Case study

Completion of renovation of electrical substation no. 1.

This advanced unit is twice as powerful as the previous one installed at EVRAZ ZSMK 50 years ago. The new substation is automated and allows equipment and the network status to be remotely controlled and monitored. It is one of the largest power grid facilities at EVRAZ ZSMK, with around US$10.5 million spent on the construction project, and it supplies electricity to some shops of the enterprise (for example, the rolling, blast furnace, and oxygen shops; the new Air Liquide oxygen plant). The modern electrical substation will also increase the reliability of the power supply, cover EVRAZ ZSMK's electricity needs for large production development projects, and also prevent downtime.

In 2020, in cooperation with Air Liquide, EVRAZ ZSMK continued with the renovation of oxygen production, namely a project to build air separation units with a capacity of 90 thousand m^3 / hour to ensure the manufacture of construction and railway products. The advanced equipment will be 30% more energy efficient than the previous one and will eliminate the need for expensive repairs. The total cost of the project is around US$150 million. The units are scheduled to launch in 2021.

In 2020 EVRAZ KGOK's two rail depots underwent a comprehensive upgrade to their lighting systems, which not only improved coverage, but also reduced energy consumption by 40%.

In 2020 a modern modular compressor station was put into operation at EVRAZ Vanadium Tula. The proposal to replace the old compressor station with a new one came from the Ideas Factory initiative. The new station consumes less electricity and is cheaper to run, which makes it possible to reduce the cost of final production. The projected economic effect from introducing this station will be more than about US$14 thousand per year.

Coal segment

In 2020 a key event in the field of energy efficiency was the implementation of an energy management system at Raspadskaya Coal Company.

With the help of measures in the area of production process optimisation, equipment replacement, maintaining temperature systems, as well as organisational initiatives, the enterprise increased the volume of energy consumption reduction almost seven times in 2020 compared to 2019.

Steel, North America segment

To supply electricity to the EVRAZ Rocky Mountain Steel mill, in September 2019 Xcel Energy, EVRAZ North America, and Lightsouce BP announced a long-term partnership to develop a new 240-MW solar plant in Pueblo, Colorado. In 2020 fundraising for the project was completed and construction activities began. Work on this project is being performed online until the end of building process in 2021.

OUTLOOK FOR 2021

In 2021 EVRAZ will develop a comprehensive methodology to assess the development of energy management systems throughout the Group's facilities. This methodology will be applied during internal energy management audits at segment and shop level.

EVRAZ will also continue to integrate energy efficiency criteria into its procurement and investment processes. The Group is actively working to acquire energy efficient electric motors and transformers.

Under its energy efficiency programme EVRAZ will also implement measures to reduce energy intensity. These measures are part of ambitious targets the Group has set for each of its facilities.