

Solutions for the energy and connectivity markets



TERNA ENERGY SOLUTIONS

We are the independent operator of the Terna Group with a market approach and we offer technological, sustainable and competitive market-driven solutions to our customers for businesses in the energy and connectivity sectors, leveraging on our unique and extensive expertise and innovative experience.

Our portfolio of solutions effectively meets customers' needs, offering a comprehensive support throughout the project life cycle.



TERNA ENERGY SOLUTIONS IS FOUNDED ON TERNA'S EXPERIENCE

IN ITS ROLE AS ITALIAN NATIONAL TRANSMISSION GRID OPERATOR, TERNA IS THE DIRECTOR OF THE ENERGY TRANSITION FOR INCREASINGLY SUSTAINABLE AND RENEWABLE DEVELOPMENT, TARGETING INNOVATION.

THIS EXPERIENCE IS WHAT DRIVES TERNA ENERGY SOLUTIONS TO SHARE ITS EXPERTISE IN THE ENERGY AND CONNECTIVITY FIELDS.

ENERGY AND CONNECTIVITY MARKETS ARE UNDERGOING GREAT CHANGE: THE AMBITION OF TERNA ENERGY SOLUTIONS IS TO BECOME THE LEADING PARTNER FOR COMPANIES SEEKING TO GROW IN THESE MARKETS.

SERVICES FROM TERNA ENERGY SOLUTIONS

WE OFFER SUSTAINABLE, COMPETITIVE, TECHNOLOGICALLY ADVANCED SOLUTIONS AIMED AT MEETING OUR CUSTOMERS' NEEDS AND THE EVOLVING MARKETS.

Through our portfolio of subsidiaries, we provide customers with specialised and diverse expertise in designing, planning, construction and maintenance of complex, sustainable and increasingly digitalised energy systems.





High Voltage

We offer construction, maintenance and monitoring services for high-voltage infrastructures, providing our knowledge and expertise over the entire life of the asset, from design and planning to construction and commissioning.



Smart Grids

We help customers identify the best solution for their needs, from initial design to full realization, integrating different technologies.



Photovoltaics

We deliver end-to-end Engineering, Procurement, Construction (EPC) solutions, and we offer Operation & Maintenance (O&M) services to maximise the availability and performance of our customers' solar farms.



Energy Efficiency

We perform energy audits, identify specific areas for improvement, design and deliver tailored solutions to increase efficiency by optimising production processes and minimising environmental impacts.



Connectivity

We grant our clients Dark Fibre within an Indefeasible Right of Use (IRU) framework, with a principle of neutrality and non-discrimination, meeting our customers' needs.



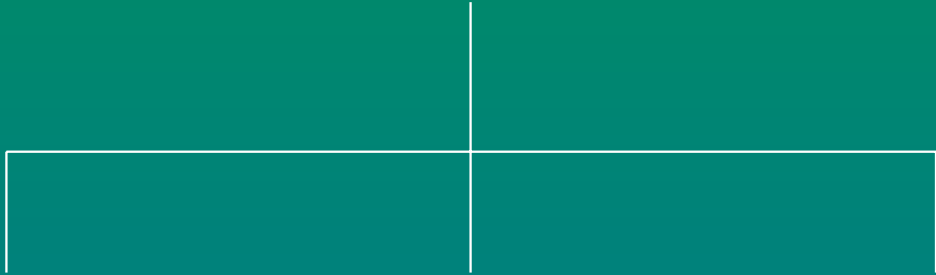
Transformers

We produce and install power transformers and special transformers designed to meet the specific needs of the customers, that we support throughout the whole product life cycle with personalised after-sales services.

THE ORGANIZATIONAL CHART OF THE GROUP



THE ORGANIZATIONAL CHART OF TERNA ENERGY SOLUTIONS GROUP



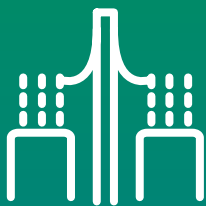
HIGH VOLTAGE



HIGH VOLTAGE

WE OFFER CONSTRUCTION, MAINTENANCE AND MONITORING SERVICES FOR HIGH-VOLTAGE INFRASTRUCTURES, PROVIDING OUR KNOWLEDGE AND EXPERTISE OVER THE ENTIRE LIFE OF THE ASSET, FROM DESIGN AND PLANNING TO CONSTRUCTION AND COMMISSIONING

Main services offered are:



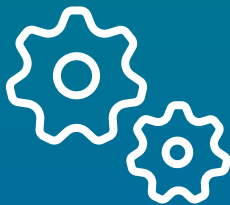
Engineering, Procurement and Construction (EPC)

we design and realize full turnkey EPC systems (e.g. electrical substations, overhead and underground connections), in accordance with the highest quality standards



Revamping

we design and realize solutions to upgrade electrical assets, helping customers identify the most effective options to restore or improve efficiency



Operation & Maintenance (O&M)

we offer services for assets' maintenance and monitoring, with the goal of improving performance and reliability

> 200

high-voltage plants realized and under management

> 1,000

activities per year

SMART GRIDS



SMART GRIDS

WE HELP CUSTOMERS IDENTIFY THE BEST SOLUTION FOR THEIR NEEDS, FROM INITIAL DESIGN TO FULL REALIZATION, INTEGRATING DIFFERENT TECHNOLOGIES

Our solutions include:



Power quality and compensation systems (STATCOM)

we support customers from design to realization and commissioning of reactive power compensation systems to manage the quality of electricity fed into and drawn from the grid



Integration of complex systems and utility-scale off-grid solutions

we design and build energy self-sufficient systems, integrating the various technologies available on the market and leveraging on the Group's portfolio of products and services

> 500 MVar

of STATCOM projects realized

PHOTOVOLTAICS



PHOTOVOLTAICS

WE DELIVER END-TO-END EPC SOLUTIONS AND WE OFFER O&M SERVICES TO MAXIMISE THE AVAILABILITY AND PERFORMANCE OF OUR CUSTOMERS' SOLAR FARMS

Main services offered through LT are:



Engineering, Procurement and Construction (EPC)

with a strong track record of more than 300 MWp of ground-installed systems and 100 MWp installed on industrial rooftops, we are the ideal and bankable partner to support our customers in every stage of the project, from initial permitting phase to the design and construction, using certified components of the best quality



Operation & Maintenance (O&M)

we manage over 1.3 GWp of PV assets, for which we implement tailored maintenance plans to optimise the efficiency. Additionally, we own a proprietary platform for real-time ticketing management to maximise plants availability



Revamping/Repowering

we identify the most appropriate solution to recover the highest levels of performance of the plants and also to repower them – according to customers' needs – embracing technological progress using the best components in the market, and offering a unique in-house service for equipment regeneration



Renewable. Reliable.

> **1.3 GWp**

of photovoltaic plants under management

> **500 MWp**

of photovoltaic plants constructed (EPC and Revamping)

ENERGY EFFICIENCY



ENERGY EFFICIENCY

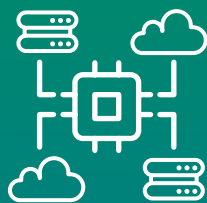
WE PERFORM ENERGY AUDITS, IDENTIFY SPECIFIC AREAS FOR IMPROVEMENT, DESIGN AND DELIVER TAILORED SOLUTIONS TO INCREASE EFFICIENCY, OPTIMISING PRODUCTION PROCESSES AND MINIMISING ENVIRONMENTAL IMPACTS

Our solutions through Avvenia include:



Energy audits

we perform detailed energy audits using energy simulation models to optimise production and management processes for individual departments or entire companies



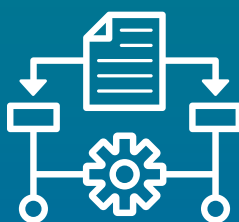
Monitoring plans and diagnostics software

we process energy data in real time and provide predictive action plans through our proprietary software platform, DIANA, using complex mathematical and statistical algorithms



Energy Performance Contracts (EnPC)

we guide our customers in identifying options to improve the energy efficiency of their assets, accompanying them in the implementation of the engineered solutions with an end-to-end approach, from design to the full realization of the works



Energy Efficiency Certificates

we offer our customers an end-to-end service to obtain and manage the Energy Efficiency Certificates – Italian “White Certificates” – , from engineering the calculation algorithms, forecasting energy savings, to the whole management and resale of the certificates



> 4 mln tons

CO₂ equivalent
emissions saved

> 250

energy diagnoses
and audits realized

CONNECTIVITY



CONNECTIVITY

WE GRANT OUR CLIENTS DARK FIBRE WITHIN AN IRU FRAMEWORK, WITH A PRINCIPLE OF NEUTRALITY AND NON-DISCRIMINATION, MEETING OUR CUSTOMERS' NEEDS

Our main services are:



Indefeasible right of use (IRU) on optical fibres

we provide our customers with primarily aerial optical fibre infrastructure with higher performance and reliability than the terrestrial one



Housing

we provide housing services, consisting in outdoor and indoor spaces equipped to accommodate customers' network transmission devices

~ 200

housing sites

~ 46,000 km

of dark fibres granted in IRU

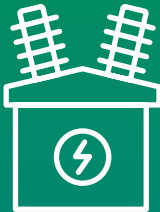
TRANSFORMERS



TRANSFORMERS

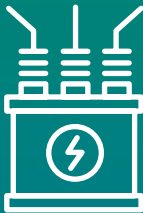
WE PRODUCE AND INSTALL POWER TRANSFORMERS AND SPECIAL TRANSFORMERS DESIGNED TO MEET THE SPECIFIC NEEDS OF THE CUSTOMERS, THAT WE SUPPORT THROUGHOUT THE WHOLE PRODUCT LIFE CYCLE WITH PERSONALISED AFTER-SALES SERVICES

Our solutions through Tamini are:



Special transformers

high-quality, reliable furnace transformers, reactors and rectifier transformers designed to meet the various needs of our customers



Power transformers

for generation, transmission and distribution of electrical power



Service

we offer our customers high-quality technical support in every phase of the transformer life cycle, with a dedicated team of specialists and a complete portfolio of after-sales and maintenance services



~ 800

transformers built in the last 5 years

63%

Export Rate in the last 5 years





WE SUPPORT CUSTOMERS IN THEIR GROWTH AND DEVELOPMENT PLANS, OFFERING CUTTING-EDGE TECHNOLOGY, DRIVEN BY EXTENSIVE KNOWLEDGE AND EXPERTISE.

We work together for a new development model based on renewable sources, innovation, sustainability and respect for the environment.

Take part in the change.

TERNA ENERGY SOLUTIONS



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