

INVESTMENTS

The PAO Rosseti Ural's investment program for 2023 was adopted by the Ministry of Energy Decree²².

The Company's 2021-2023 cost and physical parameters

Metrics	2021	2022	2023	2023/ 2022, %
Funding, RUB million plus VAT	13,481	12,602	20,239	161%
Capex, RUB million net of VAT	12,144	8,504	16,089	189%
New fixed assets, RUB million net of VAT	11,342	7,298	14,446	198%
Commissioning of transformer capacity, MVA	319	264	1,652	626%
Commissioning of power lines, km	1,812	1,870	7,605	407%

Implementation of the investment program includes handling of the following problems:

- maintenance of operability of equipment that provides reliable, no-break and high-quality power supply
- execution of liabilities under connection contracts
- enforcement of security of equipment and personnel performance
- provision of the transmitting capacitance of the networks for sustainable performance and connection of consumers
- increase of anti-diversionary protection and counter-terrorist security of energy facilities

The bulk of the 2023 funding (57%) was channeled to connection. Investments spent on reconstruction, upgrade and retrofitting totaled 29%. A 13% share of the total funding was spent on other investment projects (ready-to-operate devices, IT projects, etc.), funding of the investment projects, implemented under the energy sector perspective development schemes and programs totaled 1%; funding on greenfield construction totaled 1%. As for the sources of financing, the Company's internal funds contributed the most to the total funding (80% or RUB 16,224 million). Raised funds totaled RUB 4,016 million or 20%. We have no state-funded projects.

Investment funding structure in 2021-2023, RUB million, incl. VAT

Metrics	2021	2022	2023	2023/ 2022, %
Total	13,481	12,602	20,239	161%
Connection	6,667	7,369	11,475	156%
Reconstruction, upgrade and retrofitting	5,080	4,166	5,784	139%
Investment projects, implemented under energy sector perspective development schemes and programs	321	370	163	44%
Other greenfield construction of energy facilities	75	136	182	134%
Purchase of land plots for investment projects	0	0	0	0%
Other investment projects	1,339	561	2,636	470%

The largest investment projects completed in 2023

Branch	Title of an investment project	Goals	Commissioning in 2023
Perm region	Construction of three 6/0.4 kV modular packaged transformer substations, with transformer capacity of 2x1.25 MVA, 2x2.5 MVA, 2x1.6 MVA, with metering equipment, IATS and SC I/1, 6 kV cable line (3.856 km)	Development of the grids, related to connection of new consumers	RUB 175 million
Sverdlovsk region	Reconstruction of 35 kV Koltsovo substation with voltage conversion to 110 kV and 110 kV power line to supply XXXII World Summer Universiade 2023 facilities (53.2 MVA, 11.097 km, 3.629 ha, 22 pcs)	Electricity supply of XXXII World Summer Universiade 2023 facilities, execution of the connection contract with GKUSO UKSSO	RUB 1,243 million
Sverdlovsk region	Reconstruction of 110/35/10 kV Shpagatnaya substation, replacement of 25 MVA T-1 and 16 MVA T-2 transformers for 80 MVA transformers (2 x 40 MVA)	Development of the grids, related to connection of new consumers	RUB 170 million
Chelyabinsk region	Construction of 10 kV distribution station, 10 kV power line from 3C, 4C of 110 kV Paklinskaya substation	Development of the grids, related to connection of new consumers	RUB 200 million

Long-term investment program

The PAO Rosseti Ural's investment program for 2024-2028 was adopted by the Ministry of Energy Decree²².

The Company's 2024-2028 cost and physical parameters

Metrics	2024	2025	2026	2027	2028
Funding, RUB million, incl VAT	15,584	13,057	12,724	12,309	9,927
Capex, RUB million net of VAT	13,140	9,931	10,470	10,288	7,834
New fixed assets, RUB million net of VAT	15,570	9,187	10,039	12,250	7,578
Commissioning of transformer capacity, MVA	609	173	123	202	87
Commissioning of power lines, km	1,509	1,260	1,232	1,081	1,048

The Company's investment program for 2024-2028 stipulates RUB 63,601 million (incl. VAT) funding, RUB 51,663 million (net of VAT) capex, RUB 54,623 million (net of VAT) new fixed assets. The Company's 2024-2028 investment program is prepared with due allowances to regional development plans, equipment health, importance of grid facilities and current domestic environment.

INNOVATIONS

The Board of Directors has adopted the PAO Rosseti Ural's Innovation Development Program²³. The 2023-2027 mid-term implementation plan was revised and approved as a part of the 2022 Innovation Development Program progress report²⁴. The goal of the Company's Innovation Development Program is to shift to the new-generation innovative network with game-changing properties related to reliability, efficiency, availability, controllability and customer-centricity of the Russian grid sector.

The final results are:

- provision of high reliability of electricity supply
- enhancement of efficiency through reduction of losses, expenses and implementation of innovations in electricity transmission, maintenance and repairs of the Company's grids
- increase of investment attractiveness and value of the Company

In 2023 expenses on the activities from the IDP exceeded the targets. Total expenses in 2023 totaled RUB 982.29 million (target – RUB 958.23 million), completion of the IDP totaled 102.51%.

2023 Achievements are as follows:

1. Transition to 35-110(220) kV digital substations.

The goal is to create grid facilities with intelligent control and management system by installing state-of-the-art equipment and systems as well as to use IEC 61850 data transfer protocols. Effect from the deployment of the "Digital Substation" technology: increased level of automation and controllability, reduced exploitation costs due to extended repair intervals, usage of low-maintenance equipment, reduced time for restoration of normal network operation, reduced possibility of incidents and damages of equipment, usage of network fault location and remote switch control system.

The "Digital Substation" technology is planned to be deployed on the following pilot substations:

1) 110 kV Esaulka substation (Chelyabenergo branch).

The implementation of the project shall enable to ensure:

- a possibility to connect new consumers and increase net supply;
- an increase of supply reliability and voltage quality;
- upgrade of obsolete equipment;
- achievement of optimal load;
- an increase in observability and controllability of the facility, testing of IEC 61850-compliant solutions using microprocessor-controlled RPA devices and telematics, supporting "digital substation" technology.

2023 achievements: DSW in progress. 2023 expenses: RUB 21.03 million (target value) and RUB 18.33 million (real value). Deviation from the target value is due to reduced cost of the project as a result of completed tenders.

2) 110/35/6 kV Pyshma substation (Sverdlovenegero branch).

Innovative technologies implemented: i) digital relay protection and automation devices, supporting digital data exchange; ii) PMU devices integrated into DSP; iii) systems for control (analysis) of IEC 61850 digital communications protection, etc., using machine learning and neural networks to discover abnormalities, to ensure functional security of remote control of primary grid equipment; iv) automated systems for control of 10-220 kV equipment status after synchronous registration and monitoring of normal and emergency modes parameters; v) smart meters with possible integration into the unified management system, providing remote control and information on network parameters; vi) fieldbus firewalls with functions of control and infiltration of OPC.

2023 achievements: DSW ended, procurements ended, installation and commissioning ended. 2023 expenses: RUB 332.73 million (target value), RUB 330.51 million (real value).