

ENVIRONMENTAL  
ACTIVITIES

**A NEW  
PHASE OF  
DEVELOPMENT**

2013 REPORT



**NLMK**





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01

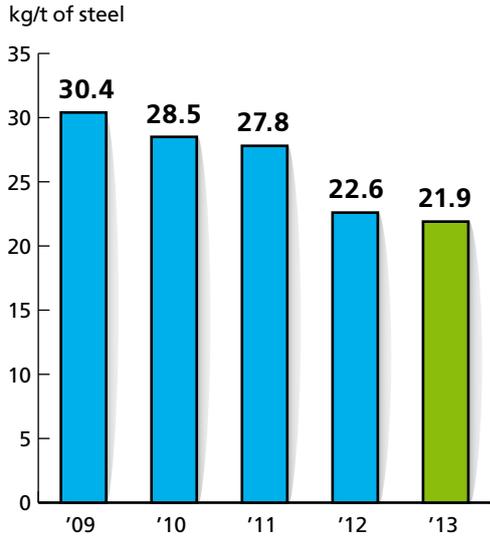
# KEY HIGHLIGHTS

CONTINUAL IMPROVEMENT OF  
ENVIRONMENTAL PERFORMANCE  
AND ENERGY EFFICIENCY IS A KEY  
FOCUS FOR NLMK.

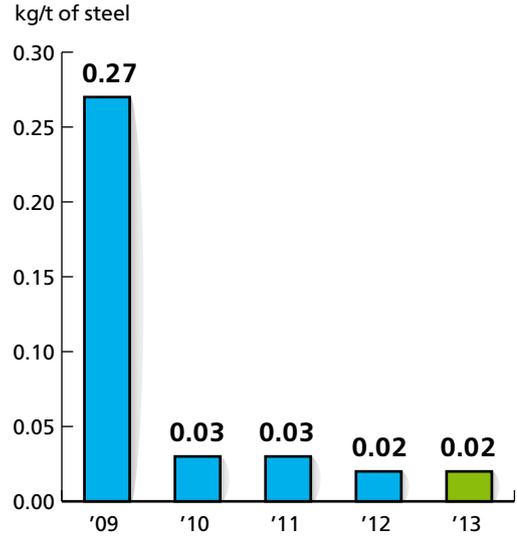


- Minimization of the negative impact of the production process on the environment
- No more accumulation of waste, recycling of previously accumulated waste
- Optimization of energy consumption

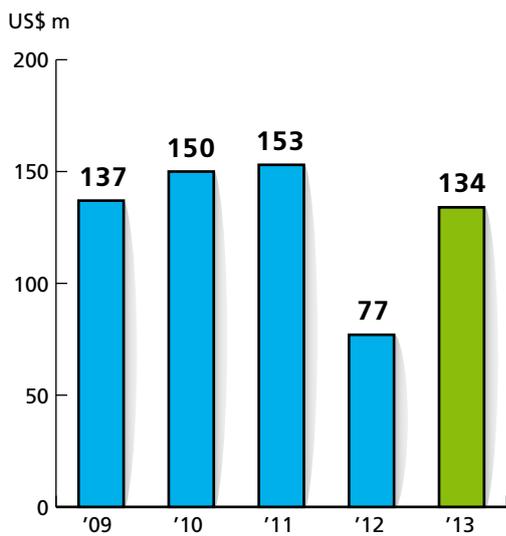
### SPECIFIC ATMOSPHERIC EMISSIONS



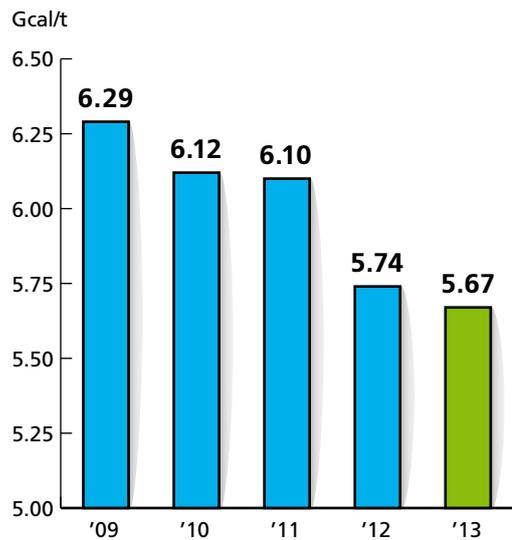
### SPECIFIC WATER DISCHARGE



### ENVIRONMENTAL INVESTMENT



### SPECIFIC ENERGY INTENSITY





↑ In the photo: in 2013, NLMK launched one of the most environmentally friendly steelmaking plants in Russia, NLMK Kaluga.

02

# ENVIRONMENTAL PROTECTION



WE ARE CONSTANTLY WORKING TO REDUCE  
OUR ENVIRONMENTAL IMPACT BY IMPLEMENTING  
PROVEN GLOBAL SOLUTIONS, THUS REDUCING  
OUR ENVIRONMENTAL FOOTPRINT IN THE REGIONS  
WHERE WE OPERATE.

Our strategy makes provision for the Group's environmentally oriented development, guaranteeing a reduction in negative impacts on the environment alongside a significant increase in the production of commercial products, including no less than 12.4 million tonnes of steel at our main production site.

In the face of current challenges, NLMK Group is directing all its efforts towards increasing the efficiency of operations. This includes protecting the environment and ensuring the sustainable environmental and social development of the regions where the Group operates.

OUR KEY GOAL IN THE AREA OF ENVIRONMENTAL PROTECTION IS TO REDUCE OUR ENVIRONMENTAL FOOTPRINT AND ITS IMPACT ON THE COMMUNITIES IN WHICH WE OPERATE, AND TO LEAD THE WAY GLOBALLY IN ENVIRONMENTALLY FRIENDLY OPERATIONS.

To establish a coherent strategy and consistent approach to environmental management, NLMK has developed the following corporate principles:

- Compliance with environmental laws and regulations;
- Transparency and accessibility of information for all stakeholders;
- Prevention of negative environmental impact;
- Prioritization of environmental criteria when building new facilities, carrying out upgrades, and improving technological processes (environmentally oriented development of the Group);
- Continuous improvement of our environmental performance, applying the best available technologies and practices.



CONSISTENT IMPLEMENTATION OF THESE CORPORATE PRINCIPLES  
ENABLES US TO ELIMINATE POSSIBLE RISKS RELATED TO ENVIRONMENTAL  
PROTECTION THAT MIGHT HINDER THE DEVELOPMENT OF THE GROUP.

Environmental protection continues to be a priority for NLMK Group. For the next stage in its development, NLMK has set out its long-term environmental safety goals covering the period until 2020:

- Reduction in atmospheric emissions to 19.4 kg/t (in line with global best practices);
- Zero water pollution at all NLMK Group production facilities;
- Reduction of accumulated waste by reusing it in operations.

NLMK has developed a comprehensive set of measures to reach the levels of best available practices in environmental protection. This will help NLMK to further consolidate its competitive advantages, which is fundamental for the sustainable development of the Group.

## ENVIRONMENTAL INVESTMENT

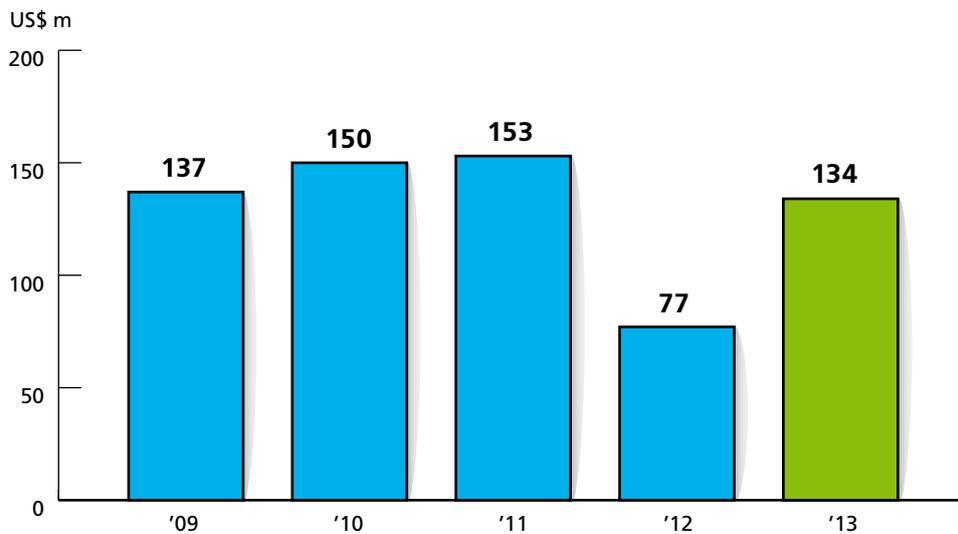
Our reduced environmental impact is the result of focused capital investment by Group businesses.

In 2013, NLMK implemented a range of large-scale environmental protection projects. These included completing the revamp of central aspiration system No. 2 in the sintering plant at the Lipetsk site, resulting in an annual reduction of 2,000 tonnes of emissions.

Another project, also at the Lipetsk site, was the launch of the new-generation aspiration systems and new high-capacity filters at BOF Shop No. 2, the largest contributor to graphite emissions. The new equipment will reduce the dust load of waste gases by 7.5 times, bringing the dedusting rate up to 99%.

Last year, the Group invested US\$ 134 million in environmental projects. Cumulative environmental investment in 2009–2013 reached US\$ 651 million.

### ENVIRONMENTAL INVESTMENT, 2009–2013

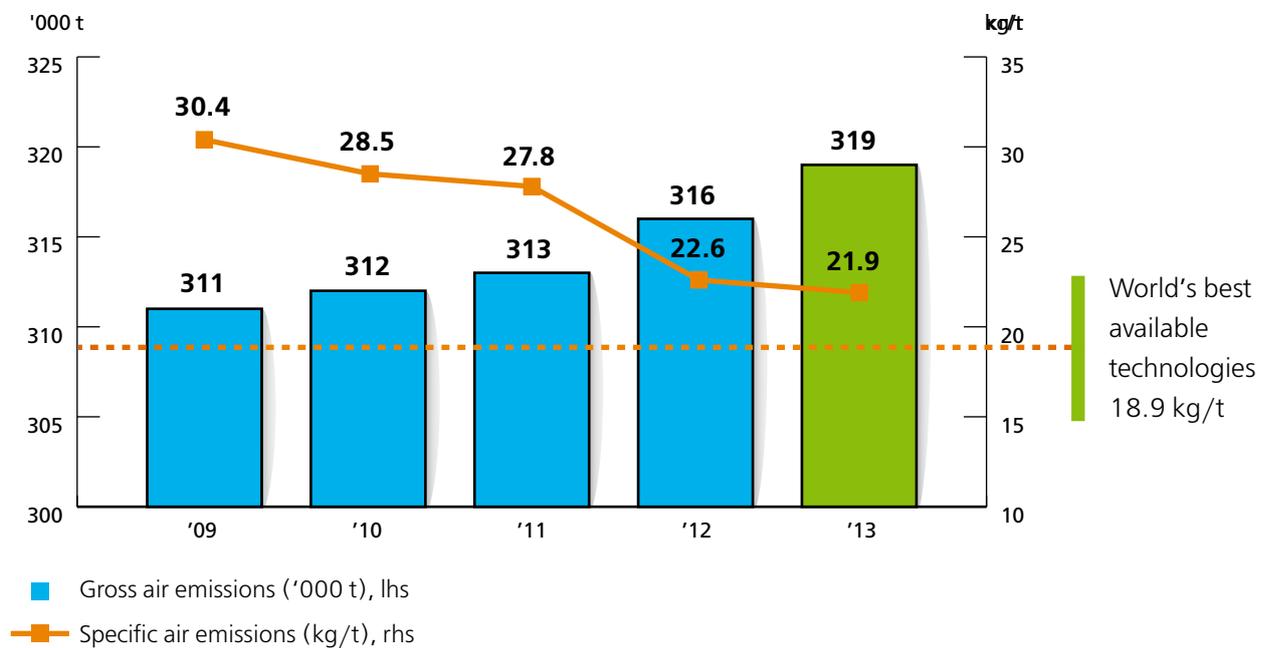




## ATMOSPHERIC EMISSIONS

IN 2013, NLMK GROUP'S ATMOSPHERIC EMISSIONS PER TONNE OF CRUDE STEEL PRODUCED DECREASED BY 3% YEAR-ON-YEAR TO 21.9 KILOGRAMS, DEMONSTRATING A CONSISTENT REDUCTION IN NEGATIVE ENVIRONMENTAL IMPACT.

### ATMOSPHERIC EMISSIONS IN 2009–2013



The minor rise in gross emissions was due to the launch of the new plant, NLMK Kaluga, in mid-2013, as well as to specific operational modes at selected production facilities.

Our Steel Segment, which contributes 82% of our total steel output, accounts for the bulk of the Group's environmental impact.



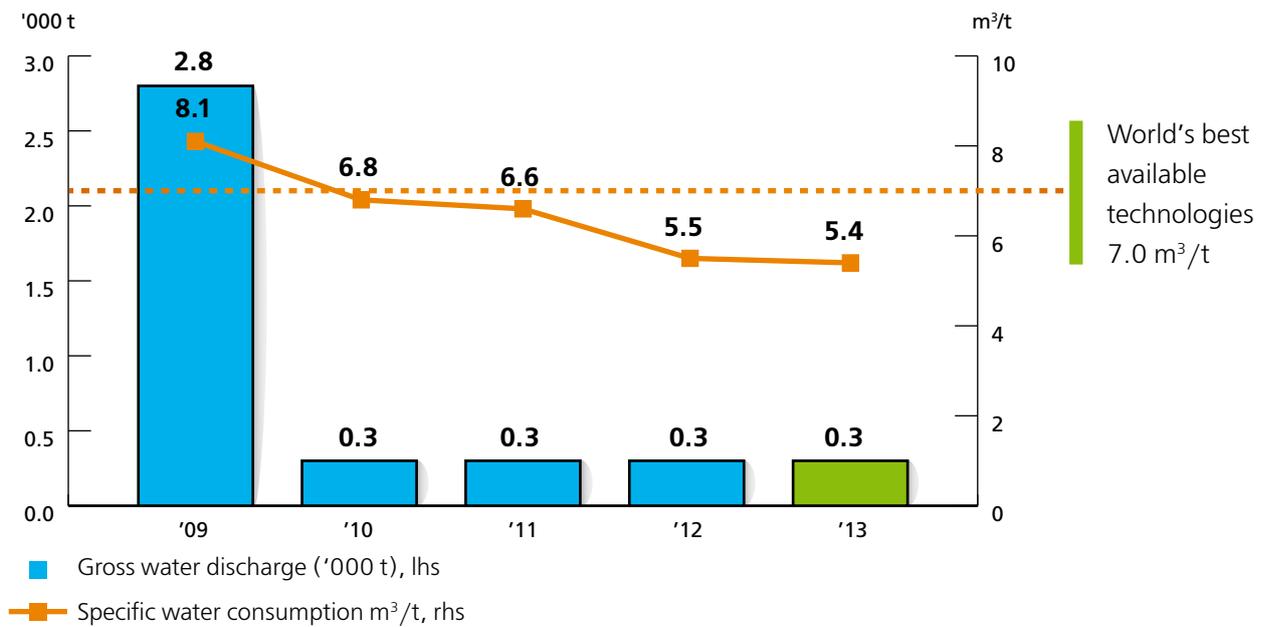
↑ In the photo: the use of shaftless hot blast stoves at Blast Furnace #7 has allowed for the reduction of carbon oxide emissions by several hundred times.

## IMPACT ON WATER

OUR KEY GOAL IN TERMS OF WATER USE MANAGEMENT IS TO OPTIMIZE WATER CONSUMPTION EFFICIENCY IN ORDER TO REDUCE OUR NEGATIVE ENVIRONMENTAL IMPACT.

Total water consumption by NLMK facilities in Russia in 2013 was 79.5 million cubic metres, which is only 3% higher than in 2012, despite the corresponding growth in steel production. Water intake per one tonne of crude steel produced decreased by 1.5% year-on-year.

### SPECIFIC WATER CONSUMPTION AND GROSS WATER DISCHARGE IN 2009–2013



In 2009, the Lipetsk production site completed the implementation of a closed water supply system, which meant that we were able to stop discharging waste water into the Voronezh River altogether, thus substantially reducing the amount of pollutants released.



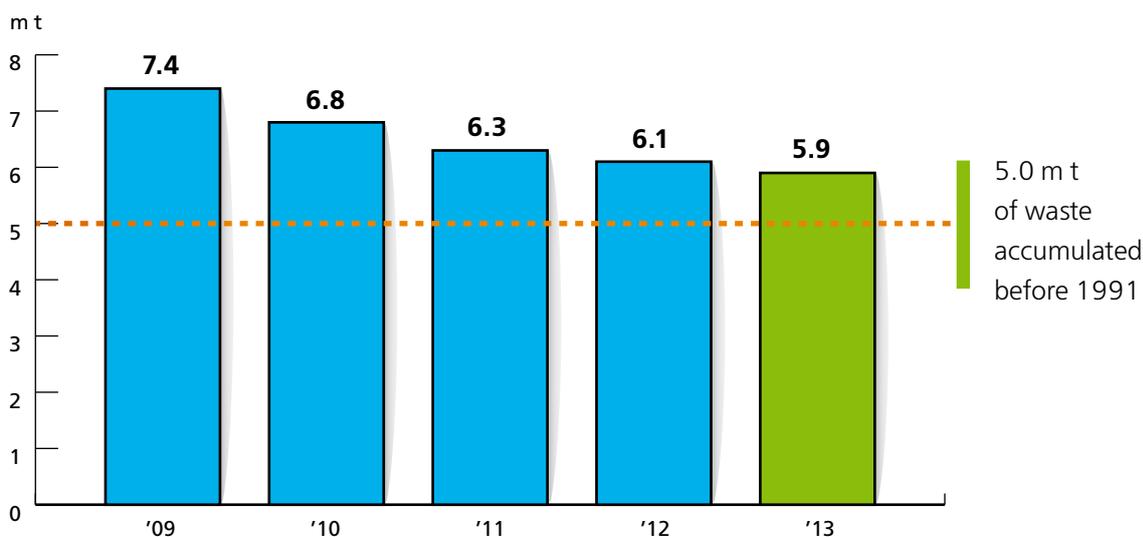
↑ In the photo: a project for construction of a new biochemical waste water treatment facility at Novolipetsk is nearing completion. This will significantly improve the quality of treatment of water for use in operational processes, introduced into the closed-looped water cycle.

## WASTE MANAGEMENT

THE GROUP'S FACILITIES, REPRESENTING VARIOUS SEGMENTS OF THE METALS AND MINING INDUSTRY, ARE CHARACTERIZED BY DIFFERENT LEVELS OF WASTE, FROM THE LOW LEVEL AT STEEL ROLLING MILLS TO THE SIGNIFICANT LEVEL INHERENT IN MINING COMPANIES.

Advanced technologies allow us to neutralize and recycle up to 95% of waste (at the Lipetsk production site). For instance, in 2004, we stopped waste accumulation at the Lipetsk production site by reusing the waste in operations. We also began recycling previously stockpiled waste. From 2004 to 2013, we were able to reduce stockpiled waste volumes by 2 million tonnes.

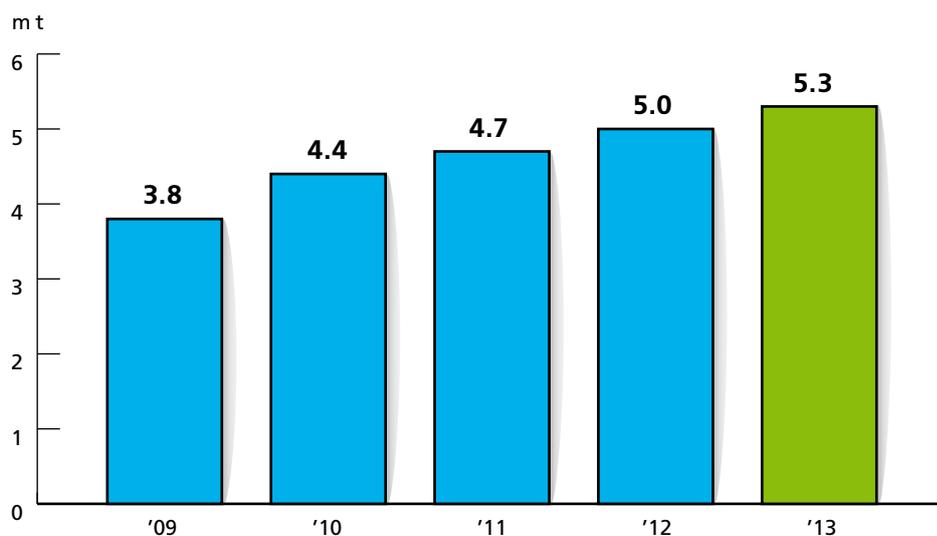
### WASTE ACCUMULATION AT NOVOLIPETSK



Waste recycling increased by 5% in 2013, reaching 5.3 million tonnes (excluding Stoilensky). This was driven by the implementation of environmental protection projects and the scaling up of the recycling technologies across our operations.



**WASTE RECYCLED BY NLMK GROUP\* IN 2009-2013**



\* excluding Stoilensky

In 2013, the best recycling rates were achieved at Altai-Koks with 121%, Dolomit with 100%, Novolipetsk with 95.7%, and NLMK Long Products with a 95.4% recycling rate.

## ENVIRONMENTAL MANAGEMENT SYSTEM

AN ENVIRONMENTAL MANAGEMENT SYSTEM WHICH COMPLIES WITH THE ISO 14001 ENVIRONMENTAL MANAGEMENT SYSTEM INTERNATIONAL STANDARD HAS BEEN IMPLEMENTED AT FIVE OF NLMK GROUP'S ENTERPRISES.

An environmental management system compliant with the ISO 14001:2004 international standard has been in operation at Novolipetsk since 2002. In 2005, 2008, and 2011, Novolipetsk passed TÜV CERT (Germany) recertification audits for compliance with the requirements of the abovementioned standard. The year 2012 marked the tenth anniversary of the introduction of the environmental management system, which passed a successful supervisory audit performed by the British Standards Institution (BSI, United Kingdom) in 2013.

At the end of 2007, Stoilensky's environmental management system was certified as compliant with ISO 14001:2004, and the company passed recertification audits conducted by Det Norske Veritas in 2010 and 2013.

In 2011, the environmental management system at Dolomit was certified as compliant with ISO 14001:2007 by SOYUZCERT (Moscow), an integrated management systems certification authority; and in 2013, the company passed a regular supervisory audit.

In 2011, the environmental management system at Stagdok was certified as compliant with ISO 14001:2007 by Lipetsk State Technical University (Lipetsk), an integrated management systems certification authority. In March 2014, the company's environmental management system passed a recertification audit conducted by Tekhtsentr-Registr (Moscow), which is also an integrated management systems certification authority.

At the end of 2012, the SGS certification authority (Switzerland) certified the environmental management system at VIZ-Steel as compliant with the ISO 14001:2007 standard. In 2013, BSI (United Kingdom) conducted a certification audit and issued an EMS certificate confirming that the environmental management system complied with the ISO 14001:2004 standard.

Altai-Koks and NLMK Long Products are continuing their preparation for certification of their environmental management systems according to ISO 14001:2004.



## PUBLIC APPRAISAL OF ENVIRONMENTAL PROTECTION ACTIVITIES

Altai-Koks was declared Best Environmentally Responsible Regional Enterprise at RosPromEco-2013, the Russian Industrial and Environmental Forum held in Moscow on November 14–15. The company was nominated by the Administration of Altai Krai.

THE SUCCESS OF THE ENVIRONMENTAL PROTECTION ACTIVITIES AT NLMK GROUP COMPANIES (NOVOLIPETSK AND VIZSTEEL) WAS RECOGNIZED BY AWARDS IN THE RUSSIA'S "TOP 100" 2013 – ECOLOGY AND ENVIRONMENTAL MANAGEMENT FEDERAL COMPETITION, FOUNDED BY THE STATE DUMA AND THE FEDERATION COUNCIL AND HELD IN ST. PETERSBURG AT THE END OF MARCH 2013.

03

# ENERGY EFFICIENCY

NLMK STRIVES TO MANUFACTURE PRODUCTS OF THE REQUIRED QUALITY AT THE LOWEST POSSIBLE COST. TO ACHIEVE THIS, WE ARE IMPLEMENTING PROGRAMMES AIMED AT IMPROVING THE EFFICIENCY OF PRODUCTION, INCLUDING THE INTEGRATION OF ENERGY-SAVING TECHNOLOGIES INTO PRODUCTION PROCESSES.





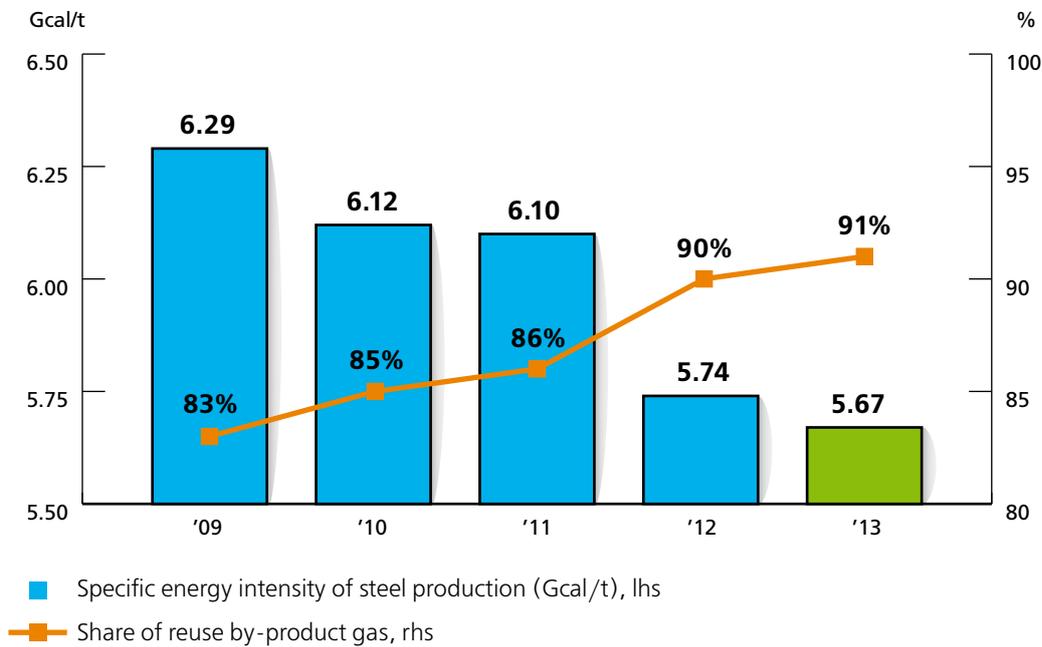
Optimization of energy consumption is one of NLMK Group’s key priorities. We take a responsible approach to the rational use of natural resources and energy. Our strategy, guiding principles, and key objectives in this area are reflected in NLMK’s Energy Efficiency Improvement Policy.

Key elements of our strategy aimed at enhancing energy efficiency include:

- Continuous improvement of production processes to reduce consumption of energy;
- Technological modernization, equipment upgrades, use of new technologies;
- Improvement of energy consumption management systems;
- Compliance with laws regulating resource consumption.

NLMK Group companies are implementing measures aimed at achieving these targets by optimizing existing business processes and using advanced technologies. For instance, by using the by-products of steelmaking operations – blast furnace and coke gases – we have been able to achieve 53% self-sufficiency in electricity at our main production site in Lipetsk.

**SPECIFIC ENERGY INTENSITY VS. HIGHER USE OF BY-PRODUCT GAS, 2009–2013**



← On the title page: Recovery Cogeneration Plant at the Lipetsk site. This project increased our level of in-house energy self-sufficiency through the use of blast furnace gas.



EFFORTS TO IMPROVE EFFICIENCY ALLOW US TO CONSISTENTLY REDUCE OUR ENERGY CONSUMPTION AND CARBON DIOXIDE EMISSIONS. TODAY, ALL OF THE GROUP'S KEY PRODUCTION COMPANIES ARE INVOLVED IN ENERGY EFFICIENCY IMPROVEMENT PROJECTS.

In 2013, specific energy consumption per tonne of steel at the Lipetsk site decreased by 1.2% to 5.67 Gcal/tonne. Best global practices reach a figure of 5.4 Gcal/tonne.

The certification of Novolipetsk's energy management system for compliance with the ISO 50001:2011 Energy Management Systems standard in September 2012 confirmed the success of NLMK's efforts to implement the best available technologies in the areas of energy consumption optimization and the rational use of energy resources. NLMK became the first steelmaking company in Russia to receive a certificate of compliance with the Energy Management Systems international standard.

In 2013, BSI Management Systems CIS conducted an external audit of the company's energy management system for compliance with ISO 50001. As a result of the audit, the Novolipetsk site was reissued an ISO 50001 compliance certificate.

# CONTACT INFORMATION

You can access information about NLMK from a variety of sources.  
Visit our corporate website for more information: [www.nlmk.com](http://www.nlmk.com).

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## NLMK IN SOCIAL NETWORKS



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