

EVRAZ operates in Metal and Mining sector which is energy intensive. Energy saving is of great importance for the Group as we aim to ensure the competitiveness and to minimise environmental impacts, such as greenhouse gas emissions. In 2017, EVRAZ continued to focus on making its operations more energy efficient with initiatives to increase in-house electricity generation and self-reliance in energy resources. Optimising resource use, including light, heat, fuel, compressed gas and separation products, were vital parts of this strategy.

Steel segment

Steelmaking

EVRAZ ZSMK (Russia). EVRAZ ZSMK's energy efficiency programme continued in 2017, including measures aimed at regulating the electricity use at rolling mills, reducing the rate of specific air consumption for oxygen production by intensifying the argon extraction process, increasing the consumption of blast furnace gas, replacing air heaters at boiler units, and regulating the electricity consumption of the hydraulic handling system.

Natural gas consumption totalled 754 million cubic metres in the reporting period, an increase of 89 million cubic metres year-on-year, due to a reduction in the use of pulverised-coal injection. Overall electricity usage amounted to 4,093 million kWh, which is 39 million kWh less than in 2016, thanks to the measures mentioned above.

EVRAZ NTMK (Russia). EVRAZ NTMK's energy efficiency programme led to a reduction in electricity purchases of by 69.9 million kWh, of which 73% was due to lower oxygen consumption at blast furnace shop, 8% from the replacement of lamps to the LED fixtures in the shops, and the rest from a number of small other projects.

In 2017, EVRAZ NTMK purchased 428.6 million kWh of electricity from third-party producers, a reduction of 4.3 million kWh year-on-year.

A total of 1,222 million cubic metres of natural gas were consumed during the reporting period, an increase of 41 million cubic metres year-on-year as a result of higher gas usage by the blast furnaces, amid a reduction in the use of pulverised-coal injection.

EVRAZ NTMK RECEIVES ISO 50001 CERTIFICATION

In 2017, EVRAZ NTMK's energy management system was certified ISO 50001 compliant.

EVRAZ NTMK has been working hard for many years to improve its energy efficiency, implementing more than 100 initiatives in the past five years that have resulted in an annual savings of more than RUB1 billion.

The plant has successfully passed the audit certifying that its operations and energy management system comply with all the international standard's requirements. The auditors who inspected the production, management and support processes gave the plant's energy management system high marks.

The audit determined that EVRAZ NTMK's energy management system is in full compliance with the ISO 50001 international standard.

EVRAZ DMZ (Ukraine). In 2017, EVRAZ DMZ implemented initiatives aimed at lowering its purchases of energy, increasing in-house electricity generation, maximising associated gas consumption (from blast furnaces and coking facilities) and reducing secondary energy losses.

It undertook further measures to improve the accounting of natural gas, electricity, and drinking water consumption to better monitor resource usage.

In 2017, EVRAZ DMZ used a total of 46.4 million cubic metres of natural gas, an increase of 8.6 million cubic metres year-on-year, and consumed 295 million kWh of electricity, a reduction of 17.5 million kWh year-on-year.

Iron ore mining

Evrazruda (Russia). Evrazruda's energy efficiency programme for 2017 included modernising the Abagursky branch's tailings transportation system, switching to a new material for the friction bearings on the ball grinders to reduce electricity

consumption, installing metering devices for drinking and technical water at the Sheregeshskaya mine, and replacing 250-watt and larger incandescent lamps with LED fixtures.

Evrazruda's operations consumed a total of 405.4 million kWh of electricity, a reduction of 34.1 million kWh year-on-year due to its energy-efficiency programme.

KGOK (Russia). EVRAZ KGOK's energy efficiency programme for 2017 included a number of technological measures, including the closure of additional mills, which led to a reduction electricity purchases by 21.6 million kWh year-on-year.

Coal segment

In 2017, the Coal segment continued to implement its energy efficiency programme, focusing primarily on repairing and upgrading the boiler units to improve their efficiency, switching to less expensive boiler fuels like internally sourced coal, and optimising the de-watering system.

The segment's electricity consumption grew in line with production volumes during the reporting period, rising from 925 million kWh in 2016 to 976 million kWh in 2017.

Steel, North America segment

In 2017, Evraz North America's energy-saving initiatives continued. EVRAZ kept focusing on finding incremental efficiency gains to improve energy consumption across the mills.

Higher production volumes led to year-on-year increases in the consumption of electricity and natural gas, the former rising from 1,152 GWh to 1,454 GWh and the latter climbing from 3,840 million cubic metres to 4,735 million cubic metres.