Product portfolio diversification

The Company has adopted the Innovation Strategy that provides for the development of new products to mitigate market risks and capture opportunities linked to the energy transition.

Nornickel has also established the Palladium Centre, which develops, tests, and brings to market new palladium-based materials that support the accelerated transition to green technologies and help reduce carbon footprints. New products are being developed for hydrogen and solar power as well as for aviation fuels.

For more details on the development of palladium-based technologies, please see the Research and Development section.

To meet the growing demand for battery materials, in 2024, the Company inaugurated a Battery Technology Centre in Saint Petersburg, which focuses on building technological capabilities in nickel-bearing cathode active materials (CAMs) – a key component in modern batteries.

For more details on efforts in this area, please see the Research and Development section.

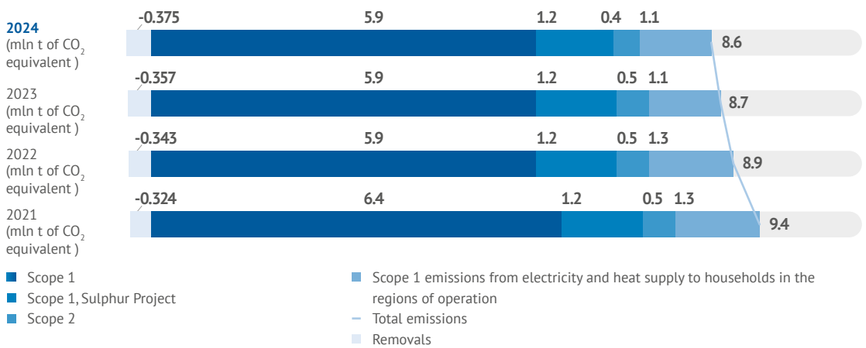
In addition, Nornickel, together with a partner, plans to develop Russia's most promising lithium deposit, located in the Murmansk Region. The project provides for the production of 45 kt of lithium carbonate and hydroxide per year.

Greenhouse gas emissions and carbon footprint of products

GRI 2-4, 305-1, 305-2, 305-4 / SASB EM-MM-110a.1 / UNCTAD B.3.1, B.3.2 / MED-20 / TCFD Mb / TNFD Mb

GRI 14.1.5, 14.1.6, 14.1.8

Nornickel uses the GHG Protocol methodology to calculate its greenhouse gas emissions (Scope 1 and 2). The calculation covers carbon dioxide (CO_2), nitrous oxide (N_2O), and methane (CH_4). The quantification includes direct and indirect GHG emissions as well as the Company's estimated prospective emissions related to the implementation of the Sulphur Project at Nadezhda Metallurgical Plant[1].



[1] In the reporting year, the Company adjusted the GHG emissions provision for the Sulphur Historically, this value stood at 2.2 mln t of CO_2 equivalent. However, due to changes in plans for the Copper Plant's Sulphur Project, post-implementation emissions are now expected to be lower, at 1.2 mln t of CO_2 equivalent (subject to update once the project reaches full capacity). This adjustment, among other factors, was also used to restate Scope 1 and 2 GHG emissions for previous reporting periods.

The intensity of GHG emissions (Scope 1 and 2) was 6.5 t of CO_2 equivalent per RUB 1 million of revenue under consolidated financial statement disclosures[3].

Across the Nornickel Group, a steady downward trend in GHG emissions has been observed over a four-year horizon.

In 2024, direct and indirect GHG emissions (Scope 1 and 2) from production and other activities of the Nornickel Group, taking into account the adjustment for the Sulphur Project's GHG emissions provision, amounted to 8.6 mln t of CO_2 equivalent, including 8.2 mln t of direct emissions[2] and 0.4 mln t of indirect emissions.

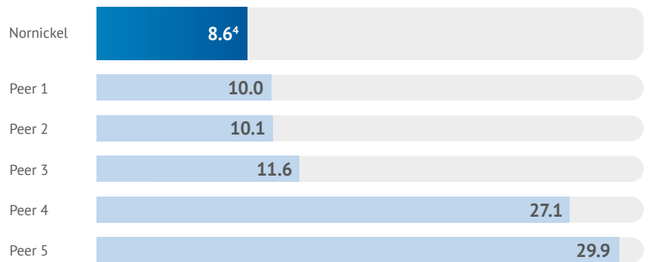
GHG emissions for the Nornickel Group decreased year-on-year in 2024. It should be noted that the Energy Division's energy enterprise has cut its GHG emissions by more than 2% compared to 2023. The reduction was driven by lower per unit fuel consumption for heat and electricity generation, which resulted from optimised equipment operating modes at CHP plants, as well as favourable weather conditions in the Norilsk Industrial District during the autumn-winter period. The update of regional CO_2 emission factors for electricity supply within the energy systems of the Murmansk Region and Trans-Baikal Territory have also contributed to a reduction in Scope 2 GHG emissions. Notably, the Trans-Baikal Division signed a bilateral power purchase agreement (PPA) with a certified low-carbon energy supplier (a hydropower plant) for a total of 124.9 mln kWh. This PPA helped reduce Scope 2 GHG emissions by more than 126 kt of CO_2 equivalent in 2024.

Emissions data verification by an independent auditor

GHG emissions (Scope 1 and 2) and removals for the Group in 2024 were verified by an international company.

Comparison with global metals and mining peers

GHG emissions (Scope 1 and 2) (mln t of CO_2 equivalent)



Sources: Company analysis, peers – latest available data (fiscal year 2023 or 2024). Peers include leading global diversified metals and mining companies: BHP Billiton, Rio Tinto, Vale, Glencore, and Anglo American.

[2] Including a GHG emissions provision for the Sulphur Project at Nadezhda Metallurgical Plant and GHG emissions generated from heat and electricity supplies to the public. In 2024, actual direct and indirect (Scope 1 and 2) GHG emissions reached 7.5 mln t of CO_2 equivalent, including Scope 2 GHG emissions at 0.4 mln t of CO_2 equivalent (calculated using the location-based method) as well as actual emissions from the Sulphur Project at Nadezhda Metallurgical Plant and GHG emissions generated from heat and electricity supplies to the public (the Sulphur Project GHG emissions provision at Nadezhda Metallurgical Plant was determined separately).

[3] Net of the Sulphur Project GHG emissions provision at Nadezhda Metallurgical Plant, but including actual emissions from the Sulphur Project in 2024.

[4] Including a GHG emissions provision for the Sulphur Project at Nadezhda Metallurgical Plant and GHG emissions generated from heat and electricity supplies to the public.

GHG emissions (downstream and upstream Scope 3)

GRI 305-3 GRI 14.1.7

The Company conducts an annual quantification of Scope 3 emissions that arise outside of Nornickel Group's operations and are beyond its control. These emissions are categorised as upstream and downstream emissions.

Their quantification follows the recommendations of the GHG Protocol and the IPCC Guidelines for National Greenhouse Gas Inventories.

GHG emissions (Scope 3) (mln t of CO_2 equivalent)[1]

Indicators	2022	2023	2024
Upstream, including	**1.4**	**1.3**	**1.2**
• purchased goods and services	0.9	0.8	**0.7**
• capital goods	0.1	0.1	**0.1**
• energy and fuel	0.3	0.3	**0.3**
• Other	0.1	0.1	**0.1**
Downstream, including	**3.9**	**5.1**	**5.5**
• transportation of sold products	0.2	0.2	**0.2**
• processing of sold products	3.7	4.9	**5.3**
Total Scope 3 emissions	**5.3**	**6.4**	**6.7**

In 2024, total upstream Scope 3 emissions amounted to

1.2

mln t of CO_2 equivalent

In 2024, the Company continued to report a quantitative assessment of upstream Scope 3 GHG emissions. Emissions are estimated across all categories of the GHG Protocol. The bulk of upstream Scope 3 emissions was attributable to the purchase of goods and equipment from third-party suppliers as well as to energy and fuel consumption (to the extent not included in Scope 1 and 2).

Downstream Scope 3 emissions are associated with the transportation of the Company's products from production assets to consumers and their subsequent processing into finished products.

To improve its Scope 3 emissions quantification methodology, the Company continuously monitors the evolving methodological framework, including international standards developed by ISO and the International Council on Mining and Metals (ICMM), industry associations, and engages with customers to obtain data on emissions released in the processing of sold products.

In 2024, the Company updated its methodology for quantifying other indirect (downstream Scope 3) GHG emissions, incorporating new guidance documents, such as the Scope 3 Emissions Accounting and Reporting Guidance (2023) by the International Council on Mining and Metals (ICMM), ISO 14083:2023, Global Logistics Emissions Council (GLEC) Framework, Scope 3 GHG Emissions in the Nickel Value Chains. A Guide to Determine Nickel-Specific Scope 3 GHG Emissions by the Nickel Institute, and industry best practices.

The downstream Scope 3 emissions assessment for 2024 covered nickel, copper, palladium, platinum, copper and nickel intermediates, and iron ore concentrate sold outside the Nornickel Group[2]. The bulk of these emissions comes from intermediates sold outside the Group. Emission volumes are influenced by changes in sales volumes, the Group's product and customer portfolio, and the geographic mix of product sales.

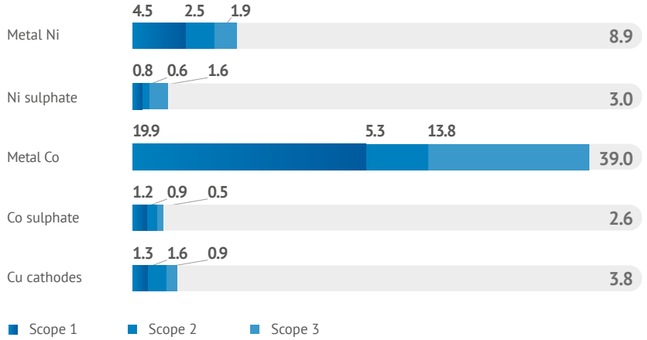
[1] As part of its effort to standardise the approach to identifying GHG emissions sources, the Company reduced the uncertainty of calculating upstream Scope 3 emissions by excluding insignificant sources in the Purchased Goods and Services and Capital Goods categories from the calculation. As a result, the emissions data for 2022 have been restated using the new approach. In 2022, total restated emissions amounted to 1.4 mln t of CO_2 equivalent.

[2] Including foreign operations.

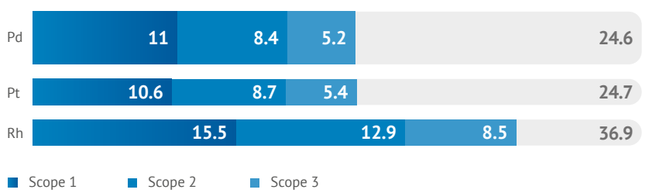
Product carbon footprint

Product carbon footprint assessments for 2024[3]

Product carbon footprint of non-ferrous metals
(kg of CO_2 equivalent per kg of product)



Product carbon footprint of PGMs
(kg of CO_2 equivalent per g of metal)



The carbon footprints of MMC Norilsk Nickel's products are calculated in accordance with:
- ISO 14067:2018, ISO 14040:2006, ISO 14044:2006
- GHG Protocol Product Life Cycle Accounting and Reporting Standard methodology
- LME passport guidance – Nickel Institute guidance for nickel producers to calculate their GHG emissions
- the IPA's guidance: The Carbon Footprint of Platinum Group Metals: A Best Practice Guidance for the Calculation of GHG of Primary Produced PGMs

The scope of the carbon footprint calculation for MMC Norilsk Nickel's products in 2024 included direct greenhouse gas absorption by tailings.

For more details on this project, please see the Decarbonisation Projects sub-section.

[3] Including the Sulphur Project provision. Group data, including foreign companies of the Polar Division.