

Clifford Ondieki

Power Systems Engineer — Grid Modelling & Compliance

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PROFESSIONAL SUMMARY

Power Systems Engineer with hands-on protection-relay and equipment testing experience, and current work building steady-state grid-modelling and power-flow studies for renewable integration. Builds digital twins using Pandapower, DlgSILENT PowerFactory, and Python to validate congestion management and EV integration against grid codes. Experienced in translating VDE requirements (AR-N 4110/4120) into simulation workflows. Active in CIGRE as Study Committee C6 Secretary and NGN OneGrid Representative, and serves as a CWIEME Berlin Ambassador.

PROFESSIONAL EXPERIENCE

Product Operations Lead (Technical Programs)

2019 - 2024

Ilara Health / Elephant Healthcare | Hybrid

- Bridged software engineering and clinical end-users, leading to a **30% increase** in platform adoption.
- Managed data workflows for 100,000+ patient records, ensuring 99.9% integrity (analogous to SCADA/GIS utility challenges).
- Increased sprint velocity by 15% via Agile/Kanban implementation.

Assistant Electrical Engineer

Aug 2016 - Dec 2017

Trans Nzoia County Government | Kenya

- Prepared technical designs and cost estimates for electrical installations, power-generation plants and county facilities.
- Supervised site works for compliance with IEE Wiring Regulations and KEBS requirements.

Engineering Intern

2013 - 2015

GDC / KenGen / KPLC | Kenya

- Carried out protection-relay setting reviews, transformer and generator testing across multiple substations, using Fluke and Mega test equipment.

KEY ENGINEERING PROJECTS

EV Charging Network Optimization

IEEE Best Paper 2025

Berlin, DE

Python, GIS, NSGA-II, Pandapower

- Developed a **NSGA-II multi-objective model** to co-optimize charger accessibility and grid thermal/voltage constraints.
- Achieved a **21% improvement** in access to fast charging and 13% reduction in spatial inequality.

Berlin Grid Digital Twin — Steady-State Compliance Study

Independent

Python, Pandapower

- Built a Python-based digital twin of a Berlin distribution grid, integrating ETL'd generation, load and import data.
- Ran AC power-flow congestion studies in Pandapower, validating voltage stability against **VDE-AR-N 4110** limits.

EDUCATION

M.Sc. Engineering Management (Distinction)

2026

Arden University, Germany

Postgraduate Diploma, Project Planning & Management

2019

University of Nairobi (Anabin H+)

B.Sc. Electrical & Electronic Engineering (Heavy Current)

2016

Jomo Kenyatta University of Agriculture and Technology (Anabin H+)

Specialization: Power Systems & Renewable Energy Integration

SKILLS

Simulation: PowerFactory (Python API), Pandapower, MATLAB/Simulink

Analysis: Power-flow studies, voltage stability, congestion, grid-code compliance

Automation: Python (Pandas, NumPy, SciPy), ETL, study scripting

Standards: VDE-AR-N 4110/4120, §14a EnWG, IEC 61850

LANGUAGES

English: Fluent (C1/C2)

German: A2-B1, actively improving

CERTIFICATIONS & MEMBERSHIPS

— **CIGRE Study Committee C6** — Secretary (2026-)

— **CIGRE NGN** — OneGrid Representative & Pavilion Coordinator, Paris Session 2026

— **CIGRE OneGrid Pavilion** — Node 2 Presenter (Grid Edge & DER), Paris Session 2026

— **CWIEME Berlin Ambassador** (2026-) — Coil Winding, Insulation & Electrical Manufacturing Exhibition

— Future Engineers Award Alumnus (Runner-Up) — CWIEME Berlin & Transformer Academy, 2026

— IEEE Best Paper Award — Intelligent Transportation Track, 2025

— Professional Memberships: IEEE, VDI, VDE