



## NEC3 Engineering & Construction Contract

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

and

for **Supply and Application of RTV Silicone rubber coating, and cleaning of existing insulation and re-coating on porcelain surfaced equipment on 275 kV and 400 kV at various substation for North East Grid**

---

<b>Contents:</b>	<b>No of pages</b>
<b>Part C1 Agreements &amp; Contract Data</b>	<b>[•]</b>
<b>Part C2 Pricing Data</b>	<b>15</b>
<b>Part C3 Scope of Work</b>	<b>[21]</b>
<b>Part C4 Site Information</b>	<b>4</b>

---

**CONTRACT No. [Insert at award stage]**

---

# Part C1: Agreements & Contract Data

---

<b>Contents:</b>	<b>No of pages</b>
<b>C1.1 Form of Offer and Acceptance</b>	<b>4</b>
[to be inserted from Returnable Documents at award stage]	
<b>C1.2a Contract Data provided by the <i>Employer</i></b>	<b>16</b>
<b>C1.2b Contract Data provided by the <i>Contractor</i></b>	<b>5</b>
[to be inserted from Returnable Documents at award stage]	
<b>C1.3 Proforma Guarantees</b>	<b>[•]</b>

---

## PART 2: PRICING DATA

### ECC3 Option B

Document reference	Title	No of pages
C2.1	Pricing assumptions: Option B	4
C2.2	The <i>bill of quantities</i>	11

# C1.1 Form of Offer & Acceptance

## Offer

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

### **Supply and Application of RTV Silicone rubber coating, and cleaning of existing insulation and re-coating on porcelain surfaced equipment on 275 kV and 400 kV at various substation for North East Grid**

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 of 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.

Options A B, C or D	The offered total of the Prices exclusive of VAT is	R [●]
Option E or F	The first forecast of the total Defined Cost plus the Fee exclusive of VAT is	R [●]
	Sub total	R [●]
	Value Added Tax @ 15% is	R [●]
	The offered total of the amount due inclusive of VAT is <sup>1</sup>	R [●]
	(in words) [●]	

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:**

(Insert name and address of organisation)

Name &  
signature of  
witness

Date

<sup>1</sup> This total is required by the *Employer* for budgeting purposes only. Actual amounts due will be assessed in terms of the *conditions of contract*.

ESKOM HOLDINGS SOC Ltd  
SUPPLY AND APPLICATION OF RTV SILICONE RUBBER RE-COATING (INCLUDING SHED EXTENDERS WHEN REQUIRED) ON  
PORCELAIN SURFACED EQUIPMENT AT CAMDEN AND MATLA SUBSTATIONS

CONTRACT NUMBER \_\_\_\_\_

Tenderer's CIDB registration number (if applicable)

**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)

\_\_\_\_\_  
 Judith Malinga

Capacity

\_\_\_\_\_  
 Senior Manager Grids

**for the  
 Employer**

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

*(Insert name and address of organisation)*

Name &  
 signature of  
 witness

Date

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

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

Note:

1. This part of the Offer & Acceptance would not be required if the contract has been developed by negotiation between the Parties and is not the result of a process of competitive tendering.
2. The extent of deviations from the tender documents issued by the Employer prior to the tender closing date is limited to those permitted in terms of the Conditions of Tender.
3. A tenderer's covering letter must not be included in the final contract document. Should any matter in such letter, which constitutes a deviation as aforesaid be the subject of agreement reached during the process of Offer and Acceptance, the outcome of such agreement shall be recorded here and the final draft of the contract documents shall be revised to incorporate the effect of it.

No.	Subject	Details
1	[•]	[•]
2	[•]	[•]
3	[•]	[•]
4	[•]	[•]
5	[•]	[•]
6	[•]	[•]
7	[•]	[•]

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

\_\_\_\_\_

\_\_\_\_\_

Capacity

\_\_\_\_\_

\_\_\_\_\_

On behalf of

~~Mace Electrical Technologies~~  
~~Probuild Commercial Park~~  
~~James Crescent 501~~  
~~Halfway House~~  
~~1685~~

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

Name & signature of witness

\_\_\_\_\_

\_\_\_\_\_

Date

\_\_\_\_\_

\_\_\_\_\_

# C1.1 Form of Offer & Acceptance

## Offer

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

### **Supply and Application of RTV Silicone rubber coating, and cleaning of existing insulation and re-coating on porcelain surfaced equipment on 275 kV and 400 kV at various substation for North East Grid**

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 of 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.

Options A B, C or D	The offered total of the Prices exclusive of VAT is	R [●]
Option E or F	The first forecast of the total Defined Cost plus the Fee exclusive of VAT is	R [●]
	Sub total	R [●]
	Value Added Tax @ 15% is	R [●]
	The offered total of the amount due inclusive of VAT is <sup>1</sup>	R [●]
	(in words) [●]	

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:**

\_\_\_\_\_  
*(Insert name and address of organisation)*

Name &  
signature of  
witness

Date

<sup>1</sup> This total is required by the Employer for budgeting purposes only. Actual amounts due will be assessed in terms of the *conditions of contract*.

ESKOM HOLDINGS SOC Ltd

CONTRACT NUMBER \_\_\_\_\_

SUPPLY AND APPLICATION OF RTV SILICONE RUBBER RE-COATING (INCLUDING SHED EXTENDERS WHEN REQUIRED) ON  
PORCELAIN SURFACED EQUIPMENT AT CAMDEN AND MATLA SUBSTATIONS

Tenderer's CIDB registration number (if applicable)

**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)

\_\_\_\_\_

Judith Malinga

Capacity

\_\_\_\_\_

Senior Manager Grids

**for the  
Employer**

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

*(Insert name and address of organisation)*

Name &  
signature of  
witness

\_\_\_\_\_

Date

\_\_\_\_\_

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

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

Note:

1. This part of the Offer & Acceptance would not be required if the contract has been developed by negotiation between the Parties and is not the result of a process of competitive tendering.
2. The extent of deviations from the tender documents issued by the Employer prior to the tender closing date is limited to those permitted in terms of the Conditions of Tender.
3. A tenderer's covering letter must not be included in the final contract document. Should any matter in such letter, which constitutes a deviation as aforesaid be the subject of agreement reached during the process of Offer and Acceptance, the outcome of such agreement shall be recorded here and the final draft of the contract documents shall be revised to incorporate the effect of it.

No.	Subject	Details
1	[•]	[•]
2	[•]	[•]
3	[•]	[•]
4	[•]	[•]
5	[•]	[•]
6	[•]	[•]
7	[•]	[•]

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

Capacity

On behalf  
of

Name &  
signature  
of witness

Date

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

## C2.1 Pricing assumptions: Option B

### 1. How work is priced and assessed for payment

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

<b>Identified and defined terms</b>	11	
	11.2	(21) The Bill of Quantities is the <i>bill of quantities</i> 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
		<ul style="list-style-type: none"><li>• the quantity of the work which the <i>Contractor</i> has completed for each item in the Bill of Quantities multiplied by the rate and</li><li>• a proportion of each lump sum which is the proportion of the work covered by the item which the <i>Contractor</i> has completed.</li></ul>
		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.

### 2. 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 specifications and descriptions of the work or any constraints on 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.

### 3. Guidance before pricing and measuring

Employers preparing tenders or contract documents, and tendering contractors are advised to consult the sections dealing with the bill of quantities in the NEC3 Engineering and Construction Contract Guidance Notes before preparing the *bill of quantities* or before entering rates and lump sums into the *bill*.

There is no general provision in Option B for payment for materials on Site before incorporation into the *works*. If secondary Option X14 Advanced payment has not been used then the tendering contractor may obtain the same effect by inserting appropriate items in the method related charges where the *method of measurement* allows, or alternatively making allowance in the rates of the *bill of quantities* for the financing of Plant and Materials until they are incorporated in the *works*.

When compensation events arise, the default position is that the Bill of Quantities is not used to calculate the cost effect of the event. Defined Cost and the resulting Fee is used and Defined Cost includes all components of cost which the *Contractor* is likely to incur, including so called P & G items. Rates and lump sums from the Bill of Quantities, or from any other source, may be used instead of Defined Cost and the Fee only if the *Contractor* and *Project Manager* agree. If they are unable to agree, then Defined Cost

plus Fee is used.

#### 4. Measurement and payment

##### 4.1. 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
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
sum	Lump sum
t	tonne (1000kg)

##### 4.2. General assumptions

- 4.2.1. Unless otherwise stated, items are measured net in accordance with the drawings, and no allowance has been made in the quantities for waste.
- 4.2.2. 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.
- 4.2.3. An item against which no Price is entered will be treated as covered by other Prices or rates in the *bill of quantities*.
- 4.2.4. 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.
- 4.2.5. 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.

##### 4.3. Departures from the *method of measurement*

4.3.1.

**4.4. Amplification of or assumptions about measurement items**

The following is provided to assist in the interpretation of descriptions given in the *method of measurement*. In the event of any ambiguity or inconsistency between the statements in the *method of measurement* and this section, the interpretation given in this section shall be used.

4.4.1.

# C1.2 Contract Data

## Part two - Data provided by the Contractor

### Notes to a tendering contractor:

1. Please read both the NEC3 Engineering and Construction Contract (April 2013) and the relevant parts of its Guidance Notes (ECC3-GN)<sup>1</sup> in order to understand the implications of this Data which the tenderer is required to complete. An example of the completed Data is provided on pages 156 to 158 of the ECC3 (April 2013) Guidance Notes.
2. The number of the clause which requires the data is shown in the left hand column for each statement however other clauses may also use the same data
3. Where a form field like this [        ] appears, data is required to be inserted relevant to the option selected. Click on the form field **once** and type in the data. Otherwise complete by hand and in ink.

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

Clause	Statement	Data
10.1	The Contractor is (Name):  Address  Tel No.  Fax No.	
11.2(8)	The direct fee percentage is  The subcontracted fee percentage is	 %  %
11.2(18)	The working areas are the Site and	<b>Camden and Matla HV Yards Transmission Substations</b>
24.1	The Contractor's key persons are:  1 Name:  Job:  Responsibilities:  Qualifications:  Experience:  2 Name:  Job:  Responsibilities:  Qualifications:  Experience:	

<sup>1</sup> Available from Engineering Contract Strategies Tel 011 803 3008, Fax 011 803 3009 or see [www.ecs.co.za](http://www.ecs.co.za)

		<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 works is		
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:		
31.1	The programme identified in the Contract Data is		
<b>A</b>	<b>Priced contract with activity schedule</b>		
11.2(20)	The <i>activity schedule</i> is in		
11.2(30)	The tendered total of the Prices is	(in figures)	(in words), excluding VAT
<b>B</b>	<b>Priced contract with bill of quantities</b>		
11.2(21)	The <i>bill of quantities</i> is in		
11.2(31)	The tendered total of the Prices is	(in figures)	(in words), excluding VAT
<b>C</b>	<b>Target contract with activity schedule</b>		
11.2(20)	The <i>activity schedule</i> is in		
11.2(30)	The tendered total of the Prices is	(in figures)	(in words), excluding VAT
<b>D</b>	<b>Target contract with bill of quantities</b>		
11.2(21)	The <i>bill of quantities</i> is in		
11.2(31)	The tendered total of the Prices is	(in figures)	(in words), excluding VAT
<b>F</b>	<b>Management contract</b>		
20.2	Work which the <i>Contractor's</i> will do himself is	<b>Activity</b>	<b>price (lump sum or rate)</b>
	<b>Data for Schedules of Cost Components</b>	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).	

<b>A</b>	<b>Priced contract with activity schedule</b>	<b>Data for the Shorter Schedule of Cost Components</b>		
<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:	%		
21 in SSCC	The published list of Equipment is the last edition of the list published by  The percentage for adjustment for Equipment in the published list is	Minus -5%		
22 in SSCC	The rates of other Equipment are:	<b>Equipment</b>	<b>Size or capacity</b>	<b>Rate</b>
61 in SSCC	The hourly rates for Defined Cost of design outside the Working Areas are  <i>Note: Hourly rates are estimated 'cost to company of the employee' and not selling rates.</i>  Please insert another schedule if foreign resources may also be used	<b>Category of employee</b>	<b>Hourly rate</b>	
62 in SSCC	The percentage for design overheads is	%		
63 in SSCC	The categories of design employees whose travelling expenses to and from the Working Areas are included in Defined Cost are:			
	<b>If Option C, D or E is used</b>	<b>Data for Schedule of Cost Components</b>		
23 in SCC	The listed items of Equipment purchased for work on this contract, with an on cost charge, are:	<b>Equipment</b>	<b>Time related charge</b>	<b>Per (time period)</b>
24 in SCC	The rates of special Equipment are:	<b>Equipment</b>	<b>Size or capacity</b>	<b>Rate</b>

44 in SCC	The percentage for Working Areas overheads is:	:	%
51 in SCC	The hourly rates for Defined Cost of manufacture or fabrication outside the Working Areas are  <b>Note: Hourly rates are estimated 'cost to company of the employee' and not selling rates</b>  <b>Please insert another schedule if foreign resources may also be used</b>	<b>Category of employee</b>	<b>Hourly rate</b>
52 in SCC	The percentage for manufacture and fabrication overheads is	:	%
	<b>If Option C, D, or E is used</b>	<b>Data for both schedules of cost components</b>	
61 in SCC & SSCC	The hourly rates for Defined Cost of design outside the Working Areas are  <b>Note: Hourly rates are estimated 'cost to company of the employee' and not selling rates.</b>  <b>Please insert another schedule if foreign resources may also be used</b>	<b>Category of employee</b>	<b>Hourly rate</b>
62 in SCC & SSCC	The percentage for design overheads is	:	%
63 in SCC & SSCC	The categories of design employees whose travelling expenses to and from the Working Areas are included as a cost of design of the works and Equipment done outside the Working Areas are:		
	<b>If Option C, D or E is used</b>	<b>Data for the Shorter Schedule of Cost Components</b>	
41 in SSCC	The percentage for people overheads is:	:	%
21 in SSCC	The published list of Equipment is the last edition of the list published by  The percentage for adjustment for Equipment in the published list is	:	%

22 in SSCC	The rates of other Equipment are:	Equipment	Size or capacity	Rate

## C1.2 ECC3 Contract Data

### Part one - Data provided by the Employer

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

Clause	Statement	Data
1	<b>General</b>	
	The <i>conditions of contract</i> are the core clauses and the clauses for main Option	
	dispute resolution Option and secondary Options	<p><b>B: Priced contract with bill of quantities</b></p> <p><b>W1: Dispute resolution procedure</b></p> <p><b>X1: Price adjustment for inflation</b></p> <p><b>X2 Changes in the law</b></p> <p><b>X5: Sectional Completion</b></p> <p><b>X16: Retention</b></p> <p><b>X18: Limitation of liability</b></p> <p><b>Z: Additional conditions of contract</b></p>
	of the NEC3 Engineering and Construction Contract, April 2013 (ECC3)	
10.1	The <i>Employer</i> is (Name):	<b>Eskom Holdings SOC Ltd (reg no: 2002/015527/30), a state owned company 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>
10.1	The <i>Project Manager</i> is: (Name)	<b>Danie Bekker</b>
	Address	<b>Registered office at Megawatt Park, Maxwell Drive, Sandton, Johannesburg</b>
	Tel	<b>013 693 4938</b>
	Fax	
	e-mail	<b>BekkerDB@eskom.co.za</b>
10.1	The <i>Supervisor</i> is: (Name)	<b>TBA</b>
	Address	<b>Registered office at Megawatt Park, Maxwell Drive , Sandton, Johannesburg</b>

Tel No. TBA  
 Fax No. TBA  
 e-mail TBA

11.2(13) The *works* are SUPPLY AND APPLICATION OF RTV SILICONE RUBBER RE-COATING (INCLUDING SHED EXTENDERS WHEN REQUIRED) ON PORCELAIN SURFACED EQUIPMENT AT CAMDEN, KRIEL AND MATLA SUBSTATIONS

11.2(14) The following matters will be included in the Risk Register

- Possibility of electrical shock (live yard) as a result of live cables, fires, mechanical related injuries such as trapping, entanglement, accidents, heavy duty machinery under bus bars, etc.
- Roads around substation (slippery during rainy season)
- Community riots• Biological risks such as general infections, contaminated water, etc. and
- Environmental risks such as water, air and waste.
- Industrial action
- Inclement weather conditions  
Work requiring outage
- Live Apparatus
- Eskom Assets – around working areas
- Poisonous reptiles
- Availability of accommodation and transport to site
- Theft and other criminal activities

Furthermore, refer to general baseline risks assessment register for a general overview of possible risk and those listed under SHE Specification.

11.2(15) The *boundaries of the site* are Camden and Matla Power Station at Eskom Transmission substation

11.2(16) The Site Information is in Part 4: Site Information

11.2(19) The Works Information is in Part 3: Scope of Work and all documents and drawings to which it makes reference.

12.2 The *law of the contract* is the law of the Republic of South Africa

13.1 The *language of this contract* is English

13.3 The *period for reply* is 2 weeks

**2 The Contractor's main responsibilities**  
 Data required by this section of the core clauses is provided by the Contractor in Part 2 and terms in italics used in this section are identified elsewhere in this Contract Data.

**3 Time**

11.2(3)	The <i>completion date</i> for the whole of the <i>works</i> is	<b>15 December 2026</b>	
11.2(9)	The <i>key dates</i> and the <i>conditions</i> to be met are:	<b>Condition to be met</b>	<b>key date</b>
		1 Approval of the Safety file and induction on site	
		2 Handing over certificates signed both parties on completion of the works	
30.1	The <i>access dates</i> are:	<b>Part of the Site</b>	<b>Date</b>
		1 Where the contract is required to site	
31.1	The <i>Contractor</i> is to submit a first programme for acceptance within	<b>Within Two weeks of the Contract Date.</b>	
31.2	The <i>starting date</i> is		
32.2	The <i>Contractor</i> submits revised programmes at intervals no longer than	<b>Two weeks and monthly reports during execution</b>	
35.1	The <i>Employer</i> is not willing to take over the <i>works</i> before the Completion Date.		

**4 Testing and Defects**

42.2	The <i>defects date</i> is	<b>Fifty two (52) weeks after Completion of the whole of the <i>works</i>.</b>	
43.2	The <i>defect correction period</i> is	<b>Defects which the Supervisor notifies that may jeopardise the performance of the works in use is the shortest possible time starting immediately upon notification of the Defect</b>	
	except that the <i>defect correction period</i> for	<b>Defects which the Supervisor notifies require urgent correction is 48 (forty-eight) hours</b>	
	and the <i>defect correction period</i> for		

**5 Payment**

50.1	The <i>assessment interval</i> is	<b>Between the 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>As per applicable Eskom commercial policy or Four (4) weeks upon receipt of correct invoice and paper work</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</b>	

appointment it shall not be necessary to prove) for amounts due in Rands and

(ii) the LIBOR rate applicable at the time for amounts due in other currencies. LIBOR is the 6 month London Interbank Offered Rate quoted under the caption "Money Rates" in The Wall Street Journal for the applicable currency or if no rate is quoted for the currency in question then the rate for United States Dollars, and if no such rate appears in The Wall Street Journal then the rate as quoted by the Reuters Monitor Money Rates Service (or such service as may replace the Reuters Monitor Money Rates Service) on the due date for the payment in question, adjusted *mutatis mutandis* every 6 months thereafter and as certified, in the event of any dispute, by any manager employed in the foreign exchange department of The Standard Bank of South Africa Limited, whose appointment it shall not be necessary to prove.

**6 Compensation events**

60.1(13)	<p>The place where weather is to be recorded is:</p> <p>The <i>weather measurements</i> to be recorded for each calendar month are,</p> <p>The <i>weather measurements</i> are supplied by</p> <p>The <i>weather data</i> are the records of past <i>weather measurements</i> for each calendar month which were recorded at:</p> <p>and which are available from:</p>	<p>[•]</p> <p>the cumulative rainfall (mm)</p> <p>the number of days with rainfall more than 10 mm</p> <p>the number of days with minimum air temperature less than 0 degrees Celsius</p> <p>the number of days with snow lying at 09:00 hours South African Time</p> <p>and these measurements:</p> <p>[•]</p> <p>[•]</p> <p>the South African Weather Bureau and included in Annexure A to this Contract Data provided by the <i>Employer</i></p>
----------	--	---

60.1(13)	<p>Assumed values for the ten year return <i>weather data</i> for each <i>weather measurement</i> for each calendar month are:</p>	<p>As stated in Annexure A to this Contract Data provided by the <i>Employer</i>.</p> <p>Note: If this arrangement is used, delete the rows above for 60.1(13) and delete this note.</p>
----------	--	--

<b>7</b>	<b>Title</b>	<p>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.</p>
----------	--------------	---

<b>8</b>	<b>Risks and insurance</b>	
80.1	These are additional <i>Employer's</i> risks	<b>1. Not completing in time</b>
<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.
<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	There is no reference to Contract Data in this Option and terms in italics are identified elsewhere in this Contract Data.
<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).
	Address	[•]
	Tel No.	[•]
	Fax No.	[•]
	e-mail	[•]
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	[•] South Africa
	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	[•].		
X1.1(c)	The <i>proportions</i> used to calculate the Price Adjustment Factor are:			
		<b>proportion</b>	<b>linked to index for</b>	<b>Index prepared by</b>
		0. [•]	[•]	[•]
		0. [•]	[•]	[•]
		0. [•]	[•]	[•]
		0. [•]	[•]	[•]
		0. [•]	[•]	[•]
		[•]	<b>non-adjustable</b>	
	Total	1.00		
<b>X2</b>	<b>Changes in the law</b>	There is no reference to Contract Data in this Option and terms in italics are identified elsewhere in this Contract Data.		
<b>X5</b>	<b>Sectional Completion</b>			
X5.1	The <i>completion date</i> for each section of the works is:	<b>Section</b>	<b>Description</b>	<b>Completion date</b>
		1	As per description and dates under 11.2(9)	
<b>X5 &amp; X7</b>	<b>Sectional Completion and delay damages used together</b>			
X7.1 X5.1	Delay damages for late Completion of the sections of the works are:	<b>section</b>	<b>Description</b>	<b>Amount per day</b>
		1	As per description and dates under 11.2(9)	
<b>X15</b>	<b>Limitation of the Contractor's liability for his design to reasonable skill &amp; care</b>	There is no reference to Contract Data in this Option and terms in italics are identified elsewhere in this Contract Data.		
<b>X16</b>	<b>Retention (not used with Option F)</b>			
X16.1	The <i>retention free amount</i> is	R0.00		
	The <i>retention percentage</i> is	5% of contract value		
<b>X18</b>	<b>Limitation of liability</b>			
X18.1	The Contractor's liability to the Employer for indirect or consequential loss is limited to:	R0.0 (zero Rand)		
X18.2	For any one event, the Contractor's liability to the Employer for loss of or	the amount of the deductibles relevant to the event		

damage to the *Employer's* property is limited to:

X18.3	The <i>Contractor's</i> liability for Defects due to his design which are not listed on the Defects Certificate is limited to	<p><b>The greater of</b></p> <ul style="list-style-type: none"> <li>• the total of the Prices at the Contract Date and</li> <li>• the amounts excluded and unrecoverable from the <i>Employer's</i> assets policy for correcting the Defect (other than the resulting physical damage which is not excluded) plus the applicable deductible as at contract date.</li> </ul>
X18.4	The <i>Contractor's</i> total liability to the <i>Employer</i> for all matters arising under or in connection with this contract, other than excluded matters, is limited to:	<p><b>the total of the Prices other than for the additional excluded matters.</b></p> <p><b>The <i>Contractor's</i> total liability for the additional excluded matters is not limited.</b></p> <p><b>The additional excluded matters are amounts for which the <i>Contractor</i> is liable under this contract for</b></p> <ul style="list-style-type: none"> <li>• Defects due to his design which arise before the Defects Certificate is issued,</li> <li>• Defects due to manufacture and fabrication outside the Site,</li> <li>• loss of or damage to property (other than the <i>works</i>, Plant and Materials),</li> <li>• death of or injury to a person and</li> <li>• infringement of an intellectual property right.</li> </ul>
X18.5	The <i>end of liability date</i> is	<p><b>(i) 7 years after the <i>defects date</i> for latent Defects and</b></p> <p><b>(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.</b></p> <p><b>A latent Defect is a Defect which would not have been discovered on reasonable inspection by the <i>Employer</i> or the <i>Supervisor</i> before the <i>defects date</i>, without requiring any inspection not ordinarily carried out by the <i>Employer</i> or the <i>Supervisor</i> during that period. If the <i>Employer</i> or the <i>Supervisor</i> do undertake any inspection over and above the reasonable inspection, this does not place a greater responsibility on the <i>Employer</i> or the <i>Supervisor</i> to have discovered the Defect.</b></p>
Z	The <i>Additional conditions of contract</i> are	Z1 to Z15 always apply.

Z1 Cession delegation and assignment

- Z1.1 The *Contractor* does not cede, delegate or assign any of its rights or obligations to any person without the written consent of the *Employer*.
- Z1.2 Notwithstanding the above, the *Employer* may on written notice to the *Contractor* 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 as a result of the restructuring of the Electricity Supply Industry.

## **Z2 Joint ventures**

- Z2.1 If the *Contractor* 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 *Employer* for the performance of this contract.
- Z2.2 Unless already notified to the *Employer*, the persons or organisations notify the *Project Manager* within two weeks of the Contract Date of the key person who has the authority to bind the *Contractor* on their behalf.
- Z2.3 The *Contractor* does not alter the composition of the joint venture, consortium or other unincorporated grouping of two or more persons without the consent of the *Employer* having been given to the *Contractor* in writing.

## **Z3 Change of Broad Based Black Economic Empowerment (B-BBEE) status**

- Z3.1 Where a change in the *Contractor's* legal status, ownership or any other change to his business composition or business dealings results in a change to the *Contractor's* B-BBEE status, the *Contractor* notifies the *Employer* within seven days of the change.
- Z3.2 The *Contractor* is required to submit an updated verification certificate and necessary supporting documentation confirming the change in his B-BBEE status to the *Project Manager* within thirty days of the notification or as otherwise instructed by the *Project Manager*.
- Z3.3 Where, as a result, the *Contractor's* B-BBEE status has decreased since the Contract Date the *Employer* may either re-negotiate this contract or alternatively, terminate the *Contractor's* obligation to Provide the Works.
- Z3.4 Failure by the *Contractor* to notify the *Employer* of a change in its B-BBEE status may constitute a reason for termination. If the *Employer* 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.

## **Z4 Confidentiality**

- Z4.1 The *Contractor* 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 *Contractor*, enters the public domain or to information which was already in the possession of the *Contractor* at the time of disclosure (evidenced by written records in existence at that time). Should the *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 In the event that 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. In the event that 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, in the course of 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 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.

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

**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 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>Loss of or damage to property</b> <u><i>Employer's</i> property</u> The replacement cost where not covered by the <i>Employer's</i> insurance  The <i>Employer's</i> policy deductible, as

	Contract Date, where covered by the Employer's 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 Contractor 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 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
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:

<b>AAIA</b>	means approved asbestos inspection authority.
<b>ACM</b>	means asbestos containing materials.
<b>AL</b>	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 in order to control asbestos exposure to prevent exceeding the OEL.
<b>Ambient Air</b>	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.
<b>Compliance Monitoring</b>	means compliance sampling used to assess whether or not the personal exposure of workers to regulated asbestos fibres is in compliance with the Standard's requirements for safe processing, handling, storing, disposal and phase-out of asbestos and asbestos containing material, equipment and articles.
<b>OEL</b>	means occupational exposure limit.
<b>Parallel Measurements</b>	means measurements performed in parallel, yet separately, to existing measurements to verify validity of results.
<b>Safe Levels</b>	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.
<b>Standard</b>	means the <i>Employer's</i> Asbestos Standard 32-303: Requirements for Safe Processing, Handling, Storing, Disposal and Phase-out of Asbestos and Asbestos Containing Material, Equipment and Articles.
<b>SANAS</b>	means the South African National Accreditation System.
<b>TWA</b>	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 effected 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.
- 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.

Month	Weather measurement				
	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 taken into account in assessing a compensation event.



## C2.2 the bill of quantities

The Price List is as the attached pricing schedules. Please note that the works is outage related per generator and feeder bays at Camden and Matla substation.

STATION:	<b>Camden 400kV Yard Substation</b>					Page 1
EQUIPMENT	NO.	TOTAL AREA	COATING COST	LABOUR COST	TOTAL COST	
<b>DUVHA FEEDER BAY</b>						
Circuit Breaker Supports	3	42.285				R -
Circuit Breaker Chambers	6	74.371				R -
Grading Capacitors	6	33.276				R -
Site Establishment	1					
			R -	R -		R -
<b>SOL NO. 1 FEEDER BAY</b>						
Capacitor Voltage Transformers	3	32.097				R -
Site Establishment	1					
			R -	R -		R -
<b>SOL NO. 2 FEEDER BAY</b>						
Capacitor Voltage Transformers	3	32.097				R -
Site Establishment	1					
			R -	R -		R -
<b>TUTUKA NO. 1 FEEDER BAY</b>						

Capacitor Voltage Transformers	3	32.097			R -
Site Establishment	1				
			R -	R -	R -
<b>CHIVELSTON NO.1 FDR BAY</b>					
Capacitor Voltage Transformers	3	32.097			R -
Site Establishment	1				
			R -	R -	R -
<b>GENERATOR NO. 3 BAY</b>					
Current Transformers	3	52.845			R -
Site Establishment	1				
			R -	R -	R -
<b>BUS SECTION 1</b>					
Current Transformers	1	17.615			R -
Busbar cvt	1	10.699			R -
Site Establishment	1				
			R -	R -	R -
<b>Total for Camden 400kV Yard</b>					
					R -

**ESKOM HOLDINGS SOC LTD - SUPPLY AND APPLICATION OF RTV SILICONE RUBBER COATING(INCLUDING SHED EXTENDERS WHEN REQUIRED) ON PORCELAIN SURFACED EQUIPMENT AT MATLA SUBSTATION**

**BILL NO. 5 - MATLA 275kV RECOAT**

**THE FOLLOWING IN RECOAT PAINTWORK TO MATLA SUBSTATION SPECIAL FINISHES**

Supply and application of Room Temperature Vulcanized (RTV) Silicone Rubber Insulator Coating on ceramic HV equipment, including preparation, cleaning etc., as per the Engineers specifications (Doc 240-56063877 and 240-56062705) :

**MATLA 275KV YARD RE-COATING ESKOM**

EQUIPMENT	No.	Paint required	Total Vol of paint	Coating material	Labour & Application	TOTAL AMOUNT
			(2)	(3)	(4)	(3 + 4)
<b>Benburg Feeder</b>						
Isolator posts	18	3.600	64.80			R 0.00
Breaker chambers	3	4.450	13.35			R 0.00
Breaker supports	3	1.800	5.400			R 0.00
Current transformers	3	5.000	15.00			R 0.00
Line trap supports	2	3.600	7.200			R 0.00
Voltage transformers	1	4.000	4.00			R 0.00
Surge arrestors	3	4.400	13.20			R 0.00
Site establishment, HSE	1					
				R 0.00	R 0.00	R 0.00
<b>Esselen Feeder</b>						
Isolator posts	18	3.600	64.80			R 0.00
Breaker chambers	3	4.450	13.35			R 0.00
Breaker supports	3	1.800	5.400			R 0.00
Current transformers	3	5.000	15.00			R 0.00
Line trap supports	2	3.600	7.200			R 0.00
Voltage transformers	3	4.000	12.00			R 0.00
Surge arrestors	3	4.400	13.20			R 0.00
Site establishment, HSE	1					
				R 0.00	R 0.00	R 0.00

<b>Nevis no:1 Feeder</b>						
Isolator posts	18	3.600	64.80			R 0.00
Breaker chambers	3	4.450	13.35			R 0.00
Breaker supports	3	4.400	13.200			R 0.00
Current transformers	2	5.000	10.00			R 0.00
Current transformers	1	5.000	5.00			R 0.00
Line trap supports	2	3.600	7.200			R 0.00
Voltage transformers	3	4.000	12.00			R 0.00
Surge arrestors	3	4.400	13.20			R 0.00
Site establishment, HSE	1					
				R 0.00	R 0.00	R 0.00

<b>Nevis no:2 Feeder</b>						
Isolator posts	18	3.600	64.80			R 0.00
Breaker chambers	1	4.450	4.45			R 0.00
Breaker supports	1	4.400	4.400			R 0.00
Current transformers	3	5.000	15.00			R 0.00
Line trap supports	6	3.600	21.60			R 0.00
Voltage transformers	3	4.000	12.000			R 0.00
Surge arrestors	3	4.400	13.20			R 0.00
Site establishment, HSE	1					
				R 0.00	R 0.00	R 0.00

<b>Kruispunt Feeder</b>						
Isolator posts	27	5.000	135.00			R 0.00
Breaker chambers	1	4.450	4.45			R 0.00
Breaker supports	1	4.400	4.400			R 0.00
Current transformers	2	5.000	10.00			R 0.00
Current transformers	1	5.000	5.00			R 0.00
Line trap supports	2	3.600	7.200			R 0.00
Voltage transformers	3	4.000	12.00			R 0.00
Surge arrestors	1	4.400	4.40			R 0.00
Site establishment, HSE	1					
				R 0.00	R 0.00	R 0.00

<b>Transformer no: 1</b>						
Isolator posts	18	5.000	90.00			R 0.00
Breaker chambers	1	4.450	4.45			R 0.00
Grading resistors	1	4.000	4.00			R 0.00
Breaker supports	1	6.000	6.000			R 0.00
Earth Links	3	5.000	15.00			R 0.00

Current transformers	3	5.000	15.00			R 0.00
Voltage transformers	3	4.000	12.00			R 0.00
Surge arrestors	3	4.400	13.20			R 0.00
Site establishment, HSE	1					
				R 0.00	R 0.00	R 0.00

<b>Bus section no: 1</b>						
Isolator posts	12	5.000	60.00			R 0.00
Breaker chambers	3	4.450	13.35			R 0.00
Breaker supports	3	4.400	13.200			R 0.00
Current transformers	6	5.000	30.00			R 0.00
Site establishment, HSE	1					
				R 0.00	R 0.00	R 0.00

<b>Bus section no: 2</b>						
Isolator posts	12	5.000	60.00			R 0.00
Breaker chambers	3	4.450	13.35			R 0.00
Breaker supports	3	4.400	13.200			R 0.00
Current transformers	6	5.000	30.00			R 0.00
Site establishment, HSE	1					
				R 0.00	R 0.00	R 0.00

<b>Bus Coupler no: A</b>						
Isolator posts	12	5.000	60.00			R 0.00
Breaker chambers	3	4.450	13.35			R 0.00
Breaker supports	3	4.400	13.200			R 0.00
Current transformers	6	5.000	30.00			R 0.00
Site establishment, HSE	1					
				R 0.00	R 0.00	R 0.00

<b>Bus Coupler no: B</b>						
Isolator posts	12	5.000	60.00			R 0.00
Breaker chambers	3	4.450	13.35			R 0.00
Breaker supports	3	4.400	13.200			R 0.00
Current transformers	6	5.000	30.00			R 0.00
Site establishment, HSE	1					
				R 0.00	R 0.00	R 0.00

<b>Busbar</b>						
Voltage transformers	4	5.000	20.00			R 0.00
Isolator posts	9	5.000	45.00			R 0.00
Site establishment, HSE	1					R 0.00

				R 0.00	R 0.00	R 0.00
--	--	--	--	--------	--------	--------

<b>Generator no: 3</b>						
Isolator posts	12	5.000	60.00			R 0.00
Breaker chambers	3	4.450	13.35			R 0.00
Breaker supports	3	4.400	13.200			R 0.00
Current transformers	3	5.000	15.00			R 0.00
Earth Link	3	6.000	18.00			R 0.00
Voltage transformers	1	5.000	5.00			R 0.00
Voltage transformers	2	5.000	10.00			R 0.00
Site establishment, HSE	1					
				R 0.00	R 0.00	R 0.00

<b>Generator no: 4</b>						
Isolator posts	12	5.000	60.00			R 0.00
Breaker chambers	3	4.450	13.35			R 0.00
Breaker supports	3	4.400	13.200			R 0.00
Earth Links	3	6.000	18.00			R 0.00
Current transformers	3	5.000	15.00			R 0.00
Voltage transformers	1	5.000	5.00			R 0.00
Voltage transformers	2	5.000	10.00			R 0.00
Site establishment, HSE	1					
				R 0.00	R 0.00	R 0.00

<b>Generator no: 5</b>						
Isolator posts	12	5.000	60.00			R 0.00
Breaker chambers	3	4.450	13.35			R 0.00
Breaker supports	3	4.400	13.200			R 0.00
Current transformers	3	5.000	15.00			R 0.00
Earth Link	3	6.000	18.00			R 0.00
Voltage transformers	1	5.000	5.00			R 0.00
Voltage transformers	2	5.000	10.00			R 0.00
Site establishment, HSE	1					
				R 0.00	R 0.00	R 0.00

<b>Generator no: 6</b>						
Isolator posts	12	5.000	60.00			R 0.00
Breaker chambers	3	4.450	13.35			R 0.00
Breaker supports	3	4.400	13.200			R 0.00
Current transformers	3	5.000	15.00			R 0.00
Earth Link	3	6.000	18.00			R 0.00
Voltage transformers	1	5.000	5.00			R 0.00

Voltage transformers	2	5.000	15.00			R 0.00
Site establishment, HSE	1					
				R 0.00	R 0.00	R 0.00

Total 0.00

**ESKOM HOLDINGS SOC LTD - SUPPLY AND APPLICATION OF RTV SILICONE RUBBER COATING(INCLUDING SHED EXTENDERS WHEN REQUIRED) ON PORCELAIN SURFACED EQUIPMENT AT MATLA SUBSTATION**

**BILL NO. 4 - MATLA 400kV RECOAT**

**THE FOLLOWING IN RECOAT PAINTWORK TO MATLA SUBSTATION SPECIAL FINISHES**

Supply and application of Room Temperature Vulcanized (RTV) Silicone Rubber Insulator Coating on ceramic HV equipment, including preparation, cleaning etc., as per the Engineers specifications (Doc 240-56063877 and 240-56062705) :

**MATLA 400KV YARD RE-COATING**

EQUIPMENT	No.	Paint required	Total Vol of paint	Coating material	Labour & Application	TOTAL AMOUNT
				(3)	(4)	(3 + 4)
<b>Glockner no:1 Feeder</b>						
Isolator posts	18	5	90			R 0.00
Support posts	8	5.600	44.80			R 0.00
Earth link posts	3	5.200	15.60			R 0.00
Breaker chambers	6	5.200	31.20			R 0.00
Breaker supports	3	7.000	21.00			R 0.00
pantograph drives	3	5.600	16.80			R 0.00
Pantograph supports	3	5.600	16.800			R 0.00
Current transformers	3	8.600	25.800			R 0.00
Line trap supports	6	5.800	34.800			R 0.00
Voltage transformers	3	5.300	15.90			R 0.00
Surge arrestors	3	6.000	18.000			R 0.00
Site establishment, HSE	1					
				R 0.00	R 0.00	R 0.00
<b>Glockner no:2 Feeder</b>						
Isolator posts	12	5.000	60.00			R 0.00
Isolator posts	6	5.000	30.00			R 0.00
Support posts	8	5.600	44.800			R 0.00
Earth link posts	3	5.200	15.60			R 0.00

Breaker chambers	6	5.200	31.200			R 0.00
Breaker supports	3	7.000	21.000			R 0.00
pantograph drives	3	5.600	16.80			R 0.00
Pantograph supports	3	5.600	16.800			R 0.00
Current transformers	3	8.600	25.800			R 0.00
Line trap supports	6	5.800	34.800			R 0.00
Voltage transformers	3	5.300	15.90			R 0.00
Surge arrestors	3	6.000	18.000			R 0.00
Site establishment, HSE	1					
				R 0.00	R 0.00	R 0.00
<b>Grootvlei Feeder</b>						
Isolator posts	18	5.000	90.00			R 0.00
Support posts	8	5.600	44.800			R 0.00
Earth link posts	3	5.200	15.60			R 0.00
Breaker chambers	6	5.200	31.200			R 0.00
Breaker supports	3	7.000	21.000			R 0.00
pantograph drives	3	5.600	16.80			R 0.00
Pantograph supports	3	5.600	16.800			R 0.00
Current transformers	3	8.600	25.800			R 0.00
Line trap supports	6	5.800	34.800			R 0.00
Voltage transformers	3	5.300	15.90			R 0.00
Surge arrestors	3	6.000	18.000			R 0.00
Site establishment, HSE	1					
				R 0.00	R 0.00	R 0.00

<b>Zeus Feeder</b>						
Isolator posts	18	5.000	90.00			R 0.00
Surport posts	6	5.600	33.600			R 0.00
Support posts	2	5.600	11.20			R 0.00
Earth link posts	3	5.200	15.600			R 0.00
Breaker chambers	6	5.200	31.200			R 0.00
Breaker supports	3	7.000	21.00			R 0.00
pantograph drives	3	5.600	16.800			R 0.00
Pantograph supports	3	5.600	16.800			R 0.00
Current transformers	3	8.600	25.800			R 0.00
Line trap supports	6	5.800	34.800			R 0.00
Voltage transformers	3	5.300	15.90			R 0.00
Surge arrestors	3	6.000	18.000			R 0.00
Site establishment, HSE	1					
				R 0.00	R 0.00	R 0.00
<b>Duvha Feeder</b>						
Isolator posts	18	5.000	90.00			R 0.00

Support posts	2	5.600	11.200			R 0.00
Earth link posts	3	5.200	15.60			R 0.00
Breaker chambers	6	5.200	31.200			R 0.00
Breaker supports	3	7.000	21.000			R 0.00
pantograph drives	3	5.600	16.80			R 0.00
Pantograph supports	3	5.600	16.800			R 0.00
Current transformers	3	8.600	25.800			R 0.00
Line trap supports	6	5.800	34.800			R 0.00
Voltage transformers	3	5.300	15.90			R 0.00
Surge arrestors	3	6.000	18.000			R 0.00
Site establishment, HSE	1					
				R 0.00	R 0.00	R 0.00

<b>Transfer bus</b>						
Isolator posts	12	5.000	60.00			R 0.00
Support posts	7	5.600	39.200			R 0.00
Breaker chambers	6	5.200	31.20			R 0.00
Breaker supports	3	7.000	21.000			R 0.00
pantograph drives	3	1.263	3.79			R 0.00
Pantograph supports	3	5.600	16.800			R 0.00
Current transformers	3	5.600	16.800			R 0.00
Site establishment, HSE	1					
				R 0.00	R 0.00	R 0.00

<b>Transformer 1</b>						
Isolator posts	6	5.000	30.00			R 0.00
Support posts	7	5.600	39.200			R 0.00
Earth link posts	3	5.200	15.60			R 0.00
Breaker chambers	18	5.500	99.00			R 0.00
Breaker grading caps	18	5.200	93.60			R 0.00
Breaker supports	9	5.200	46.800			R 0.00
pantograph drives	3	1.263	3.79			R 0.00
Pantograph supports	3	5.600	16.800			R 0.00
Current transformers	1	5.600	5.600			R 0.00
Current transformers	2	5.600	11.200			R 0.00
Transformer Bushings 400kV	3	12.000	36.000			R 0.00
Transformer bushings 275kV	3	10.000	30.000			R 0.00
Surge arrestors	3	6.000	18.00			R 0.00
Site establishment, HSE & Skyjack	1					R 0.00
				R 0.00	R 0.00	R 0.00
Voltage transformers	2	5.300	10.600			R 0.00

					R 0.00	R 0.00
						R 0.00

<b>Generator 2</b>						
Isolator posts	6	5.000	30.00			R 0.00
Support posts	7	5.000	35.000			R 0.00
Earth link posts	3	5.600	16.80			R 0.00
Breaker chambers	6	5.200	31.200			R 0.00
Breaker supports	3	5.200	15.600			R 0.00
pantograph drives	3	7.000	21.00			R 0.00
Pantograph supports	3	5.600	16.800			R 0.00
Current transformers	2	5.600	11.200			R 0.00
Current transformers	1	8.600	8.600			R 0.00
Line trap supports	6	5.800	34.800			R 0.00
Voltage transformers	1	5.300	5.30			R 0.00
Voltage transformers	1	5.300	5.30			R 0.00
Voltage transformers	1	5.300	5.30			R 0.00
Site establishment, HSE	1					
				R 0.00	R 0.00	R 0.00

<b>Generator 1</b>						
Isolator posts	6	5.000	30.00			R 0.00
Support posts	7	5.000	35.000			R 0.00
Earth link posts	3	5.600	16.80			R 0.00
Breaker chambers	6	5.200	31.200			R 0.00
Breaker supports	3	5.200	15.600			R 0.00
pantograph drives	3	7.000	21.00			R 0.00
Pantograph supports	3	5.600	16.800			R 0.00
Current transformers	3	5.600	16.80			R 0.00
Voltage transformers	1	5.300	5.30			R 0.00
Voltage transformers	2	5.300	10.60			R 0.00
Site establishment, HSE	1					
				R 0.00	R 0.00	R 0.00

<b>Bus Coupler no: A</b>						
Isolator posts	12	5.000	60.00			R 0.00
Support posts	1	5.000	5.000			R 0.00
Breaker chambers	6	5.200	31.20			R 0.00
Breaker supports	3	5.200	15.600			R 0.00
Current transformers	6	5.600	33.60			R 0.00
Site establishment, HSE	1					
				R 0.00	R 0.00	R 0.00

<b>Bus Coupler no: B</b>						
Isolator posts	12	5.000	60.00			R 0.00
Support posts	1	5.000	5.000			R 0.00
Breaker chambers	6	5.200	31.20			R 0.00
Breaker supports	3	5.200	15.600			R 0.00
Current transformers	6	5.600	33.60			R 0.00
Site establishment, HSE	1					
				R 0.00	R 0.00	R 0.00

<b>Bussection</b>						
Isolator posts	12	5.000	60.00			R 0.00
Breaker chambers	6	5.200	31.200			R 0.00
Breaker supports	3	5.200	15.60			R 0.00
Current transformers	6	5.600	33.600			R 0.00
Site establishment, HSE	1					
				R 0.00	R 0.00	R 0.00

<b>Busbar</b>						
Voltage transformers	2	5.600	11.20			R 0.00
Voltage transformers	1	5.600	5.60			R 0.00
Site establishment, HSE	1					
				R 0.00	R 0.00	R 0.00

Total

R 0.00

**SILICON COATING EQUIPMENT FOR SUBSTATION SUMMARY**

Item No	Description	Amount
2	<b>CAMDEN 400KV YARD (RE-COAT)</b>	R 0.00
2.1	400kV Yard	
	<b>Sub-Total 1</b>	<b>R 0.00</b>
3	<b>MATLA 275kV RECOAT</b>	
3.1	275KV Yard	
	<b>Sub-Total 1</b>	
4	<b>MATLA 400kV RECOAT</b>	
4.1	400KV Yard	R 0.00
	<b>Sub-Total 1</b>	<b>R 0.00</b>
	<b>Grand Total</b>	<b>R 0.00</b>



## PART 3: SCOPE OF WORK

Document reference	Title	No of pages
C3.1	This cover page <i>Employer's Works Information</i>	1
C3.2	<i>Contractor's Works Information</i>	
Total number of pages		21

## C3.1: EMPLOYER’S WORKS INFORMATION

### Contents

<b>Part 3: Scope of Work</b> .....	<b>1</b>
<b>C3.1: Employer’s works Information</b> .....	<b>2</b>
<b>1 Description of the works</b> .....	<b>5</b>
1.1 Executive overview .....	5
1.2 <i>Employer’s</i> objectives and purpose of the <i>works</i> .....	5
1.3 Interpretation and terminology .....	5
<b>2 Management and start up</b> .....	<b>65</b>
2.1 Management meetings.....	65
2.2 Documentation control .....	6
2.3 Health and safety risk management .....	76
2.4 Environmental constraints and management .....	7
2.5 Quality assurance requirements .....	87
2.6 Programming constraints .....	87
2.7 <i>Contractor’s</i> management, supervision and key people.....	87
2.8 Invoicing and payment .....	87
2.9 Insurance provided by the <i>Employer</i> .....	98
2.10 Contract change management.....	98
2.11 Provision of bonds and guarantees .....	98
2.12 Records of Defined Cost, payments & assessments of compensation events to be kept by the <i>Contractor</i> .....	98
2.13 Training workshops and technology transfer .....	98
<b>3 Engineering and the Contractor’s design</b> .....	<b>109</b>
3.1 <i>Employer’s</i> design.....	109
3.2 Parts of the <i>works</i> which the <i>Contractor</i> is to design.....	109
3.3 Procedure for submission and acceptance of <i>Contractor’s</i> design .....	109
3.4 Other requirements of the <i>Contractor’s</i> design.....	109
3.5 Use of <i>Contractor’s</i> design.....	109
3.6 Design of Equipment.....	109
3.7 Equipment required to be included in the <i>works</i> .....	10
3.8 As-built drawings, operating manuals and maintenance schedules.....	10
<b>4 Procurement</b> .....	<b>11</b>
4.1 People .....	11
4.1.1 Minimum requirements of people employed on the Site.....	11
4.1.2 BBBEE and preferencing scheme.....	11

4.1.3	Accelerated Shared Growth Initiative – South Africa (ASGI-SA)	11
4.2	Subcontracting	1244
4.2.1	Preferred subcontractors	1244
4.2.2	Subcontract documentation, and assessment of subcontract tenders	1244
4.2.3	Limitations on subcontracting	12
4.2.4	Attendance on subcontractors	12
4.3	Plant and Materials	12
4.3.1	Quality	12
4.3.2	Plant & Materials provided “free issue” by the <i>Employer</i>	12
4.3.3	<i>Contractor’s</i> procurement of Plant and Materials	12
4.3.4	Spares and consumables	12
4.4	Tests and inspections before delivery	13
4.5	Marking Plant and Materials outside the Working Areas	13
4.6	<i>Contractor’s</i> Equipment (including temporary works)	13
4.7	Cataloguing requirements	13
<b>5</b>	<b>Construction</b>	<b>1314</b>
5.1	Temporary works, Site services & construction constraints	1314
5.1.1	<i>Employer’s</i> Site entry and security control, permits, and Site regulations	1314
5.1.2	Restrictions to access on Site, roads, walkways and barricades	1314
5.1.3	People restrictions on Site; hours of work, conduct and records	1314
5.1.4	Health and safety facilities on Site	1314
5.1.5	Environmental controls, fauna & flora, dealing with objects of historical interest	14
5.1.6	Title to materials from demolition and excavation	14
5.1.7	Cooperating with and obtaining acceptance of Others	1415
5.1.8	Publicity and progress photographs	1415
5.1.9	<i>Contractor’s</i> Equipment	1415
5.1.10	Equipment provided by the <i>Employer</i>	1415
5.1.11	Site services and facilities	15
5.1.12	Facilities provided by the <i>Contractor</i>	15
5.1.13	Existing premises, inspection of adjoining properties and checking work of Others	15
5.1.14	Survey control and setting out of the works	1546
5.1.15	Excavations and associated water control	1546
5.1.16	Underground services, other existing services, cable and pipe trenches and covers	1546
5.1.17	Control of noise, dust, water and waste	16
5.1.18	Sequences of construction or installation	16
5.1.19	Giving notice of work to be covered up	16
5.1.20	Hook ups to existing works	16
5.2	Completion, testing, commissioning and correction of Defects	1617
5.2.1	Work to be done by the Completion Date	1617
5.2.2	Use of the works before Completion has been certified	1617

5.2.3	Materials facilities and samples for tests and inspections .....	17
5.2.4	Commissioning .....	17
5.2.5	Start-up procedures required to put the <i>works</i> into operation.....	17
5.2.6	Take over procedures .....	<u>1748</u>
5.2.7	Access given by the <i>Employer</i> for correction of Defects.....	<u>1748</u>
5.2.8	Performance tests after Completion.....	<u>1748</u>
5.2.9	Training and technology transfer.....	<u>1748</u>
5.2.10	Operational maintenance after Completion.....	<u>1748</u>
<b>6</b>	<b>Plant and Materials standards and workmanship .....</b>	<b><u>1819</u></b>
6.1	Investigation, survey and Site clearance .....	19
6.2	Building works .....	19
6.3	Civil engineering and structural works .....	19
6.4	Electrical & mechanical engineering works.....	<u>1920</u>
6.5	Process control and IT works.....	<u>1920</u>
6.6	Other [as required] .....	<u>1920</u>
<b>7</b>	<b>List of drawings .....</b>	<b><u>2021</u></b>
7.1	Drawings issued by the <i>Employer</i> .....	<u>2021</u>
<b>C3.2</b>	<b>Contractor's Works Information .....</b>	<b><u>2122</u></b>

# 1 Description of the works

## 1.1 Executive overview

The works to be carried out according to the Eskom RTV Silicone Rubber Insulator Coating and Shed Extender Application Standard 240-56063877 revision 2.

### The scope of works

The scope of work includes SUPPLY AND APPLICATION OF RTV SILICONE RUBBER RE-COATING (INCLUDING SHED EXTENDERS WHEN REQUIRED) ON PORCELAIN SURFACED EQUIPMENT AT CAMDEN AND MATLA SUBSTATION is as per the attached below standard documents:

- **240-56063877 RTV SILICONE RUBBER INSULATOR COATING AND SHED EXTENDER APPLICATION STANDARD**
- **240-56062705 RTV SILICONE RUBBER INSULATOR COATING AND SHED EXTENDER SUPPLIER STANDARD**

## 1.2 Employer’s objectives and purpose of the works

The electrical and mechanical performance of substation insulation plays a critical role in determining the reliability of a power network. The outdoor insulation needs to withstand the normal operating voltage under all conditions. Environmental conditions pose the greatest risk by depositing pollutants on the insulation, such as marine and industrial pollution.

The substations that are at a high risk of pollution flashovers are those located in proximity of the coast and/or a pollutant source such as heavy industry. Majority of substations in the North-East Grid (Mpumalanga) are exposed to excessive pollution, due to its proximity to the power stations, industrial smelters, waste and coal dumps and open cast mines.

Pollution combined with mist; Depending on the severity of the pollution levels, the wetting of the deposits causes an instantaneous conductive phenomenon which causes an extreme number of flashovers. This occurs on both powerline insulation and substation equipment leading to surface flashovers.

To combat surface tracking or flashovers, silicone coating should be applied on all insulators within the substation yard (as a temporary measure) or increase the creepage distance of all equipment through replacement of current equipment with new equipment of higher creepage rating

## 1.3 Interpretation and terminology

The following abbreviations are used in this Works Information:

<b>Abbreviation</b>	<b>Meaning given to the abbreviation</b>
HV	High Voltage
PM	Project Manager
QS	Quantity Surveyor
EA	Engineering Assistant
kV	Kilo volt
ORHVS	Operating Regulations for High Voltage Systems
SANS	South African National Standards
EMP	Environmental Management Plan
SS	Site Supervisor
ITP	Inspection Test Plan

## 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:
Risk register and compensation events	Weekly on Mondays at 10:00	Lines or substation referred in the scope of works	SS,RP and Contractor
Overall contract progress and feedback	Monthly on Mondays at 10:00	Lines or substation referred in the scope of works	<i>Employer, Contractor, Supervisor, and Project Manager</i>
Pre-Inaugural Meeting	After contract award	Lines or substation referred in the scope of works	PM, Contractor, Environmental Advisor, Safety advisor and SS
Compensation	When required	Lines or substation referred in the scope of works	PM, Contractor

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.

### 2.2 Documentation control

All correspondences must be addressed to the PM and all correspondence should be marked in sequential order. All internal documents will have as a reference, and the prefix will include the date and the number of correspondence in sequence

## 2.3 Health and safety risk management

NO WORK ON SITE WILL BE ALLOWED TO COMMENCE BEFORE ALL THE ACCESS PERMITS AND THE RELEVANT HEALTH AND SAFETY FILES ARE IN PLACE – ACCORDING TO THE ESKOM STANDARD **SHE Requirements 32-726 and 32-727** : (Occupational Health and Safety Requirements to be met by Eskom Transmission Employees, Contractors and Sub-Contractors during maintenance and construction work.)

The Contractor is to compile the complete SAFETY FILE according to Annexure 1 – Audit form in the Eskom Standard **SHE Requirements 32-726 and 32-727** Document and submit to Transmission Services Risk and Safety Department.. PLEASE NOTE that only once approval for the SAFETY FILE has been granted by Transmission Services Risk and Safety Department will arrangements for an Inaugural Meeting will be made to start Construction work on Site.

The Contractor must have an Eskom Certified and Authorized ORHVS person (Valid as requested by ESKOM) available on site at all times in accordance with Eskom Transmission Standard TST0015 - Training, Assessment and Authorisation of persons for the operation and maintenance of the power system. The authorization procedure for a permit to work shall be done before the Contractor commences work on site. The Contractors Responsible person has to be Interviewed and Authorised by the relevant Regional personnel before any work can commence on Site.

The Contractor is responsible for setting out the works as shown on the drawings. Before any excavation is commenced, it will be the responsibility of the Contractor to ascertain from the "Engineering Assistant" the position of any existing services on site. Once these are indicated to the Contractor they shall be deemed "known". Any costs incurred for repairs to any "known" services shall be for the Contractor's account.

The Contractor shall establish a refuse control system. All waste is to be collected and disposed of as required by Eskom's Environmental Policies and the Local Authority. All Hazardous waste to be stored separately and all waste must be disposed off at registered waste sites and certificates confirming type and amount to be submitted to Eskom. Separate bins must be provided on site for general and hazardous waste and must be clearly marked.

The Contractor shall make his own arrangements for the provision of accommodation for his employees. No accommodation or camping will be allowed on site.

The Contractor shall control his activities and processes in accordance with the Occupational Health & Safety Act No. 85 of 1993, and Eskom's Safety Standard TST41-61: Occupational Health and Safety Requirements to be met by Eskom Transmission Employees, Contractors and Sub-Contractors during maintenance and construction work. Safety meetings are to be held regularly and copies of the minutes must be maintained and submitted to Eskom at the monthly progress meetings when requested.

The Contractor shall comply with the health and safety requirements contained in Annexure A of the Eskom's Safety Standard TST41-61 to this Works Information.

## 2.4 Environmental constraints and management

The Contractor shall control his activities and processes in accordance with Eskom's Environmental Policies, TST41-120 Rev2 and Eskom's SHE Requirements 32-726 The EMP will provide the Aspects and Impacts that will require management and must be followed strictly. The Contractor shall prepare a separate mitigation plan for all environmental concerns raised through the EMP and in any other relevant forum.

Environmental meetings between Eskom and the Contractor may be held regularly and copies of the minutes may be submitted to Eskom on request. The contractor is to provide monthly environmental reports and to send a flash report for any environmental incidences on site as soon as possible or within 24 hours to the SS and PM of any impact to the environment. ESKOM HOLDINGS SOC Ltd CONTRACT NO. \_\_\_\_\_ THE SUPPLY AND APPLICATION OF THE RTV SILICONE RUBBER INSULATOR COATING AT CAMDEN, MAJUBA, SOL, SASOL 2&3 AND GROOTVLEI SUBSTATIONS

PART C3: SCOPE OF WORK PAGE 27 C3.1 ECC3 EMPLOYER'S WORKS INFORMATION

The Contractor shall comply with the environmental criteria and constraints stated in the Annexure B with Eskom's Environmental Policies, TST41-120..

## 2.5 Quality assurance requirements

The Contractor shall control his activities and processes in accordance with Eskom's Quality Standard QM 58.

The Notification period for Eskom attendance to Witness & Hold points is 48 hours. These must be clearly indicated in the work programme submitted at the commencement of the work or after every progress review meeting. The SS will be responsible for the verification and signature of the ITPs which must be maintained by the Contractor and presented for signing promptly and regularly

## 2.6 Programming constraints

2.6.1 A detailed program with all the relevant Completion date will be discussed with the Contractor and approved by Eskom at the Inaugural meeting. The Contractor shall submit a comprehensive and fully detailed program within 1 week but **before** the Starting date after the program has been discussed with the contractor. The program shall be revised fortnightly and submitted to the PM for approval. If changes take place which affect the Completion date then a revised program must be submitted within 2 days. The Employer's key and milestone dates shall be indicated. **Note: Only MS Project format will be accepted.**

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

**Site inaugural date, starting and completion date for all activities as well as relevant key dates for hold or witness points. All relevant significant activities shall be shown in order to monitor the progress on site. The programme shall also reflect a 2 week period for inspection and correcting of Defects before the completion date.**

2.6.3 Updated programmes must be available at all site meetings reflecting progress to date.

2.6.4 The contractor's trucks must have a **valid and current crane test certificate** with the truck driver and crane operator's certificate. All slings, shackles and crimping tools must have **valid and current test certificate**, which must be produced two weeks before site establishment.

2.6.5 The contractor is to have an Eskom certified and authorised **ORHVS** person available in each area where work is being performed at all times in accordance with Eskom transmission standard **TST41-61** contractor safety in a high voltage environment

## 2.7 Contractor's management, supervision and key people

The Contractor is to have an organisation chart on file clearly indicating all site specific key personnel, such as RP, Health and safety & Environmental reps, Site Foreman etc.

All key personnel must be appointed in writing and all appointments must be site specific, valid and kept on the site file at all times.

## 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 address the tax invoice to **Eskom Holdings SOC Limited, P O Box 1091, Johannesburg, 2000** and include on each invoice the following information:

- Name and address of the *Contractor* and the *Project Manager*;
- The contract number and title;
- *Contractor's* VAT registration number;
- The *Employer's* VAT registration number **4740101508**;
- Description of service provided for each item invoiced based on the Price List;
- Previous, present and to date values per payment certificate;
- Total amount invoiced excluding VAT, the VAT and the invoiced amount including VAT;
- Any other information as may be required

Procedure for invoice payment:

Work done is assessed by the *Contractor* and *Employer* Quantity Surveyor (QS), after which the *Employer's* QS and the *Contractor*, agree on the assessment and the amount to be invoiced. The *Employer* QS will then generate a payment certificate signed by both the *Employer's* QS and *Employer's* PM. A service entry/GR would be then generated for the jointly signed payment certificate by the *Employer* on SAP system. There is no need for the *Contractor* to append a GR on their invoice like in the past, the *Contractor* is only required to submit a correct soft copy of their invoice to [InvoicesgrpcapitalPDP@eskom.co.za](mailto:InvoicesgrpcapitalPDP@eskom.co.za) and it will be processed and paid.

## 2.9 Insurance provided by the *Employer*

As stipulated in the Contract Data.

## 2.10 Contract change management

All construction will be done in accordance with Eskom's policies, standards and design or drawings provided. No deviation from any design or drawing will be accepted, unless requested through the PM and approved in writing by the responsible Eskom designer.

All drawings to be used are as per the drawing register and statement of works

## 2.11 Provision of bonds and guarantees

The form in which a bond or guarantee required by the *conditions of contract* (if any) is to be provided by the *Contractor* is given in Part 1 Agreements and Contract Data, document C1.3, Sureties.

The *Employer* may withhold payment of amounts due to the *Contractor* until the bond or guarantee required in terms of this contract has been received and accepted by the person notified to the *Contractor* by the *Project Manager* to receive and accept such bond or guarantee. Such withholding of payment due to the *Contractor* does not affect the *Employer's* right to termination stated in this contract.

## 2.12 Records of Defined Cost, payments & assessments of compensation events to be kept by the *Contractor*

The *Contractor* is to keep proof/invoices of all costs incurred for a compensation event and submit them to the Project Manager if requested.

## 2.13 Training workshops and technology transfer

As per SD&L requirements

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

#### **3.1 *Employer's* design**

All construction will be done in accordance with Eskom's policies, standards and design or drawings provided. No deviation from any design or drawing will be accepted, unless requested through the PM and approved in writing by the responsible Eskom designer.

All drawings to be used are as per the drawing register and statement of works

#### **3.2 Parts of the *works* which the *Contractor* is to design**

Not applicable

#### **3.3 Procedure for submission and acceptance of *Contractor's* design**

Not applicable

#### **3.4 Other requirements of the *Contractor's* design**

Not applicable

#### **3.5 Use of *Contractor's* design**

Not applicable

#### **3.6 Design of Equipment**

Not applicable

#### **3.7 Equipment required to be included in the *works***

Not applicable

#### **3.8 As-built drawings, operating manuals and maintenance schedules**

The Contractor is to provide Eskom with detailed "as built" records where deviations have been made from construction drawings within 14 days after Completion.

## 4 Procurement

### 4.1 People

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

People employed on site shall have all relevant documents as required by law for employment within the country, i.e. relevant work permits and identifications.

All staff must be vetted through the Grid Security Manager's office according to the Grid code.

All workers will be subject to ad hoc breathalyser tests at all times when on duty

All workers must wear seat belts at all times when travelling while on Eskom business.

#### 4.1.2 BBEE and preferencing scheme

Change of Broad Based Black Economic Empowerment (B-BBEE) status
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.
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> .
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.
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.

#### 4.1.3 Accelerated Shared Growth Initiative – South Africa (ASGI-SA)

The *Contractor* complies with and fulfils the *Contractor's* obligations in respect of the Accelerated and Shared Growth Initiative - South Africa in accordance with and as provided for in the *Contractor's* ASGI-SA Compliance Schedule stated below

*[Insert the agreed ASGI-SA Compliance Schedule here]*

The *Contractor* shall keep accurate records and provide the *Project Manager* with reports on the *Contractor's* actual delivery against the above stated ASGI-SA criteria. [Elaborate on access to and format of records and frequency of submission etc.]

The *Contractor's* failure to comply with his ASGI-SA obligations constitutes substantial failure on the part of the *Contractor* to comply with his obligations under this contract.

## 4.2 Subcontracting

### 4.2.1 Preferred subcontractors

The Contractor/Supplier to appoint own subcontractors and ensure they comply with all Eskom SHEQ requirements.

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

The use of the **NEC suite of Contracts** is recommended for subcontracting in order to enable a similar subcontractor management.

### 4.2.3 Limitations on subcontracting

The *Sub-Contractors* will also be required to conform to the *Employer's* SHEQ requirements

### 4.2.4 Attendance on subcontractors

The *Sub-Contractors* will also be required to conform to the *Employer's* SHEQ requirements .

## 4.3 Plant and Materials

### 4.3.1 Quality

Refer to attached quality documents (TST41-168 Quality Assurance for Procurement of Assets, Goods and Services)

The contractor shall remain responsible for the quality of all the plant used and materials supplied. If the contractor's supplier is used for the manufacturing and erection of any steel work the contractor must ensure that the quality is in line with Eskom's requirements. Any non-conformance must be rectified.

### 4.3.2 Plant & Materials provided "free issue" by the Employer

Not applicable

### 4.3.3 Contractor's procurement of Plant and Materials

Materials must be ordered in time. Delays as a result of lack of material which could have been avoided will result in delay damages being effected. Schedules must be updated and forwarded to the Project Manager as per agreement

### 4.3.4 Spares and consumables

Specify any constraints on how the *Contractor* is to order, codify, expedite, freight, import, transport to Site and any other requirements for delivery and storage before installation. The *Employer* may require warranties from suppliers to be in favour of the *Employer* and not just to the *Contractor* during the life of the contract. Also include requirements for vendor data which the *Employer* may need after Completion of the whole of the *works*. THIS IS A VERY IMPORTANT SECTION IN PROCESS PLANT AND UTILITY PROCUREMENT CONTRACTS.

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

All the testing required by Eskom will be as per specifications indicated in this document shall be done by the *Contractor/Supplier*.

All structural steelwork is to be inspected by the Contractor and Eskom Quality Representative before being delivered to site and should have a certificate from the Galvanizer stating the coating thickness.

#### **4.5 Marking Plant and Materials outside the Working Areas**

The *Contractor* shall mark all Equipment, Plant and Material which is destined for the works as indicated in the Specifications.

#### **4.6 Contractor's Equipment (including temporary works).**

Not applicable

#### **4.7 Cataloguing requirements by the Contractor**

Not applicable

### **5 Construction**

#### **5.1 This part of the Works Information addresses constraints, facilities, services and rules applicable to the Temporary works, Site services & construction constraints**

##### **5.1.1 Employer's Site entry and security control, permits, and Site regulations**

The *Contractor* shall comply with all the requirements of SHE specification, Environmental Management Plan (EMP) and all relevant statutory requirements.

The security vetting of workers, safety and environmental training of workers and Induction courses will be done at the Substation and additional time should be provided to meet these requirements.

##### **5.1.2 Restrictions to access on Site, roads, walkways and barricades**

Although not anticipated, where the restrictions might be applicable the *Contractor* will be required to comply with these restrictions.

There will strictly be NO movement outside the barricaded area unless escorted by authorized HV Plant personnel.

##### **5.1.3 People restrictions on Site; hours of work, conduct and records**

The normal working hours shall be weekdays from 07:30 am to 04:30 pm.

The *Contractor* should keep records of his people on site including those of his sub-contractors which the *Project Manager* or *Supervisor* have access to at any time. These records may be needed when assessing compensation events Basic conditions of employment will be adhered to

##### **5.1.4 Health and safety facilities on Site**

There are no Toilet facilities available on site. The *Contractor* is to provide his own toilet facilities on site and ensure that these facilities are kept in a clean condition to Eskom's satisfaction. No work on site will be allowed to commence before the toilet facilities are available on site. The *Contractor* shall comply with all the requirements of SHE specification and all relevant statutory requirements.

#### **5.1.5 Environmental controls, fauna & flora, dealing with objects of historical interest**

The *Contractor* shall comply with all the requirements of the EMP and all other statutory requirements. The *Contractor* shall comply with the environmental requirements as stipulated in TST 41-120 (Environmental Requirements for the Procurement of Assets, Goods and Services). The contractor must also comply with the following environmental procedures:

- EPC32-727: Eskom SHEQ Policy
- ST32-726 - SHE Requirements for the Eskom Commercial Process for additional requirements or co-operate projects
- The contractor must adhere to the attached Environmental Management Plan and draw up his method statements based on the attached Environmental Management Plan.

Waste generated during project must be disposed at a registered site and contractor shall retain records of disposal.

The illegal transporting, handling, purchasing and selling, poaching and killing of fauna and flora will not be tolerated. Offenders will be prosecuted. All fauna kills as a result of the activities of the contractor must be reported to the project leader /environmental advisor within 24 hours.

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.

The *Contractor* has no title to an object of value or of historical or other interest within the Site. The *Contractor* notifies the Project Manager when such an object is found and the Project Manager instructs the *Contractor* how to deal with it. The *Contractor* does not move the object without instructions

#### **5.1.6 Title to materials from demolition and excavation**

The *Contractor* shall make his own arrangements, to the approval of the *Supervisor* and the Local Authorities, for the disposal of all surplus material and construction waste resulting from the *works*. Disposal of all waste (Building, Hazardous and Domestic) must be in accordance with the CEMP.

All the materials from excavation and demolition must be disposed of by the *Contractor* except it's expressly stated by the PM or the relevant staff from Grid at the beginning of the contract.

Therefore all copper and steel will be stored at a designated area by the EA. And all rubble and other materials must be classified, weighed and transported to the dumping site

#### **5.1.7 Cooperating with and obtaining acceptance of Others**

It will be the responsibility to work mutually with all other contractors and personnel sharing the working area at any one time during the construction Phase. The *Contractor* will be required to integrate with other contractors, as well as *the Employer's* personnel during construction. It is expected that cooperation will be given when this happens during the project construction.

#### **5.1.8 Publicity and progress photographs**

This is **not allowed** except with prior arrangement with the *Employer's Project Manager* and media department.

Cameras are completely prohibited from use at the Substation. Where there is need to take work progress photographs it will be the responsibility of the *Contractor* to seek the permission to use a camera on site.

#### **5.1.9 Contractor's Equipment**

All equipment must be registered in the equipment register as per TCT41-61. All people and vehicles entering and leaving Eskom sites will be signed in at the gates and periodically subjected to searches.

Records are to be kept of Equipment on Site including whether it is owned or hired. This includes any scaffolding, rigs, heavy lifts and cranes.

#### **5.1.10 Equipment provided by the Employer**

Any equipment provided by Eskom must be used with very reasonable care. Any breakages will be for the account of the contractor. No equipment shall be provided by the *Employer*

#### **5.1.11 Site services and facilities**

The *Contractor* must make their own provision for any water (drinking and construction) requirements on site. A site for the Contractor's yard will be provided adjacent to the site of the works where possible. The Contractor shall not occupy any area on site other than what's allocated to him.

The contractor shall supply all plant and materials to complete the works.

Water and electricity is normally available on site. The contractor shall provide all connections, extensions and additional supply points necessary for the works. Adequate and/or continuous supply is not guaranteed and no claims for delay or standing time as a result of insufficiencies or failures will be considered. Any measures which the contractor may require to maintain continuity and quality of supply shall be arranged by him at his own expense.

The contractor will supply their own office equipment, including telephones and fax machines

#### **5.1.12 Facilities provided by the *Contractor***

The *Contractor* is to provide the following items to facilitate the *Employer's* site *Supervisors* project administration within four weeks of contract award:

- a) As per instruction by the Project Manager for provision made in the Bill of Quantities.

The *Contractor* shall provide sanitary amenities, first aid and firefighting facilities as required by the Occupational Health and Safety Act.

The *Contractor* keeps records of the following and submits copies of these records to the *Supervisor* weekly:

- Number of personnel by category and/or trade on site on a daily basis.
- Detailed list of equipment by category on site on a daily basis with an indication of it's working condition i.e. working order, under repair, working but standing idle etc.
- Weather conditions as agreed with the *Supervisor* on a daily basis.

A risk register is to be kept by the *Contractor* in which all events are recorded. Records of events that could give rise to Compensation Events are to be kept up to date for inspection by the *Supervisor* and/or *Project Manager* at all times and this is to be kept in a risk register. This is not for inspection purposes but for management as per core clause 16.

#### **5.1.13 Existing premises, inspection of adjoining properties and checking work of Others**

The Work is to be carried out next to an existing HV yard and the *Contractor* is to take note of the surrounding foundations, equipment and buildings. Work will be undertaken in the existing live substation environment, and care needs to be taken by the *Contractor* for all these live condition at all times.

#### **5.1.14 Survey control and setting out of the *works***

All known services will be pointed out to the Contractor after which extreme care will be required while working in that area. Any damage of known pipes, cables or other services must be reported to the site supervisor and the damaged service must be restored at the cost of the Contractor under the supervision of either the EA or SS.

The Contractor is responsible for setting out the works.

#### **5.1.15 Excavations and associated water control**

Excavations shall only be done using machinery after careful assessment of the existing underground services and with the consensus of the EA and SS.

All necessary precautions shall be taken to ensure that deep excavations are safe and that the sides are stable, if not they shall be battered. All excavations are to be properly barricaded at all times.

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

All known services will be pointed out to the Contractor after which extreme care will be required while working in that area. Any damage of known pipes, cables or other services must be reported to the site

supervisor and the damaged service must be restored at the cost of the Contractor under the supervision of either the EA or SS.

**5.1.17 Control of noise, dust, water and waste**

Refer to the SHE specification, EMP and any other statutory requirements.

**5.1.18 Sequences of construction or installation**

This will be determined by the Contractor and the Site Supervisor during execution and approved by the Project Manager.

Site clearance

Set up compliance with safety requirements (including temporary earth)

Erect the scaffolding

Cleaning of equipment

Coating of equipment

Testing/inspection

Removal of scaffolding

**5.1.19 Giving notice of work to be covered up**

After construction the Contractor is to rehabilitate any damage caused to the environment to the satisfaction of the Supervisor. The remedial works are to be "signed-off" by both parties before acceptance.

**5.1.20 Hook ups to existing works**

The contractor will work in the existing yards. Installing equipment as per the specifications

**5.2 Completion, testing, commissioning and correction of Defects**

**5.2.1 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.

	Item of work	To be completed by
	Any outstanding work as listed in the Completion & Handing Over Certificates.	Within 2 weeks after Completion or as indicated in the Completion certificate.

**5.2.2 Use of the works before Completion has been certified**

To allow for the erection of electrical equipment some parts of the bays may need to be made available to the equipment suppliers before the works are completed. This will be managed by the Site Supervisor to ensure harmony and coordination of all on-going works.

### 5.2.3 Materials facilities and samples for tests and inspections

Take-over of The Works will be in accordance NEC procedures in conjunction with Eskom Transmission standard for substation inspection TST 41-638. The *Contractor* advises the *Supervisor* when the *Works* is available for final inspection and provides assistance.

### 5.2.4 Commissioning

Detailed commissioning procedure and compliance certificate shall be issued by the Contractor. Final certificate of compliance shall be issued by the contractor to the Employer after Completion.

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

Not applicable

### 5.2.6 Take over procedures

**Take-over of The Works will be in accordance NEC procedures in conjunction with Eskom Transmission standard for substation inspection TST 41-638. The *Contractor* advises the *Supervisor* when the *Works* is available for final inspection, and provides assistance.** The Take Over will be done after all the works have been completed .After all the outstanding work has been completed the PM will organize for a Take Over certificate to be signed with the Contractor.

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

The Project Manager will arrange for the HV Plant to allow the Contractor access to part of the works which has been taken over if needed to correct a Defect. After the works have been put into operation, the HV Plant may require the Contractor to undertake certain procedures before such access can be gra

### 5.2.8 Performance tests after Completion

The procedure for performance test is specified under the project quality plan document

### 5.2.9 Training and technology transfer

This to be in compliance with the SD&L requirements and commitments

### 5.2.10 Operational maintenance after Completion

Not Applicable

## 6 Plant and Materials standards and workmanship

Title	Revision	Tick if publicly available
<b><u>General Specifications:</u></b>		
Health and Safety requirements TST41-61		
Environmental requirements TST41-120		
Eskom SHEQ Policy (EPC 32-727)		
SHE Requirements for the Eskom Commercial Process (additional SHE requirements) ST32-726		
Site regulations and access control Occupational regulations for high voltage standard (ORHVS)		
Eskom's Quality Assurance Standard QM58.		√
Eskom's Quality Assurance Standard Qm58 Quality Requirements for Procurement of Assets, Goods & Services		
<b><u>Technical specifications:</u></b>		
EPS 4 As Built Drawings		
EPS 2 Specification for earth mat		
EPS 5 Electrical		
EPS 6 Environmental (EMP)		
EPS 6 Environmental (EMP)		
240-56063877 RTV SILICONE RUBBER INSULATOR COATING AND SHED EXTENDER APPLICATION STANDARD		
240-56062705 RTV SILICONE RUBBER INSULATOR COATING AND SHED EXTENDER SUPPLIER STANDARD		

## **6.1 Investigation, survey and Site clearance**

Not Applicable.

## **6.2 Building works**

Not Applicable

## **6.3 Civil engineering and structural works**

Not Applicable

## **6.4 Electrical & mechanical engineering works**

Not Applicable

## **6.5 Process control and IT works**

Not Applicable

## **6.6 Other [as required]**

## 7 List of drawings

### 7.1 Drawings issued by the Employer

This is the list of drawings issued by the Employer at or before the Contract Date and which apply to this contract.

Note: Some drawings may contain both Works Information and Site Information.

Drawing number	Revision	Title
03.36-689	45	Camden Station Electric Diagram
0.47/3636	25	Matla Station Electric Diagram

## **C3.2 CONTRACTOR'S WORKS INFORMATION**

This section of the Works Information will always be contract specific depending on the nature of the *works*. It is most likely to be required for design and construct contracts where the tendering contractor will have proposed specifications and schedules for items of Plant and Materials and workmanship, which once accepted by the *Employer* prior to award of contract now become obligations of the *Contractor* per core clause 20.1.

Typical sub headings could be

- a) *Contractor's* design
- b) Plant and Materials specifications and schedules
- c) Other

This section could also be compiled as a separate file.

---

## PART 4: SITE INFORMATION

Document reference	Title	No of pages
C4	This cover page Site Information	1
Total number of pages		4

## PART 4: SITE INFORMATION

### 1. General description

The works will be done in the Transmission Substations at Camden and Matla all the Mpumalanga Province in South Africa.

All persons requiring access to site shall notify the Project Manager two (2) weeks before such access is required. The applicant shall provide proof of identification to the Project Manager with the site access application. A permit shall be issued and all contractors/visitors are required to visibly retain the permit at all times. All contractors must attend safety and induction training before commencing with any of the works. The training will be provided by the Employers Safety and Security officers before commencement of any work on site.

#### Matla Substation

The site is Matla Substation located at this site coordinates -26.282216S 29.139325E. The site is situated about 17KM from Kriel Town and 35KM from Secunda in the Mpumalanga North East Grid region.

The contractor is to inspect the site in order to ascertain the conditions and extent of his risk.



Matla substation is situated at Matla power in the Mpumalanga North East Grid region

### Camden Substation

The site is Kriel Substation located at this site coordinates - 26.6171° S,30.0936° E. The site is situated about 20KM from Ermelo Town in the Mpumalanga North East Grid region.

The contractor is to inspect the site in order to ascertain the conditions and extent of his risk.



Camden substation is situated at Camden power in the Mpumalanga North East Grid region

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

The works will be done within the High Voltage Yard or Transmission Substation as indicated in the scope of work. It is important to know that High Voltage Yards have live equipment and contractors have to adhere to High Voltage Regulations.

## **3. Subsoil information**

The general soil condition is stable as most of the work is done within the existing high voltage yards.

## **4. Hidden services**

Before any work is commenced, it will be the responsibility of the contractor to ascertain from the "Engineering assistant" the position of any existing services on site. Once these are indicated to the contractor they shall be deemed as "known". Any cost incurred for the repairs to any "known" services. Any costs incurred for the repairs to any "known" services shall be for the contractors account.

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

Not applicable