

CHAIRMAN'S LETTER

STRATEGY OF SUSTAINABLE DEVELOPMENT



DEAR SHAREHOLDERS,

In 2019, once again, we delivered a strong financial performance that was reflected in the dynamics of our market capitalisation and total shareholder returns.

Higher metal prices combined with relentless work to improve the performance and competitiveness of our businesses,

contributed to a sharp increase in EBITDA to almost USD 8 bn, the highest level in the last 12 years. We increased production of our key metals and over delivered on all financial targets set in our most recent efficiency program, with unit cost declining 5% year-on-year. These outstanding results allowed us continue to generate healthy cash flow and pay industry-leading dividends, while maintaining net leverage at a conservative level.

Since 2013 we have been consistent in delivery on our promises to the investment community and in achieving our strategic goals, proving that the Company's outstanding performance is not just a 'flash in a pan', but is driven by a deeply sustainable business model.

The most exciting thing about Nornickel, however, is not the past, but the future. Having one of the best resource bases in the world, it is natural to look for longer term opportunities and to ask what the business is going to look like in 2030. We believe that we can make further advances by unlocking the unique value potential of our Company. We have materially improved our knowledge of the resource base and progressed well with the preparation of key mining projects for their execution. Thus, our long term plans have become more

informed, and hence our ambitions more achievable.

We have already embarked on this growth path, having made investment decisions on a further Talnakh concentrator upgrade and the South cluster development. Based on the existing resource base in Taimyr Peninsula, we are able to scale up ore production to 30 mln tonnes by 2030, which will be 75% higher than in 2017.

We have also identified opportunities for optimisation of our downstream assets, which should enable more efficient monetisation of our mineral resources. We have added to our prospective project portfolio, the expansion of Nadezhda smelter, the reconstruction of Norilsk concentrator and the construction of a new copper refining unit at Kola MMC.

Sustainability is a core principle at Nornickel. However, for us, it involves more than just the sustainable use of natural resources; it also comprises the sustainable development of communities and our contribution to a greener economy globally.

Firstly, we are adopting an unprecedented environmental program that covers our key geographies. For Norilsk, we have set new, more aggressive long term targets for sulfur dioxide emissions reduction being nearly 90% versus 75% previously. For Kola operations, our target is seven times emissions reduction within the next two years. Total capital expenditure is budgeted at almost \$3.5 billion over the next five years, making it one of the biggest environmental investments in the mining sector globally.

Secondly, Nornickel is perfectly positioned to play a critical role in support of major global megatrends that are already shaping “green mobility”, namely: tightening of emission standards for ICE cars and the rapid growth of electric vehicles. Our exposure to nickel, copper, cobalt, palladium and platinum is unique in the mining industry, and we will do our best to provide steady supply of these crucial materials to global markets.

We strongly believe that we are making good progress in shaping Nornickel into an outstanding investment for shareholders, while contributing to the transition to cleaner mobility and a greener economy worldwide.



Gareth Peter Penny

Chairman of the Board of Directors,
MMC Norilsk Nickel

PRESIDENT'S LETTER



DEAR SHAREHOLDERS,

2019 was for us a year of phenomenal achievements. Once again, we have shown the investor community the strengths of our business model and our ability to reach ambitious goals. We have been able to significantly increase the value of our business and pay industry-leading shareholder returns through the consistent delivery of our strategy, whose success has been supported by higher metal prices.

Financial highlights

Last year, we ramped up the output of all key metals, breaking a record in the process by producing almost half a million tonnes of copper. Strong operational performance and higher prices for nickel and palladium have contributed to a boost in revenue of 16% to USD

13.6 bn. Furthermore, our successful operational efficiency programme and rigorous cost management have helped us reduce our unit costs by almost 5%. As a result, our EBITDA grew by 27% to USD 7.9 bn while the EBITDA margin reached 58%. We have also seen our net profit increase by almost 2 times to USD 6 bn while free cash flow reached an impressive USD 5 bn for the second year running.

Finally, our leverage remained low, with Net Debt to EBITDA reduced to 0.9. We believe that a conservative approach to debt is central to maintaining our financial stability, which is particularly relevant amidst macroeconomic uncertainty.

Strategic priorities and investments

Last year, Nornickel came to the end of its five-year strategic cycle, which was primarily aimed at reconfiguring and upgrading its downstream facilities, and provided a secure foothold for further business growth. It is now time to take the next move to reach for even more ambitious objectives, and on this note, I would like to discuss in more detail the ten-year strategic programme that we have designed.

We have fundamentally improved our knowledge of our immense resource base to allow for a smooth transition to longer-term planning. In the Taimyr Peninsula, with its ore reserves of more than 2 billion tonnes, we intend to ramp up our production by 75%, or up to 30 Mtpa. In doing so, our output of key metals is expected to rise considerably by 2030: nickel by 15%–25% to 240–260 ktpa, copper by 20%–30% to 480–520 ktpa, and platinum group metals (PGMs) by 30%–45% to 140–150 ktpa.

These strategic plans assume that we will successfully complete the already-sanctioned South Cluster project, brownfield expansion projects at the Talnakh mines, upgrades and debottlenecking of our concentration and metallurgical facilities.

Backed by our unique metal basket and world-leading exposure to mining assets, we are perfectly positioned to support the global transition to green mobility. The rise of hybrid and electric vehicles, and the tightening of regulations on exhaust emissions across the globe are two megatrends that are expected to considerably boost the demand for our products in the coming years.

By 2030, we will be able to supply enough PGMs to the global market to produce 25–40 mln autocatalysts, in turn leading to a 170–270 mln t reduction in air pollutants. In addition, we believe that we will be able to supply enough high-grade nickel to produce 3.5–5.5 mln EV battery packs, which will reduce global GHG emissions by 50–100 mln t. We are confident that Nornickel will play a crucial role in helping the global economy, and above all transport, go green.

For this very reason, we believe that our own assets should also be green. Last year, we adopted the new comprehensive environmental protection programme, conventionally called “Sulphur Programme 2.0”. The programme is expected to reduce emissions by 90% by 2025 for the Polar Division, and by 85% as early as 2021 for Kola MMC.

Accordingly, our growth strategy and environmental projects will require significant investment, which can be broken down into three phases. During the first, active construction phase, management expects a gradual increase in investment from USD 2.2–2.5 bn in 2020. During the second phase (from 2022 to 2025), the annual investment is to reach its peak of USD 3.5–4 bn. During the third phase (from 2026 to 2030), our capital expenditures are expected to return to their historical annual average of about USD 2 bn.

Health and safety

Our top priorities are to ensure employee safety and mitigate the risk of work-related injuries. In 2019, we continued our unwavering efforts to enhance occupational health at our facilities. We have maintained our lost time injury frequency rate (LTIFR) at a level significantly below the global industry average. Despite this, it is with deep regret that I must inform you that nine of our colleagues lost their lives at the workplace during the last year. I offer my sincere condolences to their families, and I believe statistics like these are simply unacceptable. We are sparing no effort to achieve our priority goal of zero work-related fatalities at our facilities.

Social responsibility

Sustainability and social responsibility are not just hollow buzzwords for Nornickel: we have been and will continue to be an investor in social infrastructure and human capital.

In 2019, Nornickel and the Russian Government continued their joint implementation of a long-term target programme to relocate people from Norilsk and Dudinka (Krasnoyarsk Region) to other Russian regions with a better climate. Under the programme, 7,586 families moved into new homes on the “mainland” between 2011 and 2019.

We are actively involved in the construction and renovation of social infrastructure across our footprint, with the aim of creating inclusive and people-friendly work and living spaces.

On a final note, I would like to highlight that our 2019 performance has provided ample evidence that we are on the right strategic track. I would like to give my thanks to all those who have contributed to our success, and express my confidence that together we can deliver on all our long-term goals.

Vladimir Potanin

President,
Chairman of the Management Board
MMC Norilsk Nickel

EXPANDING OUR HORIZONS

OUR STRATEGY

The seamless execution of our strategy over the past six years, as well as tailwinds in the commodities markets, have helped us to achieve industry-leading TRS (total returns to shareholders) performance. Now it's time for us to take the next step towards even more ambitious goals, both in terms of business growth and environmental performance.

We are setting new planning horizons, as we see a positive outlook going forward. Firstly, the nickel market, which is a strategic focus for us, is showing a stable global trend in demand from battery and electric vehicle (EV) manufacturers. And while this story has been more about expectations than real action so far, we are keenly aware that the future for the automotive industry lies with green technology, which provides an extra tailwind for us. At the same time, petrol-driven cars are also still being produced, and this sector is our traditional consumer. With environmental standards getting ever tougher, demand for palladium is surging, as this metal is indispensable for making catalytic converters which capture harmful exhaust pollutants. The strong long-term demand for nickel and platinum group metals (PGMs) creates a positive case for our shift from the current, tactical five-year planning horizon to a longer, ten-year strategic planning horizon. This is even more important, as all of the major

capital projects we are betting on in the metals and mining industry take on average about 7 to 10 years to deliver. We expect to increase Nornickel's ore production 1.8 times over this time horizon, investing approximately more than RUB 2.0 trillion in our growth projects.

We are confident that Nornickel will play a crucial role in making the global economy, and above all transport, green. To this end, we need to make sure that our own assets in this new, more environmentally conscious world are equally as green.



VLADIMIR POTANIN,
President, MMC Norilsk Nickel

MISSION

Through the efficient use of natural resources and equity, we supply mankind with non-ferrous metals, which make the world a more reliable place to live in, and help people to realise their aspirations for development and technological progress

GLOBAL MEGATRENDS IN THE AUTOMOTIVE INDUSTRY



STRATEGY EVOLUTION

STRATEGY UPDATE COVERING KEY AREAS



Production growth¹

- Accelerating output growth
- Expanding the long-term investment programme

Growth in mining production² on the Taimyr Peninsula

+60–75%

Growth in metals output

Ni
nickel **+15–25%**

Cu
copper **+20–30%**

Pd+Pt
platinum
group metals **+30–45%**

¹/ To the base year (2017).
²/ To the base year (2015).



Comprehensive environmental programme

- Slashing sulphur-dioxide emissions
- Maintaining leadership in CO₂ reduction

Reduction of SO₂ emissions from operations²

by **2025** at the Polar Division **by 90%**

by **2021** at Kola MMC **by 85%**
Nornickel's production cycle ensures one of the lowest levels of GHG emissions among global metals and mining companies



STRATEGIC ASPIRATION

Sustainable growth and maintaining industry-leading shareholder returns



COMPREHENSIVE ENVIRONMENTAL PROGRAMME

OUR STRATEGY

CONTRIBUTION TO THE GLOBAL SUSTAINABLE DEVELOPMENT AGENDA

By 2030, Nornickel's supplies of PGMs to the global market will support the production of



25-40
mln
autocatalysts annually

Air pollutant emissions will be reduced by

170-270
mln t

Increases in high-grade nickel output will support the production of

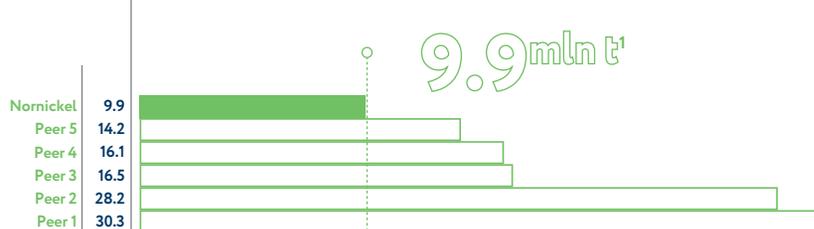


3.5-5.5
mln
EV battery packs annually

Global CO₂ emissions will be reduced by

50-100
mln t

Nornickel maintains one of the lowest CO₂ footprints among peers (Scope 1&2)
mln t



SHARE OF ELECTRICITY FROM RENEWABLE SOURCES

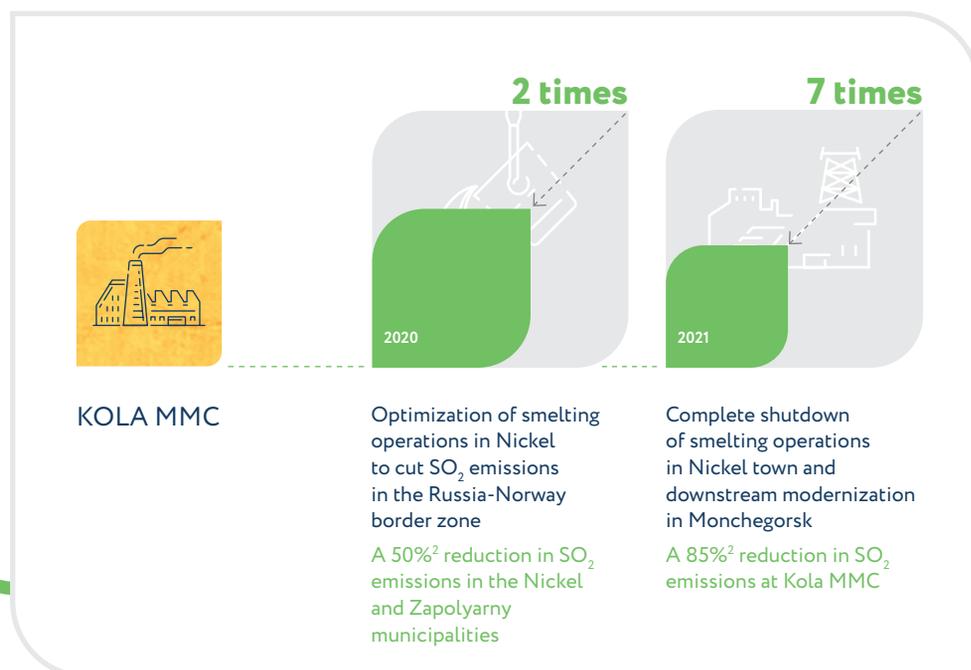
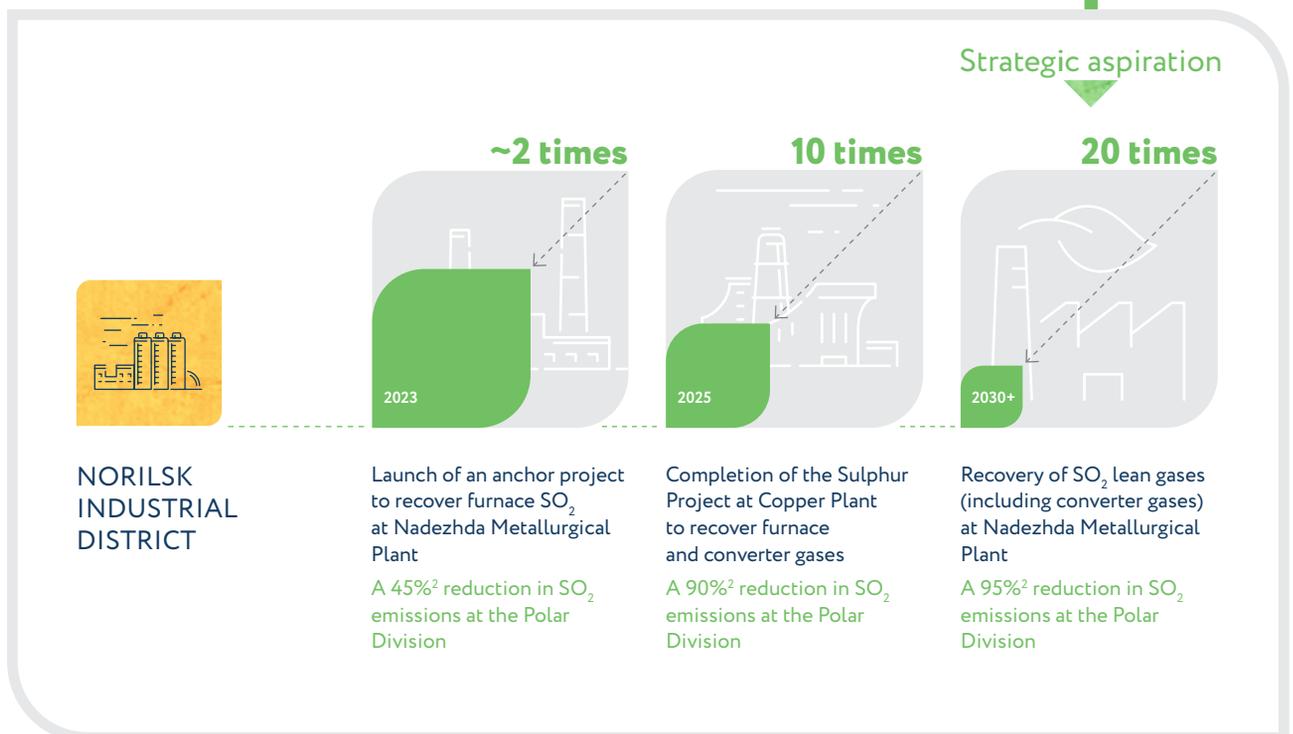
44.5%
for the Group

53.5%
for the Norilsk Industrial District

^{1/} According GHG Standard (Scope 1 & 2) (GHG Corporate Accounting and Reporting Standard)

Sulphur Programme 2.0

Sulphur Programme 2.0, Nornickel's new comprehensive environmental protection programme, aims to achieve world-class performance in sulphur capture, and zero emissions within the cross-border zone affected by Kola MMC (by the end of 2021).



^{2/} Against a 2015 baseline.

ACCELERATING PRODUCTION GROWTH

OUR STRATEGY

Our long-term strategy for accelerated production growth is closely aligned with plans to upgrade production facilities and other related infrastructure

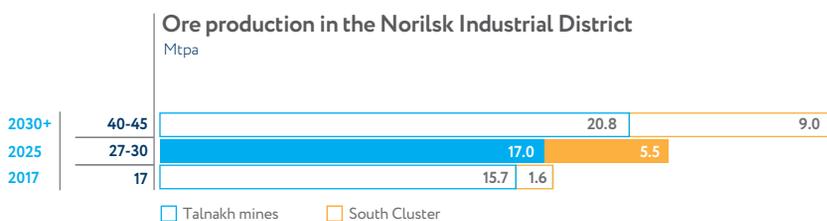


ORE PRODUCTION GROWTH

- 1/ Development of the South Cluster
- 2/ Modernisation of the Skalisty Mine
- 3/ Brownfield expansion projects at the Talnakh mines (Oktyabrsky, Komsomolsky, Taimyrsky, and Mayak)

Nornickel's resource base expansion programme envisages a production ramp-up by 2030 to

27-30 mln t



STRATEGIC AMBITIONS FOR 2030+ METAL PRODUCTION¹

Ni

Nickel

kt

+15-25%



¹ Metals produced from Russian feedstock (including metals in saleable semi-products) excluding production from Bystrinsky GOK and Nkomati.



CONCENTRATION FACILITIES

- 1/ 3rd Stage of the Talnakh Concentrator Upgrade to boost throughput capacity to 18 Mtpa from 10 Mtpa
- 2/ Norilsk Concentrator retrofit and expansion



SMELTING AND REFINING OPERATIONS

- 1/ Nickel tankhouse upgrade at KGMK
- 2/ Process chain upgrade at Copper Plant (a Continuous Converting Facility project)
- 3/ Retrofit of production facilities at Severonickel Plant (KGMK) with the roast-leach-electrowin (RLE) technology rolled out to cover the entire copper output (currently under consideration)
- 4/ Construction of the 3rd furnace at Nadezhda Metallurgical Plant's smelting shop (currently under consideration)

Nornickel's phased long-term investment programme

USD bn
Average for the period



During Phase 1 of the active construction period, CAPEX is expected to steadily grow from USD 2.5–2.8 bn in 2020 to USD 3.0–3.4 bn in 2021, eventually peaking at an annual average of USD 3.5–4 bn between 2022 and 2025. During Phase 3, between 2026 and 2030, CAPEX is expected to revert to its historical annual averages of around USD 2 bn.

Cu

Copper

kt

+20–30%

2030+	480-520
2019	454
2017	398



Pd+
Pt

Palladium + platinum

t

+30–45%

2030+	140-150
2019	113
2017	105



KEY INVESTMENT PROJECTS

MINING PROJECTS

SKALISTY MINE

Location

Norilsk Industrial District, Krasnoyarsk Region

Project overview

The Skalisty Mine development project aims to ramp up ore production to 2.5 Mtpa by 2020, and maintain this level until 2025 through mining the rich and cuprous ore reserves of the Talnakhskoye and Oktyabrskoye deposits. In 2020–2025, the project's CAPEX will total RUB 58.3 bn (USD 0.85 bn).

Ore reserves¹

53 mln t

Average metal content

NI – 3.2 %

Cu – 3.7 %

PGMs – 10.0 g/t



The Skalisty Mine forms part of Nornickel's Polar Division and produces ore from the Talnakhskoye and Oktyabrskoye deposits. In 2019, the mine extracted 2.3 mln t of rich ore and 88 kt of copper ore.

Project timeline

'19

- CAPEX – RUB 3.7 bn (USD 58 mln)
- Refurbishment of **ventilation shaft No. 10** completed, and the main ventilation unit launched
- The sinking of skip-cage shaft No. 1 completed (**2.1 km in total**)

'20

- Commissioning of **ventilation shaft No. 10**
- Commissioning **400 ktpa** of saleable ore capacity

TAIMYRSKY MINE



Taimyrsky Mine forms part of Nor Nickel's Polar Division and produces ore from the Oktyabrskoye Deposit. In 2019, the mine extracted about 4.1 mln t of rich ore.

Location

Norilsk Industrial District, Krasnoyarsk Region

Project overview

The Taimyrsky Mine development project aims to sustain ore production at 4.3 Mtpa until 2025 by tapping into the rich copper-nickel ore reserves of the Oktyabrskoye deposit. In 2020–2024, the project's CAPEX will total RUB 32.8 bn (USD 491.6 mln).

Ore reserves¹

139 mln t

Average metal content

NI – 1.2 %

Cu – 1.9 %

PGMs – 4.5 g/t

Project timeline

'19

- CAPEX – RUB 4.3 bn (USD 67 mln)
- 5.6 km of underground workings completed

'20-'24

- Commissioning 1.15 Mtpa of capacity to maintain ore production at 4.3 Mtpa

^{1/} According to JORC standards.

MINING PROJECTS

OKTYABRSKY MINE

Location

Norilsk Industrial District, Krasnoyarsk Region

Project overview

The Oktyabrsky Mine development project aims to maintain production of depleting reserves, and gradually ramp up production to 6.0 Mtpa until 2025, through mining 38.5 mln t of the rich disseminated and cuprous ore reserves of the Oktyabrskoye deposit. In 2020–2025, the project's CAPEX will total RUB 3.8 bn (USD 56.1 mln).

Ore reserves¹

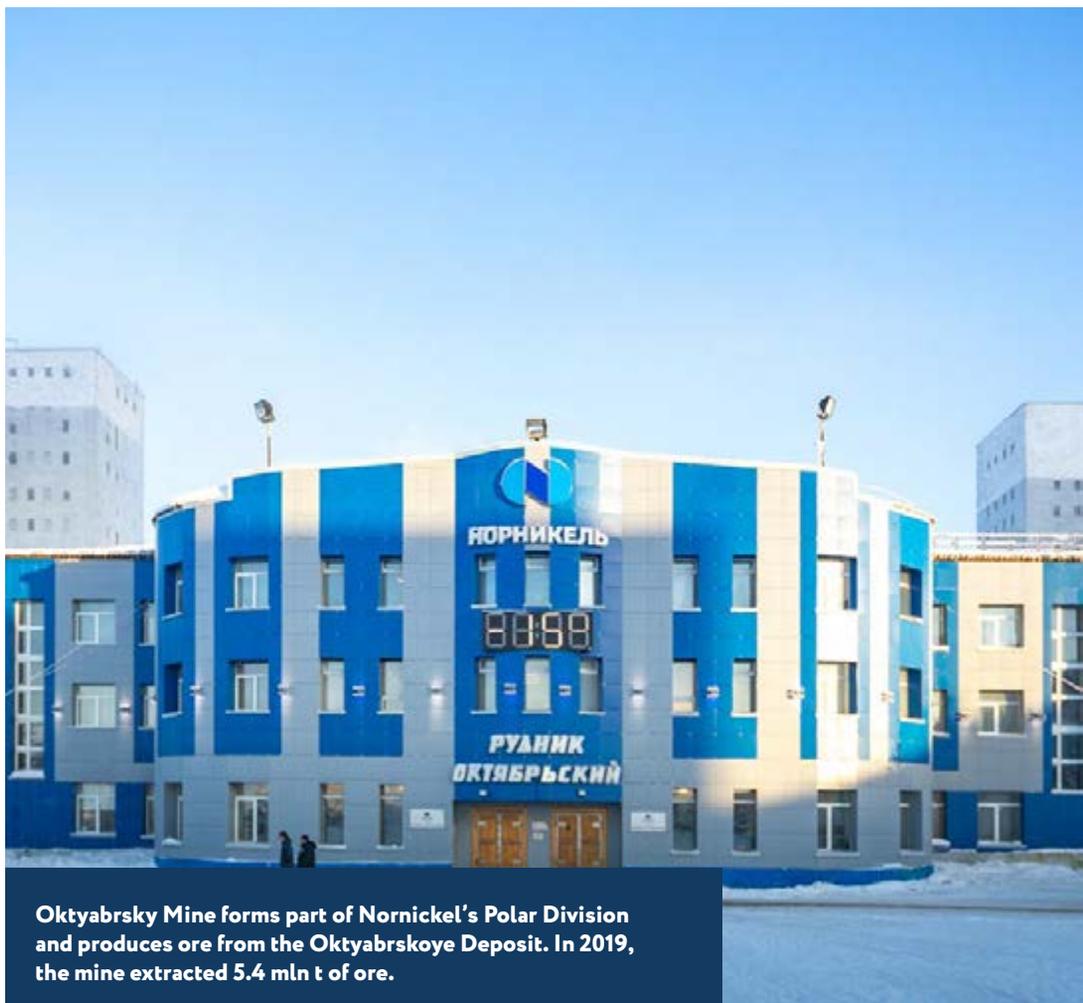
215 mln t

Average metal content

NI – 0.6 %

Cu – 2.1 %

PGMs – 5.8 g/t



Oktyabrsky Mine forms part of Nornickel's Polar Division and produces ore from the Oktyabrskoye Deposit. In 2019, the mine extracted 5.4 mln t of ore.

Project timeline

'19

- CAPEX – RUB 1.7 bn (USD 27 mln)
- 2.6 km of underground workings completed

'20-'25

- Commissioning 300 Ktpa cuprous ore and 1.15 Mtpa ore capacity to maintain production reserves

KOMSOMOLSKY MINE



The Komsomolsky Mine forms part of Nornickel's Polar Division and produces ore from the Talnakhskoye and Oktyabrskoye deposits. In 2019, the mine extracted 4.0 mln t of ore.

Location

Norilsk Industrial District, Krasnoyarsk Territory (Polar Division)

Project overview

The Komsomolsky Mine development project aims to maintain ore production at 4 Mtpa until 2023, by mining the rich, cuprous, and disseminated ore reserves of the Talnakhskoye and Oktyabrskoye deposits. In 2020–2023, the project's CAPEX will total RUB 13.7 bn (USD 204.5 mln).

Ore reserves¹

182 mln t

Average metal content

NI – 0.6 %

Cu – 1.1 %

PGMs – 4.8 g/t

Project timeline

'19

- CAPEX – RUB 3.5 bn (USD 54 mln)
- 4.5 km of underground workings completed

'20-'23

- Commissioning 1.5 Mtpa of saleable ore capacity

^{1/} According to JORC standards.

MINING PROJECTS

SOUTH CLUSTER

Location

Norilsk Industrial District, Krasnoyarsk Region

Project overview

The project aims to ramp up ore production to 9 Mtpa by 2027, first by expanding the pit (open-pit operations) and then through underground mining. In 2020–2027, the project's CAPEX will total RUB 63.1 bn (USD 0.9 bn).

Ore reserves¹

42 mln t

Average metal content

NI – 0.3 %

Cu – 0.4 %

PGMs – 6.0 g/t



In 2017, Nornickel established Medvezhy Ruchey, a wholly-owned subsidiary that operates the assets of the South Cluster. The South Cluster comprises the Norilsk Concentrator (processing capacity of 9.3 Mtpa), the northern part of the Norilsk-1 deposit, developed by the Zapolyarny open-pit mine and the Zapolyarnaya mine, as well as the tailing dump No. 1 and Lebyazhye tailing dump. The Norilsk Concentrator processes all disseminated ores from the Zapolyarny Mine and cuprous and disseminated ores from the Oktyabrskoye and Talnakhskoye deposits. In 2019, the plant processed 7.5 mln t of ore, with nickel recovery in bulk concentrate reaching 71.3%. In 2019, the Zapolyarny Mine produced 1.6 mln t of disseminated ore. In 2019, the South Cluster project's CAPEX was RUB 5.0 bn (USD 76 mln).

Project timeline

'19

- CAPEX – RUB 1.6 bn (USD 24 mln)
- Stripping completed
- Exploration conducted
- Design documentation development started

'20

- Feasibility study and detailed engineering conducted
- Completion of design documentation
- Securing of approval from the Main Department of State Expertise
- Launch of construction and installation works

'21-'22

- Construction and installation works, equipment delivery
- Launch of ore production

¹ According to JORC standards.

ARCTIC PALLADIUM

In 2018, Nornickel and Russian Platinum, a Russian private company, signed a memorandum of intent to set up a joint venture (JV) with a view to develop the Norilsk Industrial District's deposits. Contributions to the JV's authorised capital included Nornickel's licence to develop the Maslovskoye deposit and Russian Platinum's licence to develop the southern part of the Norilsk-1 deposit and the Chernogorskoye deposit.

In March 2020, Russian Platinum has notified the Company of its decision to terminate the negotiations regarding Arctic Palladium JV and to proceed with the development of the Chernogorskoye Deposit and the southern part of the Norilsk-1 Deposit on its own. This decision owes to UC RUSAL, one of Nornickel's shareholders, not issuing due corporate approvals to Nornickel to participate in the proposed joint venture.

PROCESSING PROJECTS

BYSTRINSKY GOK (CHITA PROJECT)

Location

16 km east of Gazimursky Zavod,
Gazimuro-Zavodsky District,
Zabaykalsky Region

Project overview

The Bystrinsky GOK construction project is made up of an open-pit mine at the Bystrinskoye deposit; a mining and processing plant (MPP) with all associated infrastructure, including a power line and the 227 km Borzha–Gazimursky Zavod railway line; as well as a rotation camp.

Construction of the open-pit mine and the MPP started in 2013. In 2017, a 220 kV power line was commissioned and a camp for 1,047 people was built. Hot commissioning of the MPP started in October 2017. The MPP came online in December 2019. The project is expected to ramp up to design capacity by 2021.

Ore reserves¹

316 mln t

Average metal content

Cu – 0.7 %

Fe₃O₄ – 23 %

Au – 0.9 g/t

In 2020–2022, the project's CAPEX will total

RUB 16.7 bln
(USD 252.0 mln).

The project's design capacity

10 Mtpa

New jobs

~2,000 positions



Launched in 2019, GRK Bystrinskoye (Bystrinsky GOK) is Nornickel's new copper, gold and iron concentrate project. It is the largest greenfield project in the Russian mining industry, covering ore mining, concentration and shipment of end products to customers. Nornickel owns 50.01% in Bystrinsky GOK, with CIS Natural Resources Fund holding 39.32%, and the remaining 10.67% belonging to Highland Fund. In 2005–2020, the project's CAPEX will total RUB 92.5 bn (USD 1.8 bn).

Project timeline

'19

- CAPEX – RUB 6.7 bn (USD 103 mln)
- Mining of 7.5 mln t of ore and production of 43.5 kt of copper concentrate, 177 koz of gold concentrate, and 1.3 mln t of iron ore concentrate. EBITDA – USD 349 mln

'20

- The MPP is expected to reach design capacity with the following annual concentrate volumes: Cu – 55–65 kt; Au – 220–240 koz; Fe₃O₄ (Fe – 66%) – 1.5–1.7 mln t

^{1/} According to the Russian classification (A+B+C1+C2)

TALNAKH CONCENTRATOR



The upgrade has been rolled out in three stages. Stage 1 was completed in 2015, and included the reconstruction of existing flotation capacity and the replacement of flotation cells that were beyond their useful lives, in order to maintain the concentration capacity at 7.5 Mtpa. Stage 2 involved the expansion of the main building, the reconstruction of the reagent preparation building, and the construction of additional ball mills and vertical mills, as well as the 1st Stage of the tailing dump, all of which helped to boost capacity to 10 Mtpa. This stage was completed in 2018. Plans for the 3rd Stage of the Talnakh Concentrator Upgrade include a capacity ramp-up to 18 Mtpa and construction of the tailing dump's 2nd Stage. The new concentration technology will increase recovery by 4%–7% for all key metals. The project's completion is slated for 2023, reaching design capacity by 2024+. CAPEX for the 3rd Stage of Talnakh Concentrator in 2020–2024 is estimated at RUB 40 bn (about USD 0.6 bn).

Location

Norilsk Industrial District, Krasnoyarsk Region

Project overview

The Talnakh Concentrator (Polar Division) processes rich, cuprous, and disseminated ores from the Oktyabrskoye and Talnakhskoye deposits to produce nickel-pyrrhotite and copper concentrates. In 2019, the plant processed 10.7 mln t of ore, with nickel recovery in bulk concentrate reaching 85.9% (+2.7% y-o-y).

The new concentration technology will increase recovery by 4%–7% for all key metals.

3rd Stage project timeline

'19

- CAPEX – RUB 424 mln (USD 7 mln)
- Inspection of the construction site and completion of preparatory work
- Development of design documentation completed
- Approval from the Main Department of State Expertise received and construction permit secured
- Completion of preparatory work in the main building of Talnakh Concentrator

'20-'22

- Development of engineering documents
- Construction and installation works
- Equipment delivery
- Pre-commissioning

'23-'24

- Commissioning
- Ramping up to design capacity

PROCESSING PROJECTS

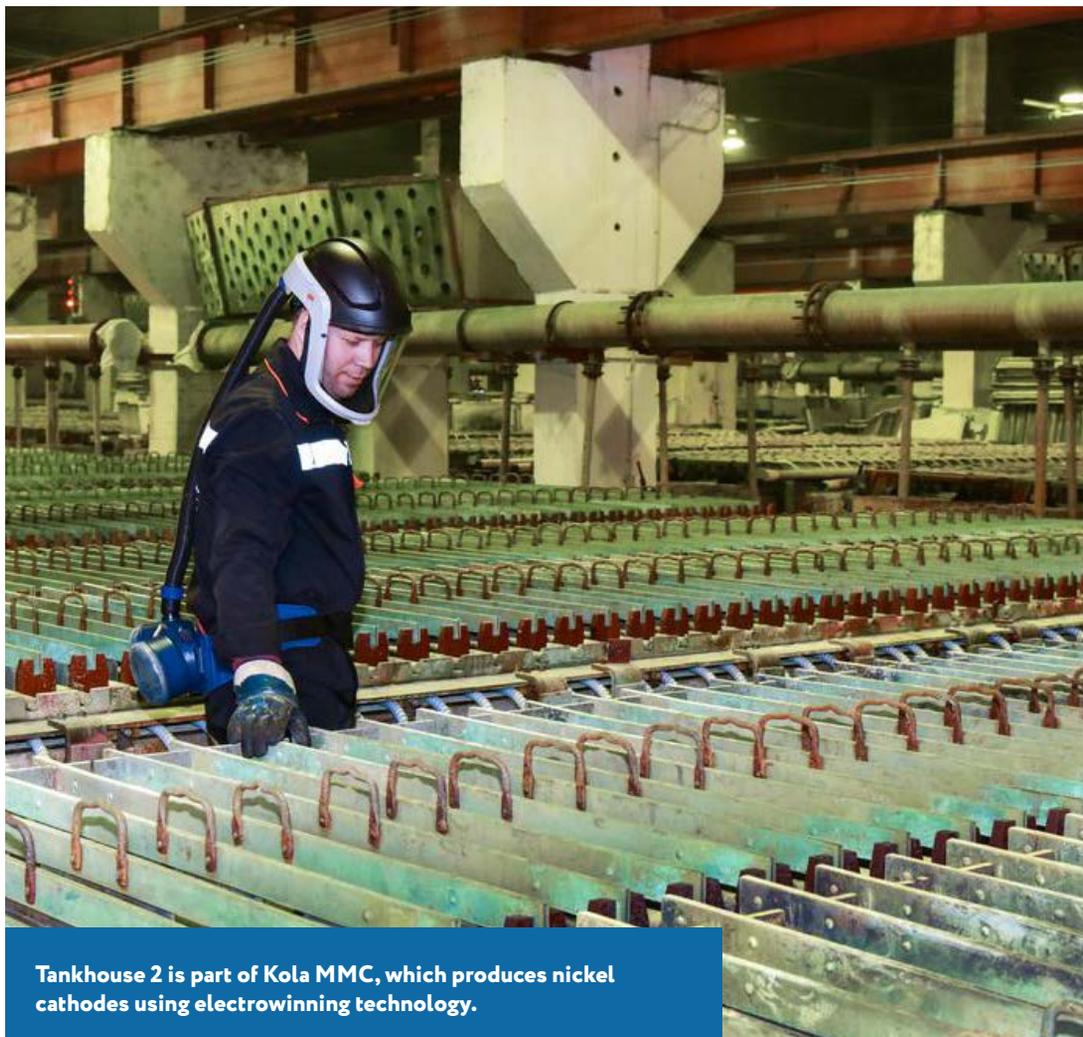
NICKEL TANKHOUSE UPGRADE

Location

Monchegorsk, Murmansk Region

Project overview

The tankhouse 2 upgrade will create a highly effective nickel cathode production unit, harnessing the technology of nickel electrowinning from chlorine dissolved tube furnace nickel powder, which will help increase output of nickel cathodes from 120 ktpa to 145 ktpa. The new technology will help achieve the highest purity of metal and reduce air emissions. In 2020–2021, the project's CAPEX will total RUB 2.9 bn (USD 43.4 mln).



Tankhouse 2 is part of Kola MMC, which produces nickel cathodes using electrowinning technology.

Project timeline

'19

- CAPEX – RUB 4.8 bn (USD 74.5 mln)
- Refurbishment of electrowinning cells – the project reaches 98% completion

'20

- Pre-commissioning and ramping up to design capacity

ENERGY PROJECTS

ENERGY INFRASTRUCTURE UPGRADES



Nornickel operates its own energy assets, which comprise four natural gas fields, three thermal power plants (CHPP-1, CHPP-2, and CHPP-3), two hydropower plants (Ust-Khantayskaya HPP and Kureyskaya HPP), gas pipelines, and power lines. Our energy sources include renewables (hydropower) and gaseous hydrocarbons (natural gas).

Location

Norilsk Industrial District, Krasnoyarsk Region

Project overview

Investment in energy infrastructure aims to replace outdated and obsolete HPP turbines and CHPP units, and retrofit key elements of the gas transmission system. These initiatives will markedly extend the service life of our key energy infrastructure facilities, enhance the reliability of our energy and gas supply, increase the amount of renewable energy generated, and enable the creation of an energy saving ecosystem. In 2020–2025, energy infrastructure CAPEX will total RUB 135 bn (USD 2 bn).

Project timeline

'19

- CAPEX – RUB 15.9 bn (USD 246 mln)
- Replacement of hydropower units at Ust-Khantayskaya HPP (turbine and electrical shops)
- Replacement of power unit equipment at CHPP-2

'20-'25

- Replacement of two existing power units at CHPP-2 and CHPP-3
- Modernisation of grid facilities and gas transmission equipment upgrades
- Turbine replacement and the introduction of an automated dispatch system at HPPs

ENVIRONMENTAL PROJECTS

SULPHUR PROGRAMME AT KOLA MMC

Location

Nickel settlement, Murmansk Region

Project overview

The project envisages the construction of a 200 kt dry concentrate loading point, the upgrade of the flotation circuit at Zapolyarny Concentrator to allow for production of two types of copper-nickel concentrate, and the complete shutdown of smelting operations in Nickel. The new facility will separate high-grade concentrate and low-grade concentrate, ready to be shipped to third-party consumers. In 2019, the concentrator processed 7.9 mln t of ore.

After all smelting operations are shut down, the employees will be offered jobs at other Nornickel enterprises.



For more details
p. 161

In 2017–2020, the project's CAPEX will total RUB 5.8 bn (USD 90.9 mln).

CLOSURE OF THE SMELTING SHOP IN NICKEL

This is a comprehensive environmental project at Kola MMC that will completely eliminate emissions in Nickel, while reducing emissions from Kola MMC by 50% by the end of 2020 (from a 2015 baseline).

Nickel, Zapolyarny, Murmansk Region

×
WILL BE
CLOSED



The Sulphur Programme at Kola MMC envisages the closure obsolete production shop in Nickel town (near the Norwegian border) and downstream modernization in Monchegorsk. These activities will completely eliminate sulphur dioxide emissions in the Russia-Norway border area and significantly reduce adverse environment impact in Monchegorsk. The programme is expected to reduce sulphur dioxide emissions from Kola MMC by 50% in 2020, and by 85% in 2021 (from a 2015 baseline).

Project timeline

'19

- CAPEX – RUB 2.3 bn (USD 35.6 mln)
- Approval from the Main Department of State Expertise secured
- Completion of all construction and installation works
- Launch of finished concentrate production and plant pre-commissioning

'20

- CAPEX – RUB 1.6 bn (USD 24.9 mln)
- Partial closure of electric furnaces at the smelting shop in Nickel
- Pre-commissioning at the loading point, and shipping of low-grade concentrate

'21

- Complete shutdown of smelting operations in Nickel
- Launch construction of a loading point for high-grade concentrate

SULPHUR PROGRAMME (POLAR DIVISION)



This is a large-scale environmental project designed to capture sulphur dioxide emissions at Nadezhda Metallurgical Plant and Copper Plant (both part of Nornickel's Polar Division), dramatically reducing emissions.

Nornickel considers its Sulphur Programme at the Polar Division a staged journey, with the following milestones set for sulphur dioxide reduction in the Norilsk Industrial District: 45% by 2023 and 90% by 2025 (from a 2015 baseline). In 2019–2025, the project's CAPEX will total about RUB 3.5 bn.

Location

Norilsk Industrial District, Krasnoyarsk Region (Polar Division)

Project overview

The project will be phased in at Nornickel's two core downstream facilities in the Norilsk Industrial District as follows:

Nadezhda Metallurgical Plant

- **Phase 1:** The recovery of gases at Nadezhda and the establishment of acid neutralisation facilities (including gypsum storage and related infrastructure) – to be completed by 2023
- **Phase 2:** The expansion of neutralisation infrastructure (for sulphuric acid from Cu stream) – to be completed by 2025

Copper Plant

- **Phase 1:** Preparatory work and retrofitting of the gas cleaning unit – to be completed by 2023
- **Phase 2:** Recovery of sulphur dioxide from rich off-gases at sulphuric facilities, reduction of Copper Plant's emissions to the maximum allowable limits, and the discontinuing of converter operations with sulphur-poor gases – to be completed by 2025

Project timeline

'19

- CAPEX – RUB 1.5 bn (USD 24 mln)
- Completion of the bulk of on-site preparatory work
- Development of design documentation for **Phase 1** at Nadezhda Metallurgical Plant, and successful state environmental review
- A number of equipment supply contracts signed
- Development of design documentation for **Phase 1** at Copper Plant

'20

- Nadezhda Metallurgical Plant will develop detailed design documentation, secure approval from the Main Department of State Expertise, and commence construction and installation works
- Copper Plant will carry out construction and installation works for **Phase 1** and develop documentation for **Phase 2**



Commodity

Market overview

44	Nickel
51	Copper
55	Palladium
59	Platinum