

# MARKET (INDUSTRY) OVERVIEW

The global economy started to slow down in 2022 after seeing significant recovery growth in 2021. Spiralling prices for food and energy are a major factor in the global economic slowdown and the tightening of financial conditions in global markets, which led many developed nations to draw back fiscal stimulus programmes and adopt stricter monetary policy.

Financial, energy, technological and transport-logistics sanctions were all imposed against

Russia in 2022. Limited prospects in the manufacture and sale of goods are a natural consequence of sanctions on exports, imports, banking activities, and the termination of collaboration with Western counterparties. In turn, this results, either directly or indirectly, in lower quality or higher prices for goods and services due to longer or slower delivery periods, changes in package contents, etc.

According to the IMF, the global GDP exceeded USD 100 trillion in 2022, with Russia's GDP coming in ninth with USD 2.1 trillion.

The Company operates in the Russian electric power industry, which is the most important basic sector for generating, transmitting, distributing and selling electricity to consumers.

## THE FOLLOWING SIGNIFICANT FACTORS GOVERN THE OVERALL HEALTH OF THE RUSSIAN ECONOMY AND HAVE AN IMPACT ON THE ELECTRICAL SECTOR<sup>1</sup>



### CHANGES IN GDP

GDP volume index in 2022 versus 2021 was 97.9% (in 2021 versus 2020 – 104.7%)



### INFLATION

Inflation in 2022 was 13.8% (in 2021 – 6.7%)



### INTEREST RATES FOR LOANS AND BORROWINGS

The Bank of Russia changed its key rate multiple times throughout 2022.

- from the beginning of the year to 13 February – 8.5%
- from 14 February to 27 February – 9.5%
- from 28 February to 10 April – 20.0%
- from 11 April to 3 May – 17.0%
- from 4 May to 26 May – 14.0%
- from 27 May to 13 June – 11.0%
- from 14 June to 24 July – 9.5%
- from 25 July to 18 September – 8.0%
- from 19 September to the end of 2022 – 7.5%

## According to the Russian Federation's Energy Strategy, which was approved by Decree of the Russian Federation's Government No. 1523-R dated 9 June 2020, here is a general assessment of the state of and trends in the Russian energy sector

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

The Russian Federation has one of the cleanest (low-carbon) fuel-energy balances among the greatest economies in the world, with natural gas accounting for approximately half of electricity generation and nuclear power, hydropower, and other renewable energy sources – for more than a third.

The Unified Energy System of Russia (UES), the Unified Gas Supply System, and the system of main oil transportation pipelines make up Russia's energy infrastructure, which is one of the longest in the world and operates in a variety of natural and climatic conditions, from the Arctic to the subtropical zone.

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 energy system of the Russian Federation consists of the UES of Russia, which includes

seven integrated energy systems (IES), i.e., the IES of Centre, Middle Volga, Urals, North-West, South and Siberia and territorially isolated energy systems (Chukotka Autonomous District, Kamchatka Territory, Sakhalin and Magadan Regions, Norilsk-Taimyr and Nikolayev energy districts, the energy systems of the northern part of the Republic of Sakha (Yakutia).

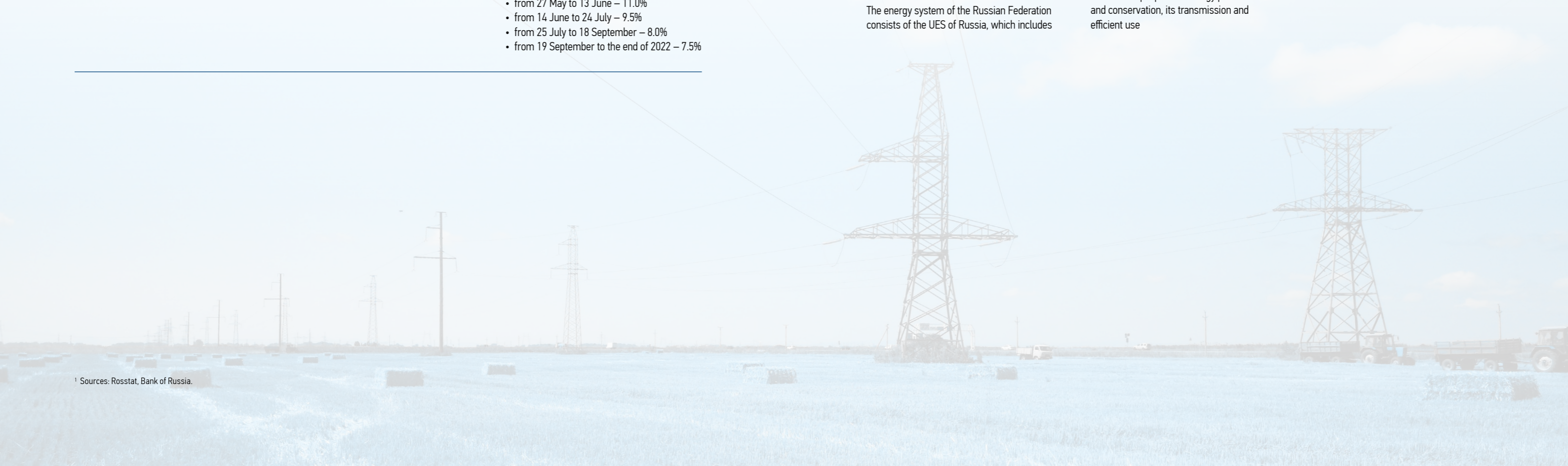
The Russian electric power sector faces the same challenges as the global electric power sector, but distinct hazards, as indicated by the following concerns shared by the fuel and energy complex (FEC):

- Slowdown in global economic growth, a change in consumption patterns and 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
- 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

<sup>1</sup> Sources: Rosstat, Bank of Russia.






**SPECIFIC FACTORS DETERMINING INDUSTRY GROWTH DYNAMICS, IN DESCENDING ORDER OF IMPORTANCE**




**STATE TARIFF REGULATION**

-  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
-  Tariffs for the Company's electricity transmission services are set with an increase within the growth rate specified by the Russian Federation's socioeconomic development forecast
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  - 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-cutting measures
  - Industry improvement pricing measures, jointly with Rosseti, PJSC




**WECM PRICE DYNAMICS**




-  Changes in electricity prices in the wholesale electricity and capacity market (WECM) have a direct impact on the size of compensation for electricity losses in power grids and, accordingly, on all activities of the Company
-  In 2022, the WECM's unregulated flat-rate electricity price climbed by around 4.6% compared to 2021, which is notably less than the inflation rate and 0.3 percentage points less than the year before
-  Measures to reduce power losses in power grids

**POWER CONSUMPTION DYNAMICS**

-  Change in energy consumption volumes has direct impact on the industry
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  - Actual electricity consumption in the UES of Russia in 2022 was 1,106.3 billion kWh, up 1.5% year-on-year<sup>1</sup>
  - Actual electricity consumption in the IES of South in 2022 was 111.0 billion kWh, up 2.8% year-on-year<sup>2</sup>
-  Measures to develop new (non-tariff) business types and increase non-tariff sources of income

**CURRENT STATE OF THE INDUSTRY**

-  All aspects of the Company's operations are directly impacted by the state of the industry.
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  - High wear and tear of main generating and grid equipment
  - Cutback of industry-specific investment programmes
  - Default in payment
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  - 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

 Description     Current state     Mitigation measures (if possible)

According to the forecast for socio-economic development of the Russian Federation for 2023 and for the 2024 and 2025 planning period<sup>3</sup> in the medium term:

- World prices will keep declining, as a result of the slowdown in global economic growth
- Drop in the physical volume of Russian exports will slow down in 2023 and begin to recover from 2024
- Pressure on the Rouble is anticipated to lessen because of scarcer foreign currency inflows and a shift in capital flows to neutral nations

- Inflation in 2023 is expected to be 6%, in 2024 – 4.7% and in 2025 – 4.0%
- In 2023, GDP is projected to decrease by 0.8% on the back of the global economic slowdown, export sanctions against Russia, supply-side constraints brought on by import sanctions, and disruptions to the supply and logistics chains; in 2024 and 2025, GDP growth of 2.6% per annum is anticipated in the event that economic policies to adapt the economy to the new conditions are implemented effectively

- As major central banks tighten monetary policy, which will force prices on global commodities markets to fall more precipitously, the likelihood of a recession in developed countries is rising
- There is still a possibility of heavier sanctions
- The increase of regulated tariffs in the Russian Federation from 1 December 2022 is set at an average rate of 9%, from 1 July 2024 – 6%, and from 1 July 2025 – 5%. This is done to compensate electric grid businesses for inflationary development of costs



<sup>1</sup> Source: Functional report of the UES of Russia in 2022.

<sup>2</sup> Ibid.

<sup>3</sup> Source: Ministry of Economic Development of the Russian Federation.