

**The Provision of Electrification MV and LV infrastructure and Households Connections within Mpumalanga Province - LimLanga Cluster**



NEC3 Engineering & Construction Contract

**Between** **ESKOM HOLDINGS SOC Limited**  
**(Reg No. 2002/015527/30)**

**and** **Contractor**  
**Reg No.**

**for** **The Provision of Electrification MV and LV infrastructure and Households Connections within Mpumalanga Province - LimLanga Cluster as and when required basis for a period of 60 months**

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**CONTRACT No.**

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**The Provision of Electrification MV and LV infrastructure and Households Connections within Mpumalanga Province - LimLanga Cluster**

## Part C1: Agreements &amp; Contract Data

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C1.1 Form of Offer & Acceptance

**Offer**

The Employer, identified in the Acceptance signature block, has solicited offers to enter a contract for the procurement of:

**The Provision of Electrification MV and LV infrastructure and Households Connections within Mpumalanga Province - LimLanga**

The tenderer, identified in the Offer signature block, has examined the documents listed in the Tender Data and addenda thereto and by submitting this Offer has accepted the Conditions of Tender.

By the representative of the tenderer, deemed to be duly authorised, signing this part of this Form of Offer and Acceptance the tenderer offers to perform all the obligations and liabilities of the *Contractor* under the contract including compliance with all its terms and conditions according to their true intent and meaning for an amount to be determined in accordance with the *conditions of contract* identified in the Contract Data.

Option B	The offered total of the Prices exclusive of VAT is	<b>Rate based Contract</b>
	Value Added Tax @ 15% is	<b>Rate based Contract</b>
	The offered total of the amount due inclusive of VAT is <sup>1</sup>	<b>Rate based Contract</b>
	<b>Rate based Contract</b>	

This Offer may be accepted by the Employer by signing the Acceptance part of this Form of Offer and Acceptance and returning one copy of this document including the Schedule of Deviations (if any) to the tenderer before the end of the period of validity stated in the Tender Data, or other period as agreed, whereupon the tenderer becomes the party named as the *Contractor* in the *conditions of contract* identified in the Contract Data.

Signature(s)

Name(s) .....

Capacity .....

**For the tenderer:** .....

Name & signature of witness

Date

Tenderer's CIDB registration number

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**Acceptance**

By signing this part of this Form of Offer and Acceptance, the Employer identified below accepts the tenderer's Offer. In consideration thereof, the Employer shall pay the Contractor the amount due in accordance with the *conditions of contract* identified in the Contract Data. Acceptance of the tenderer's Offer shall form an agreement between the Employer and the tenderer upon the terms and conditions contained in this agreement and in the contract that is the subject of this agreement.

The terms of the contract, are contained in:

- Part C1            Agreements and Contract Data, (which includes this Form of Offer and Acceptance)
- Part C2            Pricing Data
- Part C3            Scope of Work: Works Information
- Part C4            Site Information

and drawings and documents (or parts thereof), which may be incorporated by reference into the above listed Parts.

Deviations from and amendments to the documents listed in the Tender Data and any addenda thereto listed in the Returnable Schedules as well as any changes to the terms of the Offer agreed by the tenderer and the Employer during this process of offer and acceptance, are contained in the Schedule of Deviations attached to and forming part of this Form of Offer and Acceptance. No amendments to or deviations from said documents are valid unless contained in this Schedule.

The tenderer shall within two weeks of receiving a completed copy of this agreement, including the Schedule of Deviations (if any), contact the Employer's agent (whose details are given in the Contract Data) to arrange the delivery of any securities, bonds, guarantees, proof of insurance and any other documentation to be provided in terms of the *conditions of contract* identified in the Contract Data at, or just after, the date this agreement comes into effect. Failure to fulfil any of these obligations in accordance with those terms shall constitute a repudiation of this agreement.

Notwithstanding anything contained herein, this agreement comes into effect on the date when the tenderer receives one fully completed original copy signed between them of this document, including the Schedule of Deviations (if any).

Unless the tenderer (now *Contractor*) within five working days of the date of such receipt notifies the Employer in writing of any reason why he cannot accept the contents of this agreement, this agreement shall constitute a binding contract between the Parties.

Signature(s)

Name(s)	.....	
	Pravind Orrie	.....
Capacity	.....	
	Snr Manager Asset Creation	.....
	DxLimLanga Cluster Mpumalanga	
<b>for the Employer</b>	.....	
	Eskom Holdings SOC Ltd, Megawatt Park	.....
	Maxwell Drive, Sandton	.....
	Johannesburg 2199	.....

Name & signature of witness	.....	Date	.....
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Note: If a tenderer wishes to submit alternative tenders, use another copy of this Form of Offer and Acceptance

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**Schedule of Deviations to be completed by the *Employer* prior to contract award**

No.	Subject	Details
1	<b>None Listed</b>	<b>Not applicable</b>

By the duly authorised representatives signing this Schedule of Deviations below, the Employer and the tenderer agree to and accept this Schedule of Deviations as the only deviations from and amendments to the documents listed in the Tender Data and any addenda thereto listed in the Tender Schedules, as well as any confirmation, clarification, or changes to the terms of the Offer agreed by the tenderer and the Employer during this process of Offer and Acceptance.

It is expressly agreed that no other matter whether in writing, oral communication or implied during the period between the issue of the tender documents and the receipt by the tenderer of a completed signed copy of this Form shall have any meaning or effect in the contract between the parties arising from this Agreement.

**For the tenderer:**

**For the Employer**

Signature .....

.....

Name .....

Pravind Orrie

Capacity .....

Snr Manager Asset Creation  
DxLimLanga Cluster Mpumalanga

On behalf of .....

Eskom Holdings SOC Ltd, Megawatt Park  
Maxwell Drive, Sandton  
Johannesburg 2199

Name & signature of witness .....

.....

Date .....

.....

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### C1.2 ECC3 Contract Data

#### Part one - Data provided by the *Employer*

Clause	Statement	Data
1	<b>General</b>	
	The <i>conditions of contract</i> are the core clauses and the clauses for main Option	<b>B:</b> <b>Priced contract with bill of quantities</b>
	dispute resolution Option	<b>W1:</b> <b>Dispute resolution procedure</b>
	and secondary Options	<b>X1:</b> <b>Price adjustment for inflation</b>
	of the NEC3 Engineering and Construction Contract, June 2005 (ECC3) (with amendments June 2006)	<b>X2</b> <b>Changes in the law</b>
		<b>X5:</b> <b>Sectional Completion</b>
		<b>X7:</b> <b>Delay damages</b>
		<b>X16:</b> <b>Retention</b>
		<b>X17:</b> <b>Low Performance damages</b>
		<b>X18:</b> <b>Limitation of liability</b>
		<b>Z:</b> <b><i>Additional conditions of contract</i></b>
10.1	The <i>Employer</i> is (Name):	<b>Eskom Holdings Limited (reg no: 2002/015527/30), a juristic person incorporated in terms of the company laws of the Republic of South Africa</b>
	Address:	<b>Registered office at Megawatt Park, Maxwell Drive, Sandton, Johannesburg</b>
	Represented by:	<b>Ncomeka Xuma</b>
	Tel No:	<b>011 709 3743</b>
10.1	The <i>Project Manager</i> is:	<b>The Project Manager will be the Project Co-ordinator appointed for a particular project and will be specified in the project specific agreement.</b>
10.1	The <i>Supervisor</i> is:	<b>The supervisor will be the Clerk of Works appointed for a particular project and will be specified in the project specific agreement.</b>

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11.2(13)	The <i>works</i> are	<b>Various categories of work on Electrification Projects</b>				
11.2(14)	The following matters will be included in the Risk Register	<ul style="list-style-type: none"> <li>• Late material Date</li> <li>• Theft of un-energised cables</li> <li>• Vandalism of un-energised primary plant</li> <li>• Armed robberies on site</li> <li>• Subcontracting demands by community members</li> <li>• Countries lockdown due to unforeseen circumstances</li> <li>• Inclement weather</li> <li>• Community unrest</li> </ul>				
11.2(15)	The <i>boundaries of the site</i> are	<b>All projects to be executed in terms of this contract will be executed at various sites within Mpumalanga.</b>				
11.2(16)	The Site Information is in	<b>The Site Information will form part of the Project Specific Agreement for each project to be executed in terms of this contract.</b>				
11.2(19)	The Works Information is in	<b>The Works Information will form part of the Project Specific Agreement for each project to be executed in terms of this contract.</b>				
12.2	The <i>law of the contract</i> is the law of	<b>the Republic of South Africa</b>				
13.1	The <i>language of this contract</i> is	<b>English</b>				
13.3	The <i>period for reply</i> is	<b>3 days</b>				
<b>2</b>	<b>The Contractor's main responsibilities</b>	<b>Data required by this section of the core clauses is provided by the Contractor in Part Two and terms in italics used in this section are identified elsewhere in this Contract Data.</b>				
<b>3</b>	<b>Time</b>					
11.2(3)	The <i>completion date</i> for the whole of the works is	<b>Varies from one project to the next and shall be detailed in each Site-Specific Agreement</b>				
11.2(9)	The <i>key dates</i> and the <i>conditions</i> to be met are:	<table border="1"> <thead> <tr> <th><i>Condition to be met</i></th> <th><i>key date</i></th> </tr> </thead> <tbody> <tr> <td>Any key date and conditions will be specified in the Project Specific Agreement for any project executed in terms of this contract.</td> <td>TBA</td> </tr> </tbody> </table>	<i>Condition to be met</i>	<i>key date</i>	Any key date and conditions will be specified in the Project Specific Agreement for any project executed in terms of this contract.	TBA
<i>Condition to be met</i>	<i>key date</i>					
Any key date and conditions will be specified in the Project Specific Agreement for any project executed in terms of this contract.	TBA					
30.1	The <i>access dates</i> are:	<table border="1"> <thead> <tr> <th>Part of the Site</th> <th>Date</th> </tr> </thead> <tbody> <tr> <td>Access Date and</td> <td>TBA</td> </tr> </tbody> </table>	Part of the Site	Date	Access Date and	TBA
Part of the Site	Date					
Access Date and	TBA					

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conditions will be specified in the Project Specific Agreement for any project executed in terms of this contract.

31.1	The <i>Contractor</i> is to submit a first programme for acceptance within	<b>1 week of the Project Specific Agreement.</b>
31.2	The <i>starting date</i> of this contract is	<b>TBA</b>
32.2	The <i>Contractor</i> submits revised programmes at intervals no longer than	<b>3 days</b>
35.1	The <i>Employer</i> is not willing to take over the <i>works</i> before the Completion Date.	
<b>4</b>	<b>Testing and Defects</b>	
42.2	The <i>defects date</i> is	<b>52 weeks after Completion of the whole of the works per project or section thereof if sectional completion is applicable.</b>
43.2	The <i>defect correction period</i> is	<b>Within 1 week upon notification of defect</b>
<b>5</b>	<b>Payment</b>	
50.1	The <i>assessment interval</i> is	<b>between the 20<sup>th</sup> and 25<sup>th</sup> day of each successive month.</b>
51.1	The <i>currency of this contract</i> is the	<b>South African Rand.</b>
51.2	The period within which payments are made is	<b>Between 14 and 30 Days depending on each contractor's BBBEE status</b>
51.4	The <i>interest rate</i> is	<b>the publicly quoted prime rate of interest (calculated on a 365-day year) charged from time to time by the Standard Bank of South Africa Limited (as certified, in the event of any dispute, by any manager of such bank, whose appointment it shall not be necessary to prove) for amounts due in Rands</b>
<b>6</b>	<b>Compensation events</b>	
60.1(13)	The place where weather is to be recorded is:	<b>The Construction site</b>
	The <i>weather measurements</i> to be	<b>the cumulative rainfall (mm)</b>

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recorded for each calendar month are,

the number of days with rainfall more than 10 mm

the number of days with minimum air temperature less than 0 degrees Celsius

the number of days with snow lying at 09:00 hours South African Time

and these measurements:

The *weather measurements* are supplied by

**The contractor using actual weather readings from the construction site**

The *weather data* are the records of past *weather measurements* for each calendar month which were recorded at:

**The nearest weather station of the South African Weather Service to the site**

and which are available from:

**the South African Weather Bureau and included in Annexure A to this Contract Data provided by the *Employer***

<b>7</b>	<b>Title</b>	There is no reference to Contract Data in this section of the core clauses and terms in italics used in this section are identified elsewhere in this Contract Data.
<b>8</b>	<b>Risks and insurance</b>	
80.1	These are additional <i>Employer's</i> risks	<ul style="list-style-type: none"> <li>• <b>Cost overruns due to unpredictable surface conditions.</b></li> <li>• <b>The possibility of existing services which might not be indicated on the wayleave.</b></li> </ul>
84.1	The <i>Employer</i> provides these insurances from the Insurance Table	<b>as stated in Annexure B1,B2,B3 of this contract</b>
84.1	The <i>Employer</i> provides these additional insurances	<b>as stated in Annexure B1,B2,B3 of this contract</b>
84.2	The minimum limit of indemnity for insurance in respect of loss of or damage to property (except the <i>works</i> , Plant, Materials and Equipment) and liability for bodily injury to or death of a person (not an employee of the <i>Contractor</i> ) caused by activity in connection with this contract for any one event is	<b>whatever the <i>Contractor</i> deems necessary in addition to that provided by the <i>Employer</i>.</b>
84.2	The minimum limit of indemnity for insurance in respect of death of or bodily injury to employees of the <i>Contractor</i> arising out of and in the course of their	<b>As prescribed by the Compensation for Occupational Injuries and Diseases Act No. 130 of 1993 and the <i>Contractor's</i> common law liability for people falling outside the scope of</b>

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	employment in connection with this contract for any one event is	the Act with a limit of Indemnity of not less than R500 000 (Five hundred thousand Rands).
<b>9</b>	<b>Termination</b>	There is no reference to Contract Data in this section of the core clauses and terms in italics used in this section are identified elsewhere in this Contract Data. Contractor to refer to NEC ECC Core Clause 9 Termination table in conjunction with Clause Z11 of this contract
<b>10</b>	<b>Data for main Option clause</b>	
<b>B</b>	<b>Priced contract with bill of quantities</b>	
60.6	The <i>method of measurement</i> is	as stated in Part C2.1, Pricing Assumptions.
<b>11</b>	<b>Data for Option W1</b>	
W1.1	The <i>Adjudicator</i> is	the person selected from the ICE-SA Division (or its successor body) of the South African Institution of Civil Engineering Panel of Adjudicators by the Party intending to refer a dispute to him. (see <a href="http://www.ice-sa.org.za">www.ice-sa.org.za</a> ). If the Parties do not agree on an Adjudicator the Adjudicator will be appointed by the Arbitration Foundation of Southern Africa (AFSA).
W1.2(3)	The <i>Adjudicator nominating body</i> is:	the Chairman of ICE-SA a joint Division of the South African Institution of Civil Engineering and the London Institution of Civil Engineers. (See <a href="http://www.ice-sa.org.za">www.ice-sa.org.za</a> ) or its successor body.
W1.4(2)	The <i>tribunal</i> is:	arbitration.
W1.4(5)	The <i>arbitration procedure</i> is	the latest edition of Rules for the Conduct of Arbitrations published by The Association of Arbitrators (Southern Africa) or its successor body.
	The place where arbitration is to be held is	Within South Africa in any City that will be agreed upon
	The person or organisation who will choose an arbitrator	
	- if the Parties cannot agree a choice or	the Chairman for the time being or his nominee
	- if the arbitration procedure does not state who selects an arbitrator, is	of the Association of Arbitrators (Southern Africa) or its successor body.
<b>12</b>	<b>Data for secondary Option clauses</b>	
<b>X1</b>	<b>Price adjustment for inflation</b>	
X1.1(a)	The <i>base date</i> for indices is	TBA
X1.1(c)	The proportions used to calculate the Price Adjustment Factor are:	The rates will be fixed and firm for the first year of the contract. On the anniversary of

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		the contract SEIFSA will be applied where 15% will be non-adjustable and 85% will be adjusted based on Table C3 (a) for labour rates. Transport will be adjusted by SEIFSA Table L-5 for transport. Only task that will be issued after this date will be claimed using the adjusted rate.
<b>X2</b>	<b>Changes in the law</b>	The Law of South Africa will be used
<b>X5</b>	<b>Sectional Completion</b>	
X5.1	The <i>completion date</i> for each <i>section</i> of the <i>works</i> is:	The completion date for each section of the work will be specified in the Project Specific Agreement for any project executed in terms of this contract.
<b>X5 &amp; X7</b>	<b>Sectional Completion and delay damages used together</b>	The delay damage for each section and/or completion of the work shall be 0.5%/day of the total value of the project to a maximum of 10% and will be specified in the Project Specific Agreement for any project executed in terms of this contract and will be relevant to the specific project being executed.  Live Work /Outage cancellation - R5 000 per day
<b>X16</b>	<b>Retention</b>	
X16.1	The <i>retention free amount</i> is	R0,00
	The <i>retention percentage</i> is	5% 2,5% for SDL&I
<b>X17</b>	<b>Low Performance damages</b>	
X17.1	The amounts for low performance damages are: <b>Any substandard work as per the Eskom D-DT Standard</b>	<b>Amount</b> Based on Quotation to fix substandard/Defect
		<b>Performance level</b> As per applicable the latest D-DT Standard
X18.1	The <i>Contractor's</i> liability to the <i>Employer</i> for indirect or consequential loss is limited to:	The sum of the loss because of any action arising by any negligent act by any person under the contractor's employ or any person performing work under the direct supervision of the contractor
X18.2	For any one event, the <i>Contractor's</i> liability to the <i>Employer</i> for loss of or damage to the <i>Employer's</i> property is limited to:	the amount of the deductibles relevant to the event described in the insurance policy format selected in the data for clause 84.1 above, which policy is available on Insurance Letters Attached in this contract
X18.4	The <i>Contractor's</i> total liability to the	the total of the Prices other than for the

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*Employer* for all matters arising under or in connection with this contract, other than excluded matters, is limited to:

**additional excluded matters.**

**The *Contractor's* total liability for the additional excluded matters is not limited.**

**The additional excluded matters are amounts for which the *Contractor* is liable under this contract for**

- Defects due to his design which arise before the Defects Certificate is issued,
- Defects due to manufacture and fabrication outside the Site,
- loss of or damage to property (other than the *works*, Plant and Materials),
- death of or injury to a person and
- Infringement of an intellectual property right.

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X18.5

The *end of liability date* is

**(i) Five years after the *defects date* for latent Defects and**

**(ii) The date on which the liability in question prescribes in accordance with the Prescription Act No. 68 of 1969 (as amended or in terms of any replacement legislation) for any other matter.**

**A latent Defect is a Defect which would not have been discovered on reasonable inspection by the *Employer* or the *Supervisor* before the *defects date*, without requiring any inspection not ordinarily carried out by the *Employer* or the *Supervisor* during that period. If the *Employer* or the *Supervisor* do undertake any inspection over and above the reasonable inspection, this does not place a greater responsibility on the *Employer* or the *Supervisor* to have discovered the Defect.**

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<b>Z</b>	<b>The <i>Additional conditions of contract</i> are</b>	<b>Z1 to Z15 always apply.</b>
<b>Z1</b>	<b>Cession delegation and assignment</b>	
Z1.1	The <i>Contractor</i> does not cede, delegate, or assign any of its rights or obligations to any person without the written consent of the <i>Employer</i> .	
Z1.2	Notwithstanding the above, the <i>Employer</i> may on written notice to the <i>Contractor</i> cede and delegate its rights and obligations under this contract to any of its subsidiaries or any of its present divisions or operations which may be converted into separate legal entities because of the restructuring of the Electricity Supply Industry.	
<b>Z2</b>	<b>Joint ventures</b>	
Z2.1	If the <i>Contractor</i> constitutes a joint venture, consortium, or other unincorporated grouping of two or more persons or organisations then these persons or organisations are deemed to be jointly and severally liable to the <i>Employer</i> for the performance of this contract.	
Z2.2	Unless already notified to the <i>Employer</i> , the persons or organisations notify the <i>Project Manager</i> within two weeks of the Contract Date of the key person who has the authority to bind the <i>Contractor</i> on their behalf.	
Z2.3	The <i>Contractor</i> does not alter the composition of the joint venture, consortium, or other unincorporated grouping of two or more persons without the consent of the <i>Employer</i> having been given to the <i>Contractor</i> in writing.	
<b>Z3</b>	<b>Change of Broad Based Black Economic Empowerment (B-BBEE) status</b>	
Z3.1	Where a change in the <i>Contractor's</i> legal status, ownership or any other change to his business composition or business dealings results in a change to the <i>Contractor's</i> B-BBEE status, the <i>Contractor</i> notifies the <i>Employer</i> within seven days of the change.	
Z3.2	The <i>Contractor</i> is required to submit an updated verification certificate and necessary supporting documentation confirming the change in his B-BBEE status to the <i>Project Manager</i> within thirty days of the notification or as otherwise instructed by the <i>Project Manager</i> .	
Z3.3	Where, as a result, the <i>Contractor's</i> B-BBEE status has decreased since the Contract Date the <i>Employer</i> may either re-negotiate this contract or alternatively, terminate the <i>Contractor's</i> obligation to Provide the Works.	
Z3.4	Failure by the <i>Contractor</i> to notify the <i>Employer</i> of a change in its B-BBEE status may constitute a reason for termination. If the <i>Employer</i> terminates in terms of this clause, the procedures on termination are P1, P2 and P3 as stated in clause 92, and the amount due is A1 and A3 as stated in clause 93.	
<b>Z4</b>	<b>Confidentiality</b>	
Z4.1	The <i>Contractor</i> does not disclose or make any information arising from or in connection with this contract available to Others. This undertaking does not, however, apply to information which at the time of disclosure or thereafter, without default on the part of the <i>Contractor</i> , enters the public domain or to information which was already in the possession of the <i>Contractor</i> at the time of disclosure (evidenced by written records in existence at that time). Should the	

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*Contractor* disclose information to Others in terms of clause 25.1, the *Contractor* ensures that the provisions of this clause are complied with by the recipient.

- Z4.2 If the *Contractor* is uncertain about whether any such information is confidential, it is to be regarded as such until notified otherwise by the *Project Manager*.
- Z4.3 If the *Contractor* is, at any time, required by law to disclose any such information which is required to be kept confidential, the *Contractor*, to the extent permitted by law prior to disclosure, notifies the *Employer* so that an appropriate protection order and/or any other action can be taken, if possible, prior to any disclosure. If such protective order is not, or cannot, be obtained, then the *Contractor* may disclose that portion of the information which it is required to be disclosed by law and uses reasonable efforts to obtain assurances that confidential treatment will be afforded to the information so disclosed.
- Z4.4 The taking of images (whether photographs, video footage or otherwise) of the *works* or any portion thereof, while Providing the Works and after Completion, requires the prior written consent of the *Project Manager*. All rights in and to all such images vests exclusively in the *Employer*.
- Z4.5 The *Contractor* ensures that all his subcontractors abide by the undertakings in this clause.

### **Z5 Waiver and estoppel: Add to core clause 12.3:**

- Z5.1 Any extension, concession, waiver, or relaxation of any action stated in this contract by the Parties, the *Project Manager*, the *Supervisor*, or the *Adjudicator* does not constitute a waiver of rights and does not give rise to an estoppel unless the Parties agree otherwise and confirm such agreement in writing.

### **Z6 Health, safety, and the environment: Add to core clause 27.4**

- Z6.1 The *Contractor* undertakes to take all reasonable precautions to maintain the health and safety of persons in and about the execution of the *works*. Without limitation the *Contractor*:
- accepts that the *Employer* may appoint him as the "Principal Contractor" (as defined and provided for under the Construction Regulations 2014 (promulgated under the Occupational Health & Safety Act 85 of 1993) ("the Construction Regulations") for the Site.
  - warrants that the total of the Prices as at the Contract Date includes enough for proper compliance with the Construction Regulations, all applicable health & safety laws and regulations and the health and safety rules, guidelines and procedures provided for in this contract and generally for the proper maintenance of health & safety in and about the execution of *works*; and
  - undertakes, in and about the execution of the *works*, to comply with the Construction Regulations and with all applicable health & safety laws and regulations and rules, guidelines and procedures otherwise provided for under this contract and ensures that his Subcontractors, employees and others under the *Contractor's* direction and control, likewise observe and comply with the foregoing.
- Z6.2 The *Contractor*, in and about the execution of the *works*, complies with all applicable environmental laws and regulations and rules, guidelines and procedures otherwise provided for under this contract and ensures that his Subcontractors, employees and others under the *Contractor's* direction and control, likewise observe and comply with the foregoing.

### **Z7 Provision of a Tax Invoice and interest. Add to core clause 51**

- Z7.1 Within one week of receiving a payment certificate from the *Project Manager* in terms of core clause 51.1, the *Contractor* provides the *Employer* with a tax invoice in accordance with the

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*Employer's* procedures stated in the Works Information, showing the amount due for payment equal to that stated in the payment certificate.

Z7.2 If the *Contractor* does not provide a tax invoice in the form and by the time required by this contract, the time by when the *Employer* is to make a payment is extended by a period equal in time to the delayed submission of the correct tax invoice. Interest due by the *Employer* in terms of core clause 51.2 is then calculated from the delayed date by when payment is to be made.

Z7.3 The *Contractor* (if registered in South Africa in terms of the companies Act) is required to comply with the requirements of the Value Added Tax Act, no 89 of 1991 (as amended) and to include the *Employer's* VAT number 4740101508 on each invoice he submits for payment.

### Z8 Notifying compensation events

Z8.1 Delete from the last sentence in core clause 61.3, "unless the *Project Manager* should have notified the event to the *Contractor* but did not".

### Z9 *Employer's* limitation of liability

Z9.1 The *Employer's* liability to the *Contractor* for the *Contractor's* indirect or consequential loss is limited to R0.00 (zero Rand)

Z9.2 The *Contractor's* entitlement under the indemnity in 83.1 is provided for in 60.1(14) and the *Employer's* liability under the indemnity is limited.

### Z10 Termination: Add to core clause 91.1, at the second main bullet point, fourth sub-bullet point, after the words "against it":

Z10.1 or had a business rescue order granted against it.

### Z11 Addition to secondary Option X7 Delay damages (if applicable in this contract)

Z11.1 If the amount due for the *Contractor's* payment of delay damages reaches the limits stated in this Contract Data for Option X7 or Options X5 and X7 used together, the *Employer* may terminate the *Contractor's* obligation to Provide the Works using the same procedures and payment on termination as those applied for reasons R1 to R15 or R18 stated in the Termination Table.

### Z12 Ethics

For the purposes of this Z-clause, the following definitions apply:

**Affected Party** means, as the context requires, any party, irrespective of whether it is the *Contractor* or a third party, such party's employees, agents, or Subcontractors or Subcontractor's employees, or any one or more of all of these parties' relatives or friends,

**Coercive Action** means to harm or threaten to harm, directly or indirectly, an Affected Party or the property of an Affected Party, or to otherwise influence or attempt to influence an Affected Party to act unlawfully or illegally,

**Collusive** means where two or more parties co-operate to achieve an unlawful or illegal purpose,

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- Action** including to influence an Affected Party to act unlawfully or illegally,
- Committing Party** means, as the context requires, the *Contractor*, or any member thereof in the case of a joint venture, or its employees, agents, or Subcontractor or the Subcontractor's employees,
- Corrupt Action** means the offering, giving, taking, or soliciting, directly or indirectly, of a good or service to unlawfully or illegally influence the actions of an Affected Party,
- Fraudulent Action** means any unlawfully or illegally intentional act or omission that misleads, or attempts to mislead, an Affected Party, in order to obtain a financial or other benefit or to avoid an obligation or incurring an obligation,
- Obstructive Action** means a Committing Party unlawfully or illegally destroying, falsifying, altering or concealing information or making false statements to materially impede an investigation into allegations of Prohibited Action, and
- Prohibited Action** means any one or more of a Coercive Action, Collusive Action Corrupt Action, Fraudulent Action or Obstructive Action.

- Z12.1 A Committing Party may not take any Prohibited Action during the course of the procurement of this contract or in execution thereof.
- Z12.2 The *Employer* may terminate the *Contractor's* obligation to Provide the Services if a Committing Party has taken such Prohibited Action and the *Contractor* did not take timely and appropriate action to prevent or remedy the situation, without limiting any other rights or remedies the *Employer* has. It is not required that the Committing Party had to have been found guilty, in court or in any other similar process, of such Prohibited Action before the *Employer* can terminate the *Contractor's* obligation to Provide the Services for this reason.
- Z12.3 If the *Employer* terminates the *Contractor's* obligation to Provide the Services for this reason, the amounts due on termination are those intended in core clauses 92.1 and 92.2.
- Z12.4 A Committing Party co-operates fully with any investigation pursuant to alleged Prohibited Action. Where the *Employer* does not have a contractual bond with the Committing Party, the *Contractor* ensures that the Committing Party co-operates fully with an investigation.

**Z13 Insurance**

**Z 13.1 Replace core clause 84 with the following:**

- Insurance cover** **84**
- 84.1** When requested by a Party, the other Party provides certificates from his insurer or broker stating that the insurances required by this contract are in force.
- 84.2** The *Contractor* provides the insurances stated in the Insurance Table A.
- 84.3** The insurances provide cover for events which are at the *Contractor's* risk from the *starting date* until the earlier of Completion and the date of the termination certificate.

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**INSURANCE TABLE A**

<b>Insurance against</b>	<b>Minimum amount of cover or minimum limit of indemnity</b>
Loss of or damage to the works, Plant and Materials	The replacement cost where not covered by the <i>Employer's</i> insurance  The <i>Employer's</i> policy deductible, as at Contract Date, where covered by the <i>Employer's</i> insurance
Loss of or damage to Equipment	The replacement cost
Liability for loss of or damage to property (except the works, Plant and Materials and Equipment) and liability for bodily injury to or death of a person (not an employee of the <i>Contractor</i> ) caused by activity in connection with this contract	<b><u>Loss of or damage to property</u></b> <u>Employer's property</u> The replacement cost where not covered by the <i>Employer's</i> insurance  The <i>Employer's</i> policy deductible, as at Contract Date, where covered by the <i>Employer's</i> insurance  <u>Other property</u> The replacement cost  <b><u>Bodily injury to or death of a person</u></b> The amount required by applicable law
Liability for death of or bodily injury to employees of the <i>Contractor</i> arising out of and in the course of their employment in connection with this contract	The amount required by the applicable law

Z 13.2

**Replace core clause 87 with the following:**

The *Employer* provides the insurances stated in the Insurance Table B.

**INSURANCE TABLE B**

<b>Insurance against or name of policy</b>	<b>Minimum amount of cover or minimum limit of indemnity</b>
Assets All Risk	Per the insurance policy document
Contract Works insurance	Per the insurance policy document
Environmental Liability	Per the insurance policy document
General and Public Liability	Per the insurance policy document

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Transportation (Marine)	Per the insurance policy document
Motor Fleet and Mobile Plant	Per the insurance policy document
Terrorism	Per the insurance policy document
Cyber Liability	Per the insurance policy document
Nuclear Material Damage and Business Interruption	Per the insurance policy document
Nuclear Material Damage Terrorism	Per the insurance policy document

**Z14 Nuclear Liability**

- Z14.1 The *Employer* is the operator of the Koeberg Nuclear Power Station (KNPS), a nuclear installation, as designated by the National Nuclear Regulator of the Republic of South Africa and is the holder of a nuclear licence in respect of the KNPS.
- Z14.2 The *Employer* is solely responsible for and indemnifies the *Contractor* or any other person against any and all liabilities which the *Contractor* or any person may incur arising out of or resulting from nuclear damage, as defined in Act 47 of 1999, save to the extent that any liabilities are incurred due to the unlawful intent of the *Contractor* or any other person or the presence of the *Contractor* or that person or any property of the *Contractor* or such person at or in the KNPS or on the KNPS site, without the permission of the *Employer* or of a person acting on behalf of the *Employer*.
- Z14.3 Subject to clause Z14.4 below, the *Employer* waives all rights of recourse, arising from the aforesaid, save to the extent that any claims arise or liability is incurred due or attributable to the unlawful intent of the *Contractor* or any other person, or the presence of the *Contractor* or that person or any property of the *Contractor* or such person at or in the KNPS or on the KNPS site, without the permission of the *Employer* or of a person acting on behalf of the *Employer*.
- Z14.4 The *Employer* does not waive its rights provided for in section 30 (7) of Act 47 of 1999, or any replacement section dealing with the same subject matter.
- Z14.5 The protection afforded by the provisions hereof shall be in effect until the KNPS is decommissioned.

**Z15 Asbestos**

For the purposes of this Z-clause, the following definitions apply:

- AAIA** means approved asbestos inspection authority.
- ACM** means asbestos containing materials.
- AL** means action level, i.e., a level of 50% of the OEL, i.e., 0.1 regulated asbestos fibres per ml of air measured over a 4-hour period. The value at which proactive actions is required to control asbestos exposure to prevent exceeding the OEL.
- Ambient Air** means breathable air in area of work with specific reference to breathing zone, which is defined to be a virtual area within a radius of approximately 30cm from the nose inlet.
- Compliance Monitoring** means compliance sampling used to assess whether the personal exposure of workers to regulated asbestos fibres is in compliance with the Standard's

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requirements for safe processing, handling, storing, disposal and phase-out of asbestos and asbestos containing material, equipment and articles.

- OEL** means occupational exposure limit.
- Parallel Measurements** means measurements performed in parallel, yet separately, to existing measurements to verify validity of results.
- Safe Levels** means airborne asbestos exposure levels conforming to the Standard's requirements for safe processing, handling, storing, disposal and phase-out of asbestos and asbestos containing material, equipment, and articles.
- Standard** means the *Employer's* Asbestos Standard 32-303: Requirements for Safe Processing, Handling, Storing, Disposal and Phase-out of Asbestos and Asbestos Containing Material, Equipment and Articles.
- SANAS** means the South African National Accreditation System.
- TWA** means the average exposure, within a given workplace, to airborne asbestos fibres, normalised to the baseline of a 4-hour continuous period, also applicable to short term exposures, i.e., 10-minute TWA.
- Z15.1 The *Employer* ensures that the Ambient Air in the area where the *Contractor* will Provide the Services conforms to the acceptable prescribed South African standard for asbestos, as per the regulations published in GNR 155 of 10 February 2002, under the Occupational Health and Safety Act, 1993 (Act 85 of 1993) ("Asbestos Regulations"). The OEL for asbestos is 0.2 regulated asbestos fibres per millilitre of air as a 4-hour TWA, averaged over any continuous period of four hours, and the short-term exposure limit of 0.6 regulated asbestos fibres per millilitre of air as a 10-minute TWA, averaged over any 10 minutes, measured in accordance with HSG248 and monitored according to HSG173 and OESSM.
- Z15.2 Upon written request by the *Contractor*, the *Employer* certifies that these conditions prevail. All measurements and reporting are affected by an independent, competent, and certified occupational hygiene inspection body, i.e. a SANAS accredited and Department of Employment and Labour approved AAIA. The *Contractor* may perform Parallel Measurements and related control measures at the *Contractor's* expense. For the purposes of compliance, the results generated from Parallel Measurements are evaluated only against South African statutory limits as detailed in clause Z15.1. Control measures conform to the requirements stipulated in the AAIA-approved asbestos work plan.
- Z15.3 The *Employer* manages asbestos and ACM according to the Standard.
- Z15.4 In the event that any asbestos is identified while Providing the Services, a risk assessment is conducted and if so required, with reference to possible exposure to an airborne concentration of above the AL for asbestos, immediate control measures are implemented, and relevant air monitoring conducted in order to declare the area safe.
- Z15.5 The *Contractor's* personnel are entitled to stop working and leave the contaminated area forthwith until such time that the area of concern is declared safe by either Compliance Monitoring or an AAIA approved control measure intervention, for example, per the emergency asbestos work plan, if applicable.
- Z15.6 The *Contractor* continues to Provide the Services, without additional control measures presented, on presentation of Safe Levels. The contractually agreed dates to Provide the Services, including the Completion Date, are adjusted accordingly. The contractually agreed dates are extended by the notification periods required by regulations 3 and 21 of the Asbestos Regulations, 2001.

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Z15.7 Any removal and disposal of asbestos, asbestos containing materials and waste, is done by a registered asbestos contractor, instructed by the *Employer* at the *Employer's* expense, and conducted in line with South African legislation.

**Annexure A: One-in-ten-year-return weather data obtained from SA Weather Bureau for [weather station]**

If any one of these *weather measurements* recorded within a calendar month, before the Completion Date for the whole of the *works* and at the place stated in this Contract Data is shown to be more adverse than the amount stated below then the *Contractor* may notify a compensation event.

	<i>Weather measurement</i>				
Month	Cumulative rainfall (mm)	Number of days with rain more than 10mm	Number of days with min air temp < 0 deg.C	Number of days with snow lying at 08:00 CAT	[Other measurements if applicable]
January					
February					
March					
April					
May					
June					
July					
August					
September					
October					
November					
December					

Only the difference between the more adverse recorded weather and the equivalent measurement given above is considered in assessing a compensation event.

**Annexure B: Insurance provided by the Employer**

*These notes are provided as guidance to tendering contractors and the Contractor about the insurance provided by the Employer. The Contractor must obtain its own advice. Details of the insurance itself are available from the internet web link given below.*

1. For the purpose of works contracts, insurance provided by Eskom (the *Employer*) has been arranged on the basis of “project” or “contract” value, where the value is the total of the Prices at Completion of the whole of the works including VAT.

A “project” is a collection of contracts or work packages to be undertaken as part of a single identified capital expansion or refurbishment of a particular asset or facility.

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A “contract” is a single contract not linked to or being part of a “project”.

2. For ECC3 there are three main “formats” of cover and deductible structure; Format A, Format B and Format Dx.

**Format A** is for a project or contract value less than or equal to R350M (three hundred and fifty million Rand) inclusive of VAT.

**Format B** is for a project or contract value greater than R350M. (Three hundred and fifty million Rand) inclusive of VAT.

In the case of contracts / packages within a project:

- For a contract / package of R50M which is part of a R400M project, Format B will apply
- For a contract / package of R250M which is part of a R6 billion project, Format B will apply.
- For a contract / package of R120M which is part of a R350M project Format A will apply.

For a contract which is not part of a project the same limits apply:

- For a contract of R50M, Format A will apply
- For a contract of R355M, Format B will apply.

**Format Dx** applies only to Distribution Division projects and contracts. If a Distribution Division project or contract exceeds the Format A limit, the Eskom Insurance Management Services [EIMS] need to be contacted for advice on how to formulate the insurance cover. Cover and deductibles for Distribution Division are per the relevant policy available on the internet web link given below.

**Format A generally applies to Transmission Division** projects and contracts. If a Transmission Division project or contract exceeds the Format A limit, the Eskom Insurance Management Services [EIMS] need to be contacted for advice on how to formulate the insurance cover.

3. Tendering contractors should note that cover provided by the *Employer* is only per the policies available on the internet web link listed below and may not be the cover required by the tendering contractor or as intended by each of the listed insurances in the left-hand column of the Insurance Table in clause 84.2. In terms of clause 84.1 “the *Contractor* provides the insurances stated in the Insurance Table except any insurance which the *Employer* is to provide”. Hence the *Contractor* provides insurance which the *Employer* does not provide and in cases where the *Employer* does provide insurance the *Contractor* insures for the difference between what the Insurance Table requires and what the *Employer* provides.
4. When the Marine Insurance is required, the *Contractor* needs to obtain a copy of the latest edition of Eskom’s Marine Policies Procedures found at internet website given below.
5. Further information and full details of all Eskom provided policies and procedures may be obtained from Insurance Letters attached as referenced on page 109

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C1.2 Contract Data

**Part two - Data provided by the Contractor**

Completion of the data in full, according to Options chosen, is essential to create a complete contract.

Clause	Statement	Data
10.1	The <i>Contractor</i> is (Name): Address Tel No. Fax No.	
11.2(8)	The <i>direct fee percentage</i> is The <i>subcontracted fee percentage</i> is	<b>NIL</b> <b>NIL</b>
11.2(18)	The <i>working areas</i> are the Site and	
24.1	The <i>Contractor's</i> key persons are: 1 Name: Job: Responsibilities: Qualifications: Experience: 2 Name: Job Responsibilities: Qualifications: Experience:	<b>CV's (and further key persons data including CVs) are appended to Tender Schedule entitled.</b>
11.2(3)	The <i>completion date</i> for the whole of the <i>works</i> is	<b>Varies from one project to the next and shall be detailed in each Site-Specific Agreement</b>
11.2(14)	The following matters will be included in the Risk Register	
11.2(19)	The Works Information for the <i>Contractor's</i> design is in:	N/A
31.1	The programme identified in the Contract Data is	

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<b>B</b>	<b>Priced contract with bill of quantities</b>	
11.2(21)	The <i>bill of quantities</i> is in	<b>Part 2- Pricing Data</b>
11.2(31)	The tendered total of the Prices is	<b>Rate based Contract</b>
	<b>Data for Schedules of Cost Components</b>	<i>Note "SCC" means Schedule of Cost Components starting on page 60, and "SSCC" means Shorter Schedule of Cost Components starting on page 63 of ECC3 (April 2013).</i>
<b>B</b>	<b>Priced contract with bill of quantities</b>	<b>Data for the Shorter Schedule of Cost Components</b>
41 in SSCC	The percentage for people overheads is:	<b>NIL</b>
62 in SSCC	The percentage for design overheads is	<b>NIL</b>
63 in SSCC	The categories of design employees whose travelling expenses to and from the Working Areas are included in Defined Cost are:	<b>NIL</b>

**The Provision of Electrification MV and LV infrastructure and Households Connections within Mpumalanga Province - LimLanga Cluster****PART 2: PRICING DATA**

<b>Document reference</b>	<b>Title</b>	<b>No of pages</b>
C2.1	Pricing assumptions: Option B	1-2
C2.2	The <i>bill of quantities</i>	1-49

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C2.1 Pricing assumptions: Option B

**The conditions of contract**

**How work is priced and assessed for payment**

Clause 11 in NEC3 Engineering and Construction Contract, June 2005 (ECC3) Option B states:

**Identified and defined terms** 11 11.2

(21) The Bill of Quantities is the *bill of quantities* as changed in accordance with this contract to accommodate implemented compensation events and for accepted quotations for acceleration.

(28) The Price for Work Done to Date is the total of

- the quantity of the work which the *Contractor* has completed for each item in the Bill of Quantities multiplied by the rate and
- a proportion of each lump sum which is the proportion of the work covered by the item which the *Contractor* has completed.

Completed work is work without Defects which would either delay or be covered by immediately following work.

(31) The Prices are the lump sums and the amounts obtained by multiplying the rates by the quantities for the items in the Bill of Quantities.

This confirms that Option B is a re-measurement contract, and the bill comprises only items measured using quantities and rates or stated as lump sums. Value related items are not used. Time related items are items measured using rates where the rate is a unit of time.

**Function of the Bill of Quantities**

Clause 55.1 in Option B states, "Information in the Bill of Quantities is not Works Information or Site Information". This confirms that instructions to do work or how it is to be done are not included in the Bill, but in the Works Information. This is further confirmed by Clause 20.1 which states, "The *Contractor* Provides the Works in accordance with the Works Information". Hence the *Contractor* does **not** Provide the Works in accordance with the Bill of Quantities. The Bill of Quantities is only a pricing document.

**Measurement and payment**

**Symbols**

The units of measurement described in the Bill of Quantities are metric units abbreviated as follows:

Abbreviation	Unit
%	percent
h	hour
ha	hectare
kg	kilogram
kl	kilolitre
km	kilometre
km-pass	kilometre-pass
kPa	kilopascal

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kW	kilowatt
l	litre
m	metre
mm	millimetre
m <sup>2</sup>	square metre
m <sup>2</sup> -pass	square metre pass
m <sup>3</sup>	cubic metre
m <sup>3</sup> -km	cubic metre-kilometre
MN	meganewton
MN.m	meganewton-metre
MPa	megapascal
No.	number
Prov sum <sup>2</sup>	provisional sum
PC-sum	prime cost sum
R/only	Rate only
sum	Lump sum
t	ton (1000kg)
W/day	Workday

**General assumptions**

Unless otherwise stated, items are measured net in accordance with the drawings, and no allowance has been made in the quantities for waste.

The Prices and rates stated for each item in the Bill of Quantities shall be treated as being fully inclusive of all work, risks, liabilities, obligations, overheads, profit and everything necessary as incurred or required by the *Contractor* in carrying out or providing that item.

An item against which no Price is entered will be treated as covered by other Prices or rates in the *bill of quantities*.

The quantities contained in the Bill of Quantities may not be final and do not necessarily represent the actual amount of work to be done. The quantities of work assessed and certified for payment by the *Project Manager* at each assessment date will be used for determining payments due.

The short descriptions of the items of payment given in the bill of quantities are only for the purposes of identifying the items. Detail regarding the extent of the work entailed under each item is provided in the Works Information

<sup>2</sup> Provisional Sums should not be used unless absolutely unavoidable. Rather include specifications and associated bill items for the most likely scope of work, and then change later using the compensation event procedure if necessary.

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C2.2 the provisional bill of quantities

Mpumalanga Household Electrification Bill of Rates-				
Note: Please initial each page and sign the last page for acceptance of the rates				
NO	STD REFERENCE	DESCRIPTION	UNIT	LABOUR RATE
A	<b>PRELIMINARIES AND GENERAL FIXED CHARGE ITEMS</b>			
A1	<b>Site Establishment:</b> The Contractor shall establish the site camp and maintain throughout the construction period and allow for removal of such upon completion of Works. <b>The Eskom Representative reserves the right to negotiate the rates for rental arrangements based on the project scope and magnitude.</b>			
A1.1		Office and Meeting Room complete as per P&G's Guideline	Sum	R18 691,22
A1.2		Stores	Sum	R16 233,68
A1.3		Sanitation	Sum	R2 363,65
A1.4		Electricity	Sum	R2 626,28
A1.5		Supply and Install Diamond mesh fencing at 1.8 meters high	m	R198,88
A1.6		Supply and Install Diamond mesh Lockable Gate 1.8m high x 3.6m wide	each	R2 281,28
<b>Signboard Labour</b>				
A1.7		Contractor shall erect on site, maintain throughout the construction duration(Safety)	each	R439,50
A1.8		Project signboard	each	R3 727,50
<b>Health and Safety measures (In terms of 34-333) Safety &amp; Health, Environmental</b>				
A1.9		Compliance with OH&S Act, Construction Regulations, COVID 19 and EMP (Environmental Management Plan) .	Sum	R34 609,57
<b>Materials Management</b>				
A1.10		The Contractor shall make allowance to receive at Eskom stores, offload and stack the free-issue materials supplied to the contractor.	Sum	R11 937,63
<b>Contractual requirements:</b> Cost to comply to and maintain all insurance and statutory contributions, etc.				
A1.11		Allowance to comply to and maintain all insurance and statutory contributions, etc. <b>(Actual cost will be paid at the end of the project and proof of policy must be provided and must be compliant to contractual requirements)</b>	Month	R4 047,00
A1.12		<b>Contractors supplied material (Contractors to submit 3 quotations)</b>		<b>COST PLUS 5%</b>
<b>Sub-Total A1</b>				

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A2		PRELIMINARIES AND GENERAL TIME RELATED ITEMS		
<b>Site Establishment</b>				
A2.1		Site office 6m x 3m with aircon	Weeks	R1 810,50
A2.2		Site Storage 6m x 3m	Weeks	R1 171,50
A2.3		Water	Weeks	R447,66
A2.4		Sanitation (service)	Weeks	R1 510,11
A2.5		Electricity (Eskom /Munic supply)	Weeks	R334,25
A2.6		Electricity (Generator 6.5kVA)	Weeks	R532,50
<p><b>Accommodation:</b> Allowance is for the Contractors Staff excluding the casual labourers which are assumed to be residing in the area where the works are executed.</p>				
A2.7		Staff Accommodation Allowance	Weeks	R1 391,91
<p><b>Labour:</b> The Contractor need to submit Weekly Time Sheets for all hourly compensation claims and a Daily attendance register</p>				
A2.8		<i>Supervisor</i>	hourly	R106,04
A2.9		<i>Construction Manager (SACPMP Registered)</i>	hourly	R216,15
A2.10		<p><i>Storeman</i></p> <p><i>(Storeman is required to reconcile and quantify All material on site including Eskom supplied material using the correct material return to stores forms. The Storeman shall adhere to the implementation and maintenance plan for Materials Management System for the duration of the contract).</i></p>	hourly	R60,76
A2.11		Community Liaison Officer	Daily (Max)	R372,75
A2.12		Safety Officer (SACPMP Registered)	hourly	R148,07
<b>Security</b>				
A2.13		Security on site - 24 Hour Unarmed Security (Must be registered with the appropriate body) cost + 7 % fee inline with PSIRA <b>Contractor to attach both PSIRA Registration and Quotation</b>	sum	R0,00
<b>Sub-Total A2</b>				
<b>Sub-Total Preliminaries &amp; General</b>				

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BILL OF ACTIVITIES				
ITEM	REFERENCE DRAWING	DESCRIPTION	UNIT	
<b>B</b>	<b>BUSH CLEARING &amp; TREE FELLING</b>			
	In the event where the contractor is required to cut, remove and clear trees on site. This activity shall be used to execute such work provided that the quotation submitted is from a contractor who meets all the necessary Eskom requirements for Bush Clearing plus fee.			
1		Bush Clearing and Tree Felling (Scattered Formation)	Sum	<b>R0,00</b>
2		Bush Clearing and Tree Felling (Dense Formation)	Sum	<b>R0,00</b>
<b>Sub-Total B</b>				
BILL OF ACTIVITIES				
ITEM	REFERENCE DRAWING	DESCRIPTION	UNIT	
<b>C</b>	<b>EXCAVATIONS</b>			
	Excavate only as per Eskom Standard for Holes and Trenches for Poles, Stays and Struts. All material will be elsewhere measured.			
<b>1</b>		<b>STAYS &amp; STRUTS</b>		
1.1	<a href="#">D-DT-0350</a>	LV Stay Back-Actor or Hand	Each	R188,51
1.2	<a href="#">D-DT-0350</a>	LV Stay auger	Each	R527,18
1.3	<a href="#">D-DT-0350</a>	LV Strut Back-Actor or Hand	Each	R159,75
1.4	<a href="#">D-DT-0350</a>	LV Strut auger	Each	R527,18
1.5	<a href="#">D-DT-0337</a>	LV Short Strut Back-Actor or Hand	Each	R188,51
1.6	<a href="#">D-DT-0337</a>	LV Short Strut auger	Each	R527,18
1.7	<a href="#">D-DT-0350</a>	MV Stay Back-Actor or Hand	Each	R111,83
1.8	<a href="#">D-DT-0350</a>	MV Stay auger	Each	R729,53
1.9	<a href="#">D-DT-0350</a>	MV Strut Back-Actor or Hand	Each	R147,68
1.10	<a href="#">D-DT-0350</a>	MV Strut auger	Each	R729,53
<b>2</b>		<b>WOOD POLES</b>		
2.1	<a href="#">D-DT-0330</a>	5m Pole Wood Back-Actor or Hand (1.0m Deep)	Each	R147,68
2.2	<a href="#">D-DT-0330</a>	5m Pole Wood auger (1.0m Deep)	Each	R335,48
2.3	<a href="#">D-DT-0330</a>	5m Pole Wood Hard Rock Drilling (1.0m Deep)	Each	R963,83
2.4	<a href="#">D-DT-0330</a>	5m Pole Wood Back-Actor or Hand (1.5m Deep)	Each	R191,98
2.5	<a href="#">D-DT-0330</a>	5m Pole Wood auger (1.5m Deep)	Each	R426,72
2.6	<a href="#">D-DT-0330</a>	5m Pole Wood Hard Rock Drilling (1.5m Deep)	Each	R1 253,41
2.7	<a href="#">D-DT-0330</a>	7m Pole Wood Back-Actor or Hand (1.3m Deep)	Each	R236,29
2.8	<a href="#">D-DT-0330</a>	7m Pole Wood auger (1.3m Deep)	Each	R427,49
2.9	<a href="#">D-DT-0330</a>	7m Pole Wood Hard Rock Drilling (1.3m Deep)	Each	R1 432,47
2.10	<a href="#">D-DT-1866</a>	8m Wooden Pole/X-Arm 160-179 Top Diameter Back-Actor or Hand (1.3m Deep)	Each	R221,53

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2.11	<a href="#">D-DT-1866</a>	8m Wooden Pole/X-Arm 160-179 Top Diameter auger (1.3m Deep)	Each	R427,49
2.12	<a href="#">D-DT-1866</a>	8m Wooden Pole/X-Arm 160-179 Top Diameter Hard Rock Drilling (1.3m Deep)	Each	R1 611,53
2.13	<a href="#">D-DT-0330</a>	9m Pole Wood Back-Actor or Hand (1.5m Deep)	Each	R295,38
2.14	<a href="#">D-DT-0330</a>	9m Pole Wood auger (1.5m Deep)	Each	R427,49
2.15	<a href="#">D-DT-0330</a>	9m Pole Wood Hard Rock Drilling (1.5m Deep)	Each	R1 660,60
2.16	<a href="#">D-DT-0330</a>	10m Pole Wood Back-Actor or Hand (1.7m Deep)	Each	R324,91
2.17	<a href="#">D-DT-0330</a>	10m Pole Wood auger (1.7m Deep)	Each	R427,49
2.18	<a href="#">D-DT-0330</a>	10m Pole Wood Hard Rock Drilling (1.7m Deep)	Each	R1 701,34
2.19	<a href="#">D-DT-0330</a>	11m Pole Wood Back-Actor or Hand (1.8m Deep)	Each	R354,80
2.20	<a href="#">D-DT-0330</a>	11m Pole Wood auger (1.8m Deep)	Each	R427,49
2.21	<a href="#">D-DT-0330</a>	11m Pole Wood Hard Rock Drilling (1.8m Deep)	Each	R1 931,26
2.22	<a href="#">D-DT-0330</a>	12m Pole Wood Back-Actor or Hand (2.0m Deep)	Each	R295,38
2.23	<a href="#">D-DT-0330</a>	12m Pole Wood auger (2.0m Deep)	Each	R541,11
2.24	<a href="#">D-DT-0330</a>	12m Pole Wood Hard Rock Drilling (2.0m Deep)	Each	R2 148,70
2.25	<a href="#">D-DT-0330</a>	13m - 16m Pole Wood Back-Actor or Hand (2.2m Deep)	Each	R324,91
2.26	<a href="#">D-DT-0330</a>	13m - 16m Pole Wood auger (2.2m Deep)	Each	R541,11
2.27	<a href="#">D-DT-0330</a>	13m - 16m Pole Wood Hard Rock Drilling (2.2m Deep)	Each	R2 327,75
2.30	<a href="#">D-DT-0330</a>	18m Pole Wood Back-Actor or Hand (2.4m Deep)	Each	R354,80
2.31	<a href="#">D-DT-0330</a>	18m Pole Wood auger (2.4m Deep)	Each	R562,84
2.32	<a href="#">D-DT-0330</a>	18m Pole Wood Hard Rock Drilling (2.4m Deep)	Each	R2 719,58
<b>3</b>	<b>CONCRETE POLES</b>			
3.1	<a href="#">D-DT-0330</a>	11m Pole Concrete Back-Actor or Hand (1.8m Deep)	Each	R252,53
3.2	<a href="#">D-DT-0330</a>	11m Pole Concrete auger (1.8m Deep)	Each	R427,49
3.3	<a href="#">D-DT-0330</a>	11m Pole Concrete Hard Rock Drilling (1.8m Deep)	Each	R1 969,64
3.4	<a href="#">D-DT-0330</a>	12m Pole Concrete Pole Back-Actor or Hand (2m Deep)	Each	R280,61
3.5	<a href="#">D-DT-0330</a>	12m Pole Concrete Pole auger (2m Deep)	Each	R541,11
3.6	<a href="#">D-DT-0330</a>	12m Pole Concrete Hard Rock Drilling (1.0m Deep)	Each	R2 327,75
3.7	<a href="#">D-DT-0330</a>	13m Pole Concrete Back-Actor or Hand (2.2m Deep)	Each	R308,67
3.8	<a href="#">D-DT-0330</a>	13m Pole Concrete auger (2.2m Deep)	Each	R541,11
3.9	<a href="#">D-DT-0330</a>	13m Pole Concrete Hard Rock Drilling (1.0m Deep)	Each	R2 327,75
3.10	<a href="#">D-DT-0330</a>	14m Pole Concrete Back-Actor or Hand (2.3m Deep)	Each	R322,68
3.11	<a href="#">D-DT-0330</a>	14m Pole Concrete auger (2.3m Deep)	Each	R541,11
3.12	<a href="#">D-DT-0330</a>	14m Pole Concrete Hard Rock Drilling (2.3m Deep)	Each	R2 506,82
<b>4</b>	<b>Heavy Conductor Wood Poles</b>			
4.1	<a href="#">D-DT-0330</a>	11m Pole Back-Actor or Hand - 1800mm Deep x 700mm Diameter	Each	R252,53
4.2	<a href="#">D-DT-0330</a>	11m Pole Back-Actor or Hand - 1800mm Deep x 800mm Diameter	Each	R252,53
4.3	<a href="#">D-DT-0330</a>	11m Pole Back-Actor or Hand - 1800mm Deep x 1000mm Diameter	Each	R252,53

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4.4	<a href="#">D-DT-0330</a>	11m Pole Back-Actor or Hand - 1800mm Deep x 1000mm Diameter - Add 6 Pockets of Cement to Moistened Excavated Soil	Each	R780,67
4.5	<a href="#">D-DT-0330</a>	11m Pole Back-Actor or Hand - 1800mm Deep x 1000mm Diameter - Clay and Turf - Add 8 Pockets of Cement to Moistened Imported Soil	Each	R956,71
4.6	<a href="#">D-DT-0330</a>	11m Pole Back-Actor or Hand - 1800mm Deep x 1200mm Diameter - Add 6 Pockets of Cement to Moistened Excavated Soil	Each	R780,67
4.7	<a href="#">D-DT-0330</a>	11m Pole Back-Actor or Hand - 1800mm Deep x 1200mm Diameter - Clay and Turf - Add 8 Pockets of Cement to Moistened Imported Soil	Each	R780,67
4.8	<a href="#">D-DT-0330</a>	11m Pole Back-Actor or Hand - 1800mm Deep x 1800mm Diameter - Add 6 Pockets of Cement to Moistened Excavated Soil	Each	R780,67
4.9	<a href="#">D-DT-0330</a>	11m Pole Back-Actor or Hand - 1800mm Deep x 1800mm Diameter - Clay and Turf - Add 8 Pockets of Cement to Moistened Imported Soil	Each	R956,71
4.10	<a href="#">D-DT-0330</a>	11m Pole Back-Actor or Hand - 1800mm Deep x 1800mm Diameter - <i>Add 12 Pockets of Cement to Moistened/Imported Excavated Soil</i>	Each	R1 336,87
4.11	<a href="#">D-DT-0330</a>	11m Pole Back-Actor or Hand - 1800mm Deep x 2000mm Diameter - Add 12 Pockets of Cement to Moistened/Imported Excavated Soil	Each	R1 336,87
4.12	<a href="#">D-DT-0330</a>	11m Pole Back-Actor or Hand - 1800mm Deep x 2200mm Diameter - Add 12 Pockets of Cement to Moistened/Imported Excavated Soil	Each	R1 336,87
4.13	<a href="#">D-DT-0330</a>	11m Pole Back-Actor or Hand - 1800mm Deep x 2500mm Diameter - Add 12 Pockets of Cement to Moistened/Imported Excavated Soil	Each	R1 336,87
4.14	<a href="#">D-DT-0330</a>	12m Pole Back-Actor or Hand - 2000mm Deep x 700mm Diameter	Each	R311,78
4.15	<a href="#">D-DT-0330</a>	12m Pole Back-Actor or Hand - 2000mm Deep x 800mm Diameter	Each	R311,78
4.16	<a href="#">D-DT-0330</a>	12m Pole Back-Actor or Hand - 2000mm Deep x 1000mm Diameter	Each	R311,78
4.17	<a href="#">D-DT-0330</a>	12m Pole Back-Actor or Hand - 2000mm Deep x 1000mm Diameter - Add 6 Pockets of Cement to Moistened Excavated Soil	Each	R839,91
4.18	<a href="#">D-DT-0330</a>	12m Pole Back-Actor or Hand - 2000mm Deep x 1000mm Diameter - Clay and Turf - Add 8 Pockets of Cement to Moistened Imported Soil	Each	R1 015,96
4.19	<a href="#">D-DT-0330</a>	12m Pole Back-Actor or Hand - 2000mm Deep x 1200mm Diameter - Add 6 Pockets of Cement to Moistened Excavated Soil	Each	R839,91
4.20	<a href="#">D-DT-0330</a>	12m Pole Back-Actor or Hand - 2000mm Deep x 1200mm Diameter - Clay and Turf - Add 8 Pockets of Cement to Moistened Imported Soil	Each	R1 015,96
4.21	<a href="#">D-DT-0330</a>	12m Pole Back-Actor or Hand - 2000mm Deep x 1800mm Diameter - <i>Add 6 Pockets of Cement to Moistened Excavated Soil</i>	Each	R839,91
4.22	<a href="#">D-DT-0330</a>	12m Pole Back-Actor or Hand - 2000mm Deep x 1800mm Diameter - <i>Clay and Turf - Add 8 Pockets of Cement to Moistened Imported Soil</i>	Each	R1 015,96

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4.23	<a href="#">D-DT-0330</a>	12m Pole Back-Actor or Hand - 2000mm Deep x 1800mm Diameter - Add 12 Pockets of Cement to Moistened/Imported Excavated Soil	Each	R1 368,05
4.24	<a href="#">D-DT-0330</a>	12m Pole Back-Actor or Hand - 2000mm Deep x 2000mm Diameter - Add 12 Pockets of Cement to Moistened/Imported Excavated Soil	Each	R1 368,05
4.25	<a href="#">D-DT-0330</a>	12m Pole Back-Actor or Hand - 2000mm Deep x 2200mm Diameter - Add 12 Pockets of Cement to Moistened/Imported Excavated Soil	Each	R1 368,05
4.26	<a href="#">D-DT-0330</a>	12m Pole Back-Actor or Hand - 2000mm Deep x 2500mm Diameter - Add 12 Pockets of Cement to Moistened/Imported Excavated Soil	Each	R1 368,05
4.27	<a href="#">D-DT-0330</a>	13m - 14m Pole Back-Actor or Hand - 2200mm Deep x 700mm Diameter	Each	R322,68
4.28	<a href="#">D-DT-0330</a>	13m - 14m Pole Back-Actor or Hand - 2200mm Deep x 800mm Diameter	Each	R322,68
4.29	<a href="#">D-DT-0330</a>	13m - 14m Pole Back-Actor or Hand - 2200mm Deep x 1000mm Diameter	Each	R322,68
4.30	<a href="#">D-DT-0330</a>	13m - 14m Pole Back-Actor or Hand - 2200mm Deep x 1000mm Diameter - Add 6 Pockets of Cement to Moistened Excavated Soil	Each	R850,82
4.31	<a href="#">D-DT-0330</a>	13m - 14m Pole Back-Actor or Hand - 2200mm Deep x 1000mm Diameter - Clay and Turf - Add 8 Pockets of Cement to Moistened Imported Soil	Each	R1 026,86
4.32	<a href="#">D-DT-0330</a>	13m - 14m Pole Back-Actor or Hand - 2200mm Deep x 1200mm Diameter - Add 6 Pockets of Cement to Moistened Excavated Soil	Each	R850,82
4.33	<a href="#">D-DT-0330</a>	13m - 14m Pole Back-Actor or Hand - 2200mm Deep x 1200mm Diameter - Clay and Turf - Add 8 Pockets of Cement to Moistened Imported Soil	Each	R1 026,86
4.34	<a href="#">D-DT-0330</a>	13m - 14m Pole Back-Actor or Hand - 2200mm Deep x 1800mm Diameter - Add 6 Pockets of Cement to Moistened Excavated Soil	Each	R850,82
4.35	<a href="#">D-DT-0330</a>	13m - 14m Pole Back-Actor or Hand - 2200mm Deep x 1800mm Diameter - Clay and Turf - Add 8 Pockets of Cement to Moistened Imported Soil	Each	R1 026,86
4.36	<a href="#">D-DT-0330</a>	13m - 14m Pole Back-Actor or Hand - 2200mm Deep x 1800mm Diameter - Add 12 Pockets of Cement to Moistened/Imported Excavated Soil	Each	R1 378,95
4.37	<a href="#">D-DT-0330</a>	13m - 14m Pole Back-Actor or Hand - 2200mm Deep x 2000mm Diameter - Add 12 Pockets of Cement to Moistened/Imported Excavated Soil	Each	R1 378,95
4.38	<a href="#">D-DT-0330</a>	13m - 14m Pole Back-Actor or Hand - 2200mm Deep x 2200mm Diameter - Add 12 Pockets of Cement to Moistened/Imported Excavated Soil	Each	R1 378,95
4.39	<a href="#">D-DT-0330</a>	13m - 14m Pole Back-Actor or Hand - 2200mm Deep x 2500mm Diameter - Add 12 Pockets of Cement to Moistened/Imported Excavated Soil	Each	R1 378,95
<b>5</b>	<b>Heavy Conductor Concrete Poles</b>			
5.1	<a href="#">D-DT-0330</a>	11m Pole Back-Actor or Hand - 1800mm Deep x 700mm Diameter	Each	R252,53
5.2	<a href="#">D-DT-0330</a>	11m Pole Back-Actor or Hand - 1800mm Deep x 900mm Diameter	Each	R252,53

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5.3	<a href="#">D-DT-0330</a>	11m Pole Back-Actor or Hand - 1800mm Deep x 1000mm Diameter	Each	R252,53
5.4	<a href="#">D-DT-0330</a>	11m Pole Back-Actor or Hand - 1800mm Deep x 1200mm Diameter - Add 6 Pockets of Cement to Moistened Excavated Soil	Each	R780,67
5.5	<a href="#">D-DT-0330 &amp; 240-758831148</a>	11m Pole Back-Actor or Hand - 1800mm Deep x 1200mm Diameter - Clay and Turf - Add 8 Pockets of Cement to Moistened Imported Soil	Each	R956,71
5.6	<a href="#">D-DT-0330</a>	11m Pole Back-Actor or Hand - 1800mm Deep x 1250mm Diameter - Add 6 Pockets of Cement to Moistened Excavated Soil	Each	R780,67
5.7	<a href="#">D-DT-0330 &amp; 240-758831148</a>	11m Pole Back-Actor or Hand - 1800mm Deep x 1250mm Diameter - Clay and Turf - Add 8 Pockets of Cement to Moistened Imported Soil	Each	R780,67
5.8	<a href="#">D-DT-0330</a>	11m Pole Back-Actor or Hand - 1800mm Deep x 1500mm Diameter	Each	R780,67
5.9	<a href="#">D-DT-0330</a>	11m Pole Back-Actor or Hand - 1800mm Deep x 1500mm Diameter - Add 6 Pockets of Cement to Moistened Excavated Soil	Each	R956,71
5.10	<a href="#">D-DT-0330 &amp; 240-758831148</a>	11m Pole Back-Actor or Hand - 1800mm Deep x 1500mm Diameter - Clay and Turf - Add 8 Pockets of Cement to Moistened Imported Soil	Each	R1 336,87
5.11	<a href="#">D-DT-0330</a>	11m Pole Back-Actor or Hand - 1800mm Deep x 2000mm Diameter - Add 6 Pockets of Cement to Moistened Excavated Soil	Each	R1 336,87
5.12	<a href="#">D-DT-0330 &amp; 240-758831148</a>	11m Pole Back-Actor or Hand - 1800mm Deep x 2000mm Diameter - Clay and Turf - Add 8 Pockets of Cement to Moistened Imported Soil	Each	R1 336,87
5.13	<a href="#">D-DT-0330 &amp; 240-758831148</a>	11m Pole Back-Actor or Hand - 1800mm Deep x 2000mm Diameter Add 12 Pockets of Cement to Moistened/Imported Excavated Soil	Each	R1 336,87
5.14	<a href="#">D-DT-0330 &amp; 240-758831148</a>	11m Pole Back-Actor or Hand - 1800mm Deep x 2500mm Diameter Add 12 Pockets of Cement to Moistened/Imported Excavated Soil	Each	R311,78
5.15	<a href="#">D-DT-0330 &amp; 240-758831148</a>	11m Pole Back-Actor or Hand - 1800mm Deep x 3000mm Diameter - Add 12 Pockets of Cement to Moistened/Imported Excavated Soil	Each	R311,78
5.16	D-DT-0330	12m Pole Back-Actor or Hand - 2000mm Deep x 700mm Diameter	Each	R311,78
5.17	D-DT-0330	12m Pole Back-Actor or Hand - 2000mm Deep x 900mm Diameter	Each	R839,91
5.18	D-DT-0330	12m Pole Back-Actor or Hand - 2000mm Deep x 1000mm Diameter	Each	R1 015,96
5.19	D-DT-0330	12m Pole Back-Actor or Hand - 2000mm Deep x 1200mm Diameter - Add 6 Pockets of Cement to Moistened Excavated Soil	Each	R839,91
5.20	D-DT-0330 & 240-758831148	12m Pole Back-Actor or Hand - 2000mm Deep x 1200mm Diameter - Clay and Turf - Add 8 Pockets of Cement to Moistened Imported Soil	Each	R1 015,96

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5.21	D-DT-0330	12m Pole Back-Actor or Hand - 2000mm Deep x 1250mm Diameter - Add 6 Pockets of Cement to Moistened Excavated Soil	Each	R839,91
5.22	D-DT-0330 & 240-758831148	12m Pole Back-Actor or Hand - 2000mm Deep x 1250mm Diameter - Clay and Turf - Add 8 Pockets of Cement to Moistened Imported Soil	Each	R1 015,96
5.23	D-DT-0330	12m Pole Back-Actor or Hand - 2000mm Deep x 1500mm Diameter	Each	R1 368,05
5.24	D-DT-0330	12m Pole Back-Actor or Hand - 2000mm Deep x 1500mm Diameter - Add 6 Pockets of Cement to Moistened Excavated Soil	Each	R1 368,05
5.25	D-DT-0330 & 240-758831148	12m Pole Back-Actor or Hand - 2000mm Deep x 1500mm Diameter - Clay and Turf - Add 8 Pockets of Cement to Moistened Imported Soil	Each	R1 368,05
5.26	D-DT-0330	12m Pole Back-Actor or Hand - 2000mm Deep x 2000mm Diameter - Add 6 Pockets of Cement to Moistened Excavated Soil	Each	R1 368,05
5.27	D-DT-0330 & 240-758831148	12m Pole Back-Actor or Hand - 2000mm Deep x 2000mm Diameter - Clay and Turf - Add 8 Pockets of Cement to Moistened Imported Soil	Each	R322,68
5.28	D-DT-0330 & 240-758831148	12m Pole Back-Actor or Hand - 2000mm Deep x 2000mm Diameter Add 12 Pockets of Cement to Moistened/Imported Excavated Soil	Each	R322,68
5.29	D-DT-0330 & 240-758831148	12m Pole Back-Actor or Hand - 2000mm Deep x 2500mm Diameter Add 12 Pockets of Cement to Moistened/Imported Excavated Soil	Each	R322,68
5.30	D-DT-0330 & 240-758831148	12m Pole Back-Actor or Hand - 2000mm Deep x 3000mm Diameter - Add 12 Pockets of Cement to Moistened/Imported Excavated Soil	Each	R850,82
5.31	<a href="#">D-DT-0330</a>	13m - 14m Pole Back-Actor or Hand - 2200mm Deep x 700mm Diameter	Each	R1 026,86
5.32	<a href="#">D-DT-0330</a>	13m - 14m Pole Back-Actor or Hand - 2200mm Deep x 900mm Diameter	Each	R850,82
5.33	<a href="#">D-DT-0330</a>	13m - 14m Pole Back-Actor or Hand - 2200mm Deep x 1000mm Diameter	Each	R1 026,86
5.34	<a href="#">D-DT-0330</a>	13m - 14m Pole Back-Actor or Hand - 2200mm Deep x 1200mm Diameter - Add 6 Pockets of Cement to Moistened Excavated Soil	Each	R850,82
5.35	<a href="#">D-DT-0330 &amp; 240-758831148</a>	13m - 14m Pole Back-Actor or Hand - 2200mm Deep x 1200mm Diameter - Clay and Turf - Add 8 Pockets of Cement to Moistened Imported Soil	Each	R1 026,86
5.36	<a href="#">D-DT-0330</a>	13m - 14m Pole Back-Actor or Hand - 2200mm Deep x 1250mm Diameter - Add 6 Pockets of Cement to Moistened Excavated Soil	Each	R1 378,95
5.37	<a href="#">D-DT-0330 &amp; 240-758831148</a>	13m - 14m Pole Back-Actor or Hand - 2200mm Deep x 1250mm Diameter - Clay and Turf - Add 8 Pockets of Cement to Moistened Imported Soil	Each	R1 378,95
5.38	<a href="#">D-DT-0330</a>	13m - 14m Pole Back-Actor or Hand - 2200mm Deep x 1500mm Diameter	Each	R1 378,95
5.39	<a href="#">D-DT-0330</a>	13m - 14m Pole Back-Actor or Hand - 2200mm Deep x 1500mm Diameter - Add 6 Pockets of Cement to Moistened Excavated Soil	Each	R1 378,95

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5.40	<a href="#">D-DT-0330 &amp; 240-758831148</a>	13m - 14m Pole Back-Actor or Hand - 2200mm Deep x 1500mm Diameter - Clay and Turf - Add 8 Pockets of Cement to Moistened Imported Soil	Each	R1 378,95
5.41	<a href="#">D-DT-0330</a>	13m - 14m Pole Back-Actor or Hand - 2200mm Deep x 2000mm Diameter - Add 6 Pockets of Cement to Moistened Excavated Soil	Each	R1 378,95
5.42	<a href="#">D-DT-0330 &amp; 240-758831148</a>	13m - 14m Pole Back-Actor or Hand - 2200mm Deep x 2000mm Diameter - Clay and Turf - Add 8 Pockets of Cement to Moistened Imported Soil	Each	R1 378,95
5.43	<a href="#">D-DT-0330 &amp; 240-758831148</a>	13m - 14m Pole Back-Actor or Hand - 2200mm Deep x 2000mm Diameter Add 12 Pockets of Cement to Moistened/Imported Excavated Soil	Each	R1 378,95
5.44	<a href="#">D-DT-0330 &amp; 240-758831148</a>	13m - 14m Pole Back-Actor or Hand - 2200mm Deep x 2500mm Diameter Add 12 Pockets of Cement to Moistened/Imported Excavated Soil	Each	R1 378,95
5.45	<a href="#">D-DT-0330 &amp; 240-758831148</a>	13m - 14m Pole Back-Actor or Hand - 2200mm Deep x 3000mm Diameter - Add 12 Pockets of Cement to Moistened/Imported Excavated Soil	Each	R1 378,95
<b>6</b>	<b>Free Standing Poles</b>			
6.1	<a href="#">2-WT/0000</a>	9m Pole Free Standing 18kN Back-Actor or Hand (1.5m Deep) - Soil Type 1 & 2	Each	R315,41
6.2	<a href="#">D-DT-1650</a>	12m Pole Free Standing 8kN Back-Actor or Hand (2.5m Deep) - Soil Type 1 & 2	Each	R315,41
6.3	<a href="#">D-DT-1650</a>	12m Pole Free Standing 8kN Back-Actor or Hand (2.5m Deep) - Soil Type 3	Each	R473,12
6.4	<a href="#">D-DT-1650</a>	12m Pole Free Standing 8kN Back-Actor or Hand (2.5m Deep) - Soil Type 4	Each	R630,82
6.5	<a href="#">D-DT-1651</a>	12m Pole Free Standing 15kN Back-Actor or Hand (2.5m Deep) - Soil Type 1 & 2	Each	R591,38
6.6	<a href="#">D-DT-1651</a>	12m Pole Free Standing 15kN Back-Actor or Hand (2.5m Deep) - Soil Type 3	Each	R887,09
6.7	<a href="#">D-DT-1651</a>	12m Pole Free Standing 15kN Back-Actor or Hand (2.5m Deep) - Soil Type 4	Each	R1 182,79
6.8	<a href="#">D-DT-1652</a>	12m Pole Free Standing 27kN Back-Actor or Hand (2.5m Deep) - Soil Type 1 & 2	Each	R1 064,50
6.9	<a href="#">D-DT-1652</a>	12m Pole Free Standing 27kN Back-Actor or Hand (2.5m Deep) - Soil Type 3	Each	R1 596,75
6.10	<a href="#">D-DT-1652</a>	12m Pole Free Standing 27kN Back-Actor or Hand (2.5m Deep) - Soil Type 4	Each	R2 129,02
6.11	<a href="#">D-DT-1653</a>	12m Pole Free Standing 42kN Back-Actor or Hand (2.5m Deep) - Soil Type 1	Each	R1 655,90
6.12	<a href="#">D-DT-1653</a>	12m Pole Free Standing 42kN Back-Actor or Hand (2.5m Deep) - Soil Type 2	Each	R1 655,90
6.13	<a href="#">D-DT-1653</a>	12m Pole Free Standing 42kN Back-Actor or Hand (2.5m Deep) - Soil Type 3	Each	R2 483,85
6.14	<a href="#">D-DT-1653</a>	12m Pole Free Standing 42kN Back-Actor or Hand (2.5m Deep) - Soil Type 4	Each	R3 311,79
6.15	<a href="#">D-DT-1654</a>	12m Pole Free Standing 58kN Back-Actor or Hand (2.5m Deep) - Soil Type 1	Each	R2 286,71
6.16	<a href="#">D-DT-1654</a>	12m Pole Free Standing 58kN Back-Actor or Hand (2.5m Deep) - Soil Type 2	Each	R2 286,71
6.17	<a href="#">D-DT-1654</a>	12m Pole Free Standing 58kN Back-Actor or Hand (2.5m Deep) - Soil Type 3	Each	R3 430,08
6.18	<a href="#">D-DT-1654</a>	12m Pole Free Standing 58kN Back-Actor or Hand (2.5m Deep) - Soil Type 4	Each	R3 430,08

**The Provision of Electrification MV and LV infrastructure and Households Connections within Mpumalanga Province - LimLanga Cluster**

6.19	<a href="#">D-DT-1655</a>	12m Pole Free Standing Terminal Back-Actor or Hand (2.5m Deep) - Soil Type 1	Each	R315,41
6.20	<a href="#">D-DT-1655</a>	12m Pole Free Standing Terminal Back-Actor or Hand (2.5m Deep) - Soil Type 2	Each	R315,41
6.21	<a href="#">D-DT-1655</a>	12m Pole Free Standing Terminal Back-Actor or Hand (2.5m Deep) - Soil Type 3	Each	R473,12
6.22	<a href="#">D-DT-1655</a>	12m Pole Free Standing Terminal Back-Actor or Hand (2.5m Deep) - Soil Type 4	Each	R630,82
6.23	<a href="#">D-DT-1656</a>	12m Pole Free Standing 73kN Back-Actor or Hand (2.5m Deep) - Soil Type 1	Each	R2 878,11
6.24	<a href="#">D-DT-1656</a>	5m Wooden Pole 80-100mm Top Diameter by Hand - Soil Type 1	Each	R224,46
6.25	<a href="#">D-DT-1656</a>	12m Pole Free Standing 73kN Back-Actor or Hand (2.5m Deep) - Soil Type 3	Each	R4 317,16
6.26	<a href="#">D-DT-1656</a>	12m Pole Free Standing 73kN Back-Actor or Hand (2.5m Deep) - Soil Type 4	Each	R4 317,16
6.27	<a href="#">D-DT-1657</a>	12m Pole Free Standing 106kN Back-Actor or Hand (2.5m Deep) - Soil Type 1	Each	R4 179,18
6.28	<a href="#">D-DT-1657</a>	12m Pole Free Standing 106kN Back-Actor or Hand (2.5m Deep) - Soil Type 2	Each	R4 179,18
6.29	<a href="#">D-DT-1657</a>	12m Pole Free Standing 106kN Back-Actor or Hand (2.5m Deep) - Soil Type 3	Each	R6 268,75
6.30	<a href="#">D-DT-1650</a>	13m Pole Free Standing 8kN Back-Actor or Hand (2.5m Deep) - Soil Type 1 & 2	Each	R315,41
6.31	<a href="#">D-DT-1650</a>	13m Pole Free Standing 8kN Back-Actor or Hand (2.5m Deep) - Soil Type 3	Each	R473,12
6.32	<a href="#">D-DT-1650</a>	13m Pole Free Standing 8kN Back-Actor or Hand (2.5m Deep) - Soil Type 4	Each	R630,82
6.33	<a href="#">D-DT-1651</a>	13m Pole Free Standing 15kN Back-Actor or Hand (2.5m Deep) - Soil Type 1 & 2	Each	R591,38
6.34	<a href="#">D-DT-1651</a>	13m Pole Free Standing 15kN Back-Actor or Hand (2.5m Deep) - Soil Type 3	Each	R887,09
6.35	<a href="#">D-DT-1651</a>	13m Pole Free Standing 15kN Back-Actor or Hand (2.5m Deep) - Soil Type 4	Each	R1 182,79
6.36	<a href="#">D-DT-1652</a>	13m Pole Free Standing 27kN Back-Actor or Hand (2.5m Deep) - Soil Type 1 & 2	Each	R1 064,50
6.37	<a href="#">D-DT-1652</a>	13m Pole Free Standing 27kN Back-Actor or Hand (2.5m Deep) - Soil Type 3	Each	R1 596,75
6.38	<a href="#">D-DT-1652</a>	13m Pole Free Standing 27kN Back-Actor or Hand (2.5m Deep) - Soil Type 4	Each	R2 129,02
6.39	<a href="#">D-DT-1653</a>	13m Pole Free Standing 42kN Back-Actor or Hand (2.5m Deep) - Soil Type 1	Each	R1 656,92
6.40	<a href="#">D-DT-1653</a>	13m Pole Free Standing 42kN Back-Actor or Hand (2.5m Deep) - Soil Type 2	Each	R1 656,92
6.41	<a href="#">D-DT-1653</a>	13m Pole Free Standing 42kN Back-Actor or Hand (2.5m Deep) - Soil Type 3	Each	R2 483,85
6.42	<a href="#">D-DT-1653</a>	13m Pole Free Standing 42kN Back-Actor or Hand (2.5m Deep) - Soil Type 4	Each	R3 311,79
6.43	<a href="#">D-DT-1654</a>	13m Pole Free Standing 58kN Back-Actor or Hand (2.5m Deep) - Soil Type 1	Each	R2 286,71
6.44	<a href="#">D-DT-1654</a>	13m Pole Free Standing 58kN Back-Actor or Hand (2.5m Deep) - Soil Type 2	Each	R2 286,71
6.45	<a href="#">D-DT-1654</a>	13m Pole Free Standing 58kN Back-Actor or Hand (2.5m Deep) - Soil Type 3	Each	R3 430,08

**The Provision of Electrification MV and LV infrastructure and Households Connections  
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6.46	<a href="#">D-DT-1654</a>	13m Pole Free Standing 58kN Back-Actor or Hand (2.5m Deep) - Soil Type 4	Each	R3 430,08
6.47	<a href="#">D-DT-1655</a>	13m Pole Free Standing Terminal Back-Actor or Hand (2.5m Deep) - Soil Type 1	Each	R315,41
6.48	<a href="#">D-DT-1655</a>	13m Pole Free Standing Terminal Back-Actor or Hand (2.5m Deep) - Soil Type 2	Each	R315,41
6.49	<a href="#">D-DT-1655</a>	13m Pole Free Standing Terminal Back-Actor or Hand (2.5m Deep) - Soil Type 3	Each	R473,12
6.50	<a href="#">D-DT-1655</a>	13m Pole Free Standing Terminal Back-Actor or Hand (2.5m Deep) - Soil Type 4	Each	R630,82
6.51	<a href="#">D-DT-1656</a>	13m Pole Free Standing 73kN Back-Actor or Hand (2.5m Deep) - Soil Type 1	Each	R2 878,11
6.52	<a href="#">D-DT-1656</a>	13m Pole Free Standing 73kN Back-Actor or Hand (2.5m Deep) - Soil Type 2	Each	R2 878,11
6.53	<a href="#">D-DT-1656</a>	13m Pole Free Standing 73kN Back-Actor or Hand (2.5m Deep) - Soil Type 3	Each	R4 317,16
6.54	<a href="#">D-DT-1656</a>	13m Pole Free Standing 73kN Back-Actor or Hand (2.5m Deep) - Soil Type 4	Each	R4 317,16
6.55	<a href="#">D-DT-1657</a>	13m Pole Free Standing 106kN Back-Actor or Hand (2.5m Deep) - Soil Type 1	Each	R4 179,18
6.56	<a href="#">D-DT-1657</a>	13m Pole Free Standing 106kN Back-Actor or Hand (2.5m Deep) - Soil Type 2	Each	R4 179,18
6.57	<a href="#">D-DT-1657</a>	13m Pole Free Standing 106kN Back-Actor or Hand (2.5m Deep) - Soil Type 3	Each	R6 268,75
6.58		Fuel operating Jack Hammer (Subject to pre-approval)	Each	R994,00
6.59		Electrical Jack Hammer (Subject to pre-approval)	Each	R852,00
6.6		TLB for holes (Subject to pre-approval)	Each	R3 245,72
6.61		TLB for Trenches (Subject to pre-approval)	m3	R688,19
6.62		Jack Hammer with a compressor (Subject to pre-approval)	Each	R1 876,93
<b>Sub-Total C</b>				

**The Provision of Electrification MV and LV infrastructure and Households Connections within Mpumalanga Province - LimLanga Cluster**

BILL OF ACTIVITIES				
ITEM	REFERENCE DRAWING	DESCRIPTION	UNIT	
D	PLANTING OF POLES			
Planting including backfilling and compaction are measured here. The costs are also inclusive of plant and equipment required to plant the Structures. Stay, Struts and Flying Stay are elsewhere measured. All backfill material included in price				
1		Soil Type 1		
1.1	<a href="#">D-DT-0058</a>	5m Wooden Pole 80-100mm Top Diameter Soil Type 1	Each	R128,00
1.2	<a href="#">D-DT-0058</a>	5m Wooden Pole 80-100mm Top Diameter Soil Type 2	Each	R362,36
1.3	<a href="#">D-DT-0058</a>	5m Wooden Pole 80-100mm Top Diameter Soil Type 3	Each	R1 003,26
1.4	<a href="#">D-DT-0058</a>	5m Wooden Pole 80-100mm Top Diameter Soil Type 4	Each	R889,95
1.5	<a href="#">D-DT-0066</a>	6m Wooden Pole/X-Arm 160-179 Top Diameter Soil Type 1	Each	R153,60
1.6	<a href="#">D-DT-0066</a>	6m Wooden Pole/X-Arm 160-179 Top Diameter Soil Type 2	Each	R207,37
1.7	<a href="#">D-DT-0066</a>	6m Wooden Pole/X-Arm 160-179 Top Diameter Soil Type 3	Each	R936,78
1.8	<a href="#">D-DT-0066</a>	6m Wooden Pole/X-Arm 160-179 Top Diameter Soil Type 4	Each	R936,78
1.9	D-DT-0050	7m Wooden Pole 100-120mm Top Diameter Soil Type 1	Each	R153,59
1.10	D-DT-0050	7m Wooden Pole 100-120mm Top Diameter Soil Type 2	Each	R207,37
1.11	D-DT-0050	7m Wooden Pole 100-120mm Top Diameter Soil Type 3	Each	R936,78
1.12	D-DT-0050	7m Wooden Pole 100-120mm Top Diameter Soil Type 4	Each	R936,78
1.13	D-DT-0050	7m Wooden Pole 120-139mm Top Diameter Soil Type 1	Each	R179,20
1.14	D-DT-0050	7m Wooden Pole 120-139mm Top Diameter Soil Type 2	Each	R241,91
1.15	D-DT-0050	7m Wooden Pole 120-139mm Top Diameter Soil Type 3	Each	R936,78
1.16	D-DT-0050	7m Wooden Pole 120-139mm Top Diameter Soil Type 4	Each	R936,78
1.17	<a href="#">D-DT-1866</a>	8m Wooden Pole/X-Arm 160-179 Top Diameter Soil Type 1	Each	R204,81
1.18	D-DT-0050	8m Wooden Pole/X-Arm 160-179 Top Diameter Soil Type 2	Each	R276,50
1.19	D-DT-0050	8m Wooden Pole/X-Arm 160-179 Top Diameter Soil Type 3	Each	R936,78
1.20	D-DT-0050	8m Wooden Pole/X-Arm 160-179 Top Diameter Soil Type 4	Each	R936,78
1.21	D-DT-0055	9m Wooden Pole 140-159mm Top Diameter Soil Type 1	Each	R220,38

**The Provision of Electrification MV and LV infrastructure and Households Connections within Mpumalanga Province - LimLanga Cluster**

1.22	D-DT-0055	9m Wooden Pole 140-159mm Top Diameter Soil Type 2	Each	R297,52
1.23	D-DT-0055	9m Wooden Pole 140-159mm Top Diameter Soil Type 3	Each	R936,78
1.24	D-DT-0055	9m Wooden Pole 140-159mm Top Diameter Soil Type 4	Each	R936,78
1.25	D-DT-0055	9m Wooden Pole 160-179 mm Top Diameter Soil Type 1	Each	R247,93
1.26	D-DT-0055	9m Wooden Pole 160-179 mm Top Diameter Soil Type 2	Each	R334,71
1.27	D-DT-0055	9m Wooden Pole 160-179 mm Top Diameter Soil Type 3	Each	R936,78
1.28	D-DT-0055	9m Wooden Pole 160-179 mm Top Diameter Soil Type 4	Each	R936,78
1.29	D-DT-0055	9m Wooden Pole 180-199mm Top Diameter Soil Type 1	Each	R275,48
1.30	D-DT-0055	9m Wooden Pole 180-199mm Top Diameter Soil Type 2	Each	R371,90
1.31	D-DT-0055	9m Wooden Pole 180-199mm Top Diameter Soil Type 3	Each	R936,78
1.32	D-DT-0055	9m Wooden Pole 180-199mm Top Diameter Soil Type 4	Each	R936,78
1.33	D-DT-0052	10m Wooden Pole 160-179mm Top Diameter H4 Soil Type 1	Each	R258,05
1.34	D-DT-0052	10m Wooden Pole 160-179mm Top Diameter H4 Soil Type 2	Each	R348,87
1.35	D-DT-0052	10m Wooden Pole 160-179mm Top Diameter H4 Soil Type 3	Each	R936,78
1.36	D-DT-0052	10m Wooden Pole 160-179mm Top Diameter H4 Soil Type 4	Each	R936,78
1.37	D-DT-0052	10m Wooden Pole 160-179mm Top Diameter H5 Soil Type 1	Each	R258,05
1.38	D-DT-0052	10m Wooden Pole 160-179mm Top Diameter H5 Soil Type 2	Each	R348,36
1.39	D-DT-0052	10m Wooden Pole 160-179mm Top Diameter H5 Soil Type 3	Each	R936,78
1.40	D-DT-0052	10m Wooden Pole 160-179mm Top Diameter H5 Soil Type 4	Each	R936,78
1.41	D-DT-0052	10m Wooden Pole 180-199mm Top Diameter H4 Soil Type 1	Each	R286,72
1.42	D-DT-0052	10m Wooden Pole 180-199mm Top Diameter H4 Soil Type 2	Each	R387,06
1.43	D-DT-0052	10m Wooden Pole 180-199mm Top Diameter H4 Soil Type 3	Each	R936,78
1.44	D-DT-0052	10m Wooden Pole 180-199mm Top Diameter H4 Soil Type 4	Each	R936,78
1.45	D-DT-0052	10m Wooden Pole 180-199mm Top Diameter H5 Soil Type 1	Each	R286,72
1.46	D-DT-0052	10m Wooden Pole 180-199mm Top Diameter H5 Soil Type 2	Each	R241,37
1.47	D-DT-0052	10m Wooden Pole 180-199mm Top Diameter H5 Soil Type 3	Each	R936,78
1.48	D-DT-0052	10m Wooden Pole 180-199mm Top Diameter H5 Soil Type 4	Each	R936,78

**The Provision of Electrification MV and LV infrastructure and Households Connections within Mpumalanga Province - LimLanga Cluster**

1.49	D-DT-0052	10m Wooden Pole 200-219mm Top Diameter H4 Soil Type 1	Each	R315,40
1.50	D-DT-0052	10m Wooden Pole 200-219mm Top Diameter H4 Soil Type 2	Each	R425,79
1.51	D-DT-0052	10m Wooden Pole 200-219mm Top Diameter H4 Soil Type 3	Each	R936,78
1.52	D-DT-0052	10m Wooden Pole 200-219mm Top Diameter H4 Soil Type 4	Each	R936,78
1.53	D-DT-0052	10m Wooden Pole 200-219mm Top Diameter H5 Soil Type 1	Each	R315,40
1.54	D-DT-0052	10m Wooden Pole 200-219mm Top Diameter H5 Soil Type 2	Each	R425,79
1.55	D-DT-0052	10m Wooden Pole 200-219mm Top Diameter H5 Soil Type 3	Each	R936,78
1.56	D-DT-0052	10m Wooden Pole 200-219mm Top Diameter H5 Soil Type 4	Each	R936,78
1.57	<a href="#">D-DT-0051</a>	11m Wooden Pole 140-159mm Top Diameter H4 Soil Type 1	Each	R277,45
1.58	<a href="#">D-DT-0051</a>	11m Wooden Pole 140-159mm Top Diameter H4 Soil Type 2	Each	R374,56
1.59	<a href="#">D-DT-0051</a>	11m Wooden Pole 140-159mm Top Diameter H4 Soil Type 3	Each	R936,78
1.60	<a href="#">D-DT-0051</a>	11m Wooden Pole 140-159mm Top Diameter H4 Soil Type 4	Each	R936,78
1.61	<a href="#">D-DT-0051</a>	11m Wooden Pole 140-159mm Top Diameter 75MPA H4 Soil Type 1	Each	R277,45
1.62	<a href="#">D-DT-0051</a>	11m Wooden Pole 140-159mm Top Diameter 75MPA H4 Soil Type 2	Each	R374,56
1.63	<a href="#">D-DT-0051</a>	11m Wooden Pole 140-159mm Top Diameter 75MPA H4 Soil Type 3	Each	R936,78
1.64	<a href="#">D-DT-0051</a>	11m Wooden Pole 140-159mm Top Diameter 75MPA H4 Soil Type 4	Each	R936,78
1.65	<a href="#">D-DT-0051</a>	11m Wooden Pole 140-159mm Top Diameter H5 Soil Type 1	Each	R277,45
1.66	<a href="#">D-DT-0051</a>	11m Wooden Pole 140-159mm Top Diameter H5 Soil Type 2	Each	R374,56
1.67	<a href="#">D-DT-0051</a>	11m Wooden Pole 140-159mm Top Diameter H5 Soil Type 3	Each	R936,78
1.68	<a href="#">D-DT-0051</a>	11m Wooden Pole 140-159mm Top Diameter H5 Soil Type 4	Each	R936,78
1.69	<a href="#">D-DT-0051</a>	11m Wooden Pole 140-159mm Top Diameter 75MPA H5 Soil Type 1	Each	R312,13
1.70	<a href="#">D-DT-0051</a>	11m Wooden Pole 140-159mm Top Diameter 75MPA H5 Soil Type 2	Each	R421,39
1.71	<a href="#">D-DT-0051</a>	11m Wooden Pole 140-159mm Top Diameter 75MPA H5 Soil Type 3	Each	R936,78
1.72	<a href="#">D-DT-0051</a>	11m Wooden Pole 140-159mm Top Diameter 75MPA H5 Soil Type 4	Each	R936,78
1.73	<a href="#">D-DT-0051</a>	11m Wooden Pole 160-179mm Top Diameter H4 Soil Type 1	Each	R312,13
1.74	<a href="#">D-DT-0051</a>	11m Wooden Pole 160-179mm Top Diameter H4 Soil Type 2	Each	R421,39
1.75	<a href="#">D-DT-0051</a>	11m Wooden Pole 160-179mm Top Diameter H4 Soil Type 3	Each	R936,78

**The Provision of Electrification MV and LV infrastructure and Households Connections within Mpumalanga Province - LimLanga Cluster**

1.76	<a href="#">D-DT-0051</a>	11m Wooden Pole 160-179mm Top Diameter H4 Soil Type 4	Each	R936,78
1.77	<a href="#">D-DT-0051</a>	11m Wooden Pole 180-199mm Top Diameter H4 Soil Type 1	Each	R346,82
1.78	<a href="#">D-DT-0051</a>	11m Wooden Pole 180-199mm Top Diameter H4 Soil Type 2	Each	R468,21
1.79	<a href="#">D-DT-0051</a>	11m Wooden Pole 180-199mm Top Diameter H4 Soil Type 3	Each	R936,78
1.80	<a href="#">D-DT-0051</a>	11m Wooden Pole 180-199mm Top Diameter H4 Soil Type 4	Each	R936,78
1.81	<a href="#">D-DT-0051</a>	11m Wooden Pole 200-219mm Top Diameter H4 Soil Type 1	Each	R381,50
1.82	<a href="#">D-DT-0051</a>	11m Wooden Pole 200-219mm Top Diameter H4 Soil Type 2	Each	R515,02
1.83	<a href="#">D-DT-0051</a>	11m Wooden Pole 200-219mm Top Diameter H4 Soil Type 3	Each	R936,78
1.84	<a href="#">D-DT-0051</a>	11m Wooden Pole 200-219mm Top Diameter H4 Soil Type 4	Each	R936,78
1.85	<a href="#">D-DT-0053</a>	12m Wooden Pole 160-179mm Top Diameter Soil Type 1	Each	R311,11
1.86	<a href="#">D-DT-0053</a>	12m Wooden Pole 160-179mm Top Diameter Soil Type 2	Each	R419,98
1.87	<a href="#">D-DT-0053</a>	12m Wooden Pole 160-179mm Top Diameter Soil Type 3	Each	R936,78
1.88	<a href="#">D-DT-0053</a>	12m Wooden Pole 160-179mm Top Diameter Soil Type 4	Each	R936,78
1.89	<a href="#">D-DT-0053</a>	12m Wooden Pole 180-199mm Top Diameter Soil Type 1	Each	R345,68
1.90	<a href="#">D-DT-0053</a>	12m Wooden Pole 180-199mm Top Diameter Soil Type 2	Each	R466,67
1.91	<a href="#">D-DT-0053</a>	12m Wooden Pole 180-199mm Top Diameter Soil Type 3	Each	R936,78
1.92	<a href="#">D-DT-0053</a>	12m Wooden Pole 180-199mm Top Diameter Soil Type 4	Each	R936,78
1.93	<a href="#">D-DT-0053</a>	12m Wooden Pole 200-219mm Top Diameter Soil Type 1	Each	R380,25
1.94	<a href="#">D-DT-0053</a>	12m Wooden Pole 200-219mm Top Diameter Soil Type 2	Each	R513,33
1.95	<a href="#">D-DT-0053</a>	12m Wooden Pole 200-219mm Top Diameter Soil Type 3	Each	R936,78
1.96	<a href="#">D-DT-0053</a>	12m Wooden Pole 200-219mm Top Diameter Soil Type 4	Each	R936,78
1.97	<a href="#">D-DT-0056</a>	13m Wooden Pole 160-179mm Top Diameter H4 Soil Type 1	Each	R341,28
1.98	<a href="#">D-DT-0056</a>	13m Wooden Pole 160-179mm Top Diameter H4 Soil Type 2	Each	R460,74
1.99	<a href="#">D-DT-0056</a>	13m Wooden Pole 160-179mm Top Diameter H4 Soil Type 3	Each	R936,78
1.100	<a href="#">D-DT-0056</a>	13m Wooden Pole 160-179mm Top Diameter H4 Soil Type 4	Each	R936,78
1.101	<a href="#">D-DT-0056</a>	13m Wooden Pole 160-179mm Top Diameter H5 Soil Type 1	Each	R341,28
1.102	<a href="#">D-DT-0056</a>	13m Wooden Pole 160-179mm Top Diameter H5 Soil Type 2	Each	R460,74

**The Provision of Electrification MV and LV infrastructure and Households Connections  
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1.103	<a href="#">D-DT-0056</a>	13m Wooden Pole 160-179mm Top Diameter H5 Soil Type 3	Each	R936,78
1.104	<a href="#">D-DT-0056</a>	13m Wooden Pole 160-179mm Top Diameter H5 Soil Type 4	Each	R936,78
1.105	<a href="#">D-DT-0056</a>	13m Wooden Pole 180-199mm Top Diameter H4 Soil Type 1	Each	R379,19
1.106	<a href="#">D-DT-0056</a>	13m Wooden Pole 180-199mm Top Diameter H4 Soil Type 2	Each	R511,91
1.107	<a href="#">D-DT-0056</a>	13m Wooden Pole 180-199mm Top Diameter H4 Soil Type 3	Each	R936,78
1.108	<a href="#">D-DT-0056</a>	13m Wooden Pole 180-199mm Top Diameter H4 Soil Type 4	Each	R936,78
1.109	<a href="#">D-DT-0056</a>	13m Wooden Pole 180-199mm Top Diameter H5 Soil Type 1	Each	R379,19
1.110	<a href="#">D-DT-0056</a>	13m Wooden Pole 180-199mm Top Diameter H5 Soil Type 2	Each	R511,91
1.111	<a href="#">D-DT-0056</a>	13m Wooden Pole 180-199mm Top Diameter H5 Soil Type 3	Each	R936,78
1.112	<a href="#">D-DT-0056</a>	13m Wooden Pole 180-199mm Top Diameter H5 Soil Type 4	Each	R936,78
1.113	<a href="#">D-DT-0056</a>	13m Wooden Pole 200-219mm Top Diameter H4 Soil Type 1	Each	R417,13
1.114	<a href="#">D-DT-0056</a>	13m Wooden Pole 200-219mm Top Diameter H4 Soil Type 2	Each	R573,23
1.115	<a href="#">D-DT-0056</a>	13m Wooden Pole 200-219mm Top Diameter H4 Soil Type 3	Each	R936,78
1.116	<a href="#">D-DT-0056</a>	13m Wooden Pole 200-219mm Top Diameter H4 Soil Type 4	Each	R936,78
1.117	<a href="#">D-DT-0056</a>	13m Wooden Pole 200-219mm Top Diameter H5 Soil Type 1	Each	R417,13
1.118	<a href="#">D-DT-0056</a>	13m Wooden Pole 200-219mm Top Diameter H5 Soil Type 2	Each	R573,23
1.119	<a href="#">D-DT-0056</a>	13m Wooden Pole 200-219mm Top Diameter H5 Soil Type 3	Each	R936,78
1.120	<a href="#">D-DT-0056</a>	13m Wooden Pole 200-219mm Top Diameter H5 Soil Type 4	Each	R936,78
1.121	<a href="#">D-DT-0054</a>	14m Wooden Pole 160-179mm Top Diameter H4 Soil Type 1	Each	R375,28
1.122	<a href="#">D-DT-0054</a>	14m Wooden Pole 160-179mm Top Diameter H4 Soil Type 2	Each	R506,63
1.123	<a href="#">D-DT-0054</a>	14m Wooden Pole 160-179mm Top Diameter H4 Soil Type 3	Each	R936,78
1.124	<a href="#">D-DT-0054</a>	14m Wooden Pole 160-179mm Top Diameter H4 Soil Type 4	Each	R936,78
1.125	<a href="#">D-DT-0054</a>	14m Wooden Pole 160-179mm Top Diameter H5 Soil Type 1	Each	R375,28
1.126	<a href="#">D-DT-0054</a>	14m Wooden Pole 160-179mm Top Diameter H5 Soil Type 2	Each	R506,63
1.127	<a href="#">D-DT-0054</a>	14m Wooden Pole 160-179mm Top Diameter H5 Soil Type 3	Each	R936,78
1.128	<a href="#">D-DT-0054</a>	14m Wooden Pole 160-179mm Top Diameter H5 Soil Type 4	Each	R936,78
1.129	<a href="#">D-DT-0054</a>	14m Wooden Pole 180-199mm Top Diameter H4 Soil Type 1	Each	R416,98

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1.130	<a href="#">D-DT-0054</a>	14m Wooden Pole 180-199mm Top Diameter H4 Soil Type 2	Each	R562,93
1.131	<a href="#">D-DT-0054</a>	14m Wooden Pole 180-199mm Top Diameter H4 Soil Type 3	Each	R936,78
1.132	<a href="#">D-DT-0054</a>	14m Wooden Pole 180-199mm Top Diameter H4 Soil Type 4	Each	R936,78
1.133	<a href="#">D-DT-0054</a>	14m Wooden Pole 180-199mm Top Diameter H5 Soil Type 1	Each	R416,98
1.134	<a href="#">D-DT-0054</a>	14m Wooden Pole 180-199mm Top Diameter H5 Soil Type 2	Each	R562,93
1.135	<a href="#">D-DT-0054</a>	14m Wooden Pole 180-199mm Top Diameter H5 Soil Type 3	Each	R936,78
1.136	<a href="#">D-DT-0054</a>	14m Wooden Pole 180-199mm Top Diameter H5 Soil Type 4	Each	R936,78
1.137	<a href="#">D-DT-0054</a>	14m Wooden Pole 200-219mm Top Diameter H4 Soil Type 1	Each	R458,67
1.138	<a href="#">D-DT-0054</a>	14m Wooden Pole 200-219mm Top Diameter H4 Soil Type 2	Each	R619,21
1.139	<a href="#">D-DT-0054</a>	14m Wooden Pole 200-219mm Top Diameter H4 Soil Type 3	Each	R936,78
1.140	<a href="#">D-DT-0054</a>	14m Wooden Pole 200-219mm Top Diameter H4 Soil Type 4	Each	R936,78
1.141	<a href="#">D-DT-0054</a>	14m Wooden Pole 200-219mm Top Diameter H5 Soil Type 1	Each	R458,67
1.142	<a href="#">D-DT-0054</a>	14m Wooden Pole 200-219mm Top Diameter H5 Soil Type 2	Each	R619,21
1.143	<a href="#">D-DT-0054</a>	14m Wooden Pole 200-219mm Top Diameter H5 Soil Type 3	Each	R936,78
1.144	<a href="#">D-DT-0054</a>	14m Wooden Pole 200-219mm Top Diameter H5 Soil Type 4	Each	R936,78
1.145	<a href="#">D-DT-0057</a>	15m Wooden Pole 160-179mm Top Diameter Soil Type 1	Each	R433,02
1.146	<a href="#">D-DT-0057</a>	15m Wooden Pole 160-179mm Top Diameter Soil Type 2	Each	R619,21
1.147	<a href="#">D-DT-0057</a>	15m Wooden Pole 160-179mm Top Diameter Soil Type 3	Each	R936,78
1.148	<a href="#">D-DT-0057</a>	15m Wooden Pole 160-179mm Top Diameter Soil Type 4	Each	R936,78
1.149	<a href="#">D-DT-0057</a>	15m Wooden Pole 190-199mm Top Diameter Soil Type 1	Each	R433,02
1.150	<a href="#">D-DT-0057</a>	15m Wooden Pole 190-199mm Top Diameter Soil Type 2	Each	R619,21
1.151	<a href="#">D-DT-0057</a>	15m Wooden Pole 190-199mm Top Diameter Soil Type 3	Each	R936,78
1.152	<a href="#">D-DT-0057</a>	15m Wooden Pole 190-199mm Top Diameter Soil Type 4	Each	R936,78
1.153	<a href="#">D-DT-0057</a>	15m Wooden Pole 200-219mm Top Diameter Soil Type 1	Each	R434,37
1.154	<a href="#">D-DT-0057</a>	15m Wooden Pole 200-219mm Top Diameter Soil Type 2	Each	R557,08
1.155	<a href="#">D-DT-0057</a>	15m Wooden Pole 200-219mm Top Diameter Soil Type 3	Each	R936,78
1.156	<a href="#">D-DT-0057</a>	15m Wooden Pole 200-219mm Top Diameter Soil Type 4	Each	R936,78

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1.157	<a href="#">D-DT-0049</a>	16m Wooden Pole 180-199mm Top Diameter Soil Type 1	Each	R453,75
1.158	<a href="#">D-DT-0049</a>	16m Wooden Pole 180-199mm Top Diameter Soil Type 2	Each	R612,57
1.159	<a href="#">D-DT-0049</a>	16m Wooden Pole 180-199mm Top Diameter Soil Type 3	Each	R936,78
1.160	<a href="#">D-DT-0049</a>	16m Wooden Pole 180-199mm Top Diameter Soil Type 4	Each	R936,78
1.161	<a href="#">D-DT-0049</a>	16m Wooden Pole 200-219mm Top Diameter Soil Type 1	Each	R499,13
1.162	<a href="#">D-DT-0049</a>	16m Wooden Pole 200-219mm Top Diameter Soil Type 2	Each	R673,84
1.163	<a href="#">D-DT-0049</a>	16m Wooden Pole 200-219mm Top Diameter Soil Type 3	Each	R936,78
1.164	<a href="#">D-DT-0049</a>	16m Wooden Pole 200-219mm Top Diameter Soil Type 4	Each	R936,78
1.165	<a href="#">D-DT-0048</a>	18m Wooden Pole 180-199mm Top Diameter Soil Type 1	Each	R498,95
1.166	<a href="#">D-DT-0048</a>	18m Wooden Pole 180-199mm Top Diameter Soil Type 2	Each	R673,59
1.167	<a href="#">D-DT-0048</a>	18m Wooden Pole 180-199mm Top Diameter Soil Type 3	Each	R936,78
1.168	<a href="#">D-DT-0048</a>	18m Wooden Pole 180-199mm Top Diameter Soil Type 4	Each	R936,78
1.169	<a href="#">D-DT-0048</a>	18m Wooden Pole 200-219mm Top Diameter Soil Type 1	Each	R548,85
1.170	<a href="#">D-DT-0048</a>	18m Wooden Pole 200-219mm Top Diameter Soil Type 2	Each	R740,94
1.171	<a href="#">D-DT-0048</a>	18m Wooden Pole 200-219mm Top Diameter Soil Type 3	Each	R936,78
1.172	<a href="#">D-DT-0048</a>	18m Wooden Pole 200-219mm Top Diameter Soil Type 4	Each	R936,78
<b>2</b>	<b>Concrete Poles</b>			
2.1	<a href="#">D-DT-0017</a>	11m Concrete Pole 10kN Ultimate Load	Each	R315,41
2.2	<a href="#">D-DT-0015</a>	12m Concrete Pole 10kN Ultimate Load	Each	R344,08
2.3	<a href="#">D-DT-0016</a>	13m Concrete Pole 10kN Ultimate Load	Each	R372,75
2.4	<a href="#">D-DT-0018</a>	14m Concrete Pole 10kN Ultimate Load	Each	R401,42
<b>3</b>	<b>Free Standing (Unsupported)</b>			
3.1	<a href="#">PA09599B01</a>	9m Concrete Pole 18kN	Each	R315,41
3.2	<a href="#">D-DT-1650</a>	12m Concrete Pole 8kN	Each	R315,41
3.3	<a href="#">D-DT-1651</a>	12m Concrete Pole 15kN	Each	R591,38
3.4	<a href="#">D-DT-1652</a>	12m Concrete Pole 27kN	Each	R1 064,50
3.5	<a href="#">D-DT-1653</a>	12m Concrete Pole 42kN	Each	R1 655,90

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3.6	<a href="#">D-DT-1654</a>	12m Concrete Pole 58kN	Each	R2 286,71
3.7	<a href="#">D-DT-1655</a>	12m Concrete Pole 65kN - Terminal Structure	Each	R2 562,70
3.8	<a href="#">D-DT-1656</a>	12m Concrete Pole 73kN	Each	R2 878,11
3.9	<a href="#">D-DT-1657</a>	12m Concrete Pole 106kN	Each	R4 179,18
3.10	<a href="#">D-DT-1650</a>	13m Concrete Pole 8kN	Each	R341,68
3.11	<a href="#">D-DT-1651</a>	13m Concrete Pole 15kN	Each	R640,67
3.12	<a href="#">D-DT-1652</a>	13m Concrete Pole 27kN	Each	R1 153,21
3.13	<a href="#">D-DT-1653</a>	13m Concrete Pole 42kN	Each	R1 793,90
3.14	<a href="#">D-DT-1654</a>	13m Concrete Pole 58kN	Each	R2 477,28
3.15	<a href="#">D-DT-1655</a>	13m Concrete Pole 65kN - Terminal Structure	Each	R2 776,25
3.16	<a href="#">D-DT-1656</a>	13m Concrete Pole 73kN	Each	R3 117,95
3.17	<a href="#">D-DT-1657</a>	13m Concrete Pole 106kN	Each	R4 527,44
<b>Sub-Total D</b>				
<b>BILL OF ACTIVITIES</b>				
ITEM	REFERENCE DRAWING	DESCRIPTION	UNIT	
<b>E</b>	<b>MV SUPPORT STRUCTURES (DOWNWIRE EXCL BUT BONDING INCL)</b>			
	<p><b>Supply and erect MV support structures as per Eskom DDT 0400, 1300, 1700, 1800 drawings and OU specific SI Engineering instructions. Auxiliary equipment such as bonding, jumpers, jumper terminations, pole and x-arm hardware, conductor attachment hardware and insulators to be included. Poles are measured elsewhere, cross arms are included. Stay, strut material measured elsewhere. Pole, stay and strut excavations are measured elsewhere. Where road crossing structures are to be used the line hardware needs to be changed to include : For intermediate a suitable fullwrap road crossing tie and for a strain structure a 3bolt suitable pistol grip. Other relevant road crossing hardware to be included where required. Road crossings to be inserted in BOQ where required and marked with "RX" as part of the description. MV intermediate structures that fall within high lightning zones in the OU shall have the a spark gap device installed on its BIL downwire. Refer DDT3134. All other intermediate structures will have a normal BIL. All line hardware purchased will be paid elsewhere as cost plus fee.</b></p>			
<b>1</b>	<b>Intermediate - 0 deg</b>			
1.1	1390	Phase / phase - T-frame / 2m Steel X-arm – Intermediate - 0° Deviation	Each	R249,49
1.2	1390	Phase / phase - T-frame / 2m Steel X-arm – Intermediate - 0° Deviation -RX	Each	R249,49
1.3	1390	Phase / phase - T-frame / 2m Steel X-arm – Intermediate - 0° Deviation -With Spark Gap device	Each	R249,49
1.4	1390	Phase / phase - T-frame / 2m Steel X-arm – Intermediate - 0° Deviation -With Spark Gap device - RX	Each	R249,49

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1.5	1370	Phase / phase - H-Pole / 4,5m Wood X-arm – Intermediate - 0° Deviation	Each	R397,81
1.6	1370	Phase / phase - H-Pole / 4,5m Wood X-arm – Intermediate - 0° Deviation -RX	Each	R397,81
1.7	1370	Phase / phase - H-Pole / 4,5m Wood X-arm – Intermediate - 0° Deviation -With Spark Gap device	Each	R425,70
1.8	1370	Phase / phase - H-Pole / 4,5m Wood X-arm – Intermediate - 0° Deviation -With Spark Gap device-RX	Each	R425,70
<b>2</b>	<b>Strainer - Small (1 - 30) deg</b>			
2.1	1371	Phase / phase – H-Pole / 4,5m Wood x-arm – Intermediate – Small (1 –10°) deviation	Each	R396,01
2.2	1371	Phase / phase – H-Pole / 4,5m Wood x-arm – Intermediate – Small (1 –10°) deviation-RX	Each	R396,01
2.3	1391	Phase / phase - T-frame/ 2m Steel X-arm – Intermediate - Small (1- +/-10°) Deviation	Each	R249,49
2.4	1391	Phase / phase - T-frame/ 2m Steel X-arm – Intermediate - Small (1- +/-10°) Deviation -RX	Each	R218,29
<b>3</b>	<b>Strainer - 0 deg</b>			
3.1	1340	Phase / phase – Delta/2.5M Wooden X-arm –Strain - 0° Deviation	Each	R250,62
3.2	1340	Phase / phase – Delta/2.5M Wooden X-arm –Strain - 0° Deviation Rx	Each	R250,62
3.3	1340B	Phase / phase – Delta/2.5M Wooden X-arm –Strain - 0° Deviation	Each	R250,62
3.4	1340B	Phase / phase – Delta/2.5M Wooden X-arm –Strain - 0° Deviation Rx	Each	R250,62
3.5	1340B	Phase / phase – Delta/2.5M Wooden X-arm –Strain - 0° Deviation With Spark Gap Device	Each	R269,42
3.6	1340B	Phase / phase – Delta/2.5M Wooden X-arm –Strain - 0° Deviation With Spark Gap Device-Rx	Each	R269,42
3.7	1343	Phase / phase – Delta/2.5M Wooden X-arm –Strain - 0° Deviation	Each	R250,62
3.8	1343	Phase / phase – Delta/2.5M Wooden X-arm –Strain - 0° Deviation - Rx	Each	R250,62
3.9	1373	Phase / phase - H-Pole / 4,5m Wood X-arm – Strain – 0° Deviation	Each	R396,01
3.10	1373	Phase / phase - H-Pole / 4,5m Wood X-arm – Strain – 0° Deviation -RX	Each	R396,01
<b>4</b>	<b>Strainer - Medium (1 - 60) deg</b>			
4.1	1344	Phase / phase – Delta/2.5M Wooden X-arm –Strain - Medium (1-60°) Deviation	Each	R250,62
4.2	1344	Phase / phase – Delta/2.5M Wooden X-arm –Strain - Medium (1-60°) Deviation -Rx	Each	R250,62
4.3	1374	Phase / phase - H-Pole / 4,5m Wood X-arm – Strain - Medium(1°- 60°) Deviation	Each	R396,01
4.4	1374	Phase / phase - H-Pole / 4,5m Wood X-arm – Strain - Medium(1°- 60°) Deviation -RX	Each	R396,01
<b>5</b>	<b>Strainer - Terminal</b>			
5.1	1346	Phase / phase – Delta/2.5M Wood X-arm – Strain - Terminal	Each	R250,62

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5.2	1346	Phase / phase – Delta/2.5M Wood X-arm – Strain - Terminal -RX	Each	R250,62
5.3	1376	Phase / phase - H-Pole / 4,5m Wood X-arm – Strain – Terminal	Each	R396,01
5.4	1376	Phase / phase - H-Pole / 4,5m Wood X-arm – Strain – Terminal -RX	Each	R396,01
<b>6</b>	<b>Take-Off</b>			
6.1	1811	Phase / phase Take-off – Vertical (600mm spacing)	Each	R148,50
6.2	1811	Phase / phase Take-off – Vertical (600mm spacing)-RX	Each	R148,50
6.3	1814	Phase / phase Take-off - 2,5m Wooden X-arm	Each	R187,11
6.4	1814	Phase / phase Take-off - 2,5m Wooden X-arm-RX	Each	R187,11
6.5	1815	Phase / phase Take-off - 2 x 2,5m Wooden X-arm	Each	R297,00
6.6	1815	Phase / phase Take-off - 2 x 2,5m Wooden X-arm-RX	Each	R297,00
6.7	1816	Phase / phase Take-off - H-Pole (3,5m Wooden X-arm)	Each	R346,51
6.8	1816	Phase / phase Take-off - H-Pole (3,5m Wooden X-arm)-RX	Each	R346,51
6.9	1817	Phase / phase Take-off - H-Pole (2 x 3,5m Wooden X-arm)	Each	R396,01
6.10	1817	Phase / phase Take-off - H-Pole (2 x 3,5m Wooden X-arm) -RX	Each	R396,01
<b>Assemble Three Phase MV Structures (Downwire excluded but Bonding Included)</b>				
<b>7</b>	<b>Intermediate - 0 deg</b>			
7.1	D-DT-1700	3 Phase - Staggered Vertical (450mm Spacing)	Each	R210,05
7.2	D-DT-1710	3 Phase - Staggered Vertical (600mm Spacing)	Each	R210,05
7.3	D-DT-1720	3 Phase - Delta (450mm Stud)	Each	R210,05
7.4	D-DT-1730	3 Phase - Delta (Intermediate 'T' Crossarm)	Each	R210,05
7.5	D-DT-1740	3 Phase - Delta / 2,5m Wood Crossarm	Each	R240,06
7.6	D-DT-1750	3 Phase - Delta / 4,5m Wood Crossarm	Each	R476,31
7.7	D-DT-1760	3 Phase - H-Pole / 3,5m Wood Crossarm	Each	R381,05
7.8	D-DT-1770	3 Phase - H-Pole / 4,5m Wood Crossarm	Each	R381,05
7.9	D-DT-1785	MV Heavy Conductor - 3 Phase Staggered Vertical 800mm Spacing	Each	R501,38
7.10	<a href="#">D-DT-1790</a>	MV Heavy Conductor - 3 Phase - Delta - 3500mm Wooden Crossarm	Each	R501,38
7.11	<a href="#">D-DT-1793</a>	MV Heavy Conductor - 22kV H-Pole Suspension Structure General Arrangement	Each	R501,38

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7.12	<a href="#">D-DT-1870</a>	Three Phase T-Frame / 2m Steel Crossarm	Each	R252,69
7.13	1740B	3 Phase - Delta / 2,5m Wood X-arm – Intermediate - 0° Deviation	Each	R240,06
7.14	1740B	3 Phase - Delta / 2,5m Wood X-arm – Intermediate - 0° Deviation -RX	Each	R240,06
7.15	1740B	3 Phase - Delta / 2,5m Wood X-arm – Intermediate - 0° Deviation -With Spark Gap Device	Each	R240,06
7.16	1740B	3 Phase - Delta / 2,5m Wood X-arm – Intermediate - 0° Deviation -With Spark Gap Device-RX	Each	R240,06
7.17	1750	3 Phase - Delta / 4,5m Wood X-arm – Intermediate - 0° Deviation -RX	Each	R476,31
7.18	1750	3 Phase - Delta / 4,5m Wood X-arm – Intermediate - 0° Deviation -With Spark Gap Device	Each	R476,31
7.19	1750	3 Phase - Delta / 4,5m Wood X-arm – Intermediate - 0° Deviation -With Spark Gap Device-RX	Each	R476,31
7.20	1710	3 Phase - Staggered Vertical (600mm Spacing) Intermediate 0° Deviation Rx	Each	R210,05
7.21	1770	3 Phase - H-Pole / 4,5m Wood X-arm – Intermediate - 0° Deviation -RX	Each	R381,05
7.22	1770	3 Phase - H-Pole / 4,5m Wood X-arm – Intermediate - 0° Deviation - With Spark Gap Device	Each	R381,05
7.23	1770	3 Phase - H-Pole / 4,5m Wood X-arm – Intermediate - 0° Deviation - With Spark Gap Device -RX	Each	R381,05
7.24	1790	Heavy Conductor - 3 Phase Delta-3500mm Wooden X-arm Intermediate 0° Deviation Rx	Each	R476,31
7.25	1710	3 Phase - Staggered Vertical (600mm Spacing) Intermediate 0° Deviation Rx	Each	R210,05
<b>8</b>	<b>Intermediate - (0 - 10) deg</b>			
8.1	<a href="#">D-DT-1701</a>	3 Phase - Vertical (450mm Spacing)	Each	R221,10
8.2	<a href="#">D-DT-1711</a>	3 Phase - Vertical (600mm Spacing)	Each	R221,10
8.3	<a href="#">D-DT-1771</a>	3 Phase - H-Pole / 4,5m Wood Crossarm	Each	R401,10
8.4	<a href="#">D-DT-1871</a>	Three Phase T-Frame / 2m Steel Crossarm	Each	R252,69
8.5	1771	3 Phase - H-Pole / 4,5m Wood X-arm – Intermediate - Small(1°-±10°) Deviation -RX	Each	R401,10
8.6	1711	3 Phase - Vertical (600mm Spacing) Intermediate-Small (1- ±10°) Deviation Rx	Each	R221,10
<b>9</b>	<b>Intermediate - (15 - 30) deg</b>			
9.1	<a href="#">D-DT-1702</a>	3 Phase - Vertical (450mm Spacing)	Each	R210,05
9.2	<a href="#">D-DT-1712</a>	3 Phase - Vertical (600mm Spacing)	Each	R210,05
9.3	1712	3 Phase - Vertical (600mm Spacing) Intermediate-Medium (±15-30°) Deviation Rx	Each	R210,05
<b>10</b>	<b>Strainer - 0 deg</b>			
10.1	<a href="#">D-DT-1703</a>	3 Phase - Vertical (450mm Spacing)	Each	R240,06

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10.2	<a href="#">D-DT-1713</a>	3 Phase - Vertical (600mm Spacing)	Each	R240,06
10.3	<a href="#">D-DT-1733</a>	3 Phase - Delta / 1,3m Steel Crossarm	Each	R240,06
10.4	<a href="#">D-DT-1743</a>	3 Phase - 600mm Phase Spacing Delta / 2,5m Wood Crossarm	Each	R270,06
10.5	<a href="#">D-DT-1747</a>	3 Phase - 600mm Phase Spacing Delta / 2 x 2,5m Wood Crossarm	Each	R476,31
10.6	<a href="#">D-DT-1747</a>	3 Phase - 800mm Phase Spacing Delta / 2 x 2,5m Wood Crossarm	Each	R476,31
10.7	<a href="#">D-DT-1753</a>	3 Phase - Delta / 4,5m Wood Crossarm	Each	R476,31
10.8	<a href="#">D-DT-1763</a>	3 Phase - Delta / 3,5m Wood Crossarm	Each	R476,31
10.9	<a href="#">D-DT-1767</a>	3 Phase - H-Pole / 2 x 3,5m Wood Crossarm	Each	R828,78
10.10	<a href="#">D-DT-1773</a>	3 Phase - H-Pole / 4,5m Wood Crossarm	Each	R381,05
10.11	<a href="#">D-DT-1777</a>	3 Phase - H-Pole / 2 x 4,5m Wood Crossarm	Each	R828,78
10.12	<a href="#">D-DT-1783</a>	3 Phase - Trips	Each	R857,36
10.13	<a href="#">D-DT-1786</a>	MV Heavy Conductor - 22kV 3 Phase - Vertical 800mm Spacing	Each	R476,31
10.14	<a href="#">D-DT-1794</a>	MV Heavy Conductor - 22kV H-Pole Braced	Each	R476,31
10.15	1767	3 Phase - H-Pole / 2 x 3,5m Wood X-arm – Strain - 0° Deviation -RX	Each	R828,78
10.16	1773	3 Phase - H-Pole / 4,5m Wood X-arm - Strain - 0° Deviation-RX	Each	R381,05
10.17	1777	3 Phase – H-Pole / 2 x 4,5m Wood X-arm – Strain - 0° Deviation -RX	Each	R828,78
10.18	1713	3 Phase - Vertical (600mm Spacing) Strain 0° Deviation Rx	Each	R240,06
10.19	1743	3 Phase - Delta / 2,5m Wood X-arm - Strain – 0° Deviation -RX	Each	R270,06
10.20	1747	3 Phase - Delta / 2 x 2,5m Wood X-arm - Strain - 0° Deviation -RX	Each	R476,31
10.21	1753	3 Phase - Delta / 4,5m Wood X-arm - Strain – 0° Deviation -RX	Each	R476,31
10.22	1763	3 Phase - H-Pole / 3,5m Wood X-arm - Strain - 0° Deviation -RX	Each	R476,31
10.23	1785	3 Phase - Staggered Vertical (800mm spacing) 0° Deviation Rx Wood Poles Rx	Each	R476,31
10.24	1786	3 Phase - Vertical (800mm spacing) Strain 0° Deviation 10kN Wood Poles Rx	Each	R476,31
10.25	1783	3 Phase – Trips – Strain - 0° Deviation (Front view) -RX	Each	R857,36
10.26	1794	Heavy Conductor H-Pole Braced In-Line strain-RX	Each	R476,31
<b>11</b>	<b>Strainer - Small (1 - 30) deg</b>			
11.1	<a href="#">D-DT-1704</a>	3 Phase - Vertical (450mm Spacing)	Each	R240,06

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11.2	<a href="#">D-DT-1714</a>	3 Phase - Vertical (600mm Spacing)	Each	R240,06
11.3	<a href="#">D-DT-1734</a>	3 Phase - Delta / 1,3m Steel Crossarm	Each	R270,06
11.4	<a href="#">D-DT-1787</a>	MV Heavy Conductor - 22kV 3 Phase - Vertical 800mm Spacing	Each	R476,31
11.5	1714	3 Phase - Vertical (600mm Spacing) Strain - Small(1-30°) Deviation Rx	Each	R240,06
11.6	1787	3 Phase - Vertical (800mm spacing) Strain 0-30° Deviation 10kN Wood Poles Rx	Each	R476,31
<b>12</b>	<b>Strainer - Medium (1 - 60) deg</b>			
12.1	<a href="#">D-DT-1744</a>	3 Phase - Delta / 2,5m Wood Crossarm	Each	R270,06
12.2	<a href="#">D-DT-1748</a>	3 Phase - Delta / 2 x 2,5m Wood Crossarm	Each	R476,31
12.3	<a href="#">D-DT-1754</a>	3 Phase - Delta / 4,5m Wood Crossarm	Each	R476,31
12.4	<a href="#">D-DT-1754</a>	3 Phase - Delta / 2 x 4,5m Wood Crossarm	Each	R476,31
12.5	<a href="#">D-DT-1764</a>	3 Phase - H-Pole / 3,5m Wood Crossarm	Each	R476,31
12.6	<a href="#">D-DT-1768</a>	3 Phase - Pole / 2 x 3,5m Wood Crossarm	Each	R828,78
12.7	<a href="#">D-DT-1774</a>	3 Phase - H-Pole / 4,5m Wood Crossarm	Each	R381,05
12.8	<a href="#">D-DT-1778</a>	3 Phase - Pole / 2 x 4,5m Wood Crossarm	Each	R828,78
12.9	<a href="#">D-DT-1795</a>	MV Heavy Conductor - 22kV H-Pole Braced	Each	R476,31
12.10	1744	3 Phase - Delta / 2,5m Wood X-arm - Strain – Medium(1°-60°) Deviation -RX	Each	R270,06
12.11	1748	3 Phase - Delta / 2 x 2,5m Wood X-arm - Strain - Medium(1°-60°) Deviation -RX	Each	R476,31
12.12	1754	3 Phase - Delta / 4,5m Wood X-arm - Strain – Medium(1°-60°) Deviation -RX	Each	R476,31
12.13	1754	3 Phase - Delta / 2x4,5m Wood X-arm - Strain – Medium(1°-60°) Deviation -RX	Each	R476,31
12.14	1764	3 Phase - H-Pole / 3,5m Wood X-arm - Strain - Medium(1°-60°) Deviation -RX	Each	R476,31
12.15	1768	3 Phase - H-Pole / 2 x 3,5m Wood X-arm – Strain - Medium(1°-60°) Deviation -RX	Each	R828,78
12.16	1774	3 Phase – H-Pole / 4,5m Wood X-arm - Strain - Medium(1°-60°) Deviation -RX	Each	R381,05
12.17	1778	3 Phase – H-Pole / 2 x 4,5m Wood X-arm – Strain – Medium(1°-60°) Deviation -RX	Each	R828,78
12.18	1795	Heavy Conductor H-Pole Braced Angle strain (1-60°)-RX	Each	R476,31
<b>13</b>	<b>Strainer - Large (61- 90) deg</b>			
13.1	<a href="#">D-DT-1705</a>	3 Phase - Vertical (450mm Spacing)	Each	R270,06
13.2	<a href="#">D-DT-1715</a>	3 Phase - Vertical (600mm Spacing)	Each	R240,06

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13.3	<a href="#">D-DT-1735</a>	3 Phase - Delta / 1,3m Steel Crossarm	Each	R240,06
13.4	<a href="#">D-DT-1742</a>	3 Phase - Delta 2,5m Wood Crossarm / 1700 Steel Crossarm	Each	R436,32
13.5	<a href="#">D-DT-1742</a>	3 Phase - Delta 2,5m Wood Crossarm / 2,5m Wood Crossarm	Each	R436,32
13.6	<a href="#">D-DT-1745</a>	3 Phase - Delta 2 x 2,5m Wood Crossarm / 1700 Steel Crossarm	Each	R476,31
13.7	<a href="#">D-DT-1745</a>	3 Phase - Delta 2 x 2,5m Wood Crossarm / 2 x 2,5m Wood Crossarm	Each	R476,31
13.8	<a href="#">D-DT-1745</a>	3 Phase - Delta 1 x 2,5m Wood Crossarm / 1700 Steel Crossarm	Each	R476,31
13.9	<a href="#">D-DT-1745</a>	3 Phase - Delta 2,5m Wood Crossarm 2,5m Wood Crossarm	Each	R476,31
13.10	<a href="#">D-DT-1784</a>	3 Phase - Trips	Each	R857,36
13.11	<a href="#">D-DT-1788</a>	MV Heavy Conductor - 22kV 3 Phase - Vertical 800mm Spacing	Each	R476,31
13.12	<a href="#">D-DT-1791</a>	MV Heavy Conductor - 22kV 3 Phase - Vertical 800mm Spacing (Double Wood Poles)	Each	R872,64
13.13	<a href="#">D-DT-1792</a>	MV Heavy Conductor - 22kV 3 Phase - Vertical 800mm Spacing (Double Wood Poles)	Each	R872,64
13.14	<a href="#">D-DT-1873</a>	3 Phase - H-Pole / 2 x 4.5m Wooden Crossarm	Each	R828,78
13.15	1715	3 Phase - Vertical (600mm Spacing) Strain - Large(30-90°) Deviation Rx	Each	R240,06
13.16	1745	3 Phase - Delta /2 x 2,5m wood x-arms/1700 WOOD x-arm - strain - (60° - 90°) deviation-RX	Each	R476,31
13.17	1745	3 Phase - Delta /2 x 2,5m wood x-arms/ 3x2.5 wood x-arms - strain - (60° - 90°) deviation	Each	R476,31
13.18	1745	3 Phase - Delta /2 x 2,5m wood x-arms/ 3x2.5 wood x-arms - strain - (60° - 90°) deviation-RX	Each	R476,31
13.19	1784	3 Phase – Trips – Strain - Large(1°-90°) Deviation (Front view) -RX	Each	R857,36
13.20	1873	3 Phase H-pole /2X4.5m Wooden X-arm Strain Large (60-90°) Deviation Rx	Each	R828,78
<b>14</b>	<b>Strainer - Terminal</b>			
14.1	<a href="#">D-DT-1706</a>	3 Phase - Vertical (450mm Spacing)	Each	R240,06
14.2	<a href="#">D-DT-1716</a>	3 Phase - Vertical (600mm Spacing)	Each	R210,05
14.3	<a href="#">D-DT-1736</a>	3 Phase - Delta / 1,3m Steel Crossarm	Each	R240,06
14.4	<a href="#">D-DT-1746</a>	3 Phase - Delta / 2,5M Wood Crossarm	Each	R270,06
14.5	<a href="#">D-DT-1749</a>	3 Phase - Delta / 2 x 2,5m Wood Crossarm	Each	R476,31
14.6	<a href="#">D-DT-1756</a>	3 Phase - Delta / 4,5M Wood Crossarm	Each	R476,31
14.7	<a href="#">D-DT-1766</a>	3 Phase - H-pole / 3,5m Wood Crossarm	Each	R476,31
14.8	<a href="#">D-DT-1769</a>	3 Phase - H-pole / 2 x 3,5m Wood Crossarm	Each	R828,78

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14.9	<a href="#">D-DT-1776</a>	3 Phase - H-pole / 4,5m Wood Crossarm	Each	R381,05
14.10	<a href="#">D-DT-1779</a>	3 Phase - H-pole / 2 x 4,5m Wood Crossarm	Each	R828,78
14.11	<a href="#">D-DT-1789</a>	MV Heavy Conductor - 22kV 3 Phase - Vertical 800mm Spacing	Each	R476,31
14.12	<a href="#">D-DT-1796</a>	MV Heavy Conductor - 22kV H-Pole Braced	Each	R476,31
14.13	1746	3 Phase - Delta / 2,5m Wood X-arm - Strain – Terminal - RX	Each	R270,06
14.14	1749	3 Phase - Delta / 2 x 2,5m Wood X-arm - Strain - Terminal -RX	Each	R476,31
14.15	1756	3 Phase - Delta / 4,5m Wood X-arm - Strain – Terminal - RX	Each	R476,31
14.16	1766	3 Phase - H-Pole / 3,5m Wood X-arm - Strain - Terminal - RX	Each	R476,31
14.17	1769	3 Phase - H-Pole / 2 x 3,5m Wood X-arm - Strain – Terminal -RX	Each	R828,78
14.18	1776	3 Phase – H-Pole / 4,5m Wood X-arm - Strain - Terminal -RX	Each	R381,05
14.19	1779	3 Phase – H-Pole / 2 x 4,5m Wood X-arm – Strain – Terminal-RX	Each	R828,78
14.20	1789	3 Phase - Vertical (800mm spacing) Strain -Terminal (10kN Wood Poles) Rx	Each	R476,31
14.21	1716	3 Phase - Vertical (600mm Spacing) Strain - Terminal Rx	Each	R210,05
14.22	1796	Heavy Conductor H-Pole Braced Terminal structure-RX	Each	R476,31
14.23	1793	Heavy Conductor H-Pole Suspension Structure-RX	Each	R476,31
14.24	1793	Heavy Conductor H-Pole Suspension Structure- With Spark Gap Device	Each	R476,31
14.25	1793	Heavy Conductor H-Pole Suspension Structure- With Spark Gap Device-RX	Each	R476,31
<b>15</b>	<b>Take-Off</b>			
15.1	<a href="#">D-DT-1800</a>	3 Phase Take-Off - Vertical (450mm Spacing)	Each	R210,05
15.2	<a href="#">D-DT-1801</a>	3 Phase Take-Off - Vertical (600mm Spacing)	Each	R210,05
15.3	<a href="#">D-DT-1803</a>	3 Phase Take-Off - Delta / 1.3m Steel Crossarm	Each	R210,05
15.4	<a href="#">D-DT-1804</a>	3 Phase Take-Of - 2,5M Wooden Crossarm	Each	R210,05
15.5	<a href="#">D-DT-1805</a>	3 Phase Take-Of - 2 x 2,5M Wooden Crossarm	Each	R381,05
15.6	<a href="#">D-DT-1806</a>	3 Phase Take-Of - H-Pole 3,5M Wooden Crossarm	Each	R333,42
15.7	<a href="#">D-DT-1807</a>	3 Phase Take-Of - H-Pole 2 x 3,5M Wooden Crossarm	Each	R381,05
15.8	<a href="#">D-DT-1808</a>	3 Phase Take-Off - 1.7m Steel Crossarm (Fox)	Each	R166,70
15.9	<a href="#">D-DT-1809</a>	3 Phase Take-Off - 1.7m Steel Crossarm (Hare)	Each	R166,70

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15.10	1801	3 Phase Take-off – Vertical 600mm Spacing Rx	Each	R210,05
15.11	1804	3 Phase Take-off - 2,5m Wooden X-arm-RX	Each	R210,05
15.12	1805	3 Phase Take-off - 2 x 2,5m Wooden X-arm-RX	Each	R381,05
15.13	1806	3 Phase Take-off - H-Pole (3,5m Wooden X-arm)-RX	Each	R333,42
15.14	1807	3 Phase Take-off - H-Pole (2 x 3,5m Wooden X-arm) -RX	Each	R381,05
15.15	(OU Specific Drawing No)	Erect goal posts, supply and erect temporary structures and traffic signs and regulate traffic during construction for all <b>road crossings/railways crossings</b> . (This includes any loss of production during road crossings and ensuring that access is maintained to roads and properties as well as any fees by Prov. Traffic Dept)	Each	R3 000,69
15.16	DDT - 1310	Phase / phase – Staggered Vertical (600mm spacing) – Intermediate - 0° Deviation	Each	R358,04
15.17	DDT - 1313	Phase / phase – Vertical (600mm spacing) – Strain -0° Deviation	Each	R487,86
15.18	DDT - 1314	Phase / phase – Vertical (600mm spacing) – Strain-Small (1-30°) Deviation	Each	R436,80
15.19	DDT - 1314	Phase / phase – Vertical (600mm spacing) – Strain-Small (1-30°) Deviation Rx	Each	R436,80
15.20	DDT - 1315	Phase / phase – Vertical (600mm spacing) – Strain - Large (30-90°) Deviation	Each	R466,71
15.21	DDT - 1315	Phase / phase – Vertical (600mm spacing) – Strain - Large (30-90°) Deviation Rx	Each	R466,71
15.22	DDT - 1316	Phase / phase – Vertical (600mm spacing) – Strain - Terminal	Each	R478,69
15.23	DDT - 1316	Phase / phase – Vertical (600mm spacing) – Strain - Terminal Rx	Each	R478,69
<b>Sub-Total E</b>				
<b>BILL OF ACTIVITIES</b>				
<b>ITEM</b>	<b>REFERENCE DRAWING</b>	<b>DESCRIPTION</b>	<b>UNIT</b>	
<b>F</b>	<b>ASSEMBLING OF MV STAYS</b>			
	<b>Supply and install stays, flying stays, struts Hip Stay including backfilling &amp; compaction. Accessories include staywire, stayrods, stay plates, soil anchors, stay insulators, guy grips stay LimLanga Cluster – Mpumalanga brackets, LimLanga Cluster – Mpumalanga hardware, anti climbing devices, stayguards and danger labels. Poles and excavations are measured elsewhere. The installation and erection of strut poles are measured here. All hardware purchased will be paid elsewhere as cost plus fee.</b>			
1.1	<a href="#">D-DT-0341</a>	Make-Off Conventional Stay	Each	R352,71
1.2	<a href="#">D-DT-0343</a>	Make-Off Flying Stay	Each	R421,01
1.3	<a href="#">D-DT-0342/0351</a>	Make-Off Strut Pole	Each	R312,59
1.4	<a href="#">D-DT-0344</a>	Hip Stay	Each	R551,88

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1.5	357 (Sh 1 of 3)	LV/MV-ROCK ANCHOR INSTALLATION (EXPANDABLE SHELL & RESIN TYPE)	Each	R248,63
1.6	357 (Sh 2 of 3)	LV/MV-ROCK ANCHOR INSTALLATION (2 EYED ROD AND PIN TYPE)	Each	R198,91
1.7	357 (Sh 3 of 3)	MV- SOFT ROCK ANCHOR INSTALLATION	Each	R198,91
<b>Sub-Total F</b>				

<b>BILL OF ACTIVITIES</b>				
ITEM	REFERENCE DRAWING	DESCRIPTION	UNIT	
<b>G</b>	<b>ASSEMBLING OF LV STRUCTURES</b>			
	<b>ASSEMBLE SINGLE PHASE LV STRUCTURES</b>			
	Supply and erect LV support structures as per Eskom DDT 1100(only use insulated neutral ABC). Auxiliary equipment such as strain clamps, suspension clamps, cable ties, IPC's , end caps, LV shackle insulators, binding wires, D brackets, dead end preforms, threaded rods, pigtail bolts, eyenuts, terminations to be included. Pole, stay and strut material and excavations are measured elsewhere. All hardware purchased will be paid elsewhere as cost plus fee.A436			
<b>1</b>	<b>A. List of Single - phase ABC wood pole</b>			
1.1	1153	LV 1 phase insulated/bare neutral ABC Suspension Assembly (0°- 30°)	Each	R78,16
1.2	1154	LV 1 phase insulated/bare neutral ABC Terminal Assembly	Each	R104,21
1.3	1155	LV 1 phase insulated/bare neutral ABC Strain Assembly (0°- 60°)	Each	R104,21
1.4	1156	LV 1 phase insulated/bare neutral LV 2 phase bare neutral (60°- 90°)	Each	R104,21
1.5	1157	LV 1 phase insulated/bare neutral ABC T from Intermediate	Each	R104,21
1.6	1158	LV 1 phase insulated/bare neutral ABC Cross Intermediate Suspension Assembly	Each	R130,26
1.7	1159	LV 1 phase insulated/bare neutral ABC T from Strain	Each	R156,31
1.8	1160	LV 1 phase insulated/bare neutral ABC X Intermediate-Strain Assembly	Each	R182,37
	<b>ASSEMBLE DUAL PHASE LV STRUCTURES</b>			
	Supply and erect LV support structures as per Eskom DDT 1100(only use insulated neutral ABC). Auxiliary equipment such as strain clamps, suspension clamps, cable ties, IPC's , end caps, LV shackle insulators, binding wires, D brackets, dead end preforms, threaded rods, pigtail bolts, eyenuts, terminations to be included. Pole, stay and strut material and excavations are measured elsewhere. All hardware purchased will be paid elsewhere as cost plus fee.A436			

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2		B. List of Dual - phase ABC wood pole		
2.1	1145	LV 2 phase insulated/bare neutral ABC Suspension Assembly (0°- 30°)	Each	R74,25
2.2	1146	LV 2 phase insulated/bare neutral LABC Terminal Assembly	Each	R99,00
2.3	1147	LV 2 phase insulated/bare neutral ABC Strain Assembly (0° - 60°)	Each	R99,00
2.4	1148	LV 2 phase insulated/bare neutral ABC Strain Assembly (60° - 90°)	Each	R99,00
2.5	1149	LV 2 phase insulated/bare neutral ABC T from Intermediate	Each	R99,00
2.6	1150	LV 2 phase insulated/bare neutral ABC Intermediate Suspension Assembly	Each	R123,74
2.7	1151	LV 2 phase insulated/bare neutral ABC T from Strain	Each	R148,49
2.8	1152	LV 2 phase insulated/bare neutral ABC X Intermediate-Strain Assembly	Each	R173,25
<b>ASSEMBLE 3 PHASE LV STRUCTURES</b>				
<p><b>Supply and erect LV support structures as per Eskom DDT 1100(only use insulated neutral ABC). Auxiliary equipment such as strain clamps, suspension clamps, cable ties, IPC's , end caps, LV shackle insulators, binding wires, D brackets, dead end preforms, threaded rods, pigtail bolts, eyenuts, terminations to be included. Pole, stay and strut material and excavations are measured elsewhere. All hardware purchased will be paid elsewhere as cost plus fee.A436</b></p>				
3		A. List of 3-phase ABC wood pole		
3.1	<a href="#">D-DT-1100</a>	LV - 3 Phase insulated/bare neutral ABC Suspension Assembly 0-30 Deg.	Each	R92,88
3.2	<a href="#">D-DT-1121</a>	LV - 3 Phase insulated/bare neutral ABC Strain Assembly 0-60 Deg.	Each	R123,84
3.3	<a href="#">D-DT-1122</a>	LV - 3 Phase insulated/bare neutral ABC Strain Assembly 60-90 Deg.	Each	R123,84
3.4	<a href="#">D-DT-1120</a>	LV - 3 Phase insulated/bare neutral ABC Terminal Assembly	Each	R123,84
3.5	<a href="#">D-DT-1140</a>	LV - 3 Phase insulated/bare neutral ABC T-Off Assembly from Intermediate	Each	R123,84
3.6	<a href="#">D-DT-1141</a>	LV - 3 Phase insulated/bare neutral ABC Cross Intermediate - Intermediate Assembly	Each	R154,80
3.7	<a href="#">D-DT-1142</a>	LV - 3 Phase insulated/bare neutral ABC T-Off Assembly From Strain	Each	R185,76
3.8	<a href="#">D-DT-1143</a>	LV - 3 Phase insulated/bare neutral ABC Cross Intermediate - Strain Assembly	Each	R216,72
<b>Sub-Total G</b>				

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BILL OF ACTIVITIES				
ITEM	REFERENCE DRAWING	DESCRIPTION	UNIT	
H	<b>ASSEMBLING OF LV STAYS</b>			
	<b>Supply and install stays, flying stays, struts Short Stay including backfilling &amp; compaction. Accessories include staywire, stayrods, stay plates, soil anchors, stay insulators, guy grips stay brackets, hardware, anti climbing devices, stayguards and danger labels. Poles and excavations are measured elsewhere. The installation and erection of strut poles are measured here. All hardware purchased will be paid elsewhere as cost plus fee.</b>			
1.1	<a href="#">D-DT-0341</a>	Make-Off Conventional Stay	Each	R335,06
1.2	<a href="#">D-DT-0343</a>	Make-Off Flying Stay	Each	R399,97
1.3	<a href="#">D-DT-0342/0351</a>	Make-Off Strut Pole	Each	R296,96
1.4	<a href="#">D-DT-0344</a>	Make-Off Short Strut Pole	Each	R296,96
<b>Sub-Total H</b>				
BILL OF ACTIVITIES				
ITEM	REFERENCE DRAWING	DESCRIPTION	UNIT	
I	<b>POLE TOP BOX INSTALLATION</b>			
	<b>Install on a wooden and/or concrete pole a pole distribution box as specified complete with pole brackets (including sealing), cable ties, PG clamps, miniature circuit breaker(s), neutral, phase and earth bars, insulated copper tails for connecting to LV ABC, insulation piercing connectors and factory installed cable openings. Included shall be the stainless steel strapping, buckles and terminations of the tails onto the LV ABC. Eskom D-DT standards as amended will apply.</b>			
1.1	<a href="#">D-DT-3236</a>	2 Way Fibre Glass Box for Split Metering	Each	R175,37
1.2	<a href="#">D-DT-3236</a>	4 Way Fibre Glass Box for Split Metering	Each	R175,37
1.3	<a href="#">D-DT-3055</a>	8 Way Fibre Glass Box for Split Metering	Each	R175,37
1.4	D-DT-3236	2 Way Steel Box for Split Metering	Each	R263,06
1.5	D-DT-3236	4 Way Steel Box for Split Metering	Each	R263,06
1.6	D-DT-3236	6 Way Steel Box for Split Metering	Each	R263,06
1.7	D-DT-3236	8 Way Steel Box for Split Metering	Each	R263,06
1.8	3055	BOX,POLE TOP SPLIT METER 2-WAY 50A D3055	Each	R263,06
1.9	3055	BOX,POLE TOP SPLIT METER 4-WAY 50A D3055	Each	R263,06

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1.10	3055	BOX,POLE TOP SPLIT METER 2-WAY 120A D3055	Each	R263,06
1.11	3055	BOX,POLE TOP SPLIT METER 8-WAY 50A D3055	Each	R263,06
<b>Sub-Total I</b>				
<b>BILL OF ACTIVITIES</b>				
ITEM	REFERENCE DRAWING	DESCRIPTION	UNIT	
<b>J</b>	<b>CONDUCTOR STRINGING (TENSION, REGULATE &amp; BIND IN)</b>			
	<b>Install Eskom issued marked conductor. Material quantity to allow for 5% sag in addition to actual conductor length quantity. Installation includes handling, stringing and final sagging. This will be for greased ungreased conductor</b>			
1.1		Fox Conductor 1-Phase	m	R3,80
1.2		Fox Full Tension Joint*	Each	R93,28
1.3		Mink Conductor 1-Phase	m	R3,80
1.4		Mink Full Tension Joint*	Each	R93,28
1.5		Hare Conductor 1-Phase	m	R3,80
1.6		Hare Full Tension Joint*	Each	R93,28
1.7		Chickadee Conductor 1-Phase	m	R15,99
1.8		Chickadee Full Tension Joint*	Each	R175,86
1.9		Kingbird Conductor 1-Phase	m	R15,99
1.10		Kingbird Full Tension Joint*	Each	R175,86
1.11	3136	MV Bare AAAC Pine Greased	m	R3,80
1.12		Pine Conductor Full Tension Joint	Each	R93,28
1.13	3136	MV Bare AAAC Oak Greased	m	R3,80
1.14		Oak Conductor Full Tension Joint	Each	R93,28
1.15	3136	MV Bare AAAC 35mmsq Greased	m	R3,80
1.16	<b>831</b>	35mm sq. Full Tension Joint* 2 Core	Each	R93,28
1.17	<b>831</b>	35mm sq. Full Tension Joint* 3 Core	Each	R140,43
1.18	<b>831</b>	35mm sq. Full Tension Joint* 4 Core	Each	R373,12
1.19		35 mm sq. ABC 3-phase	m	R3,80

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1.20	<b>0800 series</b>	70mm sq. Full Tension Joint* 4 Core	Each	R93,28
1.21		70 mm sq. ABC 3-phase	m	R3,80
1.22	3141	COND,ABC 2C XLPE 35SQ INS NEUT	m	R2,33
1.23	3141	COND,ABC 3C XLPE 35SQ INS NEUT	m	R2,48
1.24	3141	COND,ABC 4C XLPE 35SQ INS NEUT	m	R3,30
1.25	3141	COND,ABC 3C XLPE 70SQ INS NEUT	m	R2,48
1.26	3141	COND,ABC 4C XLPE 70SQ INS NEUT	m	R3,30
<b>Sub-Total J</b>				
<b>BILL OF ACTIVITIES</b>				
<b>ITEM</b>	<b>REFERENCE DRAWING</b>	<b>DESCRIPTION</b>	<b>UNIT</b>	
<b>K</b>	<b>EQUIPMENT INSTALLATION</b>			
	<p><b>Install Transformer/Recloser/Voltage Regulator/MV Metering Units as per relevant Eskom DDT 1800 Series Assembly Drawing and OU Specific SI Engineering Instructions. All Auxiliary Equipment to include Station and Distribution MV, LV Surge Arrestors, Control Boxes, Metering Kiosks, Jumper Terminations, Anti Climbing Devices , LDPE Pipe Covered Jumpers as per 02TB-023 and Danger Labels, Channel Irons, Cradles, Standoff Insulators, Conductor Busbars and suitable Equipment Labels. Poles, Stays, X-arms, Struts, Isolators and earthing Material and Excavations are elsewhere measured. Transformers /Reclosers/Voltage Regulators and MV Metering Units will be Eskom Free Issue Material. Main Line Structures and Auxiliary Equipment are elsewhere measured. All material purchased will be paid elsewhere as cost plus fee.</b></p>			
<b>1</b>	<b>Transformers</b>			
1.1	<a href="#">D-DT-1862</a>	Install 5-Pole Double Platform Transformer Structure	Each	R2 726,98
1.2	<a href="#">D-DT-1863</a>	Install 2-Pole Platform Transformer Structure	Each	R2 031,92
1.3	<a href="#">D-DT-1864</a>	Install 5-Pole Double Platform Transformer Structure (Out of Line)	Each	R3 721,97
1.4	<a href="#">D-DT-1865</a>	Install 2-Pole Platform Transformer Structure (Out of Line)	Each	R2 031,92
1.5	<a href="#">D-DT-1865B</a>	Transformer - Out- of- Line 100kVA to 200KVA	Each	R2 031,92
1.6	<a href="#">D-DT-1866</a>	Install Single Pole Out of Line Transformer Structure (Out of Line)	Each	R1 610,40
1.7	<a href="#">D-DT-1866B</a>	Transformer - Out- of- Line 16kVA to 100kVA/64kVA	Each	R1 610,40
1.8	D-DT-3021	Relocate - 300-500kVA x 3-Phase	Each	R8 305,38
1.9	<a href="#">D-DT-3021</a>	Install Transformer - 300-500kVA x 3-Phase	Each	R6 693,86
1.10	<a href="#">D-DT-3021</a>	Relocate - 200kVA x 3-Phase	Each	R4 034,75

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1.11	<a href="#">D-DT-3021</a>	Install Transformer - 200kVA x 3-Phase	Each	R2 460,87
1.12	<a href="#">D-DT-3021</a>	Relocate - 100kVA x 3-Phase	Each	R4 034,75
1.13	<a href="#">D-DT-3021</a>	Install Transformer - 100kVA x 3-Phase	Each	R2 460,87
1.16	D-DT-3021	Relocate - 50kVA x 3-Phase	Each	R2 492,36
1.17	D-DT-3021	Install Transformer - 50kVA x 3-Phase	Each	R2 163,99
1.18	D-DT-3021	Relocate - 25kVA x 3-Phase	Each	R2 492,36
1.19	D-DT-3021	Install Transformer - 25kVA x 3-Phase	Each	R2 163,99
1.20	D-DT-3021	Relocate Transformer - 16kVA x 1-Phase	Each	R2 492,36
1.22	D-DT-3021	Install Transformer - 16kVA x 1-Phase	Each	R2 163,99
1.23		Install Labels (Chromadek)	Each	R467,76
1.24	1860	Transformer - 5-100kVA Single Pole	Each	R1 666,58
1.25	1861	TRANSFORMER - 100-200kVA / 2-POLE PLATFORM LIMLANGA CLUSTER - MPUMALANGANTED (H-POLE) GENERAL ARRANGEMENT	Each	R1 729,70
<b>2</b>	<b>Transformer MV Protection</b>			
2.1	<a href="#">D-DT-1849</a>	Equipment Links Cut-Outs Or Disconnectors 2.5m Wood Crossarm / Single Pole	Each	R430,63
2.2	<a href="#">D-DT-1850</a>	Section / Equipment Links Or Disconnectors 1.3m Steel Crossarm / Single Pole	Each	R430,63
2.3	<a href="#">D-DT-1869</a>	Section / Equipment Links Cut/Out Or Disconnectors 1.7m Steel Crossarm/Single Pole	Each	R258,38
2.4	<a href="#">D-DT-0261</a>	Install Surge Arresters (3-phase)	Each	R348,76
2.5		Install Labels (Chromadek)	Each	R467,76
<b>3</b>	<b>Transformer LV Protection</b>			
3.1	D-DT-0309	80A Morsdorf Type Fuses - 3-Phase	Set	R190,73
3.2	D-DT-0309	125A Morsdorf Type Fuses - 3-Phase	Set	R381,50
3.3	D-DT-0309	160A Morsdorf Type Fuses - 3-Phase	Set	R381,50
3.4	<a href="#">D-DT-3034</a>	150A MCCB - 3-Phase(Circuit breaker)	Each	R381,50
3.5	<a href="#">D-DT-3034</a>	300A MCCB - 3-Phase(Circuit breaker)	Each	R417,80
3.6	309	Three phase trf and LV fuse holder connection - ABC conductor- 40A NH00	Set	R112,37
3.7	309	Three phase trf and LV fuse holder connection - ABC conductor- 63A NH00	Set	R112,37
3.8	309	Dual phase trf and LV fuse holder connection - ABC conductor- 40A NH00	Set	R112,37

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3.9	309	Dual phase trf and LV fuse holder connection - ABC conductor- 63A NH00	Set	R112,37
3.10	309	Dual phase trf and LV fuse holder connection - ABC conductor- 80A NH00	Set	R190,73
3.11	309	Dual phase trf and LV fuse holder connection - ABC conductor- 125A NH00	Set	R381,50
3.12	309	Dual phase trf and LV fuse holder connection - ABC conductor- 160A NH00	Set	R381,50
3.13	309	Single phase trf and LV fuse holder connection - ABC conductor- 40A NH00	Set	R112,37
3.14	309	Single phase trf and LV fuse holder connection - ABC conductor- 63A NH00	Set	R112,37
3.15	309	Single phase trf and LV fuse holder connection - ABC conductor- 80A NH00	Set	R190,73
3.16	309	Single phase trf and LV fuse holder connection - ABC conductor- 125A NH00	Set	R381,50
3.17	309	Single phase trf and LV fuse holder connection - ABC conductor- 160A NH00	Set	R381,50
3.18		Install Data Concentrator (Complete)	Each	R127,80
3.19		Install Labels (Chromadek)	Each	R467,76
<b>4</b>	<b>Poles</b>			
4.1	<a href="#">D-DT-1821</a>	Install Sectionaliser Structure	Each	R966,92
4.2	<a href="#">D-DT-1828</a>	Install Sectionaliser - Out-Of-Line Structure	Each	R1 450,37
4.3	<a href="#">D-DT-1821</a>	Install Sectionaliser	Each	R1 450,37
4.4	<a href="#">D-DT-1848</a>	Section Links Cut/Outs Or Disconnectors 2.5m Wood Crossarm / Single Pole	Each	R258,38
4.5	<a href="#">D-DT-1852</a>	Equipment Links - Cut-Outs Or Disconnectors - 3.5/4.5m Wood Crossarm / H-Pole	Each	R430,63
4.6	<a href="#">D-DT-1853</a>	Equipment Isolating (In-Out) Links - Cut-Outs Or Disconnectors - 2 x 2.5m Wood Crossarm / H-Pole	Each	R775,13
4.7	<a href="#">D-DT-1854</a>	Equipment Isolating (In-Out) Links - Cut-Outs Or Disconnectors - 4.5m Wood Crossarm / Out-Of-Line	Each	R775,13
4.8	<a href="#">D-DT-1857</a>	3 Phase Switch Disconnecter Ganged, Link Stick Operated Horizontal Assembly H-Pole 1800 And 2200 Centres	Each	R516,75
4.9	<a href="#">D-DT-1858</a>	3 Phase Switch Disconnecter Ganged, Link Stick Operated Assembly Single Pole	Each	R516,75
4.10	<a href="#">D-DT-1875</a>	Equipment Isolating (In-Out) Links Cut/Outs Or Disconnectors 2x2.4m Steel Crossarm / H-Pole	Each	R775,13
4.11	<a href="#">D-DT-0261</a>	Install Surge Arresters	Each	R348,76
4.12		Install Labels (Chromadek)	Each	R467,76
<b>5</b>	<b>Pole Recloser</b>			
5.1	<a href="#">D-DT-1825</a>	Install Recloser Structure	Each	R1 578,30
5.2	<a href="#">D-DT-1829</a>	Install Recloser - Out-Of-Line Structure	Each	R1 803,76

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5.3	<a href="#">D-DT-0272</a>	Install Recloser On Existing Structure	Each	R1 803,76
5.4	<a href="#">D-DT-1848</a>	Section Links Cut/Oots Or Disconnectors 2.5m Wood Crossarm / Single Pole	Each	R275,17
5.5	<a href="#">D-DT-1852</a>	Equipment Links - Cut-Outs Or Disconnectors - 3.5/4.5m Wood Crossarm / H-Pole	Each	R458,62
5.6	<a href="#">D-DT-1853</a>	Equipment Isolating (In-Out) Links - Cut-Outs Or Disconnectors - 2 x 2.5m Wood Crossarm / H-Pole	Each	R825,51
5.7	<a href="#">D-DT-1854</a>	Equipment Isolating (In-Out) Links - Cut-Outs Or Disconnectors - 4.5m Wood Crossarm / Out-Of-Line	Each	R825,51
5.8	<a href="#">D-DT-1857</a>	3 Phase Switch Disconnecter Ganged, Link Stick Operated Horizontal Assembly H-Pole 1800 And 2200 Centres	Each	R550,34
5.9	<a href="#">D-DT-1858</a>	3 Phase Switch Disconnecter Ganged, Link Stick Operated Assembly Single Pole	Each	R550,34
5.10	<a href="#">D-DT-1875</a>	Equipment Isolating (In-Out) Links Cut/Oots Or Disconnectors 2x2.4m Steel Crossarm / H-Pole	Each	R825,51
5.11	<a href="#">D-DT-0270</a>	Install Auxiliary Transformer	Each	R2 304,65
5.12	<a href="#">D-DT-0261</a>	Install Surge Arresters	Each	R371,42
5.13		Install Labels (Chromadek)	Each	R498,16
5.14	D-DT-1829B	Recloser structure – General arrangement (INCLUDING PMRTV) (sheet 1 of 2) (Bypass structure not included)	Each	R2 101,20
<b>6</b>	<b>Voltage Regulator</b>			
6.1	<a href="#">D-DT-1830</a>	Install Voltage Regulator - 11/22kV 100/200A Open Delta Structure	Each	R2 013,13
6.2	<a href="#">D-DT-1831</a>	Install Voltage Regulator - 11/22kV 100/200A Closed Delta Structure	Each	R2 013,13
6.3	<a href="#">D-DT-1833</a>	Install Voltage Regulator - 11/22kV 100/200A Open Delta - Out-Of-Line Structure	Each	R2 300,72
6.4	1833B	Regulator - 100 / 200A Open Delta – General Arrangement (sheet 1 of 3)	Each	R2 680,10
6.5	<a href="#">D-DT-1834</a>	Install Voltage Regulator - 11/22kV 100/200A Closed Delta - Out-Of-Line Structure	Each	R2 300,72
6.6	1834B	Regulator - 100 / 200A Closed Delta - General Arrangement (Sheet 1 of 2)	Each	R2 680,10
6.7	<a href="#">D-DT-3119</a>	Install Voltage Regulator On Existing Structure	Each	R2 300,72
6.8	<a href="#">D-DT-1848</a>	Section Links Cut/Oots Or Disconnectors 2.5m Wood Crossarm / Single Pole	Each	R258,38
6.9	<a href="#">D-DT-1851</a>	Equipment Links - Cut-Outs Or Disconnectors - 2.5m Wood Crossarm / H-Pole	Each	R258,38
6.10	<a href="#">D-DT-1852</a>	Equipment Links - Cut-Outs Or Disconnectors - 3.5/4.5m Wood Crossarm / H-Pole	Each	R430,63
6.11	<a href="#">D-DT-1854</a>	Equipment Isolating (In-Out) Links - Cut-Outs Or Disconnectors - 4.5m Wood Crossarm / Out-Of-Line	Each	R453,30
6.12	<a href="#">D-DT-1857</a>	3 Phase Switch Disconnecter Ganged, Link Stick Operated Horizontal Assembly H-Pole 1800 And 2200 Centres	Each	R516,75
6.13	<a href="#">D-DT-1858</a>	3 Phase Switch Disconnecter Ganged, Link Stick Operated Assembly Single Pole	Each	R516,75

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6.14	<a href="#">D-DT-1874</a>	Equipment Links Or Disconnectors 2.4m Steel Crossarm / H-Pole	Each	R775,13
6.15	<a href="#">D-DT-0261</a>	Install Surge Arresters	Each	R348,76
6.16		Install Labels (Chromadek)	Each	R467,76
<b>7</b>	<b>Pole CT-VT Unit</b>			
7.1	<a href="#">D-DT-1839</a>	Install MV CT / VT Metering Bulk Tariff Out-Of-Line Structure	Each	R1 782,81
7.2	<a href="#">D-DT-1840</a>	Install MV CT / VT Metering Bulk Tariff In Line Structure	Each	R1 782,81
7.3	<a href="#">D-DT-1841</a>	Install CT/VT Metering Statistical Structure	Each	R2 013,13
7.4	<a href="#">D-DT-1846</a>	Install CT/VT Metering Statistical Out-Of-Line Structure	Each	R2 013,13
7.5	<a href="#">D-DT-3118</a>	Install CT/VT unit	Each	R2 300,72
7.6	<a href="#">D-DT-1848</a>	Section Links Cut/Oots Or Disconnectors 2.5m Wood Crossarm / Single Pole	Each	R258,38
7.7	<a href="#">D-DT-1850</a>	Section / Equipment Links Or Disconnectors 1.3m Steel Crossarm / Single Pole	Each	R206,65
7.8	<a href="#">D-DT-1852</a>	Equipment Links - Cut-Outs Or Disconnectors - 3.5/4.5m Wood Crossarm / H-Pole	Each	R430,63
7.9	<a href="#">D-DT-1853</a>	Equipment Isolating (In-Out) Links - Cut-Outs Or Disconnectors - 2 x 2.5m Wood Crossarm / H-Pole	Each	R775,13
7.10	<a href="#">D-DT-1854</a>	Equipment Isolating (In-Out) Links - Cut-Outs Or Disconnectors - 4.5m Wood Crossarm / Out-Of-Line	Each	R430,63
7.11	<a href="#">D-DT-1857</a>	3 Phase Switch Disconnecter Ganged, Link Stick Operated Horizontal Assembly H-Pole 1800 And 2200 Centres	Each	R516,75
7.12	<a href="#">D-DT-1858</a>	3 Phase Switch Disconnecter Ganged, Link Stick Operated Assembly Single Pole	Each	R516,75
7.13	<a href="#">D-DT-1875</a>	Equipment Isolating (In-Out) Links Cut/Oots Or Disconnectors 2x2.4m Steel Crossarm / H-Pole	Each	R775,13
7.14	<a href="#">D-DT-3236</a>	Install CT/VT Metering Kiosk	Each	R146,52
7.15	<a href="#">D-DT-0261</a>	Install Surge Arresters	Each	R348,76
7.16		Install Labels (Chromadek)	Each	R467,76
<b>8</b>	<b>Pole Shunt Capacitor Banks</b>			
8.1	<a href="#">D-DT-1832</a>	Install Capacitor Structure	Each	R2 300,72
8.2	<a href="#">D-DT-3218</a>	Install Capacitor Bank	Each	R2 300,72
8.3	<a href="#">D-DT-1849</a>	Equipment Links Cut-Outs Or Disconnectors 2.5m Wood Crossarm / Single Pole	Each	R430,63
8.4	<a href="#">D-DT-1850</a>	Section / Equipment Links Or Disconnectors 1.3m Steel Crossarm / Single Pole	Each	R430,63
8.5	<a href="#">D-DT-0261</a>	Install Surge Arresters	Each	R348,76
8.6		Install Labels (Chromadek)	Each	R467,76

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9	Line Arrester			
9.1		Install Equipment Links	Each	R579,23
9.2	<a href="#">D-DT-1842</a>	Line Arresters 1.3m Long Steel Crossarm Staggered Vertical Configuration	Each	R348,76
9.3	<a href="#">D-DT-1843</a>	Line Arresters 2.5m Long Wooden Crossarm Vertical Configuration	Each	R348,76
9.4	<a href="#">D-DT-1844</a>	Line Arresters H-Pole Configuration	Each	R403,40
9.5	<a href="#">D-DT-1845</a>	Line Arresters Delta Configuration	Each	R348,76
9.6		Install Labels (Chromadek)	Each	R467,76
10	3 Phase Sectional Links			
10.1	<a href="#">D-DT-1847</a>	Section Links Cut/Outs Or Disconnectors 3.5/4.5m Wood Crossarm / H-Pole	Each	R430,63
10.2	<a href="#">D-DT-1848</a>	Section Links Cut/Outs Or Disconnectors 2.5m Wood Crossarm / Single Pole	Each	R258,38
10.3	<a href="#">D-DT-1850</a>	Section / Equipment Links Or Disconnectors 1.3m Steel Crossarm / Single Pole	Each	R258,38
10.4	<a href="#">D-DT-1857</a>	3 Phase Switch Disconnecter Ganged, Link Stick Operated Horizontal Assembly H-Pole 1800 And 2200 Centres	Each	R516,75
10.5	<a href="#">D-DT-1858</a>	3 Phase Switch Disconnecter Ganged, Link Stick Operated Assembly Single Pole	Each	R516,75
10.6	<a href="#">D-DT-1869</a>	Section / Equipment Links Cut/Out Or Disconnectors 1.7m Steel Crossarm/Single Pole	Each	R258,38
10.7		Install Labels (Chromadek)	Each	R467,76
11	Bird Flight Diverter			
11.1	<a href="#">D-DT-3029</a>	Install Bird Flight Diverter	Each	R7,08
12	Miniature Substation			
12.1		Prepare Site Including Excavation and Compaction for Pre-Cast Plinth	m <sup>2</sup>	R351,64
12.2	<a href="#">D-DT-0859</a>	Install Pre-Cast Plinth	Each	R3 452,44
12.3	<a href="#">D-DT-0859</a>	Install Miniature Substation	Each	R1 964,97
12.4	<a href="#">D-DT-3034</a>	MCCB - 3-Phase	Each	R417,80
12.5		Vermin Proofing	Each	R469,12
12.6		Stencilling	Each	R17,91
12.7		Install Labels (Chromadek and Aluminium)	SET	R467,76
12.8	D-DT-3409	Install Vertical Fuse Pillar	Each	R239,63

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12.9	D-DT-3181	Install NH02 Fuse	Each	R239,63
<b>13</b>	<b>Ring Main Unit</b>			
13.1		Prepare Site Including Excavation and Compaction for Pre-Cast Plinth	m <sup>2</sup>	R351,64
13.2	<a href="#">D-DT-0863</a>	Install Pre-Cast Plinth	Each	R2 387,44
13.3	<a href="#">D-DT-8060</a>	Install Ring Main Unit	Each	R1 014,67
13.4		Vermin Proofing	Each	R469,12
13.5		Stencilling	p/letter	R17,91
13.6		Install Labels (Chromadek)	Each	R467,76
<b>14</b>	<b>Ground CT-VT Unit</b>			
				R0,00
14.1		Prepare Site Including Excavation and Compaction for Pre-Cast Plinth	m <sup>2</sup>	R351,64
14.2	<a href="#">D-DT-0865</a>	Install Pre-Cast Plinth	Each	R2 387,44
14.3	D-DT-0865	Install CT-VT Unit	Each	R1 014,67
14.4		Vermin Proofing	Each	R469,12
14.5		Stencilling	p/letter	R17,91
14.6		Install Labels (Chromadek)	Each	R467,76
<b>15</b>	<b>Meter Kiosk</b>			
15.1		Prepare Site Including Excavation and Compaction for Pre-Cast Plinth	m <sup>2</sup>	R351,64
15.2	<a href="#">D-DT-0865</a>	Install Pre-Cast Plinth	Each	R2 805,25
15.3	D-DT-0865	Install LPU Meter Kiosk	Each	R146,52
15.4	<a href="#">D-DT-3236</a>	4 Way High Risk Steel Kiosk	Each	R719,68
15.5	<a href="#">D-DT-3236</a>	6 Way High Risk Steel Kiosk	Each	R719,68
15.6	<a href="#">D-DT-3236</a>	8 Way High Risk Steel Kiosk	Each	R719,68
15.7	<a href="#">D-DT-3236</a>	12 Way High Risk Steel Kiosk	Each	R719,68
15.8		Energy Management Units (Meter)	Each	R409,92
15.9		Vermin Proofing	Each	R469,12
15.10		Stencilling	p/letter	R17,91
15.11		Install Labels (Chromadek)	Each	R467,76
<b>Sub-Total K</b>				

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BILL OF ACTIVITIES				
ITEM	REFERENCE DRAWING	DESCRIPTION	UNIT	
<b>L</b>	<b>EARTHING INSTALLATION</b>			
	<b>MV &amp; LV Earthing Trenching shall include Excavation, Backfilling, Compaction and Installation of electrode and conductor as per the Eskom Standard for Earthing</b>			
<b>1</b>		<b>Transformer - MV Earthing</b>		
1.1		Excavation - length long, 0.5m deep and 0.6m wide	m <sup>3</sup>	R149,22
1.2	<a href="#">D-DT-3139</a>	16mm sq. Bare Stranded Cu Conductor	m	R11,94
1.3	<a href="#">D-DT-3137</a>	16mm sq. Insulated Stranded Cu Conductor	m	R11,94
1.4	<a href="#">D-DT-3091</a>	Earth Electrode (Type as per the design)	Each	R250,68
1.5		Backfill - length long, 0.5m deep and 0.6m wide	m <sup>3</sup>	R121,76
<b>2</b>	<b>Transformer - LV Earthing</b>			
2.1		Excavation - length long, 0.5m deep and 0.6m wide	m <sup>3</sup>	R149,22
2.2	<a href="#">D-DT-3139</a>	16mm sq. Bare Stranded Cu Conductor	m	R11,94
2.3	<a href="#">D-DT-3137</a>	16mm sq. Insulated Stranded Cu Conductor	m	R11,94
2.4	<a href="#">D-DT-3091</a>	Earth Electrode (Type as per the design)	Each	R250,68
2.5		Backfill - length long, 0.5m deep and 0.6m wide	m <sup>3</sup>	R121,76
<b>3</b>	<b>Other Overhead System Equipment Earthing - Capacitor Bank / CT-VT Unit / Line Arrester / Recloser / Sectionalizer / Voltage Regulator</b>			
3.1		Excavation - length long, 0.5m deep and 0.6m wide	m <sup>3</sup>	R149,22
3.2	<a href="#">D-DT-3139</a>	16mm sq. Bare Stranded Cu Conductor	m	R11,94
3.3	<a href="#">D-DT-3137</a>	16mm sq. Insulated Stranded Cu Conductor	m	R11,94
3.4	<a href="#">D-DT-3091</a>	Earth Electrode (Type as per the design)	Each	R250,68
3.5		Backfill - length long, 0.5m deep and 0.6m wide	m <sup>3</sup>	R121,76
<b>4</b>	<b>Other Underground System Equipment Earthing - Miniature Substation / Ring Main Unit / CT-VT Unit</b>			
4.1		Excavation - length long, 0.5m deep and 0.6m wide	m <sup>3</sup>	R149,22
4.2	<a href="#">D-DT-3139</a>	16mm sq. Bare Stranded Cu Conductor	m	R11,94

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4.3	<a href="#">D-DT-3091</a>	Earth Electrode (Type as per the design)	Each	R250,68
4.4		Backfill - length long, 0.5m deep and 0.6m wide	m <sup>3</sup>	R121,76
<b>5</b>	<b>Earthing Installation excluding trenching</b>			
5.1	D-DT-3066	MV Earthing (Type 1 Crowfoot)	Each	R2 832,90
5.2	D-DT-3066	MV Earthing (Type 2 Crowfoot)	Each	R3 136,43
5.3	D-DT-3066	MV Earthing (Type 3 Crowfoot)	Each	R3 439,95
5.4	D-DT-3066	MV Earthing (Type 4 Crowfoot)	Each	R3 642,30
<b>Sub-Total L</b>				
<b>BILL OF ACTIVITIES</b>				
<b>ITEM</b>	<b>REFERENCE DRAWING</b>	<b>DESCRIPTION</b>	<b>UNIT</b>	
<b>M</b>	<b>SERVICE CONNECTION INSTALLATION</b>			
<p><b>House Connections include installation of ready board, hardware, wooden backboards, customer interface units, conduit pipe, excavations and backfilling of underground connection, capturing of customer data including GPS coordinates. Digging and bulleting for road crossing including installation of sleeves and warning tape are measured here</b></p>				
1.1	<a href="#">D-DT-0360</a>	Overhead service connection direct to dwelling (from the pole top box to the pre-paid meter) (Type A) to brick dwelling	Each	R76,71
1.2	<a href="#">D-DT-0360</a>	Overhead service connection with service pole (from the pole top box to the pre-paid meter) (Type B) to mud dwelling	Each	R76,71
1.3	<a href="#">D-DT-0367</a>	Underground Service Connection	Each	R496,57
1.4		25mm Conduit LDPE Pipe	m	R149,22
1.5	<a href="#">D-DT-0854</a>	Excavation - 0.75m Deep and 0.45 Wide	m <sup>3</sup>	R149,22
1.6		Road Crossing - Digging	m	R937,07
1.7		Road Crossing - Bulleting	Each	R426,54
1.8	<a href="#">D-DT-8018</a>	Install Sleeves	m	R4,77
1.9	<a href="#">D-DT-0854</a>	Laying of Warning Tape	m	R2,78
1.10	<a href="#">D-DT-0854</a>	Backfill - 0.75m Deep and 0.45 Wide	m <sup>3</sup>	R121,76
<b>2</b>	<b>Split / Smart Metering</b>			
2.1	<a href="#">D-DT-3145</a>	Customer Interface Unit	Each	R37,28

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2.2	<a href="#">D-DT-3176</a>	Split Meter Ready-Board	Each	R179,06
2.3	D-ST-2351	Wooden Backboard for Ready board (for Tin and Mud houses)	Each	R149,22
2.4		Split/Smart Meter Installation	Each	R346,13
2.5		Capture and Upload of Customer Data New & Existing Including GPS Coordinates	Each	R9,83
2.6		Installation of smart meters including all its accessories	Each	R179,06
2.7		Installation of the Data Concentrator Kiosk	Each	R276,90
2.8		Wiring of Data concentrator, Supply and Incorporating Communication MODEM and Antenas	Each	R266,25
2.9		Installation of the supply cable from ABC to the Data concentrator Meter.	Each	R106,50
2,10		Test the functionality of the data concentrator	Each	R213,00
<b>Sub-Total M</b>				
<b>BILL OF ACTIVITIES</b>				
<b>ITEM</b>	<b>REFERENCE DRAWING</b>	<b>DESCRIPTION</b>	<b>UNIT</b>	
<b>N</b>	<b>Service Conductor Installation:</b>			
	<b>Accessories for Service Conductor installation shall include installation of pigtails, bolts, strain clamps, threaded rod, cable saddles, stringing of all types of service cable. Installation of poles and its accessories are measured elsewhere</b>			
1	<a href="#">D-DT-3140</a>	6mm sq Tinned Copper Airdac with Communication Core	m	R2,16
3	<a href="#">D-DT-0384</a>	Kicker Pole Dressing	Each	R27,71
4	<a href="#">D-DT-0384</a>	Shack Pole Dressing	Each	R27,71
5	<a href="#">D-DT-3128</a>	16mm sq Underground	m	R6,52
6	366	Service suspension assembly	Each	R24,75
7	384	Service strain assembly/arrangement	Each	R49,50
<b>Sub-Total N</b>				

**The Provision of Electrification MV and LV infrastructure and Households Connections within Mpumalanga Province - LimLanga Cluster**

BILL OF ACTIVITIES				
<b>0</b>	<b>Underground Cable Installation:</b>			
	Installation of underground cable include trenching for excavation in general trench, rail/road crossing or along the road, directional drilling & excavation for end pits, backfilling of trench, supply of accessories includes appropriate sleeves, supply & compaction of imported bedding and blanket soil, laying of warning tape and installation of cable route markers. Laying of cable shall be in accordance with Eskom standard of laying cables. After the execution of the works, reinstatement on gardens, pavements, driveways and tarred surfaces shall be measured here			
<b>1</b>	<b>Trenching</b>			
1.1	<a href="#">D-DT-0854</a>	Excavation - General Trench - 1.0m Deep and 0.45m Wide	m <sup>3</sup>	R149,22
1.2	<a href="#">D-DT-0854</a>	Excavation - Rail/Road Crossing Trench - 1.6m Deep and 0.45m Wide	m <sup>3</sup>	R149,22
1.3	<a href="#">D-DT-0854</a>	Excavation - Along The Road Trench - 1.3m Deep and 0.45m Wide	m <sup>3</sup>	R149,22
1.4	-	Install Barricading	m	R41,79
1.5	-	Install Shoring	m	R227,64
1.6	<a href="#">D-DT-0854</a>	Compact Blanket Soil	m <sup>2</sup>	R121,76
1.7	<a href="#">D-DT-0854</a>	Sifted Soil - 0.25m High and 0.45m Wide	m <sup>3</sup>	R121,76
1.8		Dispose of unused Excavated Material at approved disposal site	m <sup>3</sup>	R247,88
1.9	<a href="#">D-DT-0854</a>	Imported Soil - 0.25m High and 0.45m Wide	m <sup>3</sup>	R387,96
<b>2</b>	<b>Road &amp; Rail Crossing</b>			
2.1		Directional Drilling <b>(Supply Invoice + 5 %)</b>	m	R0,00
2.2		Excavate Start and End Pits	m <sup>3</sup>	R149,22
2.3		Supply and Install appropriate sleeve	Each	R325,37
2.4		Rail, river and Road -pipe jacking method including access holes, shoring as well as handling of equipment- (outsourced) <b>Supply Invoice + 5 %</b>	m	R0,00
<b>3</b>	<b>Road crossing trench import of backfill material and compaction</b>			
3.1	D-DT0854	Application of tar according to municipal standard - <b>Supply Invoice + 5 %</b>	m <sup>2</sup>	R0,00
3.2		Bedding soil for cable	m	R13,37
3.3		Blanket soil for cable	m <sup>3</sup>	R13,37
3.4		G5 filling for cable	m <sup>3</sup>	R17,83

**The Provision of Electrification MV and LV infrastructure and Households Connections within Mpumalanga Province - LimLanga Cluster**

<b>4 Compacting Bedding Soil</b>				
4.1	D-DT-0854	Sifted Soil - 0.15m High and 0.45m Wide	m2	R121,76
4.2	<a href="#">D-DT-0854</a>	Imported Soil - 0.15m High and 0.45m Wide	m2	R352,15
<b>5 Laying of Cable</b>				
5.1	<a href="#">D-DT-0854</a>	Laying of 3-Core 50mm sq. MV Cable	m	R17,91
5.2	<a href="#">D-DT-0854</a>	Laying of 3-Core 95mm sq. MV Cable	m	R40,47
5.3	<a href="#">D-DT-0854</a>	Laying of 3-Core 185mm sq. MV Cable	m	R65,76
5.4	<a href="#">D-DT-0854</a>	Laying of 3-Core 300mm sq. MV Cable	m	R121,41
5.5	<a href="#">D-DT-0854</a>	Laying of 4-Core 16mm sq. LV Cable	m	R17,91
5.6	<a href="#">D-DT-0854</a>	Laying of 4-Core 25mm sq. LV Cable	m	R17,91
5.7	<a href="#">D-DT-0854</a>	Laying of 4-Core 35mm sq. LV Cable	m	R17,91
5.8	<a href="#">D-DT-0854</a>	Laying of 4-Core 50mm sq. LV Cable	m	R17,91
5.9	<a href="#">D-DT-0854</a>	Laying of 4-Core 70mm sq. LV Cable	m	R35,41
5.10	<a href="#">D-DT-0854</a>	Laying of 4-Core 120mm sq. LV Cable	m	R58,68
5.11	<a href="#">D-DT-0854</a>	Laying of 4-Core 185mm sq. LV Cable	m	R65,76
5.12	<a href="#">D-DT-0854</a>	Laying of 4-Core 240mm sq. LV Cable	m	R121,41
<b>6 Compacting Blanket Soil</b>				
6.1	<a href="#">D-DT-0854</a>	Sifted Soil - 0.25m High and 0.45m Wide	m2	R121,76
6.2	<a href="#">D-DT-0854</a>	Imported Soil - 0.25m High and 0.45m Wide	m2	R352,15
<b>7 Backfilling of the Cable Trench</b>				
7.1	<a href="#">D-DT-0854</a>	General Trench - 0.6m High and 0.45m Wide	m <sup>3</sup>	R121,76
7.2	<a href="#">D-DT-0854</a>	Rail/Road Crossing Trench - 1.2m High and 0.45m Wide	m <sup>3</sup>	R121,76
7.3	<a href="#">D-DT-0854</a>	Along The Road Trench - 0.9m High and 0.45m Wide	m <sup>3</sup>	R121,76
7.4	<a href="#">D-DT-0854</a>	Laying of Warning Tape	m	R2,78
7.5	<a href="#">D-DT-8012</a>	Installation of Cable Route Markers	Each	R143,24
7.6		Re-instatement of Gardens	m <sup>2</sup>	R228,14
7.7		Re-instatement of Pavements	m <sup>2</sup>	R274,62

**The Provision of Electrification MV and LV infrastructure and Households Connections within Mpumalanga Province - LimLanga Cluster**

7.8		Re-instatement of Driveways	m <sup>2</sup>	R1 748,80
7.9		Re-instatement of Tarred surfaces	m <sup>2</sup>	R781,89
<b>Sub-Total O</b>				
<b>BILL OF ACTIVITIES</b>				
ITEM	REFERENCE DRAWING	DESCRIPTION	UNIT	
<b>P</b>	<b>MV/LV CABLE TERMINATION</b>			
	Termination of cable shall be done in accordance with Eskom standard of terminating cables for the termination onto air-filled cable, termination onto overhead line cable in their deferent classifications. Termination material are free issue, unless otherwise ordered and/or specified by the Project Manger to supply all accessories on an as and when required basis as cost plus fee.			
<b>1</b>	<b>LV Cable Termination onto Air-Filled Cable Termination Enclosure</b>			
1.1		Install 2-Core 16mm sq. LV Bare Termination	Each	R1 265,35
1.2		Install 4-Core 16mm sq. LV Bare Termination	Each	R1 265,35
1.3		Install 4-Core 25mm sq. LV Bare Termination	Each	R1 265,35
1.4		Install 4-Core 35mm sq. LV Bare Termination	Each	R1 265,35
1.5		Install 4-Core 50mm sq. LV Bare Termination	Each	R1 265,35
1.6		Install 4-Core 70mm sq. LV Bare Termination	Each	R1 265,35
1.7		Install 4-Core 120mm sq. LV Bare Termination	Each	R1 265,35
1.8		Install 4-Core 185mm sq. LV Bare Termination	Each	R1 265,35
1.9		Install 4-Core 240mm sq. LV Bare Termination	Each	R1 265,35
1.10		Install 3-Core 50mm sq. Shrouded Termination	Each	R1 265,35
<b>2</b>	<b>MV Cable Termination onto Air-Filled Cable Termination Enclosure</b>			<b>R0,00</b>
2.1	<a href="#">D-DT-8011</a>	Install 3-Core 50mm sq. Shrouded Termination	Each	R1 265,35
2.2	<a href="#">D-DT-8006</a>	Install 3-Core 50mm sq. Unscreened Separable Connector Termination	Each	R1 611,53
2.3	<a href="#">D-DT-8006</a>	Install 3-Core 50mm sq. Unscreened Separable Connector Extended Screen Termination	Each	R1 611,53
2.4	<a href="#">D-DT-8006</a>	Install 3-Core 50mm sq. Screened Separable Connector Termination	Each	R1 611,53
2.5	<a href="#">D-DT-8011</a>	Install 3-Core 95mm sq. Shrouded Termination	Each	R1 265,35
2.6	<a href="#">D-DT-8006</a>	Install 3-Core 95mm sq. Unscreened Separable Connector Termination	Each	R1 611,53
2.7	<a href="#">D-DT-8006</a>	Install 3-Core 95mm sq. Unscreened Separable Connector Extended Screen Termination	Each	R1 611,53

**The Provision of Electrification MV and LV infrastructure and Households Connections within Mpumalanga Province - LimLanga Cluster**

2.8	<a href="#">D-DT-8006</a>	Install 3-Core 95mm sq. Screened Separable Connector Termination	Each	R1 611,53
2.9	<a href="#">D-DT-8011</a>	Install 3-Core 185mm sq. Shrouded Termination	Each	R1 265,35
2.10	<a href="#">D-DT-8006</a>	Install 3-Core 185mm sq. Unscreened Separable Connector Termination	Each	R1 611,53
2.11	<a href="#">D-DT-8006</a>	Install 3-Core 185mm sq. Unscreened Separable Connector Extended Screen Termination	Each	R1 611,53
2.12	<a href="#">D-DT-8006</a>	Install 3-Core 185mm sq. Screened Separable Connector Termination	Each	R1 760,74
2.13	<a href="#">D-DT-8011</a>	Install 3-Core 300mm sq. Shrouded Termination	Each	R1 265,35
2.14	<a href="#">D-DT-8006</a>	Install 3-Core 300mm sq. Unscreened Separable Connector Termination	Each	R1 611,53
2.15	<a href="#">D-DT-8006</a>	Install 3-Core 300mm sq. Unscreened Separable Connector Extended Screen Termination	Each	R1 611,53
2.16	<a href="#">D-DT-8006</a>	Install 3-Core 300mm sq. Screened Separable Connector Termination	Each	R1 760,74
<b>3</b>	<b>MV Cable Termination onto Overhead Line from Substation</b>			<b>R0,00</b>
3.1	<a href="#">D-DT-0850</a>	Install 50mm sq O/D Termination	Each	R903,41
3.2	<a href="#">D-DT-0851</a>	Install 50mm sq O/D Termination	Each	R903,41
3.3	<a href="#">D-DT-0850</a>	Install 95mm sq O/D Termination	Each	R903,41
3.4	<a href="#">D-DT-0851</a>	Install 95mm sq O/D Termination	Each	R903,41
3.5	<a href="#">D-DT-0850</a>	Install 185mm sq O/D Termination	Each	R903,41
3.6	<a href="#">D-DT-0851</a>	Install 185mm sq O/D Termination	Each	R903,41
3.7	<a href="#">D-DT-0850</a>	Install 300mm sq O/D Termination	Each	R903,41
3.8	<a href="#">D-DT-0851</a>	Install 300mm sq O/D Termination	Each	R903,41
3.9	<a href="#">D-DT-1850</a>	Install Equipment Links - 3-Phase	Each	R903,41
3.10	<a href="#">D-DT-0261</a>	Install Surge Arresters - 3-Phase	Each	R348,76
3.11	<a href="#">D-DT-8023</a>	Install a Steel Pipe	Each	R298,42
<b>Sub-Total P</b>				

**The Provision of Electrification MV and LV infrastructure and Households Connections within Mpumalanga Province - LimLanga Cluster**

BILL OF ACTIVITIES				
ITEM	REFERENCE DRAWING	DESCRIPTION	UNIT	
Q	<b>CABLE JOINT</b>			
	<p><b>Cable joint bay shall be executed in accordance with Eskom standard of jointing cables in their different classifications. Joint bay materials including kits are free issue, unless otherwise ordered and/or specified by the Project Manger to supply all accessories on an as and when required basis and paid as cost plus fee. Excavations, compaction and backfilling of cable joints bay shall be measured here including supply of imported soil in bedding and blankets or sifted soil where specified.</b></p>			
1.1	<a href="#">D-DT-0854</a>	Excavate a Joint Bay	m <sup>3</sup>	R149,22
1.2	<a href="#">D-DT-0854</a>	Compact Bedding Soil	m <sup>2</sup>	R121,76
1.3	<a href="#">D-DT-0854</a>	Sifted Soil - 0.15m High and 0.45m Wide	m <sup>3</sup>	R121,76
1.4		Dispose of Excavated Material at approved disposal site	m <sup>3</sup>	R247,88
1.5	<a href="#">D-DT-0854</a>	Imported Soil -0.15m High and 0.45m Wide	m <sup>3</sup>	R352,15
1.6	<a href="#">D-DT-8008</a>	Make-Off a Cable Joint - 3-Core 16mm sq MV Cable	Each	R93,28
1.7	D-DT-8008	Make-Off a Cable Joint - 3-Core 50mm sq MV Cable	Each	R93,28
1.8	D-DT-8008	Make-Off a Cable Joint - 3-Core 95mm sq MV Cable	Each	R93,28
1.9	<a href="#">D-DT-8008</a>	Make-Off a Cable Joint - 3-Core 185mm sq MV Cable	Each	R93,28
1.10	<a href="#">D-DT-8008</a>	Make-Off a Cable Joint - 3-Core 300mm sq MV Cable	Each	R93,28
1.11	<a href="#">D-DT-8014</a>	Make-Off a Cable Joint - 4-Core 16mm sq LV Cable	Each	R93,28
1.12	<a href="#">D-DT-8014</a>	Make-Off a Cable Joint - 4-Core 25mm sq LV Cable	Each	R93,28
1.13	<a href="#">D-DT-8014</a>	Make-Off a Cable Joint - 4-Core 35mm sq LV Cable	Each	R93,28
1.14	<a href="#">D-DT-8014</a>	Make-Off a Cable Joint - 4-Core 50mm sq LV Cable	Each	R93,28
1.15	<a href="#">D-DT-8014</a>	Make-Off a Cable Joint - 4-Core 70mm sq LV Cable	Each	R93,28
1.16	<a href="#">D-DT-8014</a>	Make-Off a Cable Joint - 4-Core 120mm sq LV Cable	Each	R93,28
1.17	<a href="#">D-DT-8014</a>	Make-Off a Cable Joint - 4-Core 185mm sq LV Cable	Each	R93,28
1.18	<a href="#">D-DT-8014</a>	Make-Off a Cable Joint - 4-Core 240mm sq LV Cable	Each	R93,28
1.19	<a href="#">D-DT-0854</a>	Backfill a Joint Bay	m <sup>3</sup>	R121,76
1.20	<a href="#">D-DT-8012</a>	Install a Route Marker	Each	R143,24
<b>Sub-Total Q</b>				

**The Provision of Electrification MV and LV infrastructure and Households Connections within Mpumalanga Province - LimLanga Cluster**

BILL OF ACTIVITIES				
ITEM	REFERENCE DRAWING	DESCRIPTION	UNIT	
R	<b>EQUIPMENT DISMANTLING</b>			
	<b>Includes Cut Up, Coiling And Loading But Excludes Transport To The Nearest Eskom Stores</b>			
1.1		Dismantle LV Conductor	m	R4,77
1.2		Dismantle MV Conductor	m	R4,77
1.3		Dismantle Service Cable	m	R3,18
1.4		Dismantle MV Overhead Transformers	Each	R417,80
1.5		Dismantle MV Overhead Sectionaliser	Each	R417,80
1.6		Dismantle MV Overhead Reclosers	Each	R417,80
1.7		Dismantle MV Pole CT-VT Unit	Each	R417,80
1.8		Dismantle MV Pole Shunt Capacitor Banks	Each	R417,80
1.9		Dismantle MV Line Arrestor	Each	R402,35
1.10		Dismantle MV Overhead Section / Equipment Links	Each	R402,35
1.11		Remove LV Pole Top Boxes	Each	R359,82
1.12		Dismantle Stays	Each	R264,18
1.13		Dismantle Poles	Each	R243,15
1.14		Remove MV Cable, includes excavation and backfill	m	R179,08
1.15		Remove LV Cable, includes excavation and backfill	m	R179,08
1.16		Remove MV Cable I/D Terminations	Each	R370,06
1.17		Remove MV Cable O/D Terminations	Each	R370,06
1.18		Remove RMU	Each	R2 984,31
1.19		Remove Mini sub	Each	R2 984,31
1.20		Remove Ground CT-VT Unit	Each	R1 770,21
1.21		Remove LV Kiosks	Each	R124,54
1.22		Remove Plinths	Each	R1 871,39

**The Provision of Electrification MV and LV infrastructure and Households Connections within Mpumalanga Province - LimLanga Cluster**

1.23		Transport Of Dismantled / Decommissioned To Eskom Stores	KM	R22,32
1.28		Removal of a post / pin insulator	Each	R24,75
1.30		Removal of SPU unit with rails	Each	R24,75
1.31		Removal of LPU unit ( indoor and outdoor)	No	R24,75
1.33		Moving of pre-Paid Meter (Meter Shifting)	Each	R74,25
1.39		Removal of ED / ECU	Each	R75,74
1.41		AP4 Meter Box + Pipe	Each	R113,60
1.42		Removal - complete of one Regulator can/voltage regulator	Each	R132,91
<b>2</b>		<b>BIL &amp; BONDING</b>		
2.1		Re-instate broken/damage bonding & BIL on existing structure	No	R52,11
<b>Sub-Total R</b>				
<b>BILL OF ACTIVITIES</b>				
<b>ITEM</b>	<b>REFERENCE DRAWING</b>	<b>DESCRIPTION</b>	<b>UNIT</b>	
<b>S</b>	<b>LABELLING</b>			
	<b>Allow for the following end items to be applied as per relevant Eskom Instructions/Bulletins/Procedures and Standards where not already allowed for in Structure Package</b>			
1.1		MV Pole Number	Each	R17,91
1.2		LV Pole Number	Each	R17,91
1.3		Meter Number	Each	R17,91
<b>Sub-Total S</b>				

**The Provision of Electrification MV and LV infrastructure and Households Connections within Mpumalanga Province - LimLanga Cluster**

BILL OF ACTIVITIES				
ITEM	REFERENCE DRAWING	DESCRIPTION	UNIT	
<b>T</b>	<b>EQUIPMENT TESTING</b>			
	Allowance shall be made for the complete testing and commissioning of Medium Voltage equipment. Tests to include earth electrode resistance measurement. Transformer to include a LV earth electrode resistance measurement. Soil Resistivity Tests for Equipment to be performed as appropriate and to be verified by Eskom's Clerk of Works, and must be according to Eskom Standard			
1.2		Continuity Tests	Each	R96,54
1.3		Earth Resistance Test	Each	R96,54
1.4		A.C. Over-Voltage Test	Each	R96,54
1.5		D.C. Insulation Test	Each	R96,54
1.6		Outer Sheath Test (Serving Test)	Each	R96,54
1.7		Compaction Test	Each	R96,54
1.8		C.O.C Test for Certificate	No	R252,94
1.9		Voltage Regulator commissioning test	No	R96,54
1.10		Recloser commissioning test	No	R96,54
<b>Sub-Total T</b>				
BILL OF ACTIVITIES				
ITEM	REFERENCE DRAWING	DESCRIPTION	UNIT	
<b>U</b>	<b>AS - BUILTS</b>			
	Allow for the following end items to be applied as per relevant Eskom Instructions/Bulletins/Procedures and Standards where not already allowed for in Structure Package			
1		As-built Drawings	Each	R3 541,13
<b>Sub-Total U</b>				

**The Provision of Electrification MV and LV infrastructure and Households Connections within Mpumalanga Province - LimLanga Cluster**

BILL OF ACTIVITIES				
ITEM	REFERENCE DRAWING	DESCRIPTION	UNIT	
V	<b>MISCELLANEOUS</b>			
	Allow for the following end items to be applied as per relevant Eskom instructions/bulletins/procedures and standards where not already allowed for in structure package. Note the cross arms below are applicable for existing structures only.			
1.1	3175	Damper,vibrat spiral 8.29-11.71 D3175	Each	R24,75
1.2	3175	Damper,vibrat spiral 11.72-14.30 D3175	Each	R24,75
1.3	7028	Set: Device warning-Aircraft warning 8.87-13.55;2	SET	R54,94
1.4	7028	Set: Device warning -Aircraft warning 7.35-14.16;2	SET	R54,94
1.5	7028	Set: Device warning-Aircraft warning 18.13-23.88;2	SET	R54,94
<b>Sub-Total V</b>				
BILL OF ACTIVITIES				
ITEM	REFERENCE DRAWING	DESCRIPTION	UNIT	
W	<b>TRANSPORT</b>			
	Unless otherwise specified, transport is to be used under specific instruction from the Project Manager only. This excludes staff transport. Staff transport is to be paid to transport workers from base location to site only. LDV/4x4 will only be paid for justifiable use and will be to the sole discretion of the Project Manager. All construction vehicles to be fitted with kilometre tracking device to support kilometres claimed.			
1.1		LDV 4x2	km	R6,09
1.2		LDV/4x4	km	R6,09
1.3		Personnel Transport for Staff	km	R8,34
1.4		10 m³ Tipper Truck	km	R32,07
1.5		6 m³ Tipper Truck	km	R28,50
1.6		Transport Truck 2-4 ton	km	R9,19
1.7		Transport Truck 5-8 ton	km	R12,74
1.8		Transport Truck 5-8 ton with crane	km	R18,03
1.9		Transport Truck 9-14 ton	km	R23,43
1.10		Transport Truck 9-14 ton with crane	km	R34,93
<b>Sub-Total W</b>				

**The Provision of Electrification MV and LV infrastructure and Households Connections within Mpumalanga Province - LimLanga Cluster**

BILL OF ACTIVITIES				
ITEM	REFERENCE DRAWING	DESCRIPTION	UNIT	
X	LABOUR ONLY			
This schedule is used to assist with the valuation of Compensation Events				
1.1		Electrician (qualified trade test)-skilled	hour	R127,35
1.2		Linesman (Proof of qualification required)-semi skilled	hour	R74,21
1.3		Cable Jointer-skilled	hour	R127,35
1.4		Storeman	hour	R42,71
1.5		Semi-skilled Labour (Proof of qualification required)	hour	R74,20
1.6		Unskilled Labour-no formal NQF qualification	hour	R26,07
<b>Sub-Total X</b>				
BILL OF ACTIVITIES				
ITEM	REFERENCE DRAWING	DESCRIPTION	UNIT	LABOUR RATE
Y	OTHER LABOUR DESIGN ITEMS NOT FOUND IN THE BoQ			
This schedule is used to give price offer for all other items necessitated by the design but not found in all sections above.				
1.1				
1.2				
1.3				
1.4				
1.5				
1.6				
1.7				
1.8				
1.9				
1.1				
<b>Sub-Total Y</b>				

**ACCEPTED BY CONTRACTOR:**

.....  
PRINT NAME

.....  
SIGNATURE

.....  
DATE

**The Provision of Electrification MV and LV infrastructure and Households Connections within Mpumalanga Province - LimLanga Cluster**

**PART 3: SCOPE OF WORK**

Document reference	Title	No of pages
C3.1	This cover page <i>Employer's Works Information</i>	1 26
	Total number of pages	27

## **The Provision of Electrification MV and LV infrastructure and Households Connections within Mpumalanga Province - LimLanga Cluster**

### **C3.1: EMPLOYER'S WORKS INFORMATION**

#### **1. SCOPE OF WORK**

The provision of electrical infrastructure for electrification projects in Mpumalanga in the Distribution business.

##### **Executive overview**

The purpose of this contract is to facilitate the construction of all electrification work in the Mpumalanga in the Distribution Business.

All work shall be carried out to the specified requirements, standards and quality as set out by Eskom while observing and complying to all safety and environmental requirements at the agreed negotiated rates. All project specifications will be included in the relevant Project Specific Agreement for each project. Eskom reserves the right not to appoint any work to a Contractor based on poor performance of the Contractor.

##### **Establishment of the site includes:**

**NOTE:** The contract shall establish site as per the Preliminaries and General guidelines

#### **3.1 HOUSEHOLDS:**

##### **3.1.1 Overhead Support and Excavations:**

- Excavate backfill and compact as per Eskom Standard and import backfill soil where required as per Eskom Standard for holes and trenches for poles, stays, struts, flying stays and earth electrodes.
- Planting of structure, flying stay and strut poles are included in this section. Poles are Eskom free issue material. Pole top diameter ranges from 140mm to 220mm.
- Supply and install stays, flying stays, struts including accessories. Accessories include stay wire, stay rods; stay plates, soil anchors, stay insulators, guy grips stay brackets, hardware, anti-climbing devices, stay guards and danger labels.
- Take delivery and store Eskom free supply materials safely (poles, x-arms).
- Transport and deliver Eskom free supply materials from Eskom Stores to the Site Camp, and vice versa (poles, x-arms).
- Supply strut pole brackets.
- Blasting and drilling of rock holes (to be paid on verification of the Clerk of Works).

##### **3.1.2 MV overhead system**

- Install Eskom issued marked conductor. Material quantity to allow for 5% sag in addition to actual conductor length quantity. Installation includes handling, stringing and final sagging.
- Take delivery and safely store Eskom free issue material (conductor).
- Transport and deliver conductor from Eskom Stores to the Site Camp, and vice versa.

## **The Provision of Electrification MV and LV infrastructure and Households Connections within Mpumalanga Province - LimLanga Cluster**

### **3.1.3 MV equipment**

- Install transformer / recloser / voltage regulator and MV metering units as per relevant Eskom DDT 1800 series assembly drawing and DX OUs, SI Engineering instructions. All auxiliary equipment to include station and Distribution MV, LV surge arrestors, control boxes, metering kiosks, jumper terminations, anti-climbing devices, LDPE pipe covered jumpers as per 02TB-023 and danger labels, channel irons, cradles, stand-off insulators, conductor bus bars and suitable equipment labels. Transformers / reclosers / voltage regulators and MV metering units will be Eskom free issue material.
- Supply and install MV isolators according to Eskom DDT 1800 series, where applicable. Accessories to include solid inserts, expulsion type fuses, jumper terminations, hardware, LDPE pipe covered jumpers as per 02TB-023. Disconnectors to be supplied with suitable labels. Phase-phase isolators to only have one covered jumper. The jumper support insulator is excluded and if required, it may be selected as miscellaneous item. Cross arms are included.
- All relevant earthing shall be included as per relevant Eskom DDT 1800 series, DDT 0600 and DDT 0200 series assembly drawing and OU specific SI Engineering instructions.
- Allowance shall be made for the complete testing and commissioning of Medium Voltage equipment. Tests to include earth electrode resistance measurement. Transformer to include LV earth electrode resistance measurement.
- Take delivery and safely store Eskom free issue materials (transformers, reclosers, VR's and MV Metering units, control boxes and earthing kits).
- Transport and deliver from Eskom Stores to the Site Camp, and vice versa.

### **3.1.4 MV cable work, trenching, installation and removal**

- Take delivery of and safely store on site miniature substations, ring main units, MV cable and pre-cast plinths as supplied as free issue from Eskom. Transport to site and install as per Eskom DT Standards. All civil work to be included.
- Install as per Eskom Standard and DDT 0854.XPLE Insulated Type A3 core cable 300mm and 185mm sq. stranded copper, PVC bedding, galvanized steel wire. Allowance is made for crossing the road, plantations, 2m slack on both sides and 9m up the MV pole.
- Allow for railway, road and driveway crossings as indicated below. Included are cutting and/or removal of hardened surfaces, excavations to required depth, 160NBx3.2mm wall thickness PVC pipes (number of per crossing as indicated on drawing), backfilling and reinstatement of hardened surfaces to, at least, as good a condition as before removal.
- Supply and install all materials for the complete earthing of transformer structures for ABC networks as specified. Included in the rate shall be all required spikes, insulated copper conductor, galvanized conducts, staples, bare copper, excavations, backfilling, etc. The rate shall allow for one MV earth electrode only, consisting of four earth spikes, in accordance with the specifications.

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### **3.1.5 LV overhead system**

- Install Eskom issued specified conductor. Material quantity to allow 5% sag in addition to actual conductor length quantity. Installation includes handling, stringing and final sagging. Supply and erect LV support structures as per Eskom DDT 1100 (only use insulated neutral ABC). Auxiliary equipment such as strain clamps, suspension clamps, cable ties, IPC's, end caps, LV shackle insulators, binding wires, D brackets, dead-end preforms, threaded rods, pigtail bolts, eye nuts, terminations to be included. Pole, stay and strut material and excavations are measured elsewhere. Supply and install LV fuse units as per Eskom DDT 0300 series assembly drawings. Accessories inclusive of the fuse bracket and hardware fuse holders and appropriate labels. The LV NH00 fuse rating shall be as per the design.
- "Allow for the following end items to be applied as per relevant Eskom instructions / bulletins / procedures and standards where not already allowed for in structure package".

### **3.1.6 House service connections (infills)**

- House connections (Type A and Type B). Accessories include house labels, pigtail bolts, strain clamps, cable saddles, passive base / ready board hardware, threaded rods. Meters, Customer Interface Units, ready boards, service cable, poles and excavations are measured elsewhere.
- Install Customer Interface Units, ECU's, ready boards, passive base units. Accessories include hardware. Allow for suitable sealing and testing of meters for COC, OHS Act and Eskom requirements. Eskom meters and CUI's are free issue.
- Install Eskom issued Eskom marked conductor. Material quantity to allow for 5% sag addition to actual conductor length quantity. Installation includes handling, stringing and final sagging. The quantity shall be conductor length.
- Completing of PCS file for uploading of connections to be done immediately after energisation and registering of all connected customers on the Eskom SOC Limited customer management system within 7 days after energisation under dead or live conditions.
- Abridged certificate of compliance or installation of certificate to be completed by a competent resource and to be submitted within 7 days after energization.

### **3.1.7 LV cable work, trenching, installation, and removal**

- Take delivery of and safely store on LV cables on site as supplied as free issue from Eskom. Transport to site and install as per Eskom DT Standards and DDT 0854.
- Take delivery of and safely store LV cables on site as supplied as free issue from Eskom.
- Supply and install joint kits for jointing of LV PVC / SWA / PVC cables as per Eskom DT Standards.
- Allow for LV cable trenching as indicated on the drawings. Excavation and levelling of cable trenches as per Eskom DT Standards and DDT 0854. Any services (e.g., other cables, water pipes, etc.) damaged by the Contractor shall be made good by him at his own. Crossings and trench backfilling measured elsewhere.
- Allow for the complete testing and commissioning of the LV underground system, include earth readings, feeder continuity tests, phasing, etc. Included are the test certificates and all documentation required to hand-over the system.

### **3.1.8 Dismantling**

- Dismantle MV line (and cables, if any) including all accessories and auxiliary equipment.
- Dismantle LV line (and cables, if any) including all accessories and auxiliary equipment.
- All leftover assets and scrap materials to be returned to Eskom RDC (using IM104 Process).
- Contractor to sign the handover certificate on completion of the project.
- All tests done during construction are to be handed over to the COW before outage day / project completion.

### **3.1.9 Underground cable installation**

- Trenching
- Pulling
- Laying

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- Jointing
- Termination
- Backfilling

### **3.1.10 General**

- Provision and usage of PPE at all times including casual employees.
- Transportation of Contractor staff to site and from site as per Eskom Standard.
- Provide security services in line with the Eskom requirements and criteria.

### **3.1.11 Metering**

- Install the split meters which include Customer Interface Unit (CIU), Prepayment Meters, Meter, Split 20AWS Prepayment Meters and Meter, Split DIN RAIL 20A WS and Meter, Split DIN Rail 20APLC as per D-DT 3145.
- Install the Box Distribution: Pole Top Split Meter i.e., 8-way 20A, 6-way 20A, 4-way 20A and 2-way 20A in accordance with D-DT 3055
- Install the advance metering infrastructure (AMI) with all accessories equipment which include Customer interface Unit AMI (CIU), Data concentrator, AMI GPRS MODEM In accordance with D-DT 9421.

### **3.2 Additional information**

Domestic electrical installation work in respect of dwellings within the supply area of the Employer. The Contractor shall install electrical equipment necessary to give supply of electricity to the Employer's Customer. The Contractor must respond within 7 days after been notified by the Project-Coordinator to perform the work that was allocated to him under sub-contracting. The Contractor must ensure that he obtains authorization from the area superintendent in the relevant area before proceeding to work on the LV line. The of connections to be performed by the Contractor will be in excess of ten at a time. The Contractor shall be responsible for the provision of Equipment and Labour necessary to perform the work. The Contractor shall collect, and transport materials supplied by Eskom from Eskom store to site. The Contractor shall supply all other materials required to perform the work according to Eskom Distribution Standard. The aforementioned include the supply of raw bolts, threaded rods, square washers, nuts etc. as far as possible. In order that the Project-Coordinator may assess the due at each assessment date, the Contractor must submit a claim at least one week prior to the assessment date, detailing the work done and claimed for, i.e., the description and the rand value of each activity completed must be highlighted. The format shall be progressive i.e., the claim shall be for the total work done to date less than any payment already made in respect of the said work. The rates as on the price list cater for safety and security which the contractor should supply during construction.

### **Employer's objectives and purposes of the work**

The Eskom Project Manager will contact the allocated Contractor and issue the Contractor with the design package for the project to be executed. A Project Specific Agreement will be issued which will detail all the project specific requirements for execution of the project. The Project Specific Agreement issued will form the basis of the agreement between Eskom and the Contractor for each project to be executed in terms of this contract.

The terms and conditions contained in the Project Specific Agreement will be in accordance with the terms and conditions of this contract but specific to the requirements of the project to be executed.

The allocated Contractor will do a site visit with the Eskom project representatives and verify the scope of work to be executed contained in the design package, assess the Site conditions, the Project Specific SHEQ requirements and SD&L requirements before the quotation for the works is finalised. The Project Manager will then request a quotation from the Contractor for the execution of the works as verified. The quotation must be submitted to the Project Manager by the Contractor within 5 days. The Project Manager will request

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the Quantity Surveyor to verify the quotation for correctness and confirm the cost according to the agreed negotiated rates.

Should the quotation require adjustment, the Project Manager will request the allocated Contractor to amend the quotation. Once the quotation has been accepted by Eskom, the Project Manager will issue upon the approval of the task order committee (TOC) the allocated Contractor with Project Specific Agreement. The Project Specific Agreement will then be signed off by the Project Manager and the Contractor and work may then commence on the project.

No work may commence on a project unless the Task Order / Project Specific Agreement has been issued and signed, the Contractor Safety File has been approved by Eskom, the 37(2) agreements has been signed and Site Access has been granted to the allocated Contractor. Eskom will not be liable to pay for any work unless a valid Project Specific Agreement has been issued.

The Contractor is to submit the Project Specific Safety File within seven days upon being requested to do so by the Project Manager for approval by Eskom. The Safety File is to conform to all Eskom and OHS requirements. Should there be a need to rectify the safety file an additional opportunity will be granted to conform to the recommendations made by the Eskom SHE representative and must be resubmitted within seven days for approval. Should the Project Specific Safety File fail upon resubmission the works will be allocated to another Contractor?

The Contractor will compile a Risk Register as per the terms and conditions of the ECC for discussion at regular Risk Reduction Meetings or as per agreement with the Project Manager.

It is expected from the Contractor to do the whole of the work as per timeframe set in the Task Order, Project Specific Agreement, and agreed Program of the Works.

The Contractor will be responsible for the collection and transporting of all necessary material from any and/or all Eskom warehouses and delivery of the material to site as well as return any material to Eskom stores from the site upon instruction from the Project Manager. Payments will be made based on the distance from the site to the relevant Eskom store and back to site.

Minimum recommended working hours to be observed site are from 07h30 to 16h00 and these hours constitute normal working hours in terms of this contract.

The contractor is to ensure that all required documentation prescribed by Law is kept on file at the site office. All OHS and Construction Regulation requirements are to be adhered to by the Contractor.

The Contractor will also ensure that all plant and equipment dedicated to the project will not be removed from site until there is no use for the intended plant and equipment. No moving of plant and equipment between projects will be allowed as it will have impact on completion of the project and lead to delays in completion.

The Contractor is to ensure that all Site Managers are competent and trained in the use of the ECC and are fully conversant and familiar with the usage and procedures thereof. Adherence to the terms and conditions of the ECC are essential and a requirement of all Contractor Site Managers dedicated to each project as per the Construction Regulations.

Payment Assessments will only be done for work done to date. No material on site will be paid for. Records of defined costs are to be kept on file on site whereby the *Project Manager* always has access to this file.1.3 Interpretation and terminology

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### 1.3.1 Abbreviations

The following abbreviations are used in the Works Information:

BBBEE	Broad Based Black Economic Empowerment
CIDB	Construction Industrial Development Board
CQP	Contract Quality Plan
ECC	Engineering Construction Contract
EMP	Environmental Management Plan
EPWP	Expanded Public Works Programme
ITP	Inspection and Test Plan
OHS	Occupational Health and Safety
PM	Project Manager
PPPFA	Procurement Preferential Policy Framework Act
QCP	Quality Control Plan
QS	Quantity Surveyor
SDL&I	Supplier Development Localisation and Industrialisation
SHE	Safety Health and Environment
SHEQ	Safety Health and Environment Quality
TBA	To be announced
TOC	Task Order Committee

### 1.3.2 Acceptance of Eskom SHEQ Policies and Procedures

The attached documents form part of this legal binding contract, the *Contractor* confirms that he has familiarized himself with all the embedded documents from 1 to 26 as indicated

<u>NO</u>	<u>UNIQUE IDENTIFIER</u>	<u>REVISIO</u>	<u>DOCUMENT TITLE</u>
1	32 - 727	0	<b>SAFETY, HEALTH, ENVIRONMENT AND QUALITY (SHEQ) POLICY 32-727</b>   FINAL ESKOM SHEQ POLICY - 32-727 pro Eskom's (SHEQ) Policy poster 32-727
2	32 - 136	0	<b>CONSTRUCTION SAFETY HEALTH AND ENVIRONMENTAL MANAGEMENT</b>  2_Construction Safety Health and En
3	32-524	0	<b>DEVELOPING A SAFETY, HEALTH AND ENVIRONMENTAL SPECIFICATION</b>  3_Developing a Safety, Health and En
4	34 - 333	1	<b>HEALTH AND SAFETY REQUIREMENTS TO BE MET BY PRINCIPAL</b>

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			<b>CONTRACTORS EMPLOYED BY ESKOM DISTRIBUTION 34-333</b>  4_Health and Safety Requirements to be n
5	ESKOM LIFE SAVING RULES	1	<b>ESKOM LIFE SAVING RULES 240-62196227</b>  Eskom life-saving rules.pdf
6	CONSTRUCTION REG 3		<b>NOTIFICATION OF CONSTRUCTION WORK TO DEPARTMENT OF LABOUR</b>  6_Notification of Construction Work to
7	CONSTRUCTION REG 4 & 5		<b>APPOINTMENT LETTERS FOR CLIENT REPRESENTATIVE, PRINCIPAL CONTRACTOR &amp; CONTRACTOR</b>  7_Appointment letters for Client repr
8 & 9	OHS ACT	1	<b>WRITTEN AGREEMENT ON OHS ACT SECTION 37(2) &amp; STANDARD CLAUSE</b>  37 2 Jan 2014.doc
10, 11 & 12	34 - 1063	0	<b>EXPANDED PUBLIC WORKS REPORT 34-1063.</b>    10_34-1063 EPWP Works Instruction.pdf 11_EPWP Guidelines Second edition 2005. Eskom EPWP report template rev 7.xlsx
13	<u>DST 34-961</u>	0	<b>LEGAL APPOINTMENTS AND AUTHORIZATIONS</b>  13_Legal Appointments and Au
14	TPC 41-55		<b>TRANSPORTING PERSONS ON BACK OF VEHICLES</b>  14_Transporting of Passengers on the ba
15	LTIR	MASTE R	<b>LOST TIME INJURY REPORT</b>  LTIR Master.xls
16	1. Contractor Performance Evaluation	MASTE R	 Single Evaluator Template for Contrac

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17	2. Supplier Contract Quality Requirements	MASTE R	 QM-58 Supplier Contract Quality Req
18	3. Hard Specifications 01/12/ Hat OHS	MASTE R	 OHS 01 12 Hard Hat Specifications.pdf
19	4. Identifying, Analysing, Documenting and Observing Tasks according to Criticality.	REV 1	 DPC_34-380.pdf
20	5. Health & Safety Representatives inspection reports and guidelines	REV 1	 DPC_34-228Health_Safety_REp.pdf
21	6. Work at Heights Procedure	REV 1	 32-418 Work at Height Procedure.pdf
22	7. SHE Requirements for the Eskom Commercial Process	REV 1	 32-726 SHE Requirements for the
23	8. Vehicle Safety	REV 0	 Vehicle Safety 32 345.pdf
24	9. 32-95 Environmental Occupational Health and Safety Incident Management Procedure	REV 5	 32-95 Environmental Occupational Health a
25	10. Risk Audit System Template	REV 0	 Audit Input Form Contractor RM 29 Sep
26	11. Project Material Management	REV 3	 240-96742100 Project Material Managemen

**Acknowledgement by Contractor**

I/WE, ..... DO HEREBY ACKNOWLEDGE HAVING READ AND UNDERSTOOD THE ABOVE ANNEXED DOCUMENTS FROM 1 TO 26 IN SECTION 1.3.2 OF THIS CONTRACT.

I/WE UNDERTAKE TO STUDY AND ABIDE BY THESE REQUIREMENTS AT ALL TIME.

SIGNED AT: ..... ON THE ..... DAY OF .....20.....

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**Note:** Please return the above pages with the other tender returnable to the Eskom office that issued this enquiry after complying with the above.

### 2. Management and Start-up

#### 2.1 Management Meetings

Regular meetings of a general nature may be convened and chaired by the *Project Manager* as follows:

Title and purpose	Approximate time & interval	Location	Attendance by:
Pre-introductory meeting	Upon request of the Project Manager at an agreed date by all parties	Site	<i>PM, QS, Site Supervisor, Safety and Environmental Representatives, Contractor, and all other relevant stakeholders.</i>
Introductory meeting	After safety and environmental files have been assessed and approved.	Site	<i>PM, QS, Site Supervisor, Safety and Environmental Representatives, Contractor, and all other relevant stakeholders.</i>
Toolbox talk and risk assessment	Daily before work begins.	Site	<i>Contractor and Site Supervisor.</i>
Risk registers and compensation events	As necessary.	Site	<i>PM, Contractor, and Site Supervisor.</i>
Overall contract progress and feedback	On a regular basis as agreed with the Project Team and the Contractor	Site	<i>PM, QS, Contractor, Site Supervisor, and Safety and Environmental Representatives.</i>

Meetings of a specialist nature may be convened as specified elsewhere in this Works Information or if not so specified by persons and at times and locations to suit the Parties, the nature and the progress of the works. Records of these meetings shall be submitted to the *Project Manager* by the person convening the meeting within five days of the meeting.

All meetings shall be recorded using minutes or a register prepared and circulated by the person who convened the meeting. Such minutes or register shall not be used for the purpose of confirming actions or instructions under the contract as these shall be done separately by the person identified in the *conditions of contract* to carry out such actions or instructions.

All project instructions are to be issued by the Project Manager only, unless delegation of roles have been communicated to the Contractor in writing.

#### 2.2 Documentation Control

All correspondence is to be addressed to the *Project Manager* with a chronological numbering system.

#### 2.3 Health and Safety Risk Management

The Contractor shall control his activities and processes in accordance with the Occupational Health & Safety Act, No. 85 of 1993 and Eskom's Construction Safety, Health and Environmental Management 32-136, Safety, Health, Environment and Quality Policy, EPC32-727 and SHE Requirements for the Eskom Commercial Process, ST32-726. The *Contractor* shall comply with the health and safety requirements contained in Section 1.3.2 of this Works Information.

The Contractors Project SHEQ File is to be updated on a continuous basis. The Contractor is to ensure that all relevant documentation and authorisations are contained in the file pertaining to the project. Upon

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completion of the project, the Contractor is to convert all documentation contained in the SHEQ file into electronic format and save it as a PDF File. The file name should contain the name of the Contractor and the project. The file should then be saved onto a disk / USB or removal storage device and handed over to the Project Manager upon completion of the project.

### **LEGAL COMPLIANCE GUIDE IN COMPLIANCE TO OHSA AND CONSTRUCTION REGULATION**

The *Contractor* undertakes to take all reasonable precautions to maintain the health and safety of persons in and about the execution of the *works*. Without limitation the *Contractor*:

- accepts that the *Client (Eskom Distribution LimLanga Cluster)* may appoint him as the “Principal Contractor” (as defined and provided for under the Construction Regulations 2014 (promulgated under the Occupational Health & Safety Act 85 of 1993) (“the Construction Regulations”) for the site.
- warrants that the total of the Prices as at the Contract Date includes a sufficient amount for proper compliance with the Construction Regulations, all applicable health & safety laws and regulations and the health and safety rules, guidelines and procedures provided for in this contract and generally for the proper maintenance of health & safety in and about the execution of *works*; and undertakes, in and about the execution of the *works*, to comply with the Construction Regulations and with all applicable health & safety laws and regulations and rules, guidelines and procedures otherwise provided for under this contract and ensures that his Subcontractors, employees and others under the *Contractor’s* direction and control, likewise observe and comply with the foregoing.
- Contractors are employers and it’s expected to do the basics to entrench the culture of safety.
- The Directors or delegate should ensure the following is done in their respective sites/ companies while furthering the Eskom business: -
  - I. Ensure that you have necessary competencies, capacity, and resources to carry out the construction work safely
  - II. take reasonable steps to ensure co-operation between all contractors appointed by yourself to enable each of those contractors to comply with these Regulations.
  - III. ensure that your company is registered and in good standing with the compensation fund or with a licensed
  - IV. compensation insurer as contemplated in the Compensation for Occupational Injuries and Diseases Act, 1993 (Act No. 130 of 1993).
  - V. Ensure that all contractor key performance indicators / key performance areas as per the Distribution/ LimLanga Cluster contractor reporting dashboard in line with the financial year performance targets are met and exceeded.
  - VI. Conduct monthly and quarterly occupational health and safety meetings
  - VII. Conduct Job observations – at least 4 per Month
  - VIII. Monthly Site Visits
  - IX. Monthly housekeeping Inspections
  - X. Conduct biannually Self OHS Audits – (Distribution LimLanga Cluster Contractor Risk Audit System (RAS) Audit Template to be utilized, moreover audit records, action plan and close outs be documented)
  - XI. Incident Management and Investigations as per 32-95
  - XII. Include vehicle monitoring system as a standard requirement for all Principal Contractors employees who are required to travel.
  - XIII. Submission of the vehicle monitoring system reports and actions taken to address non-compliance monthly and on an as and when required basis.
  - XIV. Submit on a monthly required basis contractor man – hours by the last day of every month.
  - XV. All contractors who fail to comply with the above requirements and conditions, shall be issued with transgression and/ or noncompliance sanctions ranging from early warnings, work stoppages, etc. and revocation of NEC terms and conditions leading to the termination of the contract.

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**Section B-SHEQ Contractual Conditions for Electrification LimLanga Tender Requirements**

The above requirements will form part of contract conditions and tenderers will be allowed 14 working days to resubmit the outstanding contractual requirements which were not met at tender stage before task order can be issued. The SHE personnel shall evaluate the contractual requirements at execution phase before site mobilization only twice to ensure such requirements are fully met. For service providers who do not meet requirements under this category even after NOD's have been issued. NEC terms and conditions will be applied to terminate the contract.

No task will be allocated to contractors in whose registration and good standing with the compensation commissioner is not valid and in order.

Provided in the standard rates are costs of Health and Safety which cover all safety requirement and not limited to the following: -

1. Contractor's insurance.
2. Company & head office overhead costs.
3. Personal Protective Equipment
4. Plant, tools, and equipment.
5. Risk Assessment Procedure, QM, Quality Management System, Health and Safety Specification, Environmental Plan, Safety Inspections, OHS appointments, etc.
6. Environmental Compliance & Site maintenance (waste management, site habitability etc.).
7. Safety Compliance & Site maintenance (first aid, fire extinguisher, medical tests, inductions, signage etc).

The Contractor shall always ensure compliance with the Occupational Health and Safety Requirements (32-136) however not limited to the following:

<b>1</b>	<b>Personal Protective Equipment appropriate to the task to be performed shall be provided by the Principal Contractor.</b>
	Steel toe capped safety boots
	Appropriate protective clothing, Operator's Overalls
	Colour coded hardhats [Blue for labourer, Red for First Aider, Green for SHE Reps and White for Supervisors and/or Managers]
	Eye protection appropriate to task performed
	Ear Protection e.g. (Ear Plugs etc)
	Dust mask where possible
	Safety Goggles - specific to task requirements
	Gloves appropriate to the task performed.
<b>2</b>	<b>Supply and Provision for Safety and Emergency Response Equipment</b>
	First Aid Box Equipment
	Fire Fighting Equipment (Fire Extinguisher's (9kg)
	Fire and First Aid Box Symbolic Signs
	Alco Tester
	Provision of symbolic safety construction signs
<b>3</b>	<b>Human Resources</b>
	Comply with Statutory Health & Safety appointments and required competencies in terms of the <b>OHS Act and Regulations. (Costing for training should be in accordance with the required listed training as per SHE returnable Annexure C1).</b>
	Eskom Environmental Law Training

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<b>4</b>	<b>Occupational Health and Hygiene</b>
	Pre-Medical Screening per employee assigned for a particular project (Principal Contractor subject to one claim annually for 2 - 4 assigned employees ).
<b>5</b>	<b>Covid 19 Compliance (As required by Law)</b>
	Fabric/ Cloth washable masks minimum two per employee (Only where the risk assessment requires)
	Hand Sanitiser with 70% alcohol-based content
	Sanitizer/ handwasher handsfree 50-100mm deep trough

### Occupational Health & Safety Management and Supervision of Construction work

- The Contractor shall ensure compliance with the Occupational Health and Safety laws, however not limited to the following:
  - The Occupational Health and Safety Act, 1993, and all regulations made there under as per the standard clause A1, stipulated on page 4 of this contract.
  - The Construction Regulations, 2014
  - The Health and Safety Requirements of the Employer more fully set out in Eskom procedure 32-136 and the SHE specification.
  - All Eskom Safety and Operating Procedures as outlined in the ORHVS (Operating Regulations on High Voltage Systems) and the standards attached to this document.
  - The Contractor acknowledges that he is fully aware of the requirements of all of the above and undertakes to employ people who have been duly authorized in terms thereof and who have received sufficient safety training to ensure that they can comply therewith.
  - The Contractor undertakes not to do, or not to allow anything to be done which will contravene any of the provisions of the Act, Regulations or Safety and Operating Procedures
  - The Contractor shall ensure that a team member of the Contractor is authorized as a Responsible Person in terms of the ORHVS. This includes the completion of all the pre-authorization training required for ORHVS Responsible Person (at the Contractor's expense) as detailed in standard 34-146. The Responsible Person shall always supervise the works and be available to take permits where necessary.
  - The Contractor shall ensure that the Responsible person completes a training logbook (as per standard 34-146) and arrange with the appropriate Eskom representative for evaluation of the authorized person prior to the Construction start date. This needs to be arranged by the Contractor.
  - The Contractor shall appoint a person who will liaise with the Eskom Safety Officer responsible for the premises relevant to this contract. The person so appointed shall:
  - Supply the Eskom Safety Officer with copies of minutes of all Health and Safety Committee meetings (if relevant), monthly.
  - Supply the Eskom Safety Officer with copies of all appointments in respect of employees employed on this contract, in terms of the Act and Regulations and shall advise the Eskom Safety Officer of any changes thereto – to be handed over to the Employer prior to construction start.
  - Eskom may, at any stage during the currency of this agreement, be entitled to.
  - do safety audits at the Contractor's premises, its workplaces and on its employees.
  - refuse any employee, sub-contractor, or agent of the Contractor access to its premises if such person has been found to commit any unlawful act or any unsafe working practice or is found to be not authorized or qualified in terms of the Act
  - issue the Contractor with a work stop order or a compliance order should Eskom become aware of any unsafe working procedures or conditions or any non-compliance with the Act, Regulations and Procedures referred to in 1 above by the Contractor or any of its employees, sub-contractors, or agents.

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- No extension of time will be allowed because of any action taken by Eskom in terms of the above and the Contractor shall have no claim against Eskom as a result thereof. Furthermore, no amendments to the Act or the Regulations or reasonable amendment to Eskom’s Safety and Operating Procedures will entitle the Contractor to claim any additional costs incurred in complying therewith from Eskom.
- An authorized Eskom representative will be on site for regular site visits to monitor the Contractor’s implementation of health, safety, and quality Standards.
- The Contractor shall be responsible for all expenses incurred to ensure adherence to Health and Safety Regulations as stipulated above which includes but is not restricted to ORHVS training courses, etc.
- The Contractor shall adhere to the Standard on Working Clearances at MV Structures with pole-mounted auxiliary equipment as attached to this contract.
- The Contractor shall comply with all the requirements of the CONSTRUCTION REGULATIONS.

Please Note: (Before carrying out work, Contractor to notify the provincial director in writing of the construction work in line with requirements Construction Regulations)

It is an Eskom requirement that the Contractor shall use a Fall Arrest System (FAS) as defined in the Construction Regulations whenever a risk of falling exists. The Contractor shall adhere to the applicable standards and procedures attached to this contract.

Typically, the following identified risks could endanger the work as done by the Contractor. The Contractor should identify mitigation actions for these risks, as well as identify any additional risks and submit at tender:

Typical Risk	Yes/No
Live underground cables	
Work in live chambers/restricted areas	
Live overhead conductors/crossings	
Close proximity work to live equipment	
Work in elevated positions/on ladders/from crane buckets	
Operating of cranes/vehicle mounted	
Static electricity/induction, step potential etc	
Work with chainsaws/mechanical cutters	
Materials handling/ heavy equipment handling	
Conductor stringing and tensioning	
Vehicle risks	
Work in open trenches/excavations	
Biological/Health risks (camps)	
Weather related risks (UV, heat, cold)	
Environmental risks	
Ergonomic risks (body position, fatigue)	
Work on/dismantling of rusted & rotten poles and structures	
Fire risks	
Public safety risks	

**Health and Safety Plan**

I/We .....will prepare and submit Health and Safety Plan to Project Co-ordinator before the commencement of each Task and Resource Capacity Schedule, including following details: -

1. Safety Representatives and First Aiders names, providing their ID Numbers and details of certification.
2. Serial numbers, calibration certificates and expiry dates of the tested tools and equipment.
3. Make, model and registration number of vehicles to be used.

Project Health and Safety file shall be developed in line with the requirements of the SHE specifications and shall be submitted for evaluation and approval by the client safety department.

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### **Subcontracting**

Contractors are requested to submit names of proposed "Subcontractors" to be utilized on this project. Contractors are advised that only Eskom Approved Consultants and Contractors who have completed the necessary Eskom Contractor Training & Accreditation may Construction Safety

- The Contractor shall be responsible for ensuring that all equipment supplied and used, and all work carried out under this contract shall be in accordance with the Occupational Health and Safety Act (Act 85 of 1993) and regulations remaining in force, as may be amended from time to time.
- In addition, the Contractor shall comply with other Safety application provisions of Government, Provincial, Municipal Safety Laws, Building, Construction, Electricity Regulations and Eskom Distribution Standards.
- The Contractor shall accept full responsibility for the means, methods, sequence, or procedures of construction for safety precautions or programmes incident to the work of the contractor.
- The Contractor is required to submit a working methodology statement with regards to the Safety Standards while working within hazardous areas such as live lines or in close proximity of energized apparatus.
- The Contractor shall indemnify the employer and the Engineer against responsibility for safety on the site of the works.
- The Contractor shall enter into an agreement to complete the work required for the construction of the works in accordance with the provisions of all pertinent legislation and with the provisions of the Occupational Health and Safety Act (Act 85 of 1993) and the regulations promulgated there under.
- Reference of the Safety Methodology Statement can be found in the Government Occupational Health and Safety Act (Act 8 of 1993) and Construction Regulations Document which is available publicly.
- The safety of the Contractors personnel and employees acquire precedence over the construction works.
- Contractor to assess and make provision for security services to protect the demolished material should the need arise

### **Life Saving Rules (Refer to the attached document)**

Due to the importance to safe life's and apparatus of Eskom it is recommended that if a contractor abuse any life saving rules, all work allocated to the contractor will immediately put on hold until final outcome with investigation. Safety is the combined responsibility of the team and therefore team leader or team will be punished together. There are five life saving rules that may not be broken by the Team Leader and his/her team.

### **The five Eskom Life Saving Rules are as follows:**

Rule 1:\*Open, isolated, tests, earth, and bond and/or insulate before touch\*

Rule 2:\*Hook up at height\*

Rule 3:\*Buckle Up\*

Rule 4\*Be Sober\*

Rule 5:\*Ensure that you have a permit to work\*

### **ACCEPTANCE NOTE**

I/WE \_\_\_\_\_ HEREBY ACCEPT THE ABOVE TERM FOR BREACHING OF LIVE SAFETY RULES.

SIGNED BY: \_\_\_\_\_ DATE: \_\_\_\_ / \_\_\_\_ /

## The Provision of Electrification MV and LV infrastructure and Households Connections within Mpumalanga Province - LimLanga Cluster

### 2.4 Environmental Constraints and Management

The *Contractor* is required to ensure that all goods, services or works supplied in terms of this *Works Information* comply to all applicable environmental legislation(s), Eskom's Safety, Health, Environment and Quality Policy, 32 -727.

The company's environmental or EMS file or SHE file must contain the following relevant information:

- Environmental Policy:  
Environmental policy signed by top management (CEO / managing director), dated and version controlled
- Company organogram:  
Company's organogram depicting an environmental representative.
- Environmental appointment letters:  
Appointment letter of the employee responsible for environmental issues within the company. Appointment letter to be accepted and dated.
- Communication strategy or communication Plan: Procedure to include the following-  
Company's communication plan / procedure on what, how & when relevant environmental issues will be communicated
- Environmental incident Register:  
Incident/complaints register for environmentally related incidents
- Environmental Aspects & Impacts (Risk Assessment):  
Aspect and impact register relevant to the services (activity related) – specific to the project
- Environmental management programme  
Environmental management programme related to the services (activity related) tendered for.
- Environmental Emergency Preparedness & Response Plan:  
Emergency preparedness procedure/plan for environmental emergencies with emergency contact details
- Environmental Awareness Training

Eskom's Environmental law: The Company's SHE or Environmental Representative or the site supervisors must have a valid environmental law certificate (within three years).

- Waste management strategy/ Plan:  
Waste management plan on how waste generated on site will be managed, to include where disposal occurs. Note: Disposal to be at licensed Municipal landfill sites
- Weighbridge slips for waste disposed during project  
Slips or signed register showing that waste has been disposed of at a licenced site
- All sewage (human effluent) generated from the chemical toilets must be disposed at the approved Wastewater Treatment Plant (WWTP). The records of the disposal must be kept in the EMS or environmental file and be produced when required.
- Issued Environmental permits (Tree permit, General Authorisation (GA), etc..) to be in the EMS file.
- Proof of project handover  
Attendance registers of handover, presentation (if available), need to show that environmental conditions for the project were discussed.
- The contractor shall be in possession of a project specific Distribution Environmental Screening Document (DESD) for the project they will be executing. In addition, the conditions stipulated in the Environmental Management Plan (EMP) section of the DESD must be complied with.
- If subcontracting may be applicable, the *Contractor* must ensure that all *Subcontractors'* EMP comply with legal and other requirements and includes all the environmental risks associated with the scope of work. The *Main (Principal) Contractor* shall define the specific risks applicable to the *Subcontractor's* scope of work or supply of kiosks. The conditions stipulated in the Environmental Management Plan (EMP) section of the DESD must also be complied with.

## **The Provision of Electrification MV and LV infrastructure and Households Connections within Mpumalanga Province - LimLanga Cluster**

- The *Contractor* shall send a flash report to the *Eskom Environmental Representative* and *Project Manager* for any environmental incidents that have occurred on site as soon as possible or within 24 hours, clearly stating any impact to the environment.
- Chemical toilets should be provided for employees on site.
- Good housekeeping must be always ensured on site.
- No unauthorised cutting / trimming of trees protected or not protected shall be permitted or undertaken on site.

Deviations from these requirements will be regarded as a non-conformance. Should there be concerns regarding environmental issues and non-conformance to environmental requirements, management engagements and interventions will be introduced to determine a means to addressing the shortfalls. Once these interventions have been explored and exhausted, then the *Eskom Supplier Disciplinary Process* will be followed.

### **2.5 Quality Assurance Requirements**

Supplier QM specification, 240-105658000, Category 3 criteria, were selected as the applicable supplier quality requirements to be met for this contract by assigned Eskom Representative. Requirements include Category 3 Form A of the QM-58 specification which need to be completed and signed by the Contractor responding to an Eskom Enquiry as an acknowledgement for receiving the specification and committing to comply with requirements.

#### **2.5.1 Contractor and Subcontractor Quality Management System Requirements**

- The Contractor and Subcontractor shall have formal Quality Management System in place in accordance with the requirements of the Category 3 of Supplier Quality Management specification, 240-1056500.
- Such formal system shall consist of the appropriate documentation required by ISO 9001 standard, such as quality manual, work procedures, work instructions, method statements, workflow documentation etc. as the case may be. This requirement constitutes the most basic Quality Management System requirements.
- Unless specifically excluded in the Quality Assessment Criteria, as per the Level of Quality Requirements (Category 1, 2, 3 or 4). The Contractor shall have a fully documented, implemented and maintained Quality Management System that complies with the latest ISO-9001 standard. If the Contractor invariably requires the assistance of some Subcontractor to realise its own supply obligations. The requirement applies equally in all cases where any such Subcontractor's scope of responsibility includes the provision of any of the following activities viz. Design & Development, Manufacturing, Testing, Storage, Delivery, Installation, Commissioning, and Project Management.
- Eskom reserves the right to request and perform necessary assessments at Subcontractor facilities.
- The Contractor shall be responsible for defining the specific quality control elements applicable to the respective Subcontractor's scope of work/supply and ensure that their Subcontractor(s) quality programmes support Eskom requirements.
- The Contractor shall inform Eskom of any proposed changes to the Quality Management System or staff that will affect the Quality System prior to implementation of these changes.

#### **2.5.2 Quality Plan**

The information in this section constitutes the minimum requirements for a Quality Plan:

- The scope of work activities shall have a documented, implemented and maintained Contract Quality Plan and/or Quality Control Plan (Inspection and Test Plan).
- All production and/or service provision shall be carried out in accordance with documented Contract Quality Plan (CQP) and/ or Quality Control Plan (QCP)/ Inspection and Test Plan (ITP).
- Sourcing of material and subcontracted activities; monitoring of sub-suppliers' information shall be included in the CQP.
- The Contractor shall plan for the required Quality related activities and interfaces within the Contractor's Quality system, to demonstrate its ability towards both controlling and meeting specified Eskom requirements.
- The final Contract Quality Plan shall be submitted within 30 days after contract award and shall be updated continuously as per instruction from the Project Manager.

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### **2.5.3 Contract Quality Plan**

Contractor shall require Subcontractors to submit Contract Quality Plan (CQP) and associated documentation in accordance with requirements of Project Quality Management System processes applicable to Subcontractor Scope of Work.

Contractor shall, where applicable based on Scope of Work Criticality, ensure Procurement documents clearly and unambiguously require Subcontractor submission of a Subcontractor CQP for Contractor and Eskom review.

Contractor and Subcontractor CQP shall comply with Eskom "Quality Requirements Specifications" and shall be submitted prior to the initial Scope of Work Kick-off or initial Pre-fabrication meeting and prior to commencement of manufacturing, whichever is earlier.

Sourcing of material and subcontracted activities; monitoring of sub-suppliers' information shall be included in the CQP;

The final Contract Quality Plan shall be submitted 30 days after contract award and shall be updated continuously as per instruction from the Project Manager.

### **2.5.4 Quality Control Plan**

Contractor shall develop and implement processes and procedures which efficiently and effectively monitor, verify and document Quality of Scope of Work deliverables.

Contractor shall ensure that QCP/ITPs are prepared at a level of detail sufficient to address all Quality Control related activities in chronological order, from contract review through materials verification, manufacturing, fabrication, assembly, final testing, documentation, and certification.

Contractor shall ensure that Subcontractor QCP/ITPs are prepared at a level of detail sufficient to address all Quality Control related activities in chronological order, from contract review through materials verification, installation/ construction work, fabrication, assembly, final testing, documentation, and certification.

Where activities subject to Inspection and Test procedures are to be undertaken by a Subcontractor, the QCP/ITP shall make reference to this fact and shall include descriptive details of Subcontractors involvement.

A separate QCP/ITP shall be required for each Contractor / Subcontractor Scope of Work.

Contractor may authorise use of Subcontractor QCP/ITP format providing it is in compliance with the above. Contractor shall be ultimately responsible for the development and proper implementation of all Subcontractor QCP/ITPs, including those reviewed or developed by Subcontractors.

Eskom reserves the right to select witness and hold points within all developed Subcontractor QCP/ITPs for Eskom oversight of selected functions and to perform surveillance or audits of the Work.

Contractor shall establish processes and procedures for formal assessment of Subcontractor inspection and testing programs. These shall include review of Subcontractor inspection reports and other Quality Control documentation. Additional formal assessment of manufacturing, fabrication and assembly facility operations shall be conducted by Contractor to ensure continuing suitability, adequacy and effectiveness of the Subcontractor inspection and testing programs. Assessment frequency shall be established in consideration of Subcontractor Scope of Work, Criticality of Scope of Work deliverables and performance information. Assessment scope and schedule shall be developed in consultation with Eskom.

Mandatory pre-inspection meetings will be convened by Eskom or its Inspection Agency or AIA to be attended by the Contractor and Subcontractors representatives, including their Quality representatives who will be involved with the Works and records to be kept.

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Eskom reserves the right to appoint resident quality inspectors that can be based at the Contractor or Subcontractor's premises and on site where the work is being performed. The Contractor is expected to provide workspace at no cost to Eskom, for the inspector as required.

### 2.6 Programming constraints

A comprehensive and fully detailed programme is to be submitted within the five (5) days after the introductory meeting and should indicate all milestones and critical dates. This programme must first be approved by the *Project Manager* and must be updated on an as and when required basis by the *Project Manager*.

#### The following dates shall be clearly reflected on the programme:

- Starting and completion dates for all activities as well as relevant key dates for hold or witness points. All relevant significant activities shall be shown to monitor the progress in the factory/workshop.
- The programme shall also reflect a 2-week period for inspection and correcting of Defects before the completion date.

Updated programmes must be available at all meetings reflecting progress to date and the date when delivery will take place using project specific agreements. The programme should follow the following format:

- The Contractor shall submit his construction programme in terms of the conditions of contract.
- The *Contractor* is to submit a revised programme for acceptance at each site meeting.
- This programme shall be in the form of an approved Gantt Chart containing the following information:
- All construction activities, including milestones, initial tasks, critical path, required Outages, and target *Dates*. All potential risk activities should be clearly indicated on the critical path.
- Every activity on the programme will be clearly linked to labour resources and equipment required to perform the specific activity.
- Projected weekly progress on *site* for the entire duration of the contract.
- Completion and hand-over *Dates* for formal inspection by the site supervisor must be indicated.
- A column showing the daily tempo of all the construction activities must be indicated next to the activity on the programme.
- Project expenditure monthly for the entire duration of the contract.
- The following project phases and activities are minimum requirements for the programme:
- Site Establishment and Material Delivery – Lead times to be specified.
- Preparation work – Work that can be completed without the necessity of power outages
- Outage work – Work that must be completed under outage conditions
- Planned outages to be included in the programme
- *Contractors* float to be included in the programme
- The Contract Programme will be on display in the *Contractors Site Offices* and will be updated weekly. In addition to the maintaining of this programme, the *Contractor* will report progress to the *Project Manager* at each site meeting or at request of the *Project Manager*.
- The *Contractor* shall also provide an organisation chart showing the personnel to be employed for the *works*, along with a detailed CV of all key personnel.
- Should any deviations to the programme be found the *Contractor* shall submit a revised programme to the *Project Manager* within one week of such deviations being brought to the *Contractor's* attention.
- The Outages must be arranged with *Employer* via the Outage arrangement procedures, as a pre-requisite for the acceptance of the programme by the *Project Manager*.
- Acceptance of any programme by the *Project Manager* shall have no contractual status other than an indication that the *Project Manager* is satisfied as to the order in which the work is to be carried out, and that the *Contractor* undertakes to perform all work in accordance with the accepted programme.
- The *Project Manager* retains the right to alter the accepted programme should circumstances on *site* necessitate such a change.
- The *Project Manager* retains the right to retain 25% of the 1<sup>st</sup> claim of the project should the contractor fails to submit the construction programme on time.
- The following Statutory non-working days are included within the contract period:

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- ✓ All Public Holidays for the duration of the contract.
- ✓ The programme must clearly indicate the non-working days for the entire construction period.

### 2.7 Contractor's Management, Supervision and Key People

The *Contractor* is to submit an organogram showing all key people involved in the contract 7 days after contract award. All key personnel must be appointed in writing, must be current for the specific site and area of work and must be kept on file. This would be essential if the *Contractor* is a Joint Venture.

### 2.8 Invoicing and payment

Within one week of receiving a payment certificate from the *Project Manager* in terms of core clause 51.1, the *Contractor* provides the *Employer* with a tax invoice showing the amount due for payment equal to that stated in the *Project Manager's* payment certificate.

The *Contractor* shall submit a vehicle tracking system report for all kilometres travel claims. No assessment of the travelled kilometres claims will be made until such time that the vehicle tracking system report has been provided.

The *Contractor* shall only make use of PSIRA registered security services. Both the company and the physical guards should be registered. The security expense claims may only be assessed and paid upon receipt of proof of valid registration. A minimum two security guards during the day and two at night is required. More guards may be required from time to time based on an acceptable basic risk assessment. Only a *Project Manager* may give such instruction.

Material Supply to be project specific, bulk buying and loan arrangements from other fellow contractors shall not be entertained. The contractor shall submit a minimum of two quotations and may buy the material as agreed with the project manager. Only the current proof of purchase in correspondence with the project and quotations received may be used for material reimbursements. An allowance of 5% handling fee for material used on site may be paid, this includes but not limited to the administration pertaining the placing of orders, storage, packaging, loading and off-loading, travelling etc.

The *Contractor* ensures that the requirement in terms of Section 20(4) (C) of the Value Added Tax Act, no 89 of 1991 (as amended by the Revenue Laws Amendment Act 45 of 2003), that the VAT registration number of the recipient of the tax invoice, appears on the said tax invoice in order for the invoice to fully comply with the requirements of a valid invoice for VAT purposes as contained in the said Section 10(4) (C), is adhered to. The Employer requires adherence by the *consultant* to this requirement as from 1 June 2004. No payment will be made on tax invoices not fully meeting the requirement.

No payment will be certified unless the EPWP and Manpower report above are submitted.

Tax invoices must meet the following requirements where the consideration (VAT inclusive) exceeds R3 000:

1. The words "**TAX INVOICE**" in a prominent place (preferably at the top of the page).
2. **Name, address and VAT registration number of the supplier.**
3. **Name, address and VAT registration number of the recipient. \***

Please note: Eskom's name has to be reflected as Eskom Holdings SOC Limited on all tax invoices and Eskom's VAT number is 4740101508.

4. An **individual serial number** (tax invoice number) and **date issued.**
5. **The contract number and title**
6. A **full and proper description** of goods and/or services supplied.

Please note: Merely referring to a contract is not sufficient.

7. The **quantity or volume** of goods or services supplied and other to be paid to the Supplier less to be paid by or retained from the Supplier.
8. The change in the due since the previous payment being the invoiced - excluding VAT.
9. Where the supply is subject to VAT at the standard rate, the following in Rand:

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- The value, VAT and consideration OR
- The total consideration with a statement that VAT is included @15% OR
- The total consideration and the of VAT charged.
- Add other as required

The procedure for electronic invoice submission and payment is detailed in the letter dated 17 October 2014 titled “e-invoicing letter to vendors (CI Edited)” Attached in this contract

In terms of core clause 50 the *Contractor* assesses the amount due and applies to the *Employer* for payment. The *Contractor* applies for payment with a tax invoice addressed to the *Employer* as follows:

**Additional information to be noted by the Supplier when submitting invoices**

<b>General Information</b>	<b>X</b>
- No Pro-forma Invoice	
- Check Vendor number against the Address and name on Tax invoice	
- Insert the Vendor number on Tax invoice (Top right-hand corner)	
- Bank details must be on the invoice or on an attach sheet, but it does not require a bank stamp just a letter)	
- Check banking details on invoice against SAP system. If more than one banking account check bank account against banking details on invoice. If banking details not on invoice, write the bank code next to the vendor account (bank code 0002)	
- Check Vendor VAT number against the vendor master. (FK03) If VAT number not on master records, prepare a list and forward to Vendor Management to check and update the vendor master records	
- No fax copies of Tax invoices allowed	
- No copies of Tax invoices allowed unless originally printed by the Vendor if a photocopy tax invoice, it must be an original “certified copy” (i.e. not a copy of a “certified copy” invoice) from the vendor and check in system if not previously be paid. Put stamp “not previously paid” on invoice and sign.	
- Ensure that date received stamp is clear on invoice	
- Stamp all Invoices with the Vat stamp, complete and sign (only when VAT is applicable)	
- The stamp should not be stamped over any written information	
- When scanning invoice, check the quality before linking in SAP (inboxes)	
<b>With Reference Invoices</b>	<b>X</b>
- Goods receipt must be done (payment with reference)	
- Ensure that the SAP purchase order number is clear and correct on the invoice	
- GR number to be written on the Invoices	
- If multiple lines on invoice write the line number of the order against the line to ensure that the processors match the correct lines (to ensure that 191100 is matched correctly)	

**2.9 Insurance provided by the Employer**

Refer to Section C1.2A Data provided by the Employer (See Annexure B for basic guidance). Contact any of the Insurance Advisors from ESCAP.

Refer to attached insurance letters as referenced on page 109

**2.10 Training workshops and technology transfer**

Not applicable except stated in a Project Specific Agreement

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### 3 Engineering and the *Contractor's* design

#### 3.1 *Employer's* design

The Employer will supply Contractor with a final design document compiled by the Project Engineer detailing the scope of work to be executed on the project as well as Project Drawings.

#### 3.2 As-built drawings and other documents

The *Contractor* is required to provide the updated as built or redline drawings in line with the latest installation. The *Contractor* is required to provide quality check list(s) and test certificate(s) or test result(s) for all test(s) conducted during the project.

### 4 Procurement

#### 4.1 People

##### 4.1.1 Minimum requirements of people employed on the Site

All Contractor employees on site shall have the appropriate standard PPE for the task carried on site; the *Contractor* employees must have proof for attending induction training. Foreign employees to have their work permit on site all the time.

All people employed by the *Contractor* to perform supervision of installation and commissioning should have Police Clearance before work can commence. The *Contractor's* employees shall be sober when carrying out their duties and may be subjected to random breathalyser tests.

##### 4.1.2 Supplier Development Localisation and Industrialisation

#### Procurement spend on entities with a minimum 51% black ownership – 10% target set

The contractor is encouraged to procure/spend on designated groups on the following paid invoices for both:

- the indirect expenses (**staff transport to and from site – with an approved vehicle; PPE procurement; petrol/diesel purchases; toilet hire, security and other overheads**) on goods and services supplied to the contractor by designated groups; and
- direct spend on goods and services supplied by the subcontractors for the execution of the scope of work.

Activities, as a proportion of the local procurement content, which may be subcontracted to designated black owned enterprises must be submitted in a table below:

Procurement from Designated Group	Eskom Target	Contractor Proposal
Black Women Owned	2.5%	
Black Youth Owned	5.0%	
Black Persons with Disability	2.5%	

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**Jobs.** Contractors are required to submit proposals for the type and number of jobs that will be created and retained in South Africa as a direct result of being awarded a contract.

Type of Jobs to be created	Number of Jobs to be created
Semi-skilled and general labour	Contractor's proposal
Minimum eleven (11)	
Type of Jobs to be retained	Number of Jobs to be retained
Contractor to propose	Contractors proposal

### Skills development

Contractors are required to submit proposals in a table below for developing the skills of unemployed candidates within Mpumalanga Province. Skills development is intended to address Eskom's core, the scarce and critical skills. These skills are also included in a 2020 list of occupations in high demand as stipulated in the Government Gazette 43937. Candidates shall be from both Mpumalanga provinces in the country, and their composition shall be representative of the population demographics of South Africa

Skill type / Occupation	Eskom target	Proposed Number of Candidates
Electrical Artisan (Minimum N2 Electrical Engineering)	5 (1 per annum)	
Line Construction training	2	
Truck Mounted Crane Operator Certification	2	
Prepayment Training for Split and Smart Metering	2	

The process of developing these skills shall involve the participation by Contractors directly and through their supply network. In certain cases, the SETA's accredited training providers can be approached to participate in developing critical and scarce skills.

**Note:** That these targets for skills development candidates categorically exclude Eskom employees and registered learners. The Contractors are required to take full responsibility for the total cost of developing the requisite skills, and Eskom shall not make any financial contribution towards the fulfilment of this obligation. Contractors also are advised to approach their relevant SETAs to access grants, subsidies, and incentives as well as South African Revenue Services for tax rebates that are earmarked for skills development initiatives

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### **SDL&I Penalty and Performance Security**

Eskom will apply a penalty of 2.5% of the Accumulated Task Order Values for failure to meet SDL&I obligations.

For the duration of the contract, Eskom will retain 2.5% of every invoice (excluding VAT) as security for the fulfilment of all SDL&I Obligations. The retained amounts shall only be released to the Contractor upon:

- Eskom receives the SDL&I progress report/s from the contractor.
- Fulfilment of all SDL&I obligations by the contractor.
- Submission of an approved compliance report by SDL&I Department.

### **Reporting and Monitoring**

- The suppliers shall on a quarterly basis submit a report to Eskom in accordance with Data Collection Template on their compliance with the SDL&I obligations described above.
- Eskom shall review the SDL&I reports submitted by the suppliers within 30 (thirty) days of receipt of the reports and notify the suppliers in writing if their SDL&I obligations have not been met.
- Upon notification by Eskom that the suppliers have not met their SDL&I obligations, the suppliers shall be required to implement corrective measures to meet those SDL&I obligations before the commencement of the following report, failing which Retention clauses shall be invoked.

Every contract shall be accompanied by the SDL&I Implementation Schedule, which must be completed by the suppliers and returned to SDL&I representative for acceptance 28 days after contract award. This will be used as a reference document for monitoring, measuring and reporting on the supplier's progress in delivering on their stated SDL&I commitments

#### **4.2.1 Preferred subcontractors**

The *Contractor* to submit the names of each proposed subcontractor to the *Employer* for acceptance. The *Contractor* does not appoint a subcontractor until the *Employer* has accepted such subcontractor.

#### **4.2.2 Subcontract documentation, and assessment of subcontract tenders**

The *Contractor* to indicate the percentage of subcontracting, the proposed subcontractors together with their BBBEE statuses, and the sources of assets, goods or services when local content and production criteria are applicable. The proposed target will form part of the contractual obligation. The NEC system is compulsory for all subcontract documentation.

#### **4.2.3 Limitations on subcontracting**

The *Contractor* is not allowed to sub-contract more than 25% of the contract to another enterprise/supplier that does not have equal or higher BBBEE status, unless the intended subcontractor is an EME that has the capability and ability to execute the sub-contract, to claim the points for BBBEE.

#### **4.2.4 Attendance on subcontractors**

The *Contractor* is responsible for performing on the provided scope of work as if he had not subcontracted. The appointed *Contractor* will also be liable to the *Subcontractors'* employees, as he legally and liable to this contract.

### **4.3 Plant and Materials**

#### **4.3.1 Quality**

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The *Contractor* shall control his activities and processes in accordance with Eskom's Supplier Quality Management Specification QM-58 category 3 and ISO-9001.

### **4.3.2 Contractor's procurement of Plant and Materials**

The *Employer* requires warranties from the *Contractor* to be in favour of the *Employer* and not just to the *Contractor* during the life of the contract.

### **Project material management**

The following must be read in conjunction with the Project Material Management Work Instruction\_240-96742100

Once material is delivered onsite, the safe keeping and handling thereof is the sole responsibility of the contractor until the project is complete and material is returned to RDC.

### **Contractor Responsibilities**

The relevant Contractor Material Management responsibilities are as published in the "NEC3 ECC", the following are the excerpts from the Contract

- All material received shall be neatly stored in clearly defined areas to reduce damage and facilitate checking of quantities and quality. Proof of Delivery (POD) slips shall be forwarded to Eskom on delivery / collection and a record shall be kept on site of the total quantities of material received. Such records will be subject to audit by Eskom
- Eskom will not be held responsible for any construction delays resulting from loss of material.
- All surplus material (Eskom supply), including off-cuts of phase and earth conductors shall be collected by the Contractor on completion or when the quantities justify the need to collect for each project and returned to Eskom's Operational Stores
- Loss, theft, or damage to material supplied by Eskom while under the Contractors control shall be for the account of the Contractor. The risk in the material shall pass from Eskom to the Contractor on receipt of material by the Contractor
- The Contractor shall maintain a record of material receipts, on hand and where used at the storage premises at all times.
- The Eskom appointed representatives shall be allowed free access to audit and inspect such site stores.
- The Contractor shall ensure that all materials required for the completion of the Works, shall be timeously ordered, and delivered.
- The Contractor shall nominate a responsible person for receiving of material from Eskom Warehouse. The nominated person shall collect materials and shall present identification to Eskom's requirements.
- The Contractor shall submit his material requirements as set out above to the Project Manager. The Project Manager will submit the material order to Eskom's Warehouse for preparation where the Contractor shall be required to sign for the correctness and acceptance of each order.
- At the end of the contract period, all Eskom supply surplus material shall be returned to Eskom's Operational Store(s).
- No person shall be allowed or permitted access remove material from the storage area without the written consent of the Project Manager/Programme Manager.
- The Contractor shall not release any material received by his store to any person, including Eskom personnel, without the written permission of the Project Manager. In the event of such permission being granted, date, time, quantity, and recipient shall be noted, and signed for the person removing the material.

### **4.4 Tests and inspections before delivery**

All materials shall be regularly tested at the manufacturers' factories. The *Contractor* shall make sure that regular quality control tests are carried out to ensure that good quality of the materials is maintained.

## **5 Construction**

### **5.1 Completion, testing, commissioning, and correction of Defects**

## **The Provision of Electrification MV and LV infrastructure and Households Connections within Mpumalanga Province - LimLanga Cluster**

### **5.1.1 Work to be done by the Completion Date**

On or before the Completion Date the *Contractor* shall have done everything required to Provide the Works except for the work listed below which may be done after the Completion Date but in any case before the dates stated. The *Project Manager* cannot certify Completion until all the work except that listed below has been done and is also free of Defects which would have, in his opinion, prevented the *Employer* from using the *works* and others from doing their work.

### **5.1.2 Use of the works before Completion has been certified**

The *Contractor* will have to carry out the supervision of the installations, as per the instruction of the *Project Manager*.

### **5.1.3 Materials facilities and samples for tests and inspections**

From time-to-time random sample test and inspections may be requested, to ensure good quality of the goods being supplied.

### **5.1.4 Commissioning**

Commissioning is to be done before or after Completion depending on the Programme from the *Project Manager*.

### **5.1.5 Start-up procedures required to put the works into operation**

The Handover process shall take place thereafter the Customer Network Centre (CNC) should be in position to put the plant/ asset into operation.

### **5.1.6 Take over procedures**

Take-over is after or at the same time as Completion. The *Contractor* is to arrange an inspection before completion of the installation to inspect and identify any outstanding or any defects. The *Project Manager* may require the *Contractor* to provide assistance, on an as and when required basis.

### **5.1.7 Access given by the Employer for correction of Defects**

The *Project Manager* arranges access for the *Contractor* to use a part of the *works* which has been taken over if needed to correct any Defects. After the *works* have been put into operation, the *Employer* may require the *Contractor* to undertake certain procedures before such access can be granted. The *Contractor* will be responsible for ensuring that the area to be worked in is barricaded before correcting any defects.

### **5.1.8 Performance tests after Completion**

The *Contractor* to demonstrate that the *works* can operate as guaranteed by the *Contractor* (in *Contractor's* Works Information) or specified by the *Employer* either here or elsewhere in this Works Information.

### **5.1.9 Training and technology transfer**

N/A

### **5.1.10 Operational maintenance after Completion**

The *Employer* may require the *Contractor* to fix any *defects* within the defects period (52 weeks after the completion date).

**The Provision of Electrification MV and LV infrastructure and Households Connections within Mpumalanga Province - LimLanga Cluster****6 List of drawings****6.1 Drawings issued by the *Employer***

The project related drawings such as the Network Operating diagram, single line drawings and township layout shall be issued with the detail design package. All the relevant standard drawings shall be referenced in the design package and the *Contractor* shall retrieve them from the Distribution Technology website. The Cluster specific drawings shall be issued with detail design package.

**The Provision of Electrification MV and LV infrastructure and Households Connections within Mpumalanga Province - LimLanga Cluster**

**PART 4: SITE INFORMATION**

Document reference	Title	No of pages
C4	This cover page	1
	Site Information	2
	Total number of pages	3

## **The Provision of Electrification MV and LV infrastructure and Households Connections within Mpumalanga Province - LimLanga Cluster**

### **PART 4: SITE INFORMATION**

Core clause 11.2(16) states

“Site Information is information which

- describes the Site and its surroundings and
- is in the documents which the Contract Data states it is in.”

In Contract Data, reference has been made to this Part 4 of the contract for the location of Site Information.

#### **General description**

All relevant descriptions will be specified in the Project Specific Agreement for any project executed in terms of this contract.

#### **Existing buildings, structures, and plant & machinery on the Site**

All relevant information will be specified in the Project Specific Agreement for any project executed in terms of this contract.

#### **Subsoil information**

All relevant information will be specified in the Project Specific Agreement for any project executed in terms of this contract.

#### **Hidden services**

All relevant information will be specified in the Project Specific Agreement for any project executed in terms of this contract.

#### **Other reports and publicly available information**

All relevant information will be specified in the Project Specific Agreement for any project executed in terms of this contract.

#### **Additional Information**

##### **Precautions against Damage**

The contractor shall take precaution of life and property on, or about, or in connection with the contract. The contractor shall be held liable for any damage arising from negligence on the part of himself and his employees. The contractor will ensure that excavation is done carefully as no plans of existing services are normally available of the rural areas. The damage occurring during any required excavation will be for the contractor's risk and must therefore be replaced by the contractor. Protection of the environment should always be adhered to.

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**Excavations and associated water control**

Refer to the Detailed Project Specifications in the approved Detailed Design Package /Final Design Package document. No excavations should be left open or unattended. If the Contractor encounters any rock during excavation, he/she must inform the Clerk of works first to come and verify before he/she can use a mechanical boring device, drilling or blasting and requires the approval of associated costs from the Project manager .

**Underground services, other existing services, cable, and pipe trenches and covers**

The contractor shall be held liable for any damages caused during construction to existing services such as underground water pipes, electrical cables, telecommunication cables, overhead lines, storm water pipes and existing roads.

It is the responsibility of the Contractor to contact the landowner and/or local authority to determine the position of such services to prevent any damages.

**Illegal Connection**

The contractor shall be held accountable for any illegal connections carried out by any of their employees or any other personnel employed by the contractor. The contractor shall not be relieved of his accountability based on whether the staff introduced or employed for Eskom Work is of temporary or permanent nature.

Any illegal activity that is uncovered that is as result of a particular contractor’s staff will result in the contractor and the staff being liable and being penalized, charged, and possibly prosecuted.

**Additional Information Forming Part of this Contract**

Confirmation of Insurance General AAR
Confirmation of Insurance General ACAR
Confirmation of Insurance Transportation
Project Material Management Work Instruction_240-96742100
Annexure C for SDL&I performance template
Insurance Letters

**Acknowledgement of the receipt of the above-mentioned additional information.**

I .....do hereby acknowledge having received all the documents listed above prior to the signing of this contract document.

I undertake to study and always abide by these requirements. If for any reason I cannot access or open any of the files, I will contact the *Employer* immediately.

Signed at: ..... on the ..... day  
of ..... 2022