

## TERMS OF REFERENCE FOR PRASA A-CORRIDOR: KWAMASHU - DURBAN TRAIN STATION - OHTE AND TRACTION SUBSTATIONS INSPECTION



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### PRASA KwaMashu to Durban Train Stations OHTE inspection Terms of Reference

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Mr Boy Johannes Nobunga (Chairperson), Ms Yongama Pamla (Deputy Chairperson), Mr Mmuso Selaledi (Acting Chief Executive Officer), Adv Johannes Collen Weapond, Mr Sisa Lunga Mtwa, Ms Nompumelelo Sibongile Ekeke, Adv Frans Johannes Van Der Westhuizen, Ms Dineo Mathibedi, Mr Christiaan Johan de Vos, Mr Godfrey Maluleke

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## 1. BACKGROUND

- 1.1. The 3kV DC Overhead Traction Equipment (OHTE) between KwaMashu and Durban Train Stations has been partially restored. The Passenger Rail Agency of South Africa (PRASA) is currently operating Electric Multiple Unit (EMU) trains in this corridor since September 2023.
- 1.2. The OHTE in the corridor has not been fully restored on both lines since the resumption of the train service.

## 2. STATEMENT OF INTENT

- 2.1. An inspection will be conducted in accordance with Section 38 and in compliance with Section 30(b) of the Railway Safety Regulator Act, Act 16 of 2002 (as amended).
- 2.2. The purpose of the Terms of Reference (TOR) document is to appoint a service provider to render specialist services in conducting an OHTE and Traction Substation infrastructure inspection between KwaMashu and Durban Train Stations via Greenwood Park, as well as the section from Duffs Road to Bridge City Train Station.
- 2.3. The service provider will comprise extensive knowledge and skills on 3kV DC OHTE and Traction Substations railway infrastructure experience.
- 2.4. The objective of the OHTE and Traction Substations inspection between KwaMashu and Durban Train Stations is to:
  - a) verify whether the OHTE infrastructure and Traction Substations complies with the relevant legislation, and to
  - b) determine whether the OHTE infrastructure and Traction Substations conditions meet the minimum operating standards.

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### 3. MANDATE

- 3.1. The service provider is required to inspect the 3kV DC OHTE, Traction Substations, record findings made and report on the following:
  - (a) Whether the OHTE and Traction Substations infrastructure complies with the relevant legislation.
  - (b) Whether the OHTE and Traction Substations infrastructure conditions meet the minimum operating standards.
- 3.2. There are ten (10) train stations between KwaMashu and Durban Train Stations, namely, KwaMashu, Thembalihle, Duffs Road, Avoca, Redhill, Greenwood Park, Briadene, Umgeni, Moses Mabhida and Durban. The service provider will work on sampled sections for the OHTE inspection in this corridor. The sampled sections will include all the OHTE and Traction Substations between KwaMashu and Durban, via Greenwood Park, as well as the section from Duffs Road to Bridge City Train Station.
- 3.3. There are four (4) traction substations and one (1) tie station between KwaMashu and Durban Train Stations. The traction substations are Durban, Springfield, Duffs Road (Transnet owned) and Bridge City and one (1) tie station, i.e., KwaMashu.
- 3.4. The service provider is further mandated to make recommendations to improve the OHTE and Traction Substations infrastructure conditions in the corridor.
- 3.5. The service provider is requested to formulate their recommendations in such way that:
  - (a) The recommendations are clear, specific, and unambiguous as to what is expected, and from whom.
  - (b) The recommendations are measurable, practical, and attainable.

### 4. SCOPE OF WORK

- 4.1. The appointed service provider will conduct an OHTE and Traction Substations infrastructure inspection in the railway corridor between KwaMashu and Durban Train Stations.
- 4.2. The service provider will:

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- a) Conduct an inspection of the 3kV DC OHTE and Traction Substations at the selected sections between KwaMashu and Durban Train Stations to assess the condition of the OHTE and Traction Substations infrastructure installed in the section. The service provider will also observe train traffic and the types of trains using the corridor.
- b) Engage in discussions with following key PRASA personnel to understand the challenges experienced in the section and the controls implemented for safe train operations in the section:
  - OHTE infrastructure Managers
  - Permanent Way managers
  - Train Operations Managers
  - Safety Managers
  - Any other relevant personnel that can help the inspection.
- c) Request and peruse the following OHTE and Traction Substations infrastructure documents.
  - OHTE and Traction Substations infrastructure Risk Assessments
  - Traction Substation and OHTE Inspection reports
  - Corridor Inspection reports
  - Corrective Action Implementation
  - Any other documents that may help the service provider with the inspection.
  - Traction Substation test reports and other OHTE tests in the corridor
- d) Conduct OHTE and Traction Substations verifications tests with PRASA personnel where required. The verification tests will be guided by what comes out from the inspections, discussions, and perusal of documents.
- e) Make recommendations to improve the OHTE and Traction Substations infrastructure conditions in the corridor.
- f) Provide an inspection report covering the complete allocated scope.

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- g) The service provider receives its powers to conduct this investigation from section 33 of Act 16 of 2002. The service provider has the same powers as any RSR Railway Safety Inspector.
- h) A total of 180 hours will be allocated for this assignment. The 180 hours includes review of documents, site visits and inspections, interviews, drafting of the inspection report and any other relevant activity that will make this project a success.

## 5. PROJECT DELIVERABLES

- 5.1. After the appointment, the service provider will commence with the OHTe and Traction Substations infrastructure inspection in the corridor and drafting of the inspection report. The service provider shall submit the draft report (excluding all annexures that are supporting documents and not directly required to facilitate the understanding of the draft inspection report) to the RSR Eastern Region (Regional Technical Manager of the Railway Safety Regulator). The purpose hereof is to ensure that the service provider has met the conditions of the Terms of Reference and that the report reflect such.
- 5.2. Upon receipt of the draft inspection report, the Regional Technical Manager will require five (5) working days to scrutinise the draft inspection report and to make recommendations and to provide direction, if any, to the service provider.
- 5.3. The service provider will incorporate inputs and corrections as discussed with the Regional Technical Manager. The service provider shall submit the final OHTe and Traction Substations infrastructure inspection report back to the RSR Regional Technical Manager within (5) working days of receiving inputs.

## 6. QUALIFICATIONS AND EXPERIENCE

- 6.1 The service provider shall comprise two (02) railway OHTe and Traction Substations infrastructure specialists:

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- (a) Qualified and experienced expert in railway OHTE and Traction Substations infrastructure.
- (b) The persons must have extensive experience in railway OHTE, Traction Substations and an excellent understanding of train operations.
- (c) The persons must have extensive understanding of railway safety management.
- (d) The persons must have a workable knowledge of SANS 3000 series of standards.

## 7. RESPONSIBILITY OF THE RSR

- 7.1. The RSR shall support the service provider with the following support specialist:
  - a) 1 x RSR Principal Inspector. The Principal Inspector will work with the service provider and act as a Railway Operator Liaison Support.
- 7.2. The RSR, hereby agree to remunerate the service provider at the agreed hourly rates, including such other unavoidable incidental costs incurred in the execution of this Terms of Reference in line with the pricing schedule/table below.

## 8. PROPOSAL SUBMISSION

- 8.1 The bidder must provide a detailed proposal as part of the tender, addressing and including at least the following:
  - a) Proven previous experience, including testimonials from previous contracts on railway OHTE and Traction Substations infrastructure management; The testimonials/reference letter should be on a client's official letterhead with valid and traceable contact details, scope of the work and standard of service. RSR may contact the references to confirm the information provided.
  - b) Demonstrable capacity to deliver on all the desired services that include response to the project scope and allocated resources.
  - c) A detailed methodology on how the project scope will be delivered.

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- d) A Project Management plan, covering project management reports.
- e) All prices should be VAT Inclusive and include all travelling, and accommodation expenses as they will be arranged and paid for by the service provider.

## 9. COMPULSORY BRIEFING SESSION

The bidders will be required to attend a compulsory briefing session

## 10. PHASE 1: COMPLIANCE DOCUMENTS

Kindly refer to section 4 of the RFQ attached.

## 11. PHASE 2: MANDATORY REQUIREMENT

- a) The persons must be registered with Engineering Council of South Africa (ECSA) in terms of the Engineering Profession Act 46 of 2000 as a Professional Engineer or Technologist. **(Submit a valid proof)**

**Failure to submit the above will result to a disqualification.**

## 12. PHASE 3: FUNCTIONALITY EVALUATION

The suitable service provider must demonstrate capacity and capability to execute this project by complying with the functionality criteria **Error! Reference source not found.** below: - **Functionality Criteria**

FUNCTIONALITY CRITERIA		100
12.1.	<b>COMPANY EXPERIENCE</b>	<b>10 POINTS</b>

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12.1.1	<p>Company's proven experience in Participating in conducting railway inspections.</p> <p>Contactable Testimonials and/or references (not older than 10 years)</p> <p>3 References and above = 10 points</p> <p>2 References = 7 points</p> <p>1 Reference = 4 points</p>	10
12.2	<b>BIDDER'S TECHNICAL TEAM QUALIFICATION &amp; EXPERIENCE</b>	<b>45 POINTS</b>
12.2.1	<p>Enclosure:</p> <p>1. The Team will comprise of 2 (two) experts</p> <p><i>The CV's and certified certificates of both experts will be used for evaluation for the OHTe and Traction Substations Specialist and average their scores.</i></p> <p><b>The scoring of the key personnel will be as below:</b></p> <p><b>OHTe and Traction Substations Specialists- (Average points = 20 Max )</b></p> <p>1. Qualifications - Qualification in Engineering [or its International Qualification equivalent <b>as verified by South African Qualification Authority (SAQA)</b>. It is the responsibility of the bidder to secure the verification]</p> <p>a) Post-graduate = 20 points  b) Bachelor's Degree = 15 points  c) National Diploma = 10 points  d) No qualification = 0 points</p> <p>2. Years of work experience in railway OHTe and Traction Substations inspections – Average points = 25 Points  (Clarity number of years with each employer)  (e.g. 2012- 2014 conducting railway OHTe and Traction Substations inspections at company X)</p> <p>a) 10 years or more = 25 points  b) 8 or more years but below 10 years = 20 points  c) Less than 8 years = 15 points  d) No experience = 0 points</p>	20 25
10.3	<b>APPROACH TO WORK</b>	<b>45 POINTS</b>
12.3.1	Structured Approach/Methodology and Project Plan covering management of the scope.	
12.3.1.1	<b>Structured Approach/Methodology</b> (Comprehensive Methodology that highlights techniques that will be employed for the project, this must include the approach	30

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	and alignment to best practice)	
	<ul style="list-style-type: none"> <li>Well defined approach methodology= 30 points</li> <li>Moderately defined approach methodology= 20 points</li> <li>Poorly defined approach methodology= 10 points</li> <li>No approach methodology= 0 points</li> </ul>	
12.3.1.2	<b>Project Plan covering management of the scope with milestones/phases and timelines</b>	15
	<ul style="list-style-type: none"> <li>Well defined Project Plan= 15 points</li> <li>Moderately defined Project Plan= 10 points</li> <li>Poorly defined Plan Plan= 05 points</li> <li>No project plan= 0 points</li> </ul>	
	<b>TOTAL</b>	<b>100</b>

Only bidders that scored a minimum of **70 points** of the total points at the functionality phase will proceed to the next evaluation.

## 12.1 PRICING SCHEDULE

Hours to be Spent for duration (Estimated)	Position	Rate per hour	Total (Maximum)
90 hours	OHTE and Traction Substations Infrastructure Expert 1	R	R
90 hours	OHTE and Traction Substations Infrastructure Expert 2	R	R
<b>Sub Total</b>			<b>R</b>
<b>VAT @ 15%</b>			<b>R</b>
<b>Grand Total</b>			<b>R</b>

All prices should include VAT.

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