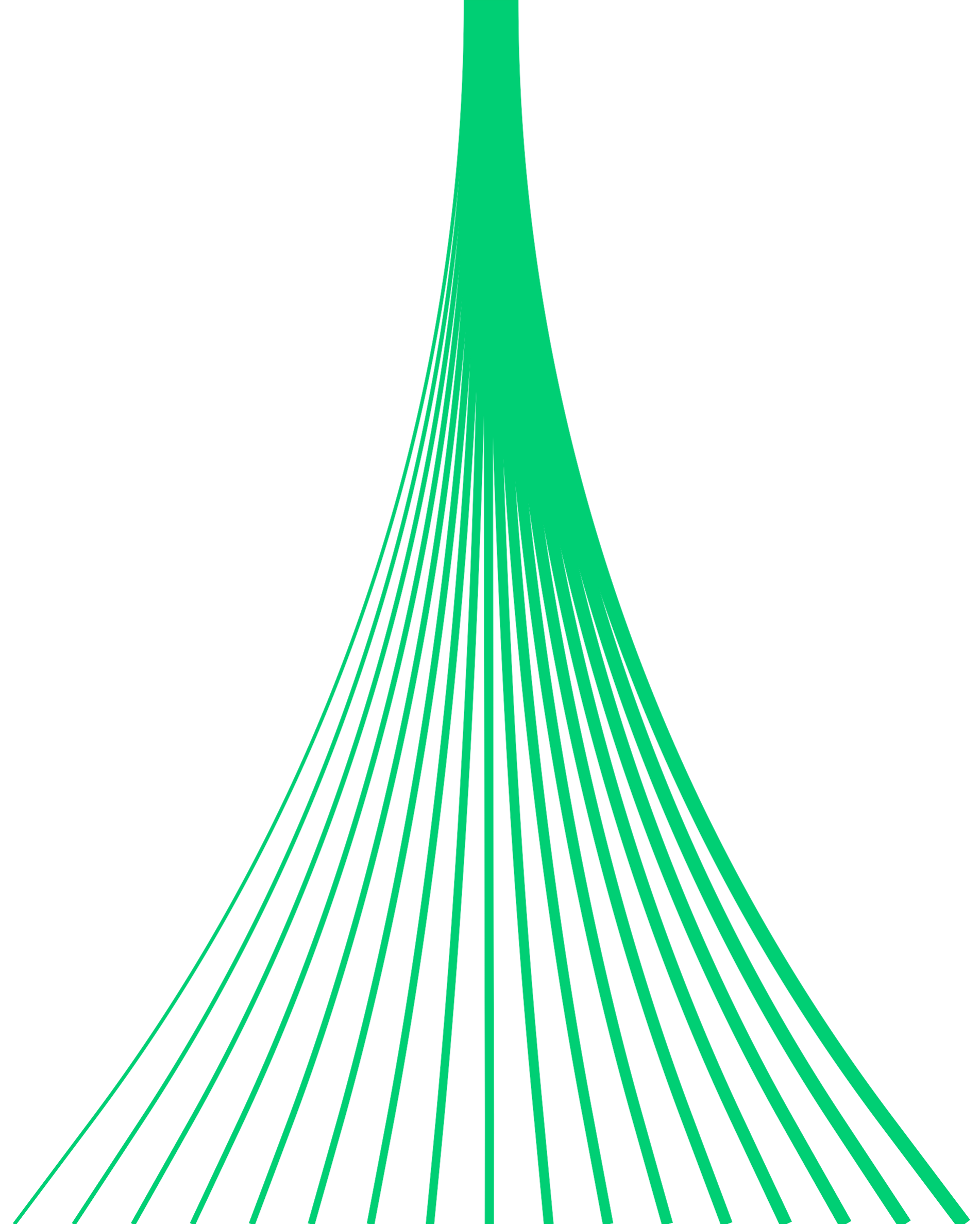


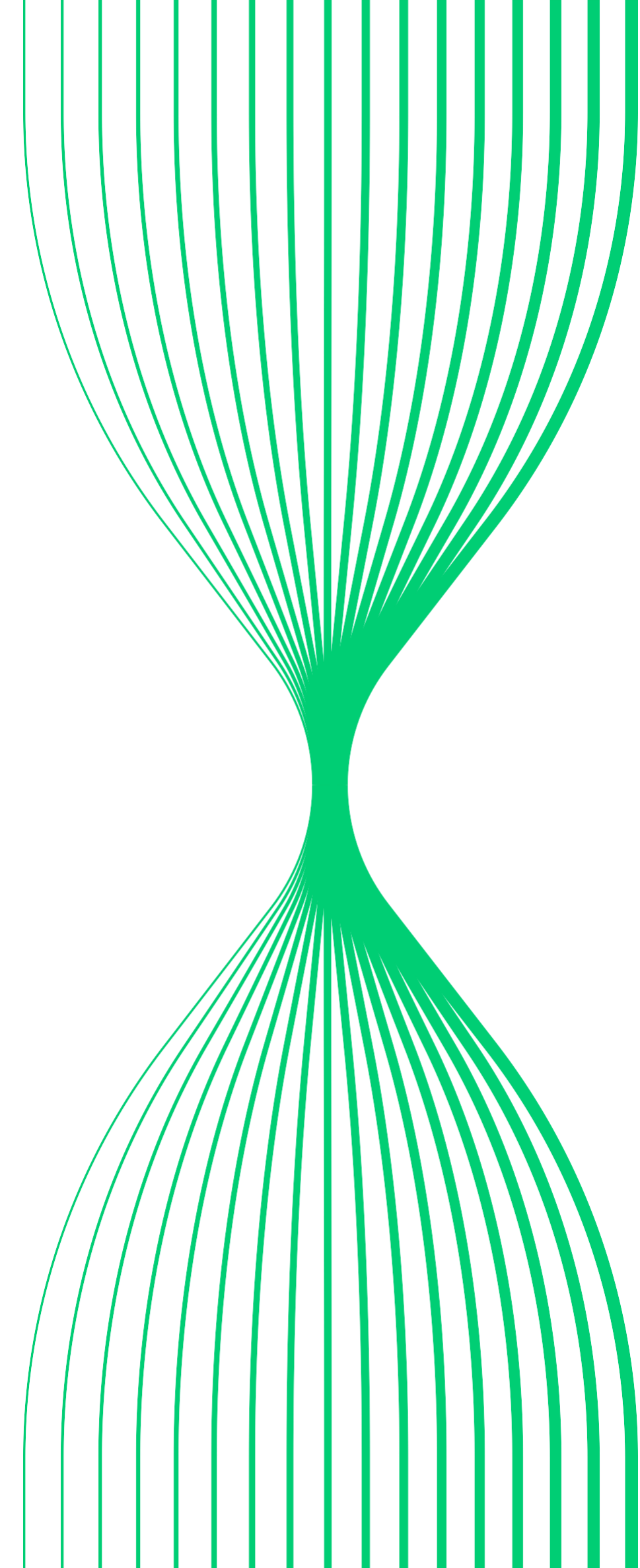
NEC JSC Solutions



About the Company

NEC Industrial Group

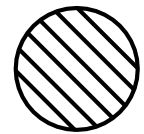
(National Energy Company JSC) is an association of technology companies that manufacture innovative Russian products and services in the electrical engineering, instrument making and industrial automation markets.



NEC by the numbers

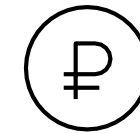
> 112,000 sq. meters

Total Production Area



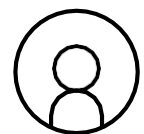
50 billion rubles

Total Revenue



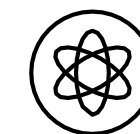
> 2,500

Number of Employees



Unified

Scientific and Technical Center,
more than 50 development projects



Our Goals



Development and manufacture of complex products within the country to ensure technological independence



Creation of traditions of a new engineering school and modern competence centers in various regions of the country

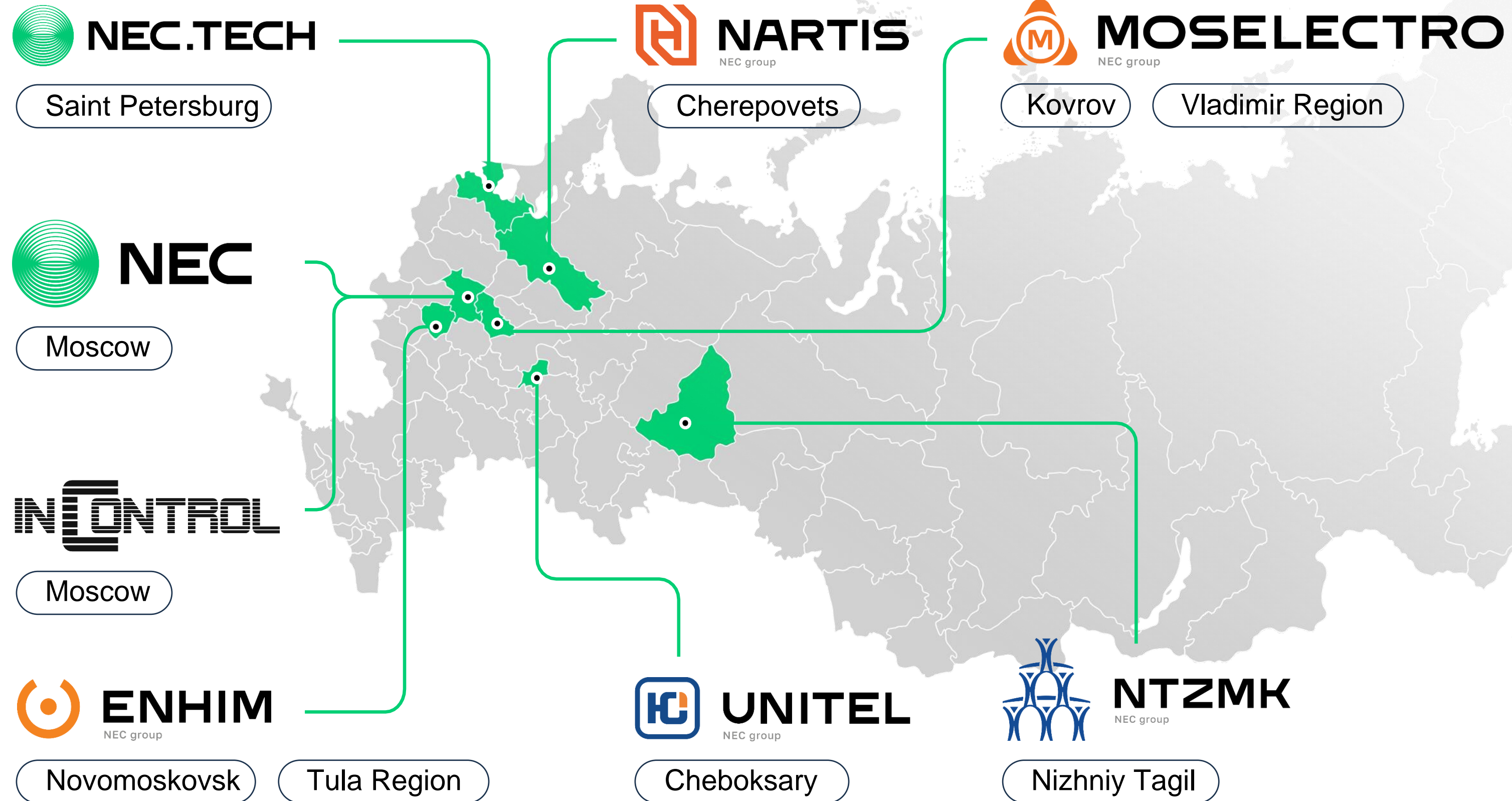


Leadership in the chosen areas for the development of the country's economy and entering competitive international markets



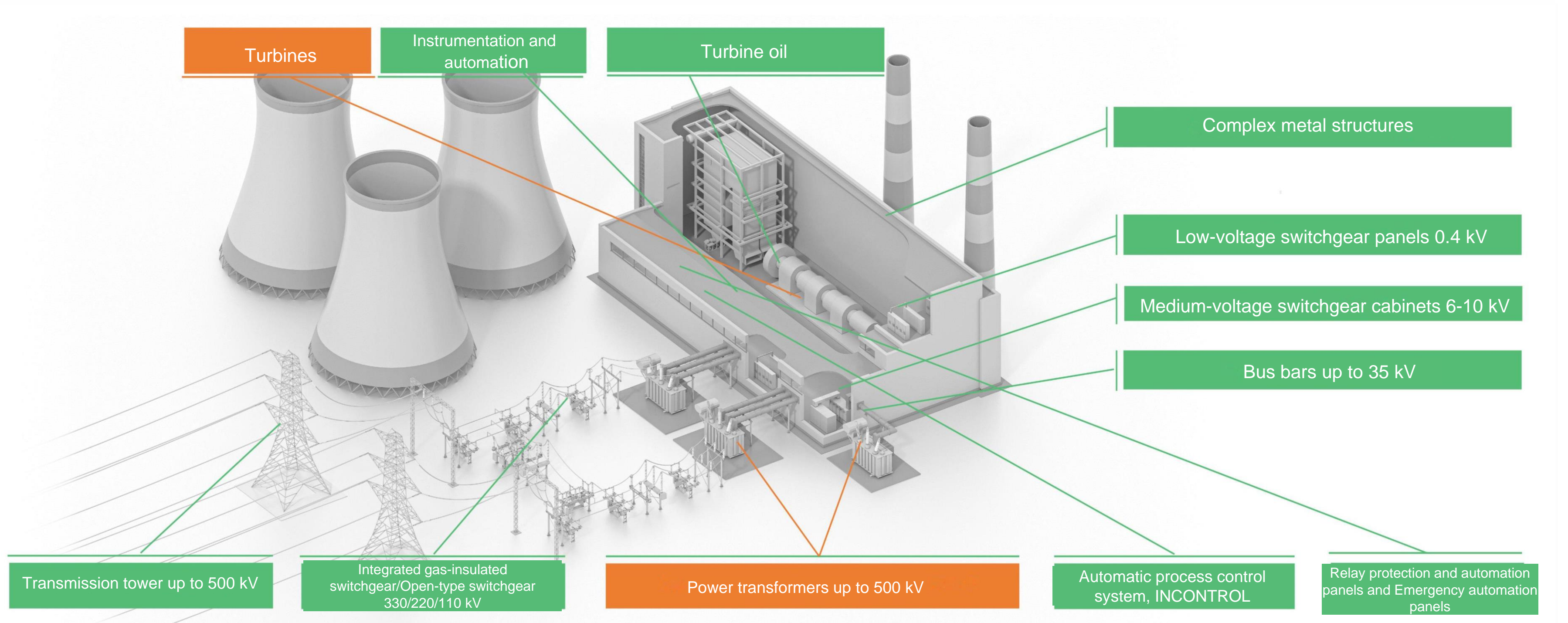
Fully outfitting power facilities with modern, high-quality equipment

Map of NEC JSC assets



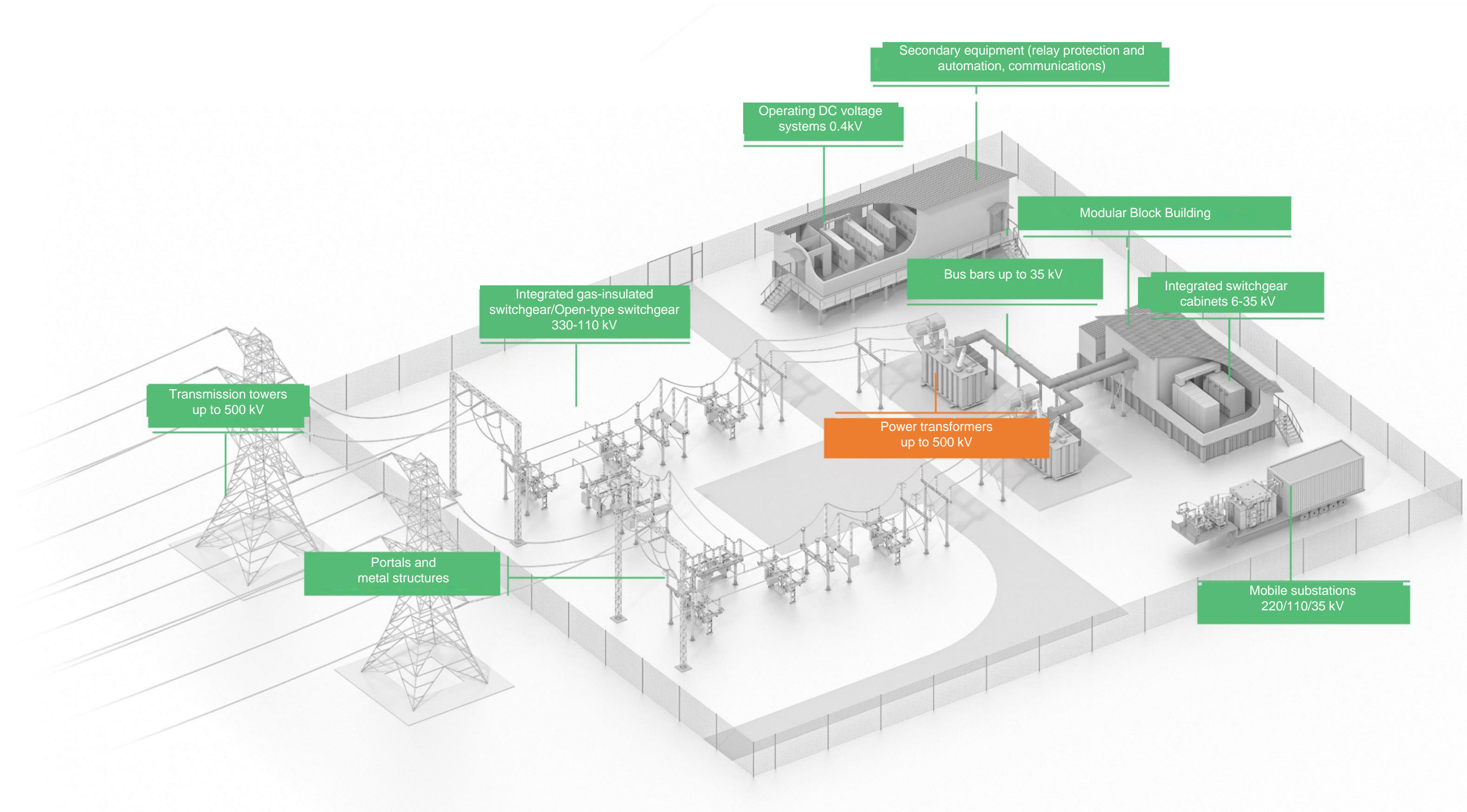
Product Nomenclature

Solutions for generation facilities



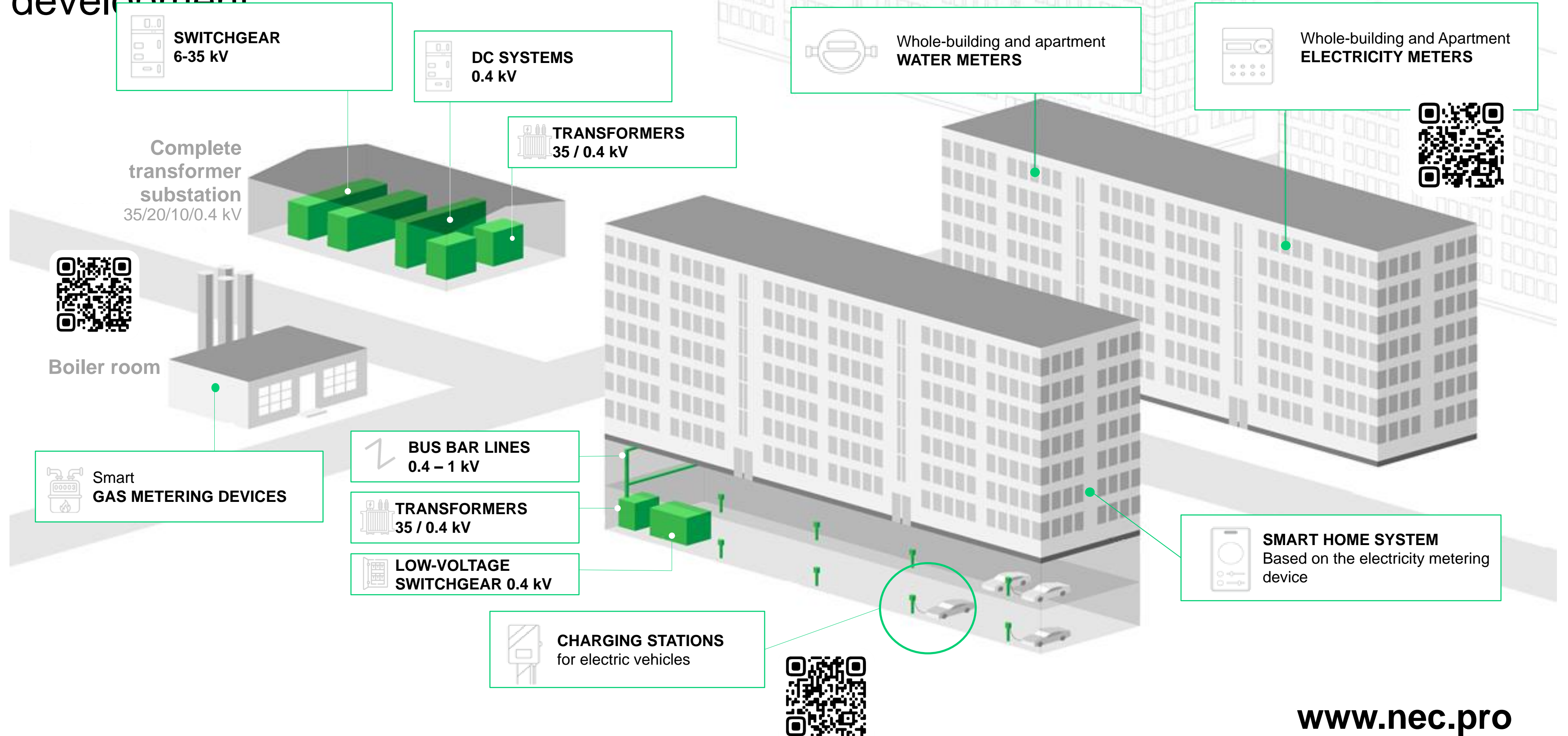
Product Nomenclature

Solutions for electrical networks



Product Nomenclature

Solutions for urban infrastructure and development



01. NARTIS



Plant of smart measuring and control equipment, radio electronics and communication equipment

About the Company:

- Founded in 2018
- Production Capacity: 1.5 to 2 million metering devices per year
- Number of Employees: 750
- Russian leader in the production of Integral Control Systems

Areas of Activity:

- DC and AC charging stations
- Development of domestic element base (electronic components)
- Launching mass production of water and gas meters



01. NARTIS Solutions

Product range



Electricity meters

These instruments are produced in various versions, which differ in accuracy classes, maximum currents, nominal voltages, network connection options, communication interface types, antenna type, load control method, housing dimensions, operating conditions, and architecture. These devices comply with the requirements of the standards of PJSC Rosseti STO 34.01-5.1-009-2021.



Device for collecting and transmitting data using cryptographic information protection tools

This device is intended for receiving and storing data from electric energy meters, energy resource meters and other digital measuring devices of the information and measuring complex via digital interfaces, recording discrete signals, and also ensuring the transfer of received information to higher levels of information and computing complexes, automated information and measuring systems and intelligent metering systems.



Commercial electricity metering point 6–10 kV

This product is designed to measure active and reactive electrical energy of forward and reverse directions, as well as active, reactive and apparent powers, line voltages, phase currents, network frequency, specific energy losses in current circuits, direct and negative sequence current, negative sequence current unbalance factor, reactive power factor, power factor in three-phase three-wire AC electrical networks with industrial frequency of 50 Hz with isolated neutral with voltage of 6/10 kV (depending on the version).



DC and AC charging stations

These are intended for charging batteries of electric vehicles. They are available in various versions, which differ in maximum currents, nominal voltages and powers, number of connectors, types of connectors, installation methods, housing dimensions, operating conditions and architecture.

02. Moselectro



Production and supply of electrical equipment for voltage classes 0.4-500 kV

About the Company:

- Founded in 1946
- Number of Employees: >500
- Facility Area: >15,000 sq. meters

Areas of Activity:

- Production of electrical equipment and implementation of integrated projects for power supply of generation facilities and electrical networks
- Implementation of R&D by order of the Ministry of Industry and Trade for the development and production of 6-20 kV integrated gas-insulated switchgear
- The company has also begun localizing the production of 330-110 kV integrated gas-insulated switchgear.



02. Moselectro Solutions

Product range



Integrated switchgear cabinets 6–35 kV:

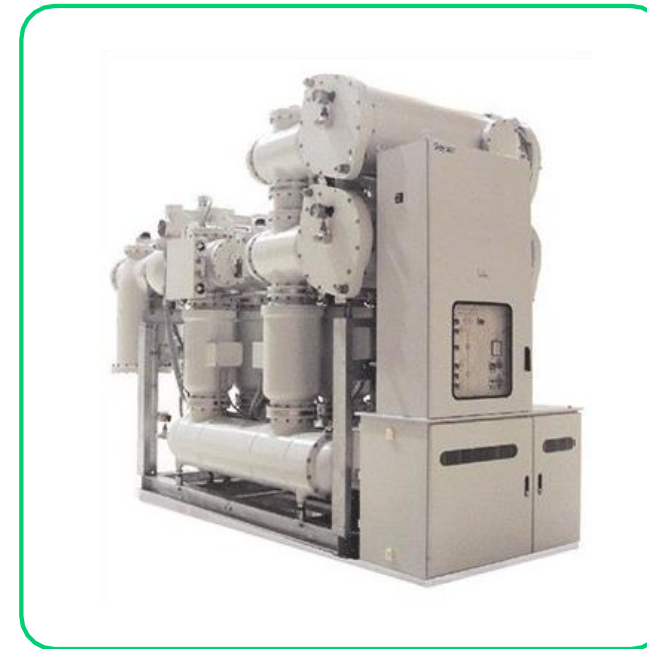
Full range of integrated air-insulated switchgear 6(10)/20/35 kV for network and generating facilities



Monobloc k 6-20 kV:

Integrated gas-insulated switchgear for distribution networks

Expandable configurations for secondary distribution



Integrated GIS 330/220/110 kV:

Availability of all test reports according to GOST requirements

Indoor and outdoor installation



QUBE 0.4 kV low voltage complete device panels:

4b sectioning

High degree of protection up to IP54



Bus bars 0.4-35 kV:

Production experience of over 70 years – No. 1 in Russia

Availability of KEMA test reports

03. Unitel Engineering



Production of electrical equipment for automation of substations and power systems

About the Company:

- Founded in 2009
- Number of Employees: 320
- Facility Area: 11,520 m²

Areas of Activity:

- Equipment for technological networks and communication systems
- Equipment for monitoring, control and transmission of relay protection and emergency automation commands
- Line of interface converters
- The UNIT Series line of relay protection and automation devices



03. Unitel Engineering Solutions

Product range



Equipment for technological networks and communication systems

UNITEL implements a comprehensive approach, performing design work in all areas of communication, and develops and manufactures technological communication systems for facilities of any complexity.



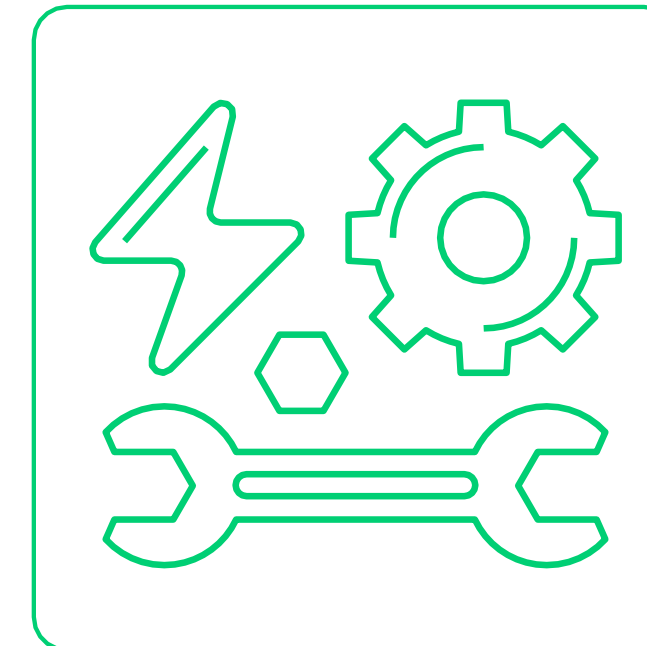
UNIT series relay protection and automation terminals

UNITEL launched serial production of 6-35 kV UNIT series relay protection terminals.



Equipment for monitoring, control and transmission of relay protection and emergency automation commands

UNITEL is a developer and manufacturer of emergency signal and command transmission devices of the UPASK series.



Services

UNITEL offers its clients design work, installation, adjustment and maintenance of the supplied equipment.

04. INCONTROL



Development and production of automated control systems for highly complex technological processes

About the Company:

INCONTROL has developed and implemented more than 300 projects of automated process control systems for large-scale power equipment.

Import substitution projects in the field of development and implementation of Russian software and hardware complex for thermal power plants, combined cycle plants, and gas turbines.

Areas of Activity:

- Turnkey automation of power facilities
- Production of the in-house line of INKONT hardware and software solutions
- Information security
- Simulators
- Information systems, tasks of the MES class; Independent expertise, consultations, and training

04. INCONTROL

Vladivostok Combined Heat and Power Plant

Development and implementation of a Russian full-scale software and hardware complex for the automated process control system on KA01 and TA01.

Project Distinctiveness:

Implementation of automated process control systems for heat-mechanical and electrical equipment in the environment of the Data Processing Center (DPC).

For the first time, high-speed drives for controlling PT valves based on domestic solutions were used.



05. ENHIM



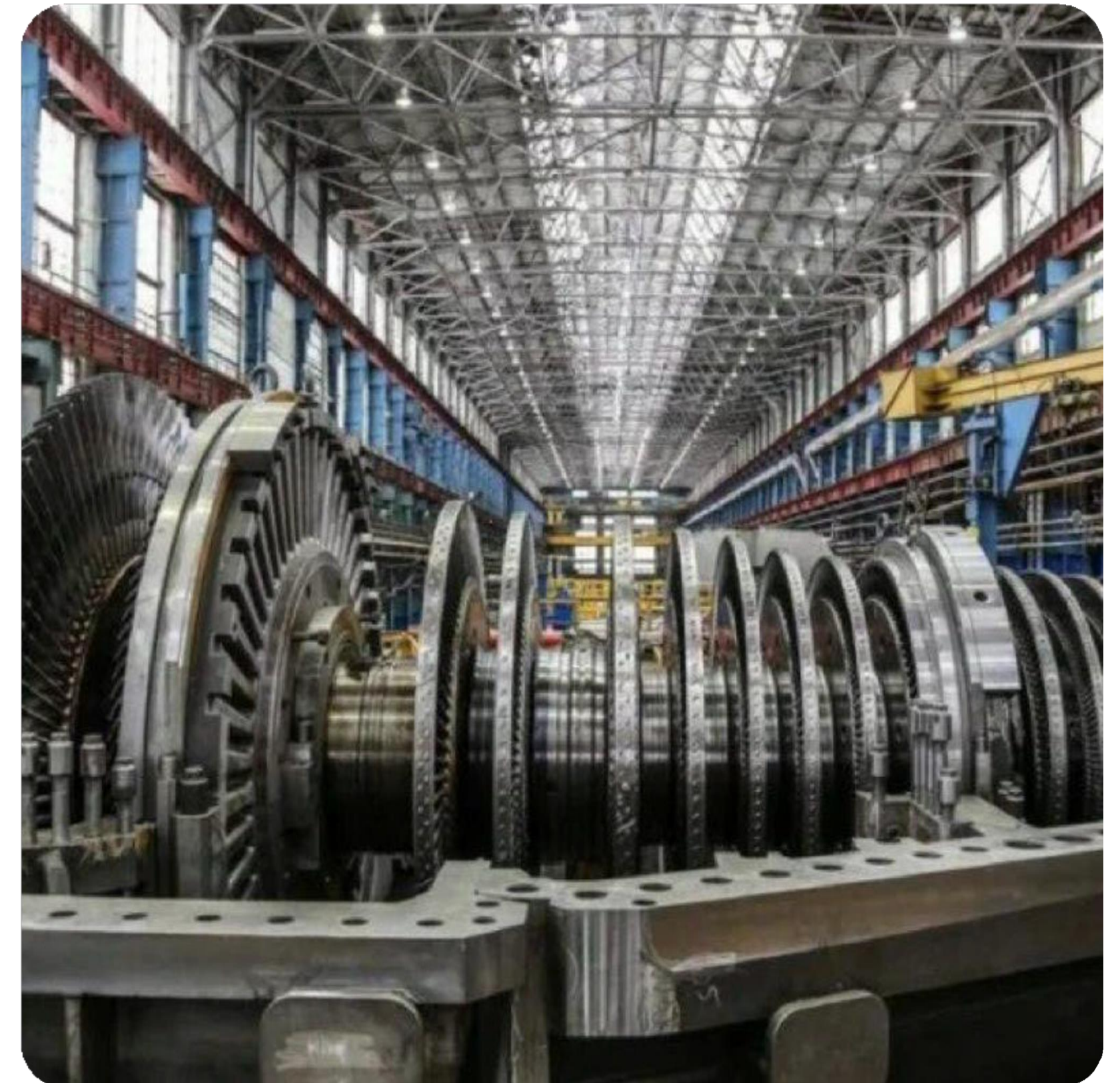
Production of fire-resistant turbine oil

About the Company:

- Founded in 2023
- Production Capacity: 1,200 tons/year
- Number of Employees: 40
- Facility Area: 3,500 sq. meters

Areas of Activity:

- Production of fire-resistant hydraulic fluid (type OMTI) for control and lubrication systems of steam turbines, an analogue of fire-resistant hydraulic fluids Reolube, Fyrquel
- Creation of import-substituted manufacturing of a wide range of products using the technology of synthesis of complex phosphoric acid esters (Second Stage)
- Restoration of production of xylene and phosphorus raw materials in the Russian Federation (Third Stage)



06. NTZMK



Manufacture of complex spatial metal structures

About the Company:

- Founded in 1942
- Production capacity: > 3,000 tons/month
- Number of Employees: > 1,000
- Facility Area: > 62,000 m²
- More than 100 major projects over the past 20 years

Manufactured Products Nomenclature

- Complex spatial metal structures
- Manufacture of metal structures for the construction of power plants
- Manufacture of transmission towers up to 500 kV



06. NTZMK

Major completed projects of national importance:

- Construction of a research nuclear facility based on the Multipurpose Fast Research Reactor (MBIR), JSC SSC RIAR, Dimitrovgrad, 2023. Volume of delivery by NTZMK Ltd.: 1,586 tons
- Building frame of the FEFU student housing complex, Russky Island
- Bridge across the Petrovsky Canal, St. Petersburg; MFC Lakhta Center, St. Petersburg
- Central Olympic Stadium "Fisht", Sochi
- Stadium for 45,000 spectators for the 2018 FIFA World Cup, Nizhny Novgorod
- JSC Vyksa Metallurgical Plant. Frame of the building of the pipe rolling shop
- Nizhniy Tagil Iron and Steel Works OJSC Blast furnace No. 7, Nizhny Tagil



07. NEC.TECH



Unified Scientific and Technical Center
More than 50 projects in development

About the Company:

The Group has established a joint research and development center, NEC.TECH, whose team of engineers carries out pure and applied scientific research of various levels of complexity, designs, develops and provides support for innovative software and hardware solutions, creates technical regulations and regulatory documentation, and custom develops individual projects for power industry facilities with voltages from 35 kV to 750 kV.

Number of Employees: 200

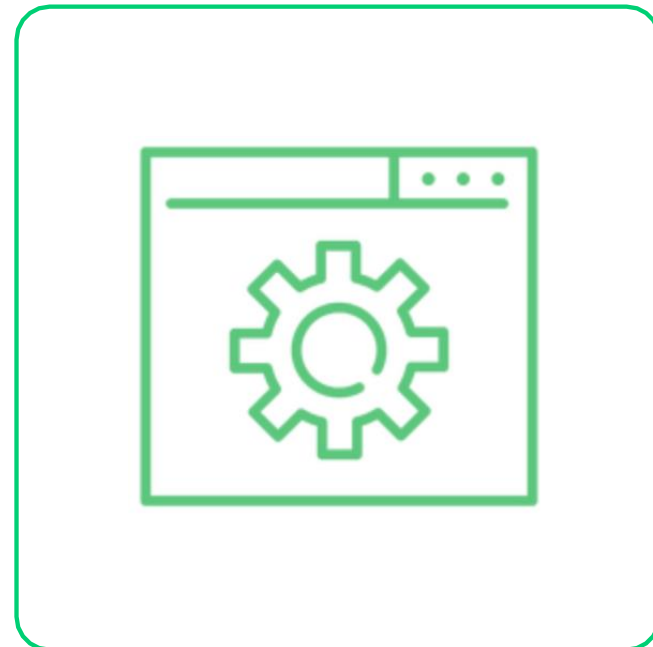
Main Areas of Development:

- Equipment for electric power facilities
- Digital twin of the power system
- Intelligent devices and systems for metering electricity, water, gas
- Charging stations and energy storage systems
- Electronic component base and radio-electronic components
- Communication equipment



07. NEC.TECH

Areas of Research:



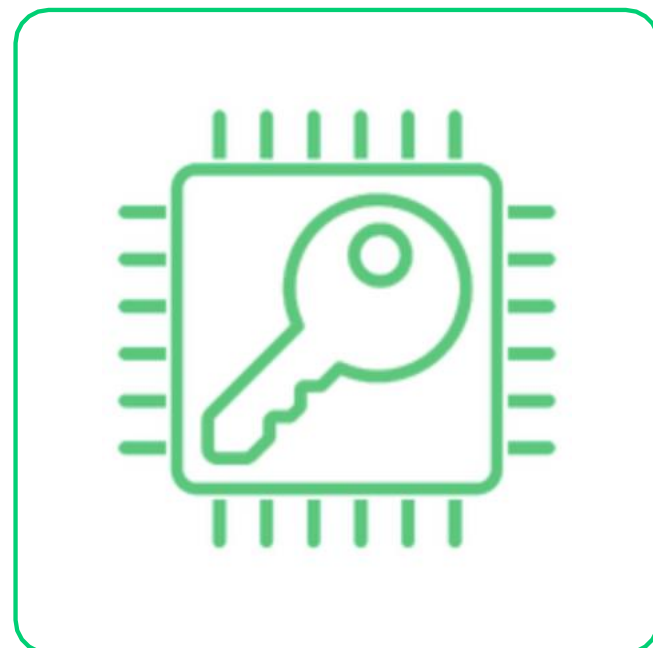
Software

Embedded software (ES) for collecting, processing, transmitting and storing data on measured electrical energy



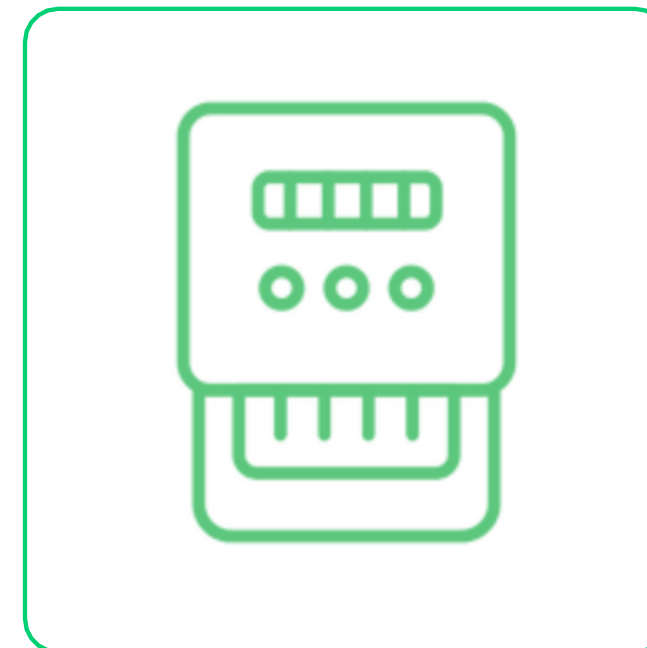
Technologies for Smart Homes

Smart home system using ZigBee data transmission technology



CIPF

Designed for integration into communication devices in automated control systems (ACS) and machine-to-machine interaction systems (M2M)

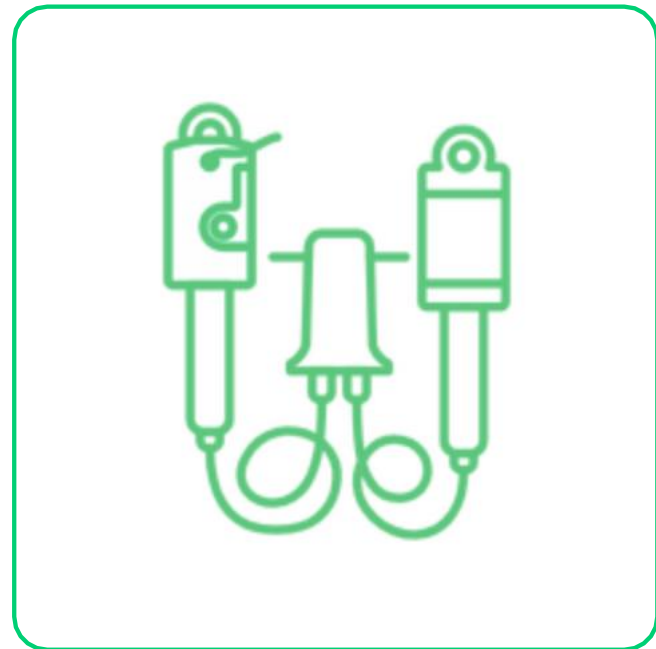


Metering devices

Smart devices that record resource consumption (electricity, gas, water) and transmit information to industrial controllers

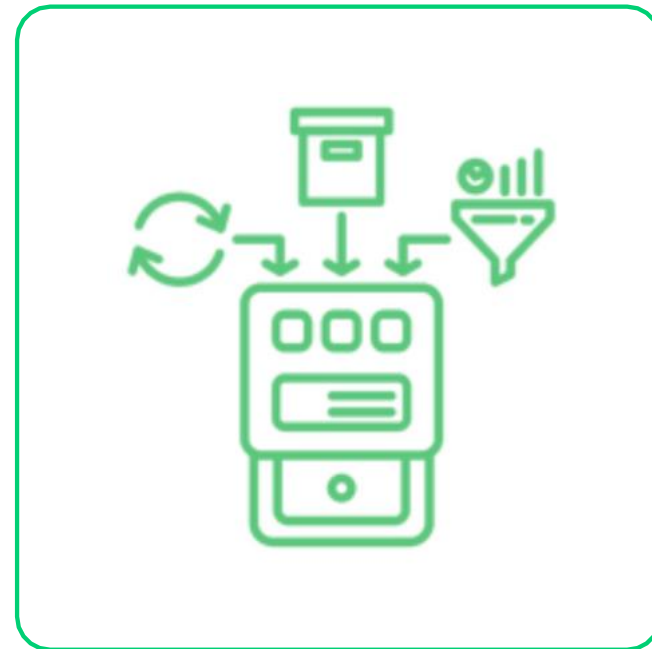
07. NEC.TECH

Areas of Research:



High-voltage metering devices

Smart devices that measure electricity consumption and replace commercial metering points (CMP)



Communication equipment

Interacts with other network devices, collects, converts, stores and transmits information



Auxiliary devices

Devices for joint operation with electricity meters

07. NEC.TECH

Areas of Research:



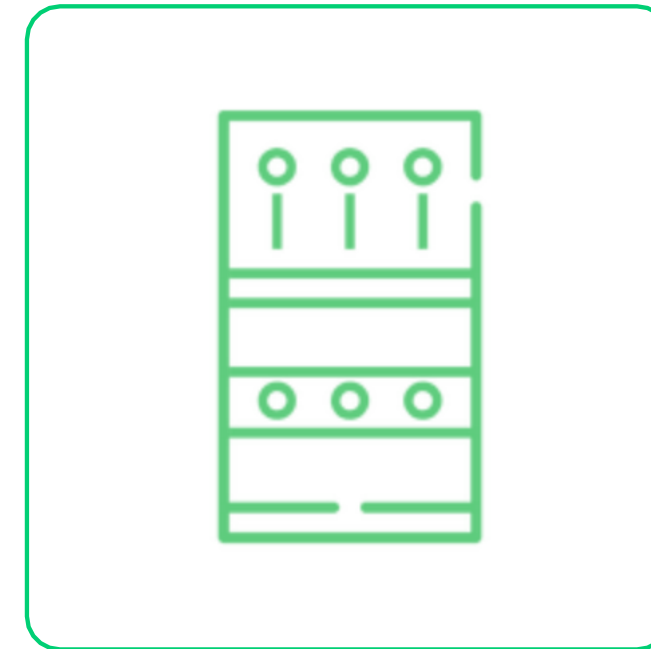
Charging stations for electric vehicles

Development of the design and of embedded software for fast, convenient, stylish and reliable charging stations for electric vehicles using domestic components



Relay protection and automation devices

Devices that, in an emergency, identify a faulty section and disconnect this element from the power system

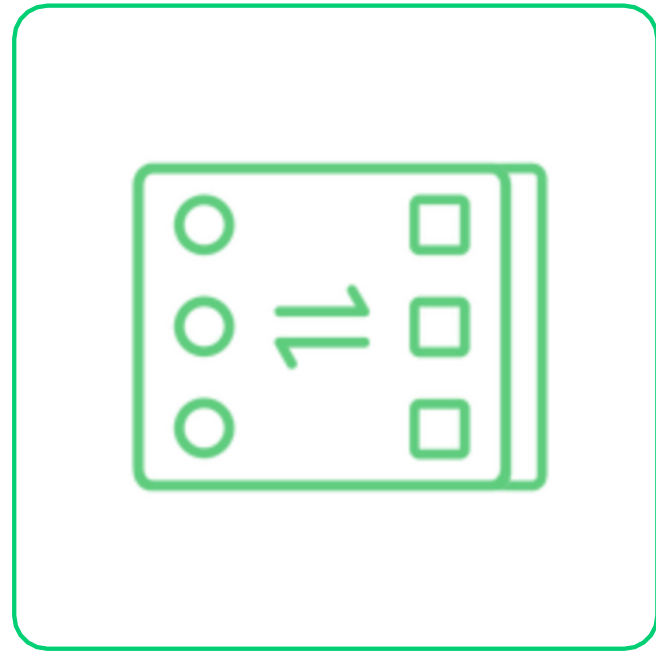


Communication equipment cabinets

General industrial communication equipment cabinets (CEC) for organizing communications in the electric power industry and other industries

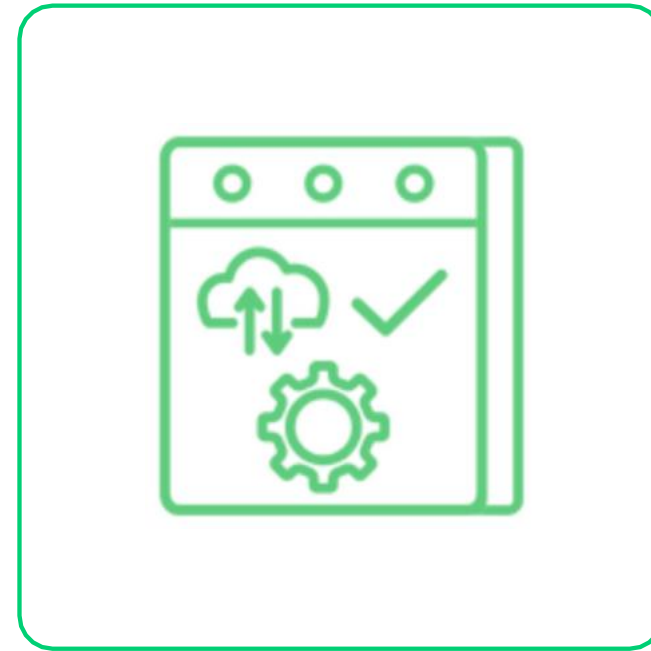
07. NEC.TECH

Areas of Research:



Interface converters

Devices that allow data to be transferred between devices that have incompatible types of interfaces for external communications



Equipment for relay protection and emergency automation

Equipment for monitoring, control and transmission of relay protection and emergency automation commands



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