

ENERGY CONSUMPTION AND ENERGY EFFICIENCY

Higher production growth rates have led to increased energy consumption at the Company. In an effort to minimise the impact of this process, Gazprom Neft is working on improving energy efficiency and optimising the use of energy resources by introducing a systematic approach to meeting these challenges.

One of the priorities for improving the Company's operational efficiency is to enhance the energy efficiency of its production assets. Gazprom Neft's energy policy aims to enhance the energy efficiency of the Company's production enterprises, mitigate adverse impacts on the environment and reduce the consumption of non-renewable energy resources.

The Company has established an integrated energy management system based on ISO 50001. Introducing modern tools to manage production gives Gazprom Neft the opportunity to effectively utilise the best global and national practices for managing the consumption of fuel and energy resources.



433
mn kWh

energy savings
of the Upstream Division
in 2016

UPSTREAM DIVISION

The main energy efficiency indicator at Upstream Division enterprises is the specific electricity consumption for liquid extraction, which totalled 28.91 kWh/t in 2016, or 1.7% below the planned level.

The Energy Efficiency Programme exceeded its targets in 2016. The Upstream Division had energy savings of 433 million kWh (RUB 1.251 billion), which is a record level for the implementation of energy efficiency programmes at Gazprom Neft.

The decrease in electricity consumption is the result of a reduction in the volume of fluid produced. The increase in thermal energy consumed for oil production processes was due to changes in the ambient air temperature.

The Upstream Division continued introducing the Energy Management System in 2016.

TOTAL ENERGY CONSUMPTION BY THE UPSTREAM DIVISION

	2012	2013	2014	2015	2016
Electricity consumption (purchased + generated), MWh	5,690,232	6,032,738	6,177,164	6,419,919	6,298,276
Change vs. previous period, %	6.9	6.0	2.4	3.9	(1.9)
Thermal energy consumption (internally produced and purchased from third-party suppliers), GJ	1,231,237	1,218,555	1,064,758	982,015	996,644
Change vs. previous period, %	(3)	(1)	(13)	(8)	1

DOWNSTREAM DIVISION

The Downstream Division continued implementing the measures of the comprehensive Energy Conservation Programme in 2016. As a result, the Division's fuel and energy savings totalled:

- > heat energy – 258.7 Gcal
- > fuel – 25,000 TOE
- > electricity – 16.2 mn kWh

Energy conservation activities resulted in savings of 2,369.9 TJ of heat, electricity and fuel. This made it possible to reduce growth in energy intensity associated with the commissioning of new process units by 1.6%, or 7% higher than the 2015 indicators. Spending on energy resources decreased by RUB 528.9 million.

In 2016, the Downstream Division Unified Energy Management System, which links the Unit's upper (corporate centre) and lower (key subsidiaries) levels of energy conservation and energy efficiency management, was completed and certified with ISO 50001.

Sixty-three measures with a total investment of RUB 667 million were planned and implemented as part of the Programme for Improved Power Supply Reliability to Oil Refining Enterprises in 2016.

The 'Power' Centre of Excellence achieved an economic effect of RUB 330 mn during the reporting year by implementing best practices proposed by the Centre's experts.

The main focuses were: eliminating power equipment failures, increasing the sustainability of power supply systems, improving the level of technological infrastructure, as well as training and upgrading personnel skills.

The Programme resulted in the following positive dynamics in target performance values versus the 2015 levels:

- > the overall number of failures decreased by 15%;
- > the total number of unscheduled downtime hours due to power supply disruptions decreased by 49%;
- > the overall indicator for resistance to external disturbances increased by 30%.

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CONSUMPTION OF PURCHASED ENERGY BY THE DOWNSTREAM DIVISION

	2012	2013	2014	2015	2016
Purchased electricity (minus electricity transferred to third parties), MWh	3,121,124	3,322,147	3,262,669	3,340,550	3,400,210
Change vs. previous period, %	–	6.4	(1.8)	2.4	1.8
Purchased thermal energy (minus electricity transferred to third parties), GJ	16,854,981	17,373,245	16,581,709	16,081,895	15,186,997
Change vs. previous period, %	–	3.1	(4.6)	(3.0)	(5.6)