



EMPHASIZING ELECTRICAL CARE AND SAFETY

Comprehensive advanced electrical analytics and safety solutions



18 YEARS OF EXCELLENCE
in service and commitment



WE ARE

VISION POWER ANALYTICS (Formerly Vision Power FACTx), reaching milestone and showcasing **18+ years** of dedicated service in the field of technical solutions focused on human and asset safety, sustainability and reliability.

Vision Power Analytics (P) Ltd. is an India-based specialist team with a proven track record in engineering services. Our focus spans diverse domains, encompassing Earthing & Grounding, Electrical Safety, Power System Protection, High Voltage Protection, Advanced Power Quality, Lightning & Surge Protection, and Arc Flash & Fire Protection solutions.

WHY VISION POWER ANALYTICS

COLLECTIVE EXPERIENCE OF SERVICE



Collaborative Approach

From inception to completion, we work hand in hand with customer, understanding the intricacies of customer's mission and tailoring our engineering expertise to fit the market requirement.



Service-centric Approach

Satisfaction of services is our priority – Primary focus is on development and improvement is on services and solutions, retain customer's interest through continuous enhancement and upgradation of engineering services.



Proven Technology

Employing top tier cutting edge technologies and advanced engineering methodologies in safety, protection and reliability. Our approach is to prioritize and adopt the newest advancements in all our ideas and implementations.



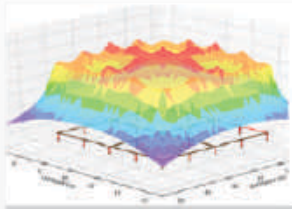
Networking And Partnerships

Treat customer as a valued partner by commitment and collaboration. Work along with partners to navigate challenges and celebrate successes together and grow together to achieve shared objectives.

WE ARE MARKET FIT

SERVICES THAT CARE, SOLUTIONS THAT SECURE.

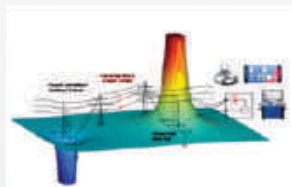
CONCEPTUALIZING TECHNICAL SERVICES
FOR EFFECTIVE SOLUTIONS.



⚡ Advanced Earthing design
using CDEGS with LEVEL-II
certification.



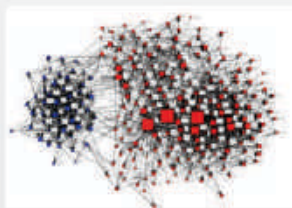
⚡ Root cause and
investigation for
equipment failures and
trippings.



⚡ Earthing system health
assessment, study, and
mitigation measures



⚡ Electrical installation
verification



⚡ Power system network
analysis. (ETAP, EMTP,
DIgSILENT)



⚡ Lightning & surge
protection planning
& design



⚡ Insulation coordination



⚡ Technical training by certified professionals.



⚡ Energy benchmarking and conservation.



⚡ Advanced Power quality measurements, analysis, and mitigations.



⚡ EMI/EMC planning and verification.



⚡ Arc flash Risk assessment and solutions.

ELECTRICAL SAFETY SERVICES

INSPECTION, VERIFICATION, AND ASSESSMENT SERVICES.



REGULATIONS AND STANDARD COMPLIANCES

- Prioritize understanding safety concepts within CEA, NEC, NBC, NFPA, and IEC relevant standards.
- Guarantee a workplace adhering to the highest safety standards.



TEAM OF EXPERTS

- 15+ Years as a workplace safety practitioner.
- Professional and chartered safety engineers.
- Verified safety in 250+ workplaces.
- Offered consulting for risk mitigation.
- Conducted 10,000+ man-hours of safety training.



SCOPE OF WORKPLACE SAFETY

- Best practices for electrical equipment selection and installation.
- Ensuring safety in wiring for electrical installations.
- Hazard identification in installation, operation, maintenance, and demolition.
- Implementing safety procedures in electrical work.
- Guidelines for using electrical equipment in special conditions.
- Protection against electric shocks, thermal effects, and arcing fires.
- Safety-related maintenance and administrative controls.



TYPE OF INSTALLATIONS

- Power generation, transmission, and distribution.
- Industrial buildings, Warehouses, Hazardous areas, Medical locations Hotels, Schools and educational institutes.
- Multi-story buildings and solar photovoltaic installations.



AUTOMATED RISK BASED FINDINGS AND RECOMMENDATIONS

- Risk-centric automated application.
- Identify workplace risks in installation, maintenance, and operations.
- Provide recommendations beyond risk identification.
- Define threats and prioritize risks based on severity.
- Deliver actionable risk controls and mitigation measures.



CONTINUOUS TECHNICAL ASSISTANCE

Engagement in ongoing technical assistance, providing guidance and support to customers even after the inspection is completed.

LIGHTNING AND SURGE PROTECTION ENGINEERING AND PLANNING SERVICES

Risk assessment and evaluation of risk against lightning hazards and suggest protection measures in accordance with IEC 62305, IEC TR 63227, IEC 62561 etc. Based on identification of risk and required level of protection, Our Protection engineering team support selection of lightning and surge protection measures to reduce the risk

ENGINEERING AND PLANNING ACTIVITIES



Identify assets and risks by site survey and data collection.



Assessment aligns with IEC 62305 protection measures and compliance.



Software based risk evaluation and assessment – IEC 62305-2. Optimized level of protection.



Selection of External Lightning protection components (ELPS). Surge protection measures (SPM).



Lightning, shielding and earthing CDEGS software-based simulations and analysis.



Assistance and supervision during installation. Training and technical assistance.



Testing requirements of different lightning and surge protection components. Installation and testing certification.



Verification of Design and bill of material. Planning and engineering documentation.

APPLICATIONS

- Simple and complex industrial and commercial structures.
- Hazardous and non-hazardous structures.
- Isolated lightning protection for special structures and areas.
- Power generating stations and Substations.
- Sensitive electronics installations.
- Solar, wind, and hybrid plants.
- Railways, metros, and aviation.

ARC FLASH HAZARDS AND SAFETY SERVICES

Assess and mitigate the risks associated with arc flash. Comprehensive software-based safety assessment services in accordance with IEEE 1584, IEEE 1584.1 and NFPA 70E.



CAUSES OF ARC FLASH

- Inadequate maintenance.
- Wear and tear.
- Accidental dropping of uninsulated tools.
- Equipment failures.
- Live work on damaged equipment.
- Exposed live parts.
- Loose connections.
- Lack of training and awareness.

OUR APPROACH FOR ARC FLASH ASSESSMENT

- Legal and regulatory compliance for electrical and workplace safety.
- Adherence to NFPA 70E and OSHA standards.
- Goals for personnel and equipment protection.
- Thorough risk assessment and hazard identification.
- Definition of controls (engineering, administrative, PPE).
- Detailed plan for implementation.
- Training and awareness for teams.

OUR DELIVERABLES

- Determine study information through site survey and data collection.
- Provide guidance on accurate data collection.
- Update Power distribution single line diagram.
- List electrical equipment within the study scope.
- Determine system modes of operation.
- Review short circuit study and relay coordination report.
- Perform arc flash hazard calculations.
- Represent incident energy test results.
- Evaluate within standards' tolerable limits.
- Optimize protective devices.
- Consider incident energy reductions.
- Design and provide arc flash labels.
- Conduct training and discussion on the report.



EARTHING AND BONDING DESIGN VERIFICATION SERVICES

- 15 years expertise in earthing and bonding.
- Specialized in EHV substations, renewable energy plants, data centers, telecommunication, high-speed railways, and industrial safety.
- Internationally recognized by IEEE, IEC, CIGRE.
- LEVEL II certified in Grounding, Lightning, AC interference using CDEGS.
- Offers 24/7 technical support and on-field assistance.

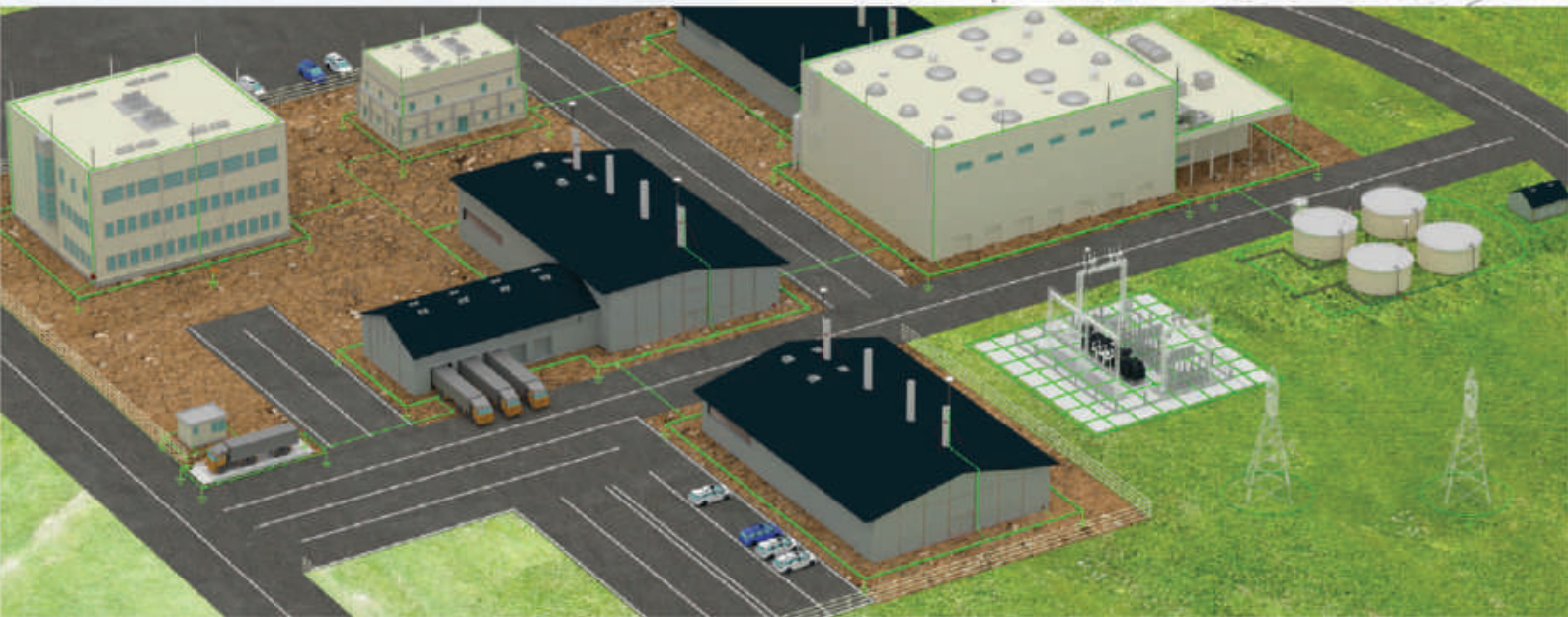
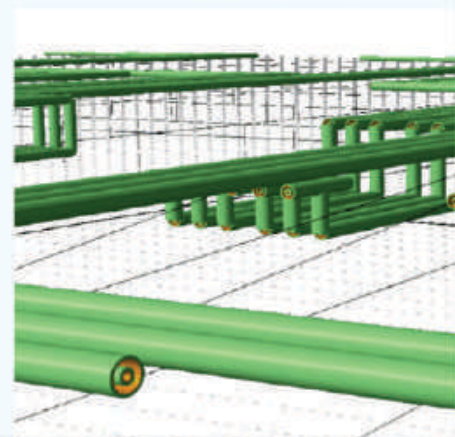
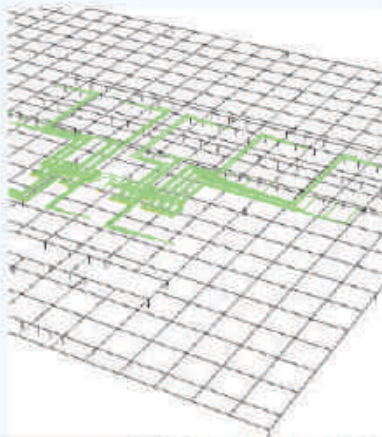
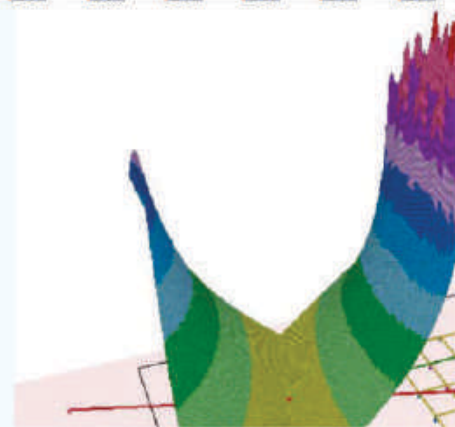
ADVANCED CAPABILITIES WITH US

- Multilayer soil modeling.
- Current and potential distribution analysis.
- Electromagnetic field study in various conditions.
- Assessment of touch, step, and ground potential.
- Analysis of high-frequency disturbances.
- Addressing electromagnetic interference issues.
- Corrosion protective system analysis.
- 3D displays of earthing network.
- AC and DC earthing analysis.

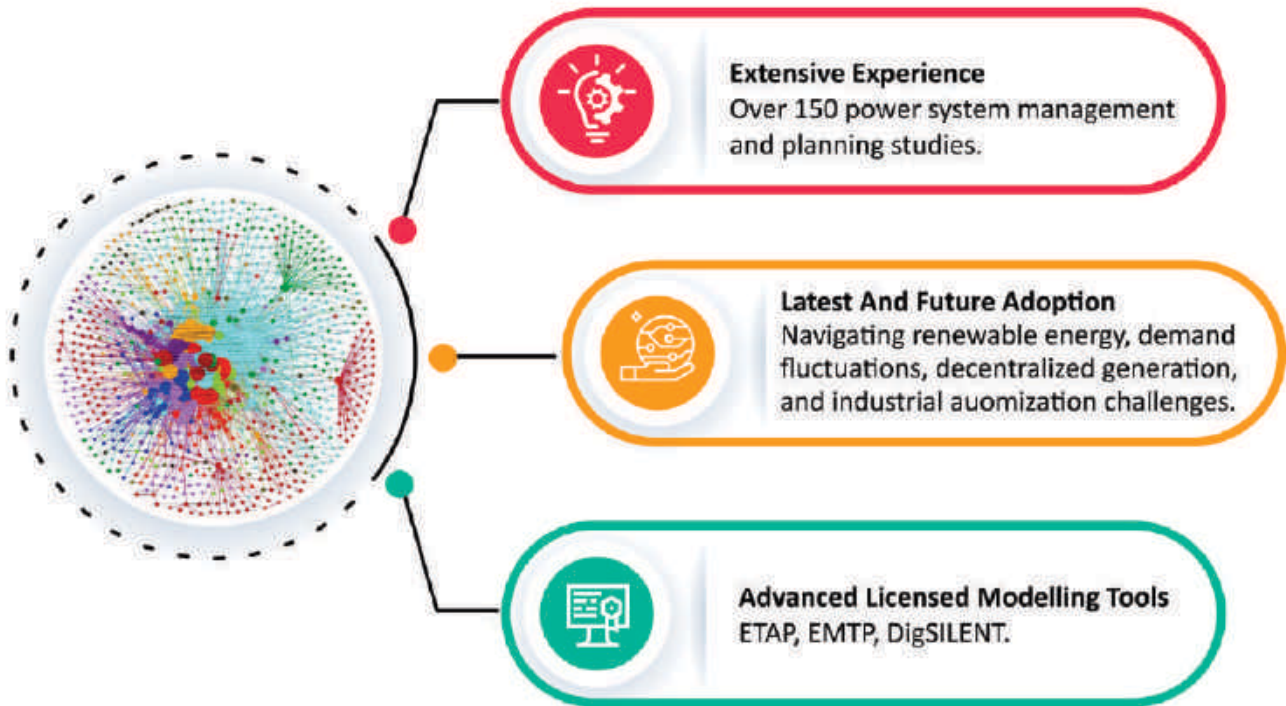


EARTHING AND BONDING VERIFICATION SERVICES

- Soil resistivity test and assessment.
- Earthing electrodes resistance test.
- Earth risers and grid integrity assessment.
- Verify loop impedance, automate disconnection of supply.
- Verify earthing selection & installation.
- Adequacy of termination and connections.
- Measurement of prospective fault current.
- Touch & step potential measurement and evaluation.
- Safety simulations and assessment.
- Design and Planning services.
- Recommendations and mitigation measures.



POWER SYSTEM NETWORK ANALYSIS



VALUABLE ASPECTS OF OUR PRACTICES

- Understand customer goals.
- Tailor data collection to specific cases.
- Collaborate with customers.
- Provide recommendations for unique challenges.
- Approach studies as solutions, not just assessments.

POWER SYSTEM MANAGEMENT, PLANNING, AND ANALYSIS SERVICES

- Load flow and short circuit studies.
- Protection Coordination Studies.
- Power Generator integration and Connection Studies.
- Harmonics simulation and mitigation studies.
- Insulation coordination studies.
- As-Built Network Modeling.
- Power system Compliance studies.
- Recommendations and Best Practices.
- Detailed Technical Reports:
- Conceptual and on-field training.



POWER QUALITY ASSESSMENT SERVICES

APPLICATION

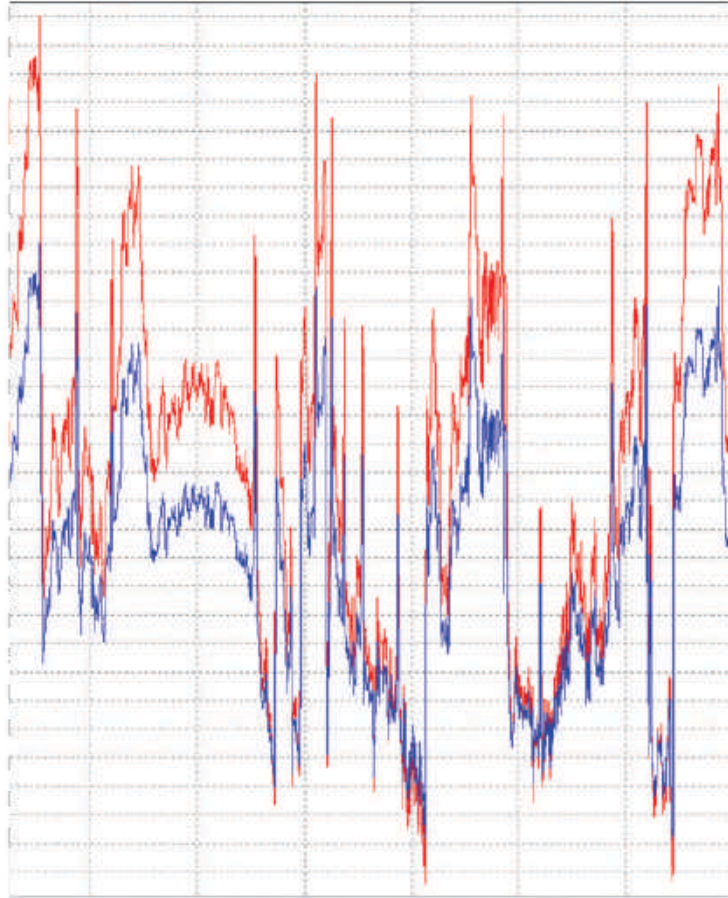
- Fundamental analysis of power system.
- Assessing the quality of electrical power.
- Fault analysis and system optimization.
- Energy usage patterns.
- Optimize equipment sizing.
- Harmonics studies.
- Power outage problems.
- Equipment failures investigation.
- Utility operators Power quality survey.
- Identification of voltage stresses.
- Identify abnormal power quality situation and potential failures.
- Safety in the workplace.
- Preventing future interruptions, downtime, and lost productivity.

CAPABILITIES

- Expertise of 25+ years.
- Measurement blueprint.
- IEC 61000-4-30 latest measurement technology.
- IEEE 519-2022, EN 50160, IEC 61000-2-2, IEC 61000-2-4, Local regulations and norms.
- Detailed trouble shooting methods.
- Concept to commissioning support.

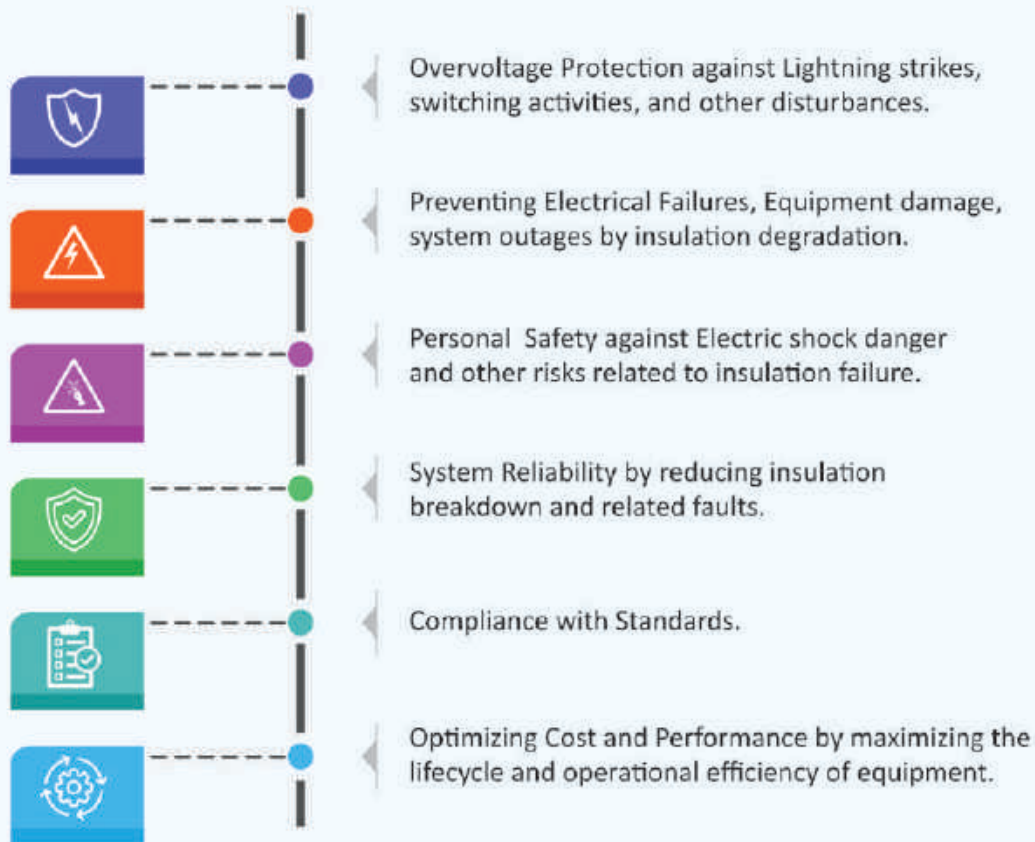
ACTIVITIES

- Planning and preparing the survey.
- Site inspection.
- Measurement plan.
- Conduct site visit.
- Network Data collection.
- Customer interview.
- Analyzing the monitoring and inspection data.
- Technical and compliance report.
- Simulations.
- Implementing corrective solutions.
- Verifying corrective solutions.



INSULATION COORDINATION STUDY

ESSENTIAL ENGINEERING AND DESIGN FOR THE SELECTION AND PLACEMENT OF INSULATION LEVELS FOR DIFFERENT ELECTRICAL EQUIPMENT WITHIN A POWER SYSTEM.

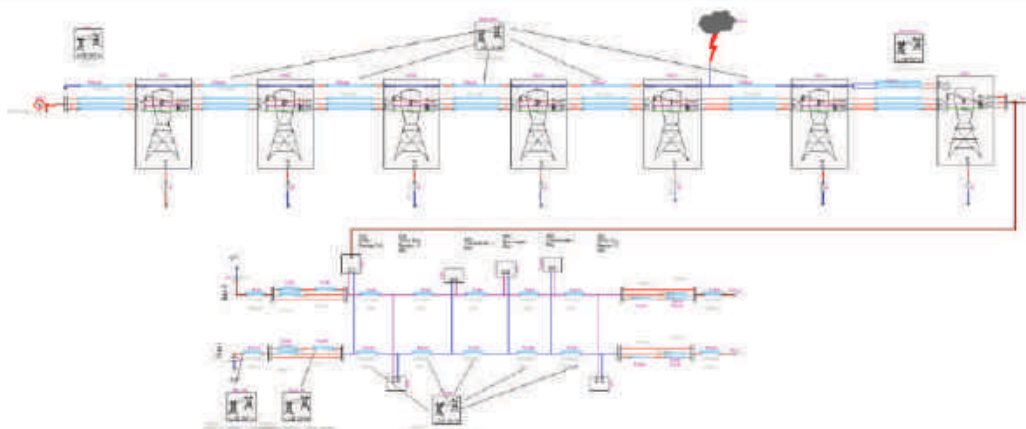


APPLICATIONS

- Transient over voltages and TRV.
- Slow-front, fast-front and very fast-front over voltages.
- Lightning over voltages.
- Switching surge over voltages.
- Very fast transients(VFTO).
- Back flash over voltage.
- BIL design for transmission lines and substation equipment.
- Surge arrester sizing and verification.
- Capacitor bank switching.

STANDARDS

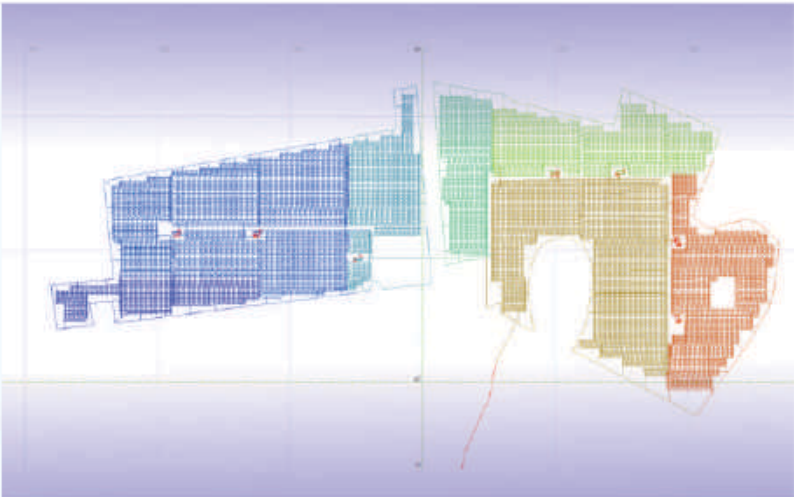
IEC 60071, IEC 60099, IEEE C.62.82.1



DISTINGUISHED PROJECTS

EARTHING, LIGHTNING, POWER SURGES PROTECTION FOR TAILORED SOLUTIONS FOR LARGE PV PROJECTS IN BOLDEKOW, GERMANY, AND HORIA, ROMANIA

- CDEGS software utilized for engineering studies
- Compliance with local and international standards ensured
- Emphasis on earthing, lightning, and surge protection

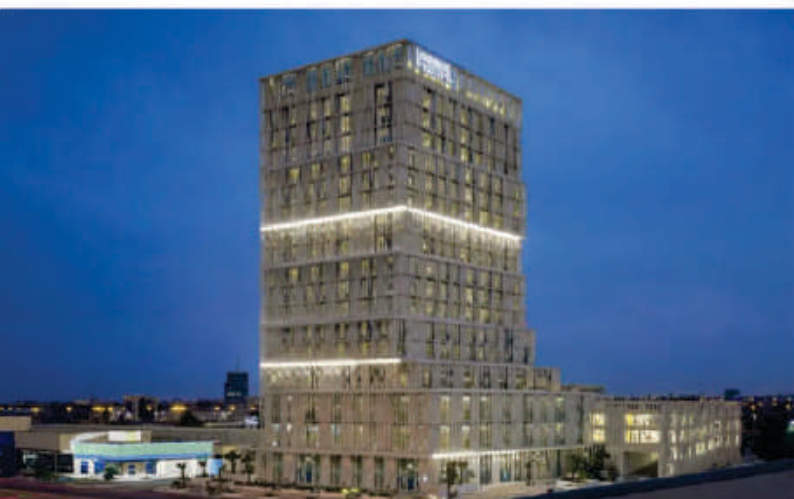


POWER SYSTEM STUDIES AND INSULATION COORDINATION FOR THE TANZANIA ELECTRIC SUPPLY COMPANY LIMITED TANESCO

- Power system planning studies for 220/33kV substations

DETAILED GROUNDING ENGINEERING ANALYSIS AND DESIGN FOR HVDC TRANSMISSION LINE: 600 KV KIMAL - LO AGUIRRE

- Optimization considering soil resistivity evaluation
- Safety simulation



POWER SYSTEM STUDIES FOR CAPACITY OPTIMISATION FOR AL KHORAYEF CENTRE, SAUDI ARABIA

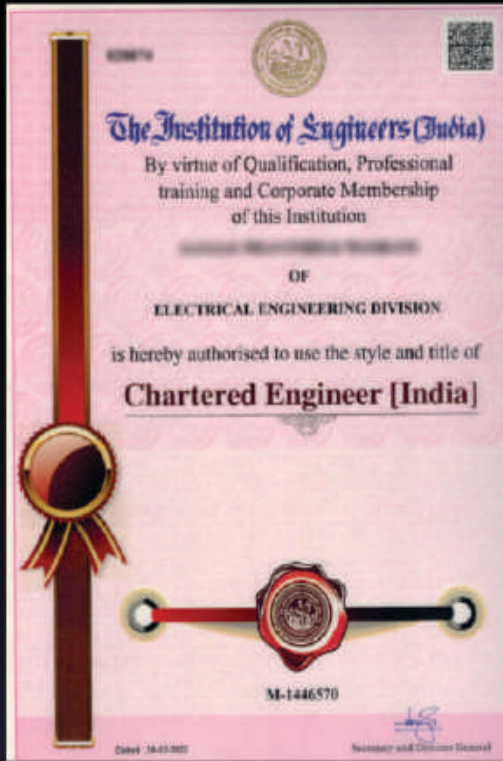
- Validate existing electrical installations
- Assess protection systems
- Plan for future load requirements

LICENSED TECHNOLOGY

We utilize licensed software for optimal functionality and compliance.



CERTIFICATION



CLIENTS

UTILITIES



EPC/TECHNOLOGIES/CONSULTANTS



PROCESS INDUSTRIES



DATA CENTERS/IT



OIL & GAS



SOLAR AND WIND POWER PLANTS



E-COMMERCE/WAREHOUSE





Remote locations

Noida | Delhi

Associates

Jalgaon | Bharuch
Raipur



VISION POWER ANALYTICS PVT. LTD.

C-001, Shree Krishna Complex CHS Ltd,
Opp. National Park, Borivali - East, Mumbai - 400 066.

Mo. +91 99097 90005 | support@visionpq.com | www.visionpq.com

© Copyright 2024 VISION POWER ANALYTICS PVT. LTD.