

# **INVESTMENT ACTIVITY**

TO ENSURE STABLE GROWTH OF THE COUNTRY'S ECONOMY, IT IS NECESSARY TO ACCELERATE 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, NPG reliability and network capacity. These projects are being implemented taking into account the creation of conditions for the development of RES (SPP and WPP, characterized by unstable generation), appropriate power grid construction to ensure the power output of large RES facilities.

In addition, the projects have important social significance — additional jobs will be created during the construction and installation work. This, in turn, will have a positive impact on the development of the real sector of the economy, increase employment and welfare of the population, and increase tax deductions to budgets.

## In 2024, the Company is implementing the following major investment projects



INTEGRATION OF THE ENERGY SYSTEM OF WESTERN KAZAKHSTAN WITH UPS OF KAZAKHSTAN. CONSTRUCTION OF ELECTRIC GRID FACILITIES.

### The purpose of the project

Construction of the 500 kV overhead line of the Karabatan substation Ulke with a length of 604.3 km to connect the Western Zone with the main part of the UPS of Kazakhstan across the territory of the Republic of Kazakhstan in order to increase the reliability of electricity supply to consumers in the Western Zone and use maneuverable generation in the Western Zone to compensate for power and capacity imbalances. The project is financed from own and borrowed funds.

#### Source of funding

- The project is financed from own and borrowed funds.
- On December 3, 2024, 2 loan agreements were signed with DBK (32 billion tenge), the EBRD (up to 133.33 billion tenge and 15 million euros).

#### **Project implementation status**

- ♦ In February 2024, the RSE Gosexpertiza received a positive conclusion on the feasibility study of the Project.
- In September 2024, 3 EPC contracts were signed for substation and overhead line for the development of PSA, supply of equipment, materials and construction and installation work.
- Work has begun on the development of a PSA (substation survey, approval of the overhead line route).



STRENGTHENING OF THE ELECTRICAL NETWORK OF THE SOUTHERN UPS ZONE OF THE REPUBLIC OF KAZAKHSTAN.

### The purpose of the project

Strengthening of the UPS Southern Zone electric power system across the territory of the Republic of Kazakhstan to ensure reliable power supply to consumers in the Southern Zone and strengthen electrical communication between the regions of the Southern Zone.

#### Source of funding

- The project is financed from own and borrowed funds ("green" bonds).
- On July 19, 2024, a loan agreement was signed with the Asian Development Bank in the amount of 58.2 billion tenge.

#### Project implementation status

- A feasibility study has been developed. Contracts have been concluded for 5 facilities (2 overhead lines and 3 substations) for the development of a PSA, the supply of equipment, materials and the implementation of a QMS.
- The PSD for the 2nd overhead line is being examined by the RSE Gosexpertiza.
- Positive conclusions of the RSE "Gosexpertiza" were received for substation 500 "Shu" and "Zhambyl".
- ◆ The PSA is undergoing an examination for the substation 500 Shymkent.
- The equipment has been delivered.

On July 19, 2024, a loan agreement was signed between KEGOC JSC and the Asian Development Bank to finance the project "Strengthening the electric grid of the Southern UPS Zone of Kazakhstan. Construction of electric grid facilities", in the amount of 58.2 billion tenge.

On December 3, 2024, a loan agreement was signed between KEGOC JSC and the EBRD, as well as an agreement to open a credit line with Development Bank of Kazakhstan JSC (DBK) to finance the project "Connecting the energy System of Western Kazakhstan with UPS of Kazakhstan. Construction of electric grid facilities".

- The amount of the EBRD loan is up to 133.3 billion tenge, as well as an additional loan of up to 15.0 million euros.
- The amount of the credit line in DBK is 32.0 billion tenge.

When forming a portfolio of investment projects, KEGOC JSC uses a scenario approach based on the development and annual updating of the projected balance of electricity and UPS capacity in 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 power grid and minimize the key risk of failure of production assets in the short term, the Company plans to implement the following investment projects aimed at the development of NPG:

01

## RECONSTRUCTION OF 220-500 KV OVERHEAD LINES OF KEGOC JSC **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 PTLs that have reached their standard service life, as well as overhead lines that will reach their standard service life in the coming years.

The objects of reconstruction are 48 220-500 kV overhead lines, which are on the balance sheet of the branches "Akmola MES", "Central MES", "Eastern MES", "Northern MES" with a total length of 4,236 km. The feasibility study was sent for examination to RSE Gosexpertiza.

02

## RECONSTRUCTION OF 220-500 KV OVERHEAD LINES OF KEGOC JSC **BRANCHES, STAGE III**

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

03. Reliability and development of NPG

- achieving and exceeding the standard service life of 220-500 kV overhead lines;
- improving the reliability of electricity 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 "Almaty MES", "Central MES", "Southern MES" with a total length of 4,332 km. A feasibility study is being developed.

03

## STRENGTHENING THE EXTERNAL POWER SUPPLY SCHEME IN ASTANA. CONSTRUCTION OF ELECTRIC GRID FACILITIES

The aim of the Project is to increase the reliability of Astana's electricity supply by creating a second city power supply center with 500 kV supply lines in order to cover the growing electricity needs of the region and the possibility of connecting additional RES facilities. A feasibility study is being developed. The project implementation period is 2024-2028.

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

01

## **INCREASE THE TRANSIT POTENTIAL AND CAPACITY OF UPS** KAZAKHSTAN.

The development of the feasibility Study of the Project is initiated in order to increase the transit potential of the NPG of the Republic of Kazakhstan using innovative technologies, taking into account the implementation of major RES projects, as well as taking into account the possibility of interconnection of the energy systems of the Central Asian and Caucasian countries.

02

# **CONSTRUCTION OF 500 KV** KARAGANDA — ASTANA **OVERHEAD LINE AND CONSTRUCTION OF A NEW 500 KV KARAGANDA** SUBSTATION.

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

03

# **CONSTRUCTION OF 500 KV OVERHEAD LINE SUBSTATION** KARAGANDA — SUBSTATION **ZHEZKAZGAN — SUBSTATION KYZYLORDA — SUBSTATION** SHYMKENT.

The implementation of the project will ensure the delivery of the planned capacity for the construction of the Kyzylorda CCGT with a capacity of 1,000 MW, as well as strengthen the power supply to the Ulytau power plant and ensure the construction of a pipeline in the Ulytau power plant.

04

# STRENGTHENING OF THE WESTERN ENERGY **HUB CONSTRUCTION OF 500 KV OVERHEAD LINE SUBSTATION KABATAN —** SUBSTATION BEINEU -**SUBSTATION MANGYSTAU.**

The project is planned to be implemented in order to provide the necessary conditions for the 2nd stage of the Unification of the Western Zone with the UPS of Kazakhstan and the balancing of the RES.

# UNIFICATION OF THE **WESTERN ZONE WITH 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 RES into UPS in the Republic of Kazakhstan, and expand transit potential in the future. This project will make it possible to complete the looping of the power system with high voltage lines.

05