

INVESTMENT PROGRAMME AND PROJECTS

The Company makes its contribution to increasing productivity through technical modernisation and investment in research and improving its products.

One of the Company's main goals is to constantly improve efficiency, through making smart investments into strategic projects.

The Company has in place an approved regulation on investment management, which covers all phases and investment areas. In addition, a set of regulations has been introduced that directly regulates project activities and the implementation of major integrated programmes. In addition to the regulations, the Company uses special approaches, including investment project and post-investment control performance evaluations and risk management assessments for investment projects.

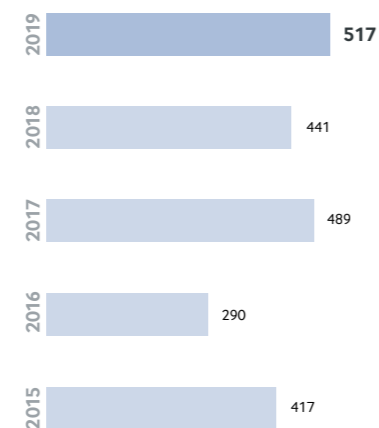
As part of its strategy implementation, Metalloinvest builds its investment policy based closely on the needs of key consumers and through upgrading facilities so that they can produce the products that are in demand. Separate key investment projects of the Company are combined into integrated strategic development programmes.

In the reporting period the Company continued with the implementation of its strategy and achieved its goals: Metalloinvest maintained a stable financial position and implemented production plans, with a rise in the production of certain items.

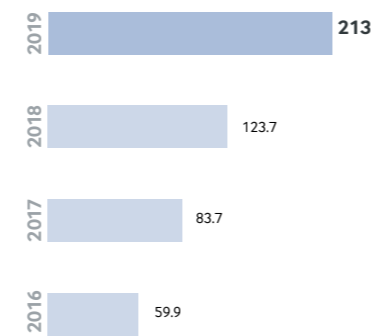
Total capital expenditure in 2015–2019 exceeded USD2 billion. In 2019 the Company's capital expenditure stood at USD517 million, a rise of +17.2% y-o-y.

In the reporting period, as part of its Strategy, the Company continued to scale up production and increase the effectiveness of sustainable development practices, including the aim of reducing the negative impact on the environment. Metalloinvest strives for maximum efficiency and is constantly looking for opportunities to build capacity by investing heavily in research and work to improve its products and existing technologies. In 2019, these costs amounted to 213 million roubles, an increase of 1.7 times compared to the previous year.

Capital expenditure, 2015–2019, USD million



Investments in research and work on improving products, 2016-2019, million roubles



We recognise that a high level of productivity is one of the factors for the success of the Company. In order to increase efficiency, Metalloinvest improves the employee motivation system, forms the KPI system, creates the conditions for the development of competencies, and develops a culture of high productivity within the framework of human resource management processes.

For more information about the personnel management system and employee motivation see Responsibility to the staff section in the Sustainable Development Report (p. 26)

LGOK

In July 2019 the Comprehensive Programme for the Development of LGOK premium products was approved, including projects to develop beneficiation, pellet, and HBI plants. The goal of this integrated programme is to create a premium-quality product (flotation concentrate) with reduced silicon dioxide content, a greater number of products with a high-margin value (pellets, HBI), improved HBI quality, and reduced negative impacts on the environment.

In 2019 work at two infrastructure HBI-3 plant facilities was on course to be completed in Q2 of 2020.

Another large-scale investment project is the construction of a cyclical and continuous facility. The Company forecasts that investments in this project will amount to around RUB11 billion. An in-pit ore crushing and conveying facility will boost production performance and reduce the cost of finished products.

In the reporting year the first stage of a project to develop external power supplies was successfully completed at LGOK. The commissioning of facilities at the second and third start-up complexes is scheduled for Q4 2020.

In May 2019 the Board of Directors also approved a new tailing dump project. As at the end of the reporting period, a tender for design work had been completed.

RUB **11** bn
investment in the construction of a cyclic-flow technology complex



INVESTMENT PROGRAMME AND PROJECTS

MGOK

The MGOK integrated development programme, which has been in place since May 2018, is aimed at improving the performance of the processing plant, enhancing the quality of iron-ore products, and increasing production volumes via a total upgrade of existing manufacturing processes.

As part of the integrated programme, Derrick fine screening technology has been introduced. The first stage of this technology was launched in four sections of the beneficiation plant on 3 September 2019. Completed ahead of schedule, the project enabled budget savings to be made and performance indicators to be achieved. In 2019, 1.2 million tonnes of high quality concentrate were produced, including 0.3 million tonnes in addition to the business plan.

Currently, the second stage of the project, the construction of a new concentrate re-enrichment building using high-performance equipment (Derrick screens, mills, and flotation plants) is under way at MGOK.

Under the programme pellet plant production facilities are also enhanced. Design engineering is in progress, and contracts for main equipment have been signed. The MGOK integrated programme also includes upgrading roasting machines, with a view to boosting production of iron-ore pellets with high-added value. As at the end of the reporting period the first stage had been completed. The facility was commissioned and planned performance indicators achieved (the performance of roasting machine-3 improved by 5%).

Crushing and conveying facilities are planned to be commissioned at MGOK in two stages. The forecast budget of the crushing and conveying facility project is around RUB11 billion. The supply of equipment and the design of the conveyor complex in the southeast of the open-pit mine have been completed, and construction work and the installation of steel structures and equipment are in progress. Commissioning is scheduled for Q3 2020. Preparatory work related to the northeast of the mine is in progress.

Construction of the crushing and conveying facilities will lower operating costs (decrease the strip ratio, increase productivity, and reduce rail transportation) and optimise the open-pit transportation scheme (reduce the number of ore transshipment points, the amount of loading equipment, and the volume of railway transport).

OEMK

An integrated SBQ customer focus and quality improvement programme is being implemented at OEMK, aimed at:

- upgrading production with a view to protecting and bolstering the Company's market position
- introducing changes to the sales process and coordinating it with production / appropriate IT system support
- revising how the supply chain is organised in order to widen the accessibility of new markets
- further developing the product portfolio to realise the potential of the customer base and existing technical prerequisites.

As part of the programme, a project to renovate Continuous Casting Machine (CCM) No. 3 was implemented, involving the main components and mechanisms of the machine being replaced. A number of systems were installed, including related to electromagnetic stirring, soft reduction, the automatic feeding of slag-forming mixtures, to remove burr from intermediate products, a hydraulic oscillator and slide shutters of tundishes with argon feed, and the secondary cooling zone and automation system were upgraded.

CCM-3 was launched after the project was completed in March 2020. The new mill facilitates enhancing the specifications of continuous casting for further rolling, as well as the production of intermediate stamping and forging products and cord steel grades. Metalloinvest's invested around RUB1 billion in the CCM-3 renovation.

Guarantee tests were completed as part of a key programme project, namely, the construction of a heat-treatment facility for hot-rolled steel products with a capacity of 70 thousand tonnes per year at the OEMK finishing plant.

The commissioning of the new plant will enable OEMK to raise its rolled product heat treatment capacity and perform various types of heat treatment within a wide temperature range (400-980°C) to create high-quality rolled products with a specific microstructure. Heat treatment is required in the production of various types of spring, ball-bearing, structural, and high-strength steel. The construction of the new facilities will allow Metalloinvest to increase SBQ sales and consolidate its position in the premium steel products market.

A ball rolling mill construction project is in progress. Related project investments are planned at around RUB1 billion, and the commissioning of the mill is scheduled for Q4 2020. The mill will be able to annually produce about 43 thousand tonnes of 100-120-mm diameter grinding balls. When supplying the required number of own-produced grinding balls to mining companies Metalloinvest adopts an integrated approach in order to resolve any issues in terms of delivery logistics, quality, costs, and the optimisation of material flows.



1
RUB bn
volume of investments
in technical re-equipment
of CCM-3



11
RUB bn
Forecast budget of the project
Crushing and conveyor complex
(DCC)

INVESTMENT PROGRAMME AND PROJECTS

URAL STEEL

The main event in the current reporting period was the commissioning in March and December of two steel furnaces using FMF technology. As a result of the project the main technical operating indicators of the upgraded furnaces planned at the initial stage were achieved. The project was successfully implemented and is demonstrating high economic performance indicators. The share of FMF technology used grew from 40% to 59%. Metalloinvest invested around RUB1.1 billion in the project.

An important part of the Company's strategic integrated development programme has been the renovation of the DP-2 and DP-3 blast furnaces at Ural Steel. In the reporting period a detailed engineering plan for DP-2 was adopted, the main equipment was delivered, and detailed design work performed. As for DP-3, detailed engineering was developed and work began on a detailed design. The commissioning of the furnaces is planned before the end of 2021. The furnaces will be equipped with a cooling system using copper refrigeration plates combined with graphite refractories. The forecast volume of investments is over RUB7 billion.

The construction of middle pressure boilers at the thermal power plant is performed as part of current key projects. In the reporting period the main part of equipment delivery, the elaboration of working documentation, and the installation of boilers and boiler equipment were completed, and construction work is continuing on schedule. The commissioning of the boilers is scheduled for Q3 2020. The implementation of this project will facilitate the generation of medium-pressure steam for the process needs of structural units, as well as the stable operation of all medium-pressure unit equipment of the thermal power plant.

The New Air Separation Unit (ASU) #6 construction project is also part of the Ural Steel integrated development programme, and is aimed at improving operational and management performance by outsourcing, via a partnership with Linde. The commissioning of ASU-6 is scheduled for Q1 2021. A new cable tray system, recipient installation, and an energy source rack supplied by steam, nitrogen, argon, dry air, and high and low-pressure oxygen pipelines will be installed as part of the project, as well as industrial water pipelines.

RUB 7+ bn
estimated investment in the project for re-equipment of blast furnaces (DP-2 and DP-3)



GENERAL PROJECTS BY KEY AREAS IN 2019

The Company seeks to maintain a favourable social environment at all its enterprises and in every region where it operates. Metalloinvest provides stable employment for over 43,000 people at main production sites and play an active role in resolving urgent problems in regions where it operates.



Laboratory

Metalloinvest enterprises have been implementing projects to develop laboratory equipment since 2018. These projects are aimed at improving the quality of iron-ore products (pellets, HBI) and metal products through continually monitoring and controlling the metallurgical properties of raw materials, increasing customer focus by determining the metallurgical properties of products, and conducting studies on the development of new types of products / how to reduce production costs.

In December 2019 a metallurgical laboratory was commissioned at LGOK, and over 40 new indicators were applied in four beneficiation areas.



Maintenance and repairs; mobile technical maintenance and equipment repairs

To facilitate the automation and motorisation of maintenance and repair functions, Metalloinvest has since 2018 been implementing programmes covering the procurement of vehicles, lifting machines, mechanical systems, diagnostics systems, and tools and equipment, as well as a programme to purchase tools for mobile technical maintenance and equipment repairs.



Environmental protection programme

In December 2019 the environmental protection programme was approved and launched. The purpose of the programme is to cut air emissions by 2025, and to reduce waste generation from dead and overburden rocks, lower greenhouse gas emissions (CO₂ equivalent) among Metalloinvest's iron-ore consumers, and facilitate the disposal and recycling of waste.

Read more in the Sustainability Report, in the section «Environmental Program» (p. 86).



Energy efficiency programme

In May 2019 the goals of the energy efficiency programme were approved, including:

- reduced energy resource consumption and greater efficiency as of the base period (2017)
- ensuring reliable and uninterrupted power supplies
- providing the level of energy resources necessary to develop production.

At the end of the reporting period an independent audit of the energy efficiency of beneficiation areas had been carried out, which demonstrated high-energy efficiency indicators.

Read more in the Sustainability Report, in the section «Energy Consumption and Energy Efficiency» (p. 108)

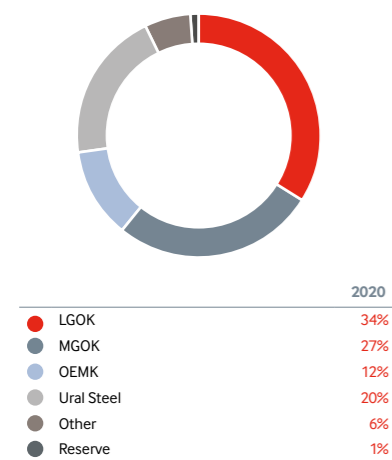
INVESTMENT PROGRAMME AND PROJECTS

PLANS

In 2020 and the medium term Metalloinvest will continue to implement programmes and projects as part of its strategy .


For 2020 the Metalloinvest capital expenditure programme envisages two areas: maintenance and development. Development-related investments are made in the following areas: quality improvement, cost reduction, enhancing operational stability, ensuring greater production volumes, and reduced administrative costs.

Financing structure of the capital expenditure programme for priority development projects by processing plants, 2020



LGOK

- renovation of the HBI-1 and HBI-3 plants;
- the technical renovation of 1-4 roast machines;
- construction of a cyclical and continuous facility;
- creating an external power supply; commissioning facilities at the second/third start-up complexes is scheduled for Q4 2020;
- developing tailing facilities at LGOK (existing tailing dump to mark +250 metres), building a new tailing dump at the Dubenka Creek.



MGOK

- executing the second stage of introducing the Derrick fine screening technology – construction of an enrichment building;
- implementing the second stage of the upgrade to roast machine No.3;
- constructing a crushing and conveyor facility: the commissioning of the conveyor facility on the southeast side of the mine is scheduled for Q3 2020;
- executing the Vkhodnaya railway station construction project.



OEMK

- completing the CCM-3 technical renovation project, commissioning is scheduled for March 2020;
- construction at the OEMK finishing plant of a heat-treatment facility for hot-rolled products, with an annual capacity of 70 thousand tonnes ;
- the ball rolling mill construction project is ongoing.



Ural Steel

- renovation of blast furnaces DP-2 and DP-3; their commissioning is scheduled for Q4 2021;
- the construction of middle pressure boilers at TPP: their commissioning is scheduled for Q3 2020;
- the construction of air separation unit 6: its commissioning is scheduled for Q1 2021.



Implementation of large-scale investment programs, increasing operational and managerial efficiency create a platform for achieving the Company's long-term leadership.

General projects

- Implementation of the energy efficiency programme: reducing the cost of consumed energy, as well as the consumption of electric power, gas, fuel, and lubricants (diesel) by 2025.
- Implementation of the environmental protection programme: reducing air emissions, waste generation from dead and overburden rocks, and greenhouse gas emissions (CO₂ equivalent) among Metalloinvest's iron ore consumers by 2025, as well as the disposal and recycling of waste.
- Launch of budgeting, analytical reporting, and consolidation in accordance with IFRS modules; commissioning a back-up data processing centre as part of a project to introduce an integrated management system for financial and business operations, based on SAP S/4HANA in 2020; and developing laboratory equipment at all Metalloinvest companies.
- Implementation of the programme for the procurement of vehicles, lifting machines, mechanical systems, diagnostics systems, tools and equipment, as well as the programme to purchase tools for mobile technical maintenance and equipment repairs: reduced labour intensity, improved repair work, and a reduction in the number of repair personnel.

The implementation of large-scale investment programmes and creating greater operational and management efficiency will help the Company cement its position as a long-term leader.