ENELTEC
Energia Elétrica e Tecnologia

Transmission & Distribution

Power Quality & Energy Efficiency

Power Systems Analyses & Studies

Renewable Energy

ENELTEC
Energia Elétrica e Tecnologia

OUR COMPANY

ENELTEC is a brazilian company with more than 5 years of experience. Founded by D.Sc. Electrical Engineers, it merges values such as ethics, social responsibility and environment sustainability. The company continuously develops innovation in the electrical energy market.

OUR BUSINESS

Consulting and development of special projects in Transmission & Distribution, Energy Quality, Power Systems Analysis and Renewable Energy.

The consulting provided by ENELTEC are engineering services conducted with the knowledge and experience of the staff. The term Special Projects refers to the development of innovative solutions uniquely designed to match our clients needs.

The company also has a Research & Development (R&D) department where the technical staff has its own ideas and looks forward to new market oppotunities.

OUR UNIQUE FEATURES

The high expertise of our staff and the partnership held with research institutions also guarantee a solid execution of projects, studies, researches and technology/knowledge transfer, such as seminars or short recycling/extension courses.

These features, coupled with a simplified and efficient operational structure to reduce costs, make ENELTEC the ideal choice for our clients.

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Power Systems Analyses & Studies

STEADY-STATE

- Voltage profile and load control in power or industrial systems to allow proper adjustment and operation of equipment and machines;
- Technical reports.

SHORT-CIRCUIT

- Calculation of short-circuit levels of industrial or power electrical systems (IEC 60909 standard);
- Specification and protection coordination and adjustments, as well as circuit breakers adequation and disturbances analysis;
- Technical reports.

ELECTROMAGNETIC & ELECTROMECHANIC TRANSIENTS

- Switching transients and system recomposition;
- Harmonic performance of industrial plants (HarmZs);
- Motor starting;
- Synchronous machines;
- Analysis of the electrical variables in both time and frequency domains;
- FACTS (Flexible AC Transmission Systems) devices simulations;
- Disturbances due to switching, outages, lightning and no-load energization;
- Identification and analysis of low frequency oscillations;
- Simulation software integration (ATP, PSCAD/EMTDC, MATLAB/Simulink, ANAREDE, ANAFAS, ANATEM, etc.);
- Multiplatform simulations;
- Technical reports.

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Transmission & Distribution

TRANSMISSION LINES DESIGN

- Routing;
- Meteorological parameters;
- Wind velocities and pressures;
- Structures;
- Optimum spotting;
- Construction documentation;
- Field adjusting due to construction;
- Projects based on the new NBR-5422 (for the Brazillian power system).

SUBSTATIONS

- Design, FEED (Front End Engineering and Design) and detailing of medium voltage industrial substations, including electrical drives, cable tray, power and control signals panels, power distribution, motor starting, etc.;
- Overhead and underground cables ampacity (NBR and IEC standards);
- High and extra-high voltage power substation;
- Grounding and lightning protection systems design.

STUDIES & ANALYSES

- Technical/economical analysis and cost estimation of transmission systems;
- Conductors and grounding wires optimum selection;
- Electromagnetic effects and interference caused by transmission lines;
- Transmission systems mathematical and physical modeling;
- Grounding systems;
- Ampacity, regulation and electrical losses;
- Power increase in existing lines;
- Non-conventional lines;
- New concepts in structures and conductors.

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Power Quality & Energy Efficiency

DIAGNOSTICS

- Identification of sags, swells, short-term voltage variations, voltage and current harmonics, voltage flutuation and power factor for minimizing costs due to power quality problems.

POWER CONDITIONING

- Passive and active filters to eliminate/minimize harmonics;
- Voltage, power and power factor control;
- Electrical energy conversion.

ENERGY EFFICIENCY

- Determination and analysis of the loads of industrial and comercial plants;
- Power consumption costs reduction;
- Pre-diagnostics and diagnostics of Energetic Efficiency;
- Projects and studies for green-buildings certifications (LEED);
- Energetic Simulations with Energy Plus software;
- Analysis of Energetic Efficiency projects.

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Renewable Energy

ELECTRICAL STUDIES

- Energetic/Electrical potential analysis;
- Design and analysis of generation systems;
- Impact of the electrical system connection: power quality;
- Ride Through;
- Autonomous Systems.

PROJECTS

- Project of generation systems: design of the system topology including the number of generators, based on the the energetic potential and local area analysis;
- Interconnection project of the generation system to the distribution network, determining some possible points of coupling.

INNOVATION PROPOSALS

- Reconfigurable systems for renewable source energy generation;
- Customized projects.

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