



Mapaseka Majoro

Strategy (Technical)

Description

The provision of Live Work Maintenance and Emergency repairs on the HV network (44kV to 132kV) and associated Projects in the Northern Cape Operating Unit on an “as and when required” basis for a period of 36 months.

Background to the need for the Procurement

There are no adequate resources within the Northern Cape OU to perform maintenance and repairs on the Eskom HV network.

Due to resource constraints in the Northern Cape currently, we are in need of external resources to assist with the execution of Live Work maintenance and repairs on the HV networks.

Inadequate maintenance resources within the Northern Cape Operating Unit which lead to:

- Increased SAIFI (Frequent supply interruptions to perform maintenance and repairs).
- Maintenance backlog due to a limited number of resources.
- Projects and faults are not completed/cleared in time due to inadequate resources.
- This contract is needed to support Operations and Maintenance resources and aims to improve the Live Work overall performance in the NCOU.

The benefits of implementation of this strategy will result in the following:

- There will be adequate resources to maintain the network on time, no backlog
- Reduce network down time and improve customer satisfaction
- Reduce internal staff overtime and fatigue
- Improve the reliability of supply
- Improved SAIFI incidents saved and improved SAIDI hours saved (LW KPI's & ratios).

The previous contract number 4600067123 commenced on 01 February 2020 and expired on 31 January 2023. The contract was for a period of 36 months. The contract value was **R30 000 000 .00**

The contract had one contractor and the expenditure report (work allocation) as at contract expiry is as follows:

			4600067123			
Contractor	Release #	Creation date	Actual Value	Actual amount paid	Unpaid Pos	Projects
DBI ELECTRICAL	4502948884	2020/02/24	0.00	0.00	0.00	Replacement of 70 , 66kV 5 pole structure Kuruman Sub-transmission
DBI ELECTRICAL	4502956643	2020/03/17	R 3 213 930.10	R 3 193 307.77	R 20 622.33	Ulco borrelskop-5 pole structure.
DBI ELECTRICAL	4502984125	2020/06/29	R 3 574 220.26	R 3 574 220.24	R 0.02	Ulco Smidtdrift 132kV Line
DBI ELECTRICAL	4503000191	2020/08/17	R 2 952 421.67	R 2 952 418.40	R 3.27	DOUGLAS RING
DBI ELECTRICAL	4503030034	2020/11/09	R 3 500 000.00	R 3 500 000.00	R 0.00	Karoo Cuprum 66KV Feede
DBI ELECTRICAL	4503059318	2021/02/11	R 3 827 215.25	R 3 807 133.05	R 20 082.20	Replacement of 70 , 66kV 5 Pole Structures
DBI ELECTRICAL	4503081171	2021/04/16	R 167 894.75	R 167 894.75	0.00	Hotazel/Reries 66kV X-arm replacement
DBI ELECTRICAL	4503081205	2021/04/16	R 192 286.58	R 192 286.58	0.00	Reries Eldoret 66kV X-arm replacement

DBI ELECTRICAL	4503094293	2021/05/26	R 5 994 588.08	R 5 994 588.08	0.00	LIVE WORK REPAIR 5 POLE WOODEN STRUCTURES :- KAROO - CUPRUM 66KV
DBI ELECTRICAL	4503114772	2021/08/02	R 832 729.70	R 832 729.70	0.00	Replacement of critical 5 pole wood structure 22 structures.Hotazel CNC.
DBI ELECTRICAL	4503121715	2021/08/25	0.00	R 803 541.47	-803 541.47	Gamohaam Riries (R 803 541.47)
DBI ELECTRICAL	4503139743	2021/10/20	R 79 262.24	R 79 262.24	0.00	KARATS/OLYN 132KV EMERGENCY REPAIRS.SCOPE: REPAIR & STRING ONE PHASE CONDUCTOR
DBI ELECTRICAL	4503160726	2022/01/10	R 2 299 898.86	R 2 299 898.86	0.00	NCOU- Ruigtevallei Badfontein 66 KV 5 Pole replacement
DBI ELECTRICAL	4503175830	2022/03/01	R 757 579.17	R 757 579.17	0.00	Badsfontein Ruigtevallei 1 66kV 5 wood pole replacement contract invoiced for R757 579.17
DBI ELECTRICAL	4503208168	2022/06/17	R 1 309 259.04	R 1 309 259.04	0.00	Ruigtevallei Badsfontein 66kV 5 pole replacement
DBI ELECTRICAL	4503211713	2022/06/30	R 161 661.97	0.00	R 161 661.97	String New 88kV line section- Bakwena/ Brits Industries
DBI ELECTRICAL	4503252641	2022/11/09	R 1 548 438.09	R 402 877.48	R 1 145 560.61	Repair 5 wood pole strucutes on the Badsfontein- Ruigtevallei 66kV feeder
DBI ELECTRICAL	4503252528	2022/11/09	R 3 285 682.20	R 3 157 762.95	R 127 919.25	Repair of 5 wood pole structures on the Badsfontein/ Ruigtevallei 66 kV
			R 33 697 067.96	R 33 024 759.78		

Contractor		R 36 000 000				
DBI ELECTRICAL		R 33 697 067.96				
Available Balance		R 2 302 932				

Motivation for panel appointment:

The contract is required for a period of 3 years due the following reasons:

- 36 months duration will assist in ensuring the continuity of work and allow sufficient time to prepare for future planning (establishing a contract requires/utilise a number of resources and a lengthy process).
- Maintenance is continuous and scheduled/planned throughout the year, however external forces (weather conditions, etc) cause maintenance deferment. Therefore, having adequate available resources at all times to execute the work will benefit the business.
- 36 months will allow the business Operations and Maintenance to run smoothly with no interruptions on reliability of supply.
- A once-off RFQ's cannot be utilised due to the fact that this will be continuous transactions.
- Northern Cape will achieve savings as the tender will be issued with the standardised rates for three years which will only be escalated on the second and the third year of the contract duration.

The panel will consist of 4-5 Contractors

- The vast area and the Live Work needs in the Northern Cape network requires the appointment of more than one company .
- This panel will assist the internal Live Work section as they are under resourced to carry out this task.
- The current live work resources within the Operating Unit is facing a number of challenges, particularly lack of Live work resources, which includes both live line trucks as well as crane trucks which is impeding the defects clearance. The services of external service providers will assist the OU in the interim whilst the business is in the process of acquiring the required equipment.

The scope of work for live work sub transmission maintenance and emergency will not be limited to the following:

- Replacement of all types of insulators
- Spray washing of insulators
- Replacing cross arm and the poles on 66-88kV lines
- Stubbing damaged /rotten poles on 132kV 5 pole structure
- Bonding of cross arms on 66-132kV H poles and 5 poles
- Making and breaking of jumpers
- Repair conductors at midspan and jumpers 66-132kV
- Installation or replacement of vibration dampers
- Removal of bird nest
- Installation/replacement of bird protectors stick and bare hand
- Installation of aircraft warning spheres
- Stringing conductors over energized lines 44kV to 132kV using Live Work methods
- Remove, re-string and join damaged earth wire
- Installation and replacement of stay wire

The evaluation process has two main parts:

- Desktop Evaluation
- Site Evaluation

Desktop Evaluation

This evaluation exercise is performed by the Eskom evaluating representatives. This part of the evaluation starts when the tender submissions are opened for the first time.

The technical evaluation will be evaluated as follows: the mandatory criteria (desktop evaluation) and then proceeds to functionality (site evaluation). The Eskom assessment representatives will go through the details of the returnable submissions that are required and will ensure that mandatory / gatekeeper qualification criteria are met. For desktop evaluation, the suppliers are required to obtain a minimum of 90% to be considered for the next evaluation phase which is site evaluation. Only submissions that pass mandatory / gatekeeper requirements will proceed to the functionality phase. Scoring/rating for functionality criteria will be assessed out of 100% (Site evaluation). One point will be allocated per item and thereafter the percentage is worked out.

Evaluation criteria for desktop is in Annexures of this document.

Note that the overall minimum threshold for desktop evaluation is 90%.

The test certificates do not need to be valid at this time (desktop evaluation), previous certificates or expired certificates will be accepted during the desktop evaluation but not during the site evaluation.

Site Evaluation

This assessment is performed based on assessing the supplier's capability to enter a contract with Eskom with respect to the establishment of a Live Work Gloving contract for Northern Cape Operating Unit -Gemma Cluster. This report and any actions that are listed or recommended because of this assessment, is by no means a confirmation or guarantee that any contract will be entered into by Eskom and the supplier or that post contract performance has been achieved. Any actions undertaken by the supplier because of this report is for the supplier's account. Any liability for the said actions undertaken by the supplier is not transferrable to Eskom in any way. The assessment team has no authority or responsibility in the decision taken by Eskom with respect to contracting for a product or service. Any statements, intentions and/or actions expressed by the assessment team during the assessment and post the assessment has no effect and does not constitute any liability to Eskom with regards to contract placement or post contract performance guarantees.

All vehicles used must be road worthy and in a good condition of service as per road regulations.

Aerial devices used for live work shall meet the requirements as set up in the standard 240 – 142701257 (MINIMUM REQUIREMENTS TO BE MET FOR THE MANUFACTURING OF LIVE WORK INSULATING MEWPS)

Evaluation criteria for site will is in Annexure B of this document.

Note that the site evaluation's threshold is 100%.

Tools and Equipment should be available on site for the inspection which will be conducted by Eskom representatives at the Supplier's Business premises/Central place.

Live Work Team should be available during Site Evaluation.

Technical Criteria (Functionality)

Functionality	Live Work
Weightings	100%
Total	100%
Overall minimum threshold for qualification (desktop evaluation)	90%
Site evaluation	100%

Note: Tenderers are expected to achieve a minimum threshold of 90. The tenderers which fail to meet the minimum functionality threshold will be disqualified for further evaluation

Technical evaluation representative will be led by Mapaseka Majoro (Live Work Manager), assisted by Officers Technical Support & Live Work Senior Supervisors and will be signed off by Kenneth Groenewald, (Specialized Maintenance & Support Manager).

ANNEX A: DESKTOP EVALUATION

Minimum training and documentation for Stick and Barehand Method

Elements:	Evidence:	Mark/s	Weight
A. Vehicles			40%
1.1. Live Work truck/Aerial device, registration documents or lease agreement with a legitimate company	Registration Documentation – Registered under Company name or Company owner and a picture of the vehicle or Lease agreement signed by both parties and a picture of the vehicle	2	
1.2. Electrical Test Certificate (Boom, Basket, Liner, Earth Spike and Foot Plate)	Certificates	1	
1.3. Mechanical test/ Load test	Certificates by Registered LMI	1	
1.4. Acoustic test	Certificate	1	
1.5. Oil test	Certificate	1	
1.6. Max height displayed	Picture	1	
1.7. Functional test (Electrical Interlock system)	Operation of vehicle / monthly inspection report	1	
1.8. Emergency procedure display	Picture	1	
1.9. Voltage rating displayed	Picture	1	
1.10. SWL displayed	Picture	1	
1.11. Certificate of Fitness	From Traffic Department	1	
1.12. Two - meter displayed	Picture	1	

2. LDV x1, registration documents or lease agreement with a legitimate company	Registration Documentation – Registered under Company name or Company owner and picture of the vehicle or Lease agreement signed by both parties and picture of the vehicle	2	
3.1. Crane truck, registration documents or lease agreement with a legitimate company	Registration Documentation – Registered under Company name or Company owner and a picture of the vehicle or Lease agreement signed by both parties and a picture of the vehicle	2	
3.2. Mechanical test / Load test	Certificates by Registered LMI	1	
3.3. Certificate of Fitness	Copy of Certificate of Fitness from the Traffic Department	1	
4.1 Drill truck, registration documents or lease agreement with a legitimate company	Registration Documentation – Registered under Company name or Company owner and picture of the vehicle or Lease agreement signed by both parties and picture of the vehicle	2	
4.2 Certificate of Fitness	Copy of Certificate of Fitness from the Traffic Department	1	
B. Administration			60%
1. Organogram / Company Work structure	Of the company (showing, CEO, PiC, PtP, Crane operator, Safety Representatives ect.) A minimum of three PtP's, one PiC with a crane operator	1	
2. Regular Safety meetings with staff x 3	Minutes	1	

3. Certified copy of ID's	Employees as per minimum number (9) required	1	
4. Certified Driver's License and PDP where required.	Employees as per minimum number (3) required	1	
5. Intranet Access for Standards and Procedures	Registration Letter or any Proof thereof.	1	

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[illegible]

If a person operating a crane is not a live worker, then he/she should have at least attended live work appreciation training Note: If a crane operator is a live worker, he/she cannot be the same person used as a PiC or PtP above.

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ANNEX B SITE EVALUATION

Minimum Live Works Tools and Equipment per team for Stick and Barehand

Method Evaluation

1. Vehicles:				
Elements:	Evidence	Yes	No	Comments / Remarks
1.1. Live Work Aerial Device, registration documents for company or rental from a bonified company	Registration Documentation – Registered under Company name or Company owner of the vehicle or Lease agreement signed by both parties. Registration number:			
1.1.1 Type of vehicle Certificate of fitness	Copy of Certificate of Fitness from the Traffic Department			
1.1.2 Valid Electrical Test Certificate (with truck registration) for the following:	Certificates (Date tested)			
1.1.3 Footplate and earth lead	Certificates (Date tested)			
1.1.4 Mechanical test / Load test	Certificates (Date tested) Certificates by Registered LMI			
1.1.5 Acoustic test	Certificates (Date tested)			
1.1.6 Oil tests	Certificates (Date tested)			
1.1.7 Six monthly visual inspection	Proof of visual inspection done by LMI			
1.1.8 Voltage rating displayed	Voltage rating displayed on the MEWP			
1.1.9 Safe workload displayed	SWL rating displayed on the MEWP			
1.1.10 Max height displayed	Max height displayed on the MEWP			
1.1.11 Functional test	Testing of the vehicle			
1.1.12 Elect. Interlock system				

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1.1.13 Emergency procedure display				
1.1.14 Two-meter clearance displayed				
1.2 Crane	Registration number:			
1.2.1 Type of crane and certificate of fitness	Copy of Certificate of fitness from Traffic Department			
1.2.2 Mechanical test / load test	Certificates (Date tested) Certificates by Registered LMI			
1.2.3 Safe workload displayed on crane.	Safe workload of crane to be displayed			
1.2.4 SWL & punch marks on hook	Hook to have the punch mark			

1.2.5 Hook equipped with serviceable safety latch.	Hook to be equipped with a safety latch			
1.2.6 Foot plate and earth lead.	The crane to be equipped with the foot plate and the earth spike			
1.2.7 Working under live line notice displayed.	Working under live line notice to be displayed on the crane			
1.2.8 Six monthly visual inspection	Proof of visual inspection done by LMI			

All vehicles used must be roadworthy and in good condition of service.

2. Requirement for Tool and equipment's	Evidence			
2.1 No modifications on tools and equipment	If the modification is done, it should be approved by LWTC			
2.2 Suitable storage facilities / transporting	As per standard 240-135663316 under 3.3.2 Storage			
2.3 Only approved types of equipment are	Only approved products to be			

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allowed.	used.			
2.4 All live work equipment must be in very good serviceable condition.	Tools and equipment condition			
2.6 Daily and 3 monthly inspection sheets should be available.	Inspection sheets			
2.7 All equipment must have a unique serial / asset number.	Asset Register and Inspection register			
2.8 SWL displayed on all appropriate tools. (Lifting equipment) and rated voltage.	Certificates and Appropriate tools by LMI			
2.9 All lifting machines should have been mechanically tested and certified.	Certificates. Serial / assets numbers correspond with valid test certificates by LMI			
2.10 All lifting tackles should have been inspected three months by a competent person.	Acceptance Certificates Refer to OHS Act			

Tools and equipment required:			
3. Lifting equipment	Minimum required	Quantity	Remarks
3.1 Snatch pulley	4		
3.2 Come along (4 ton)	2		
3.3 Compression yoke (Live Yoke)	1		
3.4 Nylon sling	4		
3.5 Hand Line	1		
3.6 Plastic bucket for hand line	1		
3.7 2X3 Pulley rope	2		
3.8 Pole tong (63mm)	3		

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3.9 Pole tong (38mm)	3		
3.10 Universal Stick	4		
3.11 Universal fittings			
3.12 Dead yoke	1		
3.13 Insulating Cradle	1		
3.14 Strainer stick	2		
3.15 Ratchet wrench	2		
3.16 Tower saddle clamp	3		
3.17 Pole saddle clamp	3		
3.18 Robe snubbing bracket	2		
3.19 Nylon ratchet hoist (3 ton)	1		
3.20 Lever hoist	1		
3.21 Static shunt	1		
3.22 Spiral link stick	1		
3.23 Leakage current monitor	1		
3.24 Hot stick tester	1		
3.25 Strainer gauge	2		
3.26 Crip-all clamp stick	1		
3.27 Conductor cutter	1		
3.28 Tool rack stand	2		
3.29 Ground sheet	1		
4. Equipment Require			
4.1 Fire Extinguisher (min. 9kg) per vehicle	1		
4.2 First Aid Kit (Team size) per vehicle	1		
4.3 Wind speed meter	1		
4.4 Stick tester	1		
4.5 Infrared Scanner	1		
4.6 Road Cones	6		
4.7 Silicon and cotton cloth			

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**Wood Poles Replacement under Live Work Conditions, Live
Work Maintenance and Associated Projects for NWOU**

Unique Identifier: **474-xxx**

Revision: **1**

4.8 Toolbox with relevant tools inside	1		
4.9 Chain Saw	1		
5. Personal Protective Equipment required:	Minimum per person	Quantity	Remarks
5.1 Conductive Suits	1 pair	1	
5.2 Conductive boots	1 pair	1	
5.3 Conductive gloves and socks	1 pair	1	
5.4 Safety Leather Gloves per person	1 pair	1	
5.5 Safety Helmet with chin strap type	1	1	
5.6 Safety Boots (SABS Approved) Must have steel tip / cap	1 pair	1	
5.7 Safety Clothing per person – 100% Cotton (No Short Pants or Short Sleeve Shirts allowed)	1 set	1	
5.8 PPE for chainsaw	Set	1	
5.9 Safety sunglasses	1 pair	1	
5.10 Sun Block	1	1	
5.11 FAS and bag	1	1	

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