

Investment activities

TO ENSURE STABLE GROWTH OF THE COUNTRY'S ECONOMY, IT IS NECESSARY TO ADVANCE THE DEVELOPMENT OF THE ELECTRIC POWER INDUSTRY AS A WHOLE, INCLUDING THE ELECTRIC GRID INFRASTRUCTURE.

The company is actively continuing to implement large-scale investment projects in order to increase efficiency, increase the reliability of the NPG and network capacity. These projects are being implemented taking into account the creation of conditions for the development of renewable energy (SPP and WPP, characterized by unstable generation), appropriate power grid construction to ensure the output of large renewable energy facilities.

In addition, the projects are of great social importance — additional jobs will be created during the CIW. This, in turn, will have a positive impact on the development of the real sector of the economy, increasing employment and welfare of the population, and increasing tax deductions to budgets.



In 2023, the Company implemented the following major investment projects:

Investment projects of KEGOC JSC in 2023

2023-1

Name of the project	The purpose of the project	Source of financing	Project implementation status
1 Reconstruction of 220-500 kV overhead lines of KEGOC branches of Aktyubinskiye MES, Zapadnye MES and Sarbaiskiye MES, 1st stage.	A large-scale project for the modernization and reconstruction of 24 overhead lines.	Financing of the project: own and borrowed funds raised by placing 'green' bonds of KEGOC JSC on the KASE trading platform.	☑ Implemented In 2023, the CIW was completed at 24 transmission line facilities. Since the beginning of the project, 2,023 km of overhead lines have been reconstructed, including 255.9 km of transmission lines in 2023. The development of capital investments in 2023 is KZT 6.9 billion .
2 Strengthening of the electric network of the Western zone of the UPS of the Republic of Kazakhstan.	Increasing the capacity and reliability of power supply to consumers of the Western zone of the UPS of the Republic of Kazakhstan by strengthening 220 kV electric networks between the western regions of the republic.	Financing of the project: own and borrowed funds raised by placing 'green' bonds of KEGOC JSC on the KASE trading platform.	☑ Implemented On November 28, 2023, with the participation of the Prime Minister of the Republic of Kazakhstan, the 220 kV 'Uralskaya — Pravoberezhnaya — Inder — Karabatan — Kulsary — Tengiz' overhead line with a total length of 779.7 km was put into operation. 5 220 kV 'Uralskaya', 'Pravoberezhnaya', 'Inder', 'Kulsary', 'Tengiz' substations were expanded and 220 kV 'Karabatan' DP was built. The development of capital investments in 2023 is KZT 24.7 billion .
3 Strengthening of the electric network of the Southern zone of the UPS of the Republic of Kazakhstan.	Strengthening the electric power system of the Southern zone of the UPS on the territory of the Republic of Kazakhstan to ensure the reliability of power supply to consumers of the Southern Zone and strengthen the electrical connection between the regions of the Southern Zone.	Financing of the project: own funds and borrowed funds raised by placing 'green' bonds of KEGOC JSC on the KASE trading platform.	A FS has been developed. Contracts have been concluded for 5 facilities (2 overhead lines and 3 substations) for the development of DED, the supply of equipment, materials and the implementation of CIW. Work has started, overhead lines and substations have been inspected, the choice of overhead line route has been previously agreed upon, work is underway according to schedule. The development of capital investments in 2023 is KZT 0.071 billion .

Since December 2022, KEGOC JSC has twice issued 'green' bonds with a total volume of

35 KZT billion



The funds raised were used to finance the Company's investment projects 'Reconstruction of overhead lines 220-500 kV of KEGOC branches and 'Strengthening the electric network of the Western zone of the UPS of the Republic of Kazakhstan. Construction of electric grid facilities.

On June 7, 2023, within the framework of the Astana Finance Days conference, the Green Finance Awards 2023 award ceremony was held, during which KEGOC JSC was awarded the award in the nomination 'Largest Non-financial Corporate Green Bond' for the largest issue of green bonds in 2022. This award was a high assessment of the Company's work in financing the transition of the economy to a green economy and respect for natural resources. The winners of the Green Finance Awards are determined every 2 years. This year, organizations that have contributed to the development of the sustainable finance market in 2021-2022 in the regions of Central Asia, Eastern Europe, the Caucasus and Mongolia were awarded.

When forming a portfolio of investment projects, KEGOC JSC uses a scenario approach based on the development and annual updating of the forecast balance of electricity and capacity of the UPS of the Republic of Kazakhstan. In addition, the risks of climate change are taken into account, namely natural factors (floods, hurricanes, earthquakes, epidemics) that lead to an emergency risk. In order to ensure the reliability of the network, as well as reduce the key risk of failure of production assets, the Company plans to implement the following investment projects aimed at the development of NPG in the near future:

In addition, in the future, until 2035, KEGOC JSC will consider supplementing its portfolio with the following major NPG development projects:

'Unification of the energy system of Western Kazakhstan with the UPS of the Republic of Kazakhstan'

The project will unite the Western Zone with the main part of the UPS of the Republic of Kazakhstan across the territory of the Republic, ensure energy security and energy independence of the Western regions of the Republic of Kazakhstan, increase the reliability of power supply to consumers of the Western Zone, use maneuverable generation of the Western Zone to compensate for power and capacity imbalances and create conditions for the development of renewable energy sources.

As a result of the development of stage 1, an option was adopted providing for the construction of a **500 kV** overhead line of the Kabatan — Ulke substation.

Currently, the feasibility study has been developed and is under consideration by the RSE 'Gos-expertiza'. It is planned to develop a DED in 2024-2025, and a CIW in 2025-2027. The planned implementation period of the project is 2027.

1

Reconstruction of 220-500 kV overhead lines of KEGOC branches, stage II

The aim of the project is to increase the reliability of the NPG of the Republic of Kazakhstan through the reconstruction of existing power lines that have reached the standard service life, as well as overhead lines whose service life will reach the standard in the coming years.

The objects of reconstruction are 48 220-500 kV overhead lines, which are on the balance sheet of the branches 'Akmolinskiye MES', 'Tsentralnye MES', 'Vostochnye MES', 'Severnye MES' with a total length of 4,236 km. A FS is being developed.

2

Reconstruction of 220-500 kV overhead lines of KEGOC branches, stage III

The need for reconstruction of the NPG is due to the following reasons:

- reaching and exceeding the 220-500 kV overhead line range of the standard service life;
- improving the reliability of power supply to consumers, transit of electricity, and output of power plants.

The objects of reconstruction are 44 220-500 kV overhead lines, which are on the balance sheet of the branches 'Almatinskiye MES', 'Tsentralnye MES', 'Yuzhnye MES' with a total length of 4,332 km. A FS is being developed.

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3

A project related to Strengthening the external power supply scheme of the city of Astana

Construction of a 500 kV substation in Astana. The project is aimed at improving the reliability of power supply in Astana by creating a second city power center with 500 kV supply lines. The implementation of the project will cover the growing needs of the city for electric energy and additionally connect renewable energy facilities in the Astana city area.

1

Construction of a 500 kV Karaganda — Astana overhead line with a length of about 290 km and construction of a new 500 kV Karaganda substation

The implementation of the project, first of all, will increase the reliability of the Karaganda-Temirtau power plant, which is home to large industrial enterprises of the country and will increase the capacity of the 500 kV network.

3

Construction of a North-South direct current line

This promising project will increase the capacity of North-South transit, provide promising coverage of electricity needs in the south of the Republic of Kazakhstan and balance the instability of renewable energy generation, as well as expand export and transit potential.

The construction of a direct current line makes it possible for the Republic of Kazakhstan to join the CASA-1000 project and expand electricity sales markets to South Asia (Afghanistan, Pakistan). The project provides for the construction of a direct current transmission of **± 500 kV** with a capacity of 2 GW from the North to the South of the country with a length of about **1,300 km**.

2

The unification of the Western Zone with the UPS of the Republic of Kazakhstan. Stage II

The project will balance the energy system due to the maneuverability of gas generation in the Western zone, integrate renewable energy sources into the UPS of the Republic of Kazakhstan, and will also expand the transit potential in the future. This project will complete the looping of the power system with high voltage lines. The project involves the construction of a direct current (AC) transmission from Mangystau in the direction of the Southern Zone with a length of about 2,000 km.

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