

ENERGY ASSETS

NTEK (Norilsk-Taimyr Energy Company)

NTEK engages in power and heat generation, transmission and sale using the facilities of Norilskenergo (MMC Norilsk Nickel's branch) and Taimyrenergo. The energy sources include renewables (hydropower) and gaseous hydrocarbons (natural gas).

To generate power from renewable energy sources, NTEK operates Ust-Khantayskaya and Kureyskaya HPPs (441 MW and 600 MW of installed capacity, respectively).

In 2016, the share of renewable energy stood at 25% for the Norilsk Nickel Group and 38% for the Norilsk Industrial District.

In the reporting period, the low water level at the HPP water storage reservoirs led to increased TPP generation and lower HPP volumes in order to achieve long-time average annual levels to coincide with the peak load of the heating season. In 2016, TPP generation reached 5,259,908 thousand kWh, while the HPPs produced 2,929,888 thousand kWh.

Bystrinsk Electric Grid Company

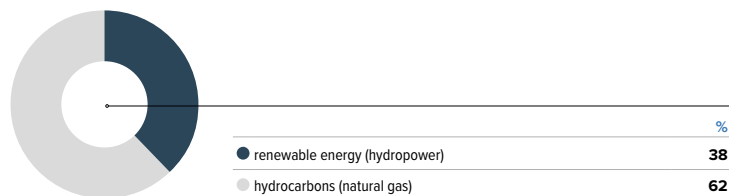
Bystrinsk Electric Grid Company was set up as a construction management company to carry out an investment project.

In 2016, it completed the following works:

- adjusted technical data and estimates in the design documents;
- received an approval following the review of the fibre optic communication line and 220 kV overhead line design documents;
- drafted 95% of the engineering documents;
- completed the construction of the 220 kV overhead line, except for land rehabilitation and corrections;
- completed main installation works at the 220 kV Bystrinskaya substation. In 2017, the facilities are scheduled to be commissioned following the completion of all the works.

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NTEK's power generation in 2016



Source: Company data

USE OF RENEWABLE ENERGY



The Group's investment programme includes two large-scale projects that aim to increase the use of renewable energy (hydropower):

- Ust-Khantayskaya HPP investment project provides for the replacement of obsolete hydroelectric units to make better use of water resources, increase overall HPP generation volumes, and improve the reliability of energy supplies to the Norilsk Industrial District. Two out of seven hydroelectric units have been replaced, while 2017 sees the replacement of hydroelectric unit – 3 underway;
- Opornaya substation investment project covers installation of an additional autotransformer to increase the intake of power and capacity from the Ust-Khantayskaya and Kureyskaya HPPs for the Norilsk Industrial District across the 110 kV network to 350 MW and 500 MW in normal and emergency conditions, respectively (the project was completed in 2016).