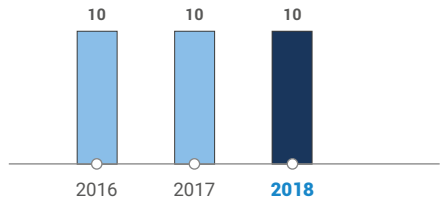
GREENHOUSE EMISSIONS

The Company assessed its GHG emissions in accordance with the existing national methodology. The assessment reflected the climatic conditions of operations, facilities upgrade and reconfiguration timelines. Direct GHG emissions total ca. 10 mtpa[1], including some 6.40 mtpa from fuel and energy assets, 3.45 mtpa from smelting operations, and up to 0.15 mtpa from transport and logistics. Next year, Nornickel intends to use the international methodology of GHG emission assessment for comparison purposes.

At the moment, Russian legislators are working to introduce statutory requirements for corporate GHG reporting.

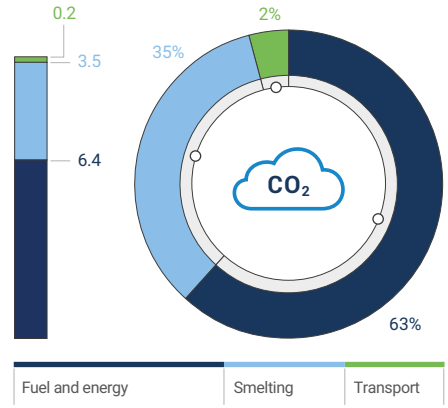
The Company is monitoring all legislative developments on this front to ensure compliance with the regulations.

Direct GHG emissions *(Scope 1, mt)*[1]



[1] *According to the GHG Emission Calculation Guidelines approved by Order No. 300 of the Russian Ministry of Natural Resources dated 30 June 2015.*

GHG emissions broken down by source *(mt)*



RENEWABLE ENERGY SOURCES

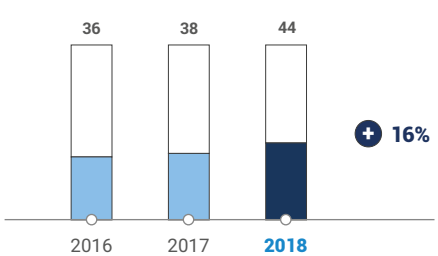
The European Union has set a target for a reduction of 20% in GHG emissions in the year 2020 compared with 1990 levels predominantly through shifting from fossil fuel to renewable energy sources.

The Company seeks to cover its energy needs primarily from renewable sources. Nornickel makes continuous efforts to reduce the consumption of such energy sources as diesel fuel, coal, and natural gas as well as to provide its enterprises with reliable and efficient low-carbon energy sources in the long term. As a result of Nickel Plant shutdown, the estimated coal consumption declined by 40–70 ktpa.

The Company's priority energy source is hydropower generated by hydropower plants: Ust-Khantayskaya and Kureyskaya HPPs (481 MW and 600 MW of installed capacity, respectively). In 2018, renewables accounted for 44% of total electric power generated by the Norilsk Nickel Group and 51% of power generated in the Norilsk Industrial District. The Company rolled out a project to replace hydropower plant equipment for rendering it more reliable and increasing power output through better performance of hydroelectric units (implemented in 2012–2021), thus laying out the groundwork to expand the share of renewables.

The use of other renewables such as solar, geothermal, and wind energy is limited, as Nornickel's major production assets are located beyond the Arctic Circle. There is not enough solar energy in winter because of polar night lasting approximately 60 days. Wind turbines are also inefficient due to changes in wind intensity: weather conditions range from dead calm lasting for weeks to snowstorms with a wind speed of up to 50 m/s.

Electric power generated from renewable sources *(%)*



Group's consumption of electricity and heat *(TJ)*