	Technical Evaluation	NWOU
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1. INTRODUCTION

This is a North West Operating Unit document that will set up the minimum requirement to be met by Live Work contractors. This document is aimed at setting the standard technical evaluation criteria for evaluating **LIVE WORK MAINTENANCE AND ASSOCIATED PROJECTS ON LINES FROM 44kV UP TO 132kV FOR THE NORTH WEST OPERATING UNIT (NWOU) FOR 36 MONTHS ON AN “AS AND WHEN REQUIRED” BASIS.**

This document will enable the assessor/s to conduct fair and transparent evaluations on possible live work contractors prior to a contract being awarded to them, and also to be used during follow up audits. It is in line with **240-151423891(CRITERIA FOR THE TECHNICAL EVALUATION OF LIVE WORK CONTRACTORS).**

2. SUPPORTING CLAUSES

2.1 SCOPE

The document contains mandatory technical requirements, functional evaluation criteria and the objective criteria for evaluating the establishment of Live Work Maintenance and associated projects on lines from 44kV up to 132kV for the North West Operating Unit for 36 months on an “As and When required basis”.

2.1.1 Purpose

The purpose of this document is to evaluate whether the respective contractors are able to meet the requirements for quality management and possess the necessary capability in terms of the following:

- Human Resources
- Vehicles
- Basic Hand Tools
- Personal Protective Equipment
- Live Work Equipment
- Lifting Gear
- Expertise
- Business Premises
- Quality Management Systems
- Safety Risk Process
- OHS Act

The outcome of this evaluation will enable the assessor/s to compile a report for Management to prove compliance / non-compliance to the Live Work and appropriate Eskom Standards, Procedures, Regulations, Engineering / Technical Instructions / Bulletins and Task Manuals.

2.1.2 Applicability

This document is applicable to all contractors who are working Live or indicated their interest to obtain Live Work contracts in Eskom (NWOU).

2.2 NORMATIVE/INFORMATIVE REFERENCES

Parties using this document shall apply the most recent edition of the documents listed in the following paragraphs.

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2.2.1 Normative

- [1] ISO 9001 Quality Management Systems.
- [2] 240-70413029 Care, Inspection, Maintenance and testing of Live Work strain carriers.
- [3] 240-135663316 Care, Inspection, Maintenance and testing of insulating gloves, sleeves, hoses, blankets and covers for live working.
- [4] 240-146738795 Distribution High Voltage Live Working.
- [5] 240-76222282 Care, Inspection, Maintenance and testing of live work lifting equipment
- [6] 240-92064074 Routine inspection, care and maintenance of insulating MEWP's / Sky Ladders
- [7] 240-142701257 Minimum Requirements to be met for the Manufacturing of Live Work Insulating MEWP's.
- [8] 240-139695158 High Voltage Live Work Training and Assessment.
- [9] 240-70175091 The Use, Care, Maintenance and Testing of High Voltage Operating sticks.
- [10] SCSASAAZ6 Standard for the inspection care, maintenance and testing of pedestal mounted ladder assemblies
- [11] 240-114967625 Operating Regulations for High Voltage Systems

2.2.2 Informative

- [12] None

2.3 DEFINITIONS

Definition	Description
Desktop Evaluation	This part of the evaluation starts when submissions are opened for the first time.
Site evaluation	This part of evaluation is performed on the basis of assessing whether the supplier has capability to enter into a contract with Eskom.

2.3.1 Disclosure Classification

Controlled disclosure: controlled disclosure to external parties (either enforced by law, or discretionary).

2.4 ABBREVIATIONS

Abbreviation	Description
kV	Kilo Volt
LAP	List of Approved Products
LMI	Lifting Machine Inspector
LV	Low Voltage
LWTC	Live Work Technical Committee
MEWP	Mobile Elevating Work Platform
MV	Medium Voltage

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Abbreviation	Description
NWOU	North West Operating Unit
OTS	Officer Technical Support
PiC	Person in Charge of Live Work
PoE	Portfolio of Evidence
PtP	Person Who May Perform Live Work
SS	Senior Supervisor

2.5 ROLES AND RESPONSIBILITIES

2.5.1 Live Work / Technical Support Manager

The Live Work / Technical Support Manager shall:

- Ensure that the requirements of this report are enforced.
- Appoint a competent person to evaluate all live work contractors.

2.5.2 Live Work Senior Supervisor and / or OTS

Live Work Senior Supervisor and / or OTS shall:

- Schedule a pre evaluation meeting with the contractors to define and explain requirements.
- Do a technical evaluation on the contractors prior to any contracts being awarded.

2.5.3 Live work contractor

Live work contractor shall:

- Attend the pre-evaluation meeting.
- Ensure that the original documentation and a copy of all log books and relevant evidence are provided to Eskom prior to evaluation.

Note: The copy of documentation provided to Eskom shall remain in Eskom's custody for auditing purposes.

2.6 PROCESS FOR MONITORING

NA

2.7 RELATED/SUPPORTING DOCUMENTS

[13] 34-190 Access to farms(Includes Strategy on Dealing with Game farms)

3. TECHNICAL EVALUATION

3.1 TECHICAL EVALUATION PROCEDURE

The technical evaluation procedure is specific to wood pole replacement under live conditions, live work maintenance and associated projects for the North West Operating Unit (NWOU).

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The evaluation process has two main parts:

- Desktop Evaluation
- Site Evaluation

3.1.1 Desktop Evaluation

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

The technical evaluation will be evaluated as follows: the mandatory criteria and then proceeds to functionality.

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.

Only submissions that pass mandatory / gatekeeper requirements will proceed to the functionality phase. Scoring/rating for functionality criteria will be assessed out of 100%.

For desktop evaluation, the suppliers are required to obtain a minimum of 90% before they can be evaluated further to the next evaluation which is site evaluation.

Evaluation criteria for desktop is in Annex A of this document

Note that the overall minimum threshold for qualification is 90%.

3.1.2 Site Evaluation

This assessment is performed on the basis of assessing the supplier's capability to enter into a contract with Eskom with respect to the establishment of Stick and Bare Hand contract for North West Operating Unit (NWOU).

This report and any actions that are listed or recommended as a result 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 as a consequence of this report is for the suppliers 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 ordinance.

Aerial devices used for live working 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 Annex B of this document

Note that site evaluation is all or nothing

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 to be available during Site Evaluation and Portfolio of Evidence per team member will be checked during Site Evaluation.

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3.2 DETAILED SCOPE OF WORK

3.2.1 Scope of Work

The work covered in the contract comprises of the establishment of a working site at the identified work area, safekeeping of Eskom supplied equipment, installation, testing where applicable, and handing over in working order.

Eskom will supply the required poles and relevant hardware and equipment. It is the responsibility of the Contractor to transport the appropriate hardware and relevant equipment from the Contractor's site to the place of work.

Work will be done as per issued Maximo work order, issued by appropriate CNC and closing of the work order on a weekly basis will be done by the appropriate CNC, only when work was inspected and found to be according to the contract.

Eskom or its appointed representative, behold the right to do an onsite inspection for quality, safety and adherence to scope, without prior arrangement, on intervals as needed or determined by Eskom.

The works associated with the Live Work maintenance is identified, in the line inspections for 44 kV, 66 kV, 88kV & 132kV overhead networks.

The conductor height as stipulated in Eskom standard **240-75883906** will be adhered to at all times. Where this conductor height, all three phases, is influenced, corrective action will be implemented to ensure that the required conductor height, as specified in the Eskom standard, is reached and maintained at all times.

An oil spillage kit will be available on site. Any environmental incident shall be reported to Eskom within 24 hours after occurrence.

Inform land owners in adherence with **ACCESS TO FARMS (INCLUDES STRATEGY ON DEALING WITH GAME FARMS)** as per Eskom standard 34-190.

It is not suspected to work overtime and therefore no overtime rates can be claimed. If it became necessary for the Contractor to work overtime to catch up on lost work because of his or his employees fault, the remuneration of such overtime will be for the Contractor's account.

Eskom will be informed in advance when the supplied hardware and equipment are reaching a low level, for replenishment.

Works to be commissioned according to the applicable Eskom Standards

Hand over and documentation to be completed on completion of the work as per **240-75884058. (HANDING OVER DOCUMENTATION MAJOR DISTRIBUTION MINOR DISTRIBUTION AND ELECTRIFICATION)**

The claiming of remuneration for standing time will only be allowed if Eskom is at fault e.g. if a shortage of required material is experienced.

All work must be executed under live conditions by applying accepted and approved Eskom Live Work task manuals and technical instructions for Gloving Method.

Live Work maintenance and associated projects work will be done as per the task manuals below:

Task Manual No.	Task Manual Description
240-50089576	Pole Replacement on staggered vertical structure(S&B)
240-42025805	Stringing Conductors Over Energised Lines 11 kV to 132 kV Using Live Work Methods

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DMN_34-1305	Disconnecting / Connecting of Droppers / Jumpers (Stick and Bare hand)
DMN_34-1306	Changing Strain Insulators (Stick & Bare hand)
DMN_34-1307	Changing Suspension Insulators (Stick & Bare hand)
240-134638814 (DMN 34-1310)	Repairs of a Conductor at Mid Span or Faulty Jumper Connections Using Bare hand Procedure on Live 66kV to 132kV lines
240-129231821 (DMN 34-1380)	Change Insulators on Live 44 kV to 88 kV Steel Kite Construction Working from An Insulating Aerial Device
240-134719105 (DMN 34-2089)	Stubbing of Damaged/ Rotten Poles on 132kV 5 Pole Wooden Structures (Stick Method)
240-134719127 (DMN 34-2148)	Installation / Replacement of Bird Protectors (Stick and Bare hand)
240-134719141 (DMN 34-791)	Bonding of Cross-Arms on 66kV – 132kV H-Pole and 5-Pole Configuration, Using Live Work Method
DMN_34-814	Replacing Cross arms and Poles on 66-88kV Pole Wooden Suspension Structures, Using Live Work Methods
240-134719151 (DMN 43-813)	Replacing Insulators on 66-132kV Overhead Lines on 5-Pole Wooden Structures, Using Live Work Methods
240-61181591	Repair/Replacement of Wooden Five-Pole Intermediate Construction (Stick and Bare hand)

Note: All work must be done as per Live Work and appropriate Eskom standards, procedures, regulations, Engineering / Technical Instructions / Bulletins and Task Manuals.

4. AUTHORISATION

This document has been seen and accepted by:

Name & Surname	Designation
Rodney Pretorius	Live Work / Technical Support Manager
Moopelo Kungwane	Plant Manager (Acting)
Etienne Lizemore	Officer Technical Support

5. REVISIONS

Date	Rev.	Compiler	Remarks
November 2020	1	Marumo Mokobi	To setup the standard technical evaluation criteria for evaluating Live Work Contractors

6. DEVELOPMENT TEAM

The following people were involved in the development of this document:

- Marumo Mokobi Officer Technical Support
- Lucky Mafela Live Work Senior Supervisor
- Tshimangadzo Netshifhire Live Work Senior Supervisor
- Pieter Nchaupe Officer Live Work Coach

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7. ACKNOWLEDGEMENTS

- N/A

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ANNEX A: DESKTOP EVALUATION

Minimum training and documentation for gloving method

1. Vehicles:				
Elements:	Evidence:			% Weigh
Live Work truck, registration documents for company or rental from a bonified 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			40%
Electrical Test Certificate(Boom, Basket, Liner, Earth Spike and Foot Plate)	Certificates			
Mechanical test/ Load test	Certificates			
Acoustic test	Certificate			
LDV x1	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. Administration				
On job observations on each team x 3	On Job Observation Forms			15%
Local Live work meeting(PiC Forum) - Minutes x 3	Minutes and signed attendance register			
Live Work Technical Committee Minutes x 3	Minutes			
Regular Safety meetings with staff x 3	Minutes			
3. Requirements for live-workers:				
Requisite:	Evidence:	PiC X 1	PtP X 5	% Weigh
				45%

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OHS Act – Overview (L2C 05)	Valid Certificate	Yes	Yes
First Aid (Level 2)	Valid Certificate	Yes	Yes
ORHVS (HV 04)	Valid Certificate	Yes	Yes
Line Construction Training	Certificate	Yes	Yes
Basic Rigging / Slings	Valid Certificate	Yes	Yes
Log book completed/ Signed off Live work Log book	Log Book Record / PoE	Yes	Yes
One year Eskom related line maintenance/building experience Log book record	Log Book Record / PoE	Yes	Yes
Fire Fighting course	Certificate	Yes	Yes
Task observations (3 per year from Eskom OTS / S.S) On job book	On job book	Yes	Yes
FAS training	Valid Certificate	Yes	Yes
Completed the person in charge training	Log Book Record / PoE	Yes	No
500 Hours active Live Work experience Log book record	Log Book Record / PoE	Yes	Yes
Lifting gear inspection course (LMI APPROVED)	Valid Certificate	Yes	Yes
Previous Hand over's	Hand over book	Yes	Yes
Medical Certificate	Valid Certificate	Yes	Yes
Hazard Identification & Risk Assessment (HIRA)	Valid Certificate	Yes	Yes
Induction Course	Attendance register	Yes	Yes
Environmental Awareness	Certificate	Yes	Yes
Select, use and care for electrical measuring instruments (If not a qualified electrician or technician)	Certificate	Yes	Yes
Understanding the fundamentals of Electricity (L2C 01)(If not a qualified electrician or technician)	Certificate	Yes	Yes

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

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Equipotential earthing	Certificate	Yes	Yes	
Supervision	Certificate	Yes	No	
Mobile Elevated Work Platform(MEWP) 247272	Valid Certificate	Yes	Yes	
Proof of Gloving training	Log Book Record / PoE	Yes	Yes	
PiC - 100 hours as PtP	Log Book Record / PoE	Yes	No	
Recommendation letter	Letter form facilitator	Yes	Yes	
previous authorisation for Stick and Bare Hand	Authorisation	Yes	Yes	

***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, it 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 Gloving Method

1. Vehicles:		
Elements:	Evidence	
Live work truck, registration documents for company or rental from a bonified company	Registration Documentation – Registered under Company name or Company owner and pictures of the vehicle or Lease agreement signed by both parties and pictures of the vehicle	
Valid Electrical Test Certificate(with truck registration) for the following:	Certificates	
a. Insulating Boom	Certificates	
b. Basket Liner	Certificates	
c. Earth Spike	Certificates	
d. Foot Plate	Certificates	
Mechanical test/ Load test	Certificates	
Acoustic test	Certificates	
Voltage rating displayed	Voltage rating displayed on the MEWP	
Safe work load displayed	Voltage rating displayed on the MEWP	
2 Meter clearance displayed	Keep 2M clearance displayed on the MEWP	
Emergency procedure display	Emergency procedure displayed on the MEWP	
LDV x1	Registration Documentation –Registered under Company name or Company owner and pictures of the vehicle or Lease agreement signed by both parties and pictures of the vehicle	
All vehicles used must be road worthy and in a good condition of service.		
2. Requirements for Tools and equipments	Evidence	
No modifications on tools and equipment	If modified is done, it should be approved by LWTC	
Only approved type of equipment is allowed as per LAP.	Only approved products to be used.	
All live work equipment must be in a very good serviceable condition.	Tools and equipment condition	
Daily and 3 monthly inspection sheets should be available.	Inspection sheets	
All equipment must have a unique serial	Asset Register	

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/asset number.			
SWL displayed on all appropriate tools.	Certificates and Appropriate tools		
All lifting equipment should have been mechanical tested and certified.	Certificates		
All lifting tackle should have been tested for Acceptance.	Acceptance Certificates		
Lifting equipment, inclusive of lifting tackle, should be documented and inspected and suitable for all tasks.	Inspection Sheets		
All lifting equipment should have a bi-annual inspection and annual test certificate issued by an accredited LMI.	Inspection Sheets and Certificates		
3. Tools and equipments required:	Minimum required		
Wire holding stick	2		
Grip all stick 4.5m	2		
Universal stick 38x 3m	3		
Universal stick 38 x 4.5m	2		
Hand line complete	1		
2 x 3 or 3 x 4 rope block	1		
Spiral link stick 38 x 1.2m	1		
Snatch Pulley	1		
Strainer sticks	2		
Live yoke 2 Ton	1		
Dead yoke 2 Ton	1		
Trunnion ratchets	2		
Chain sling	1		
Nylon slings	3		
Come a long	2		
Universal Shepherd hook	2		
Universal W-pin remover	1		
Universal W-pin inserter	1		
Universal rotary prong	1		
Universal ball socket fork	1		
Universal mirror	1		
Universal cotter key replacer	1		

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Universal hammer	1		
Universal steel brush	1		
Static shunt	1		
Cradle	1		
Tower bracket	1		
Bare hand ladder	1		
63mm jinn pole	1		
38mm Wire Tong	1		
63mm Wire Tong	1		
Various Pole saddle clamps			
Fishbone Stick Racks	2		
Fire extinguisher 9kg x 1 per vehicle.	1		
Wind speed meter	1		
Stick tester	1		
Leakage monitor	1		
Silicon Cloths	2		
4. Personal Protective Equipment required:	Minimum required		
Safety Spectacles per person	1		
Safety Helmet with chin strap type per person	1		
Safety Boots(SABS Approved) per person	1		
FAS System per person	1		
Conductive boots per person (for climbing any 132kv structure)	1		
Bare hand suit per person	1		
Conductive socks per person	1		
Conductive gloves per person	1		
Safety Gloves per person	1		
Sun Block	1		
Safety Clothing per person – 100% Cotton (No Short Pants or Short Sleeve Shirts allowed)	1		

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