

The main directions of the state policy in the field of electric power industry are developed and determined by the Government of the Republic of Kazakhstan. The Ministry of Energy of the Republic of Kazakhstan is the State authorized body responsible for the management of the electric power industry. Supervision and control in the field of electric power industry is carried out by the state body — the Committee for Atomic and Energy Supervision and Control of the Ministry of Energy of the Republic of Kazakhstan.

The Committee for Regulation of Natural Monopolies of the Ministry of National Economy of the Republic of Kazakhstan is a state body responsible for monitoring and regulating activities related to the sphere of state monopoly (including the activities of the Kazakhstan Electricity Grid Operating Company Joint-Stock Company (KEGOC JSC) as a natural monopoly entity).

UPS of the Republic of Kazakhstan is a set of power stations, PTL and SS. Electric power industry of the Republic of Kazakhstan includes the following sectors:

- ♦ production of electric energy;
- ♦ transmission of electric energy;
- ♦ supply of electric energy;
- ♦ consumption of electric energy;
- ♦ other activities in the field of electric power industry.

INDUSTRY STRUCTURE

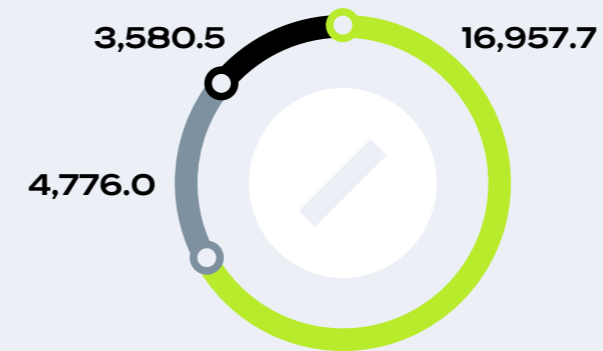
ELECTRICITY PRODUCTION SECTOR

The production of electric energy in the Republic of Kazakhstan is carried out by 233 electric power plants of various forms of ownership. The total installed capacity of power plants in the Republic of Kazakhstan as of January 1, 2025 is 25,314.2 MW; available capacity is 18,890.3 MW (available capacity of RES (SPP, WPP, small HPP) is indicated in accordance with the methodology for calculating the projected balance of electric capacity: damless HPP operating via watercourse — 30%; WPP — 20%; SPP — 0% of the available capacity).

Electric energy production in the Republic of Kazakhstan, MW

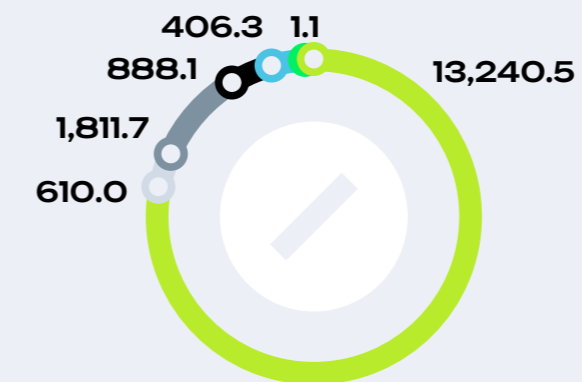
| Power plants | Installed capacity, MW |
|--|------------------------|
| Total thermal power plants: | 19,740.8, |
| Steam turbine, of which: | 17,631.5, |
| - pulverized carbon | 13,592.0 |
| - on gas and fuel oil | 4,039.5, |
| Gas Turbine engines | 2,109.3, |
| Wind farms | 1,525.7, |
| Solar power plants | 1,216.6, |
| Hydroelectric power plants, of which: | 2,830.0, |
| - small | 295.2, |
| Biogas plants | 1.1, |
| Total | 25,314.2 |

Installed capacity of power plants by zone, MW



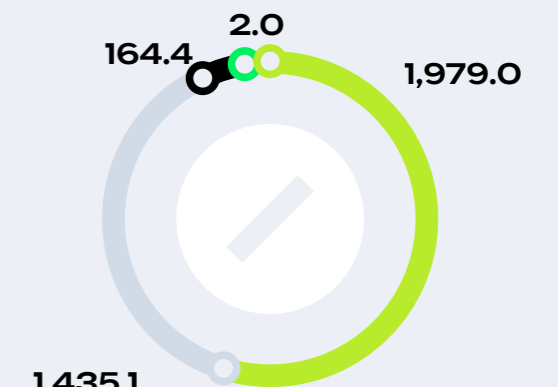
■ Northern zone ■ Southern zone ■ Western zone

Northern zone, MW



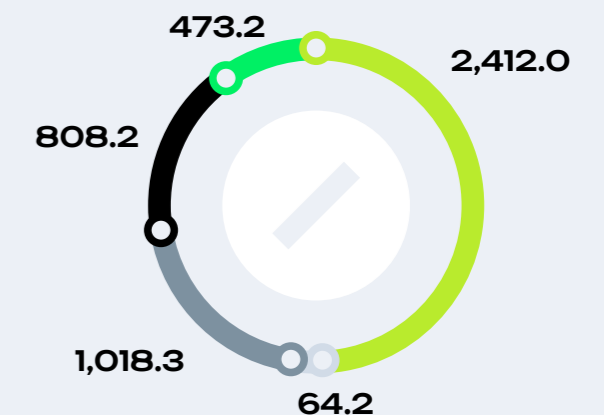
■ TPP ■ GTPP ■ HPP ■ WPP ■ BGP ■ SPP

Western zone, MW



■ TPP ■ GTPP ■ WPP ■ SPP

Southern zone, MW



■ TPP ■ GTPP ■ HPP ■ WPP ■ SPP

Installed capacity of power plants by region, MW

| | |
|---|-------------|
| Aktobe region: | 21.1 |
| WPP Khromtau LLP "KEZ" | 12.5 |
| HPP "Green Capital Kazakhstan" LLP | 8.6 |
| Almaty Region: | 3 |
| HPP Kargaly LLP "WPP Tolkyn" | 3 |
| HPP Kakpak LLP "Konaev and Company" | 2.2 |
| Atyrau Region: | 14 |
| WPP Dossor LLP "Divitel" | 48 |
| TGTES-1 TCO — dismantling of gas turbine No. 6.2 | -34 |
| East Kazakhstan Region: | -30 |
| Ridder CHPP — dismantling of steam turbine No. 5 | -30 |
| Zhambyl Region: | 20 |
| SPP Aralsk LLP "AEC Asa" | 20 |
| Zhetysu Region: | 16.9 |
| HPP Verkhne-Baskan HPP-2 LLP "Baskan Power" | 10.6 |
| HPP Verkhne-Baskan HPP-3 LLP "Baskan Power" | 4.3 |
| HPP Korgas RSE on REU "Kazvodkhoz" | 2 |
| Karaganda Region: | 53.9 |
| WPP Hyperborea LLP "Hyperborea" | 53.9 |
| Kostanay Region: | 3 |
| Arkalyk CHPP — installation of steam turbine No. 2 | 3 |
| Pavlodar Region: | 540 |
| Ekibastuz GRES-1 — installation of power unit No. 1 | 540 |
| Turkestan Region: | 30 |
| Shoulder TPP LLP "PKOP" | 30 |
| Ulytau Region: | 0.34 |
| SPP LLP "Barg" | 0.34 |



672.2
MW



of new generating capacity
was commissioned in 2024

ELECTRIC ENERGY TRANSMISSION SECTOR

The electric networks of the Republic of Kazakhstan are a set of SS, switchgear and connecting PTLs with a voltage of 0.4-1150 kV, designed for the transmission and (or) distribution of electrical energy. The role of the backbone network in the UPS of the Republic of Kazakhstan is performed by NPG, which provides electrical connections between the regions of the Republic of Kazakhstan and the energy systems of neighboring countries (the Russian Federation, the Kyrgyz Republic and the Republic of Uzbekistan), as well as the supply of electric energy by electric power plants and its transmission to wholesale consumers. substation, switchgear, inter-regional and (or) interstate PTL and PTL delivering electric energy to electric power plants with a voltage of 220 kV and above, which are part of NPG, are on the balance sheet of KEGOG JSC.

Regional-level electric grids provide electrical connections within regions, as well as the transmission of electric energy to retail consumers, and are maintained and operated by regional electric grid companies.

Energy transmission organizations carry out, on the basis of contracts, the transmission of electric energy through their own or used (lease, leasing, trust management and other types of use) electric networks to consumers of wholesale and retail markets or energy supply organizations.

ELECTRIC ENERGY SUPPLY SECTOR

The electric energy supply sector in the Republic of Kazakhstan consists of energy supply organizations that purchase electric energy from a Single buyer of electric energy and then sell it to end-users.

Since January 1, 2025, the functions of electric power supply have been performed by regional electric grid companies.



WHOLESALE ELECTRIC ENERGY MARKET

The subjects of the wholesale electricity market are:

- ◆ energy producing organizations;
- ◆ energy transmission organizations;
- ◆ energy supply organizations;
- ◆ electricity consumers who purchase electricity on the wholesale market in the amount of at least 1 MW of average daily (base) capacity, including digital miners, administrators of hybrid groups;
- ◆ the system operator whose functions are performed by KEGOC JSC;
- ◆ operator of centralized trade in electric energy and capacity, whose functions are performed by KOREM JSC;
- ◆ A single buyer of electric energy (Settlement and Financial Center for support of renewable energy sources LLP).

The list of subjects of the wholesale electric energy market is formed by the system operator.

According to the current market model, a single electricity buyer is centrally purchased from energy-producing organizations and sells planned electricity included in the daily schedule to wholesale consumers. Financial settlements of imbalances in UPS of Kazakhstan (deviations from the daily schedule) are carried out on the balancing market, where the operator is the settlement center of the balancing market.

Given that this model lacks the “targeting” of electricity distribution and, accordingly, the technical ability to determine the supply route from the producer to the consumer, the Law “On Electric Power Industry” introduced a “new” NPG service, which is provided by the system operator to wholesale market entities when buying and selling electricity from a single buyer and on a balancing market.

As part of the new market model, KEGOC JSC continues to play a major role in the market and performs the following main functions:

- ◆ provides system services;
- ◆ It is the holder of an upgraded hardware and software complex, a balancing market system, which is the main instrument for the functioning of the wholesale market and the management of the balancing electric energy market;
- ◆ performs physical regulation of imbalances in the energy system by involving price requests from market participants from a ranked list, as well as within the framework of contractual relations for the settlement of deviations with the Russian Federation and the countries of Central Asia.

