

Job Description

Position Title:	Principal Electrical Engineer
Reports To:	Generation Team Lead
Client(s)/Key Liaison:	Niko Project Managers, Niko Engineers, Niko external clients
Responsible For:	Provision of design engineering services
Issued:	December 2024

Main Purpose of the Role

This position provides engineering to Niko external clients and internally to Niko design teams. This is a principal engineering role so the position holder may be expected to mentor Senior/intermediate engineers, as well as provide technical oversight of projects being led by others, while still focussing on the development of key competencies and experience of their own.

Key Tasks

Major areas of responsibility include:

- Develop detailed designs, technical specification documents and reports for generation and substation projects, for aspects such as -
 - Switchyard layouts and Industrial Process/Plant, including consideration for constructability, maintainability, least whole of life cost, and safety by design,
 - Primary equipment/plant,
 - HV outdoor equipment,
 - MV indoor switchgear,
 - CT and VT specifications,
 - MV and HV cable installation,
 - Oil interceptor systems,
 - Earthing systems,
 - Lightning protection,
 - Secondary systems, including LVAC, DC systems,
- Protection systems (circuit diagrams and assembled forms etc),
 - Interconnection with SCADA and Control & Instrumentation systems (circuit diagrams and assembled forms etc, but not SCADA/RTU/PLC/Comms design),
 - Wiring diagrams,
 - Junction box, control cubicle and panel layouts,
- Develop, or support the development of protection settings,
- Preparation/Assist with the preparation of proposals for design tenders,
- Provide project engineering support for generation and distribution client projects,
- Provide Technical Oversight of work by other Engineers,

- Carrying out Quality Assurance reviews of work by other Engineers,
- Providing coaching and mentoring of senior/Intermediate Engineers.
- Communicating and coordinating project activities with others as needed.
- Develop relationships with our clients.

Other Requirements

- Promote and contribute to the health, safety, and environment objectives of Niko Engineering.
- Embrace the equal employment opportunity objectives of Niko Engineering.
- Enhance the profile of Niko Engineering within the community and to prospective clients.
- Contribute to the promotion of a quality culture within Niko Engineering.

Person Specification

The person best suited to this position will possess the following:

Education/Qualifications

- 10+ years in the electrical engineering field, with at least 6 years in design roles.
- Tertiary qualified, ideally with a BE(Electrical) or equivalent, but not essential for those with significant industry experience.

Knowledge/Skills

Required

- Advanced theoretical understanding of HV/LV/generation and distribution power systems.
- Significant experience with design calculation software tools,
- Significant experience in the preparation of technical reports,
- Experience in practical power system (primary and secondary) design up to 220kV, Experience of the design of earthing systems,
- Experience of insulation coordination analysis and design, including surge arrester specification and lightning protection design,
- Familiarity of New Zealand transmission/generation/ distribution utility standards & systems,
- Familiarity with SCADA, Control & Instrumentation, and remote-control interfaces,
- Familiarity ELV and dc systems including battery banks, charger rectifiers, inverters/converters, dc distribution,
- Familiarity with the Microsoft 365 suite of software.
- Knowledge with protection systems,
- Knowledge of the development of detailed construction methodologies,

Desirable

- Experience with analysing and designing MV/HV cable installations, including modelling using Cymcap™ Software and specifying installation details

- Experience of arc flash studies,
- Familiarity with Microsoft Project software,
- Familiarity with powers system modelling software such as PowerCAD, DigSILENT, ETAP, CDEGs
- Familiarity of 3D CAD.
- Knowledge with HAZARDOUS area certification and design requirements,
- Knowledge of generation systems (generator AVR, excitation etc),

Competencies Required

- Attention to detail and a drive for technical excellence. Niko's reputation relies on high quality design outputs,
- An aptitude for solving problems based upon a mixture of analysis, wisdom, experience, and judgment,
- Ability to establish and maintain strong working relationships with clients and colleagues and gain their trust and respect,
- Ability to lead a multi-discipline design team, acting in a design manager or lead engineer role,
- Ability to manage projects,
- An understanding of civil and structural work processes to enable the efficient coordination of the electrical/civil interface,
- Ability to communicate protection requirements,
- Desire to develop and enhance your theoretical knowledge,
- Ability to organise and manage multiple tasks,
- Strong self-motivation and desire to work with minimal supervision,
- Ability to prioritise workload,
- Ability to confer with engineering staff and other personnel to resolve problems.

Values

Personal values and behaviours that align to our company values:

- Be friendly and approachable, whilst being professional in your dealing with internal and external clients.
- Have consideration for the safety of themselves and others at the place of work.
- Respect for colleagues.
- Act in good faith and be fair.
- Willing to work and share knowledge within a close-knit team.
- Commitment to **outstanding** customer service.