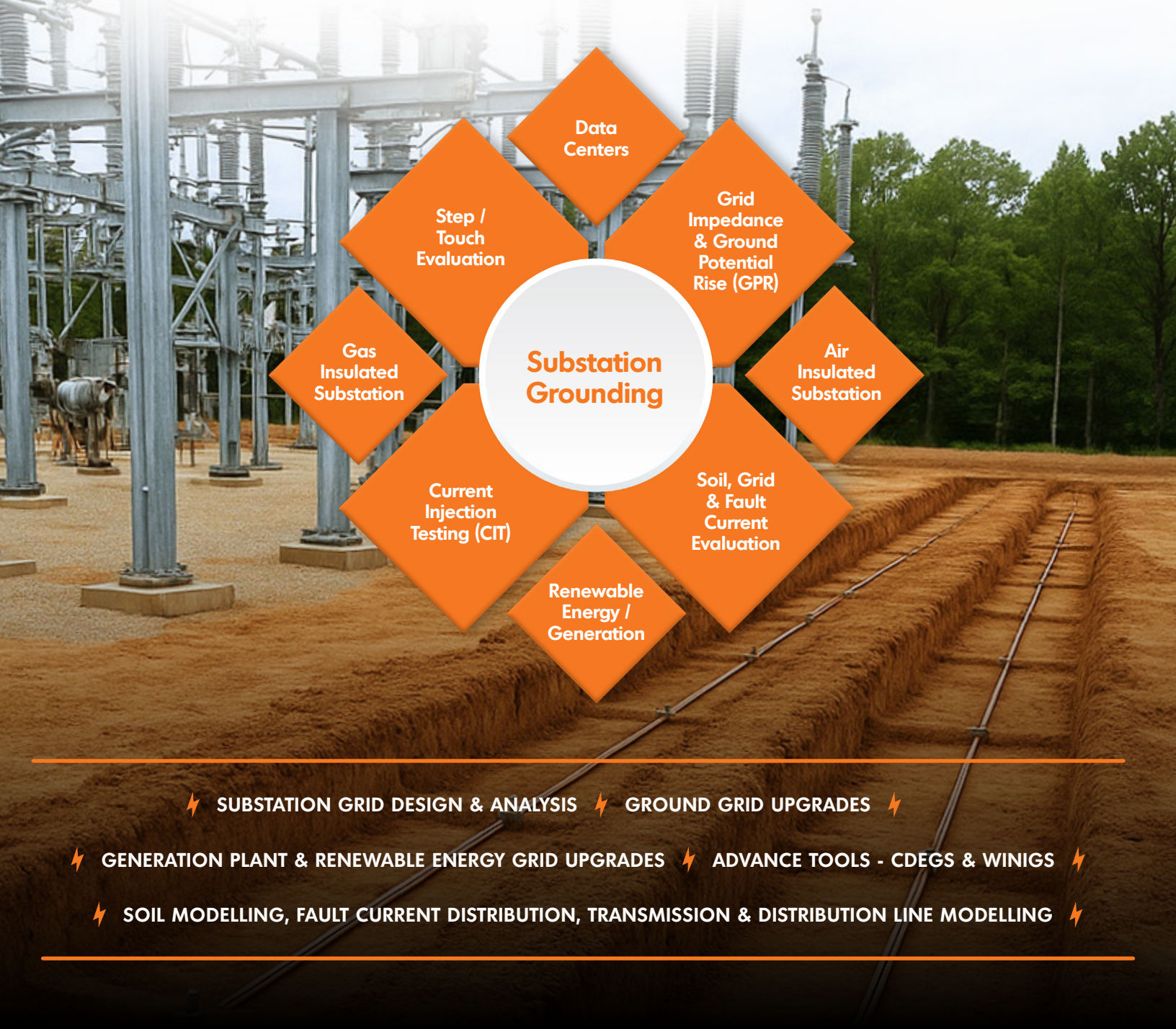
RMS ENERGY
NETA

SUBSTATION GROUNDING

At RMS Energy, we specialize in effectively designing grounding grid ensuring electrical currents are safely directed to earth under both normal and fault conditions without surpassing the operational limits of the equipment. At the same time, they protect personnel by preventing electric shock from step and touch potentials exceeding allowable limits.



- SUBSTATION GRID DESIGN & ANALYSIS
- GROUND GRID UPGRADES
- GENERATION PLANT & RENEWABLE ENERGY GRID UPGRADES
- ADVANCE TOOLS - CDEGS & WINIGS
- SOIL MODELLING, FAULT CURRENT DISTRIBUTION, TRANSMISSION & DISTRIBUTION LINE MODELLING

OUR SERVICES

TAILORED SOLUTIONS EMPOWERING SAFE GROUND GRID DESIGN

Grid Design Challenges

SOIL MODELLING CHALLENGES

- Identifying errors in soil resistivity measurement data.
- Assessing and identifying the worst soil conditions on-site to inform design and construction decisions.
- Calculating and defining soil volumes accurately for areas with significant grading changes or multi-story buildings.
- Considering the impact of winter conditions.

CHALLENGES DURING GRID MODEL

- Determining the optimal placement of conductor depths and assigning appropriate material and coating properties.
- Accurately modeling current injection and extractions to stress the grid as in a real-world simulation.
- Considering local current circulation to prevent overdesign of the ground grid.

MITIGATION CHALLENGES

- Step voltage can occur a significant distance away from any given site.
- Transfer of potentials.
- Call for an exotic solutions such as grounding well or laying conductors in grounding enhancement material (GEM).

RMS Energy Offerings

GROUND GRID DESIGN & REVIEW

- In-situ soil conditions.
- Analyzing both summer and winter soil condition and volumes.
- Modelling Transmission and Distribution network to calculate split factor.
- Fault injection and extractions modelling.
- Ground Potential Rise (GPR) and ground grid impedance report.
- Touch and step voltage calculations.
- Touch Voltage and Reach Touch Voltage mitigation techniques.
- Fence isolation panels.
- Transfer of potentials.

DESIGN SUPPORT & TOOLS

- Optimal grid upgrades to ensure cost-effective solutions.
- Continuous support during construction.
- Perform studies using WINIGS and CDEGS for brownfield expansions and greenfield AIS/GIS substations, generation, and renewable energy projects.

WHY CHOOSE RMS ENERGY?

EXPERTISE | CUSTOMER FOCUS | INNOVATION | RELIABILITY | SAFETY

RMS ENERGY

Connect with us to learn more about how we can support your power system needs and help you achieve your energy goals.

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