

ESKOM ROTEK INDUSTRIES - CONSTRUCTION SERVICES - POWERLINES DIVISION

The *Contractor* is referred to the full intent and meaning of each clause or item herein. He shall allow opposite each clause or item, whatever payments he may consider necessary, to carry out and observance of same.

ESKOM ROTEK INDUSTRIES - CONSTRUCTION SERVICES - POWERLINES DIVISION**PREAMBLES**

- 1 The Tenderer is advised to read and understand all aspects and documentation associated with this Enquiry BEFORE inserting his Prices and or Amounts.
- 2 The bill of quantities provides the basis of all valuations of the work and general progress monitoring.
- 3 The amount due at each application for payment is based as measured in terms of the bill of quantities. The Contractor provides all necessary information which is required to determine amounts due at each application for payment relative to the completed works.
- 4 The total of the prices includes for all direct and indirect costs, overheads, profits, on costs, risks, liabilities, obligations, etc. relative to the contract.
- 5 All values are total values prior to any retention and excludes VAT. Retention is not calculated in the forecast rate of payment Bill (FRP).
- 6 Tenderer to check and take responsibility for all descriptions, formulae and structure of this file.

A Free issue of Material by the Employer

- 1 Tenderers are advised that the Employer may provide certain Free Issue Materials and or Components and or Plant and or Equipment to the Contractor at no cost to the Contractor. The Contractor shall price for the taking delivery, protection, inspection, testing, storing as required and installation complete as more fully described within this Enquiry Documentation.

B GUIDANCE BEFORE PRICING AND MEASURING

- 1 The NEC's approach to the Preliminary & General (P&G) section of the bill of quantities assumes use will be made of method related charges for project applied to providing the works based on durations shown in the Accepted Programme. Fixed charges for the use of Equipment that are required throughout the construction phase, time related charges for people working in a managerial and supervisory capacity for the period required, and lump sum charges for other facilities or services not directly related to performing work items typically included in other parts of the bill of quantities.
- 2 The P&G section of the bill of quantities is not used for the assessment of compensation events but can however be used as a guide.

C METHOD OF MEASUREMENT

- 1 The bill of quantities comprises a list of work items and quantities, based on standard methods of measurement, which are either published or stated herein and state the items to be included and how quantities are to be calculated and the items and activities that are deemed to be included within the Rates and Prices inserted by the Tenderer.
- 2 Tenderers shall price the items, taking account all of the information within and associated with the tender documents and shall include for all matters, which are at the Contractors risk.
- 3 All enquiry documents supplied must be considered for pricing the items in the Bills of Quantities for the completion of the works.
- 4 Unless otherwise stated, items are measured net in accordance with the contract drawings, and no allowance has been made for waste or bulking or compaction or evaporation or loss by any means whatsoever.
- 5 The quantities contained in the bill of quantities are provisional shall not be used for ordering purposes. No claims whatsoever, however arising will be

entertained, should the bill of quantities have been used for ordering and or procurement purposes.

D RATES AND PRICES

- 1 Rates and Prices shall be expressed to two decimal places (i.e. cents) except in the case of a NIL rate or price.
- 2 The Tenderers Rates and Prices shall be inserted in the bill of quantities are deemed to be the fully inclusive Rates and Prices to the Employer for the work described under the several items. Such Rates and Prices shall cover all costs and expenses that may be required in, and for the prompt and efficient and safe execution of the work described, and shall cover the cost of all general risks, liabilities and obligations set forth or implied in this Enquiry document.
- 3 Rates and Prices for items which are required to be inserted in the bill of quantities by the Tenderer and which have not been duly inserted, are deemed to be to be covered by other Rates and Prices in the bill of quantities.
- 4 The Tenderers omission to insert Rates and Prices shall not be deemed to be a qualified exclusion to execute such work, activity or responsibility.
- 5 The Rates and Prices are deemed to include (unless otherwise specifically stated in the bill of quantities or herein) all the relevant costs associated with the Clauses of Contract as amended and shall include but not be limited to the following cost components:
- 6 The Tenderer is deemed to have obtained all the necessary information required to adequately price the scope of work associated with this Enquiry and no no claim shall be considered resulting from lack of knowledge in this respect.

Item	Description		Unit	Qty	Rates			Total
					Fixed	Time Related	Value Related	
					(1)	(2)	(3)	
					(2)	(3)	(4)	(1)x(2) OR (2)+(3)+(4)
1	Bill No. 1 - Preliminary and General							
The <i>Contractor</i> is referred to the full intent and meaning of each clause or item herein. He shall allow opposite each clause or item, whatever payments he may consider necessary, to carry out and observance of same. The <i>Contractor</i> shall price Bill No. 1 - Preliminary and General in respect of all payment required for any work, risk, contingency or obligation whatsoever, that is not described in the <i>Bill of Quantities</i> and which is his responsibility under the Contract.								
1.1	WORKS INFORMATION							
1.1.1	Programme ; Contractors Insurance ; Performance Bond ; Drawings & Specifications ; Quality management (incl. Contractor's Quality Plans)		sum	1				-
1.2	SITE COSTS AND OVERHEADS							
1.2.1	Establish staff accommodation and site camp, including sanitation as per OHS ACT's requirements and remove on completion.		sum	1				-
1.3	ADDITIONAL & MISCELLANEOUS COSTS							
1.3.1	Contractor to specify here any costs foreseen not made provision for.		PSUM	1				-
Carried forward to Bill No.7- SUMMARY								-

Item	Description		Unit	Qty	Rates			Total Price
					Fixed	Time Related	Value Related	
					(1)	(2)	(3)	
				(1)	(2)	(3)	(4)	(1)x(2) OR (1)x(3) OR (2)+(3)+(4)
2.0	SAFETY MANAGEMENT							

2.1	Supply of all items of Personal Protective Clothing/Equipment & ensure use thereof for full compliance							
2.1.1	Steel toe capped safety boots. ; Appropriate protective clothing as per Eskom SHE specification. ; Task specific gloves. ; Colour coded hard hats as per latest Eskom specification. ; Ear protection (earplugs etc). ; Eye protection appropriate to task performed. ; Induction tags/cards. ; Luminous high visibility safety vests.		sum	1				-
2.2	Supply and provision of Equipment for working at Heights & ensure use thereof for full compliance to OHS ACT and Eskom's SHE spec							
2.2.1	Fall protection equipment incl but not limited to Safety Harness(double lanyard), ropes, pulleys etc. ; Evaluation of physical and psychological fitness of personnel working at heights. ; Access ladders. ; Portable Ladders.		sum	1				-
2.3	Barricading Supply & install, including removal upon completion to ensure full compliance to legislation:							
2.3.1	Temporary fence barricading along perimeter of excavated areas ; Marking of excavation and peggings		sum	1				-
2.4	SHE File Recording & availability of SHE File/Site							
2.4.1	Compile SHE plan and file.		sum	1				-
2.5	Transport							
2.5.1	Transportation of employees in compliance with the Transportation of employees procedure (Preferred usage of local taxi association).		sum	1				-
2.6	Compliance							
2.6.1	Full Compliance with latest revision of OHS act.		sum	1				-
2.70	SHEQ Appointment							
2.7.1	Appointment of SHEQ OFFICER FULL TIME ON SITE Costs associated with the appointment of Safety personel and actual time spent on implementation, managing, documenting, monitoring, reviewing, internal and external audits, incident investigations and mitigating safety related impacts.		sum	1				-
2.7.2	Appointment of a registered Construction Manager FULL TIME ON SITE.		sum	1				-
					Carried forward to Bill No.7- SUMMARY			-

BILL No. 5 - STRINGING								
ITEM	DESCRIPTION		UNIT	QUANTITY (1)			RATE (4)	TOTAL PRICE (1)x(4)
5.1	DRESSING OF TOWERS WITH EARTHWIRE ASSEMBLIES <i>(Including all handling, cartage and attaching earth conductors to towers). Dressing method will be specified under the Works Information. Specific tower type to be added per project.</i>							
5.1.1	Self Supporting Angle Strain 0° Terminal - All Types		No.	192				-
5.1.2	Self Supporting Suspension - All Types		No.	192				-
5.1.3	Cross-rope Suspension Towers - All Types		No.	192				-
5.1.4	Guyed "V" Suspension Towers - All Types		No.	192				-

5.1.5	Cross-rope Angle Strain 0° - 15° - All Types		No.	192				-
5.1.6	Guyed Single Mast Angle Strain 15° - 30° - All Types		No.	192				-
5.1.7	Self Supporting Angle Strain 0° Terminal - All Types		No.	192				-
5.2	STRINGING AND REGULATING OF EARTHWIRES <i>(Including all handling, cartage and installation of line hardware)</i>							
5.2.1	Horse		km	436				-
5.2.2	Panther		km	436				-
5.2.3	2 x 7/3.35 Steel earthwire		km	436				-
5.2.4	2 x 19/2.7 Steel earthwire		km	436				-
5.2.5	BURYING OF EARTHWIRE							
5.2.5.1	Earthwire to transverse down the tower, underground and transverse up the tower		km	12 000				-
5.3	DRESSING OF TOWERS WITH PHASE CONDUCTOR ASSEMBLIES <i>(Including all handling, cartage and attaching phase conductors to towers)</i>							
5.3.1	Self Supporting Angle Strain 0° Terminal - All Types		No.	192				-
5.3.2	Self Supporting Suspension - All Types		No.	192				-
5.3.3	Cross-rope Suspension Towers - All Types		No.	192				-
5.3.4	Guyed "V" Suspension Towers - All Types		No.	192				-
5.3.5	Cross-rope Angle Strain 0° - 15° - All Types		No.	192				-
5.3.6	Guyed Single Mast Angle Strain 15° - 30° - All Types		No.	192				-
5.3.7	Self Supporting Angle Strain 0° Terminal - All Types		No.	192				-
5.3.8	Cross-rope Suspension Towers - All Types		No.	192				-
5.4	STRINGING AND REGULATING OF PHASE CONDUCTORS <i>(Including all handling, cartage and installation of line hardware)</i>							
5.4.1	3 Phase triple Bersfort		circuit km.	192				-
5.4.2	3 Phase triple Tern		km	8				-
5.4.3	2 x Dinosaur		km	4				-
5.4.4	1 x Wolf		km	4				-
5.4.5	3 Phase triple Bersfort Jumpers		tower	128				-
5.4.6	3 Phase triple Bull Jumpers		tower	16				-
5.5	STRINGING AND REGULATING OF OPGW <i>(Including all handling, cartage, jumpers and installation of line hardware)</i>							
5.5.1	Contractor to provide for complete installation of OPGW, all associated hardware assemblies, all tubing and duct cabling from patch panel to patch panel		km	212				-
5.5.2	OPGW end-to-end testing - Section A to Section D (Tower 1 to Tower 517)		no.	8				-
5.5.3	OPGW end-to-end testing - Section A (Tower 1 to Tower 124)		no.	8				-
7.	STRINGING AND REGULATING OF PHASE & EARTH CONDUCTORS OF SLACK SPAN <i>(Including all handling, cartage, jumpers and installation of line hardware)</i>							
7.1	3 Phase twin horizontal "Bull" AAC		no.	4				-
8.	TESTING							
8.1	Dead-end and mid-span joints for earthwire Horse		no.	24				-
8.2	Dead-end and mid-span joints for earthwire Panther		no.	24				-
8.3	Dead-end and mid-span joints for 19/3.35 Steel earthwire		no.	24				-
8.4	Dead-end and mid-span joints for 19/2.7 Steel earthwire		no.	24				-

8.5	Dead-end and mid-span joints for Bersfort		no.	24				-
8.6	Dead-end and mid-span joints for 2 x Dinosaur		no.	16				-
8.7	Dead-end and mid-span joints for Wolf		no.	16				-
8.8	Dead-end and mid-span joints for 3 x Tern		no.	16				-
8.9	All necessary testing on the OPGW i.e splicing		no.	60				-
5.5	WEEKEND WORK							
5.5.1	Saturday work by stringing team on the <i>Supervisor's</i> instruction (team per day)		No.	24				-
5.5.2	Saturday work by regulating team on the <i>Supervisor's</i> instruction (team per day)		No.	24				-
5.5.3	Sunday and Public Holiday work by stringing team on the <i>Supervisor's</i> instruction (team per day)		No.	24				-
5.5.4	Sunday and Public Holiday work by regulating teams on the <i>Supervisor's</i> instruction (team per day)		No.	24				-
5.6	RELOCATION							
5.6.1	Relocation of complete stringing and regulating teams and equipment necessary for out of sequence work due to instruction by the Employer (Per Move).		No.	36				-
5.6	RETURN TO SITE OF STRINGING AND REGULATING TEAMS							
5.6.1	De-establish and re-establish stringing teams including plant, equipment and miscellaneous items upon completion of works on instruction by the Employer.		No.	16				-
14.	METHOD OF CROSSINGS (UNDER LIVE CONDITIONS, CONTRACTOR TO SPECIFY) (Includes supply, installation and removal of all equipment, material and safety nets)							
14.1	400kV Line crossing		no.	8				-
14.2	275kV Line crossing		no.	8				-
14.3	132kV Line crossing		no.	24				-
14.4	Low voltage (11 & 22 & 33 kV) line crossing		no.	16				-
15.	METHOD OF CROSSINGS (UNDER OUTAGE CONDITIONS, CONTRACTOR TO SPECIFY) (Includes supply, installation and removal of all equipment, material and safety nets)							
15.1	400kV Line crossing		no.	0				-
15.2	275kV Line crossing		no.	0				-
15.3	132kV Line crossing		no.	0				-
15.4	Low voltage (11 & 22 & 33 kV) line crossing		no.	1				-
16.	METHOD FOR OTHER CROSSINGS (CONTRACTOR TO SPECIFY) (Includes supply, installation and removal of all equipment, material and safety nets)							
16.1	River/Water course crossing		no.	8				-
16.2	Railway crossing		no.	8				-
16.3	Dirt road crossing		no.	12				-
16.4	Main road crossing		no.	8				-
16.5	Regional road crossing (R510 & R518)		no.	12				-
16.6	Conveyor belt crossing		no.	8				-

14.7								
17.	ADDITIONAL EARTHING DUE TO NARROW SERVITUDE							
17.1	Contractor to specify methods of earthing and additional measures required to string between narrow servitude (must incl. all mitigation material and equipment i.e. nets, etc.)	km	10					-
18.	ALTERNATIVE CONSTRUCTION METHODS (used where vehicular access is impossible or prohibited on the Supervisor's agreement/instruction)							
18.1	Other Stringing method i.e pulling pilot rope by hand (Contractor to specify)	route km	10					-
5.7	METHOD FOR OTHER CROSSINGS (Includes Supply, Installation and removal of all equipment, material etc.as per the EMP/works information)							
5.7.1	Temporary woodpole non-energised training test line (44kV).	No.	16					-
5.8	DISMANTLING OF CONDUCTORS, HARDWARE, INSULATORS AND EARTHWIRE							
5.8.1	Removal of earthwires (Non - Greased 19/2.7 Steel wire) including all its assemblies.	km	24					-
5.8.2	Removal of earthwires (Greased Horse Steel wire) including all its assemblies.	km	24					-
5.8.3	Removal of phase conductors per phase (triple tern) including all its assemblies.	km	24					-
5.8.4	Removal of phase conductors per phase (quad IEC 560) including all its assemblies.	km	24					-
5.8.5	Removal of phase conductors per phase (twin bersfort) including all its assemblies.	km	24					-
5.8.6	Removal of phase conductor assemblies for all the towers.	No.	24					-
Carried forward to Bill No. 7 - SUMMARY					Carried forward to Bill No. 7 - SUMMARY			-

BILL No. 6.1 - ACCESS AND ENVIRONMENTAL WORKS								
ITEM	DESCRIPTION		UNIT	QUANTITY (1)			RATE (4)	TOTAL PRICE (1)x(4)
43	ENVIRONMENTAL AND REHABILITATION REQUIREMENTS							
1.1	Rehabilitation of damage caused during construction to tower sites, access and servitude roads, camp sites, batching plant site, etc. in accordance with the requirements of the ROD, EMP, TRMSCAAC 5.2 and ESKASABG3	km	56					-
46	EROSION CONTROL BERMS							
5.1	Install new berms in accordance with TRMSCAAC latest revision(in-situ material).	no.	128					-
5.2	Install new berms in accordance with TRMSCAAC latest revision (imported material).	no.	128					-
Carried forward to Bill No. 7 - SUMMARY								-

ESKOM ROTЕК INDUSTRIES - CONSTRUCTION SERVICES - POWERLINES DIVISION							
SUMMARY							
BILL No.	DESCRIPTION						TOTAL

1	PRELIMINARY AND GENERAL	-
2	SHEQ	-
5	STRINGING	-
5	ACCESS AND ENVIRONMENTAL WORKS	-
		-

Compiled by:

Name: Segametsi Ramoshaba

Title: Snr Quantity Surveyor

Signature: 

Date: 2024/07/31