

BRAAMFONTEIN PLANT EQUIPMENT			
Doc No & Version		Millwright	Nkosana Zondi
Creation Date	2024-05-06	Act Systems Engineer	Motlatjo Kgare
Last Edit Date	2024-05-10	Systems Engineer	Thabo Mokoena




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	Capital Programme supported:		
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1. Scope.

This specification covers PRASA requirements for the following.

Supply maintenance services for the admin generators at Wolmerton and Braamfontein Rolling stock Depots.

2. Definitions.

- 2.1. **Metrorail:** Suburban commuter rail transport.
- 2.2. **EMU:** Electrical Multiple Units
- 2.3. **PRASA:** Passenger Rail Agency of South Africa.
- 2.4. **"Supply"** includes fabrication, installation, testing and commissioning and Certification of the equipment/Instruments/Tools.

3. Terms of reference.

The primary objective for repair and maintenance of plant power generators is to ensure maximum availability, reliability, and operational readiness of backup or primary power sources, thereby minimizing unexpected downtime.

Rolling stock core function is to do maintenance of trainsets and thus obliged to ensure compliance to the legislated safety standards as set out in the OHS ACT85 and to Prasa maintenance and Standard requirements for world class best practices.

4. Scope of Supply.

The scope of a supplier is to provide services to PRASA Wolmerton and Braamfontein Rolling Stock Depots, works include the servicing (preventative and corrective maintenance) of 3 * 50KVA and 2 * 40KVA Industrial Diesel Generators as per and not only limited to this specification. The location of the works is Wolmerton and Braamfontein Rolling Stock Depot. The contractor shall submit report for all the works and will issue a CoC that comply with the requirements outlined herein.

The Contractor shall provide all labor, materials, tools, and technical expertise to perform preventative maintenance, routine servicing, and emergency repairs to ensure the generator remains in peak condition and complies with SANS 8528 series of standards for safety and performance.

Tool/Equipment Supply:

4.1. Quality Assurance:

- 4.1.1. **Standards Compliance:** Ensuring all tools and equipment meet relevant industry standards and specifications.
- 4.1.2. **Inspection and Testing:** Pre-delivery inspection and testing of tools and equipment to ensure they are in proper working condition.

4.2. After Sale Support: Warrantee, Spares, Technical service.

Supplier to provide the details for after sales service support and spare parts

- 4.2.1. After-sales support is a service that is provided after product, or services have been sold. Most after-sales support involves a guarantee, warranty, upgrade or repair service as well as ensuring spares availability. Some of the after sales customer supports includes an ongoing relationship with the original equipment manufacturer (OEM) throughout the life cycle of the product or service, while other warranties are under time constraints.

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4.2.2. After-sales support includes customer support and customer service, which is standardized by the International Customer Service Institute.

4.2.3. Today, after-sales support continues to be an important tool for both consumers and manufacturers. A customer expects a cost-effective and reliable after-sales support service. Manufacturers also rely on consumer satisfaction to maintain business and sales. Without a good after-sales support service, a product can be difficult to sell.

4.3. Technical Documentation:

4.3.1. **User Manuals:** Detailed manuals for all supplied tools and equipment.

4.3.2. **Standards Compliance:** Provide compliance certification

5. Technical Requirements.

- 5.1. Supply corrective and preventative maintenance of 3 * 50KVA.
- 5.2. Supply corrective and preventative maintenance of 2 * 40KVA
- 5.3. Supply, deliver, install and commission 380V 4-core armoured cable between DB boxes.
- 5.4. Certification of electrical equipment compliance

Guarantee and Inherent Defects:

- 5.5. The works shall be guaranteed for a period of 12 months commencing from the date of commissioning or hand over to Metrorail whichever comes first.
- 5.6. The contractor shall rectify defects that may arise during the guarantee period within 7 days of being notified by Metrorail.
- 5.7. Should the Contractor fail to comply with the requirements stipulated above, Metrorail shall be entitled to undertake the necessary repairs of work or effect replacement of defects apparatus or material and the contractor shall reimburse the client the total cost of such repair or replacement, including labour costs incurred in replacing defective apparatus or materials.
- 5.8. Metrorail shall issue a completion certificate indicating the completion date.
- 5.9. Quality of work must be as set by Prasa requirements and relevant standards.
- 5.10. The approved supplier shall guarantee that when the equipment fails will be repaired and returned to service within 10 (ten) working days, from the date of being notified of the defect.

Document Management.

- 5.11. Standard certificate of compliance, calibration and guarantee should be submitted during the delivery.
- 5.12. Technical and Service manuals should be submitted during the delivery.

6. Pricing and delivery schedule

Definitions/Abbreviations

- SANS 3000– South African National Standard
- ISO – International standard organisation
- ARR- Association of American Railroads

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Bill of Quantity

Item	DESCRIPTION	UOM	QTY	UNIT PRICE	TOTAL (VAT Inclusive)
1.	Supply corrective and preventative maintenance of 50KVA.	each	3	R	R
2.	Supply corrective and preventative maintenance of 2 * 40KVA	each	2	R	R
3.	Supply, deliver, install and commission 380V 4-core armored cable 25mm ²	Mtrs	125m	R	R
TOTAL (VAT Inclusive)					R

7. Specifications of the Work or Products or Services Required definitions

HIGH QUALITY INDUSTRIAL APPARATUS AND EQUIPMENT SPECIFICATION	
<p>WOLMERTON</p> 	<p>TECHNICAL DATA</p> <p>WORKS INCLUDE</p> <p>General Inspection</p> <ul style="list-style-type: none"> - Check for leaks (Oil, fuel, water, coolant) - Corrosion and loose parts - Battery check (testing and condition monitoring) - Load Test - Wiring, Connections, Circuit Breakers & Contactors - Check Cooling loop for leaks (flush system if necessary) - Inspect and replace the air filter element <ul style="list-style-type: none"> - Inspect and replace the engine oil, oil filter and fuel filter
<p>BRAAMFONTEIN</p> 	<p>Electrical Specifications</p> <ul style="list-style-type: none"> • Rated Power: 40 kW • Rated Voltage: 380/220 V • Rated Current: 76 A • Frequency: 50 Hz • Phase/Power Factor: 3 Phase / 0.8 cosφ <p>Mechanical & Operational Details</p> <ul style="list-style-type: none"> • Model: 40KW • Rated Speed: 1500 R.P.M. • Net Weight: 1190 kg • Date of Manufacture: September 2021 (2021-09) • Serial Numbers: 20210100015 and 20210100017