
Russian nickel projects emerging as price recovers, but Norilsk still dominates

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Market Intelligence

The price of nickel has shot up over 50% since the beginning of 2019 and exceeded US\$16,000 per tonne in early August, but the Russian industry remains dominated by Arctic behemoth PJSC Norilsk Nickel Co., with only two other significant projects on the horizon.

While stainless steel remains nickel's main source of demand for the time being, Russia's large sulfide reserves position it particularly well for a future electric vehicle boom, which would require more battery-grade metal. Though Indonesia has the world's largest reserves, they comprise low-grade nickel laterite, which is suitable for steelmaking but cannot be economically used as battery material.

"Plug-in electric light duty vehicles are likely to account for 11% of global light duty car sales in 2025, rising to 23% and 50% by 2030 and 2040, respectively," according to S&P Global Platts Analytics Scenario Planning Service.

Arctic monopoly

Norilsk predicted 50% demand growth for class 1 nickel including sulfates by 2025 but only plans to lift nickel and copper output by 15%, compared to 25% for palladium and platinum, on the basis of its approved projects, which are mainly brownfield.

Nonetheless, the company has a large pipeline of other projects that could further increase output, according to its investor relations officer, Mikhail Borovikov. He noted, however, that Norilsk's dividend commitments limit its ability to invest.

Norilsk's plans hinge on a third expansion of its Talnakh concentrator, approved in March, which will make it the largest nickel sulfide mill in the world, with capital costs estimated at 40 billion Russian rubles. The phase-three expansion aims to raise the concentrator's throughput to 18 million tonnes per year from 10 Mt/y, freeing up the Norilsk concentrator to process feed from the South Cluster project.

The company's Arctic Palladium joint venture with Russian Platinum LLC is also set to produce 50,000 tonnes of nickel from 2023, with project costs estimated at 250 billion rubles.

In 2018, Norilsk produced 218,770 tonnes of nickel, an increase of just 1% year over year, accounting for 23% of global class 1 output. Nickel production in the first half of 2019 increased by 6% year over year.

New projects

Beyond Norilsk, two of the country's most significant projects include privately held Intergeo MMC Ltd.'s Kingash property in southern Siberia and farther to the east, London-listed Amur Minerals Corp.'s Kun-Manie project. Kingash is Russia's second-largest nickel deposit, hosting 2.4 Mt of the metal, while Kun-Manie hosts 1.2 Mt. Both are projected to reach production around 2024.

Top nickel properties in Russia by contained reserves and resources

Property	Contained nickel reserves & resources (tonnes)	Development status	Owner
Polar Division	15,837,000	Expansion	RJSC MMC Norilsk Nickel
Kola Division	3,159,000	Operating	RJSC MMC Norilsk Nickel
Kingash	2,369,363	Pre-feasibility/scoping	ONEXIM Group
Kun-Manie	1,157,000	Feasibility started	Amur Minerals Corp.
Souker	894,200	Feasibility	Hannan Metals Ltd.
Voronezh	799,500	Reserves development	Ural Mining and Metallurgical Co.
Maslovskoe	731,200	Pre-feasibility/scoping	RJSC MMC Norilsk Nickel; Russian Platinum LLC
Kulymbinskaya	297,000	Reserves development	RJSC MMC Norilsk Nickel

Data compiled July 29, 2019.

Only shows active properties with a primary commodity of nickel.

Source: S&P Global Market Intelligence

Details on Kingash are scarce, but construction is said to be set for 2020 to 2021. Intergeo's Ak-Sug copper project in Tuva was reported to be its priority by Interfax in March. The two deposits will require a total of 193.2 billion rubles to develop, including 58.8 billion for roads and power lines, according to the Russian news agency.

Intergeo's chairman, former Krasnoyarsk Governor Alexander Khloponin, wrote to Russian Prime Minister Dmitry Medvedev in June asking for 60 billion rubles of state support for the two projects, which Medvedev ordered be considered. The interested federal executive bodies are preparing offers at the moment, according to Deputy Minister of Industry and Trade Victor Evtukhov.

Khloponin and Intergeo's ultimate owner, Mikhail Prokhorov, helped oligarch Vladimir Potanin acquire Norilsk in Russia's mid-1990s loans-for-shares privatization program before going on to run the top nickel producer. Intergeo acquired several mineral properties in its 2007 split from Potanin's Interros Co. but has thus far been slow to develop them.

Amur Minerals completed a pre-feasibility study in February that outlined two production options for Kun-Manie, and a Russian feasibility study known as a TEO is underway and due for submission at the start of December 2020. This would be followed by a second phase of Russian documentation with final designs and approval. The TEO results could also contribute to a Western-style definitive study. The remote site in Russia's Far East would require a 338-kilometer access road across difficult terrain at an estimated cost of about US\$129 million, but the Russian government could help with funding.

Amur is assessing alternative project financing options, CEO Robin Young told S&P Global Market Intelligence. "These include off-take agreements, streaming agreements, debt/equity financing alternatives, contract mining and equipment lease options, joint venture partnerships, and Russian Infrastructure low interest loan structures," Young said.

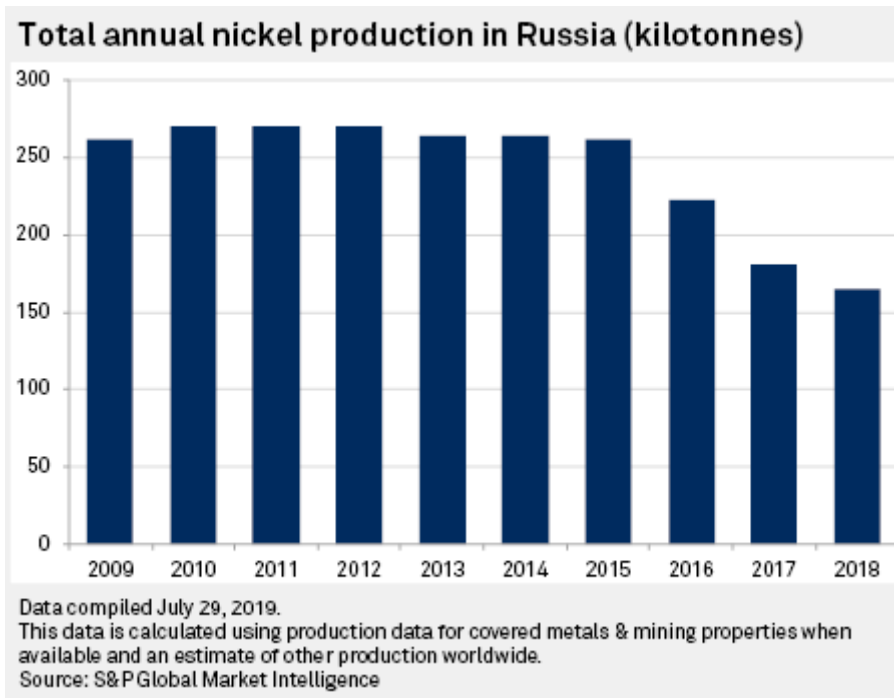
The company plans to mine 6.0 Mt of nickel sulfide ore per annum to generate about 25,000 tonnes of payable nickel to concentrate, with C1 cash costs per pound anticipated to range from US\$2.45 to US\$3.87, according to Young.

"We think there is substantial potential to identify and explore additional targets in the region," Young added. "As for expansion of our deposit, exploration potential still remains untested within our license area."

Evtukhov also highlighted a number of other smaller projects across the country, including Russian Copper Co.'s Kulikovskoye property in the Chelyabinsk region and Ural Mining & Metallurgical Co.'s Yelanskoye and Yelkinskoye deposits in Voronezh Oblast.

Russian Copper President Vsevolod Levin said in July that the company would focus on its two nickel-cobalt projects, the Kulikovskoye property and the Belininskoye deposit in Altai Krai, after its plans to join OAO Metalloinvest spinoff Baikal Mining Co. LLC's Udokan copper project fell through. Kulikovskoye contains 441,400 tonnes of nickel, while Belininskoye holds 498,000 tonnes. Russian Copper is looking at technology for developing Kulikovskoye and will cross over to Belininskoye if that goes well. That will not happen before 2020 though, according to Levin.

The emergence of new projects and Norilsk's growth plans stand in contrast to a series of closures in recent years. Russia's mine output declined from 261,000 tonnes in 2015 to 218,000 tonnes in 2018, while primary nickel production fell even further, dropping from 231,900 tonnes to 151,000 tonnes over the same period, according to International Nickel Study Group data. As a result, exports of refined nickel amounted to just 134,700 tonnes in 2018, a 38% decrease from 2015.



Mining industry consultancy CSA Global is being engaged and proposing for slightly more nickel work in Russia, according to Manager Brendan Clarke. "As a group, [there is,] certainly, more nickel work floating around particularly in lower risk jurisdictions and brownfield plays," he told Market Intelligence. "The real issue is the long lead time to development of nickel projects."

It is reasonable to expect continued growth in Russian nickel production, mainly from Norilsk but also through joint ventures with smaller producers, according to Aperio Intelligence's George Voloshin. "There are also standalone projects by industry minnows but they won't move the needle supply wise," he added.

As of Aug. 22, US\$1 was equivalent to 65.71 Russian rubles.

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