# Securing the lifelines of modern society











Eltel Networks is an experienced contractor and designer in the field of infrastructure and network services, in particular electricity and telecommunications networks, operating through its companies in Poland and in the Scandinavian countries. In Poland we have expert design offices in Kraków and Olsztyn, a modern research and development center and a training center unique on a European scale.

We offer comprehensive solutions for business, we work for many industries, we have completed several thousand of electrical power projects in Poland and around the world. We provide "turnkey" power engineering services (design and build), as well as individual design projects, connection, modernization and maintenance works. We support the power industry and other industries as part of individual tasks and long-term framework contracts.

We are distinguished by quality, experience, safety and modern solutions, and above all, a competent and committed team.

Take the advantage of our experience in the implementation of your investment.

Eltel Networks Energetyka SA Eltel Networks Engineering SA



# We offer comprehensive services in the energy sector

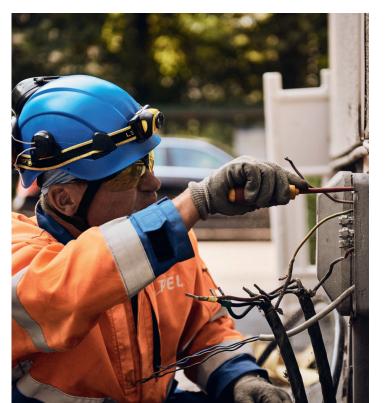
### Power transmission lines

We design, build and modernize overhead power transmission lines and cable lines. We offer "turnkey" investments (design and build), implementation of investments in the "build" system for entire facilities or their separate parts (including full elaboration of formal and legal issues and establishment of land easement). We carry out construction, reconstruction and modernization of overhead transmission lines of all voltage levels (MV, 110 kV, 220 kV, 400 kV, 750 kV), we provide MV, 110 kV, 220 kV and 400 kV cable systems, excavation and laying of cable routes (including drilling works), construction of fiber optic cable routes, installation of indoor and overhead cable joints and heads.



### Transmission line maintenance

As part of the operation of power transmission lines with a voltage of up to 750 kV, we carry out periodic inspections, replacement and repair of supporting structure elements, lightning protection and working cables, replacement of line accessories, elimination of power line failures caused by mining damage. We realize live line works on power transmission lines on voltage levels from 220 kV to 400 kV.



# Substation maintenance services

We offer the operation of facilities and substations up to 750 kV, including operational inspections of primary and secondary equipment, revisions, measurements and diagnostic tests of substation equipment, elimination of failure of substation equipment, thermal imaging of substation equipment and apparatus, comprehensive measurements of anti-shock protection of MV and HV installations, electric shock voltage measurements. We handle technical protection systems at power stations and industrial facilities.

We offer comprehensive operation of transformers of all voltage levels, measurements and modernization works related to the replacement of bushing insulators, diagnostics and replacement of on-load tap changers and modernization of cooling systems. We are an authorized service technician of Maschinenfabrik Reinhausen - a leader in the production of on-load tap changers.



# Power substations

We offer "turnkey" investments (design and build) and construction works for entire facilities or their separate parts. We build, reconstruct and modernize overhead AIS and gas GIS switchgears of all voltage levels (MV, 110 kV, 220 kV, 400 kV). We provide MV, 110 kV, 220 kV and 400 kV cable systems, as well as works related to the assembly of primary and secondary circuits, assembly of cable joints and heads of indoor and outdoor cable systems as well as comprehensive commissioning works (including primary and secondary apparatus as well as all general substation systems)



## **Export services**

We offer comprehensive implementation of assembly, measurement and commissioning works and start-up works for AIS, GIS and HVDC substations with voltage levels from 0.4 kV to 400 kV, comprehensive implementation of assembly and commissioning works for overhead transmission lines with voltage from 110 kV to 420 kV and 110 kV cable lines. We provide operational services for transformers, autotransformers and choking coils with a voltage from 6 kV to 750 kV. We have extensive experience in implementing projects abroad (Germany, Great Britain, Belgium, Norway, Sweden, Finland, Lithuania, Liberia, Singapore, Greenland, Angola, Mozambique).



# Formal and legal services

We comprehensively prepare formal and legal documentation for "turnkey" investments. starting from the analysis of possible variants, determining the location of the investment, to obtaining building permits and settlement of execution works. Our services include: obtaining approvals from property owners, establishing a transmission land easement, obtaining permits to enter the area ("right of way"), obtaining administrative and environmental decisions required by law, building permits and introducing investments to studies and spatial development plans, analysis and determination of the legal status of real estate. Property appraisers who are members of our team also prepare valuation of property rights.



# Design services

We provide services in the field of forecasts and concepts of development, construction, executive and as-built documentation for power transmission lines and substations, telecommunications installations, photovoltaic installations, energy storage and wind farms. We have experience in preparation of investments at the stage of feasibility studies, cost estimation of works, planning, obtaining the "right of way" in the field of traditional and renewable energy sources. As part of the design work, we propose solutions that reduce costs of implementation of investments or increasing the transmission capacity of the existing energy infrastructure. We also specialize in Technical Protection Systems.



# Innovative services

As a supplement to our basic offer, we also provide a package of services that we have created as part of an innovative approach to design and execution works. These include drone services (inspections, inventories, hauling the initial line, measurements of cables sag, hanging of warning signs on cables and photogrammetry, an integrated energy storage system with a photovoltaic installation-3S SunSmartStore, LIDAR terrestrial scanning, 3D thermal imaging and GIS services for mapping and data visualization.

