



ENVIRONMENT

REPORT/2016

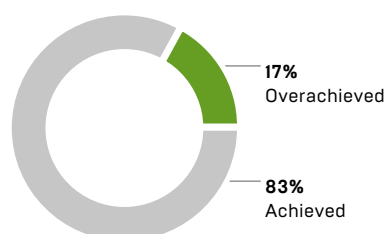
ENVIRONMENT

2016 HIGHLIGHTS

NLMK Group improved the environmental performance of its operations in 2016

TARGET FIGURES SUCCESSFULLY ACHIEVED

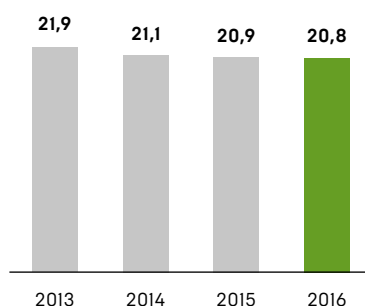
NLMK GROUP ACHIEVED
ITS 2016 ENVIRONMENTAL
TARGETS



REDUCED AIR EMISSIONS

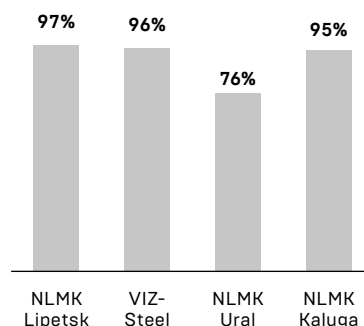
REDUCED AIR POLLUTION

kg/t of steel



EFFICIENT WASTE MANAGEMENT

HIGH WASTE RECYCLING RATE



100%
OF 2016 TARGETS
ACHIEVED

250 tonnes
per year
reduction in air emissions
thanks to capex projects

94% waste recycling
rate across
NLMK Group
(excluding low-hazard
mining waste)

→ For more details, see page 7

KEY FACTS AND FIGURES

Successful implementation of environmental initiatives

The Group achieved all the 2016 targets including a reduction of emission rates.

Efficient use of natural resources

Ongoing reduction of water consumption and high recycling rates lower cash cost and environmental impact.

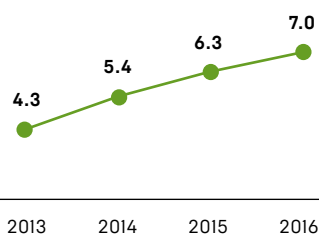
Significant improvement in energy efficiency

Specific energy consumption has been sequentially declining since 2014, with yet another project implemented in 2016.

SIGNIFICANT ENVIRONMENTAL INVESTMENTS

MAINTAINED SIGNIFICANT INVESTMENT INTO ENVIRONMENTAL PERFORMANCE

● Investments, RUB bn



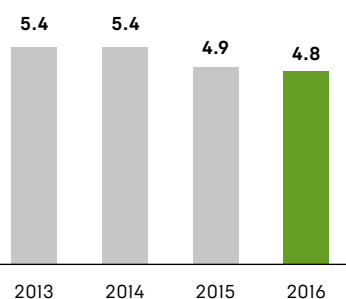
63%

increase in annual environmental investments since 2003

EFFICIENT USE OF WATER RESOURCES

ONGOING REDUCTION OF WATER CONSUMPTION

m³/t



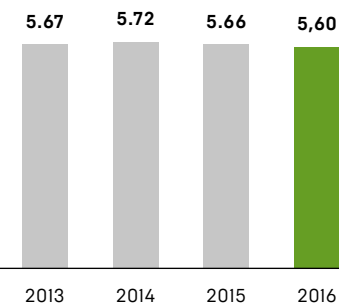
76 million m³

of total water consumption by NLMK Group's Russian operations, the same as in 2015, while steel output increased by 4%

ENERGY EFFICIENCY

REDUCTION OF ENERGY INTENSITY (NLMK LIPETSK)

GCal/t



over 200

optimization initiatives aimed at boosting energy efficiency

NLMK GROUP'S ENVIRONMENTAL ACTIVITIES



KEY FACTS AND FIGURES

Environmental protection is a priority for NLMK Group

Total investment in the Group's environmental activities since 2000 amounts to \$1.4 billion.

NLMK Group has an active Environmental Policy

The Group's key targets are environmental safety and process efficiency, in line with the best global practices.

An environmentally responsible approach enables business success

Adherence to high environmental standards allows for efficient production of high-quality products with minimal environmental footprint in regions of operation.

Reduction of ecological footprint and sustainable use of natural resources are NLMK's key environmental priorities



"We adopt new technologies and solutions in an effort to reduce our environmental footprint. Major investment in hundreds of environmental projects and initiatives over the past five years, totalling close to RUB 26 billion, has delivered a significant boost to the Company's environmental performance. The Company has ramped up its steel output by almost 50% during this period, while specific emissions have been reduced by 25%."

GALINA KHRISTOFOROVA,
NLMK Group Director
for the Environment

NLMK spent a total of 54 billion rubles (\$1.4 billion) on environmental initiatives since 2000. The scale of this investment has transformed NLMK into a leader in environmental performance; for example, NLMK Group outachieved the BAT level of water consumption as early as 2010. NLMK Lipetsk reduced specific air emissions more than two-fold over the same period and introduced a closed water-loop system to minimize water pollution.

NLMK Group assumes the responsibility to ensure and maintain a favourable living environment in the Company's home regions by devising environmental protection programmes, meticulously following adopted plans and project implementations.

NLMK Group views environmental initiatives as a priority area of corporate risk management, aimed at eliminating the risk of environmental issues placing limitations upon the Company's operations or their further development.

NLMK Group's Environmental Policy is a statement defining the Group's long-term process safety and environmental priorities across its geographies.

NLMK GROUP'S ENVIRONMENTAL POLICY GOALS:

- Ensure environmental efficiency of production processes;
- Compliance with the best global practices concerning effects on the environment and resource management;
- Hold leadership position in sector for environmental performance.

IN ORDER TO REACH ITS OBJECTIVE NLMK IS GUIDED BY THE FOLLOWING PRINCIPLES:

- Environmentally responsible approach to plant and equipment operation, upgrades, renovation and construction;
- Compliance with Russian and international environmental regulations and requirements;
- Mitigation of environmental risks;
- Openness and accessibility of information about NLMK Group companies' environmental initiatives and impact.

A high-priority systematic approach to environmental protection enables efficient production of high-quality products with minimal environmental impact on the Company's home regions.

NLMK Group's Environmental Programme

ca. 19 billion rubles
(\$350 MILLION)

STAGE I "GREEN" INVESTMENTS

NLMK Group's Environmental Programme was developed to reflect the critical long-term strategic importance of an ongoing reduction of the Company's environmental footprint.

Stage I (2014-2016):

Major capex projects implemented, systematic efforts taken to optimize environmental risk management processes.

Upon completion, Stage I delivered a 5% reduction in air emissions, and 11% reduction in water consumption vs. 2013.

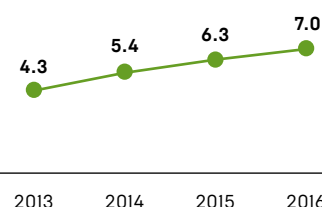
Stage II (early 2017):

Overarching goal:

- Minimize environmental footprint, and
- Achieve the industry's best-in-class environmental performance.

NLMK GROUP'S INVESTMENTS IN ENVIRONMENTAL INITIATIVES

● Investment, RUB bn



NLMK Group's 'green' investments

NLMK Group implements a range of capex projects aimed at achieving the objectives of the Environmental Programme.

INVESTMENT IN ENVIRONMENTAL INITIATIVES IN 2016 WAS UP 12% YEAR-ON-YEAR

to reach 7 billion rubles
(\$104 MILLION)

NLMK'S ENVIRONMENTAL KPIs IN 2016

CORPORATE RESPONSIBILITY: KEY ASPECTS	2016 TARGETS	2016 PERFORMANCE	2016 TARGETS ACHIEVED	2017 TARGETS
Management of potential risks to reduce or minimize environmental impact	NLMK Group's Environmental Programme	11 projects were completed as part of environmental risk management	Target achieved	Implementation of NLMK Group's Environmental Programme Stage II organizational and capex projects
Minimization of environmental impact of NLMK Group's operations	Reduction of specific emissions by 0.1 kg/t steel vs. the 2015 level	Reduction by 0.1 kg/t steel vs. the 2015 level	Target achieved	Reduction of specific emissions by 0.1 kg/t steel vs. the 2016 level
	Reduction of water consumption by 0.1 m ³ /t steel vs. the 2015 level	Reduction by 0.1 m ³ /t steel vs. the 2015 level	Target achieved	Reduction of water consumption by 0.05 m ³ /t steel vs. the 2016 level
	Increase NLMK Group's overall recycling rate by 15% of the 2011 levels	Increase NLMK Group's overall recycling rate by 20% of the 2011 levels	Target overachieved by 5 p.p. (rel.)	Increase NLMK Group's overall recycling rate by 15% (total)
Compliance with the best practices in technical upgrade and operation	Air protection: change-over to the filter material with improved residual dust content characteristics up to 10 mg/m ³ for bag filters	The filter material with improved residual dust content up to 10 mg/m ³ was replaced in bag filters according to the approved schedule	Target achieved	Scheduled replacement of filter material with an improved residual dust content of up to 10 mg/m ³ for bag filters
Improvement of management methods to comply with modern international standards	Certification of compliance of NLMK Group's Environmental Management System with the ISO 14001: 2015 international standard across all sites	Certification of compliance of NLMK Group's Environmental Management System with the ISO 14001: 2015 international standard at NLMK Kaluga and Altai-Koks	Target achieved	Certification of compliance of NLMK Group's Environmental Management System with the ISO 14001: 2015 international standard at NLMK Lipetsk, Stoilensky and Altai-Koks

Reduction in air pollution

NLMK Group has achieved an ongoing reduction in its air emissions. In 2016 the Group's emission rate was down to 20.8 kg per tonne of steel, 5% below the base level for Strategy 2017 and two times lower than the emission rate in 2000.

This was possible thanks to a mix of management initiatives and capex projects: upgrades of production units, installation of dust and gas-cleaning units, installation and upgrade of filter equipment, introduction of immobilization and waste recovery technologies.

NLMK Lipetsk (84%) and Altai-Koks (12%) accounted for the biggest part of the Group's emissions, while

the other NLMK Group's facilities accounted for the remaining 2% of the total air emissions.

NLMK Group's total air emissions in 2016 increased by 3% to 331,000 tonnes, while the Group's steel production increased by 4%. The increase in total emissions was mainly due to an increase in the output of the Group's mining operations, a higher run rate of the dry coke quenching plant at Altai-Koks and

growth in output of the Long Products Division.

The leading pollutant is carbon monoxide, which accounts for 75% of NLMK Group's total air emissions. The Class 4 hazardous substance is formed in fuel combustion and other production processes. Suspended substances (8%), nitrogen oxides (7%), and sulphur oxides (9%) account for around 24% of total emissions.

ONE TARGET OF THE ENVIRONMENTAL PROGRAMME IS TO REDUCE SPECIFIC EMISSIONS OF NLMK GROUP'S OPERATIONS FROM THE CURRENT 20.8 KG PER TONNE OF STEEL TO 19.4 KG PER TONNE OF STEEL, WHILE THE BEST GLOBALLY AVAILABLE TECHNOLOGIES ALLOW FOR AS LOW AS 18.9 KG PER TONNE OF STEEL.

These pollutants are emitted from tall chimneys, which provides for ideal dispersion conditions and a minimal impact on carbon monoxide concentration at ground level.

NLMK Group will continue taking steps to reduce its air emissions.

Sustainable management of water resources

NLMK Group is among the industry leaders when it comes to efficient water consumption and minimal discharges in its home regions, thanks to the advanced environmental technologies the Company employs.

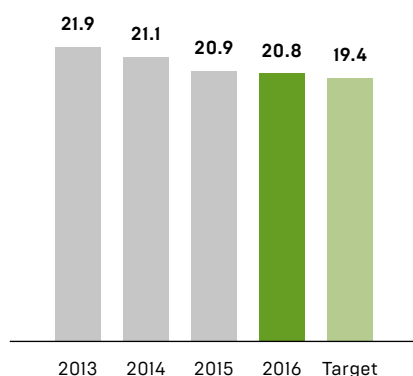
Specific water consumption (per tonne of steel) has been consistently

LIST OF MAJOR 2016 ENVIRONMENTAL CAPEX PROJECTS

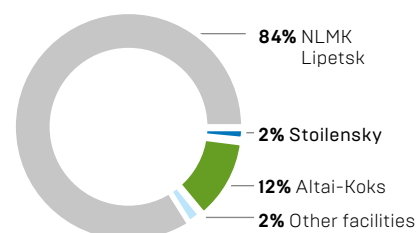
SITE	FACILITY	PROJECT	EFFICIENCY
NLMK Lipetsk	Refractory Shop	Reconstruction of de-dusting systems of the bulk materials discharging and feeding duct and bag filters replacement	Reduction of dust emissions by 150 tpa
NLMK Lipetsk	Refractory Shop	Upgrade of dust collectors for rotary furnaces	Reduction of dust emissions by 250 tpa
NLMK Lipetsk	Refractory Shop	Construction of a central gas cleaning system downstream of shaft furnaces	Reduction of dust emissions by 80 tpa
NLMK Lipetsk	Sinter operations	Overhauling of lime feeding duct and wagon dumper dedusting units	Reduction of dust emissions by 250 tpa
NLMK Lipetsk	Blast furnace operations	Construction of a modular dedusting system	Reduction of dust emissions by 109 tpa
NLMK Lipetsk		Reduction of noise pollution level at the border of the sanitary protection zone	Noise standards: daytime up to 55dB, night-time up to 45dB
NLMK Lipetsk		Development and implementation of Environmental Control information system	Environmental impact monitoring
NLMK Ural	Revda site	Initiatives for establishment of a sanitary protection zone	Noise standards: daytime up to 55dB, night-time up to 45dB
NLMK Ural	Nizhniye Sergi site	Initiatives for establishment of a sanitary protection zone	Noise standards: daytime up to 55dB, night-time up to 45dB
NLMK Ural	Nizhniye Sergi site	Storm water run-off treatment plants	Elimination of storm water discharge
VIZ-Steel		Reclamation of Lesnoy landfill	4.1 ha of lands reclaimed
Stoilensky		Resettlement of residents during open pit development	No further residents within sanitary protection zone

NLMK GROUP'S SPECIFIC AIR EMISSIONS

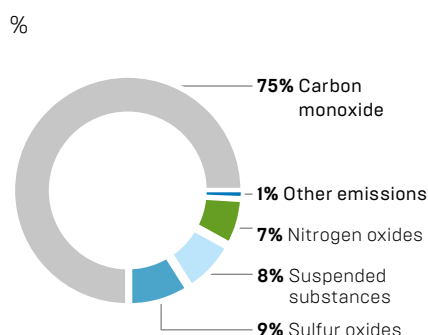
kg/t of steel



NLMK GROUP'S EMISSIONS BY SITE



NLMK GROUP'S EMISSIONS BY TYPE



reduced and in 2016 reached 4.8 m³/t, which is below the BAT level of 7.0 m³/t.

Stoilensky accounts for the majority of water consumption (57%), as it actively uses water resources in the production process. Since the completion of a project aimed at upgrading the technical water supply system to a closed loop, NLMK Lipetsk contributes 29% and Altai-Koks contributes 7% to the Group's

total water consumption, the rest is attributed to the other companies of the Group.

NLMK Group's total water consumption in 2016 was 76 million m³, which is 0.2% lower than a year earlier. Meanwhile, the Group's steel production increased by 4% year-on-year. Closed loop water supply replenishment from external sources amounted to 7% of total water consumption in 2016.



NLMK INCREASED GAS CLEANING RATE OF BLAST FURNACE NO. 4 TO 99.7%

NLMK Lipetsk launched a modern modular aspiration unit with a capacity of 600,000 m³ per hour for the Blast furnace No. 4 foundry (2.1 million tonnes of pig iron per year) in 2016. The new unit, which replaced obsolete equipment, enabled a more than 20 times reduction in the total dust emissions of the blast furnace and increased the gas-cleaning rate to 99.7%.

"We are introducing new technologies and solutions in an effort to reduce our environmental footprint. For example, we previously used water irrigation technology for dusty gas cleaning in the Blast Furnace No. 4 foundry yard; now we use high-efficiency bag filters, which significantly increase the cleaning rate. We also employ unique technical solutions designed for use in construction, to enable automatic control of the aspiration system, depending on the mode of furnace operations," commented Galina Khristoforova, NLMK Group's Director for the Environment.



NLMK Group minimizes the discharge of pollutants into water bodies in its home regions through the use of zero-discharge water systems at the Group's main production sites. This system virtually ceases the discharge of pollutants into water bodies entirely. Utility fluids from industrial sites are cleaned either at the sites' own treatment facilities or transferred to local water treatment facilities.

One of the targets of NLMK Group's Environmental Programme is to achieve zero wastewater at all production sites.

Efficient waste management

NLMK Group takes care in its use of resources and strives to enhance the recycling rate.

In 2016, NLMK Group's brought waste production down by 15% year-on-year to 4.2 million tonnes, of which 84%

is attributable to NLMK Lipetsk, and 14% to NLMK Russia Long facilities (NLMK Ural, NLMK Metalware, and NLMK Kaluga).

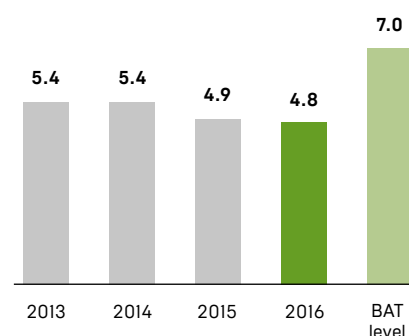
The use of modern waste treatment technologies and recycling initiatives enable efficient use of waste: the recycling rate at the NLMK Lipetsk is 97%, while it exceeds 70% at the Group's other Russian steelmaking sites. The overall recycling rate across NLMK Group's Russian operations in 2016 was 94%.

The total volume of waste generation in NLMK Group, including Stoilensky's minimal hazard stripping waste and beneficiation tailings, was reduced by 5% year-on-year to 59.6 million tonnes in 2016. The total recycling rate in 2016 was 15%, including the mining waste.

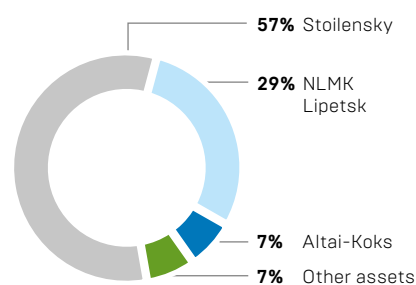
NLMK continues to invest in waste treatment and recycling technologies. One of the goals of NLMK Group's Environmental Programme is to completely eliminate old waste dump sites (specifically, the slag dump at

NLMK GROUP'S SPECIFIC WATER CONSUMPTION

m³/t

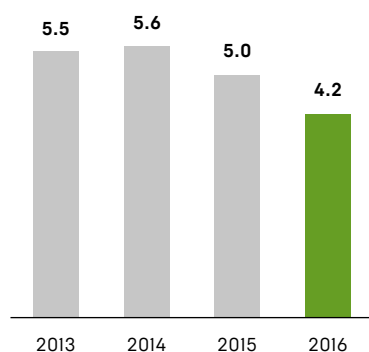


NLMK GROUP'S SPECIFIC WATER CONSUMPTION BY SITE



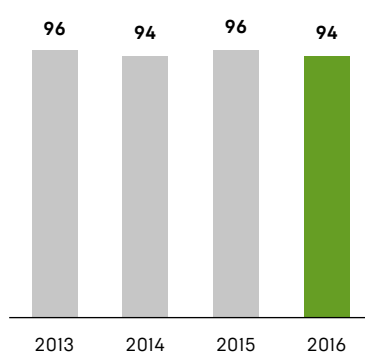
NLMK GROUP'S WASTE PRODUCTION

m t

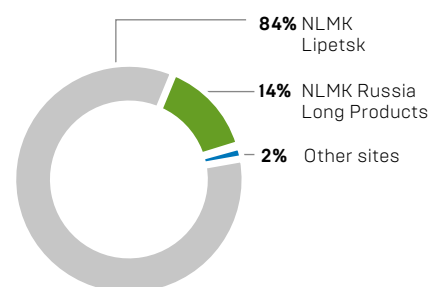


NLMK GROUP'S RECYCLING

%



WASTE PRODUCTION BREAKDOWN



the NLMK Lipetsk, accumulated over the 80 years of its operation, and the 40-year-old sludge dump site at NLMK Ural).

Environmental Management Systems development

The use of best environmental practices from around the world unlocks the Company's potential which is ultimately one of the factors that drives NLMK's leadership in the industry.

NLMK Group is on target to certify its Environmental Management Systems since 2002, when the Environmental Management System of NLMK Lipetsk was first awarded its ISO 14001:2004 certification. The NLMK Lipetsk has since passed several recertification audits. In 2016, BSI (British

CASE STUDY

CONSTRUCTION OF FACILITY TO PRODUCE BRIQUETTES FROM IRON-CONTAINING WASTE

NLMK Group's projects for construction of a facility with an annual capacity of 700,000 tonnes of metallurgical briquettes from iron-containing waste is under way at the NLMK Lipetsk. The briquettes will be manufactured using a hard extrusion method from a mix of iron ore concentrate and iron-containing waste formed in the process of wet blast furnace gas cleaning. The production of briquettes is an environmentally friendly technology that does not generate any dust or gas emissions. The launch of the plant will enable more than 350,000 tonnes of blast furnace waste to be recycled each year.

Iron-containing briquettes are a raw material for the smelting of hot metal. In addition to recycling iron-containing briquettes will substitute more expensive resources and reduce operating costs.

Standards Institution, UK) audited NLMK Lipetsk for the compliance of its environmental management system with international standards.

International environmental safety standards and their Russian counterparts (environmental management systems) are also embedded in the operations of other NLMK Group's key sites.

In 2016, NLMK Kaluga and Altai-Koks received BSI certificates of environmental management system registration, NLMK Ural also passed a certification audit.

Stoilensky, VIZ-Steel, NLMK Metalware were audited for compliance in addition to the NLMK Lipetsk in 2016.

Our success and public appraisal of environmental activities

The high priority with which NLMK Group treats environmental safety and the Company's ongoing efforts to introduce environmental technologies are key factors in improving the environment in the regions where NLMK Group's companies operate.

According to Roshydromet's Integrated Air Pollution Index (IAP), the city of Lipetsk, home to NLMK Group's key production site, has been recognised as the least polluted region capital in Russia's Central Black Earth economic area, and the most environmentally friendly Russian steelmaking city. The IAP in Lipetsk has decreased by more than 7 times since 2000, from extremely high to low, largely thanks to NLMK's environmental activities.


At year-end 2016, NLMK Group joined the ranks of leaders of the Russian Union of Industrialists and Entrepreneurs (RUIE) indices for "Accountability and Transparency" and "Vector of Sustainable Development".

In 2016, NLMK Lipetsk won the "100 Best Companies in Russia. Ecology and Environmental Management" competition, its Managing Director was awarded the "Environmentalism of the Year 2016" badge of honour, and the facility was also awarded in the categories "Golden Branch of the Planet" and "For Achievements in Air Protection". In addition the Department of Industrial Ecology won the "Best Environmental Service" category.

VIZ-Steel was named among the winners of the "100 Best Companies in Russia. Ecology and Environmental Management" competition for its project aimed at developing technical specifications for magnesium-containing sludge during wastewater treatment.

CASE STUDY





TODAY THE WILDLIFE
PARK IS HOME
TO MORE THAN

50 SPECIES
OF BIRDS

SWAN LAKE PARK: A NATURAL INDICATOR OF THE CLEAN ENVIRONMENT AT NLMK LIPETSK

Created by NLMK employees in 1978, Swan Lake Park is a unique conservation site for the protection and breeding of rare and endangered birds. Swan Lake Park covers an area of more than 5 ha and is located in the centre of the plant's site. Located in an industrial area, it is the only park of its kind in Russia and the CIS.

Today the wildlife park is home to over 50 species of birds (more than 400 birds in total). The lake in the park, which is replenished by purified process water from the Lipetsk facility, is home to fish which are the natural source of food for water birds.

In winter, between 15 October and 15 April, the water in the lake is heated by a mixture of compressed air and hot steam which is passed along the lake bottom in order to create a comfortable habitat for the water birds.

The thriving Swan Lake Park is a clear indicator of the safe and clean environment at the NLMK Lipetsk.

ENERGY EFFICIENCY

The goal of reducing energy costs is achieved both through optimization measures, and by increasing the share of in-house power generation.



KEY FACTS AND FIGURES

Systematic improvement of energy efficiency a key priority area for the Group

The main objective is to ensure a reliable supply of energy resources and reduce costs.

An increase in the share of captive power generation

The share of power generated in-house at NLMK Lipetsk in 2017 will grow to 59% of total energy consumption, with by-product fuel gases generating an 81% share of captive power in 2016.

Lower energy consumption the result of optimization measures

A reduction in the Group's energy consumption in 2016 was the result of technical upgrades and continuous optimization of production processes, with the share of purchased electricity consumption down by 1% and natural gas consumption down by 5%.

INCREASED CAPTIVE POWER GENERATION AND LOWER ENERGY CONSUMPTION BOOST EFFICIENCY AND MINIMIZE THE COMPANY'S ENVIRONMENTAL FOOTPRINT.

Sustainable energy use and systematic efforts to enhance energy efficiency are among the priorities for NLMK Group companies.

NLMK Group's main energy procurement goals are to ensure stable supply of energy resources and cost reduction (energy costs account for about 11% of the production cost) through enhancing energy efficiency.

NLMK Group operates an Energy Policy, which defines the Company's mission, objectives and principles of sustainable energy use.

POLICY GOALS:

- Achieve optimal level of energy intensity;
- Leadership in application of advanced energy efficient technologies, including introduction and continuous improvement of Energy Management Systems.

Development of in-house power generation

The development of captive generating capacities is an important element of securing the company's power supply and energy efficiency.

CASE STUDY

INTRODUCTION OF GREEN ENERGY FACILITIES

In 2016, NLMK Group successfully completed guarantee tests of the Blast Furnace No.6 top pressure recovery turbine (TRT). The launch of the new unit brings the project for the introduction of green energy facilities at the NLMK Lipetsk to completion. As a result, more than 50% of NLMK Lipetsk's blast furnace capacity now utilizes global best practice energy-efficiency technologies.

TRT is used to generate electrical power through the efficient use of blast furnace gas overpressure. Blast furnace gas generated during iron smelting in NLMK Lipetsk blast furnaces is routed to a Thermal Power Plant and Recovery and Cogeneration Plant to produce electrical power.

Sergey Chebotarev, NLMK's Vice President for Energy said:

"We have completed an extremely important project aimed at developing our green energy facilities. The TRT does not burn fuel to produce electric power, instead it makes use of the pressure of blast furnace gas which is waste energy. This means that in addition to reduction of our energy costs, we also reduce the negative impact on the environment".

NLMK's in-house power generation:

- Ensures business continuity;
- Reduces energy costs by 25%;
- Reduces environmental footprint.

Power generating capacities: The total installed in-house generation capacity is 522 MW. Electricity is produced by the Cogeneration Plant, Recovery Cogeneration Plant and two top-pressure recovery turbines.

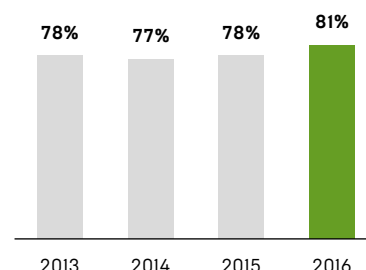
Generation sources: More than 80% of electricity at NLMK Lipetsk is generated from the recovery of by-product gases from coke and chemical and blast furnace operations.

The main fuels for NLMK's Cogeneration Plant and Recovery Cogeneration Plant are blast-furnace and coke-oven gases; top-pressure recovery turbines are used to generate electrical power through the efficient use of blast furnace gas overpressure. There is a 200 MW power plant at Altai-Koks that operates on coke oven gas and completely covers the Company's electricity needs.

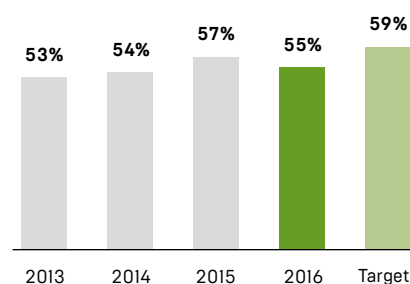
In-house generation development capex projects (2014-2016):

- 2014: capital improvement of 50 MW capacity turbine generator unit No. 4 at the Cogeneration Plant; 2015: launch of the Blast Furnace No. 7 top-pressure recovery turbine;
- 2016: capital improvement of the Blast Furnace No. 6 top-pressure recovery turbine with 20 MW capacity generators.
- A range of optimization measures was implemented in 2015-2016

CAPTIVE POWER GENERATION FROM BY-PRODUCT FUEL GASES



IN-HOUSE POWER GENERATION IN TOTAL ENERGY CONSUMPTION



at NLMK's Cogeneration Plant and Recovery Cogeneration Plant, including measures aimed at reducing the repair time of generators, selecting efficient turbine loading regimes, and optimizing the water cycle operation of turbine generator units.

- 2017: capital improvement of 60 MW capacity turbine generator unit No.5 at the Cogeneration Plant. As a result, in-house generation will increase to 59% in the Company's total power consumption.
- Further developments: There are several projects under consideration aimed at increasing captive electricity generation through effective use of secondary energy resources.

CASE STUDY

A COMPLEX OF POWER FACILITIES FOR PELLETIZER

A complex of power facilities was commissioned to cover Stoilensky Pelletizing Plant's need for electricity, including:

- Two main step-down substations, two distribution substations, 15 transformer substations and more than 1,600 km of underground power cabling;
- A 3 km long natural gas pipeline, 39 gas distribution devices;
- Technical water supply pumping station, more than 7 km of water supply networks;
- Internal gas supply, water supply, and heat supply pipelines with a total length exceeding 140 km.

The decrease in the share of in-house power generation in 2016 was that the result of turbine generator unit No. 5 at NLMK's Cogeneration Plant being taken offline for an overhaul, while the total energy consumption at NLMK Lipetsk increased. This was partially offset by an increase in the efficiency of the remaining turbine generator units and a scale-up of TRT energy output.

The share of captive power generation through utilization of by-product fuel gases in 2016 was 81%.

Energy consumption and optimization activities

Electric power:

In 2016, the total electricity consumption across NLMK Group's production facilities amounted to 11.8 billion kWh (+6% yoy), of which 57% was consumed at NLMK Lipetsk. Facilities using electric arc furnaces for steel production (22% of production) accounted for 20% of electricity consumed. The increase in consumption was caused by an increase in the output of raw materials and steel, as well as by the commissioning of new operations, including Stoilensky's Pelletizing Plant.

Natural gas:

The total natural gas consumption across NLMK Group's production facilities amounted to 2.9 billion m³ (-3% yoy), of which 83% was consumed at NLMK Lipetsk, where natural gas is widely used in blast-furnace operations, in reheating furnaces and heat treatment units and, in part, for electricity generation.

2016 optimization activities

More than 200 optimization measures aimed at improving energy efficiency.

Total gains: About 700 million rubles (\$11 million), which enabled a 70 million kWh (1% of total consumption) reduction in the consumption of purchased electricity and 142 million m³ (5% of total consumption) of natural gas across the Group's facilities.

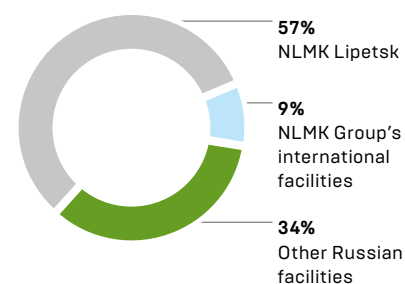
CASE STUDY

GENERATION OF HYDROGEN FROM NATURAL GAS

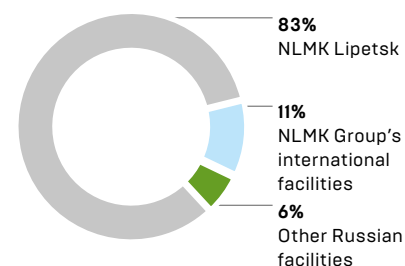
In 2016, NLMK Group began commercial operation of a hydrogen unit that generates hydrogen from natural gas through vapour reforming at VIZ-Steel in Yekaterinburg, where hi-tech transformer (grain-oriented) steel is produced.

This project will provide a three-fold reduction in the cost of hydrogen production. The new technology, which replaces expensive electrolysis, requires 30 times less energy to generate hydrogen bringing annual energy consumption down by 75 million kWh.

NLMK GROUP'S POWER CONSUMPTION IN 2016



NLMK GROUP'S NATURAL GAS CONSUMPTION IN 2016



The 2016 optimization measures were aimed at increasing the efficiency of by-product gas utilization, improving the production and distribution of air separation products, enhancing in-house power generation, optimizing the operating modes of gas consuming units, upgrading lighting equipment, automating energy consumption management, etc.

Examples of optimization projects and figures achieved:

- In 2016, efficiency improvement efforts aimed at enhancing by-product gas utilization enabled the use of more than 1 billion m³ of BF gas, and a 120 million m³ reduction in the volume of purchased natural gas;
- Thanks to the reduced repair downtime and optimized operation modes of turbine generator units, an additional 34 million kWh of electricity was generated;
- Lighting upgrades are still underway at the Group's Russian and foreign production sites. In 2010-2016, electricity consumption for lighting needs across the Group's companies was reduced by 22 MW, and a structural net gain of around 500 million rubles a year (\$8 million).

Increased energy efficiency

Ongoing improvement of energy efficiency is possible through equipment upgrade and optimization efforts.

In 2016, the specific energy intensity of NLMK Lipetsk was reduced by 1% to 5.6 Gcal/t while the best available technology (BAT) level for integrated production is 5.1 Gcal/t.

Other facilities followed suite, for example, the energy intensity at NLMK Kaluga was down by 2% year-on-year to 0.54 Gcal/t.

2017 objectives:

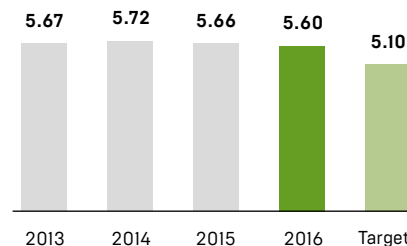
- Increase in the efficiency of fuel gas utilization in power generation;
- Optimization of energy transportation network load and configuration across all companies;
- Optimization of industrial gas equipment operation;
- Industrial lighting systems upgrade with the installation of energy-saving bulbs;
- Re-launch of turbine generator unit No.5 at NLMK's Cogeneration Plant after major overhaul, etc.

Public appraisal

Significant efforts to ensure sustainable use of energy are highly valued by society. In 2016, 76 employees of NLMK Group's energy services were awarded state and industry awards (the title of Honoured Energy Worker, Ministerial Citations).

SPECIFIC ENERGY INTENSITY AT NLMK LIPETSK

Gcal/t



CASE STUDY

LIGHTING UPGRADES

NLMK Group embarked on a large-scale upgrade of industrial lighting in collaboration with Philips in 2011. Energy saving methods such as replacing incandescent light bulbs with energy saving ones (both for indoor and outdoor lighting) and installing photocell switches and remote lighting control systems have had a significant impact: a 58% reduction in electricity consumed by lighting at NLMK Lipetsk resulted in 260 million rubles (\$4 million) in annual savings. During the pilot project for replacing ceiling lights alone, 33,000 highly efficient state-of-the-art energy saving lights with high luminous efficacy were installed. As a result, consumption of electricity was reduced by more than 100 million kWh per year.

The lighting upgrade project has since been rolled out across other NLMK Group's sites including VIZ-Steel and Stoilensky. VIZ-Steel's and Stoilensky's projects alone will result in 60 million rubles (\$1 million) in expected annual savings.

KEY HIGHLIGHTS*

	2012	2013	2014	2015	2016
Steel output, m t	13.96	14.6	15.23	15.41	15.88
Air emissions, '000 t, incl.:	315.7	319.4	321.5	322.0	330.5
NO _x	15.6	16.6	17.5	21.0	24.0
SO ₂	24.5	26.0	28.2	27.6	28.9
CO	248.0	250.7	248.5	244.6	249.2
- per unit of product, kg/t	22.6	21.9	21.1	20.9	20.8
Water consumption for production purposes, million m ³	77.2	79.5	81.8	76.0	75.8
- per unit of product, m ³ /t	5.53	5.45	5.37	4.93	4.77
Pollutants discharge, '000 t	0.3	0.3	0.3	16.5	16.1
- per unit of product, kg/t	0.0	0.0	0.0	1.1	1.0
Waste production, m t	5.43	5.50	5.61	4.97	4.25
Waste disposal, %	93.5	95.9	93.7	95.9	93.6
Additional:					
- stripping waste, m t	39.9	37.5	40.2	40.6	37.8
- beneficiation tailings, m t	16.3	16.3	17.0	17.4	17.6
Total waste production, m t	61.6	59.3	62.8	63	59.6
Waste disposal including mining waste, %	15.1	15.9	15.4	14.0	14.5
Environmental spendings, \$ m	77.0	134.3	141.4	103.6	105.1
incl. capital costs, \$ m	-	38.9	51.0	48.8	50.9
incl. operating costs, \$ m	-	95.5	90.5	54.8	58.2
Total energy consumption, m kWh	82,859	83,576	85,622	86,743	86,700
Specific energy intensity **, Gcal/t	5.74	5.67	5.72	5.66	5.60
Energy consumption, m kWh	9,828	10,024	10,417	10,392	10,667
Fuel consumption – natural gas, million m ³	2,612	2,713	2,730	2,729	2,616

* NLMK Russia [95% of NLMK Group's steel production]

** NLMK Lipetsk. Energy intensity calculation factors in coal, coke, heat, gas, electricity and other energy resources

ALSO IN THIS SERIES

ABOUT NLMK

2016



This brochure gives an overview of the structure, business model, strategy and performance of the Group over the past decade.

“Our success has been recognized by the expert community, with S&P Global Platts announcing NLMK as winner of the Industry Leadership Awards — Steel in 2016.”

Oleg Bagrin,
President and CEO
of NLMK Group

OUR TEAM

2016



Detailed information on NLMK Group's team, talent development, occupational safety policy and financial contribution to the development of local communities, and much more.

“We're proud of what we have achieved and fully recognize that our achievements were made possible thanks to the contribution of our international team, united by the common goal of leadership for NLMK Group.”

Oleg Bagrin,
President and CEO
of NLMK Group

GOVERNANCE

2016



This brochure aims to showcase NLMK Group's corporate governance practices, how the process of continuous improvement of corporate governance is arranged, and how we ensured our leadership in investor relations.

“In everything we do, we try to be very attentive to best practices. At the same time, we know — we remember — that corporate governance is the area where continuous evolution is a more effective way of progressing, compared to revolutionary transformation. So we're very attentive to what is going on outside of the company and we're applying best practices step by step.”

Stanislav Shekshnia,
Independent Director,
Chairman of the Human
Resources, Remuneration
and Social Policies Committee



FOR ESG INVESTORS

Our company is a socially responsible business. We focus on ensuring NLMK's performance leadership goes hand in hand with the most advanced corporate governance practices. We have developed a dedicated section on the Company website at www.nlmk.com to enable investors to review environmental and social questions, as well as corporate governance (Environmental, Social, Governance) when they are considering investment.