazprom (including retrospective data for 5 years) and separate companies from the *Group* that contribute greatly to the activities aspects covered in the report.

The term OAO Gazprom used in this Report refers to the parent company of the *Gazprom Group*, Open Joint Stock Company Gazprom and its fully owned subsidiary companies and organizations involved in hydrocarbons production, transportation, underground storage and processing activities, as well as maintenance of unified gas supply system.

OOO Gazprom dobycha Astrakhan	OOO Gazprom transgaz Ufa
OOO Gazprom geologorazvedka	OOO Gazprom transgaz Ukhta
OOO Gazprom dobycha Irkutsk	OOO Gazprom transgaz Tchaikovsky
OOO Gazprom dobycha Krasnodar	OOO Gazprom transgaz Yugorsk
OOO Gazprom dobycha Kuznetsk	OOO Gazprom UGS
OOO Gazprom dobycha Nadym	OOO Gazprom pererabotka
OOO Gazprom dobycha Noyabrsk	OOO Novy Urengoy gas chemical complex
OOO Gazprom dobycha Orenburg	OOO Gazprom energo
OOO Gazprom dobycha Urengoy	OOO Gazprom podzemremont Orenburg
OOO Gazprom dobycha shelf	OOO Gazprom podzemremont Urengoy
Yuzhno-Sakhalinsk	OOO Gazprom tsentremont
OOO Gazprom dobycha Yamburg	OOO Gapprom geotekhnologii
OOO Gazprom transgaz Volgograd	OOO Gazprom georesurs
OOO Gazprom transgaz Yekaterinburg	OOO Gazprom gazomotornoye toplivo
OOO Gazprom transgaz Kazan	OOO Gazprom szhizhenny gaz
OOO Gazprom transgaz Krasnodar	OOO Gazprom LNG Vladivostok
OOO Gazprom transgaz Makhachkala	OOO Gazpromavia Aviation Company
OOO Gazprom transgaz Moscow	OOO Gazpromtrans
OOO Gazprom transgaz Nizhny Novgorod	OOO Gazprom flot
OOO Gazprom transgaz Samara	OOO Gazprom invest
OOO Gazprom transgaz Saint Petersburg	OOO Gazprom sotsinvest
OOO Gazprom transgaz Saratov	ZAO Yamalgazinvest
OOO Gazprom transgaz Stavropol	OAO Gazpromtrubinvest
OOO Gazprom transgaz Surgut	OAO Tsentr gas
OOO Gazprom transgaz Tomsk	

The terms *Gazprom Neft Group* and *Gazprom Neft* comprise OAO Gazprom Neft and its subsidiary companies.

The terms Gazprom Neftekhim Salavat Group or Gazprom Neftekhim Salavat comprise OAO Gazprom Neftekhim Salavat and its subsidiary companies.

The terms *Gazprom Energoholding Group* or *Gazprom Energoholding* comprises OOO Gazprom Energoholding and its subsidiary companies (OAO Mosenergo, OAO MOEK, OAO OGK-2, OAO TGC-1, OAO Murmanskaya CHPP, OAO Saint Petersburg Heating Grid)

The term Gazprom Mezhregiongaz comprises OOO Gazprom Mezhregiongaz and its subsidiary companies involved in natural gas supplies, gas marketing and heat generation.



*Gazprom Group* will stand for OAO Gazprom (all above mentioned 100 % subsidiaries) and the following companies:

<i>Gazprom Neft Group</i>	as well as OAO Gazprom subsidiary
<i>Gazprom Neftekhim Salavat Group</i>	companies conducting their activities abroad:
<i>Gazprom Energoholding Group</i>	OAO Gazprom transgaz Belarus
<i>Gazprom Mezhhregiongaz</i>	ZAO Gazprom Armenia
Vostokgazprom Group	
OAO Daltransgaz	
OAO Krasnoyarskgazprom	
Sakhalin Energy Investment Company Ltd. (Sakhalin Energy)	
OAO Severneftegazprom	
ZAO Purgaz	

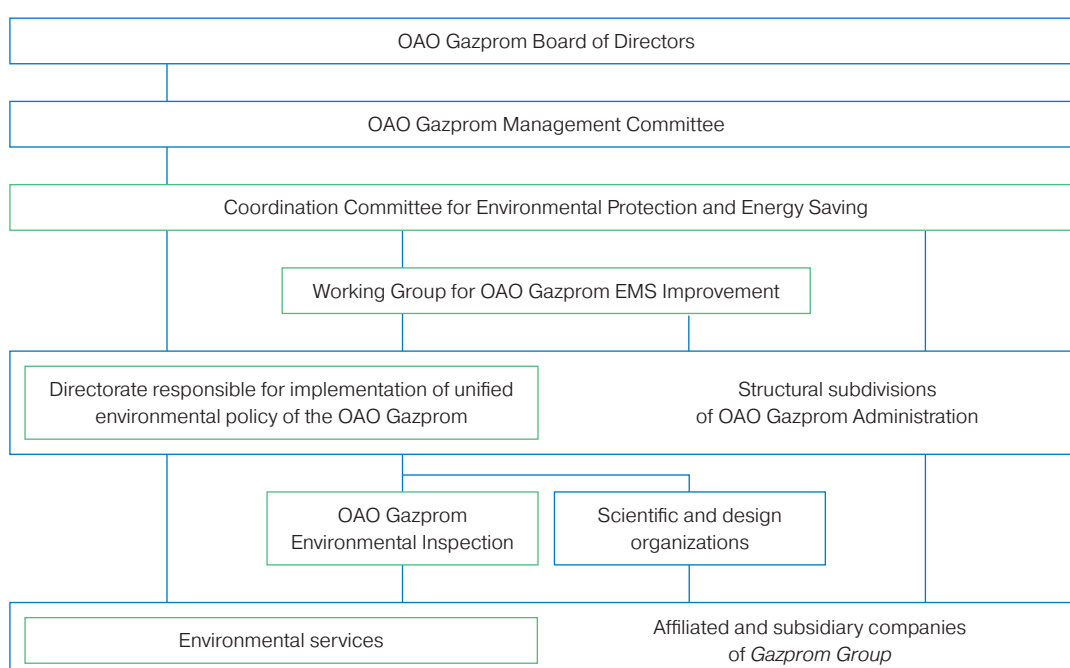
The Gas complex companies of the *Gazprom Group* comprises OAO Gazprom (and all its 100 per cent subsidiary companies and organizations involved in hydrocarbons production, transportation, underground storage and refining activities, as well as maintenance of unified gas supply system), Gazprom Mezhhregiongaz, Vostokgazprom Group (OAO Tomskgazprom), OAO Daltransgaz, OAO Krasnoyarskgazprom, Sakhalin Energy Investment Company Ltd., OAO Severneftegazprom, ZAO Purgaz.

The environmental impact indicators and the environmental and economic indicators are given for the *Gazprom Group* in relation to the Russian Federation area. Foreign activity performance is reviewed separately.

## Environmental Management System

*Gazprom* has a vertically implemented environmental management system with various management units ranging from the OAO Gazprom Board of Directors and Administration, administrative bodies of the affiliated and subsidiary companies and organizations to their branch offices and production facilities.

OAO Gazprom Environmental Policy and environmental policies of subsidiary companies constitute the objectives and liabilities concerned with the prevention and reduction of negative environmental impact. This enables the Group companies to meet all environmental legislation requirements, monitor and prevent pollution and continuously improve the environmental performance.



OAO Gazprom top administrative body in the Environmental Protection Management System is the OAO Gazprom Management Committee that regularly submits data on environmental protection activities and OAO Gazprom Environmental Policy implementation results to the Board of Directors.

OAO Gazprom Coordination Committee for Environmental Protection and Energy Efficiency was created by the Order of OAO Gazprom No. 280 dated October 17, 2007. The Committee Members comprise the majority of the Management Committee members and heads of the OAO Gazprom Administration's structural subdivisions (specialized departments). The Committee exercises complex administration and general coordination of activities for the OAO Gazprom Administration structural divisions, affiliate and subsidiary companies of the *Gazprom Group*, interaction with the state environment protection bodies and social organizations aimed at environmental protection.

Directorate responsible for implementation of unified environmental policy of the OAO Gazprom and aimed at increasing *Gazprom Group* energy efficiency is in charge of immediate actions on interacting OAO Gazprom subsidiary companies and organizations in the environmental activities area and decisions implementation of the Coordination Committee and senior executives of the OAO Gazprom.

In 2014, the following questions were regarded at the meetings of OAO Gazprom Coordination Committee for Environmental Protection and Energy Efficiency

- results of the environmental activities and works on saving the fuel resources and increasing energy efficiency of the subsidiary companies for 2013;

- OAO Gazprom Neft environmental policy implementation tools;
- OAO Gazprom Neft action plan implementation aimed at reduction of the abnormal air emissions due to burning of associated petroleum gas;
- the results of OAO Gazprom Neftekhim Salavat environmental protection activities for 2009–2013;
- proposals for reduction of natural gas losses in OAO Gazprom gas transportation subsidiary companies.

In order to improve the corporate social responsibility, *Gazprom* has deployed a system of environmental expert assessment and a system of corporate environmental control.

Environmental research and development projects carried out on OAO Gazprom's request are also an integral part of the management system.

In October 2011 the Gazprom Environmental Policy was approved and recommended for application in *Gazprom Group* companies. The environmental management system is the key element of the corporate Environmental Policy implementation. The system comprises operation control of the heading company and fully owned 36 subsidiaries, involved in production, transportation, storage and refinery of natural gas and gas condensate, as well as organizations which provide for improvement and reliability of the UGSS operations.

As of 2011, the OAO Gazprom EMS is certified in accordance with the international standard ISO 14001:2004. Re-certification audit performed in October 2014 by an independent international certification body Det Norske Veritas (DNV GL) proved that the system was compliant with the requirements.

Subsidiary companies in the OAO Gazprom EMS scope in 2014:

OOO Gazprom dobycha Astrakhan	OOO Gazprom transgaz Volgograd
OOO Gazprom Geologorazvedka	OOO Gazprom transgaz Yekaterinburg
OOO Gazprom dobycha Irkutsk	OOO Gazprom transgaz Kazan
OOO Gazprom dobycha Krasnodar	OOO Gazprom transgaz Krasnodar
OOO Gazprom dobycha Kuznetsk	OOO Gazprom transgaz Makhachkala
OOO Gazprom dobycha Nadym	OOO Gazprom transgaz Moscow
OOO Gazprom dobycha Noyabrsk	OOO Gazprom transgaz Nizhny Novgorod
OOO Gazprom dobycha Orenburg	OOO Gazprom transgaz Samara
OOO Gazprom dobycha Urengoy	OOO Gazprom transgaz Saint Petersburg
OOO Gazprom dobycha shelf	OOO Gazprom transgaz Saratov
Yuzhno-Sakhalinsk	OOO Gazprom transgaz Stavropol
OOO Gazprom dobycha Yamburg	OOO Gazprom transgaz Surgut
OOO Gazprom UGS	OOO Gazprom transgaz Tomsk
OOO Gazprom pererabotka	OOO Gazprom transgaz Ufa
OOO Gazprom energo	OOO Gazprom transgaz Ukhta
OOO Gazprom podzemremont Orenburg	OOO Gazprom transgaz Tchaikovsky
OOO Gazprom podzemremont Urengoy	OOO Gazprom transgaz Yugorsk
OOO Gazprom tsentrremont	OAO Gazprom transgaz Belarus
OOO Gazprom invest	

In 2014, the control audit DNV GL confirmed the compliance of the OAO Gazprom environmental management system with the requirements of the international standard ISO 14001:2004.

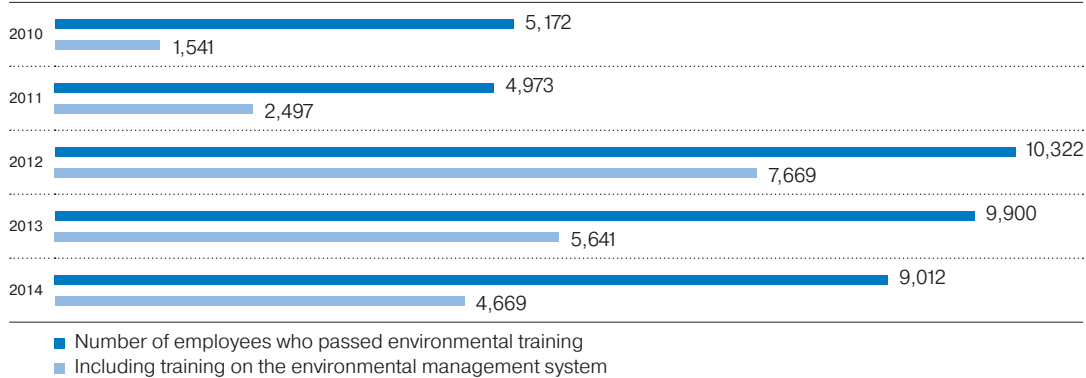
In order to ensure complex approach and coordination of the environmental management of the OAO Gazprom structural subdivisions, there is a constantly operating Working Group for the OAO Gazprom EMS improvement. The head of the group is O.E. Aksyutin — member of the OAO Gazprom Management Committee, Head of Department. Working Group main tasks are:

- organization, coordination and planning of the EMS operation including identification and assessment of environmental aspects of subsidiary companies' activities in the EMS implementation sphere;
- analysis of EMS activity, preparation of recommendations and proposals for its further development, including justification of proposals on updating the environmental policy and procedures of EMS;
- justification of purposes and tasks for the planned periods of environmental policy implementation;
- preparation and improvement of documents on EMS formation, introduction and successive improvement issues.

Besides OAO Gazprom, almost all the *Gazprom Group* companies have certified EMS. Amidst them, *OOO Gazprom Energoholding* and its subsidiary companies (OAO Mosenergo, OAO OGK-2, OAO TGC-1), *Gazprom Neft Group*, OAO Gazprom Neftechim Salavat, Sakhalin Energy Investment Company Ltd., OAO Severneftegazprom etc. For additional information on environmental management systems in the *Group* companies, visit their official websites.

In 2014, 9,012 people in the *Group* had environmental training (4,669 of them studied environmental management system), including 7,290 OAO Gazprom employees (4,580 of them studied environmental management system), 1,306 *Gazprom Neft Group* employees (54 of them studied environmental management system).

dynamics of environmental training of the *Gazprom Group* personnel, 2010–2014, pers.



Over 39,000 people passed environmental training in *Gazprom Group* in 2010–2014.

### Competition of environmental services and ecologists of the OAO Gazprom subsidiary companies

A competition of environmental services and ecologists of OAO Gazprom subsidiary companies is held annually in OAO Gazprom in compliance with the OAO Gazprom order No. 113/A dated April 30, 2008. In 2014, according to the ecologist professionals and services 2013 results, *OOO Gazprom transgaz Tomsk* won the environmental services competition.

Winners of the Competition of Ecologists were:

- Olga Vigand, first-category engineer of the Altay LPDTGP of the *OOO Gazprom transgaz Tomsk*;
- Olga Nepryakhina, Head of the Environmental Protection and Energy Saving Division of the *OOO Gazprom tansgas Moscow*;
- Vladimir Bystrykh, Head of the Environmental Protection Division of the *OOO Gazprom dobycha Orenburg*.

## Environmental targets and programs

According to the OAO Gazprom Environmental Policy, the underlying principle of the company's business is "sustainable development construed as intensive economic growth accompanied by maximal conservation of natural resources and preservation of a favorable natural environment for future generations". Strategic environmental objectives are the following:

- minimization of the adverse environmental impact intensity;
- efficiency improve of natural and energy resources use;
- involvement of the company's entire personnel in minimization of environmental risks, improve of environmental management system and environmental performance of the production.

In accordance with the set Environmental Aspects Identification Order in the Environmental Management System of OAO Gazprom, major environmental aspects of the subsidiary companies activity are defined on a yearly basis, becoming the grounds for environmental objectives, environmental safety measures development and implementation.

In 2014, the major environmental aspects for OAO Gazprom were the following: methane emissions into atmospheric air during gas pipelines repair and nitrogen oxides emissions during the compressor stations operation, as well as waste waters discharge and waste disposal.

Within the OAO Gazprom EMS frames, new Corporate Environmental Targets were set for the OAO Gazprom in 2013 for the 2014–2016. In 2014 5 out of 6 indicators showed some progress (as compared to 2011 levels set as baseline).

Achieving corporate environmental targets of OAO Gazprom in 2014			
No.	Corporate environmental target	Entities with the EMS scope	Changes as compared to the 2011 baseline
1.	Methane emissions decrease (during the gas transportation system repair)	All natural gas transportation subsidiary companies	Reduction by 7.3%
2.	Reduction of nitrogen oxide emission intensity (during compressing)	All natural gas transportation subsidiary companies	Reduction by 10.5%
3.	Lowering of waste and under-treated water discharge into surface water bodies	All subsidiary companies	Reduction by 13.3%
4.	Lowering of waste disposal share	All subsidiary companies	Reduction by 10.5%
5.	Lowering of the payment for exceeding the allowed impact as an integral indicator of the negative environmental impact	All subsidiary companies	Increase by 97.5%
6.	Lowering of gas consumption for own process needs	All natural gas transportation subsidiary companies	Reduction by 21.8%

\*Excluding the excessive charges of OOO Gazprom dobycha Noyabrsk for the 2012–2013, decreased by 26.6%.

The Complex Environmental Program of OAO Gazprom for the period of 2011–2015 is implemented to preserve favourable environment and balanced environmentally oriented development. The environmental and economic effect from Program implementation for the period of 2011–2015 will make approximately RUB 44.6bn.

Priority measures and investment projects of subsidiary companies for environmental safety provision and resource supply of the OAO Gazprom facilities are implemented within the frames of the Program.

In 2014, significant environmental effect was achieved from the following measures:

- improvement of the repair technology for line sections of trunk gas pipelines (TGP) resultant from minimization of venting associated with emergency shutdowns and forwarding to consumer;
- implementation of the production gas well string temperature heating technology after long-term down-time and conservation;
- upgrade of GCU combustors;
- motor transport switch to gas engine fuel.



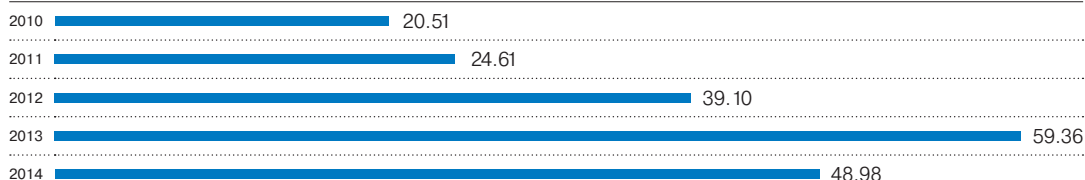
*Gazprom* develops and improves the system of standardization in terms of corporate standards in the environmental protection sphere. As of 2012, there is a separate complex in the OAO Gazprom system of standardization "Regulatory Documents in the Environmental Protection Sphere", providing for development of corporate standards on EMS groups of processes. Standardization targets in the environmental protection sphere of OAO Gazprom include:

- processes/subprocesses of environmental activity;
- process operations of main and auxiliary types of production activity with account of safety provision for the environment;
- methods/methodologies used for design, tests and for implementation of nature-protecting measures;
- EMS documentation;
- environmental protection requirements included in accordance with the procedure established by the legislation in regulatory-methodological documents of other complexes of the OAO Gazprom standardization system.

## Financing of environmental protection

In 2014, the *Gazprom Group* environmental costs were RUB 48.98bn, with 41.7% for OAO Gazprom.

### *Gazprom Group* environmental costs dynamics, 2010–2014, RUB bn



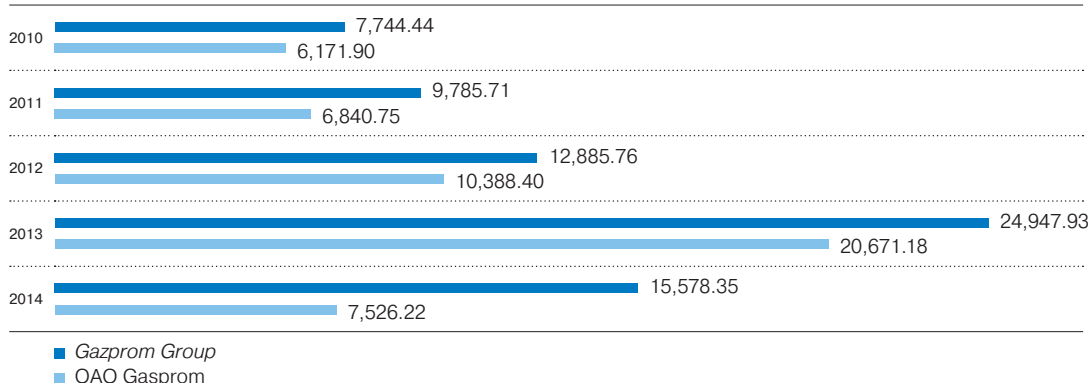
**Remark.** Investment decrease in environmental area as compared to 2013 is based on the fact that environmental protection activities implemented as a part of Olympic facilities construction and Sochi development as an alpine resort were mainly over.

### Protection and nature use, 2010–2014, RUB mm

	2010	2011	2012	2013	2014
<b><i>Gazprom Group</i></b>	<b>7,744.44</b>	<b>9,785.71</b>	<b>12,885.76</b>	<b>24,947.93</b>	<b>15,578.35</b>
Gas complex	6,476.24	6,872.66	10,416.56	20,760.53	7,703.04
including OAO Gazprom	6,171.90	6,840.75	10,388.40	20,671.18	7,526.22
<i>Gazprom Neft Group</i>	14.60	891.95	1,210.09	1,115.51	3,995.61
<i>Gazprom Energoholding</i>	1,253.60	2,021.10	646.81	162.26	800.78
<i>Gazprom Neftekhim Salavat*</i>	–	–	612.30	2,909.63	3,078.92

\* Hereinafter, data of *Gazprom Neftekhim Salavat* are provided since 2012, after the establishment of 100% control of the Group over OAO Salavat Nefteorgsintez (renamed to OAO *Gazprom Neftekhim Salavat*).

### Dynamics of *Gazprom Group* investments for environmental protection and rational use of natural resources, 2010–2014, RUB mm



In 2014, investments for water resources protection and their sustainable use dominated in the investments structure of the *Group* with RUB 6,334.23mm; RUB 3,030.08mm were invested in protection and sustainable use of the lands; RUB 4,752.75mm invested in atmospheric air protection; RUB 1,258.32mm invested in construction of enterprises and landfill sites for utilization, neutralization and disposal of toxic production, household and other waste; RUB 202.99mm invested in protection and reproduction of fish reserves, protection and reproduction of wild animals and birds.

In 2010–2014, the *Gazprom Group* investments aimed at environmental protection and sustainable use of natural resources made approximately RUB 71bn.

**Structure of investments for environmental protection and rational use of natural resources, OAO Gazprom, 2014, %**

■ Protection and rational use of water resources	41%
■ Air protection	31%
■ Protection and rational use of lands	19%
■ Facilities, enterprises and landfills for utilization, neutralization and disposal of waste	8%
■ Protection and reproduction of fish resources, protection and reproduction of wild animals	1%

In 2014, total current environmental costs of the *Gazprom Group* did not change greatly as compared to 2013 and amounted to RUB 31.66bn.

**Current environmental expenditures, 2010–2014, RUB mm**

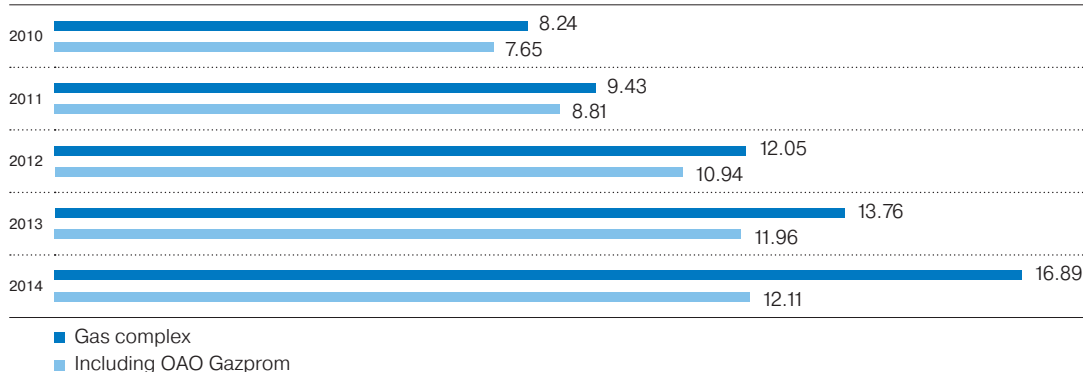
	2010	2011	2012	2013	2014
<b>Gazprom Group</b>	<b>11,533.06</b>	<b>13,804.47</b>	<b>24,648.79</b>	<b>31,456.47</b>	<b>31,656.24</b>
Gas complex	8,244.82	9,434.10	12,047.14	13,758.91	16,895.69
including OAO Gazprom	7,645.59	8,806.60	10,938.75	11,957.75	12,113.02
<i>Gazprom Neft Group</i>	1,649.00	1,514.24	2,647.73	7,413.42	6,210.19
<i>Gazprom Energoholding</i>	1,639.24	2,856.13	1,966.64	2,058.68	2,380.27
<i>Gazprom Neftekhim Salavat</i>	–	–	7,987.28	8,225.46	6,170.09
<b>including current expenditures for environmental protection</b>					
<b>Gazprom Group</b>	<b>10,289.84</b>	<b>11,232.71</b>	<b>18,354.68</b>	<b>20,328.15</b>	<b>18,047.89</b>
Gas complex	7,150.84	8,021.27	7,034.19	8,224.35	8,079.39
including OAO Gazprom	6,577.51	7,411.36	6,517.20	7,161.35	7,141.84
<i>Gazprom Neft Group</i>	1,649.00	1,514.24	2,605.06	3,953.91	3,843.48
<i>Gazprom Energoholding</i>	1,490.00	1,697.20	1,253.69	425.04	544.65
<i>Gazprom Neftekhim Salavat Group</i>	–	–	7,461.74	7,724.85	5,580.37
<b>including current expenditures for nature conservation services*</b>					
<b>Gazprom Group</b>	<b>–</b>	<b>–</b>	<b>3,849.51</b>	<b>8,021.87</b>	<b>9,403.46</b>
Gas complex	–	–	3,100.07	4,008.73	4,988.78
including OAO Gazprom	–	–	2,516.47	3,273.98	3,300.71
<i>Gazprom Neft Group**</i>	–	–	–	2,208.34	2,316.29
<i>Gazprom Energoholding</i>	–	–	436.00	1,420.62	1,686.30
<i>Gazprom Neftekhim Salavat Group</i>	–	–	313.44	384.18	412.09
<b>including current expenditures for overhaul repair of main production assets (environmental protection aspects)</b>					
<b>Gazprom Group</b>	<b>1,243.22</b>	<b>2,571.76</b>	<b>2,444.61</b>	<b>3,106.45</b>	<b>4,204.88</b>
Gas complex	1,093.98	1,412.83	1,912.89	1,525.84	3,827.52
including OAO Gazprom	1,068.08	1,395.24	1,905.08	1,522.42	1,671.01
<i>Gazprom Neft Group**</i>	–	–	42.67	1,251.17	50.41
<i>Gazprom Energoholding</i>	149.24	1,158.93	276.95	213.02	149.32
<i>Gazprom Neftekhim Salavat Group</i>	–	–	212.10	116.42	177.63

\* The costs of services of environmental protection have been considered as part of the information about the current costs of environmental protection since 2012, respectively as per the Order of the Federal State Statistics Service of 09.08.2012, the number 441.

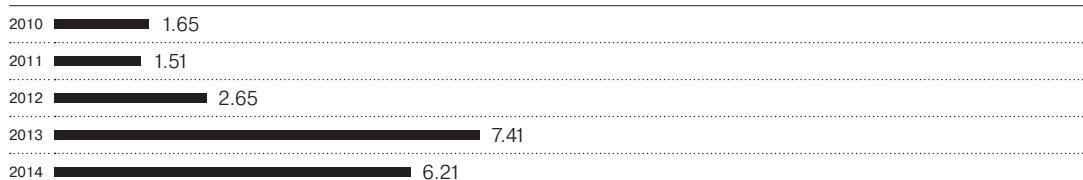
\*\* The current expenditures for nature conservation services in 2012 and for overhaul repair of main production assets (environmental protection aspects) in 2010–2011 were not provided.

### Dynamics of current expenditures for environmental protection in Gazprom Group, 2010–2014, RUB bn

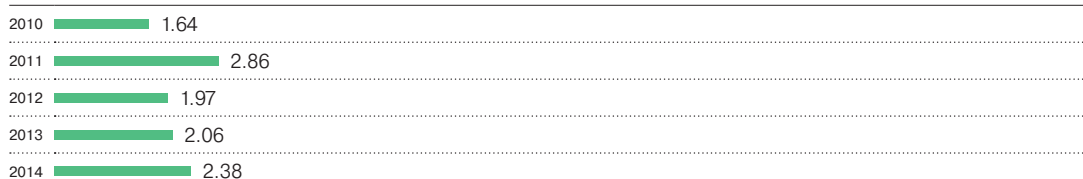
#### Gas complex



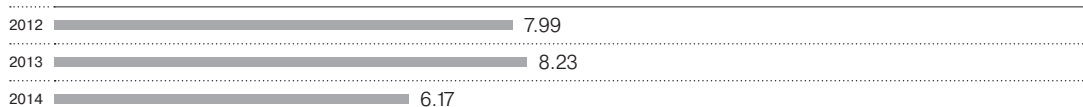
#### Gazprom Neft Group



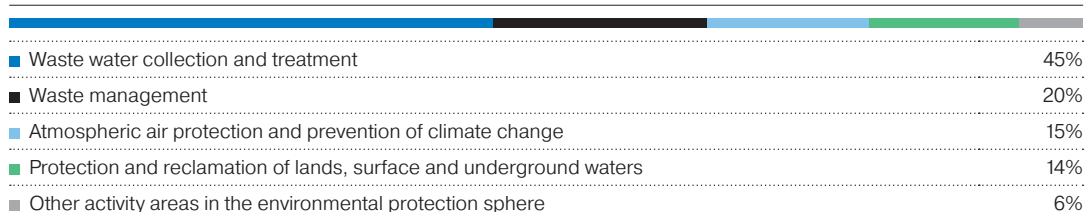
#### Gazprom Energoholding



#### Gazprom Neftekhim Salavat



### Structure of Gazprom Group's current environmental expenditures, 2014, %



In the *Gazprom Group* current costs structure, the costs for waste water collection and treatment are predominant, amounting RUB 14.1bn in 2014. Waste management costs amount to RUB 6.39bn. RUB 4.91bn were spent in atmospheric air protection and prevention of climate change; RUB 4.32bn were spent in protection and reclamation of lands, surface and underground waters; and RUB 1.94bn were spent in other environmental protection programs (preservation of biodiversity and protection of natural areas, protection from physical impact factors, provision of radiation safety, scientific research activity and research works for mitigation of adverse anthropogenic impacts).

## Adverse environmental impact fee

RUB 1,746.9bn were transferred by the *Gazprom Group* to budgets of different levels as payment for the adverse environmental impact in 2014, which is RUB 1,205.6mm less than in 2013.

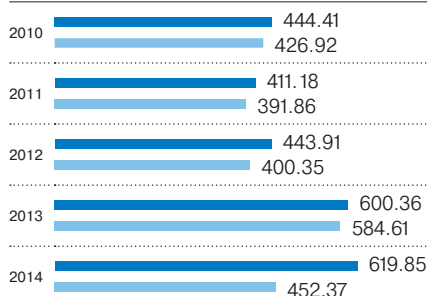
**Adverse environmental impact fee, 2010–2014, RUB mm**

	2010	2011	2012	2013	2014
<b>Gazprom Group</b>	<b>1,234.38</b>	<b>1,017.24</b>	<b>1,563.12</b>	<b>2,952.51</b>	<b>1,746.89</b>
Gas complex	444.41	411.18	443.91	600.36	619.85
including OAO Gazprom	426.92	391.86	400.35	584.61	452.37
<i>Gazprom Neft Group</i>	201.40	133.39	822.23	1,927.46	545.61
<i>Gazprom Energoholding</i>	588.57	472.67	292.70	403.16	571.11
<i>Gazprom Neftekhim Salavat</i>	–	–	4.28	21.53	10.32

In 2014, *Gazprom Group* adverse environmental impact fee was reduced by 42% as compared to 2013 results. This was caused mainly by implementation on APG and drilling waste recovering levels increase measures in the *Gazprom Neft Group*. Nevertheless, *Gazprom Energoholding* experienced a substantial increase of this index, especially OAO OGK-2, where this index increased by 20.2% as compared to 2013 levels. This was caused by Troitskaya HPP ash and slag wastes disposal cost increase.

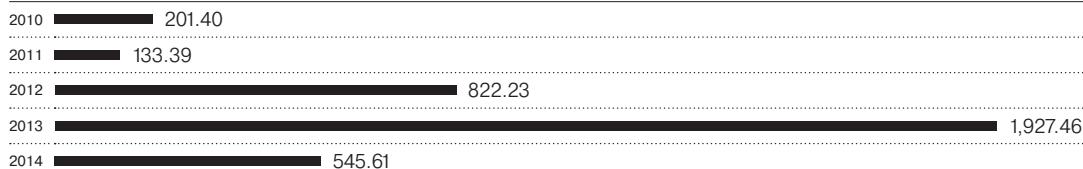
**Adverse environmental impact fee dynamics in *Gazprom Group*, 2010–2014, RUB mm**

### Gas complex

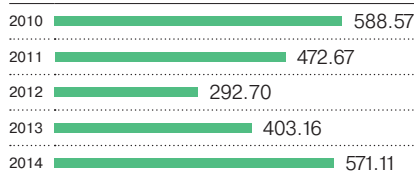


■ Gas complex  
■ Including OAO Gazprom

### *Gazprom Neft Group*



### *Gazprom Energoholding*



### *Gazprom Neftekhim Salavat*





In the adverse environment impact fee structure, payments for pollutant emissions into atmospheric air and payments for waste disposal were predominant in 2014, being also major environmental aspects of the *Gazprom Group*.

**Structure of environmental payments of *Gazprom Group*  
by types of adverse environmental impact, 2014, %**

■ Payment for air pollutant emissions	50%
■ Payment for waste disposal	42%
■ Payment for wastewater discharge into surface water bodies	8%

**Payment breakdown by the types of environmental impact,  
*Gazprom Group*, 2014, RUB mm**

<i>Gazprom Group</i>					
Gas complex					
<i>Gazprom Neft Group</i>					
<i>Gazprom Energoholding</i>					
<i>Gazprom Neftekhim Salavat</i>					
	<i>Gazprom Group</i>	<i>Gas complex</i>	<i>Gazprom Neft Group</i>	<i>Gazprom Energoholding</i>	<i>Gazprom Neftekhim Salavat</i>
■ For waste water discharge into surface water bodies	139.96	20.45	1.86	113.76	3.89
■ For air pollutant emissions	866.41	385.74	406.30	70.93	3.43
■ For waste disposal	740.44	213.58	137.45	386.42	2.99

In accordance with the task of achieving the corporate environmental objective of OAO Gazprom for reduction of payment for excessive environmental impact, fully owned companies participation of OAO Gazprom have been intensively working to improve their performance, which enabled them to reduce the payment by 22.6% in 2014 compared to 2013.







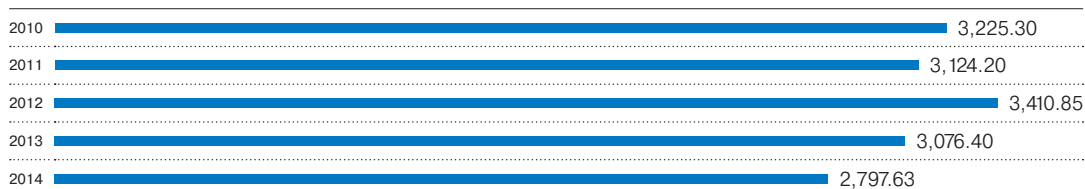


## Air protection

In 2014, total pollutant emissions from stationary sources of *Gazprom Group* amounted to 2,797.63 kilotons, 9% lower than the 2013 level. This decrease is determined by:

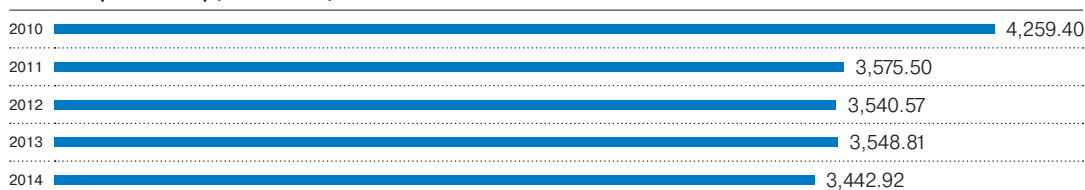
- OAO *Gazprom* implementation of measures on methane emissions reduction in gas trunk transportation, underground storage and natural gas refining;
- reduction of emissions in the *Gazprom Energoholding* due to reduction of electrical energy production;
- implementation of technological measures aimed at the increase of APG utilization level at production sites and implementation of programmes to reduce oil refining waste by *Gazprom Neft*.

**Dynamics of total air pollutant emissions in *Gazprom Group*, 2010–2014, kilotons**

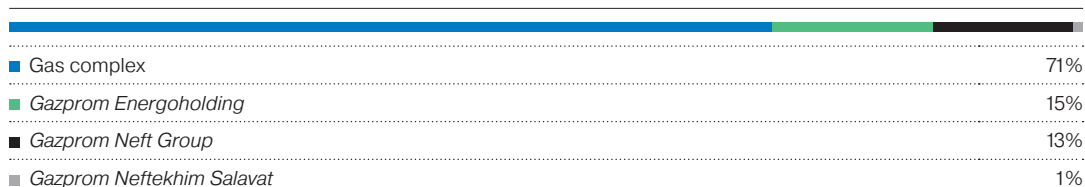


In 2014, in the *Gazprom Group* 3,442.92 kilotons of pollutants were captured and neutralized at waste gases treatment facilities, including 3,260.86 kilotons at *Gazprom Energoholding*, 134.93 kilotons at OAO *Gazprom* (99% of them in the natural gas and gas condensate refining segment), 47.12 kilotons in other *Group* companies. Total amount of the captured and neutralized pollutants is mainly (78%) solid fuel ash from power production facilities, 17% from other solid substances and 5% from gaseous and liquid substances (3% of them as sulfur dioxide).

**Dynamics of air pollutants capture and neutralization at treatment facilities in the *Gazprom Group*, 2010–2014, kilotons**



**Share of *Gazprom Group* companies in formation of total emissions into atmospheric air, %**



Air pollutant emissions from the Gas complex companies of the *Group* amounted to 1988.62 kilotons, 97% of which refer to OAO *Gazprom*.

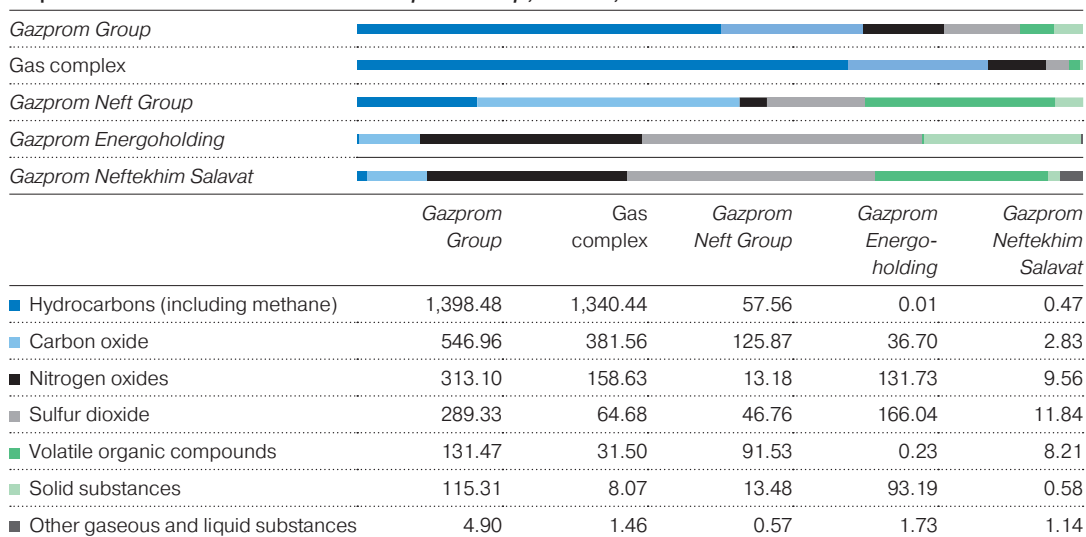
Total *Group* emissions consist of the following pollutants: hydrocarbons (predominantly methane), carbon oxide, nitrogen oxides, sulfur dioxide.

The *Gazprom* subsidiaries involved in production, transportation, storage and processing of natural gas and condensate stand for 95% of the *Group* total hydrocarbon (methane) emissions.

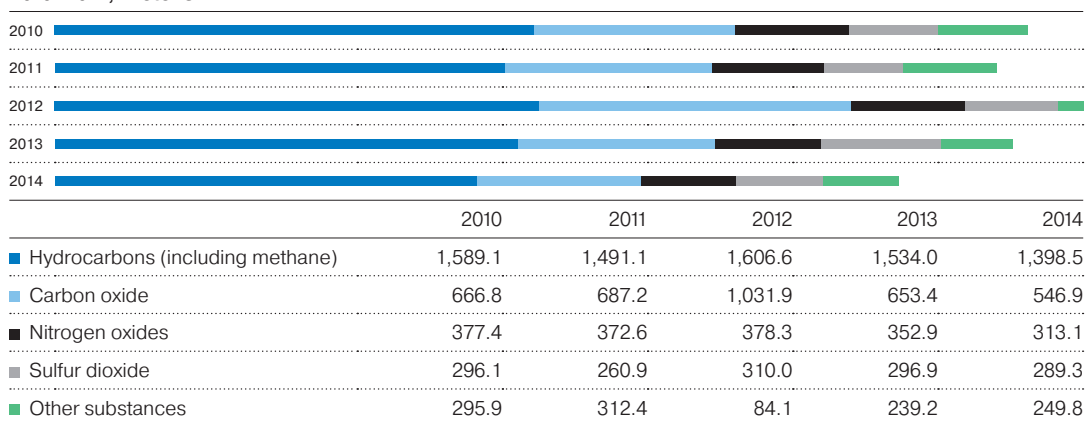
*Gazprom Group* shows steady decline impact on the air. In 2010–2014 total pollutant emissions amounted to 427.8 kilotons.

Emissions of solid substances are mostly inherent to the *Gazprom* energy sector (82% of the *Group* total) and the emissions of volatile organic compounds (VOC) are mostly inherent to the *Gazprom Neft Group* companies and to gas production and refining complex (nearly 93.6%).

#### Air pollutant emissions structure in the *Gazprom Group*, kilotons, %



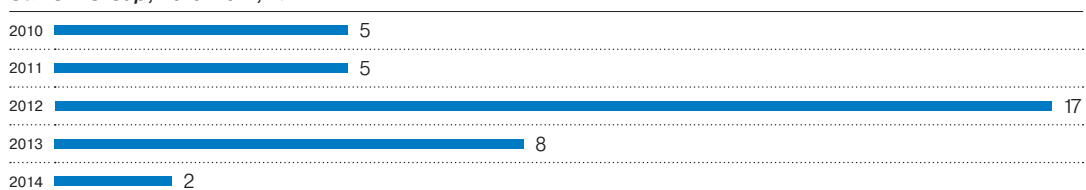
#### Dynamics of air pollutant emissions from the *Gazprom Group* stationary sources, 2010–2014, kilotons



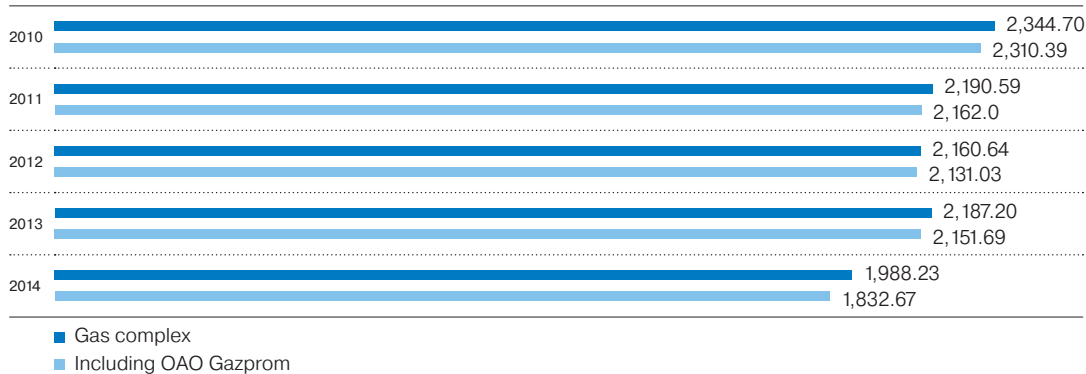
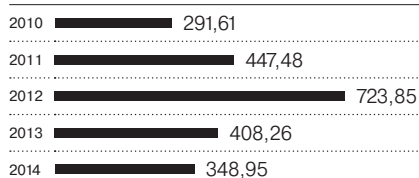
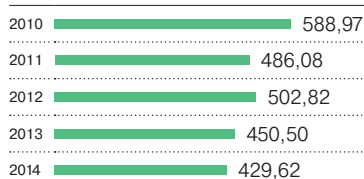
In 2010–2014, the *Group* reduced hydrocarbon emissions by 12%, nitrogen oxides — by 17%, carbon oxide — by 18%.

Share of emissions exceeding the specified standard rates in the total emissions amounted to 2% in 2014. Excessive emissions reduction as compared to previous periods was based on increasing usage of the APG.

#### Share of pollutant emissions exceeding specified standard rates in the total air emissions, *Gazprom Group*, 2010–2014, %

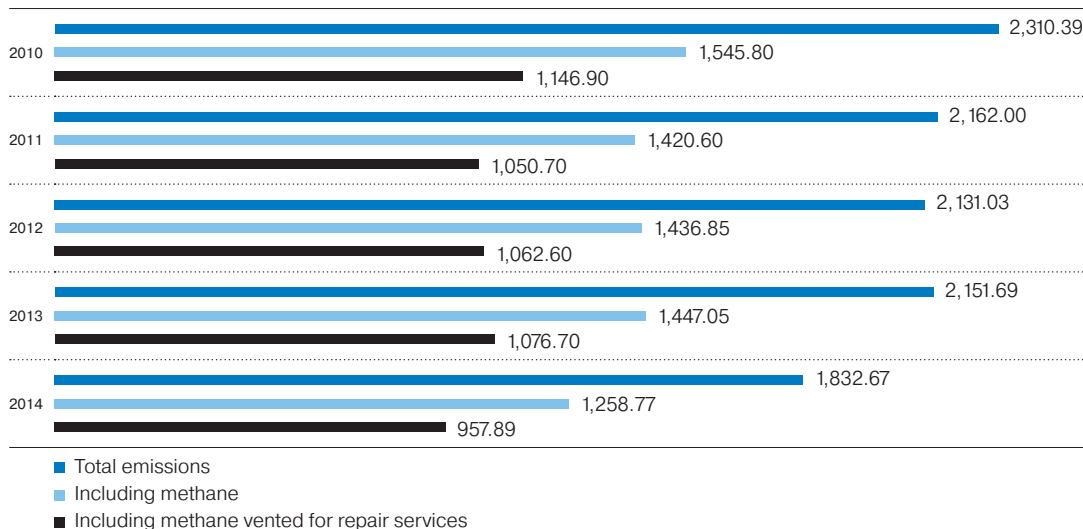




Dynamics of total emissions in *Gazprom Group*, 2010–2014, kilotons**Gas complex****Gazprom Neft Group****Gazprom Energoholding****Gazprom Neftekhim Salavat**

Decrease of total emissions in the Gas complex in relation to 2013 was associated mainly with decrease of methane emissions in the OAO Gazprom gas transportation sector. This was caused by decrease of scheduled preventive maintenance at the gas transportation facilities, fulfillment of the energy saving program, within which the subsidiary gas transmitting companies implemented techniques of pipeline pumpdown, saving gas for own process needs of compressor workshops and GDS, and hot tapping during shut-off valves replacement. Along with it natural gas and condensate production and refinery facilities performed the emission decrease by 7.5 kilotons and 5 kilotons respectively, underground gas storage — by 5.7 kilotons.

**Dynamics of air pollutant emissions from the OAO Gazprom stationary sources, 2010–2014, kilotons**

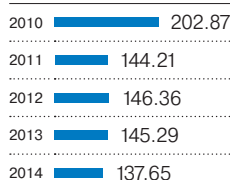


In 2010–2014, in OAO Gazprom total air pollutant emissions were overall reduced by 21%, methane emissions — by 19%.

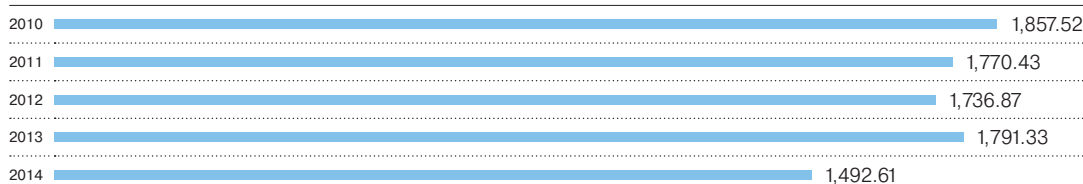
As a whole, since 2010 total emissions from the OAO Gazprom stationary sources reduced by 387.10 kilotons, including 382.56 kilotons of methane.

**Dynamics of total air pollutant emissions in OAO Gazprom by activity types, 2010–2014, kilotons**

**Gas and gas condensate production**



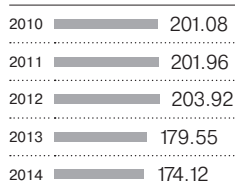
**Gas transportation**



**Underground gas storage**



**Natural gas and gas condensate processing**



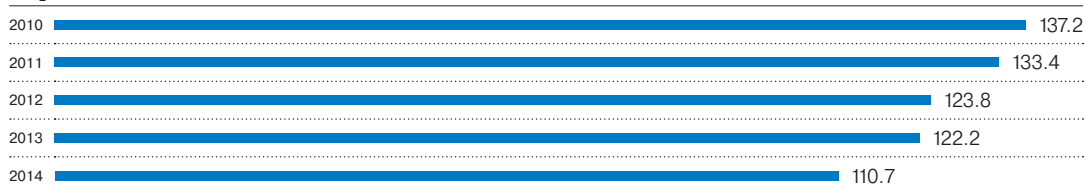
## Greenhouse gas emissions

OAOGazprom climate protection activities are based on the Energy Strategy of Russia up to 2030 and the State Program of the Russian Federation "Environmental Protection" for 2012–2020, as well as the Climate Doctrine of the Russian Federation.

Greenhouse gas (GHG) reduction is a part of the OAOGazprom Corporate Strategy. It helps the OAOGazprom to maintain dominant positions in sustainable development ratings, encourage achievement of the national objective approved by the Order of the President of the Russian Federation No. 752 dd. September 30, 2013 that is, to ensure a 75% reduction of GHG emissions by 2020 as compared to the 1990 levels.

In 2014, GHG emissions at OAOGazprom facilities amounted 110.7mm tonnes of CO<sub>2</sub>-equivalent, which is 9.4% lower as compared to the previous year level. The main reasons of this GHG emissions reduction are natural gas compression consumption decrease, efficiency increase in fuel and energy resources (FER) usage and implementation of other energy saving measures.

**Greenhouse gas emissions in OAOGazprom, 2010–2014,  
CO<sub>2</sub>-equivalent, mm tonnes**



Upon the data submitted and further estimated, OAOGazprom was recognized as the CDP Best Respondent among Russian oil companies in 2011–2014.

Every year OAOGazprom submits the results of the quantitative assessment of annual GHG emissions to Roshydromet (Russian Federal Service for Hydrometeorology and Environmental Monitoring) for preparing the national GHG emissions inventory of the Russian Federation to meet the requirements of the national legislation and requirements of the UNFCCC. OAOGazprom participates in data collection for the National greenhouse gases emissions Reports.

As of 2009, OAOGazprom takes part in international investing partnership project involving more than 500 international financial organizations, Carbon Disclosure Project (CDP), that maintains the largest international database on GHG emissions. The data from that database are used when making investment decisions.

As of the 2013, OAOGazprom widened the set of reflected indicators providing additional data on indirect GHG emissions.

GHG accounting and inventory system is implemented in other *Gazprom Group* companies. For instance, since 2001 all OAOGazprom (Gazprom Energoholding) power stations have been projecting their total emissions of carbon dioxide and other GHG (guiding document RD 153-34.0-02.318-2001 "Methodological guidelines for calculation of total greenhouse gases emissions from heat stations and boilers" as of December 20, 2007). In 2014, the Methodological guidelines for calculation of yearly GHG emissions of the *Gazprom Neft Group* companies were elaborated in *Gazprom Neft*.

GHG emissions for the *Gazprom Group* as a whole amounted to 228.25mm tonnes of CO<sub>2</sub>-equivalent, including:

- OAOGazprom — 110.7mm tonnes;
- *Gazprom Neft Group* — 14.46mm tonnes;
- *Gazprom Energoholding* — 98.85mm tonnes;
- Sakhalin Energy — 3.52mm tonnes;
- other *Group* companies — 0.54mm tonnes.

## Utilization of associated petroleum gas

A great contribution into the greenhouse gases emissions reduction is made by the *Gazprom* activities in the flared APG decrease (cut off).

APG combustion is pending problem of the oil and gas sector in the conditions of general world tendencies for economy transfer to the low-carbon and energy efficient way of development and due to the reasons of economic, environmental and social risks and losses.

Implementation of investment projects for APG use at *Gazprom Group* fields is aimed at achievement of the APG use level at least 95%.

In 2014, the level of APG usage in the *Gazprom Group* made up 84.19%. The level of APG usage 95–100% was achieved in subsidiary companies of OAO Gazprom.

APG utilization in <i>Gazprom Group</i> in 2014		
	APG produced, mmcm	Used, %
OAO Gazprom		
OOO Gazprom dobycha Krasnodar	63.7	95.4
OOO Gazprom dobycha Orenburg	25.8	100
OOO Gazprom dobycha Urengoy	620.0	99.7
Vostokgazprom Group	817.9	88.5
<i>Gazprom Neft Group</i>	7,616.0	80.9
Sakhalin Energy	989.5	94.9
<b><i>Gazprom Group, total</i></b>	<b>10,132.9</b>	<b>84.2</b>

Vacuum compressor stations were built and commissioned by *Gazprom Neft Group* at the Vyngapurovskoye and the Vyngayakhinskoye fields of OAO Gazpromneft-Noyabrskneftegaz and its branch Gazpromneft-Muravlenko for improvement of the level of APG utilization and reduction of polluting emissions during its flaring, which enabled a 80.88% utilization of APG in 2014. *Gazprom Neft Group* looks forward to achieving the maximum level of associated petroleum gas utilization by 2016.

In 2014, *Gazprom Neft* held a best industrial safety initiative competition. One of the best initiatives was the one with a significant positive environmental footprint involving APG utilization after the oil separation assembly as a fuel gas at the booster pump station line heater from the initial water separation facility of the Severo-Yangtinskoye and Krainee fields. This initiative was implemented in an OAO Gazpromneft-Noyabrskneftegaz branch, Gazpromneft-Muravlenko. As a result, the APG combustion flare was removed, and combustion products emissions were excluded. The APG from the second separation stage was successfully used for production purposes.

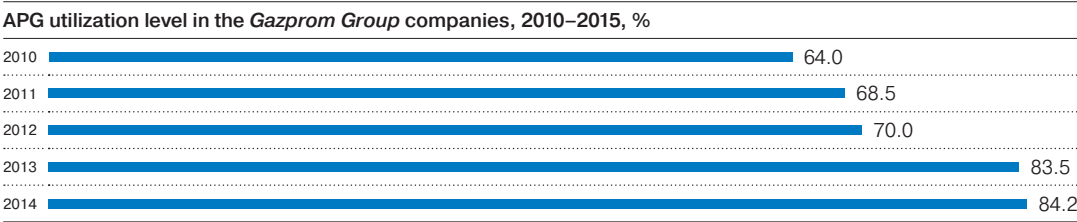
Utilization level at the OAO Tomskgazprom at the main Kazanskoye field reached 95.2% in 2014. APG combustion was performed at production sites with pilot production process.

In 2014, in order to increase the APG utilization level, OAO Tomskgazprom implemented APG utilization projects. A 14.4 MW gas compression station was put into operation at the Kazan oil gas condensate field (OGCF), as well as the second stage of the pipeline Kazan OGCF — Severo-Ostaninskoye OGCF and Severo-Ostaninskoye OGCF — Myldzhinskoye OGCF as well as a 31.5 MW power complex was installed.

In order to increase the APG utilization level, OAO Tomskgazprom implemented AG usage projects that include a 7.2 MW gas compression station at the Severo-Ostaninskoye OGCF, IGTP at the Kazanskoye OGCF and product line with a gas-filling station and a railroad terminal. Commissioning of the mentioned facilities scheduled for the 2015 will help reaching APG utilization level of 95% in 2016.

APG combustion level at the Piltun-Astokhs kaya-A platform in 2014 was 8.1 % of the APG produced, it complies with the design documentation of the Astokh site for the Piltun-Astokhs kaya field, namely: with the Addendum to the Technological Production Scheme approved by the Federal Agency on Subsoil Use, a APG utilization standard of 91.9% was set at the Piltun-Astokhs kaya-A platform for 2014. Actual overall APG utilization index reached 94.9% in 2014.

Gazprom is consistently decreasing APG flaring at the fields. The usage of APG increased by 20% in 2010–2014.





## Reduction of vehicle fleet impact on air

The activities of *Gazprom Group* make a significant contribution to the greening of the motor complex in Russia by promoting the production of motor fuel, construction of gas filling stations and production of gasoline and diesel fuel that meet international standards of Euro-3 and Euro-5.

Natural gas is an ideal fuel compliant with the atmospheric air and climate protection standards.

OAO Gazprom regards the gas engine fuel market as a strategical direction of its activities. In 2014, the OAO Gazprom Board of Directors gave a favorable assessment of corporate actions aimed at expanding the natural gas utilization as an engine fuel on both internal and external markets.

In 2014, *Gazprom* spent about RUB 1.5bn on NGV-refuelling compressor stations projects. These investments were aimed at engineering and research works as well as acquisition of equipment for the construction of 41 stations. *Gazprom* has developed and started implementing the schedule of operating NGV-refuelling compressor stations reconstructions through 2020. Works on compressed natural gas modules placement at the acting fuel stations of OAO Gazprom Neft, OAO Gazprom Gazenergoset, OAO LUKOIL, OAO TatNeft.

Under the memorandum signed jointly with the OAO Russian Railways, practice grounds for locomotive transition to liquefied natural gas (LNG) were chosen, as well as sites for LNG production and railway equipment fueling stations facilities construction.

*Gazprom* is conducting large work aimed at increasing the level of natural gas-fired car vehicles. 32 RF subjects signed agreements on extending the natural gas usage.

In 2014, such agreements were made with the administrative bodies of the Republic of Bashkortostan, Chuvash Republic, Primorskiy, Stavropol, Khabarovsk Krai, Irkutsk, Kaluga, Kemerovo, Kirov, Nizhny Novgorod, Novosibirsk, Ryazan Oblasts. These documents stipulate region's obligations on providing creation (expansion) of gas engine equipment fleet synchronized with new NGV-refuelling compressor stations construction.

Agreements of intent are made with 250 motor transport enterprises situated in promising regions for NGV-refuelling compressor stations expansion. These agreements will provide load to new stations of no less than 30% of their design capacity. Interaction agreements made with 24 Russian and foreign manufacturers and suppliers of gas engine vehicles.

Federal Service on Customers' Rights Protection and Human Well-Being Surveillance supported the Gazprom NGV Fuel initiative on amending the SanPiN 2.2.1/2.1.1.1200-03. New version of the document updates sanitary regulations and requirements for modern gas fuel stations, gas liquefaction units and sites for fuel transshipment and storage. Amendment No. 4 to the SanPiN 2.2.1/2.1.1.1200-03 were approved by the resolution of the Chief State Sanitary Inspector of the Russian Federation No. 31 dated April 25, 2014 and stipulate lowering of the hazard class and reduction of sanitary protection zone for the new NGV-refuelling compressor stations depending on their power level, and for the liquefied natural gas fuelling stations — depending on the storage volume. New revision of the document became effective as of June 8, 2014. Actualization of these standards decreases superfluous administrative obstructions and provides more effective selection of lands for NGV-refuelling compressor stations and cryo-fuelling stations construction. It will speed up construction and commissioning of the gas engine infrastructure facilities in Russia.

*Gazprom* carries on its activities on evaluating the gas engine fuel market segment abroad. For instance, OOO Gazprom gazomotornoe toplivo and OAO Gazprom transgaz Belarus have signed a Roadmap on Belarus gas engine fuel market development. AO Kaztransgaz signed a memorandum of cooperation in the area of natural gas utilization as engine fuel in the Republic of Kazakhstan.

*Gazprom* actively transits its own vehicle fleet to gas fuel. A corresponding programme for 2014–2017 is already approved. Currently the *Gazprom Group* has the largest corporate gas engine car fleet comprising over 4,000 NGVs. Almost 14.5% of the *Group's* car fleet runs on natural gas, by 2018 this index is planned to increase up to 50%. In 2014, *Gazprom Group* (including OOO Gazprom transgaz Belarus, OAO Gazprom Armenia and OAO Gazprom Neft) transited to gas 2,201 vehicle units.

Together with their foreign partners, Gazprom Germania successfully implements natural gas utilization projects, this gas being environmentally friendly and cost-effective engine fuel. One of the major links in this work is creation of infrastructure for provision of sea vehicles, trucks and cars, with compressed and liquefied natural gas. Gazprom Germania uses 24 gas fuelling stations. By the end of 2015, the company plans to operate 35 gas fuelling stations. For the purposes of future expansion of gas engine fuel vehicles within Europe, *Gazprom* together with its affiliate company VEMEX plans to expand the chain of gas fuelling stations in Czech Republic and Slovakia.

Great potential for natural gas as engine fuel lies in the heavy-duty vehicle segment. *Gazprom*, together with foreign partners, held a test operation of buses powered by liquefied natural gas. Further projects are planned for this field.

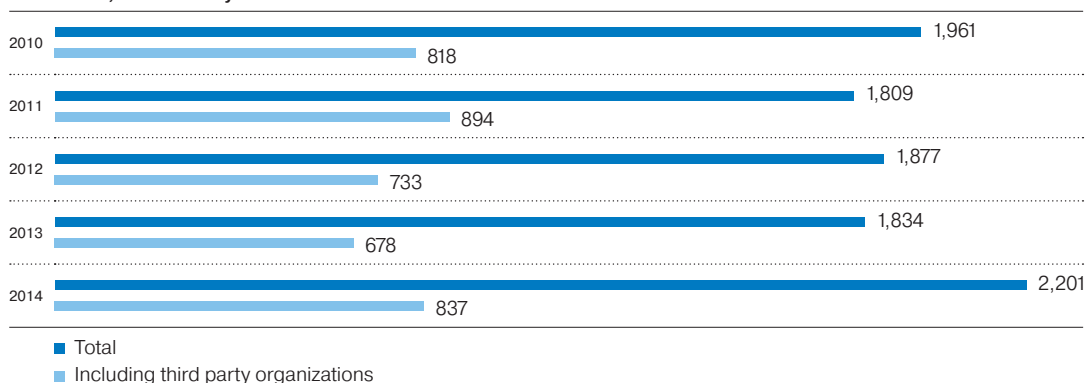
To demonstrate the advantages of methane as engine oil and diversity of vehicles powered by gas, *Gazprom* organizes and participates in rallies and car races. For instance, since 2008 *Gazprom* holds car caravans "Blue Corridor". The "Blue Corridor" 2014: Baltic — Adriatic" held by OOO Gazprom Export, OOO Gazprom gazomotornoye toplivo and German power concern E.ON once again proved the unique environmental and technical and mechanical advantages of natural gas over legacy types of engine fuel. Total route length made over 6.5 thousand km across 15 European states. Within the frames of business programme, several meetings were held on the route in the following cities: Tartu (Estonia), Riga (Latvia), Vilnius (Lithuania), Poznan (Poland), Pilsen (Czech Republic), Nurnberg (Germany), Ljubljana (Slovenia), Belgrade (Serbia), Budapest (Hungary), Minsk (Belarus); international conference in Milan (Italy); NGV-refuelling compressor station commissioning ceremony in the towns of Most (Czech Republic) and Bamberg (Germany). All the events were accompanied with gas-cylinder cars exhibitions. In Milan an International conference took place organized by Promgas S.p.A and Italian gas engine association NGV Italy, powered by the Government of the Lombardy Region (Italy). The results of the 2014 car race showed that the events organized by *Gazprom Group* provide practical implementation of the EU strategy in the area of environmentally friendly, energy- and cost-effective transport.

In December 2014, in southern France an international rally marathon began, AfricaEcoRace' 2015. Route of 6,000 km long included areas of deserts, plateaus and savannas. For the first time Russian team included sport heavy-duty KAMAZ powered by natural gas. To provide rally car with fuel, a MGFS (mobile gas filling station) from OOO Gazprom gazomotornoye toplivo was also sent to the rally. The truck powered by natural gas came in second, thus proving the efficiency and reliability of this environmentally friendly and cost-effective engine fuel even in extreme conditions.

*Gazprom* is an exclusive fuel supplier for the Volkswagen Scirocco R-Cup rally. Only two-liter turbo engine NGV Volkswagen Sciroccos were admitted to the rally.

In Russia Rally-Raid Championship "The Great Steppe" held in the most extreme conditions of Kalmyk and Astrakhan Oblast steppes, a gas-powered KAMAZ came in second.

**Number of vehicles switched to natural gas by OAO Gazprom, 2010–2014, vehicles in year**



## Water use and protection of water resources

In 2014, the *Gazprom Group* companies withdrew (received) 4,895.38 mmcm of water for the purposes of water supply, which is 5% less than in 2013.

Water discharge to surface water bodies over *Gazprom Group* was reduced by 5% and amounted to 4,179.09 mmcm. Water collecting areas made 39.35 mmcm, underground horizons — 44.73 mmcm, including 38.22 mmcm for repressuring.

As much as 12,685.55 mmcm of water was recycled or used in successive water supply systems.

*Gazprom Energoholding* companies outperformed their water consumption by 93%, and waste water discharge into surface water bodies by 97%. The share of *Group*'s gas complex in total amounts of water use is small — 3% (1.1% of it refers to OAO *Gazprom* share).

**Aggregated figures of *Gazprom Group* water use, 2010–2014, mmcm**

	2010	2011	2012	2013	2014
Total water intake	6,259.00	5,793.00	5,462.45	5,130.18	4,895.38
including water from natural sources	6,015.73	5,572.42	5,212.95	4,890.63	4,410.68
Own needs	6,109.70	5,643.19	5,319.62	5,051.64	4,779.50
including process needs	5,982.12	5,550.79	5,209.31	4,919.51	4,506.18
Water discharge to surface water bodies	5,364.05	5,257.71	4,892.96	4,389.91	4,179.09
including clean and treated as per standards	5,321.36	5,096.23	4,691.55	4,227.86	3,991.59

*Group* water intake directly from natural resources is 94%, 90% of it is from surface water bodies, and 4% is from underground water horizons. The surface water bodies are the major water sources of the *Gazprom Energoholding* facilities (96%). A greater share of underground water bodies utilization is inherent to *Gazprom Neft Group* companies, which is 76%.

**Structure of water consumption in *Gazprom Group* by types of sources, 2014, mmcm**

<i>Gazprom Group</i>					
Gas complex					
<i>Gazprom Neft Group</i>					
<i>Gazprom Energoholding</i>					
<i>Gazprom Neftekhim Salavat</i>					
	<i>Gazprom Group</i>	Gas complex	<i>Gazprom Neft Group</i>	<i>Gazprom Energoholding</i>	<i>Gazprom Neftekhim Salavat</i>
■ Surface sources	4,410.68	48.07	33.65	4,294.35	34.61
■ Underground sources	201.66	32.90	135.91	31.44	1.40
■ Municipal water supply systems	185.87	44.41	1.68	136.46	3.32
■ Other water supply systems	97.17	16.98	5.94	74.24	0.01

In 2014, *Gazprom Group* waste waters discharge into surface water bodies was reduced by 210 mmcm as compared to 2013 indices, and by 1,184.96 mmcm from 2010 to 2014. Water intake indices for the same period decreased by 312.36 mmcm, for a part of taken water is supplied by separate *Group* companies for the purposes of third party consumers in its areas of activity.

Attenuation of waste waters discharge to surface bodies environmental impact was observed in all the *Group* companies, but one of the most important decreases was in the industrial water use (for cooling purposes) at *Gazprom Energoholding*.

Water being clean as per specified standards without treatment and water processed at treatment facilities as per specified standards made up 96% of the total volume of the *Group's* discharge into surface water bodies.

In *Gazprom Group* companies a great number of environmental events were held aimed at increasing water utilization efficiency both in industrial and in household sectors, decrease of waste waters environmental impact on water bodies. Such events and measures were: maintenance and repair of sewage treatment facilities, waste waters content monitoring, water quality monitoring, etc. In 2014, a total of 102 waste waters treatment facilities were put into operation, with total capacity of 1.37 mmcmd. 1 unit in *Gazprom mezhhregiongaz*, 21 units in OAO *Gazprom* and 80 units in *Gazprom Neft Group*. It was commissioned 7 recirculated water supply systems with total capacity of 547.51 mcmd.

**Indicators of water discharge to surface water bodies  
in *Gazprom Group*, 2010–2014, mmcm**

	2010	2011	2012	2013	2014
<b><i>Gazprom Group</i></b>	<b>5,364.05</b>	<b>5,257.71</b>	<b>4,892.96</b>	<b>4,389.91</b>	<b>4,179.09</b>
Gas complex	37.73	36.55	36.63	34.00	40.35
including OAO <i>Gazprom</i>	13.08	11.60	10.70	10.38	10.66
<i>Gazprom Neft Group</i>	0.06	0.09	0.10	0.08	0.32
<i>Gazprom Energoholding</i>	5,326.26	5,221.07	4,827.77	4,307.80	4,091.95
<i>Gazprom Neftekhim Salavat</i>	–	–	28.46	48.03	46.47

**Dynamics of water discharge to surface water bodies in OAO *Gazprom*  
by activity types, 2010–2014, mmcm**

	2010	2011	2012	2013	2014
OAO <i>Gazprom</i>	13.08	11.57	10.69	10.38	10.66
Gas and gas condensate production	0.31	0.39	0.30	0.53	0.44
Gas transportation	7.52	6.73	6.11	5.69	6.20
Underground gas storage	0.78	0.34	0.18	0.19	0.18
Natural gas and gas condensate processing	1.12	0.87	1.05	0.38	0.35
Other (supporting) activity types	3.35	3.24	3.05	3.59	3.49

In 2010–2014 waste waters discharge into surface water bodies was reduced by 22% in *Gazprom Group*.

## Production and consumption waste management

In 2014, 4,831.42 kilotons of waste were generated in the *Gazprom Group* companies, which is 3% greater than the previous year value. This increase was due to the increase of drilling waste volume in *Gazprom Neft Group* and bottom-ash waste in OGK-2 company (*Gazprom Energoholding*) because of coal share growth in the fuel balance.

**Dynamics of waste generation in *Gazprom Group*, 2010–2014, kilotons**

2010	5,600.27
2011	4,973.84
2012	5,226.49
2013	4,693.68
2014	4,831.42

The major part (75%) of the *Gazprom Group* waste is represented by IV and V waste hazard classes, i.e. low-hazard or non-hazard waste. The share of I waste hazard class (extremely hazardous) was 0.004%, II waste hazard class (highly hazardous) — 0.21%, III waste hazard class (moderately hazardous) — 2.6%.

The major part of the *Gazprom Group* waste is ash and slag waste from *Gazprom Energoholding* companies (solid ash from coal combustion at HPPs) as well as drilling waste and oil sludges generated at oil and gas production and refining facilities.

**Structure of *Gazprom Group* waste by types, %**

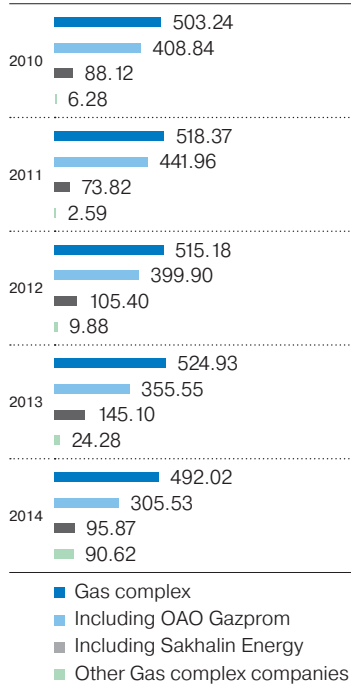
Ash and slag waste	72%
Drilling waste	12%
Oil sludge	3%
Other waste types	13%

**Share of *Gazprom Group* companies in waste generation volumes, 2014, %**

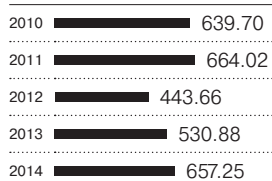
<i>Gazprom Energoholding</i>	75%
<i>Gazprom Neft Group</i>	14%
Gas complex	10%
<i>Gazprom Neftekhim Salavat</i>	1%

### Dynamics of waste generation in *Gazprom Group*, 2010–2014, kilotons

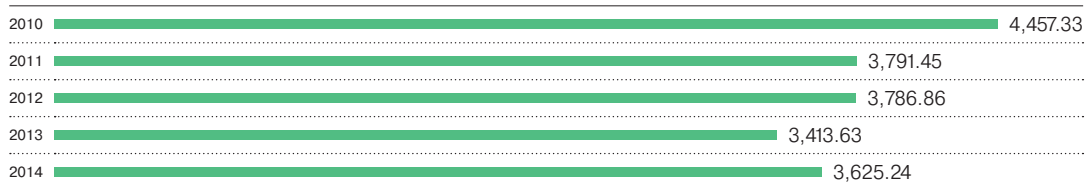
#### Gas complex



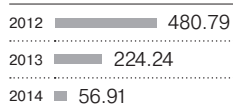
#### *Gazprom Neft Group*



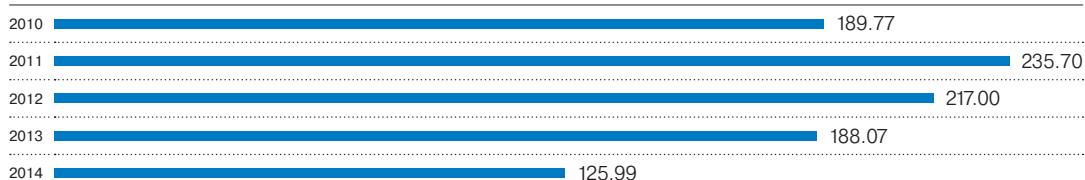
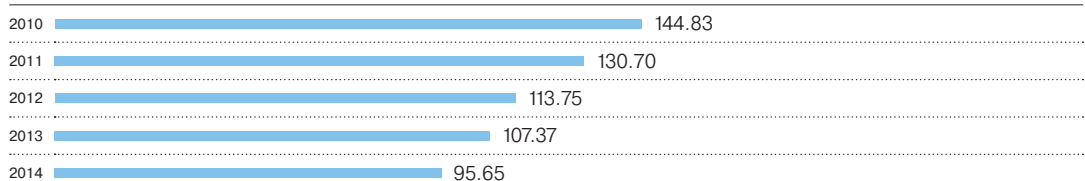
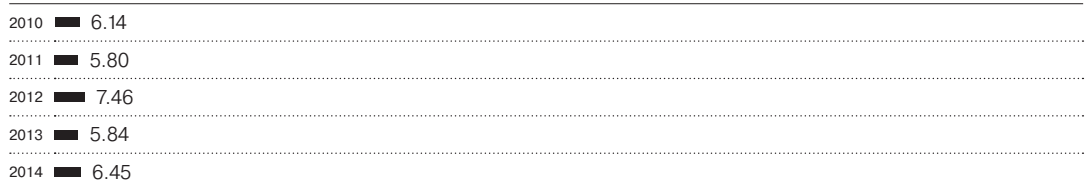
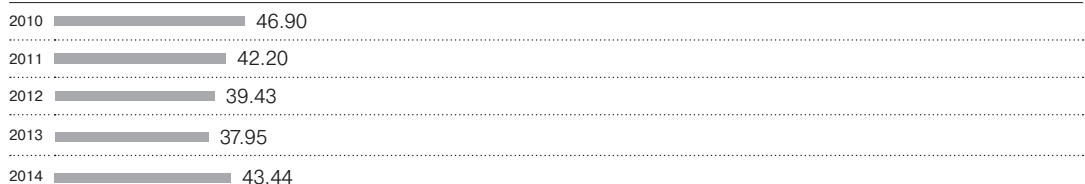
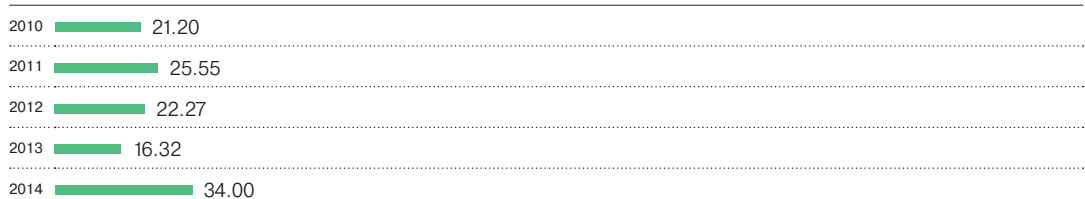
#### *Gazprom Energoholding*



#### *Gazprom Neftekhim Salavat*





**Dynamics of waste generation by activity types in OAO Gazprom, 2010–2014, kilotons**
**Natural gas and gas condensate production**

**Gas transportation**

**Underground gas storage**

**Gas and gas condensate processing**

**Other (supporting) activity types**


In 2014, OAO Gazprom decreased the total amount of generated waste by 15% or 319.03 kilotons. In subsidiary gas-producing companies waste generation decreased by 62 kilotons due to reduction of operational and exploratory holes drilling, as well as the number of facilities under construction and reconstruction. For instance, in OOO Gazprom dobycha Nadym waste generation decreased by almost 55% due to planned decrease in operational and exploratory holes drilling, in OOO Gazprom dobycha Noyabrsk — by 40% due to decrease of number of facilities under construction and reconstruction.

In the OAO Gazprom subsidiary transport companies the waste generation decreased by 11% or 15 kilotons. This was mainly due to decrease in amount of repair works, as well as improvement in waste accounting and tracking system.

In UGS and refining segments a slight increase was noted, a total of 6.1 kilotons, due to increase of V hazard class waste generation (iron-and-steel scrap) associated with the repair works on equipment and piping scrappage at the gas refining plant under OOO Gazprom dobycha Orenburg, as well as increase in construction rates at facilities of OOO Novy Urengoy gas chemical complex.

The increase of waste amount in other types of activities was associated with increase of OOO Gazprom tsentrremont production; cleaning of pipelines and oil tanks, waste water treatment facilities installation in the Yuzhny branch of OOO Gazprom energo; drilling operations of OOO Gazprom flot at the Kirinskoye gas and condensate field.

#### Structure of waste handling in OAO Gazprom, 2014, %




■ Transferred to specialized organizations for re-use and neutralization	48%
■ Located on own landfills and disposal objects	21%
■ Transferred to outside organizations for organized waste disposal	19%
■ Used and neutralized at the enterprise	7%
■ Availability at the enterprise by the end of the reported year	5%

332.01 kilotons of waste (including 18.9 kilotons available at the beginning of the year, 305.53 kilotons formed during the year and 7.58 kilotons supplied by other enterprises) were handled by the facilities of OAO Gazprom subsidiary companies. 23.66 kilotons of these were utilized and neutralized at own sites, 72.67 kilotons were placed at own waste disposal facilities and 217.18 kilotons transferred to specialized outside organizations.

The *Gazprom Group* companies pay much attention to environmentally safe management of oil contaminated waste.


In the reporting year 118.99 kilotons of oily waste were generated on the *Group* facilities, more than 90% of them generated by *Gazprom Neft Group*. This waste type consists predominantly of cuttings from pipeline, vessels and oil separation units cleanings, supernatant film from oil catching (gasoline catching) facilities.

#### Oily waste generation breakdown, *Gazprom Group*, 2014, %



■ <i>Gazprom Neft</i>	91%
■ Gas complex	7%
■ <i>Gazprom Energoholding</i>	1%
■ <i>Gazprom Neftekhim Salavat</i>	1%

In 2014, 188.4 kilotons of oily waste (including 14.46 kilotons available at the beginning of the year, 118.99 kilotons generated during the year and 54.92 kilotons supplied by other enterprises) were handled by the facilities of the *Gazprom Group*. Of this amount, 165.79 kilotons were transferred to outside specialized organizations for utilization, neutralization, storage and landfilling, and 2.87 tonnes were used and neutralized on site.

**Structure of oil contaminated waste handling in Gazprom Group, 2014, %**



■ Transferred to specialized organizations for use and neutralization	96%
■ Availability at the enterprise by the end of the reported year	3%
■ Used and neutralized at the enterprise	1%

Safe drilling waste treatment is an important task for oil and gas producing and converting enterprises of the *Gazprom Group*.

In 2014, 598.027 kilotons of drilling waste was formed in total in the oil and gas complexes of the *Group*, 78.6% of it was transferred to specialized organizations, mainly for utilization and neutralization, about 20% was disposed in own disposal and landfill facilities, and less than 1% was neutralized in own production facilities.

**Share of Gazprom Group companies in drilling waste generation, 2014, %**


■ <i>Gazprom Neft Group</i>	73%
■ Sakhalin Energy	15%
■ OAO Gazprom	12%

**Structure of drilling waste handling in Gazprom Group, 2014, %**


■ Transferred to specialized organizations for utilization and neutralization	57%
■ Located on landfills	22%
■ Used and neutralized at the enterprise	15%
■ Availability at the enterprise by the end of the reported year	6%

One of the main requirements for technological process of well drilling is prevention of drilling adverse environmental impact, especially in extreme climatic conditions of the Far North. For these purposes during the field infrastructure development some solutions that provide minimal environmental impact during drilling are implemented. For instance, during operational holes drilling, a pit-free drilling is used. A waste solidification technology for mineral construction materials production is used, with further utilization of such material in general field facilities construction. Lack of the adverse environmental impact of drilling waste utilized with this methodology is confirmed by production environmental monitoring results.

## Protection of land and soil

As a result of geological survey, construction and repair works, operation of wells, pipelines and other facilities, mechanical soil disturbance and pollution take place. *Gazprom Group* pays constant attention to practical ways of resolving the issues of restoration and preservation of disturbed soils. Biological and technical recultivation works are conducted, aimed at restoration of land productivity and its economic value.

**Parameters of land protection activities in the *Gazprom Group*, 2010–2014, ha**

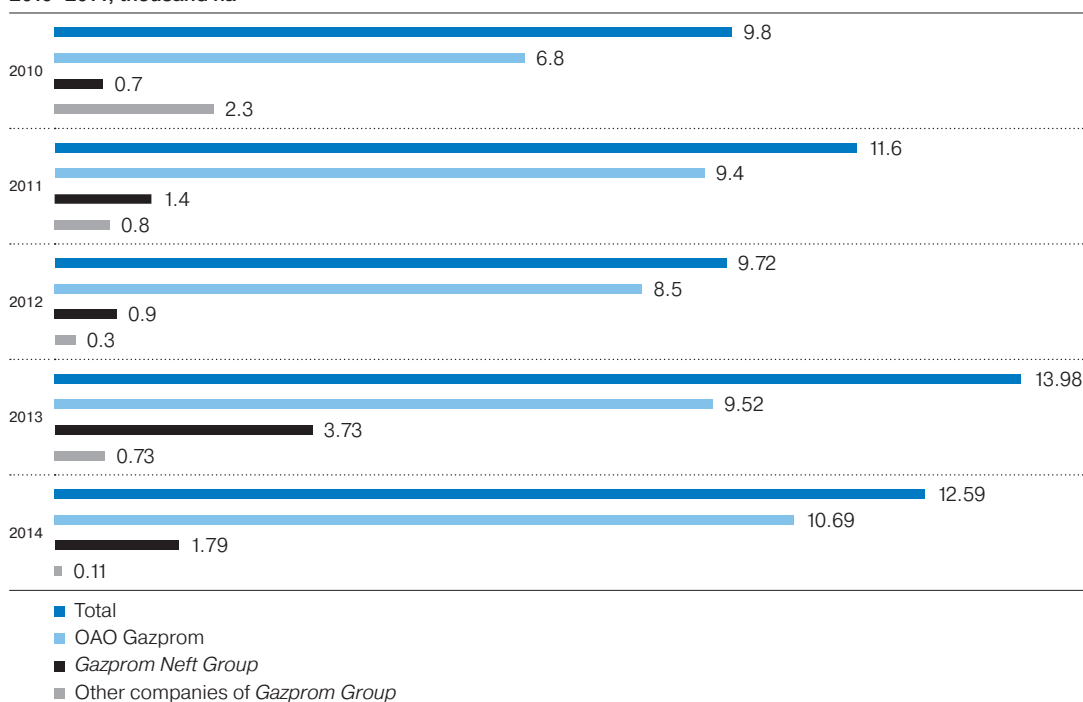
	2010	2011	2012	2013	2014
Area of disturbed lands during the year	10,048.37	11,853.11	14,402.15	13,065.47	15,407.40
including polluted areas	426.52	493.81	237.50	1,019.48	105.43
Area of rehabilitated lands during the year	9,753.69	11,549.23	9,717.18	13,977.04	12,589.34
including polluted areas*	–	–	278.26	839.18	464.39

\* Accounting of contaminated lands for the rehabilitation purposes has been provided in the corporate reporting since 2012 as per the modified requirements of the federal statistical accounting of rehabilitated lands, removal and use of the land soil (Order of Rosprirodnadzor as of December 29, 2012 N676).

During the reported year, the *Group* companies disturbed a total of 15.41 thousand ha of soils, 10.78 thousand ha of them disturbed by OAO *Gazprom*, 4.16 thousand ha — by *Gazprom Neft Group*, 0.47 thousand ha — by other *Group* companies. Soil disturbance was associated with development of hydrocarbon fields, as well as construction, repair and other works.

The land rehabilitation scope in 2014 included 12.59 thousand ha, 10.69 thousand ha of which — by OAO *Gazprom*, 1.79 thousand ha — by *Gazprom Neft Group*, 0.11 thousand ha — by other companies.

**Land rehabilitation works dynamics in *Gazprom Group* companies, 2010–2014, thousand ha**



The majority of companies fully rehabilitated the lands disturbed during the year. Works on remediation and rehabilitation of the lands are performed in the areas of *Group* companies activities.

The problem of disturbed land resources is not an acute environmental issue for OAO Gazprom, for rehabilitation measures are undertaken to the extent required, and no damage accumulation is noted.

The measures undertaken by *Gazprom* are cost-efficient and up-to-date works aimed at prevention of negative erosion processes, they provide terrain stabilization conditions and enable restoration of pedogenic vegetation cover. These technologies stipulate usage of available materials, including recycled drilling waste, biocompatible materials, plant growth stimulants. Tailored soil microorganisms enable topsoil strengthening, including spoil heaps, they also increase the speed and intensity of root generation and plant growth. All these measures enable rehabilitation of arable and grazing lands, including deer pastures, into traditional nature management system of the Far North.

Complex measures are implemented in *Gazprom Neft Group* for increasing piping system reliability, thus increasing the safety of environment. Scheduled replacement of unserviceable piping sectors, their protection by corrosion inhibitors, provided pipe breakage decrease of 22% in 2014 and excluded accidental oil pollution.

Checks of rehabilitated soil compliance with environmental standards — soil, geobotanic, agrochemical and other land inspections — are performed within the frames of production environmental control and monitoring during the facilities construction and reconstruction period.











## Protection of biodiversity

*Gazprom Group* companies contribute to international, Russian and local environmental programmes in their areas of presence. Strict observance of Russian and international environmental standards, environmental friendliness and prevention of negative impact on sea and surface ecosystems are the core conditions of *Group* projects implementation.

In 2014, a total of RUB 442.3mm was invested in biodiversity conservation and environmental protection, protection and reproduction of fish resources.

A great number of measures were implemented for the purpose of fish resources protection and reproduction, including rare and valuable fish species. For instance, OOO Gazprom dobycha Astrakhan continued the "Blue Patrol" initiative in 2014. The initiative's goal is to save ordinary juvenile fishes (roach, herring, sheat fish, pike-perch, bream, pike, crucian carp, carp, red-eye, river perch and others) from small pools generated by floods.

OOO Gazprom dobycha Orenburg held measures on fish suffocation non-admission in the water bodies of Orenburg Oblast.

OOO Gazprom transgaz Saratov conducted a complex of works aimed at artificial reproduction of biological resources in water bodies, to compensate the impact of underwater sectors repair.

OOO Gazprom transgaz Samara let out 4,000 juvenile sterlets into Saratov water storage reservoir in order to restore the sterlet population.

OOO Gazprom transgaz Tomsk conducted a let-out of juvenile juvenile Pacific salmon bred at Paratunka fish resources plant. A let-out of juvenile fish (amounted to 882,280 specimens) was held at the operating area of the Ozerki salmon fish resources plant in Elizovsky region, 120 km away from Sea of Okhotsk on the Plotnikova river.

A grand event of juvenile whitefish let-out into Ob river was held by OOO Gazprom transgaz Yugorsk and involved children, youth, employees and veterans.

OOO Gazprom geologorazvedka let out 1,134 thousand juvenile calico salmon bred at Ado-Tymovsky fish resources plant.

OOO Gazprom dobycha shelf Yushno-Sakhalinsk continued its tradition to let out juvenile salmon into the Sea of Okhotsk to prevent any possible changes in the ecosystem caused by research and operational works on the shelf. In 2014, over 8 million juvenile fishes were let out, bred at Ado-Tymovsky fish resources plant. Over the last three years over 25 million juvenile fishes were let out into Sakhalin rivers. Besides, OOO Gazprom dobycha shelf Yuzhno-Sakhalinsk assisted the All-Russian Social Organization "Green Patrol" to implement the project on preserving the endangered population of Sakhalin taimen. The project included counter measures for illegal fishing, promotional and educational initiatives among the fishermen and the local citizens, including youth. As a pilot water body Nabil river was chosen, in vicinity of Kirin field of the Sakhalin Oblast's Nogliksky region, where taimen may be still found.

OOO Gazprom sotsinvest let out over 30 thousand of rare Black Sea salmon juveniles into Mzymta river in Adler region of the Sochi. This salmon is an endangered species, listed in the Red Book. This even has become a part of major measures complex on environmental impact mitigation in the areas of construction and operation of the Olympic Gazprom objects, and was timed with the Year of Environmental Awareness held within the company. Thus, *Gazprom* performs not only scheduled environmental actions, but also organizes additional measures for saving the natural diversity of the Krasnodarsky Krai.

*Gazprom Energoholding* also conducts works on mitigating the environmental impact on water ecosystems. Troitskaya HPP in Chelyabinskaya Oblast has fish protection facilities installed at the water intakes of the shore pumping stations; in Nevsky TGC-1 branch (on Vyborgskaya and Dubrovskaya CHPPs) a repair and remodelling of the fish protection facilities and down services were conducted; in Karelsky TGC-1 branch of the Kemskaya HPP cascade fishery characteristics were elaborated for the Kem river facilities.

In 2014, OAO Gazprom Neft subsidiary company, OOO Gazprom neft Novy Port, together with the Federal State Unitary Enterprise Gosrybtsentr (Tumen) commenced unique monitoring of the Gulf of Ob ecosystem in the Kamenny Mys region, in whitefish breeding areas. According to the programme of industrial environmental monitoring on the Arctic Terminal for Yearly Oil

Shipment of the Novoportovskiy oil/gas/condensate field, FSUE Gosrybtsentr is up to perform an assessment of actual ichthyofauna productivity in the works area. The results will allow to elaborate more efficient measures aimed at enlarging the bioresources of the Gulf of Ob.

An environmental educational project "Preserving the Salmon Together" powered by Sakhalin Energy provides education on salmon preservation measures and salmon wildlife habitat. It is implemented by the Sakhalin Oblast social institution, Bumerang club. Website [www.друг-лосось.рф](http://www.друг-лосось.рф) provides children with interactive games, quizzes and interesting facts on famous Sakhalin programmes "Drop" and "Salmon Watch".

Since 1997, Sakhalin Energy pays a lot of attention to the issues of protection and preservation of the gray whales. The researchers and engineers of the company have developed a complex of measures for potential production impact decrease assessment. The research programme includes acoustic monitoring, benthos studies, the pattern of gray whales distribution and photographic identification. The Whales Protection Programme used by Sakhalin Energy during the seismology research works in the gray whales feeding migration areas of North-Western borders of Russia in the vicinity of Sakhalin shores is the most extensive programme of that kind ever to be developed. Research data results show that gray whales population grows by 3–4% every year. At the present time the population is about 180 specimens.

Sakhalin Energy company participated in elaboration of Manual on reducing seismology research impact on whales and other sea animals, prepared by Consulting Group on preservation of gray whales population in the Sea of Okhotsk under the International Union for Conservation of Nature. Practical and complex approach was proposed for reducing risks and monitoring the possible impact on sensitive sea animals during seismological research by sound waves for oil and gas fields exploration.

In 2014, Sakhalin Energy conducted an training course on wildlife saving from oil slicks in Prigorodnoye SC, on the territory of rehabilitation center for animals affected by oil slicks, the only one on Sakhalin and in Russia. The participants received theoretical knowledge and practical skills of catching birds on the Aniva bay shore, providing the birds with initial care and then on transportation and rehabilitation. The education was very realistic: living birds were saved, washed, dried and returned to their habitat. The course was attended not only by specialists that perform this task daily, but also by ordinary people interested in wildlife protection. The programme was very intense: theoretical part contained a lot of new and important facts on birds natural habitat, on lifesaving techniques during field and stationary works. At practical training the participants received skills of catching living birds and cleaning them from the pollutants.

In 2014, Sakhalin Energy company presented its new book, "Sakhalin Flora". Presentation took place in Sakhalin Oblast Nature Museum. This is the fifth edition of this book. Before it books "Steller's Sea Eagle", "Sakhalin Birds", "Sakhalin Rivers" and "Whales. A Sakhalin Story" were published. You can read electronic versions of these books on the company website: <http://www.sakhalinenergy.ru/ru/library>.

Sakhalin Energy won the VII Yearly International Forum "People Investor 2014". The company presented an Action Plan For Preserving Biodiversity in the Environmental Efficiency category. Action Plan For Preserving Biodiversity by Sakhalin Energy is a complex and well-coordinated approach to issues of biodiversity preservation, raising environmental friendliness and education.

OOO Gazprom neft Novy Port (*Gazprom Neft Group*) together with the Institute of Floral and Fauna Ecology of the Ural Branch of Russian Academy of Sciences commenced monitoring the flora and fauna of the Yamal peninsula, including those listed in the Red Book of Russia. The main goal of this monitoring is to determine the existing level of anthropogenic impact on flora and fauna. Together with the Tumen State University specialists they conduct works on assessing seeds productivity and stimulating growth of plants that have increased germinating capacity in Yamal tundra conditions. These data will allow to effectively conduct measures on restoration of the natural plant formation of the tundra.

OOO Gazprom neft shelf (*Gazprom Neft Group*) participates in the Expert Consulting Group works on research and conservation of the Atlantic walrus subspecies, one of the largest Pinnipedia

species (second to the sea elephant), listed in the Red Book of several subjects of the Russian Federation. The company elaborates and approves programmes on monitoring and research aimed at saving the Atlantic walrus, taking into account the complex results of the monitoring system and forecasting the natural and anthropogenic environmental changes. In 2014, in the Vaigach and Dolgy islands area remote sensing and field works were carried out that included marking of animals, biopsy samples collection for sex and genotype determination of the animals. During these works the scientists managed to find the areas of autumn gathering of the Southern Baltic walrus groups and estimate the amount of animals at these haulouts. Monitoring results had not detected any adverse changes in the ecosystem. Further research works are planned to study this pack of Atlantic walrus. Besides the Atlantic walrus monitoring, in 2014 the Company continued the programme of sea bioresources restoration, within which more than 30 thousand young Atlantic salmon were released into the natural water bodies of the Northern fishery reserve.

Specially protected national areas play the main part in biodiversity conservation process at federal, regional and local levels. Understanding this, *Gazprom Group* provides these territories with financial and hands-on assistance.

For instance, OOO Gazprom transgaz Moscow continued its cooperation with the Oksk State Natural Biosphere Reserve and provided it with assistance in restoring and renovating of the aviary fencing at the rare crane species nursery area. Also financial assistance was provided for preserving the auroch population in the Prioksko-terrasny Biosphere Reserve. The OOO Gazprom transgaz Moscow employees of the Serpukhv LPDTGP participated in "Adopt an Auroch" initiative, restoring the nursing territory for aurochs.

OOO Gazprom transgaz Makhachkala cleaned Manas-ozen, Shura-ozen, Prorva, Talginka, Gamri-ozen rivers banks and the Derbent shore of the Caspian Sea. Special protective equipment was installed on the 626–651 km section of gas pipeline to protect birds at aerial power lines. Works in this area are of special importance due to the vicinity of Dagestansky State Reserve, the nursery site of rare predatory birds listed in the Red Book of Russia.

OOO Gazprom invest conducted rare plants replanting in the State Natural Regional Reserve "Krasnaya Gorka" in Krasnodarsky Krai (white helleborine, narrow-leaved helleborine, *Paeonia caucasica*, lady orchis).

Industrial facilities of the OOO Gazprom transgaz Stavropol are situated in the area of specially protected ecological region of Russia, Kavkazskie Mineralnye Vody (Caucasian Mineral Waters). Litter pick initiatives "Green Spring" and "Green Russia" helped to clean the mountain slope of Kinzhal situated on this territory, rehabilitate water bodies and plant trees and bushes: pine, white cedar, juniper, birch, silver spruce, barberry and others.

OOO Gazprom transgaz Samara cleaned the territory of "Samarskaya Luka" National Park, "Sosnovy Bor" natural sanctuary in Severnoye village of the Orenburg Oblast.

OOO Gazprom dobycha Urengoy provided financial assistance to the Verkhne-Tazovsky State Natural Reserve, Yamal State Biological Reserve (Yamal region) and Pyakol Biological Reserve (Krasnoselckupsky region).

OOO Gazprom transgaz Ukhta conducted a litter-pick for cleaning the Yugyd va and Pleshcheevo Ozero National Parks.

OOO Gazprom transgaz Tchaikovsky employees cleaned the territory and cleared the ecological path "Tsarstvo Inmara", equipped the paths over water barriers in Nezhkinski National Park (Republic of Udmurtia), cleared the ecological path in Basegi State Natural Reserve (Perm Krai).

OOO Gazprom UGS conducted an ecological initiative in Losiny Ostrov National Park. OOO Gazprom geotekhnologiya cleaned the territory of the largest natural reserve within the boundaries of Moscow, "Setun River Valley". OOO Gazprom gaznadzor cleaned an aesthetic forestry Kumysnaya Polyana in Saratov Oblast and Dinamo Park Regional Natural Sanctuary in Khabarovsk. OOO Gazprom dobycha Irkutsk conducted a litter-picking action on the Baikal shore in the Pribaikalsky National Park territory near village MRS of the Olkhonsky region. OOO Gazprom mezhregiongaz conducted a litter-picking action of a specially protected regional territory "Growing Stock of Natural Oaks" in Samara Oblast.

## Energy saving

In 2014, OAO Gazprom Energy Saving and Energy Efficiency Improvement Policy implementation continues as per the Concept of OAO Gazprom Energy Saving and Energy Efficiency Improvement for 2011–2020 and energy saving and energy efficiency improvement programs.

Due to fulfillment of OAO Gazprom Energy Saving and Energy Efficiency Improvement Program, actual FER saving was 2.51 mm t c. e., including 2,070.7 mmcm of natural gas, 254.6mm kWh of electrical energy and 237.2 thousand Gcal of thermal energy. Total amount of saved FER increased the planned value by 23.7%.

Main FER saving amount (83.2%) is due to Gas transportation. As a result of this programmes implementation, in 2008–2014 average yearly saving of FER amounted to 2.57 mm t c. e. Total FER saving as per actual resources costs amounted to RUB 7,142.1mm.

### Fuel and power resources saving

Planned saving for the period through 2020 — 28.2 mm t c.e.  
Actually reached saving in the period of 2011–2014 — 9.8 mm t c.e.  
Objective fulfillment — 35%.

### Decrease of natural gas specific consumption for OPN

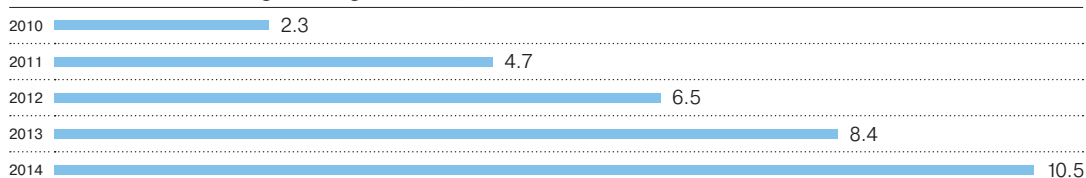
Planned decrease for the period through 2020 — 11%.  
Actually reached saving in the period of 2011–2014 — 9.14%.  
Objective fulfillment — 80%.

### Greenhouse gases reduction

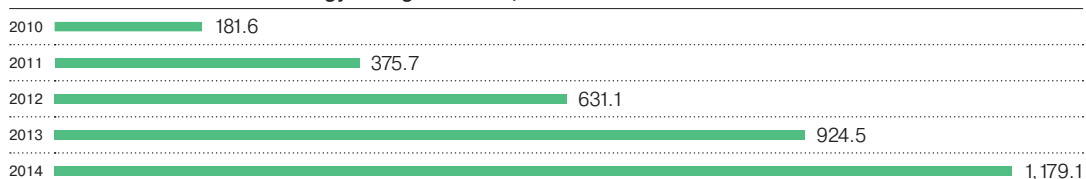
Planned decrease for the period through 2020 — 48.6mm tonnes.  
Actually achieved reduction before 2011–2014 — 22.5mm tonnes.  
Objectives fulfillment — 42%.

#### Energy saving and energy efficiency increase objectives fulfillment for the OAO Gazprom for the period 2011–2020

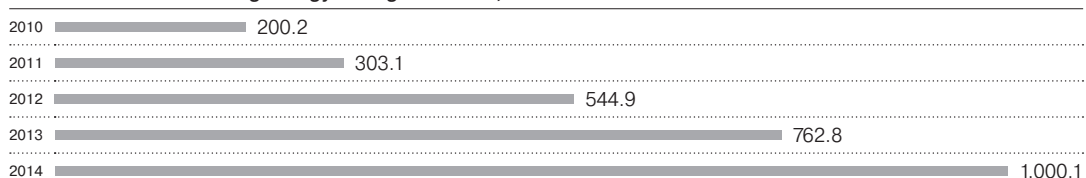
##### Cumulative sum of natural gas saving from 2010, bcm



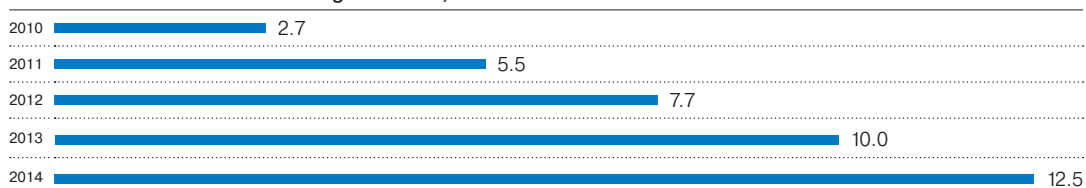
##### Cumulative sum of electrical energy saving from 2010, mmkWh



##### Cumulative sum of heating energy saving from 2010, thousand Gcal



##### Cumulative sum of Total FER saving from 2010, mm t c.e.



The most effective areas in natural gas saving in a gas pipeline transportation are (per cent of the total saving amount):

- gas utilization reduction for industrial needs during repairs and scheduled works — 38.6%;
- increasing the GPU technical condition through repair — 17.0%;
- reconstruction and modernization of technical equipment — 16.4%;
- optimization of line transportation technological modes based on modelling complexes — savings amounted to 13.6%;
- gas losses reduction — 11.7%.

#### Main areas of natural gas savings in a gas pipelines in 2014, %

■ Reduction of gas consumption for process needs of CW, CS	34%
■ Improvement of GPU technical state by means of repair	17%
■ Reconstruction and upgrade of CW, CS, LP, GDS	16%
■ Optimization of operating modes of GTS process facilities	13%
■ Reduction of gas losses at the CS, LP, GDS facilities	12%
■ Reduction of gas consumption for process needs of CW, CS	5%
■ Other activities	3%

The most effective areas in energy saving in a gas pipeline transportation are (per cent of the total saving amount):

- optimization of operating modes of electric equipment — 50.1%;
- increasing the equipment technical condition by means of repair — 16.3%;
- management operational arrangements — 14.5%;
- introduction of variable frequency drives and electric engine cushion start — 9.1%.

Based on the 2014 results, specific rate of FER consumption (natural gas and electrical energy) during gas pipeline transportation amounted to 26.28 kg c. e. /mmcm•km. This index decreased by 12.2% as compared by similar 2013 indices. Target value of the specific rate of FER consumption for the 2014 was set by the order of Federal Rates Service of the Russian Federation No. 88-э dated March 31, 2011 at 36.44 kg c. e./mmcm•km.

#### Energy saving and energy efficiency increase targets fulfillment for OAO Gazprom for the period of 2011–2020 in gas transport

##### FER specific consumption, kg c. e./mmcm•km

2010	33.64
2011	34.15
2012	31.30
2013	30.33
2014	26.68

##### Gas specific consumption and losses at OPN, cubicmeter/mmcm•km

2010	27.60
2011	27.80
2012	25.50
2013	24.80
2014	21.80

In order to provide further development and improvement of the energy saving management system, the OAO Gazprom Energy Saving and Energy Efficiency Improvement Program for 2015 was elaborated in 2014 (and approved by the Order of OAO Gazprom No. 69 dated February 17, 2015), along with several corporate standardization system documents R Gazprom. In accordance with GOST R ISO 50001:2012 a regulative documents on energy management systems elaboration process began.

The *Gazprom Neft Group* continued work on formation of a constantly effective energy management system, which will allow to transfer from individual technical measures to complex system solutions in the sphere of technologies and energy saving management.

Introduction of energy saving technologies, development and use of methodologies based on the principles of sound use of energy resources are the priority tasks of *Gazprom Energoholding*.



The program documents on energy saving and energy efficiency are brought into effect in all energy generating companies. Middle-term energy saving programs for the period till 2015 were implemented in OAO Mosenergo and OAO OGK-2, and the Environmental Policy was implemented in OAO TGC-1.

## Parameters of environmental activity and environmental impact of OAO Gazprom abroad

**ZAO Gazprom Armenia** is a 100% subsidiary of OAO Gazprom engaged with transportation, storage, processing, distribution and selling of natural gas, production and selling of electric energy in the territory of the Republic of Armenia. As of the end of 2014, the gas transportation system comprised 1,720 km of trunk pipelines-extensions, 75 gas distribution stations (GDS), Abovianskaya underground gas storage station with potential capacity of 135 mmcm. ZAO Gazprom Armenia performs operation of the 5th power unit of Razdanskaya TPP.

Gross emissions of pollutants into the atmospheric air amounted to 86,13 kiloton.

Water for water supply in the amount of 720.51 thousand cm, including that from natural sources in the amount of 671.36 thousand cm, was taken (received) in the course of the year. 667.34 thousand cm were used for production needs.

Waste water discharge into surface water bodies accounted for 265.69 thousand cm, 476.17 thousand cm were discharged to catchment areas. All waste water discharged into the natural environment were clean and treated at water treatment facilities as specified in relevant standards.

Waste in the amount of 128.99 t was produced at production facilities, 90.65 t of the above were placed in the company's own temporary storage sites, 38.35 t were transferred to outside special companies for disposal.

In 2014, ZAO Gazprom Armenia paid RUB 301.65 thousand as negative environmental impact charges, including RUB 296.82 thousand for emissions into atmospheric air, RUB 0.72 thousand — for waste water discharge, RUB 4.11 thousand — for waste disposal. All negative environmental impact charges were paid as stipulated in specified standards.

**OAO Gazprom transgaz Belarus** is a 100% subsidiary of OAO Gazprom engaged with natural gas mission via GTN of the Republic of Belarus. OAO Gazprom transgaz Belarus performs operation of more than 8,100 km of gas pipelines, 5 line CS, 3 UGSF, 232 gas distribution stations.

Environmental Management System is implemented in the company, it is included in the application scope of EMS of OAO Gazprom. In 2014, the independent certification authority — the State Metrology Institute of Belarus — performed certification audit that confirmed the compliance of the environmental management system with the requirements of the state standard of the Republic of Belarus STB ISO 14001-2005.

The main factors that influenced the change of environmental impact parameters as compared to 2013, were increased volume of repair works at line part and increased volume of gas addition to and withdrawal from underground storage facilities which caused the total growth of pollutants by 19.3%, including that of methane by 2.9 kilotons.

Environmental impact parameters, 2011–2014		
Parameters	2013	2014
Total air pollutant emissions, t	21,548.41	25,705.39
including methane emissions, t	10,335.69	13,161.90
Greenhouse gases emissions, kilotons of CO <sub>2</sub> -equivalent	229.46	288.37
Total water intake, thousand cm	1,695.71	1,564.56
including water from natural sources	1,644.24	1,497.59
Used for own needs, thousand cm	1,694.78	1,560.28
including for production needs	1,579.00	1,420.32
Waste water discharge to surface water bodies, thousand cm	65.85	37.47
including clean and treated as per standards	65.85	37.47
Produced waste amount, kilotons	3,369.15	2,292.95
Utilized and neutralized at own facilities, kilotons	40.84	61.93
Transferred to outside organizations for utilization and neutralization, kilotons	2,089.18	1,246.29
Area of disturbed lands as of the end of the year, ha	50.73	0
Area of disturbed lands in the course of the year, ha	59.58	59.92
Reclaimed lands in the course of the year, ha	172.94	110.65

The following activities were implemented to protect atmospheric air: outdated boilers at gas distribution stations were replaced by new more efficient ones of greater capacity, operational tests of boilers were carried out according to performance adjustment charts, and quality control of gas burning by heaters was provided, motors of gas pumping units were overhauled etc.

Parameters of impact on aquatic environment are reduced. Decrease of water intake by 8 % as compared to 2013 was due to the optimization of water consumption regimes at cavern wash-out in the course of increasing the capacities of Mozyrskoye underground gas storage facility. Subsidiary companies performed works to reduce the weight of pollutants discharged as part of waste water. Reconstruction of industrial effluent system, reconstruction of compressor shop, washing of storm sewers took place. Monitoring of performance parameters of storm sewage treatment facilities was intensified.

Activities to optimize production waste treatment were implemented that led to the decrease of the total volume of their generation by 32%.

Flora resources in the territory of the company's production facilities were registered in the framework of production environmental monitoring.

In 2014, adverse environmental impact charges amounted to RUB 30,441.109 thousand which is by 70% less than those in 2013. The decrease of amounts to be paid was due to the implementation of provisions of the Article 8 of the Agreement between the Government of the Republic of Belarus and the Government of the Russian Federation on the purchase and sale of shares and further activities of OAO Beltransgaz which entitled OAO Gazprom transgaz Belarus to use environmental tax rates as of 2011.

2014 saw no accidents, state inspections to check the compliance with environment protection laws of the Republic of Belarus were not carried out at the facilities of OAO Gazprom transgaz Belarus.

## Environmental assessment of projects

According to the requirements of Russian and international laws, the *Gazprom Group* companies perform environmental assessment of planned business activities at all investment process life cycle stages — from investment idea to construction projects.

Environmental assessment of projects involves a number of stages with environmental impact assessment (EIA) and environmental appraisal being the most important of them.

The *Gazprom Group* companies perform EIA on the basis of engineering environmental studies in the regions of proposed construction. In the course of the studies there examined is the state of environment components (atmospheric air, surface and underground water, soil and vegetation, flora and fauna), the level of existing man-induced impact is assessed. The study results include the assessment of proposed impact of planned business activities, possible changes in the environment and concerned social and economic consequences for the territory where facilities are to be located. The received data are taken into account at the development of design solutions on the basis of selection of the most environmentally and economically feasible variant out of the alternatives. In case projects affecting interests of other countries are developed, EIA is carried out in transboundary context as per Espoo Convention.

At the selection of TGP routes, utility lines and at the location of site facilities special attention is paid to working out of activities to reclaim disturbed lands, preserve natural, first of all specially protected, areas and complexes, cultural heritage sites or objects having cultural heritage features. Environmental aspects of the proposed activities are discussed with the public.

Environment components are permanently monitored during the period of construction and facility operation in order to detect negative tendencies leading to the deterioration of the environment state and to take necessary measures to prevent the above in due time.

In 1994, OAO Gazprom initiated and since that time has been practicing the corporate expert appraisal of project materials before they are submitted for state expert appraisal and state environmental appraisal. The expert appraisal of design objects is carried out to verify the compliance with the requirements of the existing environmental regulations of the Russian Federation, energy-saving legislation, other regulatory documents of the Russian Federation, international rules and regulations, documents of OAO Gazprom standardization system. The corporate appraisal procedure is governed by the STO Gazprom 2-2.1-031-2005 "Regulation on Expert Examination of Predesign and Design Documentation in OAO Gazprom".

In 2014, corporate environmental appraisal was performed in relation to:

- technical assignments and technical requirements to design for 116 objects of reconstruction, upgrade and construction;
- predesign and design documentation on 239 objects of reconstruction, upgrade and construction.

Technical assignments for design, predesign and design documentation for a number of fundamental production facilities were examined and agreed, including:

- Development of the Kovyktinskoye gas condensate field for the pilot project period;
- Technical and economical analysis of construction and development of gas trunk pipelines and liquid hydrocarbon transportation from Yamal and Gydan Peninsulas with the consideration of Yamal-LNG projects, prospects of developing Southern group of Yamal fields and adjacent shelf of the Kara Sea;
- Technical and economical analysis of Russian gas supplies for gas infrastructure development in Astana city and Eastern-Kazakhstan Oblast of the Republic of Kazakhstan;
- Construction and development of facilities to process and transport liquid hydrocarbon raw materials of OAO Gazprom in Nadym-Pur-Tazovskiy Region.

Additionally, expert appraisal of sets of documents on TGP and UGS construction facilities, on field development and UGSS capacities expansion was conducted. In particular, justification of investments to the following was examined: development of gas transportation system of the Republic of Belarus, comprehensive project on gas supply to southern areas of Irkutsk Region, including construction of gas processing, gas chemical facilities, independent gas infrastructure development for LHG consumers in Kamchatskiy Krai, construction of test site on the drilled

out part of Astrakhanskoye GCF and Alexeevskoye GCF, building of regasification terminal in Kaliningrad Region, building of gas pipeline-extension and GDS in i.c. Lebyazhie, construction of pilot plant for liquefied natural gas production using domestic technologies and equipment, building of underground gas storage facility in the Republic of Tatarstan.

The following investment ideas were considered: development of resources at the Gulf of Ob and Taz Bay, construction of LNG plant in Leningradskaya Oblast (Baltiyskiy LNG), development of gas transportation system of OOO Gazprom transgaz Ufa in long-term outlook with regard to operation modes of Kanchurinsko-Musinskiy UGS complex, construction of gas storage facilities on the basis of Adnikanskoye field and in the Republic of Dagestan.

The following projects were considered: UGSS expansion to supply gas to "South Stream" gas pipeline. 2nd stage (Eastern corridor) for provision of gas supply in the volume of up to 63 bcm per year; reconstruction of gas transportation facilities to provide for gas pumping into Kasimovskoye UGSF and gas withdrawal from Kasimovskoye and Uvyazovskoye UGSF in the volume of 183 mmcm, reconstruction and expansion of Kushcheovskoye UGSF and construction of 2nd branch of gas pipeline Kushcheovskoye UGSF-Kushcheovskaya CS, development of oil rims of Cenomanian pool at Tazovskoye OGSF for the period of pilot production and Botuobinskaya pool, Tchayandinskoye OGSF, Berriasian-Valanginian depositions of Nydin section of Medvezhye OGSF, 4th and 5th sections of Achimovskie depositions of Urengoyevskoye OGSF, building of section Tchayanda-Lensk of "Power of Siberia" TGP, Amurskiy gas processing plant etc.



## Production environmental monitoring and control

All *Gazprom Group* companies regularly perform production environmental control and production environmental monitoring in order to provide for the fulfillment of environment protection measures, rational use of natural resources and compliance with the requirements of the environment protection laws in the course of production and economic activities.

Production environmental control is arranged at the level of each subsidiary company. Moreover, at OAO Gazprom level there is a specialized body formed and successfully operating — the Environmental Inspection of OAO Gazprom. It performs internal EMS audits in OAO Gazprom subsidiary companies in addition to control of fulfillment of environmental legislation requirements, corporate norms and rules in the environmental protection sphere by subsidiary companies and contractors.

In 2014, the Environmental Inspection of OAO Gazprom worked in the following control areas:

- fulfillment of environmental requirements, corporate norms and rules in the environmental protection sphere by OAO Gazprom subsidiary companies and organizations;
- fulfillment of environmental requirements, corporate norms and rules in the environmental protection sphere, sound nature management and provision of environmental safety, project decisions at important capital construction objects of OAO Gazprom;
- performance of internal audits of environmental management system (EMS) of OAO Gazprom subsidiary companies and their structural divisions;
- fulfillment of waste management requirements and implementation of activities aimed at reaching the corporate objective to reduce the amount of waste to be buried;
- implementation of activities within the Year of Environmental Awareness in OAO Gazprom.

Additionally, the Environmental Inspection of OAO Gazprom performed methodological support of environment protection activities of OAO Gazprom subsidiary companies and organizations as well as interaction with the state environment protection supervision authorities in order to improve environment protection procedures.

According to the minutes of OAO Gazprom Coordination Committee for Environment Protection and Energy Saving, environmental control was carried out at construction, overhaul and reconstruction objects, and internal audits of environmental management system in OAO Gazprom subsidiary companies and organizations took place.

The Environmental Inspection conducted 597 checks in 54 OAO Gazprom subsidiary companies and organizations making up 100% of the plan, including: 10 gas production companies, 17 gas transportation enterprises, 19 branches of OOO Gazprom UGS, 6 gas processing plants, 5 branches of OOO Gazprom energo, and 24 other subsidiaries (OOO Gazprom podzemremont Orenburg, OOO Gazprom podzemremont Urengoy, OOO Gazpromtrans, OOO Gazprom szhizhenniy gas), Customers and general contractors performing works at UGSS facilities of important construction sites, facilities being reconstructed and overhauled (OOO Gazprom invest, OOO Gazprom invest Yug, ZAO Yamalgazinvest, OOO Stroygazmontazh, ZAO Stroytransgaz, OOO Gazprom tsentrremont etc.). Among 597 conducted checks there were:

- 411 scheduled checks of the fulfillment of environment protection legislation requirements by OAO Gazprom subsidiary companies and organizations, including 135 audits of EMS in structural divisions of the subsidiaries;
- 186 special-purpose checks of the fulfillment of environment protection legislation requirements at important capital construction objects.

The following facilities were controlled by the OAO Gazprom Environmental Inspection in 2014: intra-field gas and gas condensate collection systems, preliminary and complex gas treatment plants, wells, gas trunk pipelines and extensions, gas drying stations, gas cleaning and drying plants, flare systems, compressor and booster compressor stations, gas distribution stations, gas measurement stations, boiler houses, power plants, storehouses and stores of fuel and lubrication materials, mobile vehicles, gas and dust catching plants and equipment, sewage treatment facilities, storm sewage treatment facilities, sections of constructed linear parts of gas pipelines, water body crosses, camps for builders etc.

At operating facilities there was found by 27% of violations less than in 2013 due to the implementation of measures to prevent violations of and non-compliances with environmental requirements.

At facilities under construction there was found by 26% of violations less than in 2013 which amounts to 53% of the total number of violations in 2014. The managers of the companies being checked are informed on the results of the above checks along with the recommendations on the improvement of environment protection procedures, activities to eliminate and prevent the violations are determined.

The result of focused efforts of the Environmental Inspection and structural divisions of OAO Gazprom subsidiary companies and organizations on environment protection is significant reduction of system violations, better elimination rate, gradual decrease of performed violation significance.

The production environmental monitoring system of the *Gazprom Group* has a high level of equipment capability; it comprises stationary and mobile laboratories, meteorological and aerological stations, automated control stations and monitoring wells. The above allows for monitoring of pollutant emissions into the atmospheric air from stationary sources, quality of atmospheric air at the sanitary protection zone boundary and in settlements, noise level, quality of surface and waste water, quality of underground water of utility and drinking purposes, state of geological environment and soil cover, waste. In order to prevent and reduce methane emissions into the atmosphere, OAO Gazprom gas transportation subsidiaries performed helicopter inspections of TGP technical state by laser gas leakage detector, detection of gas leakages at CS by thermal imagers; pigging was carried out to prevent gas losses and reduce risks of affecting the environment. Rules, procedures and peculiarities of development and introduction of environmental monitoring systems for different production facilities are specified in a number of industrial and departmental regulatory documents, including corporate standards.

The production environmental monitoring system of *Gazprom Group* enjoys constant development.

In 2014, a new mobile environmental control station to control the atmospheric air quality in sanitary protection zones of production facilities was commissioned in OOO Gazprom transgaz Nizhny Novgorod. The mobile laboratory is fitted by the most advanced analytical equipment made by Russian and foreign manufacturers. The mobile laboratory equipment comprises: gas analyzers identifying the content of nitrogen oxides, carbon oxide, sulphur dioxide in the air, a portable chromatographic module detecting methane admixtures, a multisensor instrument measuring temperature, pressure, speed and movement direction of wind. All instruments are of high sensitivity and selectivity.

OOO Gazprom geologorazvedka performs works on environmental control of facilities located in the shelf area, environmental monitoring is carried out at license areas.

OOO Gazprom geotekhnologii performed object (radiation) monitoring of earth surface in the region where underground storage tanks and near-surface waste burial facility are located at radiation hazardous facility "Sapfir", "Magistral", "Vega", "Kama-1".

In 2014, *Gazprom Neftekhim Salavat* performed continuous monitoring of environment based on the data obtained by a specially established ecoanalytical laboratory to monitor atmospheric air, impact on soils and bottom sediments, and emission sources of the enterprise. Main tasks of the laboratory include control of the atmospheric air at the industrial site, sanitary protection zone and the air of Salavat town, control of efficient operation of gas treatment facilities and emissions from sources, monitoring of the influence produced by the waste disposal facilities on the soils. The atmospheric air in the town and at the sanitary protection zone boundary is controlled by a mobile laboratory unit allowing for real-time sampling and sample analysis without the samples being transported to the stationary laboratory, thus the time for result obtaining is reduced from 6–8 hours to 30 minutes. The so-called "control at a pipe", a new approach to emission monitoring practiced in foreign countries, is implemented at the enterprise as well. Herewith, new sources of impact on the atmospheric air are equipped by gas analytical devices

which allow not only for the control of emissions but for the optimization of processes to reduce impact on the atmospheric air as well. Environmental programme developed in the company and planned till 2030 implies creation of a unified system to monitor emissions and discharges, control atmospheric air quality based on on-line analyzers, development of own weather condition monitoring system, improvement of the enterprise's ecoanalytical laboratory facilities. Efficient measures to reduce the adverse impact of production activities down to the minimal permissible level will be implemented along with the approval of sanitary protection zone boundaries.

Since 2013 Moscow Refinery (*Gazprom Neft Group*) has been operating an automatic emission monitoring system (AEMS) whose data are transmitted to the portal of the Unified Mosecomonitoring Center on-line. Nowadays 4 AEMS stations are operated at the enterprise's emission sources, and 4 AEMS stations will be put into operation until the end of December. Additionally, according to the environment legislation requirements several atmospheric air systems are operated at Moscow Refinery, they include 2 stations to control air pollution on the Refinery's sanitary protection zone, 6 monitoring stations of the Refinery's own ecological laboratory at the SPZ boundary and 5 stations — at the industrial site, monitoring of atmospheric air in the Refinery's working zone carried out by a paramilitary gas rescue team of the MR, and emission monitoring performed by an independent laboratory.

OAo Gazprom Neft-MR has launched a special project on its official web-site, it is called "Ecoinform" and lets web-users the opportunity to get objective information on the state of air and ecological situation in the territory of the Moscow Refinery and within the boundaries of its sanitary protection zone daily. "Ecoinform" provides statistic data on six key parameters — carbon oxide, hydrocarbons of  $C_1-C_{10}$  group, sulphur dioxide, nitrogen dioxide, hydrogen sulphide and benzene. The data are presented comparatively: level of substance presence in the air as of the current day in comparison to the permissible concentration levels.

According to the existing programmes other *Gazprom Neft Group* companies performed: monitoring of atmospheric air quality, noise level, soil at the boundaries of the approved sanitary protection zones, rain and melt water discharged from the industrial sites and refuelling stations, regular monitoring of water bodies and their water protection zones, control of noise impact level, laboratory ecoanalytical control of drilling sludge pits, inventory of disturbed lands.

Companies of Gazprom Energoholding performed control of atmospheric air, waste water discharges in engineering lakes, state of water bodies receiving the waste water, soil in ash disposal areas, physical impact at the boundary of sanitary protection zone of production facilities. OAo Mosenergo has introduced devices for automatic emission control at power plants, the power plants located in Moscow enjoy operation of automated systems for environmental emission control that transfer the data to GPU Mosecomonitoring (in the Nature Management and Environment Protection Department of Moscow).

In case *Gazprom Group* facilities are located in particularly sensitive areas, environmental monitoring programmes shall involve activities on regular observation of flora and fauna. For example, OOO Gazprom dobycha Kuznetsk is engaged with permanent monitoring of habitat of annelid species — *Eisenia salarica* — occurred sporadically in fir forests and aspen woods of Kemerovo and Novosibirsk Regions, in the territory of Salair Ridge, and listed in the Red Book of Russia. Environmental monitoring programme of OOO Gazprom transgaz Krasnodar involves monitoring of morphometric parameters of water area of Taganrog Bay in the Sea of Azov, production environmental monitoring of sea section of TGP "Dzhubga — Lazarevskoye — Sochi". OOO Gazprom transgaz Ukhta monitors the state of valuable and protected flora and fauna species in the southern areas of the National Park "Yugyd va".

Since 1997 the Sakhalin Energy company has spent over USD 7mm to implement the Programme for monitoring and reduction of adverse impact on the environment, including unique fauna of Sakhalin. The programme implemented by independent Russian and foreign scientists is controlled by independent parties and provides the company the opportunity to determine the level of influence on gray whale population and thus minimize the adverse impact. The conducted researches greatly contributed to the volume of scientific knowledge on this unique whale population.

In the area where offshore ice-resistant oil-producing platform "Prirazlomnaya" is located, OOO Gazprom neft shelf (*Gazprom Neft Group*) performed comprehensive monitoring studies including: sea field studies, weather observation and studies of atmospheric air pollution, oceanographic studies, studies of pollution level of water, bottom sediments, benthos, studies of ichthyofauna state, observation of marine mammals and birds. Additionally, the state of marine and land ecosystems on arctic islands in the State Nature Reserve "Nenetsky" was monitored. The above monitoring results proved that the platform "Prirazlomnaya" activities exerted no adverse impact on the environment.

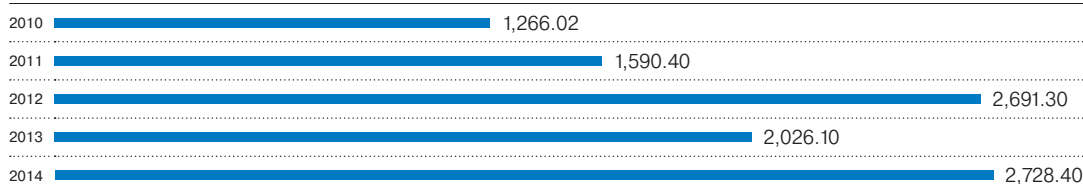
The studies also comprised works to select sites for the installation of OSR equipment of the onshore processing facility to protect the coast near the Dolgy Island and other areas against possible migration of oil patches.

Reports on the results of environmental monitoring in the "Prirazlomnaya" location area are available at OOO Gazprom neft shelf web-site: [www.Shelf-Neft.gazprom.ru](http://www.Shelf-Neft.gazprom.ru).

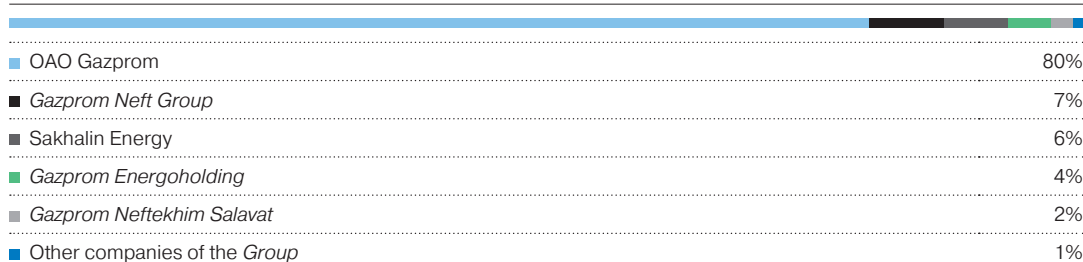
Environmental monitoring within the framework of Nord Stream Project was on in 2014. Since October 2012 the Nord Stream pipeline has been operated. 2012 was the last year when aspects related with construction activities were monitored, as far as environment impact management is concerned. The monitoring results proved that environment impact caused by construction was either missing or insignificant, locally limited and short-term which complied with the EIA conclusions. Since 2013 monitoring has been focusing on the aspects related with the operation of the pipeline and post-construction rehabilitation. Works on monitoring performance and report preparation are continued in Russia, Finland, Sweden, Denmark and Germany according to the national environmental programmes. In Russia monitoring is carried out to evaluate the water quality, sea bed topography, coastal soils, landscapes, quality of air, noise level, fish and plankton, birds, marine mammals, bottom flora and fauna and terricole flora and fauna. The data obtained in the course of monitoring are compared to the available data of previous years. No negative impact on the environment components has been detected as per the results of monitoring 2013–2014. More detailed and updated information is available on the Nord Stream web-site: [www.nord-stream.com](http://www.nord-stream.com).

The *Gazprom Group* expenditures on production environmental monitoring and control in the period 2010–2014 grew by 115.5%.

**Gazprom Group expenditures on production environmental monitoring and control, 2010–2014, RUB mm**



**Structure of expenditures on production environmental monitoring and control of Gazprom Group, 2014, %**











## Accidents and incidents

*Gazprom Group* facilities refer to high-risk facilities. 2014 saw 8 accidents with environmental consequences at OAO *Gazprom* facilities (2013 — 10 ones): OOO *Gazprom* добыча Krasnodar — 2, OOO *Gazprom* transgaz Yugorsk — 1, OOO *Gazprom* transgaz Moscow — 1, OOO *Gazprom* transgaz Nizhny Novgorod — 1, OOO *Gazprom* transgaz Saint Petersburg — 2, OOO *Gazprom* transgaz Ufa — 1.

The damage was indemnified by OAO SOGAZ. There were no accidents at the facilities of other *Gazprom Group* companies in 2014.

In recent years no accidents with significant environmental consequences were registered at the *Gazprom Group* facilities.

Annually the *Gazprom Group* companies take accident preventive measures allowing for the improvement of equipment performance reliability and reduction of risk of accidents at *Gazprom Group* production facilities. They involve technical diagnostics of pipelines at fields, injection of corrosion inhibitors, timely repair and preventive maintenance works, anti-flood activities, regular inspection of abandoned plugged wells, regular helicopter inspections of TGP LPs and pipeline-extensions to detect flaws and gas leakages, including those employing laser detectors, equipment of facilities with required devices and units to eliminate hydrocarbon spills.

## Environmental risks insurance

Environmental insurance executed by the *Gazprom Group* as the emergency environmental contamination liability insurance is aimed at provision of environmental safety, compensation of the environmental damage and compensation of losses of third parties.

In 2014, OAO Gazprom and OAO SOGAZ signed a complex insurance contract providing for coverage of risks of damage to environment, life, health and property of third parties in the process of land and marine exploration and drilling, hydrocarbon production, transportation, refining, storage, operation of sources of increased hazard, construction and other associated operations in the territory of the Russian Federation and continental shelf of the Russian Federation.

Therefore, all activities associated with environmental risks are insured.

The insurance covers OAO Gazprom and its 30 subsidiary companies, including OOO Gazprom flot, OOO Gazprom geologorazvedka, OOO Gazprom dobycha shelf Yuzhno-Sakhalinsk.

The insurance contract is voluntary and serves as an addition to obligatory general liability insurance contracts of a hazardous facility owner (as per Federal Law No. 225-FZ dated July 27, 2010). The insurance contract replaced all voluntary general liability insurance contracts of legal persons who operate sources of increased hazard, signed earlier by each subsidiary company.

## State environmental control

*In 2014, there conducted were 451 state inspections of the Gazprom Group companies, 36 of them detected no infringements of the Russian Federation environmental laws. The total number of found infringements accounted for 416 with 329 of them (79%) posing no threat to the environment and implying no penalty provisions. Necessary measures to eliminate the found violations are taken in due terms. 323 infringements were eliminated in the reporting period.*

The state supervision authorities imposed penalties in the total amount of RUB 16.29mm in 2014, including RUB 10mm to the companies of *Gazprom Neft*, RUB 3.3mm — OAO Gazprom, RUB 1.25mm — *Gazprom Energoholding*, RUB 0.92mm — Sakhalin energy, RUB 1.07mm — other companies of *Gazprom Group*.

RUB 4.75mm out of the penalty provisions imposed on *Gazprom Neft* companies in the amount of RUB 10mm, were imposed on OAO Gazpromneft Moscow Refinery as the result of inspections carried out by the The Federal Supervisory Natural Resources Management Service, Federal Service on Customers' Rights Protection and Human Well-Being Surveillance and Inter-district Environmental Prosecutor's Office of Moscow in connection with adverse environmental situation in Moscow. The penalties in the amount of RUB 1mm are declared illegitimate by court order.

The amount of penalties paid by the *Gazprom Group* companies in 2014 accounted for RUB 17.68mm, including RUB 6.78mm for previous years.

Inspections of foreign OAO Gazprom subsidiaries were not carried out.



## Scientific research and development

Currently implementation of industrial projects is impossible without provision of environmental safety. Research and development are annually carried out in the *Gazprom Group* companies; their results serve as a start for new facilities, implementation of new equipment, new technologies more perfect from the environmental standpoint. Implementation of technical and process innovations, solution of actual environmental problems of the production activity in the *Gazprom Group* companies is based on the studies performed by leading Russian scientific organizations.

In 2014, *Gazprom* performed a number of research works aimed at the improvement of reliability and industrial safety of production facilities, environmental safety, energy efficiency and economic feasibility.

OOO Gazprom VNIIGAZ on the request of OAO Gazprom carried out "Development of MPC norms for methane and odorant of natural mercaptans in the ambient air of settlements and proposals on correction of the rated payment for their emissions in the air".

"Comprehensive assessment of the best available and prospective technologies providing for environmentally safe development, preparation, transportation, storage and processing of hydrocarbon raw materials of OAO Gazprom" was conducted. The Company developed R Gazprom "Formation and keeping of the register of the best available technologies providing for environmentally safe development, preparation, transportation, storage and processing of hydrocarbon resources", Register of the best available technologies providing for environmentally safe development, preparation, transportation, storage and processing of hydrocarbon resources of OAO Gazprom, and structure, requirements to its formation and keeping.

Works on the "Assessment of potential damage to environment (flora and fauna, water biological, forest, land and other resources), including accident effect, and development of unified programme of nature protective and compensative nature protection activities for all OAO Gazprom facilities at the development of gas production, gas transportation, gas processing and gas chemical facilities in the regions of Eastern Siberia and Far East" were completed.

In the course of R&D works "Development of recommendations on oil spill elimination in ice conditions" there prepared were the reports on R&D works "Analysis of environmental consequences at oil contamination elimination in various ice conditions, including brazed and drifting (pack) ice", "Selection and testing of the best available technologies and methods to eliminate oil spills in brazed and drifting (pack) ice conditions". The Company developed R Gazprom "Recommendations on oil spill elimination in ice conditions".

R&D work on "Research and evaluation of comprehensive environmental effect from motor transport refining to natural gas in the Russian Federation" was continued. Practice and prospects of using natural gas as ecologically clean motor fuel were considered, comparative assessment of ecological aspects of the life cycle of conventional oil fuel types and natural gas as motor fuel was given, a set of environmental impacts from the motor transport refining to natural gas in Russian cities was outlined.

OOO Gazprom VNIIGAZ conducted 6th Ecotechnological Expedition "Yamal-2014" within the framework of R&D "Research of restoration processes at disturbed and contaminated soils and improvement of technologies to reclaim them on the Yamal Peninsula". The ecological-technological expeditions "Yamal" are to be carried out as it is necessary to perform regular environmental monitoring of the changes in the environment state and test the best available technologies providing for the safety of operation of site structures and facilities at hydrocarbon fields and preserve Yamal ecosystems in the period of active Bovanenkovskoye OGCF development. The following activities were implemented in the expedition-2014 conducted by OOO Gazprom VNIIGAZ together with OOO Krasnoyarskgazprom Neftegazproect and the V.I. Vernadsky Non-Governmental Ecological Fund:

- assessment of intensity of anthropogenic impact on the environment and research and methodological support of works at the construction of facilities at hydrocarbon fields on the Yamal Peninsula and adjacent water areas;
- comprehensive research of main parameters of environment conditions with regard to practical needs of hydrocarbon field development;



- assessment of natural ecological potential (land, water resources, flora and fauna resources, availability of particularly rare and vanishing species), territory and water area;
- adaptation of technologies to reclaim lands disturbed and contaminated at the development of fields.

Hydrometeorological, hydrological and hydrochemical researches were conducted in the areas where facilities of Bovanenkovskoye OGCF are located, development of dangerous geocryological processes being the most typical for the territory (thermal erosion, thermokarst, thermal heaving, thermal abrasion, solifluction) was analyzed, degree and dynamics of anthropogenic disturbance of the territory was assessed, a number of researches was carried out at key areas to test the best available technologies to rehabilitate disturbed and contaminated lands by complex mineral fertilizers, biomats "BioSTEK" etc.

Reports on current situation assessment and recommendations to improve the efficiency of disturbed land reclamation technologies in 2013, 2014, 2015 were prepared, recommendations to improve the efficiency of disturbed land reclamation technologies in 2015 were developed.

The work "Technical requirements, methods and techniques to prevent landscape degradation in the Far North areas developed by OAO Gazprom" was completed. A plan of activities to prevent landscape degradation in case of different anthropogenic impacts in the regions of Far North hydrocarbon fields was drawn out, Gazprom regulations "Methods and techniques to prevent landscape degradation in the Far North areas being developed" was worked out.

As far as energy saving and energy efficiency is concerned, OAO Gazprom performed R&D work "Development of regulatory documents on energy saving in OAO Gazprom according to the requirements of the Federal Law "On energy saving and energy efficiency improvement and on the introduction of alterations to certain legislation acts of the Russian Federation" No. 261-FZ dated November 23, 2009. In the course of the R&D works the following documents were worked out: R Gazprom "Technique to determine energy saving potential of process facilities", R Gazprom "Energy performance certificate of a subsidiary. Recommendations on execution and keeping", R Gazprom "Methodological instructions on the development of the Energy saving and energy efficiency improvement programme of a subsidiary company and organization", R Gazprom "Technique to calculate the value of fuel and energy resource saving at the introduction of energy saving activities in subsidiaries".

"Energy saving and energy efficiency improvement programme of OAO Gazprom for the period 2014–2016" and regulatory documents on energy saving management in OAO Gazprom were developed. Implementation of the "Energy saving and energy efficiency improvement programme of OAO Gazprom for the period 2011–2013 and 2014–2016" was analyzed, the following R Gazprom documents were worked out: on energy saving management system in OAO Gazprom, on the establishment of the energy saving management system, on monitoring of energy efficiency parameters of gas transportation system facilities; methodological instructions to evaluate the energy saving potential in gas distribution companies of OAO Gazprom as per production types were drawn out. STO Gazprom "Energy saving management system in OAO Gazprom. Procedure for execution, keeping and submission of information on the implementation of OAO Gazprom energy saving programmes and energy efficiency parameters of subsidiary companies and organizations" was developed. Reports on all conducted R&D works were prepared.

OOO Gazprom engineering on the request of OAO Gazprom is engaged with the development of regulatory documents on the provision of environmental safety at OAO Gazprom facilities in North-West region of the Arctic. There determined were the structure, scope and methods of ecological surveys and researches, comprehensive monitoring at facilities' operation, activities on environment protection and rational nature use.

R&D work "Development of procedure to work out reclamation project for gas transportation facility construction" was completed. Russian laws on land relations management and requirements for development procedure and scope of disturbed land reclamation project at gas transportation facility construction were analyzed. STO Gazprom "Procedure to work out reclamation project for gas transportation facility construction" was developed.

The work "Improvement of regulatory procedural framework to increase energy efficiency of buildings and facilities as well as to use fuel and energy resources at OAO Gazprom facilities" conducted by OOO Energodiagnostika, resulted in: STO Gazprom "Criteria of energy efficiency of buildings, structures, facilities in OAO Gazprom organizations", R Gazprom "Standard forms of energy performance certificates of OAO Gazprom subsidiaries' buildings and facilities", report on R&D work "Standard technical solutions to improve energy efficiency of buildings and facilities of OAO Gazprom", R Gazprom "Standard energy performance certificate of a gas distribution company of OAO Gazprom", R Gazprom "Technique to calculate standard consumption rates of heat and electric energy for underground gas storage companies", R Gazprom "Technique to calculate standard consumption rates of fuel and energy resources in gas distribution and gas supply companies".

Regulatory documents on power utilities management improvement were developed on OAO Gazprom's request. Regulatory document requirements to the quality of electric energy in power supply systems of OAO Gazprom process facilities were analyzed, the following R Gazprom were developed: on electric energy quality monitoring and its impact on the reliability of electro-technical equipment at OAO Gazprom process facilities and proposals to improve their operation, on organization of captive power plant operation, system of dispatcher names of OAO Gazprom power utilities facilities; a system of criteria to assess the efficiency of power utilities performance was developed.

OOO Krasnoyarskgazprom together with OOO Neftegazproect worked out the following documents to be used in OAO Gazprom: regulatory documents on organization and implementation of production environmental monitoring and control; requirements to production environmental monitoring and control at geological surveys and drilling works, development, operation and liquidation of hydrocarbon fields in Far North regions and the Arctic seas' shelf were analyzed. R Gazprom "Organization and implementation of production environmental control and monitoring at geological surveys, drilling, development, operation and liquidation of hydrocarbon fields in Far North regions and the Arctic seas' shelf" was developed.

OOO FRECOM continued researches on R&D work "Development of concept and plans of environmentally safe development of license sites located within the boundaries of special protected areas". The following documents were worked out: R Gazprom "Concept of environmentally safe development of license sites located within the boundaries of special protected areas", Sets of nature protection rules on environmentally safe conduct of business in license site territories, including necessary limitations and nature protection activities, Allocation justification for a site with special nature use regime within the boundaries of existing SPNA in the license site development zone, Independent environmental monitoring programme to control ecological situation within the territory, Plan of interaction with SPNA governing bodies and nature protection organizations within the framework of activities on gas production and transportation within SPNA.

In the course of implementing the work "Establishment of Regional sectoral environment protection management system of Yamalo-Nenetsky Autonomous Okrug (RSEPMS YaNAO)" the following documents were drawn out: "Programme, procedure, results of sociological and other special researches and integration of priority problems in RSEPMS YaNAO format", "Proposals on the development of organizational administrative and methodological documents on the performance of the Regional sectoral environment protection management system of Yamalo-Nenetsky Autonomous Okrug (RSEPMS YaNAO)", "Proposals on the development of priority areas and nature protection activities implemented within the framework of the Regional sectoral environment protection management system of YaNAO".

OOO NIlgazekonomika carried out the R&D work "Development and justification of recommendations on the reduction of OAO Gazprom expenditures due to the efficient use the state stimulation measures in the sphere of nature protection and energy saving for the period up to 2020". The following reports were drawn out: "Analysis of current state stimulation measures in the sphere of nature protection and energy saving and assessment of potential reduction of OAO Gazprom expenditures at implementing the current and potential state stimulation measures

in the sphere of ecology and energy saving as of the end of 2012" and "Assessment and justification of the reduction of OAO Gazprom expenditures at implementing the current and potential state stimulation measures in the sphere of ecology and energy saving for the period 2012–2020".

R&D work "Development of technical proposals on efficient use of power installations based on renewable power sources and nonconventional hydrocarbon power resources" conducted by OAO Gazprom promgaz, was completed. Possibility of using the renewable power sources and nonconventional hydrocarbon power resources in small-scale power installations was assessed. Technical proposals on the use of renewable power sources and nonconventional hydrocarbon power resources in fuel-operated equipment for small-scale power installations of OAO Gazprom were prepared, they are aimed at the diversification of the Company's activities and improvement of its efficiency in product and service sale markets both in the Russian Federation and abroad.

R&D and engineering works for the total value of RUB 270.76 were carried out in 2014 on OAO Gazprom's request.

Many subsidiary companies of *Gazprom Group* were also the customers in R&D works. Their expenditures for the said purposes amounted to RUB 102.53mm in 2014.

OOO Gazprom dobycha Astrakhan developed a technology for neutralization and utilization of high- and low-mineralized drilling waste of 3 and 4 classes of hazard (flushing fluids) produced at construction, overhaul and abandoning of wells in the fields with chemical deposits and high hydrogen content directly at the place of works performance. The work was conducted in several stages: existing process solutions were analyzed and the model of waste neutralization and utilization technology was developed, model's laboratory tests were carried out to determine optimal combination of components, dosage of the mixture for sediment inertisation and waste water treatment, pilot tests of the developed technology for neutralization of waste produced at construction, overhaul and abandoning of wells were performed. The work resulted in STP OOO Gazprom dobycha Astrakhan "Technology for neutralization and utilization of high- and low-mineralized waste produced at construction, and abandoning of wells at Astrakhan GCF".

OOO Gazprom transgaz Kazan designed a prototype of a mobile compressor plant for gas pumping, technical documentation on it was worked out and acceptance tests of the prototype took place. The plant is supposed to be used to pump the natural gas released from the gas pipeline section brought out of operation for repair, into operating gas pipeline in the course of scheduled maintenance and repair works. A prototype of a frequency converter for a house generator of GPU-25I was developed and manufactured to improve energy efficiency of the GPU and increase power supply reliability.

OOO Gazprom transgaz Krasnodar performed a number of works to optimize the technique for the detection of mechanical impurities in natural gas by gravimetric method, procedures for processing and storing the results of production environmental control at the Company's facilities, improve observation stations dealing with underground water control in the places of fuel and lubricant storage and reduce time for underground water sampling, improve the design of bottom sediment sampling unit.

OOO Gazprom transgaz Samara performed design engineering works to solve problems concerned with waste disposal and utilization of natural gas odorant residues and tanks for its storage, reclamation of land plots contaminated as a result of odorant spill. A pilot facility for waste disposal and utilization of natural gas odorant residues was erected, operating procedure, set of specifications and engineering design documentation were developed.

OOO Gazprom transgaz Stavropol worked out solutions for environmentally safe disposal method for waste water discharged from the territory of the Company's facilities. Guidance manual "Arrangement of nature protection activities at gas transportation enterprises" was published.

OOO Gazprom transgaz Tomsk developed programme-algorithm solutions for automatic assessment of ecological state of GDS territory by the data of remote Earth sounding. An information system for collection, processing and analysis of satellite data in respect to the areas where gas pipelines are laid, was created. The system allows for obtaining of information on the current ecological situation and working out of short-term forecasts.

OOO Gazprom transgaz Tomsk also developed a set of engineering documentation and made a preproduction prototype of a plant for treatment and disinfection of industrial and domestic waste water. The plant operation is based on physical and chemical processes occurred in water solutions under the exposure to pulse electron radiation.

OOO Gazprom geotekhnologii designed a prototype of a unit to produce methane-hydrogen mixture with the capacity of 1000 cm<sup>3</sup>/h. The device will allow for the decrease of fuel gas consumption at CS and reduction of harmful emissions, as well as for the production of methane-hydrogen fuel meeting the requirements for low-emission GPU.

OOO Gazprom mezhregiongaz was engaged with the development of instructions on the calculation and rating of pollutant emissions at OAO Gazprom gazoraspredeleniye facilities, its branches, subsidiaries and associated companies. The standard will enable the creation of a common methodological base for the determination of pollutant emission parameters at the operation of facilities of the associated company OAO Gazprom gazoraspredeleniye.

Sakhalin Energy performed marine geophysical studies of shelf area at north-eastern part of Sakhalin in order to specify the extracted resources and future field development strategy. The work "Simulation of noise impact at the execution of marine geophysical studies of shelf area at north-eastern part of Sakhalin" allows for forecasting of sound impact on mammals that is important to identify a safe zone with the radius of 2 km from the excitation source beyond which marine mammals (whales) are not exposed to high acoustic impact.

OAO Gazprom Neftekhim Salavat continued researches to develop a collection of industrial microorganisms to treat the most polluted waste of the enterprise.

The following Company's standards were updated for *Gazprom Energoholding* purposes: "Guidelines on rate setting of pollutant emissions into atmosphere for thermal power plants and boiler houses. RD 153-34.0-02.303-98", "Rules to arrange for control of emissions into atmosphere at thermal power plants and boiler houses. RD 153-34.0-02.306-98", "Guidelines on inventory of pollutant emissions into atmosphere at thermal power plants and boiler houses. RD 153-34.0-02.313-98".

*Gazprom Neft Group* is engaged with works to identify biological reclamation methods being the most suitable for the region within the R&D "Assessment of implementation efficiency for different technologies to carry out biological stage of disturbed land reclamation at exploration sites of VMLU and ZMLU". Results of R&D work "Development of new process solutions on neutralization and use of drilling cuttings for sludge pit reclamation" were submitted for state environmental appraisal. The objective of the work consists in the elimination of environmental risks in the sphere of drilling waste handling. Methodological part of R&D work "Regulation of peat-based sorption materials structure for petroleum- and oil-containing waste water treatment" was carried out. Regularities of interaction of peat and carbonaceous sapropel were identified. The objective of the work consists in the production of new peat-based composite materials to clean water and soil bodies from oil products due to the creation of porous structure of mixed type which makes it possible to absorb water-soluble part of hydrocarbon contaminants, and provision of filtering beds with coalescent properties allowing for directed regulation of particle size in disperse (hydrocarbon) phase. R&D on the development of MPC for mixtures of saturated hydrocarbons C<sub>1</sub>–C<sub>5</sub> and C<sub>6</sub>–C<sub>10</sub> were continued. Works to evaluate toxicity and hazard of saturated hydrocarbons were performed. The work result is the approval of MPC for mixtures of saturated hydrocarbons C<sub>1</sub>–C<sub>5</sub> and C<sub>6</sub>–C<sub>10</sub>.

The work "Comprehensive studies of marine natural ecological systems of the Arctic islands Matveev, Golets, Dolgy, Bolshoy Zelenets and Maly Zelenets of the State Nature Reserve "Nenetsky" was devoted to the comprehensive study of biota state when affected by production factors in the SPNA zone. Field stage was completed, stations for environment control were installed.

Pilot operation of pipeline scanning technology took place in 2014. The said technology allows for the examination of pipeline sections which are not suitable for pigging. The "VID-219" unit was developed for pigging of pipelines with the diameter of 219 mm. The equipment was tested at by-pass facility connected to the operating pipeline system. The technology detects critical defects in the pipelines of small diameter (100–200 mm). It improves the efficiency of investments into pipeline diagnostics.

## Implementation of the best available technologies for environmental protection

Improvement of environmental safety and energy efficiency of the *Gazprom Group* companies' operational activity is achieved largely thanks to the implementation of innovative technical and process solutions.

Large-scale high-technology projects are implemented in *Gazprom Group* within the framework of innovation development programmes. In particular, an innovative method for stepped development of multipay Yamal fields is realized, it allows for rational use of reservoir pressure and minimization of the number of production wells in the field. The method is realized at Bovanenkovskoye OGCF of the Yamal Peninsula and makes it possible to decrease the area of lands requiring further reclamation.

A home-produced innovative plant for thermal destruction of oil sludge allowing for its complete processing without remains, was put into operation at Vyngapurovskoye field of Gazprom Neft — NoyabrskNeftegaz. The used technology is dry pyrolysis of liquid, solid and paste-like oil-containing waste. The sludge is decomposed into components: oil products, water and mechanical impurities (clay, sand, metal oxides) under the action of high temperature without oxygen presence. The oil isolated in the course of sludge destruction is completely suitable for transportation into the system for preparation and further transportation for further sale. The obtained water, even without additional treatment, can be used for household purposes. The extracted mechanical impurities represent cleaned soil that can be used as construction material at road building or making cluster pads. Here-with, associated petroleum gas released in the course of oil-containing sludge utilization, is used as fuel for the plant providing for its full energy self-sufficiency. The process runs without combustion products being emitted into atmosphere, it fully complies with the environmental safety requirements for the Company's facilities. Operating plant processes 1 cubic meter of oil sludge per hour.

In future Gazprom Neft — NoyabrskNeftegaz plans to use a similar plant for treatment of solid domestic waste, car tyres, plastic items etc., including large packages, as well as for proppant "reanimation" making it reusable in hydrofracturing operations.

The first retail fuel station Gazprom Neft equipped by an experimental photoelectric installation was opened in Minsk after reconstruction. Depending on weather conditions the photoelectric cells generate up to 10 kW of electric energy providing for partial power supply of the station. Solar batteries as alternative power sources have significant benefits — they are safe for environment, serve for a long time and are simple in terms of installation and maintenance.

In 2014, *OAO Gazprom Neft* was the first in the Russian oil industry to carry out a pilot project of seismic surveys using innovative technology that prevents large forest areas from being cut out. The new "green" technology was tested at Zapadno-Tchatylkinsky license site in YaNAO in spring 2014. The pilot test results proved that implementation of the innovative method decreases the area to be cut out by two times as compared to the conventional exploration seismology technologies. The pilot project results show that the new method makes it possible to preserve about 200 ha of forest or about 60 thousand trees in the area of 400 square kilometers when the works are performed according to the new method.

*OAO Gazprom Neft* also tested new technology "Usage of drilling cuttings at the production of ground for soil formation". The implementation of the above technology will allow for the reduction of negative impact on the environment and decrease expenditures on reclamation of sludge pits remained after drilling.

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In 2014, the project "Development and implementation of technical solutions for gas-and-oil burning TPP modernization" was granted an award from the Government of the Russian Federation in the field of science and engineering. The project goal is to develop equipment upgrade methods based on innovative technologies and justification of engineering and economical results. The main practical result of the project implementation consists in the reduction (by 1/3) of fuel consumption by the upgraded power unit to generate electric energy, increased efficiency factor, longer service life, significant improvement of ecological characteristics of the equipment. New ideas found in the course of the project development gave great impetus to the Russian power engineering industry. For example, ideas tested during the design of a recovery boiler for Kirishi HPP went into production for Tcherepovets and Serov HPPs.

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## Gazprom Prize in science and technical engineering

The Gazprom Prize in science and technical engineering has been awarded annually since 1998 and is an important component of the corporate scientific and engineering policy of *Gazprom*, aimed at the stimulation of using innovations in the Company's activity and provision of its technological leadership in the world energy business.

The prizes are granted for major developments in the spheres of natural gas production, transportation, storage, refining and use, completed by formation or improvement, and — which is most important — efficient use of new machinery, devices, equipment and materials specimens. As a rule, most of the nominated scientific and technical works are directly or indirectly related to the environmental effect.

The following works became the contest winners in 2014:

### **Development and introduction of intelligent automatic system for management of hydrate formation prevention process in gas-gathering flow lines of Kharvutinskaya area at Yamburg oil gas condensate field.**

An automatic system for management of hydrate formation prevention process in gas-gathering flow lines was developed. The introduction of the system made it possible to identify the moment of hydration formation process start and timely take relevant control actions which provides for hydrate-free operating mode of the GGFL with minimal possible consumption of methanol — the substance being toxic to environment components.

### **Development and introduction of energy efficient energy saving technology of LNG small-capacity production and process equipment for its implementation.**

A technology was developed and unique equipment for small-capacity production and storage of liquefied natural gas (LNG) was worked out. LNG producing unit with the capacity of 3 t per hour was put into operation at the gas distribution station GDS-4 in Sverdlovsk. The technology involves usage of a turbine expander plant to utilize the energy of gas transported by trunk pipelines at gas distribution stations. The unit provides for the production of low-pressure network gas and LNG of required quality, aimed to be used by customers. Mobile and stationary refueling plants for the consumers of NGV fuel — motor transport, gas turbine locomotives — were created.

Implementation of the work's results allowed for the realization of projects on autonomous pipeless gas supply for housing and municipal enterprises, standby and independent gas supply of socially important and categorized facilities in Sverdlovsk Region. Usage of natural gas as a fuel provides for lower emissions into atmospheric air from heat power engineering facilities in public utilities sector.

### **Development and introduction of energy saving system for automatic control of heater operation at well sites and optimization of temperature modes at Astrakhan production site.**

A system to control and regulate operation of wellhead heaters is developed and provides for early diagnostics and active resistance to hydrate formation at formation fluid transportation due to the change of heater operation modes at well sites.

Implementation of this energy efficient system allows for the reduction of cleaned gas consumption for preliminary preparation (heating) of formation fluid at well sites, decrease of heat losses at headers (manifolds) at mixing of formation fluid flows from different wells, provision for better safety measures at minimally manned operations.

### **Development and introduction of technology to detect and repair gas pipeline sections subject to cross stress-corrosion cracking.**

Methods to identify potentially hazardous pipeline sections with high bending stresses are developed, they are based on the analysis of design, as-built and operational documentation and flaw detection data. Upgrade of pigging tools took place and provided for the opportunity for the

devices to find cross cracks with the depth of 10% of the pipe wall thickness and to record zones with increased stresses in the pipeline with high accuracy. New repair technology for potentially hazardous pipeline sections was worked out.

Effect of the work result implementation consists in the prevention of accidents and thus prevention of possible damage to the environment.

International cooperation of OAO Gazprom in the environmental protection and energy efficiency sphere is an integral part of the Company's activity within the framework of sustainable development.

In 2014, OAO Gazprom continued active scientific and engineering cooperation with foreign oil and gas companies: Wintershall Holding, GDF SUEZ, E. ON SE, N. V. Nederlandse Gasunie etc.

In January 2014, an extended meeting of the scientific and engineering cooperation expert group of OAO Gazprom and Wintershall Holding took place to discuss "Provision for environmental safety of oil and gas facilities due to the usage of best available technologies", during the meeting German and Russian advanced technologies to provide for energy efficiency and to reduce negative environmental impact were presented.

In April 2014, Amsterdam (the Netherlands) hosted technical meeting of experts from OAO Gazprom and N. V. Nederlandse Gasunie who discussed "Energy efficiency improvement and GHG emissions reduction at gas production and transportation facilities". During the meeting the parties considered Russian and European practices of implementing the best available technologies in order to realize energy saving potential. In November 2014, the meeting at CS Volokolamskaya (OOO Gazprom transgaz Moscow) was devoted to the detection and measurement of methane leakages from process equipment at compressor stations for the purpose of their reduction.

In May 2014, the parties engaged in scientific and engineering cooperation between OAO Gazprom and E. ON SE discussed possibilities of cogeneration of heat and power. They agreed to continue negotiations on the possibility of testing a recovery heat and power unit being developed by E. ON SE at OAO Gazprom's facilities in order to increase efficiency of natural gas usage and reliability of power supply at compressor stations.

2014 saw also the ongoing cooperation of OAO Gazprom and the General Electric company on energy saving and energy efficiency increase matters. The GE company developed an installation operated as per environmentally clean Rankine cycle and designed for the utilization of heat from gas turbine exhaust gases or similar secondary heat source. Implementation of a pilot utilization project together with GE is planned.

Throughout the year OAO Gazprom took part in the activities of the European Business Congress (EBC). In particular, Ecology and Healthcare Committee conducted the following meetings with OAO Gazprom representatives participating in them:

- "The role of green business in creating ecological culture by ecological education" (February, Amsterdam, the Netherlands),
- "Ecological and energy fundamentals of sustainable development" (April, Sofia, Bulgaria),
- "The role of natural gas for transport decarbonization" (May, Athens, Greece),
- "Information technologies in environment protection and health care" (September, Heidelberg, Germany).

In April 2014, in Belgrad (Serbia) the representatives of OAO Gazprom took part in the meeting of the EBC Industry and Construction Committee devoted to the usage of autonomous, including renewable, power supply sources for pipeline gas transportation.

On October 16, 2014 a Round Table was held in Sofia (Bulgaria) within the framework of the EBC project "Assessment of integral ecological and economical effect for European countries at the implementation of "South Stream" project". Many international experts were involved in the discussion of alternatives of the "South Stream" project (coal and nuclear power engineering, renewable sources, LNG etc.) and in forecasting the state of the environment, health of people in Europe.

In 2014, works were actively carried out that were concerned with the provision of environmental safety of the "South Stream" project planned to be implemented. Environment Protection and Town Planning Ministry of Turkey approved the Report on Environmental Impact Assessment (EIA) and issued a positive conclusion on the EIA results at the Turkish section of the offshore gas pipeline "South Stream". The report included the assessment of potential gas pipeline construction factors affecting the environment with geological conditions of sea bottom, water quality,

marine flora and fauna among them. The document comprised conclusions that implementation of the project would have no significant impact on the Black Sea ecology, including fishery in this region. The report specified a number of measures to prevent or to minimize any impact of the project on the environment.

Later on it was decided to close up the project in connection with the start of implementing a new project on gas pipeline construction from the Russian Federation to the Republic of Turkey and further on to the boundary of Greece.

2014 saw ongoing international cooperation on the usage of NGV fuel.

In 2014, the EBC annual general meeting was devoted to the development of NGV fuel transport and ecology of Europe (May, Athens, Greece). A film on environmental advantages of natural gas as a motor fuel was shown at the meeting. According to the data of the European Environmental Protection Agency, more than a third of Europeans live in towns with the excess of permissible air pollution levels established in the EU, and 90% of Europeans live in towns with the excess of permissible air pollution levels established by the World Health Organization (WHO). Refining of transport to NGV fuel can contribute to the significant improvement of air quality in towns.

OAOGazprom took active part in the whole series of EBC projects. For example, within the framework of international social project "Bicycle — Ecology and Health" bike stands were arranged in the European towns Bozhurishte, Sochi, Satalitse, Novy Sad to be used by the citizens for free, a bike ride was organized in Sofia for the purpose of attracting the public's attention to ecological problems of towns, increasing social and ecological responsibility of the public, promoting a bicycle as a universal, ecologically clean vehicle, propagating the healthy lifestyle.

2014 gave start to the creation of a simulation computer game "Save the City" which vividly demonstrates the advantages of natural gas as the best ecological alternative to conventional energy sources. The project is aimed at the popularization of natural gas use in different economic activities of people and in household purposes.

Implementation of the international project "Forecast of possible environmental consequences of shale gas production in Europe" was completed. Its result provided scientific evidence to negative environmental consequences of shale gas production for the European EBC member-countries having fields with forecast shale gas resources. Experts from Germany, Bulgaria, Poland, Czech Republic and Russia took part in the project.

In 2014, OAOGazprom continued work in ISO 67 Technical Committee "Materials, equipment and offshore structures for petroleum, petrochemical and natural gas industries". OAOGazprom manages the development of international standards ISO for the implementation of oil and gas projects in the Arctic within the framework of the above activity. Experts from OAOGazprom VNIIGAZ govern the work on two from six standard projects ("Escape, evacuation and rescue", "Environmental monitoring of oil and gas operations in the Arctic"). The said work is of great importance as the Arctic Region plays a special role in the development of the global power sector and with regard to the environmental risks concerned with the development and operation of oil and gas facilities in the Far North conditions.

In 2014, OAOGazprom actively interacted with oil and gas companies from Eastern Asia in connection with the decision to start the "Power of Siberia" project. The following matters were of interest for the parties to discuss: environmental safety strategy at hydrocarbon raw material production and transportation, specification of technical and ecological norms for oil and gas facilities, energy efficient technologies.

Information disclosure in respect to environment protection is one of the principles the *Gazprom Group* companies follow in their activities.

The main criteria for the implementation of information transparency principle are: reliability and completeness, regularity and timeliness of the information presentation, and its availability to the state authorities, shareholders and investors, the public and other interested parties.

Information on the *Gazprom Group* on the whole is available on the official web-site of OAO *Gazprom* <http://www.gazprom.ru/> in the sections "Environment", "Media", "Investors".

Information on the current and proposed *Gazprom* activities in environment protection and energy efficiency sphere is constantly published in corporate magazines "Gazprom", "Gas Industry", newspapers and other periodicals of *Gazprom Group* subsidiaries, special industrial publications.

According to the requirements of the UNFCCC and Kyoto protocol, *Gazprom* submits information documents to the National Communications of the Russian Federation as per the UNFCCC. The reports disclose data on GHG emissions up to 2030 and on activities to reduce the emissions. Participation of OAO *Gazprom* in the international project CDP (Carbon Disclosure Project) on the disclosure of information on GHG emissions is an important indicator of success in the work to improve the transparency of the Company's activities and one of the factors of its investment attractiveness increase.

The *Gazprom Group* companies place detailed information on environmental policy, voluntary environmental commitments, current and planned activities to provide for environmental safety, rational nature use and energy saving at their web-sites in the sections "Environment" or "Social responsibility" and in news releases of the subsidiaries' press centers.

Sections on the environment protection and energy saving are provided in the Annual Report of OAO *Gazprom*, in the corporate edition "Gazprom in Figures".

Since 1995 Environmental Report of OAO *Gazprom* has been issued annually. Since 2010 OAO *Gazprom*'s Report on sustainable development activities has been issued, its sections "Environmental impact" and "Rational use of resources" give detailed information on the strategy and tactics of rational nature use, environment protection, climate change.

Following the information transparency principle, many *Gazprom Group* companies furnish their web-sites with news environmental information, environmental reports and sustainability reports, plans of activities to preserve biological diversity, environmental monitoring reports, EIA, data on public hearing of projects, OSRPs and other materials. The following web-sites can be mentioned as examples: [www.Energoholding.gazprom.ru/investors/reports/](http://www.Energoholding.gazprom.ru/investors/reports/); [gazprom-Neft.ru/social/](http://gazprom-Neft.ru/social/); [moskva-r.gazprom.ru/ecology/](http://moskva-r.gazprom.ru/ecology/); [stavropol-tr.gazprom.ru/ecology/](http://stavropol-tr.gazprom.ru/ecology/); [www.sakhalinenergy.ru/ru/safety/enviroment/](http://www.sakhalinenergy.ru/ru/safety/enviroment/).

Annually the *Group*'s subsidiary companies draw up and submit reports on the parameters of production activity impact on the environment, implemented activities and volume of their financing, negative environmental impact charges to the state executive authorities and state statistics bodies of the Russian Federation.

Commitment of the managers of the *Gazprom Group* companies to information transparency is reflected in annual meetings with the representatives of national and regional media.

*Gazprom* monitors the media to analyze the public opinion on its environment protection activities and consider it in its future planning and timely making of management decisions.

2014 saw the increase of positive publications in media and on the Internet related to the ecological aspects of *Gazprom Group* activities, their number amounted to more than 8.4 thousand in contrast to 2.3 thousand in 2013. Number of negative publications grew as well, from 204 to 1.9 thousand. The most of such publications (95%) dealt with the start of Prirazlomnoe field development on the Pechora Sea shelf — commissioning of offshore ice-resistant stationary platform Prirazlomnaya. The event was followed by poorly founded criticism in respect to the start of the Russian Federation activities on hydrocarbon production on the Arctic shelf.

In 2014, *Gazprom Group* took part in the pilot project of WWF Russia and analytical and consulting group in FES sphere "CREON" on environmental assessment (rating) of oil and gas



companies' performance. Main players of the Russian oil and gas industry (19 companies) were compared as per categories: "environmental management", "environmental impact" and "information disclosure/transparency". OAO Gazprom won the third place.



Realization of Year of Environmental Awareness in 2014 according to the decision of Alexey Miller, the Chairman of OAO Gazprom Management Committee, has become a logical follow-up of the Year of Ecology in OAO Gazprom. It allowed for fixing the achieved results in: improvement of production environmental safety, environmental awareness of employees, improvement of environmental situation in the regions of the Company's activities, improvement of OAO Gazprom image as an environmentally responsible company.

In 2014, special attention was paid to environmental training of employees in the Company and contractor firms, public education, distribution of knowledge on healthy and environment-focused life style.

Plan of activities to conduct the Year of Environmental Awareness in OAO Gazprom involved official events — for OAO Gazprom, and events of the *Gazprom Group* subsidiary companies and organizations.

The plan implied 5,984 events to be held, including 17 — in the OAO Gazprom Administration and 5,966 in the *Gazprom Group* subsidiary companies and organizations.

Actually 20,126 events took place, including 428 ones with the participation of public organizations.

Amount of financing accounted for RUB 345.73mm.

56 *Gazprom Group* subsidiaries took part in the Year of Environmental Awareness. The events involved 362.7 thousand people in over 3,500 towns and settlements where *Gazprom Group* works in the Russian Federation and Republic of Belarus.









## Official events of OAO Gazprom

The Year of Environmental Awareness in OAO Gazprom was opened on April 23, 2014, at the meeting of Environmental Service Heads of OAO Gazprom subsidiaries.

On June 5, 2014, ceremonial events to celebrate the World Environment Day and the Environmentalist Day took place.

Within the event, works of the winners of the international project "Environmental Awareness. World and harmony" were exhibited in the V.I. Vernadsky State Geological Museum, the exhibition was devoted to the All-Russian Environmental Clean-up "Green Spring" and the Year of Environmental Awareness in OAO Gazprom.

Awarding ceremony to distinguish the representatives of the state and public organizations as well as best environmentalists and Environmental Services of OAO Gazprom who greatly contributed to the environment protection and environmental safety improvement, was held.

A.G. Ishkov, Deputy Head of Department 308, Head of Division 308/10, was awarded with the certificate of honour of the State Duma's Committee on Nature Resources, Nature Use and Ecology for his significant contribution to environment protection and provision of environmental safety.

The film "Gazprom in harmony with nature" was done and shown on all STRBS channels, it tells about environmental activities implemented by the Company when realizing different production projects.

The workshop "Environment protection activities of *Gazprom Group*. Ecological advantages of natural gas" was successfully held in the town of Doha (Qatar) on November 20, 2014. Mr. Adeli, the Secretary General of the Gas Exporting Countries Forum, Nurmahmad Kholov, Ambassador Extraordinary and Plenipotentiary in the Qatar state, representatives of the "Qatargas" company and other national companies took part in the event. OAO Gazprom experts presented their reports to the workshop participants. The main theme of discussion was the role of natural gas in sustainable development. Issues on the introduction of innovations in gas industry, environmental aspects in the implementation of new OAO Gazprom megaprojects: South Stream, Power of Siberia, LNG Vladivostok were touched upon. It was noted during the workshop that gas business facilitates the achievement of goals of the Sustainable Energy for All Decade established by the UN for the period from 2014 to 2024.

The book "Popular Ecology" was published together with the V.I. Vernadsky Fund.

Atlas of environmental effect of motore transport refining to NGV fuel in the Russian Federation regions was prepared for publishing.

Ecological Education Days were held in the regions of OAO Gazprom subsidiaries' activities together with the V.I. Vernadsky Fund. Thematic exhibitions, research and practice conferences and round tables were held within the framework of the above Days: "Environmental friendliness of CNG as alternative fuel", "Ecology of power sector: new generation's view of the problem", "Actual issues of environmental awareness formation and development", environmental awareness lessons "This fragile planet", "Red Book — laissez passe", popular lectures of scientists from the Russian Academy of Sciences. Ecological Academic Olympics "Ecoerudite" was held within the Ecological Education Days in the Southern Ural, Stavropol Region, Tambov Region, Middle and Low Volga regions, Republic of Tatarstan, Yamalo-Nenetsky Autonomous Okrug, Republic of Komi, Republic of Bulgaria. Upper-form pupils and HEI first-year students were the participants of the Olympics. The event theme was ecology and rational nature use issues, it includes three sets of questions: in geography, biology, ecology and an additional section — gas industry. Only 6 winners were chosen among the large amount of the participants, they were awarded with a diploma and prizes and got support in entering a HEI and obtained a priority right to receive grants from the V.I. Vernadsky Fund.

The "National Environmental Award" competition was held. Its goal is to find and support the most efficient innovations on energy and resource saving, clean productions, ecological training, education and social initiatives. 13 OAO Gazprom subsidiaries participated in the Competition in 2014.

*Gazprom* provided support to the international project "Environmental culture. World and harmony" established in 2012 by the V. I. Vernadsky Non-Governmental Ecological Fund.



Its goal is to find and support the innovations and ideas having practical value to form and develop environmental awareness of people of the Russian Federation. Over 300 participants were involved in the project in 2014. In 2014, the following companies became winners in the category "Ecological education and training": OOO Gazprom dobycha Urengoy with the project "Nature is the home we live in", OOO Gazprom dobycha Nadym with the project "Ecological site "Ecopark", OOO Gazprom dobycha Orenburg with the project "Live, spring well, live" became the winner in the category "Environmental culture of social initiatives".

International Children Ecological Forum "Green Planet — 2014" was held. The International Children Ecological Forum "Green Planet — 2014" is a widely known governmental project. It involved over 500,000 kids from 79 regions of Russia and 14 foreign countries (Armenia, Belarus, Bulgaria, Brazil, Germany, Kazakhstan, China, Cuba, Moldova, Romania, Turkey, Uzbekistan, Ukraine, Estonia). Certificates and prizes were granted to 14 children and youth public organizations for the work conducted within the Year of Environmental Awareness in OAO Gazprom.

Ecological marathon "Planet of Children — 2014" was held, it included competitions: of research projects, literary publications, drawings and photos, handicrafts, cloth models from ecologically clean materials, theater performances, environmental web-sites, and various environmental campaigns: "Feed birds in winter", "Birdhouse", "Say garbage NO", "Plant your tree" etc. Excursion to Moscow was organized after the marathon for the winners, they received diplomas, presents and souvenirs with symbols of the Year of Environmental Awareness in OAO Gazprom.

OAO Gazprom Service Building Management Division arranged for a stationary paper collection system in administrative buildings of OAO Gazprom (s. Gazoprovod) to transmit the paper for processing within the implementation of "Green Office" concept. Over 60 t of waste paper were collected over the year.

Information support of the events was arranged throughout the year and implied publication of press releases in regional media, radio and TV, web-sites of subsidiaries, web-sites of OAO Gazprom. Over 6,000 publications were issued during the year and 1,300 TV- and radio programmes were broadcast.

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Concluding conference devoted to environmental awareness within the Year of Culture in the Russian Federation and the Year of Environmental Awareness in OAO Gazprom took place at the V.I. Vernadsky Non-Governmental Ecological Fund on December 29, 2014.

The conference participants received welcome letters from A.V. Novak, Minister of Energy of the Russian Federation, V.I. Kashin, Chairman of the State Duma's Committee on Nature Resources, Nature Use and Ecology, Nature Use and Environment Protection Department of Moscow. Speeches of welcome were delivered by A.I. Bedritsky, Counselor and Special Representative of the President of the Russian Federation on climate issues, A.K. Tulokhonov, member of the Federation Council's Committee on Science, Education, Culture and Information Policy, Yu.N. Malyshev, Director of the Vernadsky State Geological Museum of Russian Academy of Sciences, RAS Academic, and others.

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The conference involved an exhibition devoted to the Year of Environmental Awareness in OAO Gazprom and an awarding ceremony as per the results of the Year of Environmental Awareness in OAO Gazprom and Ecological Education Days in the regions of the Russian Federation. Awards were also granted as per the results of activities on the development of environmental culture and safety culture and to the participants of the clean-up "Living Planet — We'll Do Together".

Diplomas and commemorative prizes were awarded for active participation in the activities of the Year of Environmental Awareness to the following companies:

OAO Gazprom Education Center, OOO Gazprom transgaz Belarus, OOO Gazprom transgaz Moscow, OOO Gazprom transgaz Yugorsk, OOO Gazprom transgaz Tchaikovsky, OOO Gazprom transgaz Nizhny Novgorod, OOO Gazprom transgaz Kazan, OOO Gazprom dobycha Urengoy, OOO Gazprom dobycha Orenburg, OOO Gazprom dobycha Krasnodar.

The most active participants of Ecological Education Days were also awarded: OOO Gazprom transgaz Moscow and its branch Morshansk TGP LPD, OOO Gazprom dobycha Urengoy, OOO Gazprom transgaz Ukhta, OOO Gazprom transgaz Stavropol, OOO Gazprom transgaz Samara, OOO Gazprom transgaz Kazan.

The winners of the Competition "National Environmental Award" in 2014 were: OOO Gazprom transgaz Saint Petersburg, OOO Gazprom transgaz Moscow, OOO Gazprom dobycha Orenburg, OOO Gazprom dobycha Nadym, OOO Gazprom transgaz Yugorsk, OOO Gazprom transgaz Stavropol.

Diplomas for active participation in the increase of environmental culture level of the population within the Year of Environmental Awareness in OAO Gazprom were given to: OOO Gazprom transgaz Krasnodar, OOO Gazprom transgaz Saratov, OOO Gazprom transgaz Saint Petersburg, OOO Gazprom dobycha Astrakhan, OOO Gazprom dobycha Nadym, OOO Gazprom dobycha Yamburg.

Basing on the results of the National Autumn Ecological Clean-up "Living Planet — We'll Do Together" the V.I. Vernadsky Fund granted awards to the most initiative companies: OOO Gazprom Energoholding, OAO Gazprom promgaz, OOO Gazprom transgaz Moscow, OOO Gazprom gaznadzor, ZAO Gazprom Neft — Severo-Zapad, OOO Gazprom transgaz Krasnodar, OOO Gazprom dobycha Orenburg, OOO Gazprom transgaz Nizhny Novgorod, OAO Gazprom transgaz Belarus, OOO Gazpromtrans, OOO Gazprom transgaz Yugorsk, OOO Gazprom UGS, OOO Gazprom transgaz Saint Petersburg, OOO Gazprom invest.

## Events of subsidiary companies

Planned events — 782, performed events — 1,051. 56 subsidiary companies and organizations of *Gazprom Group* took part. 62,649 persons improved level of their environmental knowledge.

### Improvement of environmental culture of subsidiaries' employees

Lectures on environment protection activities of enterprises were held for employees, information sheets were issued, stands, memos on production environmental safety, production and consumption waste handling were executed.

For example, exhibitions devoted to the World Water Day, International Earth Day, World Environment Protection Day were held in the corporate museum of OOO Gazprom dobycha Astrakhan. OOO Gazprom transgaz Saratov branches arranged for the demonstration of a film on the Year of Ecology results (2013) and lectures "Environmentally competent man is a man of culture" were read for the employees. A documentary film "Home. Meeting with Planet" is available on the network resource of OOO Gazprom pererabotka for environmental education purposes.

OOO Gazprom transgaz Samara participated in theme workshops and exhibitions of motor vehicles operated by natural gas which were aimed at the promotion of methane as automobile fuel. OOO Gazprom dobycha Krasnodar participated in the Ecological Forum "New standards, technologies and projects" held by the international ecological movement "Terra Viva" and Krasnodar Regional Department of the Russian Geographical Society.

During the whole 2014 year, OAO Gazprom Neft held forums and meetings on production, fire and environmental safety, labour protection and civil defense. Key managers of *Gazprom Neft* subsidiaries and corporate center divisions who are directly responsible for the implementation of policy on industrial safety, labour protection and environment protection, took part in the forums.

Planned events — 110, performed events — 270. 71,816 employees from 31 *Gazprom Group* subsidiaries participated

### Competition of subsidiaries' work collectives "Environmental culture of production"

Almost all subsidiaries held review competitions during the year: "Environmental Culture of Production", "Best Branch" and "Best Environment Protection Service of the Branches", "Best Environment Protection Engineer", competitions on the best landscape gardening of subsidiaries took place as well.

For example, OOO Gazprom transgaz Samara arranged for the competition on environment protection and energy saving, OOO Gazprom transgaz Kazan held competitions "Better prevent pollution than eliminate it".

OOO Gazprom transgaz Belarus held competitions "Best innovation proposal concerned with production environmental culture improvement" and "Best method of separate waste collection", OOO Gazprom UGS initiated the competition of work collectives on the best video page "Ecological booklets", OOO Gazprom transgaz Tchaikovsky — competition "Eco-presentation" on the promotion of environmental culture in production (in workshops and services).

Planned events — 1,012, performed events — 4,443. 51 subsidiary companies and organizations of *Gazprom Group* took part.

### Campaigns to support favourable environment in activity regions (landscape gardening, cleaning of nature protection areas)

Employees of all subsidiaries took part in All-Russian Clean-ups "Green Spring", "Green Russia", "Living Planet — We'll Do Together", which were initiated by the All-Russian public ecology movement "Green Russia" and the V.I. Vernadsky Non-Governmental Ecological Fund. The clean-ups aimed at the attraction of, first of all, young people to the environmental problems. The Company's employees in the whole country were engaged with landscaping of urban streets, parks, education institute territories, forest areas, water body banks. For example, OOO Gazprom dobycha shelf Yuzhno-Sakhalinsk performed the clean-up "From sea to sea", Sakhalin saw clean-up in the territory near the gas pipeline landfall from the underwater production unit of Kirinskoye GCF, Yuzhno-Sakhalinsk — clean-up of Pobeda Prospect, Murmansk — works were carried out in the State Memorial Complex "Valley of Glory", banks of the Ura river and other water bodies were cleaned from garbage, at the same time recreation zone "Troparevo" and Landscape Reserve "Teply Stan" were cleaned in Moscow.

Campaigns were held in 3,489 towns and settlements. Area of cleaned territories amounted to 11,622.4 ha. Weight of removed garbage was 11,732.123 t. 484 water bodies were rehabilitated, 171,871 trees and bushes were planted, 77,401 flowerbeds and flower gardens were arranged, support to SPNA of federal, regional and local levels was granted.

OOO Gazprom transgaz Samara cleaned area of the National Park "Samarskaya Luka", Natural Monument "Sosnovy Bor" and PNA Botanic Garden of the State Samara University.

OOO Gazprom dobycha Urengoy employees conducted beautification of the area of the Urengoy gas production department within the framework of the All-Russian Ecological Clean-up "Green Russia".

OOO Gazprom UGS Vladivostok together with the representatives of the Primorsky District Administration, Public Patriotic Movement "Heroes of Khasan" and National Park "Leopard's land" held the campaigns "Clean Bank" and "Clean Banks to Small Rivers" in the Khasan region.

Employees and veterans of OOO Gazprom dobycha Irkutsk and their families cleaned sections of the Baikal Lake coast in Olkhon Region, banks of the Kirenga river in Kazachinsko-Lensky region of Irkutsk Region. Employees of OOO Gazprom transgaz Makhachkala conducted clean-up in Makhachkala, Kaspiysk, Izberbash, Derbent and other Dagestan towns where it took several hours to root out dry bushes and trees, remove dry grass and domestic garbage. OOO Gazprom dobycha Orenburg cleaned forest zones in Orenburg, rehabilitated and modernized spring wells.

Employees of OOO Gazprom geologorazvedka performed works to eliminate environmental damage of previous years at Tambay, one of the most northern stations of Yamal region in Yamalo-Nenetsky Autonomous Okrug.

OOO Gazprom transgaz Moscow together with the Ministry of Nature Use and Ecology of Ryazan Region, the territorial body of the Federal Service for Supervision of Natural Resource Management held an environmental campaign in the Oksky State Natural Biosphere Reserve where the territory was cleaned, foundation of an arboretum near the Visit-Center was laid. OOO Gazprom transgaz Moscow presented a UAZ car operated by ecologically clean NGV fuel to the biosphere reserve.

Employees of the Gas Stabilization Factory named after V.S. Chernomyrdin (OOO Gazprom pererabotka branch) established the Gas Worker Avenue where Siberian spruces were planted, on the occasion of 30th Anniversary of the Surgut GSF. Employees of OOO Gazprom mezhregiongaz Voronezh and OAO Gazprom gazoraspredeleniye Voronezh performed landscaping of the area near the Voronezh Reservoir. OOO Gazprom dobycha Yamburg conducted the campaign "We are for clean planet". Employees and their families planted trees in kindergartens.

OOO Gazprom transgaz Yugorsk arranged for cleaning of the bank of the Kakva river — one of the rivers at the Northern Ural. Rafting along the most popular river section took place in the course of the above action with stops to clean the tourist rest areas.

Bike rides organized in the subsidiaries were the part of the activities during the Year of Environmental Awareness. OOO Gazprom transgaz Tomsk carried out "Bike ride — 2014" in 13 regions of Siberia and Far East. OAO Gazprom transgaz Belarus arranged for a cyclocross "Year of Environmental Awareness with ecological transport" along the route Minsk — Kurgan Slavy — Minsk. The World Environment Day and the Environmentalist Day coincided with a bike ride in Stavropol suburbs in which OOO Gazprom transgaz Stavropol employees and students of the North-Caucasus Federal University took part. In the honour of heroic work performed by the pioneer constructors of the gas pipeline "Soyuz", OOO Gazprom dobycha Orenburg arranged for and conducted a charitable bike ride "Way of blue flame" along the route "Orenburg — Alexeevskoye TGP LDP" 215 km long. Support was rendered to the Centre of Steppe Animal Breeding where Przewalski's horses, kyangs (Tibetan wild asses) and Bactrian camels live. Managers and experts spent their personal finances to drill and make a drinking water well, buy building materials and perform landscaping. Two Przewalski's horses were brought from Orel Region.

*Gazprom Neft Group* implemented a number of activities on planting trees, bushes, making parks and gardens. Approximately 4,000 coniferous and deciduous trees and bushes, about 4,000 flowers on the whole were planted in the regions where the Company is present, about 15 ha of area were landscaped. The campaigns enjoyed active participation of the General Directors of the subsidiaries, representatives of the municipal district administrations, employees' children, veterans of the Great Patriotic War and local citizens. Various master classes for adults and kids were arranged during the campaigns.

Planned events — 35, performed events — 94. Number of printed copies amounted to 28,000. 29 subsidiary companies and organizations took part.

### **Preparation and publishing of methodological recommendations for OAO Gazprom experts on the arrangement of environment protection activities**

In 2014, methodological materials and instructions, booklets, brochures on ecology, environmental management, waste management and resource saving were prepared in order to improve environmental culture of employees of OAO Gazprom and its subsidiaries.

So, OOO Gazprom transgaz Kazan drawn out and distributed a handbook for the employees of services and departments on environment protection, production environmental control, compliance with the environmental legislation, information sheets on environmental management were issued.

OOO Gazprom transgaz Saint Petersburg prepared a booklet on environment protection activities of the Company where environmental practices for every day were described.

OOO Gazprom transgaz Belarus issued "Pocket book on waste handling", OAO Gazprom Neft (OAO GPN-NoyabrskNeftegaz) issued a brochure "Golden rules of environmental safety" with brief set of rules which can be implemented both at an enterprise and at home, OOO Gazprom dobycha Noyabrsk developed and published booklets for children, OOO Gazprom dobycha Nadym arranged for monthly notification of employees on environmental information by placing the latter on the reverse side of payroll slips.

OOO Gazprom dobycha Urengoy prepared video on environment protection activities to show it to the employees during on-the-job training.

OOO Gazprom transgaz Stavropol together with OAO Gazprom employees and teachers from the South Federal University prepared and published a study guide "Arrangement of environment protection activities at gas transportation enterprises". The said guide is intended for environment protection engineers of gas industry enterprises and can be used by environmentalists of other industries, students of higher education institutions training in "Environment protection", "Environmental management". The guide was sent to the leading libraries of the Russian Federation. On the Knowledge Day it was presented to more than 50 first-year bachelors and masters of the Institute of Mathematics and Natural Sciences of the North-Caucasus Federal University.

Planned events — 629, performed events — 9,423, including 82 events with the participation of public organizations. 52,730 employees from 45 subsidiary companies and organizations took part. 14,772 banners, booklets, handbooks were issued. 438 TV and radio programmes were broadcast.

### **Preparation and distribution of visual propaganda means on environmental protection, creation of social and environmental advertising forming environment-focused behaviour (banners, videos, handbooks, booklets).**

Distribution of visual propaganda means and social-environmental advertising forming environment-focused behaviour plays important role in the education of broad population. For this purpose, for example, in 2014, OOO Gazprom dobycha Orenburg issued booklets "Forest fire prevention and response", "Attention! Protected water area", "Harm from used batteries and accumulators with lost consumer properties", "Requirements for used mercury-containing lamp handling".

OOO Gazprom transgaz Kazan prepared and distributed to the population (in the course of gas equipment maintenance) leaflets explaining principles and necessity of selective waste collection, undesirability of luminous lamp usage and danger of incorrect utilization of salt and alkaline batteries. OOO Gazprom dobycha Urengoy, OOO Gazprom geologorazvedka published printed materials promoting environment-focused behaviour. OOO Gazprom Energoholding issued a booklet with information on environment protection activities of OAO Mosenergo.

OOO Gazprom dobycha Nadym held an exhibition "Fuel Duel" where vehicles operated by different fuel types were presented. OOO Gazprom transgaz Stavropol conducted an advertising campaign on CNG usage in transport. Advertising means in the form of booklets, wall and pocket calendars describing the consumer and ecological properties of CNG were manufactured and distributed, the round table "Natural Gas as Motor Fuel. Practical Aspects of Usage at Agricultural Enterprises" was held in Stavropol within the framework of the exhibition "Agrouniversal' 2014". OOO Gazprom transgaz Volgograd provided advertising on the Year of Environmental Awareness and social and environmental advertising on the municipal transport.



In 2014, OOO Gazprom dobycha Orenburg issued booklets: "Forest fire prevention and response", "Attention! Protected water area" "Harm from used batteries and accumulators with lost consumer properties", "Requirements for used mercury-containing lamp handling".

Planned events — 377,  
performed events —  
1,228, including  
200 ones with public  
organizations.  
35,345 people  
from 47 subsidiary  
companies  
and organizations  
took part.  
5,695 printed  
publications were  
issued, 974 radio  
and TV programmes  
broadcast.

#### **Events to inform population on environmental aspects of OAO Gazprom production activities for environmental education purposes**

OAO Gazprom has been engaged with systematic and large-scale work to protect nature for the benefit of sustainable development of Russia. In addition to obligatory requirements of the Russian and international legislation, OAO Gazprom strictly follows voluntary environment liabilities. They involve fulfillment of Environmental Policy provisions, reduction of GHG emissions. Corporate newspapers and journals of subsidiaries print interesting informative data on achievements and new technologies in ecology field.

Big job was done within the activities on this aspect concerned with the Year of Ecology Awareness in OAO Gazprom. Such *Gazprom* subsidiaries as OOO Gazprom dobycha Noyabrsk, OOO Gazprom dobycha Orenburg and OOO Gazprom transgaz Ukhta, OOO Gazprom transgaz Saratov, OOO Gazprom pererabotka were the most active participants. Regional media covered production activities of subsidiaries and branches, as well as activities scheduled by the Year of Environmental Awareness Programme (ecological campaigns "Green Spring", "Green Russia" etc.).

Corporate newspaper "Severgazprom" of OOO Gazprom transgaz Ukhta, "Sibirsky Gazovik" of OOO Gazprom transgaz Surgut, "Golubaya Magistral" of OOO Gazprom transgaz Saratov and other corporate media published articles on environment protection activities of the Companies and publications on the Year of Environmental Awareness: "Favourite bank became cleaner", "Green Park — To Be", "Environmental missions of gas workers", "Methane — alternative fuel of future" etc.

OOO Gazprom energo conducted a social quest for bloggers and journalists of YaNAO on the theme: "How much are housing and utilities for Yamal citizens?", ecological blog-tour "Pure water of Orenburg Region — 2" was held on the base of the South-Ural Federal University with photos of its results being posted in Instagram.

OAO Gazprom transgaz Belarus provided information on the implementation of activities related with the Year of Environmental Awareness, on the advantages of using compressed natural gas as motor fuel on the Company's web-site. The "Slonimsky Vestnik" newspaper placed publications on the retrofitting of motor transport to work with compressed natural gas at the section where gas cylinder equipment is installed for Slonim TGPLD in order to make natural gas more popular as the safest motor fuel type from environmental point of view.

OOO Gazprom transgaz Samara took part in the 6th Interregion Special Exhibition "Com Avto Trans" on the theme "Environmental advantages of CNG as compared to other fuel types", in conference "Operation peculiarities of production vehicles using natural gas".

Much attention to environmental aspects was paid in corporate films shown at the stands of international exhibitions "Oil and Gas of Sakhalin" and "Offshore Marintec Russia", in which OOO Gazprom dobycha shelf Yuzhno-Sakhalinsk took part.

OOO Gazprom dobycha Urengoy informed on its environment protection activities by presenting an ecological exposition within the international campaign "Night in Museum". There prepared were articles, reports, presentations on innovative solutions of OOO Gazprom dobycha Urengoy on the reduction of pollutant emission into atmosphere, on main parameters of the Company's environment protection activities, on expertise in, problems and prospects of production waste disposal, on new technologies of hydrocarbon raw material production and preparation for transportation at Urengoy field.

OOO Gazprom sotsinvest together with the students of the Sochi Ecological-Biological Center and journalists implemented a campaign to let Black Sea salmon fries out to the Mzymta river, the fish is of rare species registered in the Red Book.

The companies of *Gazprom Energoholding Group* also carried out a number of activities, including education-information project "Hour of Energy" implemented by OAO TGC-1 in schools

and HEIs, distribution of videos "Energy sector: how it works" (ecology, safety, efficiency) in social media, arrangement for children drawing exhibitions on energy saving "Say no to extra costs — save heat and electricity" etc. together with OAO Teploset Sankt-Peterburg.

Planned events — 552, performed events — 974, including 74 ones for media, 856 — for students and schoolchildren. 22,601 people took part.

### Excursions, trips, press-tours

One of the important provisions of OAO Gazprom Environmental Policy is the availability of information on its business activities and decisions made hereupon. Gazprom subsidiaries opened their doors for interested visitors in order to inform public at large and youth on the actual state of play in environment protection activities planning at production.

So, during the year OOO Gazprom transgaz Yugorsk conducted over 50 excursions at production facilities and over 100 excursions in the Company's Museum. OOO Gazprom dobycha Orenburg arranged for a press-tour at the enterprise for the Journalism Department students of the Orenburg State University, and a contest for the best article on the visit result was announced.

OOO Gazprom dobycha Nadym conducted 2 press-tours at Bovanenkovskoye field for foreign film crews (The Gamma Project Limited and Pilot Film& Television Productions Ltd) with the demonstration of achievements in the environmental protection.

OOO Gazprom dobycha Yamburg arranged for press-tours to Zapolyarnoye oil, gas and condensate field for regional media representatives and journalists from the federal German radio station "Deutschlandradio".

A great number of activities was implemented in OOO Gazprom transgaz Stavropol, OOO Gazprom gazoraspredeleniye, OOO Gazprom Energoholding.

A press-tour took place at the sites of Kirinsk Gas Production Department of OOO Gazprom dobycha shelf Yuzhno-Sakhalinsk to inform the public on production activities and environmental safety of performed works.

Excursion for school pupils, students, public members in Omsk was organized at OAO Gazprom Neft facilities.

Planned events — 1,379, performed events — 2,001. Number of participants — 55,444.

### Education of preschoolers, schoolchildren and students

Improvement of environmental culture of people is possible only due to the formation of environmental responsibility principles and involvement in nature wealth preservation in the minds of people, especially the youngsters. For this purpose the *Gazprom Group* companies arranged for many environmental awareness lessons "This fragile planet", "Red Book — laissez passe" etc. for pupils from junior and senior classes in big cities and small settlements. Employees of OOO Gazprom dobycha Krasnodar together with State Reserve Utrish conducted an unusual open lesson for children from sponsored boarding school in the settlement Sovkhozny of Slavyansky District of Krasnodar Region. The lesson was organized as an excursion along the ecological path "Canyon". During the walking excursion children visited old-growth juniper forest, saw the Utrish phenomenon — a geological fault. While being involved in interactive playing, children got acquainted with flora and fauna of the Reserve Utrish, talked on the necessity to care about nature.

In 2014, OOO Gazprom dobycha shelf Yuzhno-Sakhalinsk and All-Russian Public Organization "Green Patrol" continued working on environmental education of coming generation: lessons, children drawing contests themed "Caught a Sakhalin taimen — let it free" in the school of s. Nogliki.

OOO Gazprom dobycha Urengoy arranged an environmental team of 43 young people from Novy Urengoy who were involved in landscaping works carried out by the employees, they were also informed on environment protection activities of the Company.

An ecological quiz game was organized by OOO Gazprom pererabotka environmentlists in Children and Youth Center of Military and Sport Training "Sibirsky Legion" in Surgut. All children were awarded with commemorative prizes.

OOO Gazprom dobycha Nadym conducted an open school lesson on "Usage of natural gas as motor fuel. Practice and prospects".

The Museum of OOO Gazprom dobycha Astrakhan organized six exhibitions devoted to various festive dates concerned with environment protection, ecological workshops for students were held as well as away events in schools and kindergartens of Astrakhan. The video film "Life in Volga" was remade for the participants of constant ecological campaign "Delta: beat off the attack of plastic". Environmental culture matters were covered in a series of thematic publications in the corporate newspaper "Pulse of Aksaraysk".

Planned events — 545, performed events — 641, including events in subsidiary branches — 380, those with public organizations — 146. Number of participants — 72,883.

### Ecological competitions

Ecological competitions in various formats and on different themes present one of the most traditional and efficient ways for environmental education. The goal of the competitions consisted in the attraction of personnel's attention in *Gazprom Group* subsidiary companies and organizations, especially young generation, to ecology problems.

Ecological competitions held by the *Group* subsidiaries were very different: competitions of research works, actually implemented projects on environment protection, creativity competitions (school compositions, media publications, photo and children drawing, handicrafts etc.).

Photo competitions for subsidiary employees "Home Forests", "Nature and We", Surprises Are Near", "Human and Nature. View Through the Lens", "Nature is Invaluable Gift", "How Wonderful This World Is", children photo competitions "Children and Animals", "Young Environmentalist" etc.

Children drawing competitions "Nature is the home we live in", "Animals, birds, forest and me — together harmonious Earth!", "Nature around us", "In harmony with nature", "Human and environment", "Nature of home land", children drawing on asphalt "Radiant sun", "Nature and me".

Competitions of children handicrafts from natural materials, those on making bird feeders, competition of handicrafts from production and consumption waste "Waste is not always garbage".

Family competitions to create ecozones "Our Yard" were held.

Subsidiaries organized competitions for the best wall newspaper to Environmentalist Day, competitions of posters on environmental topic.

For example, only OOO Gazprom transgaz Yugorsk held 53 children drawing and poster competitions on environmental topic, 39 sports and leisure creativity competitions for adults and kids related with the Year of Environmental Awareness, competitions for the most original feeders, handicrafts from waste materials, 19 ecological photo competitions.

In 2014, OAO Gazprom transgaz Belarus held children drawing competitions "Ecology of our town", "Take care of our planet — it is the best in the Universe", competition of practical and experimental work "Kitchen garden on a windowsill" and competition of handicrafts from natural materials, literary competition "Nature of home land".

Throughout the year OOO Gazprom dobycha Orenburg conducted the photo competition "Year of Environmental Awareness" with the best work being monthly published in the newspaper "Orenburg Gas". Competition "Green world seen by children" devoted to the World Environment Day, was held for pupils as well as competitions of handicrafts, drawings. Support to the organization and holding of the regional competition "Young Forester" was rendered.

OOO Gazprom transgaz Nizhny Novgorod held children drawing competitions "Ecology seen by children" and "Environment seen by children", "Visiting forest friends", photo competition for employees "Nature is the best artist of all times", children drawing competition.

Festival-competition "Not by bread alone" with the motto "In harmony with nature under vibrant guitar rhythms" was held for all OOO Gazprom transgaz Moscow branches. Besides, the following events took place: creativity competition "Wonderful world — nature!", competition of drawing and handicrafts in kindergartens "Nature is the home we live in and breath", ecological competition for pupils "Connoisseurs of nature", children drawing "In one breath with nature", exhibition of photos taken by the employees and members of their families "In harmony with nature", photo exhibition "This Wonderful World".

OOO Gazprom transgaz Tchaikovsky held competitions of children environment protection projects "Help nature in practice", composition competition "Live in harmony with yourself and environment", competition of children drawing on asphalt "How wonderful this world is" on the Children's Day, competitions of handicrafts made by the branch employees' children "Second life to waste", photo competition for the employees "Eco-lens", competition of wall newspapers for the Company departments.

OOO Gazprom transgaz Krasnodar together with Krasnodar Department of the Russian Geographical Society and the V.I. Vernadsky Fund took part in the National Prize "Crystal Compass" whose main goal is to support projects on the preservation of nature and historical and cultural wealth of Russia. Competition for pupils for the best scientific work on ecology, photo competitions "Nature seen by gas workers", "My home — Earth", "Kind habits" were also held.

OOO Gazprom transgaz Kazan held a photo competition for the employees "In harmony with nature", "Preserve forest!", competition for the branches for the best wall newspaper devoted to environment protection, competition for the employees for the best environmental message "Pay acute attention to nature! ".

OOO Gazprom transgaz Samara held festival "Ecology seen by children". All 120 participants of the competition received books with pictures, poems and stories by children from Samara region.

OOO Gazprom transgaz Saratov held Children Ecological Forum "Bloom, Planet" in which about 300 kids from Saratov took part.

Competition of children drawing and handicrafts from natural materials "Nature around me" was organized by OOO Gazprom transgaz Stavropol. Igor Larionov, Head of Building and Facility Repair Department of Stavropol Trunk Gas Pipeline Linear Production Department, planted the flag of the Year of Environmental Awareness in OAO Gazprom at the Elbrus Mountain peak.

In September 2014, in Saint Petersburg results of the latest competition "Young Vision Award" were announced, the competition is the joint project of Gazprom International (special company of OAO Gazprom to implement foreign projects) and Wintershall Russland GmbH (subsidiary of German oil and gas holding Wintershall). The goal of the project is to involve students from technical HEIs in the searches of innovative solutions for ecological problems that could arise from production process. According to the competition task, the participants had to propose innovative methods for oil production increase without damage for the environment. The project winner became Martin Mueller, student of Freiberg University, who presented work "Usage of Brinell hardness test of argillaceous formation sample for innovative researches within hydrofracturing framework".

In 2014, within the framework of the Year of Environmental Awareness, *Gazprom* International announced the start of the project ECONet — network of programmes and initiatives developed to preserve environment, interact with local communities, provide for safe work of employees in the regions where Gazprom International works.

The Year of Environmental Awareness in OAO Gazprom proved that environmental values are really important for all *Gazprom Group* companies. Implementation of this voluntary initiative promoted the improvement of environmental culture level and involvement of employees in environment protection activities.

*Gazprom Group* obtained about 350 various rewards from state authorities, educational and public organizations for the implementation of the activities within the framework of the Year of Environmental Awareness.

*Gazprom Group's* environmental impact on the whole is determined by the volumes of actual production, scope of construction and repair of main production assets, intensity of investment project implementation.

The main and most efficient instruments for the *Group* to achieve the strategic environmental goals on the reduction of anthropogenic impact on the environment are:

- introduction and support of efficient environmental management system based on ISO 14001 international standard requirements;
- target planning of actions to reduce environmental risks and of activities to implement the environmental policy;
- consideration of ecological and economical nature protection aspects together with the traditional financial and economical parameters at project design and implementation stages;
- allocation of sufficient organization, material, staff and financial resources to ensure the fulfillment of undertaken liabilities;
- performance of reclamation and other technical and organizational activities to liquidate the damage to the environment;
- usage of best available technologies in all business sectors;
- conducting and promoting of scientific researches aimed at the increase of energy efficiency, reduction of negative environmental impact and environmental risks.

In 2014, *Gazprom Group* reduced the negative environmental impact as compared to 2013: pollutant emissions into atmosphere dropped by 9.1%, greenhouse gas emissions — by 9.25%, discharges into surface water bodies — by 4.8%. The complex projects aimed at mitigation of adverse impact on the environment, preservation of natural ecosystems and ensuring efficient use of natural resources will be continued.



**Biodiversity (biological diversity)** — diversity of living organisms in all spheres including onshore, marine and other water ecosystems and ecological complexes forming them.

**Environmental damage** — negative change in environment caused by pollution which resulted in degradation of natural ecosystems and depletion of natural resources.

**GCF** — gas condensate field.

**GPU** — gas pumping unit.

**GDS** — gas distribution station.

**GTS** — gas transportation system.

**UGSS** — unified gas supply system of Russia.

**Polluting substance (PS)** — polluting substance is substance or mixture of substances, the quantity and (or) concentration of which exceed the norms established for chemical substances, including radioactive ones, other substances and microorganisms and influencing the environment adversely.

**Environmental quality** — environmental condition characterized by physical, chemical, biological and other parameters and (or) their combination.

**Environment protection control (environmental control)** — system of measures aimed at prevention, detection and elimination of legislation violation in the environment protection sphere, provision for fulfillment of the requirements, including norms and regulatory documents, in the environment protection sphere by entities of economic or other activity.

**CNG** — compressed natural gas.

**CS** — compressor station.

**CW** — compressor workshop.

**VOC** — volatile organic compounds.

**LPUMG** — line production department of trunk gas pipelines.

**LS** — line section.

**TGP** — trunk gas pipeline.

**Environmental monitoring (ecological monitoring)** — a complex system of environment monitoring, evaluation and forecast of environmental changes under the impact of natural and anthropogenic factors.

**OGCF** — oil gas condensate field.

**Adverse environmental impact** — impact of economic and other activity, the consequences of which lead to adverse changes in environmental quality.

**R&D** — research and development.

**Waste management** — collection, accumulation, use, neutralization, transportation and disposal of waste.

**Waste disposal unit** — specially equipped facility designed for waste disposal (polygon, slurry pond etc.).

**EIA (environmental impact assessment)** — type of activity aimed at detection, analysis and accounting of direct, indirect and other environmental impact consequences of planned economic and other activity to make a decision on possibility or impossibility of its implementation.

**Environment** — system of nature components, natural and natural-anthropogenic, as well as anthropogenic objects.

**Specially protected natural area (SPNA)** — areas of land, water surface and air space above them where natural complexes and objects are located, having specific nature-protecting, scientific, recreational, health-improving and other values, withdrawn partially or in full from economic use based on the decisions of the state authorities, and for which a special protection mode has been established. Specially protected natural areas are referred to national endowments.

**EP (environment protection)** — activity aimed at preservation and recovery of the environment, rational use and reproduction of natural resources, prevention of the adverse environmental impact of economic and other activity and liquidation of its consequences (hereinafter — environmental activity).

**GHG** — greenhouse gases. Presumably they cause the global greenhouse gases effect. The main greenhouse gases in the sequence of their estimated impact on the Earth's heat balance include water steam, carbon dioxide, methane, ozone, sulphurylfluoride, halocarbons and nitrogen oxide.

**MPC** — maximum permissible concentration.

**APG** — associated petroleum gas. Mixture of gases and vaporous hydrocarbon and non-hydrocarbon components emitted from oil wells and in-place oil in the process of its separation.

**Natural object** — natural environmental system, natural landscape and their components, which preserved their natural properties.

**Natural complex** — complex of natural objects functionally and naturally related to each other, united by geographic and other corresponding characteristics.

**Natural resources** — environmental components, natural objects and natural-anthropogenic objects which are used or which can be used for economic and other activity as energy sources, ware and commodities and which have a consumption value.

**UGS** — underground gas storage/facility.

**SPZ** — sanitary protection zone.

**LNG** — liquefied natural gas.

**OPN** — own process needs.

**EMS** — environmental management system.

**Environmental requirements (nature protection requirements as well)** — any obligatory conditions, limitations or their combination for economic or other activity, established by laws, other regulatory legal acts, environmental norms, state standards and other regulatory documents in the environmental protection sphere.

**FER** — fuel and energy resources.

**Environmental audit** — independent complex documented assessment of fulfillment by the economic or other activity entity of requirements, including norms and regulatory documents, in the environmental protection sphere, requirements of international standards and preparation of recommendations for such activity improvement.

**Environmental safety** — condition of protection of the environment and vital interests of humans from possible adverse impact of economic and other activity, natural and industrial emergencies, and their consequences.

**Environmental control** — system of measures aimed at prevention, detection and elimination of legislation violation in the environment protection sphere, provision of fulfillment by entities of economic or other activity of the requirements, including norms and regulatory documents, in the environmental protection sphere.

**Environmental management** — part of the general corporate management system with a clear organization structure and aimed at reaching the objectives indicated in the environmental policy by means of environmental programs implementation.

**Ecological monitoring (environmental monitoring)** — a complex system of environment monitoring, evaluation and forecast of environmental changes under the impact of natural and anthropogenic factors.

**Environmental risk** — probability of occurrence of an event with unfavourable environmental consequences, caused by the adverse impact of economic and other activity and natural and industrial emergencies.

**Environmental appraisal** — determination whether documents and (or) documentation justifying the economic and other activities planned to be implemented by the entity subject to the appraisal, with the environmental requirements established by technical regulations and legislation in the environmental protection sphere for prevention of the adverse environmental impact of such activities.

**Energy saving** — implementation of legal, management, scientific, production, technical and economic measures aimed at efficient (rational) use of fuel and energy resources and involvement of renewable energy sources into economic turnover. Energy saving is an important task for natural resources preservation.

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