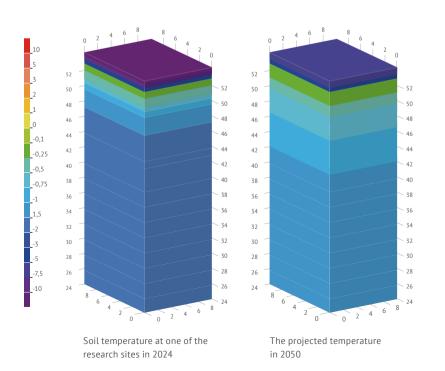




The approach to background monitoring was developed in collaboration with Fedorovsky Polar State University. Nornickel carried out engineering and geological surveys at the permafrost research sites, drilling 20 monitoring wells 10–20 m deep and three additional wells to a depth of 200 m.

As a result, a landscape map of the Norilsk Industrial District was produced, with the characteristics, composition, and properties of the soils and vegetation identified – forming the basis

Example of modelling results:



for mathematical modelling. Modelling of changes in the mean annual ground temperature at a 10 m depth was based on regional climate projections under the SSP5-8.5 scenario, previously developed by the Obukhov Institute of Atmospheric Physics of the Russian Academy of Sciences.

Initial results indicate that by 2050, ground temperatures are projected to rise across the entire Norilsk Industrial District. For instance, zones with low temperatures (from $-3\,^{\circ}\text{C}$ to $-4\,^{\circ}\text{C}$) at 10 m depth – covering up to 18% of the area in 2024 – are expected to vanish completely. The proportion of intermittently frozen ground with temperatures ranging from +1 $^{\circ}\text{C}$ to $-0.5\,^{\circ}\text{C}$ is projected to grow from 20% to 33% of total area by 2050, with sustained thawing expected in 20% of those areas.

Maps of average annual soil temperature for 2024 and 2050 were used as part of the programme activities of the Yenisei Siberia scientific and educational centre under the TP-21 initiative Launch of the Yenisei Arctic Geographic Information System (GIS).

Project awards:

- National Environmental Prize named after V.I. Vernadsky, in the Science for Sustainable Development category
- Second place, International Professional
 Competition held by the National Association
 of Members Performing Engineering Surveys
 and Design Documentation for the Best Project,
 in the Best Project in Engineering Surveys,
 Including Methodological and Technical Works
 (Implemented) category
- Winner, GenerationS Innovation Award (Federal Prize for Corporate Innovation), in the Cooperation of Science and Business category
- Winner, Green Eurasia international competition, in the Monitoring and Forecasting Climate Change category
- Included in the Best Practices Register, BRICS Solutions Awards 2024

Assessment of facility vulnerability to climate impacts

In 2024, Nornickel launched the development of a methodology for assessing the vulnerability of its facilities to climate-related impacts. The assessment is driven by objective data already available within the Company, including:

- design documents
- industrial safety reviews
- results of surveys and inspections
- monitoring results
- statistics on incidents and accidents.

The methodology was tested at the Energy Division's facilities, as they are the most exposed to climate impacts in the Norilsk Industrial District. Checklists

with assessment criteria on a low/medium/high vulnerability scale were developed for each type of assessed facility.

Within the Energy Division, 105 facilities were identified for assessment, of which 45 have already been assessed. Based on the results, 36 out of the 45 assessed facilities were found to be vulnerable to various climate factors to some degree. In 2025, the Company plans to complete the testing of this methodology across all its facilities.

Internal carbon price

IFRS S2 14b, IFRS S2 29f

In 2024, Nornickel continued to implement an internal carbon price. This tool is used to estimate the potential tax burden from future carbon regulation within the financial and economic models of individual projects and the Company's overall budgeting model.

The Company analysed the practices of international metals and mining companies and selected the shadow pricing approach, which involves calculating theoretical costs or expenses to be considered in investment decision making. Several carbon price forecasts are applied depending on the expected level of carbon-related

payments under various economic and climate scenarios. For 2024, the base price was set at USD 49 per tonne of ${\rm CO_2}$ equivalent.

During the year, 60 of the Company's investment projects were evaluated using this internal carbon price. Assessment results indicate that, even at its highest level, the internal carbon price does not reduce the NPV or IRR of commercial projects below predetermined thresholds.

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