



Job Description Form

Our Purpose

To provide safe, customer-focused, integrated and efficient transport services.

Position Title

Traction Power Engineer

Level

5

Position Number

36493
(Nominated)

Division/Directorate

Network & Infrastructure

Branch/Section

Electrical Engineering

Effective Date

November 2022

Health Task Risk Assessment Category

3

Reporting relationships

Superordinate: Principal Electrical Engineer, Level 7

Subordinates: No Direct Reports

Key role of this position

- Provides engineering expertise for the maintenance, design, construction, upgrades and modifications of 25kV Traction Power system.
- Reviews the operational performance of all the Traction Power systems including the planning and scheduling of all preventative, corrective and breakdown maintenance, and provides recommendations to the Principal Electrical Engineer.
- Carries out inspection, testing and modelling to ensure traction power system compliance, reliability and performance alignment to PTA's 2051 vision.

Core duties and responsibilities

Management and Leadership

- Monitors system performance to ensure maintenance plans are carried out in a safe, reliable and cost effective manner.
- Carries out inspections and tests, reviews, investigates, checks and analyses equipment/system failures and incidents, prepares technical reports and assists with the development of solutions and improvements as necessary to guide maintenance activities, either individually or as a member of a team.
- Contributes to developing a positive safety culture, contributing ideas and opinions for continuous improvement in workplace safety, engineering design and maintenance delivery ensuring works personally carried out comply with PTA requirements and other legislative requirements.
- Undertakes audits on the 25kV Traction Power System (TPS) and related infrastructure for the Public Transport Authority's (PTA) rail network.
- Plans and monitors maintenance, repairs and construction activities as directed by Principal Electrical Engineer and in conjunction with the Maintenance Superintendent.
- Records and analyses performance and productivity data and provides recommendation to the Principal Electrical Engineer for appropriate corrective actions for improvements.

Technical

- Provides engineering expertise for 25kV TPS maintenance, design, construction, upgrades and modifications to the existing network.
- Review System Engineering documentation to ensure adherence to applicable codes of practice, guidelines, safety standards and industry standards.
- Lead analysis of asset and performance data, providing analysis activities for the production of KPI dashboard, maintaining the accuracy of performance management tools; identifying trends and issues, and presenting them to management for improvement action.
- Develop maintenance strategies/plans and programs to improve the performance of the asset and to continuously improve processes and methodologies to collect better in-services asset data, feedback and faults in order to deliver optimal life cycle performance of assets.
- Carry out inspection, testing, fault finding and root cause analysis on all aspects of the traction power system and related assets.
- Participates in commissioning of new equipment, systems and technology, including testing of TPS network as Test Engineer or as Witnessing Engineer for Contractor's testing and commissioning.
- Carries out TPS designs to comply with the PTA's design principles and codes.
- Reviews TPS designs and modifications, and ensures adherence to the relevant technical standards, safety standards and industry standards.
- Provides relevant technical guidance and reviews/updates on TPS technical documents and maintenance procedures.
- Reviews development technical specifications, engineering maintenance instructions, service schedules, work practices, type approvals, drawings and associated TPS documentation to ensure safe, reliable and efficient operations.

Project/Contract management

- Manages high value and high risk projects, coordinates and plans in house teams and/or contractors undertaking design and/or construction of railway TPS installations.

Liaison and Customer service

- Liaises with the Electrical Branch and other sections of the PTA to ensure effective working of the network.

Training and Development

- Reviews training manuals and procedures and participates in conducting training for the TPS to ensure safe, reliable and efficient operations.

Other

- Carries out as required, such tasks and functions that are within the limits of the employee's skills, competence and training.

SELECTION CRITERIA

1. Core Competencies

- Possession of a Degree in Engineering (Electrical) to allow eligibility for membership to the Institute of Engineers (Australia) in the category of Chartered Professional Engineer.
- Demonstrated understanding of High Voltage protection relays and SCADA systems in use in a railway environment.
- Demonstrated experience in design, construction and maintenance principles for 25kV Traction Power in an electrified railway environment.
- Considerable ability to quickly assimilate complex technical engineering principles and issues and apply these in an operational environment.
- Demonstrated experience in project and contract management.

2. Communication and Interpersonal

- Well developed verbal, written and interpersonal communication skill, including the ability to develop rapport with internal and external stakeholders

3. Conceptual, Analytical and Problem Solving

- Well developed conceptual and analytical skills, including the ability to resolve complex technical and operational problems and issues.

4. Organisation

- Well developed organisational skills, including the ability to achieve agreed targets and timelines through the use of effective teamwork and delegation.

5. Special Requirements

- Satisfactory completion of required medical examinations to verify physical fitness to perform the duties of the position.
- Provision of a current National Police Clearance certificate, dated 3 months or less from the date of application for the position.
- Ability to work shift work and/or week end work as required to a 24 hour 7 day roster while involved in fault finding, maintenance and construction activities, sometimes at short notice.
- Possession of a current Western Australian 'C' or 'C-A' Class Driver's Licence or equivalent. This requirement continues for the duration of employment in this position and from time to time production of the licence on request by PTA may be required.
- Applicants must meet the special requirements shown below within 3 months of appointment to the position. Cancellation of the appointment will occur where an applicant does not meet the special requirements within the agreed period of time.
 - PTA Individual Access (IA) Track Access Permit
 - OHS Training for Managers
 - Senior First Aid.

Certification

The details contained in this document are an accurate statement of the duties, responsibilities and other requirements of the position.

Managing Director / Executive Director / General Manager

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Signature

.....
Date

Employee

I have read and accept the responsibilities of the Job Description Form.

The position's duties are to be performed in accordance with the PTA's Code of Conduct and the PTA's Values.

.....
Signature

.....
Date