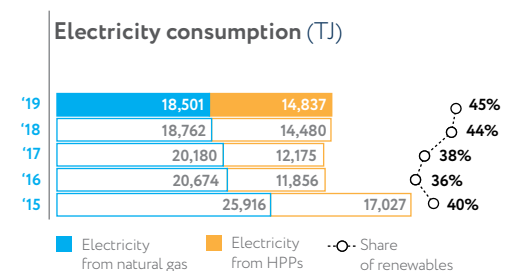
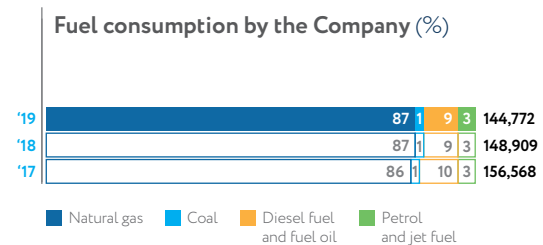


## USE OF RENEWABLES AND ENERGY EFFICIENCY

The Company sources energy locally, primarily from low-carbon natural gas and renewable energy sources, namely two hydropower plants. Diesel fuel, fuel oil, petrol and jet fuel are used by its transport assets. Use of high-carbon fuel by energy assets is minimised. Only small amounts of coal are used in certain production processes. As a result of Nickel Plant shutdown, estimated coal consumption declined by 40–70 ktpa.

The Company's priority energy source is hydropower generated by Ust-Khantayskaya and Kureyskaya HPPs. In 2019, renewables accounted for 45% of total electricity consumed by the Group and 54% of power consumption in the Norilsk Industrial District.



### Group's electricity generation and electricity and fuel consumption (TJ)<sup>3</sup>

Indicator	2017	2018	2019
1. Fuel consumption by the Company <sup>4</sup>	156,569	148,910	144,772
- natural gas	134,709	129,335	125,329
- diesel fuel and fuel oil	15,221	13,788	13,535
- petrol and jet fuel	5,178	4,127	3,820
- coal <sup>5</sup>	1,460	1,660	2,087
2. Electricity and heat from own renewable sources (HPPs)	12,414	14,877	15,058
3. Electricity and heat purchased from third parties	10,483	10,931	11,331
4. Sales of electricity and heat to third parties	19,503	18,926	18,766
<b>Total consumption of electricity and fuel (1 + 2 + 3 - 4)</b>	<b>159,962</b>	<b>155,792</b>	<b>152,395</b>

<sup>2/</sup> Carbon intensity index is calculated as carbon emissions per tonne of copper equivalent as a percentage relative to its level in 2013, assumed as 100%.

<sup>3/</sup> For a detailed breakdown of the Group's energy consumption by company, please see the 2019 Sustainability Report.

<sup>4/</sup> Including the fuel used to generate electricity for Norilsk.

<sup>5/</sup> Coal is only used in production processes, with Kola MMC accounting for 45% of total consumption, GRK Bystrinskoye 27%, the Polar Division 13%, cement production 9%, and other subsidiaries 6%.

Nornickel is committed to the responsible use of heat and electricity. 87.5% of electricity is generated by own energy companies supplying electricity to both the Company's facilities and third parties.

Nornickel's investment programme prioritises several major projects to fully unlock the potential of renewable power sources (hydropower) and drive energy savings.

In 2019, spending under the programme totalled about RUB 16 bn (USD 246 mln).

Major projects completed in 2019 included:

- Replacement of hydropower units at Ust-Khantayskaya HPP (turbine and electrical shops)
- Replacement of power unit equipment at CHPP-2

In 2019, the Group invested significant efforts in improving energy efficiency, achieving total savings of 49,924 tonnes of reference fuel. In 2019, fuel consumption per unit of electricity supplied by CHPPs was 271 g/kW·h, exceeding the target by 17 g/kW·h. The Company's subsidiaries also achieved total savings of 15 Mcm of natural gas by reducing their process needs and transportation losses.

## BIODIVERSITY CONSERVATION

### COOPERATION WITH NATURE RESERVES

Nornickel's production facilities are relatively close to nature reserves on the Taimyr and Kola Peninsulas. In the Murmansk Region, the Pasvik and the Lapland Nature Reserves are only 10 to 15 km away from Kola MMC. In the Krasnoyarsk Region, the boundaries of the Putoransky Reserve buffer zone are at a distance of between 80 km and 100 km from the Polar Division's production sites.

To help protect the unique arctic nature, the Company has been providing support to nature reserves for more than 10 years now, with its total annual value running into hundreds of millions of roubles. These efforts are well-aligned with Nornickel's overall strategy to go greener within the next five years, for which the Company has

launched a new investment cycle to drive sustainable growth.

In the Zabaykalsky Region, the Company supports the development of research capabilities and environmental awareness programmes of the Relict Oaks State Reserve.

### Pasvik Nature Reserve (Kola Peninsula)

The Pasvik State Nature Reserve is included in the "shadow list" of wetlands of international importance under the name of Fjærvann-Schaanning research ground. The reserve covers an area of more than 14,000 ha. Pasvik is the only natural reserve in Russia holding a certificate from the EUROPARC Federation awarded to the best protected areas globally. The certificate is an important pre-requisite for international cooperation with international nature reserves.

The reserve is home to animal species included in the Red List of Threatened Species and the Red Data Book of the Russian Federation. Since 2006, the Pasvik Nature Reserve has been commissioned to conduct ecological assessments of natural environment in the area of Kola MMC (Zapolyarny, Nickel and their suburbs, Pasvik State Nature Reserve), and develop a long-term environmental monitoring programme.

The reserve is also implementing projects that received the Company's grants under the World of New Opportunities charitable programme. The projects target Russian and Norwegian

### Pasvik Nature Reserve

