

Power Systems Expert / Grid Connection expert –
Grid Studies & Network Analysis Power System Studies

Location: Nairobi, Kenya

Contract Type: Fixed-Term

Reports to: Project Manager

Job Purpose:

The Power Systems Expert will be responsible for conducting detailed power system studies and grid connection assessments for energy infrastructure projects. This includes data collection, load flow analysis, short-circuit studies, stability assessments, and grid impact evaluations to support the integration of new generation or transmission assets into existing networks. The expert will use advanced IT tools for network modeling and simulations, ensuring compliance with national grid codes and international best practices.

Your Tasks

1. Power System Studies

- Collect and validate technical and operational data from utilities and project developers.
- Perform load flow, contingency, fault level, and dynamic stability analyses.
- Model transmission and distribution networks using specialized software tools.
- Evaluate grid performance under various operational scenarios.
- Support planning and optimization of network expansions and upgrades.

2. Grid Connection Studies

- Assess technical feasibility of connecting new power plants or substations to the grid.
- Analyze grid impact and propose mitigation measures.
- Prepare grid connection reports and technical documentation.
- Liaise with utilities and regulatory bodies to ensure compliance with grid codes.

3. Technical Support & Collaboration

- Provide expert input during feasibility studies and detailed design phases.
- Collaborate with multidisciplinary teams including civil, environmental, and social experts.
- Support stakeholder engagement with utilities, regulators, and project developers.

4. Tools and Software

- Use industry-standard software for network calculations (e.g., DlgSILENT PowerFactory, PSS®E, ETAP, PSCAD).
- Maintain and update network models and databases.
- Ensure data integrity and documentation of all simulations and results.

Your Profile

- Bachelor's or Master's degree, preferably with a focus on electrical power engineering or similar
- Minimum of five (5) years professional expertise in the field of power system studies/power system analyses (load flow, short circuit, stability studies, dynamic simulations, harmonics, controller models, protection settings, HVDC simulation), grid expansion planning, EMC calculations, EMT studies, HVDC systems, preparation of master plans, integration of renewable energies or similar.
- Proficiency in power system simulation tools (e.g. DlgSILENT PowerFactory, PSCAD, Integral, PSSE, ETAP)
- Strong understanding of grid codes, interconnection standards, and regulatory frameworks.
- Familiarity with African power systems and regional interconnections.
- Experience with renewable energy integration and hybrid systems is an advantage.
- Experience in the consulting business is an advantage

- Ability to work independently and manage multiple tasks under tight deadlines.
- Willingness to travel to project sites and engage with stakeholders.
- Excellent analytical, reporting, and communication skills.
- Fluent in English and confident working in an international environment
- Knowledge of French or German is an advantage

Corporate Benefits

- A growing team in a start-up environment backed up by a large global operating company
- Modern digital infrastructure
- Long-term development opportunities
- Exciting international projects in the energy industry
- C Culture of staff appreciation, equal opportunity and attractive career prospects in an international job environment
- Long-term development opportunities,
- Ability to work under your own responsibility

Email your applications to;

office.nairobi@fichtner.de