

Market Review

Macroeconomic Trends in 2023

Russian economy

3.6%

GDR growth in Russia in 2023

7.42%

inflation in Russia in 2023

GDR growth in the Russian Federation in 2023 was 3.6%¹.

The indicator exceeded the 3.5% growth rate projected by the Russian Federation's Ministry of Economic Development (MED). According to the Russian Statistics Agency, GDR growth in 2023 was largely contributed by an increase in gross value added indices in the hotel and catering services, information and communications, financial, insurance and administrative activities, wholesale and retail trade, manufacturing and construction.

According to the results of the macroeconomic survey of the Bank of Russia, Russia's GDR in 2024 may grow by 1.6%². The growth rate of gross fixed capital formation

in 2024–2026 should remain at an average of 2.3%, which will drive an increase in the share of gross fixed capital formation in GDR³.

In 2023, the Bank of Russia's policy was aimed at bringing inflation back to target, and in 2023 its level was 7.42% (against 11.94% a year earlier), which is almost in line with the Bank of Russia's earlier projection (6–7%) and coincides with the MED estimate (7.5%). The acceleration of price growth rates affected a wide range of goods and services. Accordingly, the indicators of the sustainable component of monthly price growth also continued to grow under the influence of an active increase in consumer demand. The current rate of price growth was also still affected by the weakening of the Russian Rouble.

According to forecasts, given the monetary policy in place, annual inflation should return to 4% in 2024 and will remain at 4% thereafter. The tightening of monetary policy undertaken by the Bank of Russia should contain the excessive expansion of domestic demand and limit its pro-inflationary effects⁴.



¹ Russian Statistics Agency. Socio-Economic Situation in Russia, 2023.

² Macroeconomic Survey of the Bank of Russia, https://cbr.ru/statistics/ddkp/mo_br/.

³ Russia Ministry of Economic Development of the Russian Federation, Forecasts of Socio-Economic Development of the Russian Federation for 2024 and the Planning Period of 2025 and 2026.

⁴ Bank of Russia, Consumer Price Movements, September 2023.

Industry-related trends

Global trends in the power engineering sector¹

Decarbonisation, decentralisation and digital transformation (digitalisation) are the three D trends driving the worldwide electric power industry in the era of Energy Transition 4.0.

Up to 2050, fossil fuels will continue to be the primary energy source in use worldwide. However, taking into account the decarbonisation factor, the share of oil, petroleum products and coal in total energy consumption will decrease, while natural gas and primary electricity consumption will grow by 2035. The share of electric power in final energy consumption will continue to grow, reaching 31% by 2035 and 42% by 2050.

Coal-fired electricity generation is expected to increase annually by about 4% on average until 2026². The primary driver of change in the global perspective will be the growing use of renewable energy sources in China, the country that produces over half of the world's coal-fired generation.

As the digital economy grows, a significant volume of digital data is produced, necessitating respective processing and storage power. The expansion of the cryptocurrency industry will be another factor driving the need for computing power.

Both the active growth of distributed generation (including the greater deployment of RES) and the usage of energy storage systems (including hydrogen technologies) reflect the trends towards decentralisation and decarbonisation of the global electric energy system. The long-term trajectory of sustainable growth will not change in spite of the current energy crisis.

The growth of electricity consumption causes an increase in the grid load and the expansion of electricity use in industry, heating and air conditioning, transport, telecommunications, data processing and storage. Therefore, one of the most important elements influencing the growth of energy consumption is the development of electric transportation.

¹ Long-term energy consumption forecast until 2050 (IEA).

² Electricity 2024. Analysis and Forecast to 2026. International Energy Agency, [iea.org](https://www.iea.org).



— Russia has recently launched a number of significant projects pertaining to the advancement of green energy. How does this affect the Company's operations?

— In 2023, the Rosseti Group provided grid connections to eight RES generation facilities with a total capacity of over 336 MW. These include the Kola WPP, which is the world's largest polar wind power plant, and facilities in the Stavropol and Krasnodar Territories and Karachay-Cherkessia. In addition, the Group's grid companies support the development of green energy by purchasing energy to compensate part of losses from RES generation on the retail market at a cost higher than wholesale market prices.

The power grid complex is fully prepared to ensure the supply of RES capacity. However, we believe that the development of such generation should also take into account the interests and opportunities of other market participants. It may be expedient to create large RES facilities, the capacity of which will be transmitted via main transmission grids over long distances to cover the demand in the UES of Russia.

RES may also be effective in organising power supply to remote areas, including as part of autonomous hybrid power plants (AHPP). Such projects already exist in Siberia and the Far East. In addition, Rosseti, together with equipment manufacturers, is actively involved in the development of micro-generation by providing turnkey services for the installation of small-capacity RES generation systems.

Alexey Molsky,
Deputy General Director for Investments and Capital Construction

Russian electric power market

Electricity consumption in the Unified Energy System (UES) of Russia in 2023 increased by 1.4% to 1,121.6 billion kWh¹.

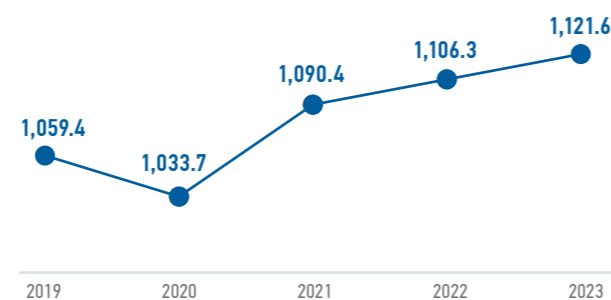
In accordance with the Scheme and Programme of Development of Electric Power Systems of Russia for 2024–2029, the electricity consumption in the UES of Russia is projected to increase by 2029 to 1,274.5 billion kWh, with increase in the maximum capacity consumption to 183,351 MW². Given the anticipated expansion in energy and capacity consumption, the implementation of the planned actions on the development of generating capacities and power grids will ensure the reliable operation of electric power systems.

The Russian economy has undergone structural adjustments and transformation as a result of recent global events. The overall energy consumption in Russia will depend on the behaviour of key sectors of the economy and other significant factors.

Transition from coal and wood heating to electric heating is considered by the state as one of the environmental improvement measures for regions with unfavourable environmental situation under the federal project called Clean Air.



Variation of electricity demand in the UES of Russia, bln kWh



Source: operational data of JSC SO UPS.

Possible drivers of growth in electricity demand by sector

Sector	Description
Agriculture	Demand will grow due to upgrade of ferrous metallurgy capacities.
Construction	Consumption will increase due to the growth in the number of illuminated and heated greenhouses in the vegetable growing sector, driven by the implementation of the Food Security Doctrine and increased exports of agricultural products.
Trade	The implementation of national projects and government programmes aimed at increasing the housing and the number of roads in Russia will lead to an increase in the production of energy-intensive building materials (including cement).
Transport	The most significant contribution to the growth of energy consumption in the trade sector will come from the development of e-commerce and the associated logistics and advertising infrastructure. Increased demand for data processing, storage and transmission will lead to an increase in the volume of data centre infrastructure commissioned.
Transport	Expansion of the electric vehicle and electric bus fleet will require the creation of a developed charging infrastructure and will increase the demand for electric power from electric transport.

Main areas of international activities

The Company actively cooperates with partners from 13 foreign countries within the framework of concluded agreements and/or regular business contacts.

13 COUNTRIES	Asia and the Middle East	China, Iran, Mongolia, China, Vietnam and Iran
	Near-abroad countries and CIS	Abkhazia, Azerbaijan, Armenia, Belarus, Georgia, Kazakhstan, Kyrgyzstan, Uzbekistan and South Ossetia

In addition, the Company's proposals are taken into account in 15 protocols of Intergovernmental Commissions on trade and economic co-operation with foreign countries.

15 COUNTRIES	Asia	China, India, Mongolia, Thailand, Vietnam, India, Mongolia and Thailand
	Near-abroad countries and CIS	Armenia, Azerbaijan, Kirgizia, Kazakhstan, Tajikistan, Turkmenistan and Uzbekistan
	Middle East and Africa	Iran, Ethiopia
	Latin America	Cuba

¹ Report on the functioning of the UES in Russia in 2023 (based on operational data), SO UPS.
² Order of the Minenergo of Russia No. 1095 dated 30 November 2023.



1.4%
growth in electricity consumption in the UES of Russia in 2023

Main areas of international co-operation

- Implementing instructions from the Government of the Russian Federation and the Ministry of Energy of the Russian Federation — promotion of national interests on the platforms of international organisations and associations
- Building strategic cooperation with foreign partners on the development of the electric power industry, exchanging experience and best practices, in particular in the field of innovative technologies and energy efficiency

- Promoting the Rosseti Group's own competences and developments in foreign markets, including through mechanisms of intergovernmental commissions of the Russian Federation with foreign countries and international organisations and associations
- Training and advanced training for foreign specialists under the training programmes of the Rosseti Group's training centres

For more details on the main areas of international activities, please see Appendix 1.

Competitive Landscape

Comparison of Rosseti with several Russian public companies in the electric power sector¹

The results of the benchmarking study of PJSC Rosseti and the most comparable Russian public companies in the electric power sector by type of activity and size for 2023 demonstrate

the Company's high financial and economic efficiency, as well as high investor interest in the Company's shares despite the limited free-float.

Company name/Indicator ²	PJSC Rosseti	PJSC RusHydro	PJSC InterRao	PJSC Unipro	PJSC EL5-Energo
Capitalisation, RUB bln	234.4 ³	316.5	412.5	126	23.7
Average daily trading volume on the Moscow Exchange, RUB mln	388.6	222.1	431.6	352.8	149.0
Revenue, RUB bln	1,378.7	510.3	1,360.0	118.6	60.8
EBITDA, RUB bln	528.2	131.5	182.4	44.3	12.1
EBITDA margin, %	38.3	25.8	13.4	37.3	19.9

¹ Comparison covers the most liquid companies in the MOEXEU industry index.

² IFRS-based indicators for 2023.

³ The capitalisation of PJSC Rosseti includes actual outstanding shares of the Company. The calculation is based on the closing price according to the data of the Moscow Exchange.