

## ENERGY EFFICIENCY

The Group strives to minimise the energy intensity of its operations while increasing its own capacity to generate electricity.

EVRAZ also constantly optimises the consumption of resources in its production process and improves the energy efficiency of its equipment.

### Steel segment

#### Steelmaking

As the Steel segment's Russian operations are the Group's primary production segment, EVRAZ pays special attention to the energy efficiency of its production.

A key driver of the Steel segment's energy efficiency improvement efforts is reducing the energy intensity of production. In 2018, the Group compared its operations with those of global peer companies and set a target of cutting its energy consumption in five years.

The forecast financial effect of this initiative will be reached as a result of several factors:

- Reducing the energy intensity of technological processes
- Optimising the ratio of internally generated and purchased energy
- Eliminating energy losses during transit
- Using secondary resources
- Selling energy resources to third parties

**EVRAZ ZSMK (Russia).** In 2018, EVRAZ ZSMK increased its internal generation of electricity and of heat while reducing specific fuel consumption for electricity generation and for heat generation.

In addition, EVRAZ ZSMK began development of a risk management program for the main energy flows, and designed the options to ensure the independence from the third-party thermal

energy supplier – Central CHP with the aim to eliminate steam consumption from it in 2023.

**EVRAZ NTMK (Russia).** In 2018, EVRAZ NTMK reduced its electricity consumption and exceeded its planned volume of internal generation. Natural gas consumption fell. The increase in internally generated electricity made it possible to decrease electricity purchases during the reporting period.

EVRAZ NTMK also installed more energy efficient lighting in its workshops, built a converter steam utilisation station and installed new heat exchangers to heat the blast furnace gas.

#### Iron ore mining

**EVRAZ KGOK (Russia).** In 2018, EVRAZ KGOK cut its electricity consumption. To achieve this, more energy efficient lighting was installed in the enrichment workshops and an automatic electricity metering system was installed in the pellet workshop. The latter will make it possible to analyse electricity consumption in real time and take timely decisions to save resources.

**Evrzruda (Russia).** In 2018, employees at Evrzruda facilities analysed energy consumption at each step of the production process. Electricity consumption fell as a result of replacing equipment (switching to modular compressor stations at the Sheregeshskaya mine, launching a low-power turbo compressor at the Tashtagolskaya mine and installing a low-power boiler at the Abagurskaya plant), among other measures.

The cost of electricity and steam was reduced by decommissioning and mothballing the main ventilation fan at the Sheregeshskaya mine, as well as installing modular compressor stations.

### Steel, North America segment

In 2018, EVRAZ North America's management focused on negotiations with natural gas suppliers after the prices for this fuel surged due to a pipeline incident in October 2018. EVRAZ North America closely monitors the natural gas consumption at its facilities.

In 2018, EVRAZ continued to install more energy efficient lighting at its operations in Canada. In addition, it replaced the heating furnaces at EVRAZ Camrose and EVRAZ Edmonton Coupling Machining with more efficient units.

Due to the growth in production volumes in 2018, total electricity consumption in the segment rose while natural gas consumption fell.

### Coal segment

In 2018, the Coal segment further implemented its energy efficiency programme. After updating the operating schedule and reducing power consumption during the hours when electricity is purchased from the wholesale market, the segment achieved its goal of reducing electricity costs by 3%. Training employees on the main energy efficiency goals and objectives as part of the "School for Young Specialists" played a significant role in this achievement.

Due to increased production volumes in 2018, the segment's total electricity consumption rose.

📄 For additional information see EVRAZ first Sustainability Report for 2018, which is to be published in May 2019.