

Position Title:	POWER SYSTEMS ENGINEER
<i>Report To:</i>	<i>LEAD POWER SYSTEMS ENGINEER</i>

PRIMARY FUNCTION

The Power Systems Engineer is responsible for undertaking power system investigations, analysis, design, documentation and project management at the highest standard of professional expertise commensurate with experience of a minimum of five years, whilst requiring minimal technical supervision.

CORPORATE RESPONSIBILITIES

- Represent/Embrace the Company's Vision and Values.
- Understand and describe the full range of services offered by the Company.
- Assist in the positive promotion of the Company and its Values at all points of contact with Clients, Suppliers and the Community.
- Recognise the key Values of the Company and participate in building a positive team culture of high quality staff.
- Act professionally and in accordance with the Company's Policies and Procedures at all times.

ACCOUNTABLE DUTIES include the following. Other duties may be assigned.

General

(a) Technical / Project Management

- Undertake power system design and documentation to achieve the objectives of quality, schedule and budgeted man-hours.
- Undertake power system studies such as load flow studies, motor starting studies, harmonic studies, fault analysis and protection coordination studies.
- Prepare detailed and accurate written reports that clearly and concisely summarise the objectives, results, conclusions and recommendations of the project scopes.
- Undertake the role of Project Manager for small and medium sized projects, taking responsibility for meeting budgeted man-hours, project cost budgets and project schedules.
- Where assigned, manage the work of subordinate engineers and drafting staff to ensure compliance with technical and quality assurance standards.
- Accept responsibility for the accuracy, quality and timeliness of engineering design performed directly and for that performed by assigned engineering and drafting staff.

- Carry out site visits to liaise with clients, gather data, adjust protection device settings, inspect construction or manufacturing progress or perform commissioning tasks.
- Maintain and develop the company's client base by winning client's satisfaction and trust during the performance of assigned projects.
- Develop technical skills while attending selected training courses and/or completing post-graduate studies.

Environmental, Health & Safety

- Identification of Environmental, Health & Safety hazards when commencing any project tasks or activities.
- Actively participate in Environmental, Health & Safety (EH&S) systems as required and understand the concepts of Welcon's EH&S systems.
- Follow all Environmental, Health & Safety relevant procedures.

SKILLS REQUIREMENT

Technical

- Technical/practical skills in most of the following areas:
 - Design of High Voltage power systems and substations, up to and including 132kV. Proven capability in outdoor switchyard systems, both primary and secondary systems.
 - Computer-based Modelling and Analysis of Power Systems - Fault studies, Load Flows, Harmonic Studies and Motor Starting studies using analysis software
 - Protection Coordination – Overcurrent, Earth-Fault, Earth-Leakage in industrial and mining applications
 - Differential (transformer and/or cable) and distance protection
 - Design and analysis of Earthing Systems, Earth Grids and lightning protection systems
 - Knowledge of sequence impedance networks/modelling from first principles
 - Low voltage and medium voltage motor control and protection
 - High voltage (up to 132kV) power reticulation
 - Design and specification of HV Switchboards, VFD's, Soft Starters, Transformers and Motors
 - On-site testing and commissioning of LV and HV equipment
 - Protection device adjustment
- Proven design capability in an industrial and power authority environment
- Current working knowledge of Australian Standards and Codes, especially AS3000, AS2067 and AS3851.
- Knowledge of Underground and Open-Cut Coal Mine operations and Regulations

- Demonstrated project management capability
- Oral communication skills, especially with clients and subordinate staff
- High level of computer literacy (eg. Spreadsheets, scheduling, word processing, e-mail)
- Estimating (capital and engineering man-hours)

Communication & Literacy

Individuals must be able to demonstrate proven hands-on experience in the following:

- Ability to read technical documentation and client briefs and interpret implications and actions required for successful implementation.
- Ability to prepare, write and review well-structured technical reports, specifications, business correspondence, operating and maintenance manuals, as well as meeting minutes and general project documentation.
- Ability to develop and write operational procedures and work instructions.
- Ability to read, analyse and interpret general business periodicals, professional journals, technical procedures, or governmental regulations.

Reasoning & Analytical

- Solve practical problems and deal with a variety of concrete variables in situations where only limited standardisation exists.
- Break a complex task into its components and assign their relevant priorities.
- Interpret a variety of instructions furnished in written, oral, diagram, or schedule form, when dealing with client requests and non-engineering personnel.
- Utilise all available research methods and resources available for technical support.

EXPERIENCE

A minimum of five (5) years relevant power systems engineering experience predominately in an industrial, consulting or power authority environment is expected.

QUALIFICATIONS & EDUCATION

To perform this job successfully, the individual must be able to perform each essential duty satisfactorily.

This requires a Degree in Electrical Engineering from a recognised Australian institution.

CERTIFICATES, LICENSES, REGISTRATIONS

The following are the minimum requirements:

- Standard Queensland Open-class Motor Vehicle License is an essential requirement for this position.
- Sufficient industry experience to be eligible for corporate membership of The Institution of Engineers, Australia, achieving CPEng status and NPER-3.

WORK ENVIRONMENT

- The position is based primarily in a professional office environment in Gladstone, Qld. However, the employee will be required to attend client sites in both commercial and industrial environments. This will include locations such as coalmines, smelters, chemical plants, power stations and refineries.
- The hazards in the work environment are usually moderate, although most industrial sites will require the use of Personal Protective Equipment, including respirators and mono-goggles. While performing the site duties of this job, the employee is occasionally exposed to risk of electrical shock.
- Medical examinations may be required to ascertain suitability to work on some sites. In particular, lung function tests may be required for some sites.
- Travel away from home for up to two weeks at a time will be expected.