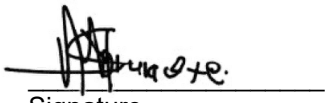
Quality Council for Trades & Occupations
www.qcto.org.za
256 Glyn Street, Hatfield, Pretoria, 0083
Private Bag X278, Pretoria, 0001
+27 12 003 1800

DESCRIPTION	JOB DESCRIPTION
REQUEST TO APPOINT A SUITABLE PROFESSIONAL ELECTRICAL ENGINEER TO CONDUCT THE ELECTRICAL ASSESSMENT FOR 2X BUILDINGS AND PROVIDE A TECHNICAL REPORT FOR SOLAR REQUIREMENT, BILL OF QUANTITIES, AND TERMS OF REFERENCES (TORS)	**SCOPE OF WORK** Appointment of a Suitable Professional Electrical Engineer for Electrical Assessment of Two Buildings and Development of Solar Requirements Technical Report, Bill of Quantities, and Terms of Reference of Work. 1. **Background** There is a need to conduct a comprehensive electrical infrastructure assessment of two (2) buildings to determine their current electrical load capacity, compliance status, and suitability for integration of a solar photovoltaic (PV) solution. The assessment will guide the development of a solar energy intervention strategy and support informed decision-making for future energy efficiency initiatives. 2. **Purpose of the Appointment** • The purpose of this assignment is to appoint a qualified and accredited Electrical Engineer to: • Conduct full electrical assessments on two identified buildings. • Provide a detailed technical report outlining the solar energy requirements for each building. • Develop a comprehensive Bill of Quantities (BoQ) for recommended upgrades or installations. • Draft Terms of Reference (ToRs) for the procurement/installation of a suitable solar photovoltaic (PV) system. **3. Objectives** • To determine the current condition of electrical installations. • To assess electrical load profiles and capacities. • To identify compliance gaps and risks. • To establish solar energy needs based on consumption and building load. • To provide actionable, engineering-grounded recommendations. • To support procurement processes through accurate BoQs and ToR documents.

	4. **Required Services** • The Electrical Engineer shall perform the following tasks: **4.1 Electrical Assessment** • Conduct site inspections of both buildings. • Evaluate existing electrical infrastructure, including: • Main distribution boards • Sub-distribution boards. • Wiring, cabling, and fixtures • Metering systems • Earth leakage and protective devices • Identify non-compliance with SANS standards and regulatory requirements. • Assess load profiles and peak demand. **4.2 Solar Requirements Analysis** • Determine building energy consumption (daily, monthly, annual). • Identify suitable solar PV capacity/ kilowatt-peak (kWp) for each building. • Recommend appropriate system configuration: • Grid-tied / off-grid / hybrid. • Inverters, batteries, switchgear • Protection systems • Conduct feasibility assessment for installation locations (rooftop/ground mount). • Provide cost estimates. **4.3 Technical Report** • The service provider must submit a detailed engineering report, including: • Summary of findings for each building • Load calculations. • Existing infrastructure condition • Solar recommendations and sizing • Compliance gaps and risks • Proposed corrective actions. • Photographic evidence

	4.4 Development of Bill of Quantities (BoQ) • Provide a detailed **Bill of Quantities (BoQ) for** recommended electrical upgrades. • Provide a **Bill of Quantities (BoQ)** for the proposed solar installation solution. • Include material specifications, quantities, and estimated costs. **4.5 Development of Terms of Reference (ToRs)** • Develop procurement-ready **Terms of Reference** ToRs for the installation of a solar PV system. • Include technical specifications, evaluation criteria, standards, and certifications. • Ensure alignment with PFMA, QCTO SCM regulations, and engineering best practices. **. Deliverables** • Electrical Assessment Report (per building) • Solar Requirement Technical Report • Bill of Quantities for electrical upgrades and solar system • Draft Terms of Reference (ToRs) • Meeting and progress updates as required. 6. **Exclusions** • The assignment does not include: • Physical installation of any electrical components or solar systems • Long-term maintenance services • Civil or structural engineering assessments beyond PV mounting feasibility. 7. **Timeframes** • The service provider will have three (3) to eight (8) weeks from the date of appointment to complete all deliverables. 8. **Skills and Qualifications Required** • The Electrical Engineer must: • Be a Registered Professional Electrical Engineer or Technologist (ECSA) with a minimum of five(5) years.

	• Demonstrate experience in electrical assessments and solar PV design. • Provide references to similar work completed (minimum four (4) references not older than five (5) years from the date of RFQ Advert. 9. **Reporting Requirements** • Inception meeting • Weekly progress updates and site walk abouts (email or virtual) • Final presentation of findings 10. **Compliance** • All work must comply with: • SANS 10142 (Wiring Code) • Occupational Health and Safety Act • Municipal by-laws • Applicable South African energy and electrical standards **#NB: COMPULSORY SITE BRIEFING**



Signature

10 FEBRUARY 2026

Date