



**SUPPLY, DELIVERY, REMOVAL,
INSTALLATION, TESTING AND
COMMISSIONING TO REPAIR THE RING MAIN
UNIT LOCATED AT TEAKWOOD ROAD
SUBSTATION FOR TRANSNET ENGINEERING.**

**DELIVERY ADDRESS: 395 SOLOMON
MAHLANGU DRIVE
CLAIRWOOD, DURBAN, 4052**

REFERENCE No: PEMM_DBN_SPEC_202

Revision 0

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Signature of Bidder/s: _____

Date: _____

DOCUMENT AUTHORITIES

Department	Facilities and Infrastructure
Effective Date	January 2025
Compiled by	Bernie Clarke
Designation	Superintendent - Facility and Infrastructure
Signature & Date	 24th of January 2025
Approved by	Sphamandla Mkhwanazi
Designation	Plant Engineer - Container Corridor
Signature & Date	 24 January 2025

Signature of Bidder/s: _____

Date: _____

1. INTRODUCTION

This specification document is for the:

#	TASK	REQUIRED
1	Design	
2	Manufacture	
3	Supply	✓
4	Refurbishment	
5	delivery	✓
6	Installation	✓
7	Documentation	✓
8	Testing	✓
9	Training	✓
10	Commissioning	✓
11	Structural Investigation	

Of the specified:

#	ITEM	REQUIRED
1	Supply and install a new 11kV RM6 unit.	✓
2	Disconnect and remove existing Schneider Electric RM6 unit from base plate and VT metering cubical.	✓
3	Factory Acceptance Testing and submission of project documentations	✓

2. SITE INSPECTION

- All prospective tenderers shall be required to undertake a compulsory site inspection to fully acquaint themselves with all aspects involved.
- Arrangements to visit the site and confirmation of the date and time of the site inspection shall be made with the Transnet Engineering Project Manager.
- The site inspection certificate shall be completed and countersigned by the Project Manager on the day of the visit and must be submitted with the tender documents.

Signature of Bidder/s: _____

Date: _____

3. INFORMATION REQUIRED

- a) Offers will not be considered unless full particulars and sufficient literature is provided at the tendering stage to enable the Transnet Engineering Technical Officers the opportunity to assess each technical offer properly.
- b) Prospective Tenderers will complete the relevant questionnaire in full and must indicate whether their offer complies with each item of the specification.
- c) Should there be insufficient space for furnishing full details; Tenderers shall provide the additional details in their covering letter. The additional details shall be numbered in accordance with the applicable clause specified in the specification.
- d) As prospective Tenderers are considered to be experts in their field, they are obliged to identify any shortcomings, such as omissions or sub-standard requirements, to the completeness of this specification. These must be brought to the attention of Transnet Engineering at tender stage with alternatives to address these shortcomings. However, each offer shall be quoted for separately.
- e) Alternative offers shall be clearly indicated by the Tenderers why it shall be considered superior and / or more beneficial to Transnet Engineering than that specified.

4. TECHNICAL REQUIREMENTS

The following regulation and codes must be complied with: -

- **The Occupational Health and Safety Act – Act 85 of 1993.**
- **SANS 10142-1 The wiring of premises Part 1: Low-voltage installations.**
- **SANS 10142-2 Code of practice for wiring of premises part 2: Medium- voltage installations above 1kv A.C. not exceeding 22kv A.C. and up to and including 3000kw installed capacity.**
- **SANS 767-1 Earth leakage protection units Part 1: Fixed earth leakage protection circuit-breakers.**
- **SANS 60529:2001/IEC 60529:2001, IDT, Ed. 2.1 Degrees of protection provided by enclosures (IP Code).**
- **SANS 60439-3:2007/IEC 60439-3:2001, IDT, Ed. 1.2 Low-voltage switchgear, and control gear assemblies Part 3: Particular requirements for low-voltage switchgear and control gear assemblies intended to be installed in places where unskilled persons have access for their use - Distribution boards.**

Signature of Bidder/s: _____

Date: _____

- **SANS 60439-1: 2004 Low-voltage switchgear and control gear assemblies Part 1: Type-tested and partially type-tested assemblies.**
- **SANS 1973-8:2008 Low-voltage switchgear and control gear ASSEMBLIES Part 8: Safety of minimally tested ASSEMBLIES (MTA) with a rated short-circuit current above 10 kA and a rated busbar current of up to and including 1 600 A A.C. and D.C.**
- **SANS 1973-3:2008 Low-voltage switchgear and control gear ASSEMBLIES Part 3: Safety of ASSEMBLIES with a rated prospective short-circuit current of up to and including 10 kA.**
- **SANS 1973-1:2007 Low-voltage switchgear and control gear**
- **SANS 1507-6:2007 Electric cables with extruded solid dielectric insulation for fixed installations (300/500 V to 1900/3 300 V) Part 6: Service cables.**
- **SANS 1507-2:2007 Electric cables with extruded solid dielectric insulation for fixed installations (300/500 V to 1900/3 300 V) Part 2: Wiring cables.**
- **SANS 10108 (SABS 0108): The classification of hazardous locations and selection of apparatus for use in such locations.**
- **SANS 60529:2001/IEC 60529:2001, IDT, Ed. 2.1 Degrees of protection provided by enclosures (IP Code).**

- 4.1 Except where otherwise provided for in the specification, all equipment offered will comply with the requirements of the relevant standard specifications of the SABS, if published, otherwise with the relevant standard of the British Standards Institution in force at the time of tendering.
- 4.2 Where equipment offered complies with the recognized standards of the country of manufacture and not specifically with the standards required by this specification, such equipment will be considered at the discretion of Management. In this case, tenders shall state fully all respects in which the equipment departs from the standard laid down in this specification.
- 4.3 The successful tender will at the conclusion of the installation provide a document along the lines “that the installation complies with national/international requirements and that all selected /designed items are compliant with Act 85 of 1995 and SABS practices applicable to the installation. The equipment has been commissioned/ calibrated and employees as specified have been trained and found competent to operate the plant.”

Signature of Bidder/s: _____

Date: _____

5. SPECIFIC REQUIREMENTS

Any person with the intention of procuring the material or goods shall ensure that the information below is complied with. The information or requirement is binding and must be supplied by either the supplier/Contractor in consultation with Transnet or Transnet Engineer and must ensure that mutual agreement is reached between the two parties (Supplier and Transnet) before the supply of material or goods.

Scope of Work:

- 5.1. Manufacture or supply a new 11 kV RM6 unit. The replacement unit shall have the following specifications and compatible to existing base plate and VT metering cubical:
 - Type: DE BBB (3 circuit breaker configuration).
 - Rated voltage: 17,5kV
 - Service voltage: 11kV
 - Rated current: 630A
 - Fr: 50/60Hz
 - Ik: 21kA
 - Up: 95kV
 - IAC A-FL: 20kA @ 1 s
 - Protection relays: VIP 410A
 - 24-125Vdc
 - 100-120Vac
 - Each switch shall have earthing facilities and voltage indicating devices.
 - RMU shall be supplied with all documentation and associated equipment to operate the Ring Main unit
- 5.2. Conduct Factory Acceptance Testing to ensure the equipment is operational before delivery on site or submit the testing report from the manufacturer should the equipment be off the shelf.
- 5.3. Disconnect and remove existing Schneider Electric RM6 unit from base plate and VT metering cubical.
- 5.4. Install the new 11kV RM6 Ring Main Unit
- 5.5. Testing and commission the new RMU where the protection settings are applied by a Pr. Eng. that specializes in substation protection and grading studies.
- 5.6. Issue a medium voltage compliance certificate in line with SANS 10142-2 after installation and provide all the equipment manufacturing documentations.
- 5.7. The ring main unit shall have the 10-year guarantee of spare availability from the manufacturer.

Signature of Bidder/s: _____

Date: _____

6. OTHER INFORMATION RELATED TO THE SCOPE

- 6.1. This specification states the minimum requirements relating to the work and in no way absolves the contractor from responsibility for sound engineering practice. Any omissions or sub-standard requirements of this specification must be brought to the attention of Transnet Engineering at tender stage and optional prices for addressing such omissions must be provided.
- 6.2. Any matter relating to this work, which requires a decision from Transnet Engineering shall be presented to the Project Manager in charge.
- 6.3. All offers shall be completed in every respect with this specification. Only completed tenders shall be considered.
- 6.4. The Technical Officer reserves the right to have the proposal checked independently by a third party.
- 6.5. Tenders must allow for monthly progress and clarification meetings on site initially and after commissioning for defect meetings when required. A meeting will be held after issuing of the tender to establish the exact scope and magnitude of the contract. No tender will be considered unless it has the certificate signed by the Engineer or project manager or his representative.

7. HEALTH AND SAFETY REQUIREMENTS

- 7.1 All equipment and installation whether detailed in this specification or not shall comply with the requirements of the Occupational Health and Safety Act 85 of 1993 as amended and all other applicable legislation including specific set of regulations and local authority bylaws where applicable.
- 7.2 All the necessary safety equipment such as guards over rotating equipment shall be supplied and the equipment shall comply fully with all the requirements of the South African Occupational Health and Safety Act, Act 85 of 1993 and all other applicable legislation including specific set of regulations and local authority bylaws where applicable. At all times during the manufacture, assembly and testing of the equipment the contractor will be responsible for the safety of all persons on site and the equipment.

7.3 SHE SPECIFICATION

Prior to commencement of contract, the contractor shall be issued with a SHE specification in order to compile a SHE files in line with TE requirements.

Prior to establishing on site, it is an explicit requirement of this contract that all of the Contractor's personnel directly involved with this contract, including those of sub-contractors, attend a Safety induction course.

Signature of Bidder/s: _____

Date: _____

Transnet will provide the course free of charge and attendance is compulsory for all personnel under the control of the Contractor who, during the duration of the contract, will be present on site whether on a full time or adhoc basis.

The contractor must allow for all additional charges because of these requirements as no claims for extras will be accepted in connection with the foregoing.

7.4 As part of the legislative and TE SHE requirements.

The successful contractor is required to conduct a Risk assessment to ascertain all potential risks associated with this project. The completed risk assessment is to be formally submitted to the Risk department via the project manager at least two weeks prior to the commencement of the actual project. A safety file and associated documents will be required from a successful tenderer, and such will be communicated by the Risk department.

8. SPECIALIST SUB-CONTRACTORS

8.1. Only specialist sub-contractors who have previously successfully completed work of the type and extent specified in this document should be engaged. The tenderer shall provide the technical officer with sufficient proof of having suitable experience regarding the design and manufacturing of similar equipment.

To this end, complete and detailed reference list shall be submitted with the tender. Reference list shall include addresses as well as contact person who may be visited for inspection of the equipment during the adjudication period.

8.3. The tender shall submit a complete list of proposed sub-contractors and suppliers of major components with his tender.

8.4. The tenderer shall be prepared to commit themselves in writing to the technical officer with an adequate, experienced, and stable project team for the duration of the contract.

8.5. Transnet Engineering will not consider any Tenderer's offer that, in the sole opinion of Transnet Engineering, does not have adequate experience in the design and manufacture of such equipment / product.

9. MATERIAL AND WORKMANSHIP

9.1 The equipment shall be offered complete in all respects, including all standard accessories normally offered by manufactures, all of which shall be specified in detail.

9.2 The equipment, as made and supplied, shall be complete in every respect, of modern design, using the most advanced proven technology extensively supported by reputable local companies, and be built to good engineering practices.

9.3 All equipment shall be adequately protected against damage and contamination during shipping,

Signature of Bidder/s: _____

Date: _____

transport and storage.

10. GENERAL REQUIREMENTS

Operation will be in the following conditions:

Altitude	Sea level
Ambient temperature	0°C to 45°C
Relative humidity	50% to 100%
Atmosphere	Heavy saline

10.1. Tenderers shall indicate clause-by-clause either that they comply in every respect with the specific requirements, or if not, exactly how it differs.

11. DEFINITIONS AND ABBREVIATIONS

CLIENT	Transnet Engineering Durban
TECHNICAL OFFICER	Project Manager, Transnet Engineering Durban
CONTRACTOR	Contractor appointed under this specification document
SABS	South African Bureau of Standards
SANS	South African National Standard
ISO	International Organisation for Standardisation

12. GENERAL

12.1. The successful tenderer will be subjected to a workshop inspection by Transnet Engineering, to ensure that the facilities are to the satisfaction of the Transnet Engineering in terms of the quality control and equipment capabilities for manufacturing such type of equipment.

Signature of Bidder/s: _____

Date: _____

13. SITE ESTABLISHMENT

13.1. The contractor shall be solely responsible for safety of his staff and for providing security to safeguard his works and material on site, until such a time.

13.2. The contractor shall be required to attend site meetings when convened by the Project Leader controlling the contract.

13.3. The contractor will be responsible for any damages caused by his staff to the building and civil works on site.

14. PENALTY CLAUSES

14.1. Due to the criticality of this project, penalties will be levied for late deliveries.

Signature of Bidder/s: _____

Date: _____

TRANSNET LIMITED

16.1 SCHEDULE OF PRICES:

All prices **exclude Vat** and additional items listed (with prices) shall be clearly labelled as optional or essential.

Replacement of Schneider RM6 unit in Teakwood Rd substation

Item	Description	Quantity	Material	Install	Total
1	Disconnect and remove existing Schneider Electric RM6 unit from base plate and VT metering cubical.	1 EA			
2	Supply and install new 11kV RM6 unit. Replacement unit shall have the following specifications and shall be compatible to existing base plate and VT metering cubical. <ul style="list-style-type: none"> Type: DE BBB (3 circuit breaker configuration). Rated voltage: 17,5kV Service voltage: 11kV Rated current: 630A Fr: 50/60Hz Ik: 21kA; Up: 95kV IAC A-FL: 20kA @ 1 s Protection relays: VIP 410A 24-125Vdc; 100-120Vac 	1 EA			
3	Each switch shall have earthing facilities and voltage indicating devices.				
4	RMU shall be supplied with all documentation and associated equipment to operate the Ring Main unit.	3 sets			
5	Protection settings shall be applied by a Pr. Eng. that specializes in substation protection and grading studies.	1 EA			
6	Issue a CoC for the installation as per SANS 10142-2	1 EA			
	The ring main unit shall have the 10-year guarantee of spare availability from the manufacturer				

Tenderer: _____

Date: _____

Witness 1: _____

Date: _____

Witness 2: _____

Date: _____

Signature of Bidder/s: _____

Date: _____

17. TENDER EVALUATION CRITERIA

The following criteria will be used to award the tender. Should there be a criterion over and above the listed below, that will be used, such criteria will be specifically stated.

Technical evaluation criteria

No.	Pre-Qualification Criteria												
	TECHNICAL DESCRIPTION (The technical evaluation will be used as a threshold. All bidders who do not meet the minimum threshold of 80 points will not proceed to the final stage of evaluation.)												
	Technical Evaluation Criteria	Weightings	Scoring guideline										
17.1	<p>The methodology, standards and working procedures that will be used in the execution of this contract (detailed written process and project plan to be supplied by the bidder):</p> <p>The methodology that will be used in the execution of this contract is provided. A process /project plan for the execution of this contract is provided.</p> <p>The methodology shall detail project time, all project activities, method of executing each activity, details on materials transportation and storage, drawing of concrete samples, submission of test results, all activities leading up to completion of the project.</p>	15 points	<table><tr><td>Methodology provided, fully detailed (purchase of materials, storage, toolbox safety talks, quality checks, project schedule).</td><td>15 points</td></tr><tr><td>Methodology missing information on prescribed topics.</td><td>0</td></tr><tr><td>Methodology not submitted</td><td>0</td></tr></table>	Methodology provided, fully detailed (purchase of materials, storage, toolbox safety talks, quality checks, project schedule).	15 points	Methodology missing information on prescribed topics.	0	Methodology not submitted	0				
Methodology provided, fully detailed (purchase of materials, storage, toolbox safety talks, quality checks, project schedule).	15 points												
Methodology missing information on prescribed topics.	0												
Methodology not submitted	0												
17.2	<p>Project Plan and Final Lead time</p> <p>(Note: Project Plan must be submitted in either excel or MS project format)</p>	15 points	<table><tr><td>Project Plan final Lead time equals/less than 20 working days</td><td>15 points</td></tr><tr><td>Project Plan final Lead time between 20 – 25 working days</td><td>10 points</td></tr><tr><td>Project Plan final Lead time greater than 25 working days</td><td>0</td></tr></table>	Project Plan final Lead time equals/less than 20 working days	15 points	Project Plan final Lead time between 20 – 25 working days	10 points	Project Plan final Lead time greater than 25 working days	0				
Project Plan final Lead time equals/less than 20 working days	15 points												
Project Plan final Lead time between 20 – 25 working days	10 points												
Project Plan final Lead time greater than 25 working days	0												
17.3	<p>Specific knowledge relating to projects of this nature</p> <ul style="list-style-type: none">• Previous experience of supply, delivery, installation, of palisade fences (steel or concrete) in the past 10 years, with contactable references.• Only completed projects will be considered during the evaluation of bids.• Each reference letter shall bear (among other details) the letterhead of previous client, date of project completion, date of letter, valid contact numbers and contact person(s).	25 points	<table><tr><td>4 letters submitted</td><td>25 points</td></tr><tr><td>3 letters submitted</td><td>15 points</td></tr><tr><td>2 letters submitted</td><td>10 points</td></tr><tr><td>1 letter submitted</td><td>5 points</td></tr><tr><td>No letter(s) submission</td><td>0</td></tr></table>	4 letters submitted	25 points	3 letters submitted	15 points	2 letters submitted	10 points	1 letter submitted	5 points	No letter(s) submission	0
4 letters submitted	25 points												
3 letters submitted	15 points												
2 letters submitted	10 points												
1 letter submitted	5 points												
No letter(s) submission	0												
17.4	<p>Compliance to scope of work</p> <p>Adherence to TE scope of work (read, completed and signed off all the pages and return with tender document).</p>	45 points	<p>Compliance to scope of work on page 5, page 7 and page 15 by writing “YES” or ticking “✓” (to indicate compliance). 45 points</p> <p>Non-compliance to scope of work by writing “No” or not fully completing the compliance tables (including not fully completing the bid document) 0</p>										

Total Weighting:

100 points

Minimum qualifying score required:

80 points

Signature of Bidder/s: _____

Date: _____