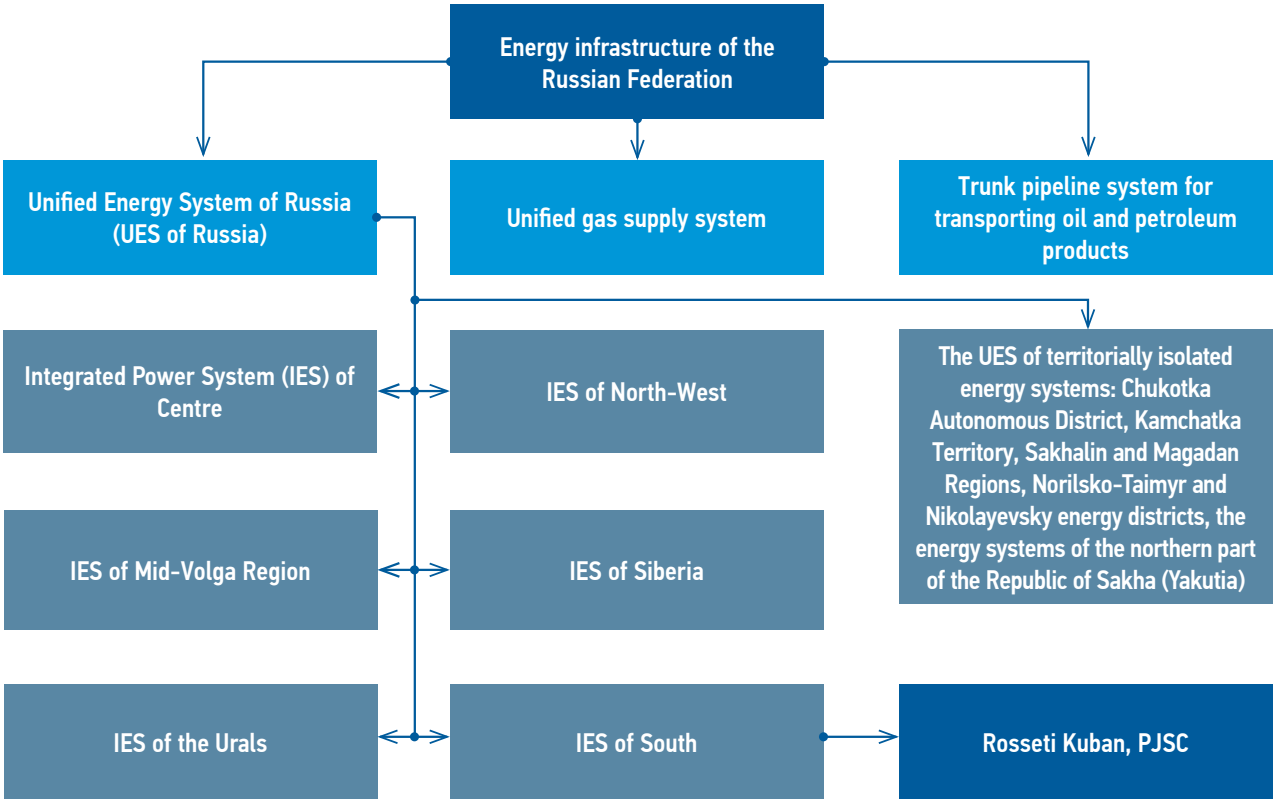
MARKET OVERVIEW AND MACROECONOMIC TRENDS

General status assessment and business trends of the energy sector in the Russian Federation[1]

The Russian Federation is among the world leaders in hydrocarbon reserves, production and export of energy resources, as well as in the development, use and export of nuclear energy technologies.

WITH NUCLEAR POWER, HYDROPOWER AND OTHER RENEWABLE ENERGY SOURCES ACCOUNTING FOR MORE THAN A THIRD OF ELECTRICITY GENERATION AND NATURAL GAS FOR ABOUT HALF, THE RUSSIAN FEDERATION HAS ONE OF THE CLEANEST (LOW-CARBON) FUEL-ENERGY BALANCES AMONG THE WORLD'S LARGEST ECONOMIES.

ENERGY INFRASTRUCTURE OF THE RUSSIAN FEDERATION



1. Outlined in accordance with the Energy Strategy of the Russian Federation for the period until 2035, approved by Government Decree No. 1523-r date 9 June 2020.

Russia, based on its national interests and resource and intellectual potential, taking into account the need to achieve the Sustainable Development Goals endorsed by the UN General Assembly, makes a significant contribution to the global energy security.

The challenges afflicting the global electric power industry are fully relevant for the Russian electric power industry, while the threats are specific as determined by the following issues common to the whole fuel & energy complex (FEC):

- A slowdown in global economic growth, a change in consumption patterns and a slumping demand for FEC products, overproduction of hydrocarbon energy resources and, as a consequence, persistently low prices for them
- Lack of investment resources, including due to the limited possibility of raising long-term foreign funding and the poor development of venture capital lending
- Maintenance of non-market relations, alongside market relations, and burdens in the end-use of FEC products and services, including the existence of cross-subsidisation
- The great challenges to scientific and technological development set out in the Strategy for Scientific and Technological Development, in particular the qualitative change in the nature of global and local energy systems, the growing importance of the power supply capacity of the economy and the ramp-up in the energy production and conservation, its transmission and efficient use

In addition to the problems common to the fuel & energy complex, there are industry-specific problems and risk factors related to the electric power industry:

- Disproportion between the claimed electricity consumption characteristics at the time the grid connection is made and their subsequent actual values
- Low payment discipline of consumers in the retail electricity market
- Imperfections in the current model of relations and pricing in the energy and heat supply sector and competitive problem in the electricity and capacity markets
- Persistence of cross-subsidisation that reduces the efficiency of the centralised energy supply system
- Insufficient automation of technological processes and increased vulnerability of facilities due to the increasing complexity of their control systems and algorithms

FACTORS DETERMINING THE ECONOMY OF THE RUSSIAN FEDERATION AND AFFECTING THE ELECTRIC POWER INDUSTRY[1]

Changes in GDP	Inflation	Interest rates for loans and borrowings
The GDP volume index in 2021 rose by 4.7% compared to 2020 and by 1.9% compared to 2019	Inflation in 2021 stood at 8.4%, whereas in 2020 – at 4.91%	The Bank of Russia key rate increased from 4.25% at the beginning of the year to 8.50% as at 31 December 2021. The decision taken by the Board of Directors of the Bank of Russia on 17 December 2021 to raise the key rate to the said amount is aimed at limiting inflation risks

1. Sources: Rosstat, Bank of Russia.

SPECIFIC FACTORS DETERMINING INDUSTRY GROWTH DYNAMICS (IN DESCENDING ORDER OF IMPORTANCE)

State tariff regulation	
Description	Electricity transmission and grid connection services are state-regulated activities. Tariffs for the Company's services approved by regulators directly affect the amount of revenues received
Current state	Tariffs for the Company's electricity transmission services are aligned with the increments envisaged by the forecast of the Ministry of Economic Development of the Russian Federation
Mitigation (if possible)	Economic justification of tariff-covered costs, including economically justified over-tariff costs and shortfalls of previous periods lost due to reasons beyond the Company's control
	Systematic cost optimisation
	Implementation of measures to improve pricing in the industry, in cooperation with Rosseti
Power consumption dynamics	
Description	Changing energy consumption has direct relevance to the health of the industry
Current state	Actual electricity consumption in the UES of Russia in 2021 was 1,090.4 bn kWh, up 5.5% year-on-year[1] Actual electricity consumption in the Krasnodar Territory and the Republic of Adygea in 2021 was 29.96 bn kWh, up 9.3% year-on-year[2]
Mitigation (if possible)	Measures to develop new (non-tariff) types of business and increase non-tariff sources of income
Price dynamics on the Wholesale Electricity and Capacity Market	
Description	Changes in electricity prices in the wholesale electricity and capacity market (WECM) have a direct impact on the amount of compensation for electricity losses in power grids and, accordingly, on all activities of the Company
Current state	The flat-rate price for electricity on the WECM in 2021 showed a 4.9% increase year-on-year
Mitigation (if possible)	Measures to reduce power losses in the grids
Current state of the industry	
Description	The state of the industry directly affects all aspects of the Company's activities
Current state	High wear and tear of the main generating and grid equipment
	Cutbacks of the industry-specific investment programmes
	Default in payment
Mitigation (if possible)	Implementation of measures for retrofitting, upgrade and renovation of existing power grid facilities
	Introduction of the up-to-date Company's management tools, automation of key functions to improve management decision-making

1. Source: Report on the Functioning of UES of Russia in 2021 | System Operator of the Unified Power System (so-ups.ru).
2. Ibid.

FORECAST FOR ECONOMIC AND ELECTRICITY SUSTAINABILITY IN 2022

By 2022, Russia has formed a sustainable economic base. According to the Forecast of Social and Economic Development of the Russian Federation for 2022 and for the planning period of 2023 and 2024[1], the main objective of economic policy is to lay the groundwork for sustainable economic development and reach the target annual growth rate of 3–3.5%. The second objective is to increase the economy's resilience and adaptability to external shocks. However, medium-term forecasts, including macro indicators, may be revised downwards due to increased geopolitical risks and sanctions pressure on the domestic economy.

The key areas of economic policy in the medium term will be as follows:

- Ensuring effective employment and income growth (primarily wages and entrepreneurial income through the development of individual, small and medium-sized entrepreneurship (SME) and self-employment), which requires higher labour market flexibility, better training and retraining systems with a focus on modern competencies, legalisation and increased labour force[2] participation rate and effective migration policy
- Launching the investment cycle with a focus primarily on private investment. At the same time, public investment will help the creation of infrastructural conditions to attract private investors as well as improve the quality of life
- Stimulating technological development, including through regulatory conditions, integration of science, education and business
- Boosting export potential with a focus on non-energy exports
- Implementing the climate agenda
- Increasing the transport connectivity on the country level
- Spatial development, which implies reduction of inter-regional differentiation in the quality of life, while maintaining incentives for development in the leading regions, increasing the number of economic growth points
- Developing human capital through higher quality and accessibility of medicine, education, culture, quality environment and security (amid mounting calls for better quality of life) with the use of state-of-the-art technologies
- Maintaining macro stability as a condition for long-term growth

The Russian Ministry of Energy forecasts that electricity consumption in Russia in 2022 will hit about 2% figure compared to 2021 and reach 1,129 bn kWh[3].

1. Source: https://www.economy.gov.ru/material/directions/makroec/prognozy_socialno_ekonomicheskogo_razvitiya/.
2. Labour force participation rate is the ratio of the labour force (employed and unemployed) of a certain age group to the total population of the respective age group calculated as a percentage (gks.ru).
3. Source: https://tass.ru/ekonomika/13573289.