

In October 2018, the Board of Directors of IDGC of the South approved the Policy of ROSSETI on Information Technologies, Automation and Telecommunication (ITT Policy) as the Company's internal document. The ITT Policy and 2030 Digital Transformation Concept set the principal objectives of the Company's information technologies development, strategic initiatives, trends of technological and organisational changes. Such transformation is aimed to improve reliability, efficiency, quality and availability of electricity transmission and grid connection services and to establish a new infrastructure for optimal energy transfer between power industry facilities in the region.

The following stages are defined to achieve the set targets in the development of the ITT Policy:

Digital Transformation up to 2030;  
measures on cybersecurity provision, information security system development;  
introduction of the corporate information systems of electricity metering and transmission services management and production assets management;  
introduction and development of the corporate centralised information systems;  
introduction and development of the financial and business operations;  
optimisation and development of the ITT-infrastructure;  
development of the automated process control systems;  
development of the telecommunications;  
optimisation of the ITT business-processes.

## **Implementation of the ITT Policy in 2018**

In 2018, branches of IDGC of the South arranged own and leased data transmission digital channels for 31 facilities.

Also, under the Programme on upgrading and expansion of the data acquisition and transmission system (DATS) in 2018, the branches of IDGC of the South introduced the remote control at 110 kV substations: Chernozemelskaya, B-8, and VdPTF. The Company also upgraded the telemetering equipment of 110 kV substations: Opytnaya, Kuzmichi, BT-1, and T-24. Now, these facilities comply with the grid operator requirements to control of the power system in the electrotechnical mode.

The Company provides transmission of minimum scope of remote signalling and remote information (via any communication channels, within the range of total warning alarm signalling from the substations) from 330 substations of 110 kV voltage when implementing the measures to improve observability.

IDGC of the South introduced remote control of three 6-10 kV distribution points.

For Football World Cup 2018, the Company upgraded 110 kV substations: AS-10 (Rostovenergo) and TND (Volgogradenergo). A new substation, Sportivnaya, was built using the latest SCADA technologies to cover the needs of Rostov Arena stadium. The mentioned substations acquired and transmitted consolidated telemetric information to SCADA Situational and Analytical Centre of the Ministry of Energy of the Russian Federation. A common data warehouse was created in Rostovenergo and Volgogradenergo branches to ensure data exchange during the 2018 Football World Cup.

Power supply systems of 10 communication centres were retrofitted to improve the reliability of telemetry and communication means.

The Company connected six remote hubs of the regions of power grids (RPG) to the corporate data exchange network of IDGC of the South through the Internet using encryption mechanisms. These initiatives allow online access to the Company's corporate and technological information systems without the need to visit a RPG or a production facility.

In 2018, IDGC of the South and Rostovenergo undertook the extensive efforts within the local area network of the Company's Executive Office.

The Company connected the Volodarsk RPG building to the LAN

And put a redundant communication channel to the Pravoberezhny RPG into operation.

Consumer service offices of Tsentralny, Zaboldinsky, and Privolzhsky RPGs were also connected to the LAN.

IDGC of the South completed the first stage of connection of Volgogradenergo RPG sections to the corporate data resources.

The Company established a communication channel and configured data transfer connection of JSC VMES to the centralised data resources of IDGC of the South.

The Company provided five base Wi-Fi rebroadcasting and reception stations to connect the Training Centre to the LAN for holding technical (process) meetings and training at the training and production facilities.

## **ITT development plans**

IDGC of the South defined a grids development vector with regard to the digitalisation for 2018-2030. In 2019, the key areas of IT development are:

customer orientation of the Company;  
introduction of the intelligent electricity metering systems;  
development of the production asset management system (PAMS);  
creation of the common information space between the IDGC of the South and ROSSETI;  
resolution of the issues relating the software import substitution.  
The main initiatives on these objectives include the following software development and integration stages:

adoption of the intelligent power grid control systems on digital technologies (Pilot projects) in line with the 2030 Digital Transformation Concept;  
continued adoption of the common corporate system based on the 1C: Holding Management basis for needs of IDGC of the South;  
adoption of the common HR and payroll accounting system based on the basis of 1C: Payroll and HR Management. CORP of the Company;  
development of the production asset management system modules based on the 1C: Holding Management basis;  
adoption of software and hardware of the leasehold system in line with IFRS 16 Leases;  
adoption of Piramida-Seti software for remote acquisition and transmission of electricity meters readings;  
IDGC of the South has planned 2019 initiatives related to the automated process control system (APCS) and telecommunications also considering the 2030 Digital Transformation Concept and in line with the Innovative Development Programme of IDGC of the South:

connection of the remote RPG sites to the Company's corporate

information systems via the Internet using encrypted transmission mechanisms;  
installation of LAN, relocation of network hardware, personal computers, scanning and printing system in a new building of Ikryaninsky RPG and in the existing buildings of Narimanovsky and Trusovsky RPGs of Astrakhanenergo branch;  
upgrade of the LAN in the production facilities of Volgogradenergo branch;  
taking measures to increase LAN transfer capacity at Volgogradenergo.

### **"THE LIGHT COUNTRY" PORTAL**

"THE LIGHT COUNTRY" PORTAL WAS STARTED ONTO THE TERRITORY OF RESPONSIBILITY OF IDGC OF THE SOUTH, PJSC WITHIN ROSTOV, ASTRAKHAN, VOLGOGRAD REGIONS AND REPUBLIC OF KALMYKIA, SINCE SEPTEMBER 25, 2018. NOWTHAT, ANY USER OF THE COMPANY SERVICES IS ENABLED TO PROVIDE INFORMATION REGARDING DIFFICULTIES ENCOUNTERED IN THE ONLINE MODE. THE MESSAGES ARE PROCESSED CENTRALLY WITHIN THE UNIFIED MODERATION SERVICE OF "ROSSETI", PJSC AND THEN IS ADDRESSED DIRECTLY TO THE SPECIALISTS. EIGHT WORKING DAYS ARE PROVIDED FOR THE REPLY FROM THE DATE OF PUBLICATION: WITHIN THIS TERM, EITHER THE PROBLEM WILL BE RESOLVED, OR THE COMPLAINANT WILL PROVIDE ITS ANSWER POINTING THE TIME NEEDED TO RESOLVE THE PROBLEM ABOVE. THE MAIN REQUESTS TOPICS SUBMITTED TO THE PORTAL ARE RELATED TO THE QUALITY OF ELECTRICITY, THE NEED FOR REPAIRING AND ELIMINATING DEFECTS OF THE ELECTRICAL EQUIPMENT.

MOST OF THE REQUESTS IN 2018 WERE IN ROSTOV REGION. EACH REQUEST IS CONSIDERED INDIVIDUALLY, THE NECESSARY ACTIVITIES WERE PERFORMED.