MITIGATING NEGATIVE ENVIRONMENTAL IMPACTS AND THE EFFECTIVE USE OF RESOURCES

A responsible attitude towards the environment is a strategic priority for Gazprom Neft. The Company is aware of its responsibility to society in this regard and objectively assesses and seeks to minimise environmental risks while increasing investment in environmental programmes. The Company's strategic goals in ensuring environmental safety and the sustainable use of natural resources are:

- to reduce its environmental footprint and support a favourable natural and living environment;
- to prevent environmental damage from business activities;
- to preserve biodiversity amidst conditions of a growing man-made burden;
- > the sustainable use, restoration and protection of natural resources.

Based on these plans, the Company prioritises the following activities:

- > risk management in environmental safety;
- environmental monitoring and industrial environmental control;
- management of the emergency prevention and containment system and mitigating the consequences of emergencies;
- > commissioning environmental facilities;
- implementing a programme for the value-added use of APG;
- developing energy conservation and improved energy efficiency programmes;
- developing production waste recycling/disposal programmes;

- implementing programmes to modernise oil refining assets;
- developing and implementing biodiversity conservation programmes;
- > developing and introducing eco-technologies;
- > training and developing environmental safety personnel.

Investment in environmental safety and protection totalled RUB 14.3 billion in 2016.

Gazprom Neft's integrated control system in industrial safety, in particular in environmental safety, enables the Company to achieve its strategic goals and meet its environmental safety obligations.

In an effort to enhance its environmental safety performance, the Company continuously improves its business processes as part of the management system and engages with stakeholders. Gazprom Neft is consistently shifting away from carrying out measures to mitigate damage to assessing environmental risks and introducing preventive measures to warn about the impact of its production activities on the environment.

Expenses on environmental services and operating costs to ensure environmental safety and protection amounted to RUB 6.876 billion in 2016.



PROTECTING THE ATMOSPHERE

One of the Company's primary environmental objectives is to reduce air pollutant emissions. In an effort to meet this objective, Gazprom Neft is carrying out an ambitious programme to modernise and rebuild its oil refining assets with a focus on boosting their industrial safety, minimising their environmental impact, enhancing the quality of products they manufacture and improving the environmental performance of different types of motor fuel.

PRODUCTION CONTROL

The first stage of the oil refining assets modernisation programme, which Gazprom Neft completed in 2015, has enabled the Company to proceed with the production of a full range of high-octane petrol and diesel fuel that meet Euro-5 emission standards. The transition by consumers to fuel of this higher emission standard significantly reduces emissions when used in motor vehicle engines.



STRUCTURE OF GROSS AIR POLLUTANT EMISSIONS

The increase in gross air pollutant emissions in 2016 compared with 2015 is due to an increase in oil production volume, including at subsidiaries with mature fields.

 $^{\rm C}$ CO₂-equivalent (CO₂-equ., CO₂e) is a unit used to measure the potential global warming of greenhouse gases. Carbon dioxide is the standard used to estimate all other greenhouse gases.

GREENHOUSE GAS EMISSIONS

As one of the leaders in the Russian oil industry, Gazprom Neft is aware of its responsibility to preserve the environment for present and future generations. The problem of climate change reinforces the importance of this issue and activities to reduce emissions at the company and national level. The Company is developing a programme to increase the utilisation of associated petroleum gas at all its production assets. Building the required infrastructure and facilities significantly reduces greenhouse gas emissions during the full-scale development of assets while increasing the efficiency of hydrocarbon production.

The growth in greenhouse gas emissions in 2016 is due to the commissioning of new major fields and also due to an increase in heat and electricity consumption as a result of the unusually cold winter. Gazprom Neft also continued implementing projects to increase the level of effective APG utilisation in 2016. The Yety-Purovskaya Compressor Station with a processing capacity of 1.2 billion m³/year was commissioned in the Yamalo-Nenets Autonomous District along with a gas turbine power plant at the Shinginskoye field, and construction continued on Russia's largest complex gas treatment plant (CGTP) at the Novoportovskoye field. The Company's strategic goal is to increase value-added APG utilisation to 95%.

GREENHOUSE GAS EMISSIONS

(mn t of CO₂-equivalent)¹





APG USAGE (mn m³)

Source: Company data



APG UTILISATION LEVEL¹ (%)

Source: Company data

2016		80.4
2015		79.9
2014		80.6
2013		79.5
2012	65.7	

WASTE MANAGEMENT

The Company's industrial waste management system optimises waste flows, mitigates the environmental impact and reduces the economic cost of waste generation. Gazprom Neft strives to maximise the possible use of waste in order to mitigate its environmental impact.

During the reporting year, the Company began introducing sludge pit reclamation technology using environmentally friendly soil obtained from drill cuttings. In 2015, the technology underwent testing at a number of the Company's fields and was given a favourable conclusion as part of a state expert environmental review. Gazpromneft-Noyabrskneftegaz successfully used the method to reclaim sludge pits.

WASTE GENERATION (1,000 t)

Source: Company data



WATER MANAGEMENT

Gazprom Neft implements action programmes that aim to minimise its volume of water consumption, mitigate environmental risks in water resource conservation and improve the environmental condition of water bodies and their coastal areas.

One of the key projects of 2016 was the construction of the 'Biosphera' biological treatment plants at the Moscow Oil Refinery with some of the best wastewater treatment efficiency in the world. The 'Biosphera' plant is slated to open in 2017. Another major water management project was preparation for the construction of enclosed treatment plants at the Omsk Oil Refinery. The advanced technological solutions for multi-stage treatment will reduce the consumption of river water and increase its reuse in production.

VOLUME OF WATER CONSUMPTION (mn m³)





VOLUME OF WATER WITHDRAWN AND RECEIVED FROM VARIOUS SOURCES² (mn m³)



¹ Data for 2014-2016 includes performance of Gazpromneft-Yamal.

² The increase in the volume of water withdrawn and received is related to increased drilling volumes at the enterprises of the Company's Upstream Division.

PROTECTION OF LAND RESOURCES AND VEGETATION

Gazprom Neft reclaims disturbed and contaminated land and sludge pits. The reclamation programmes involve an inventory of the land, an assessment of the soil contamination level, the selection of the most effective rehabilitation technology and an assessment of the quality of environmental restoration work.

Since 2014, the Company has been implementing the 'Clean Territory' project, which aims to reduce pipeline failure rates and the area of contaminated land. The project includes diagnostics and monitoring of corrosion and the reconstruction and replacement of roughly 400 km of pipelines per year.

The Company introduced the approach of recycling drilling waste at temporary storage sites without building sludge pits in 2015 and continued to successfully utilise this approach throughout 2016. Drilling waste is recycled with the construction material obtained subsequently being used to eliminate temporary drilling waste storage sites and also at other facilities in accordance with its designated purpose.



The decrease in the amount of oil contaminated lands reclaimed in 2016 compared with 2015 is due to the early implementation of the soil reclamation programme during previous periods as well as the use of resource-saving technologies as part of the 'Clean Territory' corporate project, which led to a decrease in the area of contaminated land.

ARCTIC LAND RECLAMATION PROGRAMME

Messoyakhaneftegaz is implementing an Arctic land reclamation programme at its production activity areas. The project to clean up Arctic territories within the boundaries of the East-Messoyakha license area began back in 2015. Its main goal is to restore land following the geological exploration work conducted during the last decades of the twentieth century. Metals and other waste were collected as part of the project after which the area was reclaimed using biological technology. In 2016, the Company's enterprise returned 86 hectares of reclaimed land.

PRESERVING BIODIVERSITY

The Company's field development projects include a programme to rehabilitate aquatic biological resources.

In order to comply with the Russian President's orders on the safe development of the Arctic, Gazprom Neft is implementing a perpetual corporate programme to preserve biodiversity based on a list of flora and fauna that serve as indicators of the stable condition of the marine ecosystems in Russia's Arctic zone.

In accordance with the programme, the Company conducted a study in 2016 on a wide range of fauna species in the sea, on the coast and in coastal waters. The study results revealed that neither the Prirazlomnaya platform in the Pechora Sea nor escort vessels and tankers providing delivery of Novy Port and Prirazlomnoye oil to Murmansk have had any significant stressful impact on plankton, on the successful breeding of birds (including the emergence of new, rare species) or on marine mammals.

³ Oil contaminated lands were fully reclaimed in 2016. The decrease in reclamation compared with 2015 is due to the use of resourcesaving technologies as part of the 'Clean Territory' corporate project, which led to a decrease in the area of contaminated land. The Company's field development projects include a programme to rehabilitate aquatic biological resources.