



NEC3 Engineering & Construction Contract

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

and [.....]
(Reg No. _____)

for **Installation of OPGW between Stikland-Koeberg 132kV HV lines**

Contents:	No of pages
Part C1 Agreements & Contract Data	[2 - 19]
Part C2 Pricing Data	[20 - 24]
Part C3 Scope of Work	[25- 54]
Part C4 Site Information	[55- 56]

CONTRACT No. [.....]

Part C1: Agreements & Contract Data

Contents:	No of pages
C1.1 Form of Offer and Acceptance [to be inserted from Returnable Documents at award stage]	[3 - 5]
C1.2a Contract Data provided by the <i>Employer</i>	[6 - 16]
C1.2b Contract Data provided by the <i>Contractor</i> [to be inserted from Returnable Documents at award stage]	[17 - 19]

C1.1 Form of Offer & Acceptance

1.1. Offer

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

Installation of OPGW between Stikland-Koeberg 132kV HV lines

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.

	The offered total of the Prices exclusive of VAT is	
	Sub total	
	Value Added Tax @ 15% is	
	The offered total of the amount due inclusive of VAT is ¹	
	(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:

Name & signature of witness *(Insert name and address of organisation)*

Date

Tenderer's CIDB registration number (if applicable)

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

1.2. 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

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)

Capacity

**for the
Employer**

Name &
signature of
witness

.....
.....
.....
.....
*(Insert name and address of
organisation)*

.....
.....
.....
.....
Date

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

1.3. 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	<i>(Insert name and address of organisation)</i>	<i>(Insert name and address of organisation)</i>
Name & signature of witness
Date

C1.2 ECC3 Contract Data

Part one - Data provided by the Employer

Clause	Statement	Data
1	General	
	The <i>conditions of contract</i> are the core clauses and the clauses for main Option	
	dispute resolution Option	B: Priced contract with bill of quantities
	and secondary Options	W1: Dispute resolution procedure
		X2 Changes in the law
		X7: Delay damages
		X15: Limitation of Contractor's liability for design to reasonable skill and care
		X16: Retention
		X18: Limitation of liability
		Z: Additional conditions of contract
	of the NEC3 Engineering and Construction Contract, April 2013 (ECC3)	
10.1	The <i>Employer</i> is (Name):	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
	Address	Registered office at Megawatt Park, Maxwell Drive, Sandton, Johannesburg
10.1	The <i>Project Manager</i> is: (Name)	Wedaad Abrahams
	Address	60 Voorterkker road, Bellville, Werstern Cape, 7530
	Tel	021 915 9216
	e-mail	AbrahaW@eskom.co.za
10.1	The <i>Supervisor</i> is: (Name)	
	Address	
	Tel No.	
	e-mail	

11.2(13) The *works* are

- Installation of OPGW between Stikland and Koeberg,
- Installation of HDPE conduit pipe including all compression joints in existing and excavated trenches between gantry and substation relay room,
- Drawing of Fibre Optic Cable (48 fibres) through HDPE conduit pipe, and
- Splicing and Testing of OPGW and Duct Cable

11.2(14) The following matters will be included in the Risk Register **See Typical risks on Page 50 & 51**

11.2(15) The *boundaries of the site* are **Between Stikland and Koeberg servitude line**

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 **1 week**

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 *completion date* for the whole of the *works* is

11.2(9)	The <i>key dates</i> and the <i>conditions</i> to be met are:	Condition to be met	key date
		1 Completion of the works	

30.1	The <i>access dates</i> are:	Part of the Site	Date
		1 Entire site	

31.1 The *Contractor* is to submit a first programme for acceptance within **At tender stage**

31.2 The *starting date* is

32.2 The *Contractor* submits revised programmes at intervals no longer than **1 week.**

35.1 The *Employer* is not willing to take over the *works* before the Completion Date.

4 Testing and Defects

42.2 The *defects date* is **52 weeks after Completion of the whole of the works.**

43.2 The *defect correction period* is **2 weeks.**

5	Payment	
50.1	The <i>assessment interval</i> is	1 week after the start date and then in weekly intervals.
51.1	The <i>currency of this contract</i> is the	South African Rand.
51.2	The period within which payments are made is	As per Eskom payment terms listed against the vendor on the Eskom database.
51.4	The <i>interest rate</i> is	the publicly quoted prime rate of interest (calculated on a 365 day year) charged from time to time by the Standard Bank of South Africa Limited (as certified, in the event of any dispute, by any manager of such bank, whose appointment it shall not be necessary to prove) for amounts due in Rands.
6	Compensation events	
60.1(13)	The place where weather is to be recorded is: The <i>weather measurements</i> to be recorded for each calendar month are, The <i>weather measurements</i> are supplied by The <i>weather data</i> are the records of past <i>weather measurements</i> for each calendar month which were recorded at: and which are available from:	Cape Town International Airport the cumulative rainfall (mm) the number of days with rainfall more than 10 mm the number of days with minimum air temperature less than 0 degrees Celsius the number of days with snow lying at 09:00 hours South African Time and these measurements: South African Weather Service. South African Weather Service.
60.1(13)	Assumed values for the ten year return <i>weather data</i> for each <i>weather measurement</i> for each calendar month are:	As stated in Annexure A to this Contract Data provided by the Employer. Note: If this arrangement is used, delete the rows above for 60.1(13) and delete this note.
7	Title	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.
8	Risks and insurance	
80.1	These are additional <i>Employer's</i> risks	1. Refer to "Typical Risks" attached
9	Termination	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.

10 Data for main Option clause

B Priced contract with bill of quantities

60.6	The <i>method of measurement</i> is	Standard System of Measuring Builders Work (Sixth Edition Amended), Civil Engineering Standard Method of Measurement (Third Edition) and SANS, amended as stated in Part C2.1, Pricing Assumptions.
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11 Data for Option W1

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 www.ice-sa.org.za). If the Parties do not agree on an Adjudicator the Adjudicator will be appointed by the Arbitration Foundation of Southern Africa (AFSA).
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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 www.ice-sa.org.za) or its successor body.
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W1.4(2)	The <i>tribunal</i> is:	Arbitration.
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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.
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	The place where arbitration is to be held is	Within South Africa
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	The person or organisation who will choose an arbitrator	
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- | | | |
|--|--|---|
| | <ul style="list-style-type: none"> - if the Parties cannot agree a choice or - if the arbitration procedure does not state who selects an arbitrator, is | the Chairman for the time being or his nominee of the Association of Arbitrators (Southern Africa) or its successor body. |
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12 Data for secondary Option clauses

X1 Price adjustment for inflation

X1.1(a)	The <i>base date</i> for indices is	The start date of the term contract.
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X1.1(c)	The proportions used to calculate the Price Adjustment Factor are:	The prices will be fixed and firm rates for the first 12 months of the contract. At the anniversary date of the contract the prices will be adjusted by Contracts Management Services using the Consumer Price Index (CPI). The relevant publications to be used are published by Statistics South Africa.
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X2	Changes in the law	There is no reference to Contract Data in this Option and terms in italics are identified elsewhere in this Contract Data.
X7	Delay damages	
X7.1	Delay damages for Completion of the whole of the works are	R10,000.00 per day
X15	Limitation of the Contractor's liability for his design to reasonable skill & care	There is no reference to Contract Data in this Option and terms in italics are identified elsewhere in this Contract Data.
X16	Retention (not used with Option F)	
X16.1	The <i>retention free amount</i> is	R0.00
	The <i>retention percentage</i> is	10%
X18	Limitation of liability	
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 damage to the Employer's property is limited to:	the amount of the deductibles relevant to the event
X18.3	The Contractor's liability for Defects due to his design which are not listed on the Defects Certificate is limited to	<p>The greater of</p> <ul style="list-style-type: none"> the total of the Prices at the Contract Date and the amounts excluded and unrecoverable from the Employer's assets policy for correcting the Defect (other than the resulting physical damage which is not excluded) plus the applicable deductible as at contract date.
X18.4	The Contractor's total liability to the Employer for all matters arising under or in connection with this contract, other than excluded matters, is limited to:	<p>the total of the Prices other than for the additional excluded matters.</p> <p>The Contractor's total liability for the additional excluded matters is not limited.</p> <p>The additional excluded matters are amounts for which the Contractor is liable under this contract for</p> <ul style="list-style-type: none"> Defects due to his design which arise before the Defects Certificate is issued, Defects due to manufacture and fabrication outside the Site, loss of or damage to property (other than the works, Plant and Materials), death of or injury to a person and infringement of an intellectual property right.

X18.5	The end of liability date is	<p>(i) seven years after the defects date for latent Defects and</p> <p>(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.</p> <p>A latent Defect is a Defect which would not have been discovered on reasonable inspection by the Employer or the Supervisor before the defects date, without requiring any inspection not ordinarily carried out by the Employer or the Supervisor during that period.</p> <p>If the Employer or the Supervisor do undertake any inspection over and above the reasonable inspection, this does not place a greater responsibility on the Employer or the Supervisor to have discovered the Defect.</p>
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Z The Additional conditions of contract 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.

2. INSURANCE TABLE A

Insurance against	Minimum amount of cover or minimum limit of indemnity
Loss of or damage to the <i>works</i> , Plant and Materials	The replacement cost where not covered by the <i>Employer's</i> insurance The <i>Employer's</i> policy deductible as at Contract Date, where covered by the <i>Employer's</i> insurance
Loss of or damage to Equipment	The replacement cost
Liability for loss of or damage to property (except the <i>works</i> , Plant and Materials and Equipment) and liability for bodily injury to or	<u>Loss of or damage to property</u> <u>Employer's property</u>

death of a person (not an employee of the <i>Contractor</i>) caused by activity in connection with this contract	The replacement cost where not covered by the <i>Employer's</i> insurance The <i>Employer's</i> policy deductible, as at Contract Date, where covered by the <i>Employer's</i> insurance <u>Other property</u> The replacement cost <u>Bodily injury to or death of a person</u> The amount required by applicable law
Liability for death of or bodily injury to employees of the <i>Contractor</i> arising out of and in the course of their employment in connection with this contract	The amount required by the applicable law

Z 13.2

Replace core clause 87 with the following:

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

INSURANCE TABLE B

Insurance against or name of policy	Minimum amount of cover or minimum limit of indemnity
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 44 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 44 of 1999, or any replacement section dealing with the same subject matter.
- Z14.5 The protection afforded by the provisions hereof shall be in effect until the KNPS is decommissioned.

Z15 Asbestos

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

- AAIA** means approved asbestos inspection authority.
- ACM** means asbestos containing materials.
- AL** means action level, i.e. a level of 50% of the OEL, i.e. 0.1 regulated asbestos fibres per ml of air measured over a 4 hour period. The value at which proactive actions is required in order to control asbestos exposure to prevent exceeding the OEL.
- Ambient Air** means breathable air in area of work with specific reference to breathing zone, which is defined to be a virtual area within a radius of approximately 30cm from the nose inlet.
- Compliance Monitoring** means compliance sampling used to assess whether 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.
- OEL** means occupational exposure limit.
- Parallel Measurements** means measurements performed in parallel, yet separately, to existing measurements to verify validity of results.
- Safe Levels** means airborne asbestos exposure levels conforming to the Standard's requirements for safe processing, handling, storing, disposal and phase-out of asbestos and asbestos containing material, equipment and articles.
- Standard** means the *Employer's* Asbestos Standard 32-303: Requirements for Safe Processing, Handling, Storing, Disposal and Phase-out of Asbestos and Asbestos Containing Material, Equipment and Articles.

- SANAS** means the South African National Accreditation System.
- TWA** means the average exposure, within a given workplace, to airborne asbestos fibres, normalised to the baseline of a 4 hour continuous period, also applicable to short term exposures, i.e. 10-minute TWA.
- Z15.1 The *Employer* ensures that the Ambient Air in the area where the *Contractor* will Provide the Services conforms to the acceptable prescribed South African standard for asbestos, as per the regulations published in GNR 155 of 10 February 2002, under the Occupational Health and Safety Act, 1993 (Act 85 of 1993) (“Asbestos Regulations”). The OEL for asbestos is 0.2 regulated asbestos fibres per millilitre of air as a 4-hour TWA, averaged over any continuous period of four hours, and the short term exposure limit of 0.6 regulated asbestos fibres per millilitre of air as a 10-minute TWA, averaged over any 10 minutes, measured in accordance with HSG248 and monitored according to HSG173 and OESSM.
- Z15.2 Upon written request by the *Contractor*, the *Employer* certifies that these conditions prevail. All measurements and reporting are 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.

3. 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	<i>Weather measurement</i>				
	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.

C1.2 Contract Data

4. 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)² 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 <i>Contractor</i> is (Name): Address Tel No. Fax No.	
11.2(8)	The <i>direct fee percentage</i> is The <i>subcontracted fee percentage</i> is	% %
11.2(18)	The <i>working areas</i> are the Site and	
24.1	The <i>Contractor's</i> key persons are: 1 Name: Job: Responsibilities: Qualifications: Experience: 2 Name: Job Responsibilities: Qualifications: Experience:	CV's (and further key persons data including CVs) are appended to Tender Schedule entitled.

² Available from Engineering Contract Strategies Tel 011 803 3008, Fax 011 803 3009 or see www.ecs.co.za

11.2(3)	The <i>completion date</i> for the whole of the <i>works</i> is																															
11.2(14)	The following matters will be included in the Risk Register	See Typical Risks attached to Annexure 3 of the Safety Health and Environmental Specification.																														
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	Submitted within 2 weeks of the start date																														
B	Priced contract with bill of quantities																															
11.2(21)	The <i>bill of quantities</i> is in	Part 2: C2.2																														
11.2(31)	The tendered total of the Prices is	Rate based contract																														
2.4	Data for Schedules of Cost Components	<i>Note "SCC" means Schedule of Cost Components starting on page 60, and "SSCC" means Shorter Schedule of Cost Components starting on page 63 of ECC3 (April 2013).</i>																														
B	Priced contract with bill of quantities	Data for the Shorter Schedule of Cost Components																														
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 %																														
22 in SSCC	The rates of other Equipment are:	<table border="1"> <thead> <tr> <th>Equipment</th> <th>Size or capacity</th> <th>Rate per day</th> </tr> </thead> <tbody> <tr> <td>LDV</td> <td></td> <td></td> </tr> <tr> <td>Crane truck</td> <td>3T</td> <td></td> </tr> <tr> <td>Crane truck</td> <td>8T</td> <td></td> </tr> <tr> <td>Crane truck</td> <td>14T</td> <td></td> </tr> <tr> <td>Mobile crane</td> <td>25T</td> <td></td> </tr> <tr> <td>Mobile crane</td> <td>80T</td> <td></td> </tr> <tr> <td>Puller</td> <td></td> <td></td> </tr> <tr> <td>Tensioner</td> <td></td> <td></td> </tr> <tr> <td>Sprinter</td> <td></td> <td></td> </tr> </tbody> </table>	Equipment	Size or capacity	Rate per day	LDV			Crane truck	3T		Crane truck	8T		Crane truck	14T		Mobile crane	25T		Mobile crane	80T		Puller			Tensioner			Sprinter		
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61 in SSCC	The hourly rates for Defined Cost of design outside the Working Areas are	<table border="1"> <thead> <tr> <th>Category of employee</th> <th>Hourly rate</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> </tr> </tbody> </table>	Category of employee	Hourly rate																												
Category of employee	Hourly rate																															

<p>62 in SSCC</p>	<p>Note: Hourly rates are estimated 'cost to company of the employee' and not selling rates.</p> <p>Please insert another schedule if foreign resources may also be used</p> <p>The percentage for design overheads is</p>	<p>Contracts Manager Site Supervisor Team Leader Linesman Driver LDV Driver Truck Operator Storeman General labourer</p> <p style="text-align: center;">%</p>
<p>63 in SSCC</p>	<p>The categories of design employees whose travelling expenses to and from the Working Areas are included in Defined Cost are:</p>	

PART 2: PRICING DATA

ECC3 Option B

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

C2.1 Pricing assumptions: Option B

How work is priced and assessed for payment

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

Identified and defined terms	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">• 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• a proportion of each lump sum which is the proportion of the work covered by the item which the <i>Contractor</i> has completed.
		Completed work is work without Defects which would either delay or be covered by immediately following work.
		(31) The Prices are the lump sums and the amounts obtained by multiplying the rates by the quantities for the items in the Bill of Quantities.

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

Function of the Bill of Quantities

Clause 55.1 in Option B states, "Information in the Bill of Quantities is not Works Information or Site Information". This confirms that 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.

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.

Measurement and payment

Symbols

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

Abbreviation	Unit
%	percent
h	hour
ha	hectare
kg	kilogram
kl	kilolitre
km	kilometre
km-pass	kilometre-pass
kPa	kilopascal
kW	kilowatt
l	litre
m	metre
mm	millimetre
m ²	square metre
m ² -pass	square metre pass
m ³	cubic metre
m ³ -km	cubic metre-kilometre
MN	meganewton
MN.m	meganewton-metre
MPa	megapascal
No.	number
sum	Lump sum
t	tonne (1000kg)

General assumptions

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

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

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

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

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

Departures from the *method of measurement*

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.

C2.2 the *Bill of quantities*

Item No.	Description	Unit	Qty	Rate	Price
SECTION A : PRELIMINARY AND GENERAL					
A.1	Fixed Charge Item				
Establish Facilities on Site:					
A.1.1	Contractual Requirements	Sum	1.00		-
A.1.2	Site Offices and Storage Sheds including temporary fencing.	Sum	1.00		-
A.1.3	Ablution and latrine facilities	Sum	1.00		-
A.1.4	Tools and Equipment	Sum	1.00		-
A.1.5	Establishment of Plant on Site	Sum	1.00		-
A.1.6	Electric power and communications (including connection of security spot light)	Sum	1.00		-
A.1.7	Water Supply	Sum	1.00		-
Other fixed charges:					
A.1.8	Site Establishment "Dismantle" (Remove Contractor's site establishment on Completion)	Sum	1.00		-
Sub - Total A1 (Fixed Charged Items)					-
A.2	Time-Related Items:				
Operate and maintain facilities on Site for the duration of construction					
Facilities for Contractor					
A.2.1	Site Offices and Storage Sheds	Month	1.00		-
A.2.2	Security (24/7), two (2) security guards at all times	Month	1.00		-
A.2.3	Latrine facilities	Month	1.00		-
A.2.4	Tools and Equipment	Month	1.00		-
A.2.5	Water Supply	Month	1.00		-
A.2.6	Electric power and communications / cell phones etc	Month	1.00		-
A.2.7	Plant on site	Month	1.00		-
A.2.8	Company/head office overhead costs	Month	1.00		-
A.2.9	Supervision	Month	1.00		-
A.2.10	Foreman	Month	1.00		-
A.2.11	Construction manager	Month	1.00		-
Sub-Total A2 (Time Related Items)					-
A3	HEALTH ,SAFETY & ENVIROMENTAL				
A3.1	Prepare, submit and obtain approval of safety plan/file and lodge same on site	Sum	1		-
A3.2	Personal Protective equipment	Sum	1		-
A3.3	Transportation of Employees	Month	1		-
A4	ENVIROMENTAL				
A4.1	Maintenance and revision(s), where necessary, of the safety plan/file and all activities (tool box talks, audits etc) necessary to ensure compliance with the provision of the OHS act and project safety specification	Month	1		-
A4.2	The contractor is to take cognisance of Eskom's requirements regarding environmental management, a copy of which is attached hereto and forms part of the contract documents. The contractor is to allow a lump-sum price which he deems sufficient to enable him to meet any cost he will encounter in the application of the various clauses in the EMP, for the entire duration of the contract	sum	1		-
Sub Total (Health ,Safety& Enviromental)					-
TOTAL SECTION 'A' CARRIED FORWARD TO SUMMARY					
SECTION F: OPGW INSTALLATION					
Stringing OPGW					
F.1.1	Stringing, tensioning and earthing of the OPGW Fibre Optic Cable on the earthpeak position of the new double circuit 132kV line (as per OPGW specification TRMASACB2 and NRS061-2:2003) including associated OPGW hardware.	m	15 000.00		-
F.1.2	Installation of HDPE conduit pipe including all compression joints in existing and excavated trenches between gantry and substation relay room as per TST41-115.	m	300.00		-
F.1.3	Drawing of Fibre Optic Cable (48 fibres) through HDPE conduit pipe	m	300.00		-
F.1.4	Restricted excavation in pickable material 0.45m wide, 300-500mm deep for the installation of HDPE FO conduit pipe from leg of tower to existing covered trench at GRA-GAR S/S Install "Eskom Danger Tape" in excavated trench i.e. 300mm from natural ground level as per specification (D-DT-8013) Backfill with in-situ material and compact in 300mm layers to required compaction. (yard stone removal , reinstatement, backfill and exc)	m	300.00		-
Splicing and Testing					
F.1.5	Splicing and Testing of OPGW and Duct Cable as procedure TPC41-5 and NRS 061-2:2003. Provide test results in both hard copy and soft copy format. Contract to provide a detailed breakdown of all costs associated with splicing and testing of the OPGW and Duct Cable.	sum	1.00		-
Road Crossings					
	Erect goal posts, supply and erect temp structures and traffic signs and regulate traffic during construction.	No			-
TOTAL SECTION 'F' CARRIED FORWARD TO SUMMARY					

SUMMARY		AMOUNT
A	SECTION A : PRELIMINARY AND GENERAL	R -
B	SECTION D : OPGW INSTALLATION	R -
	SUB-TOTAL	R -
	VALUE ADDED TAX	
	FINAL CONSTRUCTION COST	R -

PART 3: SCOPE OF WORK

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

C3.1: EMPLOYER'S WORKS INFORMATION, SPECIFICATIONS AND STANDARDS

1. Scope of Works for installation of OPGW between Stikland and Koeberg 132kV HV line Western Cape Operating Unit is as follows;

- Installation of OPGW between Stikland and Koeberg,
- Installation of HDPE conduit pipe including all compression joints in existing and excavated trenches between gantry and substation relay room,
- Drawing of Fibre Optic Cable (48 fibres) through HDPE conduit pipe, and
- Splicing and Testing of OPGW and Duct Cable

1.1. Environmental

1.1.1. General

All activities related to the establishment of power line construction and design implementation should be undertaken in accordance with the Eskom Safety, Health, Environment and Quality (SHEQ) policy. The environmental management during construction activities is to ensure that the Environmental Impact Assessment (EIA) recommendations, Environmental Authorization (EA) conditions, Environmental Management Plan (EMP), landowner special conditions and all relevant environmental legislation are implemented, by monitoring the site works and regular reporting.

1.1.2. Supervision

The contractor shall provide all necessary site supervisor during the execution of the construction works. The appointee should be competent and authorized and shall be approved in writing by the Project Manager. The supervisor must be at all times being on site when the construction works activities takes place. The contractor shall appoint competent, efficient, and qualified personnel to perform construction works. Eskom shall have authority to require the contractor to remove any incompetent persons from site.

1.1.3. Precautions against damage.

- a) The contractor shall adhere to applicable legislation to protect life and property in connection with the construction works.
- b) The contractor shall comply with the condition addressed by the landowner in the negotiated option.
- c) The contractor shall comply with the condition in the EMP during construction.
- d) The contractor shall provide suitable waste bins at any point of works.
- e) The contractor shall be liable for any damage done by the workforce and be repaid immediately.

- f) If there is any agreement made by the landowner and the contractor must be in writing and submitted to Eskom site representative on site within 48 hours.
- g) Any environmental incident or accident during the works must be reported to Eskom site representative.

1.2. Sanitation

The contractor shall provide portable toilet facilities for the use of the workforce at all work sites.

1.3. Wildlife

- a) It is illegal to interfere with any wildlife, fauna or flora as stipulated in the Environmental conservation Act No 73 of 1989.
- b) When stipulated in the EMP, two different coloured bird diverters shall be fitted along the indicated spans. The utilization of bird flight diverters on Eskom overhead lines standard No (240-93563150) section 5.2 shall be used for installation.

1.4. Access

The contractor shall reference the access to Farms guideline (240-80605256) standard

- a) The contractor and ECO shall negotiate with each landowner the access to reach the servitude and tower position. The access agreement will be formalized in the form "TPL 004/005 – Property Access details" and signed by the three parties. The contractor will mark the proposed route and/or a competent representative will accompany the equipment when opening the access. Any deviation from the written agreement should be closed and re-vegetated immediately.
- b) The contractor shall signpost the access roads to the tower positions immediately after the access has been negotiated.

1.4.1. Use of existing roads

- a) Maximum use of both the existing servitudes and the existing roads shall be made. In circumstances where private roads must be used, the condition of the said roads must be recorded prior to use and the condition thereof agreed by the landowner, the Eskom site representative and the contractor.
- b) All private roads used for access to the servitudes shall be maintained by the contractor and upon completion of the construction works, be left in at least the original condition.

- c) Access shall not necessary be continuous along the line, and the contractor must therefore familiarize him/herself with the physical access restrictions such as rivers, railways, motorways, mountains etc., along the line.
- d) Access is to be established by vehicles passing over the same track on the natural ground, multiple tracks are not permitted. Access roads shall only be constructed where necessary at watercourse, on steep slopes or where boulders prohibit vehicular traffic.
- e) Where the Eskom site representative deems that damage to the access road is irreparable, the contractor shall use alternative construction methods compatible with the access and terrain as agreed with the project Manager
- f) Existing water diversion berms are to be maintained during construction and upon completion be repaired as instructed by the Eskom site representative.
- g) Where access roads have crossed cultivated farmlands, the lands be rehabilitated by ripping to a minimum depth of 600mm.

1.5.1. General

- a) Attention is drawn to the Fencing Act No. 31 of 1963 as amended, in particular with regard to the leaving open of gates and the dropping of fences for crossing purposes, climbing, and willful damage or removal of fences.
- b) At points where the line crosses any fence in which there is no suitable gate within the extent of the line servitude the Contractor is to, on the Eskom Site Representative's instruction, provide and install a servitude gate as detailed in the relevant drawing. The Contractor will mark these crossing points when the tower positions are being pegged.
- c) Where applicable game gates are to be installed in accordance with the relevant drawing.
- d) All vehicles shall pass through gates when crossing fences and the Contractor shall not be allowed to drop fences temporarily for the purpose of driving over them. No construction work shall be allowed to commence on any section of line, unless all gates in that section have been installed. Installation of gates in fences on major road reserves shall comply with the ordinances of the relevant Provincial Authority. No gates may be installed in National Road and Railway fences.

1.5.3. Securing of gates

- a) The Contractor shall ensure that all servitude gates used by him are kept closed and locked at all times.
- b) The Contractor shall provide locks for all servitude gates, and when the line is taken over these locks shall be recovered by the Contractor and replaced by locks supplied by the Eskom. The Contractor shall also ensure that all existing farm gates used by him are kept closed. The Contractor shall provide the Eskom Site Representative with keys for the above locks. No keys shall be provided to landowners to avoid conflict situations between neighboring landowners.

1.4.1. Backfilling

- a) The Contractor shall backfill each excavation with suitable material.
- b) In backfilling, the pad of the foundation shall be covered, first with a 200 mm layer of well-graded material containing no pieces larger than 20 mm, before any coarse material is deposited.
- c) The material shall be mechanically compacted to a minimum of 90% of the dry density of the undisturbed material.
- d) The surface of the backfill around the foundation shall be carried to such an elevation that water will not accumulate on top of the backfilled area.
- e) Material removed from the excavation, which is either not suitable or not required for backfill, shall be spread evenly over or adjacent to the site, or be disposed of as directed by the Eskom Site Representative. Spreading of subsoil in agricultural areas will not be allowed. Excavated soil suitable for backfill will be returned to the excavation by backfilling with the subsoil first and the top soil last.

5.3. Stringing OPGW

In general the stringing of OPGW is the same as for the earth wire but the relevant installation standard for OPGW need to be adhered to.

a) Stringing Records

OPGW Installation

- OPGW Schematic Layout
- Colour Coding and Numbering
- Power Meter Results and OTDR Reports
- Splice Performance Summary
- Power Line Carrier Frequencies
- Joint Box Positions
- Assembly Drawings
- OPGW Specification

b) Drawings

- Foundation Drawings
- Tower Outline Drawings
- Hardware Drawings and OPGW Hardware

c) Handover Certificates

Permits

- Statutory Permits
- EMP Permits
- Major Incident Reports
- Non-Conformance Reports

References

South African National documents

OHSACT &
REGULATIONS

Act 85 of 1993

Fencing Act

Fencing Act No 31 of 1963 as amended.

SAISC

South African steel construction handbook

NEMA

National Environmental Management Act No. 107 of 1998

ECCS		Recommendations for angles in lattice transmission towers, No. 39.
SANS 282		Bending dimensions of bars for concrete reinforcement.
SANS 1089:1991		Round wire concentric lay overhead electrical stranded conductors
SANS 471:1971		Portland cement (ordinary, rapid-hardening and sulphate-resisting).
SANS 1:2009	60815-	Selection and dimensioning of high voltage insulators intended for use in polluted conditions
SANS 626:1971		Portland blast furnace cement.
SANS 675:2009		Zinc-coated fencing wire.
SANS 121:2011/ (ISO 1461:2009)		Hot dip galvanised coatings on fabricated iron and steel articles-specifications and test methods
SANS 831:1971		Portland cement 15 (ordinary and rapid hardening).
SANS 920:1985		Steel bars for concrete reinforcement.
SANS 1083:1976		Aggregates from natural sources.
SANS 1:1989	1491-	Portland cement extenders, Part 1: Ground granulated blast furnace slag.
SANS 2:1989	1491-	Portland cement extenders, Part 2: Fly ash.
SANS 3:1989	1491-	Portland cement extenders, Part 3: Condensed silica fume.
SANS 1466:1988		Portland fly ash cement.
SANS CC1:2012	2001-	Concrete works (structural)
SANS CC2:2012	2001-	Concrete works (Minor works)

- SANS 10100-1:1992 The structural use of concrete. Part 1: Design.
- SANS 10100-2:1992 The structural use of concrete, Part 2: Materials and execution of work.
- SANS 10144:1978 Detailing of steel reinforcement for concrete.
- SANS 10162-1:1993 The structural use of steel, Part 1: Limit-state design of hot-rolled steelwork.
- SANS 10162-2:1993 The structural use of steel, Part 2: Limit-states design of cold-formed steelwork.
- SANS 10162-3:1993 The structural use of steel, Part 3: Allowable stress design steelwork.
- SANS 10280-1:2013 Overhead power lines for conditions prevailing in South Africa
- SANS 5861-1 to 4: 2006 Concrete Tests: Making, mixing Curing and sampling
- SANS 5862-1 to 4: 2006 Slump of freshly-mixed concrete.
- SANS 5863 : 2006 Compressive strength of concrete (including making and curing of the test cubes).
- SANS 61089 IEC: Round wire concentric lay overhead electrical stranded conductors
- Agriculture Bulletin 399 Department of Agriculture Bulletin No. 399 ISBN0621082589, A primer on soil conservation.
- SANS 50025 parts 1 to 6 Hot rolled products of structural steels
- SANS 1200 A to F series Civil Engineering Construction Aspects

Eskom National Documents

- 32-9: Definition of Eskom documents.
- 32-644: Eskom documentation management standard.

474-65:	Operating Manual of SCOT
474-285	Specification for anti-theft measures
474-9428	Line Impedance measurements
240-70172585	Procedure for vegetation clearance and maintenance within overhead power line servitudes and on Eskom owned land.
240-67561924	Design, manufacturing and installation specification for transmission line labels
240-75880946	Earthing of transmission lines.
NRS 061-2:2004	Specification for overhead ground wire with optical fibre.
240-110403330	OPGW Hardware and installation requirements fo OHL
NWS 1074	Guy strand grips for transmission lines
NWP 3402	Power lines in the vicinity of aerodromes and hazards to aircraft
SHEQ	Eskom SHEQ policy

International documents

ASCE Manual 1097	Guide for design of steel transmission towers
IEC 60826:2003	Design criteria for overhead transmission lines
DIN EN ISO 898-1 1999:	Mechanical properties of fasteners made of carbon steel and alloy steel. Part1: Bolts, screws and studs

Specifications

TITLE	Doc No.	Date or revision	Tick if publicly available
SAFETY AND ORHVS STANDARDS			
HEALTH AND SAFETY STANDARD FOR CONTRACTORS AND SUBCONTRACTORS WORKING FOR ESKOM	34-333	Latest Revision	Attached
CONSTRUCTION SAFETY, HEALTH, AND ENVIRONMENTAL MANAGEMENT	32-136	Latest Revision	Attached
WORKING AT HEIGHT	32-418	Latest Revision	Attached

ASSESSMENT PROCEDURE FOR AUTHORISATION	34-145	Latest Revision	REFER TO IARC
AUTHORISATION STANDARD FOR OPERATING ON HV SYSTEMS	34-146	Latest Revision	REFER TO IARC
SUPERVISION OF PEOPLE IN ELECTRICALLY HAZARDOUS LOCATIONS	34-1954	Latest Revision	Attached
WORKING CLEARANCES AT MV STRUCTURES WITH POLE-MOUNTED AUXILIARY EQUIPMENT	DISREAAH3	Latest Revision	REFER TO IARC
INSPECTION CHECK SHEETS		Latest Revision	Attached
STANDARD FOR A FALL ARREST SYSTEM	DISASABW3	Latest Revision	REFER TO IARC
TECHNICAL INSTRUCTION – PROHIBITION NOTICE: REF. NO. IOSS 2074-003	03 TI – 016	Latest Revision	REFER TO IARC
TECHNICAL INSTRUCTION – SUBSTATION DEAD WORK	11 TI – 019	Latest Revision	Attached
TECHNICAL INSTRUCTION – SUBSTATION LIVE WORK	11 TI – 020	Latest Revision	Attached
OCCUPATIONAL HEALTH & SAFETY ACT AND REGULATIONS (ACT 85 OF 1983)		Latest Revision	Publicly available
THE FOLLOWING DOCUMENTS WILL FORM PART OF THE PORTFOLIO OF EVIDENCE WITH REGARDS TO ORHVS AUTHORISATION :			
STANDARD FOR THE USE OF EQUIPOTENTIAL FOOTPLATES	SCSASAAU5	Latest Revision	REFER TO IARC
ROUTINE INSPECTION AND MAINTENANCE OF SUB-TRANSMISSION AND RETICULATION LINES	SCSASAAV2	Latest Revision	REFER TO IARC
ROUTINE INSPECTION OF ELECTRICAL EQUIPMENT	SCSASABA8	Latest Revision	REFER TO IARC
STANDARD FOR CONTROL AND APPLICATION FOR MASTER LOCKS AND ISSUE OF MASTER KEYS	DISASAAU1	Latest Revision	REFER TO IARC
THE USE, CARE AND MAINTENANCE OF HIGH VOLTAGE OPERATING STICK	ESKASAAW6	Latest Revision	REFER TO IARC
MEDICAL SURVEILLANCE	DISASACA2	Latest Revision	REFER TO IARC
STANDARD FOR HIGH VOLTAGE DETECTORS, PHASING STICKS AND ASSOCIATED EQUIPMENT	DISASAAW5	Latest Revision	REFER TO IARC
TECHNICAL INSTRUCTION ITO ORHVS 5.03.6.3	04-TI-09	Latest Revision	REFER TO IARC
PROCEDURE FOR THE APPLICATION AND MAINTENANCE OF PORTABLE EARTHS	SCSPVABB1	Latest Revision	REFER TO IARC
OTHER			
PRE-TASK PLANNING AND FEEDBACK PROCESS	SCSPVACU1	Latest Revision	REFER TO IARC
CLEARING AND MAINTENANCE OF SERVITUDE ROUTES	SCSASAAZ9	Latest Revision	REFER TO IARC
STANDARD FOR LABELING OF HIGH VOLTAGE EQUIPMENT	ESKASAAAN 0	Latest Revision	REFER TO IARC
REPORTING, RECORDING, INVESTIGATING COSTING AND FOLLOWING UP OF INCIDENTS OR ACCIDENTS	34-350 DPC	Latest Revision	REFER TO IARC
STANDARD FOR SELECTION, CARE, USE, INSPECTION AND MAINTENANCE OF LADDERS	DST 0051	Latest Revision	REFER TO IARC
SECURING OF LADDERS	06TI-012	Latest Revision	REFER TO IARC
PROVISION AND USE OF PPE	DISASAAT8	Latest Revision	REFER TO IARC
FIRST AID STANDARD	34-332	Latest Revision	REFER TO IARC

IDENTIFYING, ANALYSING, DOCUMENTING AND OBSERVING DANGEROUS / HAZARDOUS TASKS	SCSPVACK0	Latest Revision	REFER TO IARC
PROCEDURE FOR REFUSAL TO WORK ON THE GROUNDS OF HEALTH, SAFETY AND ENVIRONMENTAL CONCERNS	SCSPVABP6	Latest Revision	REFER TO IARC
PROCEDURE FOR THE HANDLING OF NON-CONFORMANCE	SCSPVABX4	Latest Revision	REFER TO IARC
BARRICADING PROCEDURE	SCSPVABF4	Latest Revision	REFER TO IARC
ANTI-CLIMBING DEVICES IN WESTERN REGION	WTI003	Latest Revision	REFER TO IARC
ANTI-CLIMBING DEVICE	05TI-09	Latest Revision	REFER TO IARC
ACCESS TO FARMS	DISADABQ9	Latest Revision	REFER TO IARC
PROCUREMENT OF ASSETS, GOODS AND SERVICES FROM ESKOM BUSINESS UNITS AND ESKOM GROUP COMPANIES	ESKADAAI2	Latest Revision	REFER TO IARC
ESKOM HANDBOOK: THE RECEIPT, HANDLING, ASSESSMENT AND EVALUATION OF TENDERS	ESKAMAAD6	Latest Revision	REFER TO IARC
ANNEXURE A : INCLUDED IN (EXPANDED PUBLIC WORKS REPORT - DIVISIONAL CAPITAL PROGRAMME)	DWN 34-1063	Latest Revision	Attached
CONTRACTOR MANPOWER AND OHS STATS REPORTING FORM	240-1404411286	Latest Revision	Attached - Excel sheet
CONTRACTOR'S PERFORMANCE APPRAISAL – PROCESS			Attached
CONTRACTOR'S PERFORMANCE APPRAISAL – ACTUAL APPRAISAL			Attached - Excel sheet
FINAL RELEASE			Attached
SECTION 37(2) AGREEMENT – TO BE SIGNED AND SUBMITTED AT TENDER STAGE		Latest Revision	Attached
HANDOVER DOCUMENTS			
DISTR. PART7: SUBSTATION SECT.4 : QUALITY CONTROL PROCESS FOR CHECKING OF DISTR. SUBSTATION CONSTRUCTION BEFORE HANDING OVER FOR COMMERCIAL OPERATION	DISASAAQ1	5	REFER TO IARC
SUPPLIER CONTRACT QUALITY REQUIREMENTS SPECIFICATION	QM-58	0	ATTACHED
SHEQ ORGANOGRAM			ATTACHED
SAFETY AND ENVIRONMENTAL			
SAFETY HEALTH AND ENVIRONMENT POLICY	EPL 32-94	Latest Revision	REFER TO IARC
EMP – GENERIC	October 2013		Attached

1. Constraints on how the Contractor Provides the Works

Insurances

The contractor shall ensure that they submit a copy of their company Insurances at tender stage, this should include, Contractor All risk, public liability and third party insurances.

Authorisations

The nature of this contract scope requires authorisation as works will be performed within or close proximity of "live" conditions. It is therefore the responsibility of the Contractor to ensure that he maintains his Western Cape Authorisation for the full duration of this Contract.

Quality Assurance and Quality Plan

- “Quality Assurance Requirements: The *Contractor* shall comply with all quality requirements as set out in the document QM-58 i.e. Eskom Contract Quality Requirements Specification.
- The Contractor shall comply with ISO9001:2008 Quality Management System Requirements.
- The *Contractor* shall comply with all other regulatory and statutory requirements applicable to the *works*. “
- The *Contractor* needs to submit a quality plan indicating the control points for quality to ensure that the *works* are done according to specification.

Access to the site

- The Employer will provide the Contractor with an Access Certificate to formally provide access to the site and works implementation.
- The Contractor shall ensure that he is familiar with conditions of access roads and sites as well as subsurface conditions.
- The Contractor will adhere to all the requirements as per the specification **Access to Sites** which includes, but is not restricted to:
 1. Identity cards with photographs
 2. Clearly marked vehicles NB: All contractor vehicles need to be marked with a sticker stating "Eskom Contractor" but should be on Eskom Standard. All Contractor staff should be identifiable by the use of PPE and bibbons reflecting company's name.
 3. Cooperation in order to help Eskom provide the customer with a project schedule reflecting the period during which the construction and commissioning activities will take place.
- The Contractor shall be responsible for negotiation with customers with regard to use of access routes on farms etc.
- The Contractor will be responsible for negotiation with land or business owners and / or the Local Authority with regard to the works.
- The Contractor will be responsible for external disputes which may occur with regard to the works.
- The Contractor is when necessary or needed required to make all the necessary arrangements with the Local Authorities for road crossing structures and removal thereof, e.g. Removal of pavements, thrust boring under roads, wayleaves, etc.

The Contractor to ensure after completion of the *works*, that the attached “Final Release” form is fully completed by the affected landowners. The fully signed form(s) to be submitted to the Eskom representative. Final Payment will not be released unless this fully completed/signed form(s) is received by the Eskom Representative

Security of materials on sites

- Storage and security of material will be the responsibility of the Contractor until the Completion Certificate is certified. The Contractor is responsible for all costs involved to expedite lost, damaged or stolen material. All material to adhere to Eskom specification

Material and Bill of Quantities

- The Bill of Quantities is a provisional measure and quantities are subject to re measurement.
- Storage and security of material will be the responsibility of the Contractor until the Completion Certificate is certified. The Contractor is responsible for all costs involved to expedite lost, damaged or stolen material. All material to adhere to Eskom specification and criteria.
- Materials supplied by the Contractor for proposed projects will be in accordance with the latest revision of Eskom's Distribution standards, project drawings and specified bill of materials.
- Eskom's Bill of Quantities provided in the price list is provisional.
- Contractor to ensure that all materials used is in accordance with Eskom requirements.

- Materials on site are to be safely secured and stored. Payments are only made once the materials are installed.
- Materials off site: No payment will be made for any materials stored off site or in transit.

Site Establishment and De-establishment

- The *Contractor* will be required to establish a Site Office on Site where meetings can be held and will ensure that basic amenities are available, such as a table and chairs.
- *Contractor* to clear and de-establish total site on completion of proposed *works*.
- *Contractor* is required to collect, load and cart away all rubble and surplus demolished *works* and dispose thereof at a registered waste site
- Contractor to apply good housekeeping at all times.
- Contracts shall ensure the safety of site public and all employees through the provision of security guards.
- Where applicable, Site Establishment will make provision for costs to be incurred by the *Contractor* to ensure adherence to the Environmental Management Plans and other Specifications attached to this contract.
- The Site Management Plan to be submitted and approved by the Eskom representative/Project Manager for the specific works order within 7 days after Works/Purchase Order is awarded. NOTE: Only required when there is a physical site establishment. This plan to be signed off with the Works/Purchase Order at the Site Handover meeting. A template for the “site management plan” will be provided to the contractor as the start of this contract.
- Security and safeguarding of the site will form part of site establishment.

Interaction with Customers / Parties affected

- The *Contractor* shall be responsible for negotiation with customers with regard to use of access routes on farms etc.
- The Contractor will be responsible for negotiation with land or business owners and / or the Local Authority with regard to the works
- The *Contractor* shall be responsible for adequate liaison with all landowners affected during the project to ensure that they are aware of the location of the *Contractor* at all times as well as the estimated time the *Contractor* will be working on the premises.
- The *Contractor* shall adequately inform the land-owners on the number of employees that will be working on the land-owners land at one particular time.
- The *Contractor* shall negotiate access with property owners for the erection of the network and installation of service connections.
- The *Contractor* is required to make all the necessary arrangements with the Local Authorities for road crossing structures and removal thereof.

- The *Contractor* may exercise the option to use a Liaison Officer (e.g. CLO – Community Liaison Officer) for interaction with Customers or parties affected. The onus is on the Contractor to liaise with the Ward Councillor to acquire the relevant CLO
- The Contractor will be responsible for external disputes which may occur with regard to the works

Carrying out the works

- The Scope of “*Works*” is an extension of the drawings, specifications and bills of quantities listed. The *Contractor* shall notify the *Employer* of any discrepancies before commencement of the *work*.
- The *Contractor* shall familiarize himself with all existing services (water, electricity, sewage, etc) prior to starting of the *works*.
- The onus is on the *Contractor* to obtain the latest revision of standards applicable at the time of issue of the Works Order.
- The *Contractor* is required to supply all labour, plant, equipment, loose tools and transport for the duration and completion of the project.
- The *Contractor* to use local labour at various sites as encouraged by the Department of Public Works in their latest document “**Framework for the Implementation of Labour Intensive Projects under the Expanded Public Works Programme (EPWP)**”. The Contractor to ensure liaising and meeting with the relevant Ward Councillor to obtain Community Liaison Officer (CLO) to assist in acquiring localised labour as required by the EPWP.
- The *Contractor* will ensure that testing and commissioning of installations takes place where applicable as per the handover document attached to this contract and that all required Certificates of Compliance are completed.
- *Contractor* to provide breakdown of all costs for the execution of the *works* of the complete project.
- The *Contractor* must immediately notify the *Employer* in writing of scope and compensation events. .
- The *Contractor* will report all obstacles or risks on site that could impact on time, cost, quality, environmental as well as health and safety in writing to the *Employer*. In the event of an emergency, the *Contractor* will report the incident immediately to the *Employer*
- The *Contractor* shall ensure that all Construction work is carried out in accordance with all other statutory requirements applicable to the area.
- The *Contractor* is responsible for providing all PPE for the duration and completion of this contract per project. Contractor should provide a list of their permanent staff as well as submit copies of the ID docs of the temporary staff whom they will provide PPE for.

Expanded Public Works Programme (EPWP)

- The contractor must report all local/temporary labourers employed in a project. The cost of employing such labour will be inclusive in the activity/item in the price list. No additional costs will be paid.
- The contractor is to submit the completed EPWP report with the submission of each progress claim. .
- The contractor must submit REV 7EPWP report together with the assessment claim for payment. This template could change during the course of this contract and the latest applicable template should apply at all times.
- The contractor is a responsible for assisting Eskom in reporting all work done.
- No payment will be certified without the required report being submitted

Lost Time Injury Report (LTIR)/OHS Stats Report of Man Hours and incidents

- The Contractor must submit this report with each payment assessment claim for all major reticulation projects.
- As for minor reticulation projects, the Contractor is to submit a monthly Man-hours report for work done on all "minor" projects.
- No payment will be certified unless this report is submitted.

Subcontracting

The Contractor should ensure that a vetting/evaluation process is done on all his subcontractors performing work under this contract. This process will determine whether the subcontractor meets the Employers' minimum requirements and has the technical capability to perform the scope. This process will follow after the Employer's acceptance of the said subcontractor and prior to his appointment to perform the scope.

The vetting/evaluation process could include an internal evaluation by the Employer. (Note: In order to determine whether this is a requirement for your subcontractor, please consult with the *Employer's representative/project coordinator*).

IMPORTANT NOTE: The principle Contractor is not allowed to subcontract 100% of the scope of work to his subcontractor. In reference to Panel/term contracts; a Principle contractor may not subcontract work to another Contractor on the same panel.

12.1 Subcontractor requirements

The principle *Contractor* must ensure that his proposed subcontractor has the following documentation on record (for access by the Employer) before the appointment.

- Valid accreditations, authorization and/or Registration necessary to perform the scope
- Signed 37.2 agreement between Principle Contractor and Subcontractor
- Approved H&S plan for the subcontractor's portion of the works.
- Principle contractor to ensure his subcontractor complies with the construction regulations. Eg. Where security services are subcontracted the Contract is to ensure that Eskom Protective Services department has vetted and approve the security subcontractor before they can be mobilized OR in the case of Bush clearing, that this appointment is done via relevant Eskom department (Land Development/Environmental)
- A signed written contract that clearly outlines the roles and responsibilities of each party - must exist between the principal contractor and sub-contractor/s preferably in the NEC Engineering and Construction Subcontract or Short Subcontract form.
- Subcontractor should submit a valid Tax clearance certificate to the principle contractor.
- Subcontractors should comply with relevant requirements of the Skills Levies Act, Unemployment Insurance Fund Act and the Compensation of Occupational Injuries and Diseases Act.
- Have the required CIDB grading in place to execute the scope.
- Compliance to approved Safety, Health, Environmental and Quality plans

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

Retention

Eskom will retain 7.5% of each payment certificate issued under this contract for SDL&I performance. The 2.5% will only be reimbursed to the supplier at the end of the contract term if the contractor fulfilled its SDL&I

obligations. Every contract should be accompanied by the SDL&I implementation schedule which must be completed by the supplier and returned to SDL&I within 30 days of contract award.

It shall be used as a reference document for monitoring, measuring and reporting on the supplier's progress in delivering on their stated SDL&I commitments. Contract Manager shall provide a copy of the plan and the contract at contract award.

In addition to this, a further 10% retention will be deducted on all major works/projects.

Wayleaves and other

- The Contractor shall adhere to all the requirements of the applicable Local Authority when arranging and completing road and rail crossing. Way-leaves to be obtained from Land Development. All costs for damaged fences and road reserve shall be borne by the Contractor.

Invoicing and payment

- The Contractor will submit his claim as per the NEC Payment Certificate format as attached to this contract with supporting Bill of Quantities on the assessment day. The Contract Number must be clearly visible on the NEC Payment Certificate.
- The Employer will assess Payment certificates on actual work completed. Any possible issues regarding the claim will be addressed by the Employer to the Contractor.
- On acceptance of the Payment Certificate by the Employer the Contractor submits his invoice as agreed upon with the Employer. Payment will take place as per ESKOM Payment Terms and not as per the NEC Conditions of Contract.

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

The *Contractor* includes the following information on each tax invoice:

- Name and address of the Contractor
- The contract number (46...) and title as well as Purchase Order Number (45...);
- The total Price for Work Done to Date which the Contractor has completed;
- Other amounts to be paid to the Contractor;
- Less amounts to be paid by or retained from the Contractor;
- The change in the amount due since the previous payment being the invoiced amount - excluding VAT, the VAT and including VAT;
- (add other as required)

In addition;

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

Please note: Eskom's name has to be reflected as **Eskom Holdings SOC Limited** on all tax invoices and Eskom's VAT number is 4740101508. The word just Eskom is not acceptable.

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

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

6. The **quantity** or **volume** of goods or services supplied.

7. Ensure that the Eskom Purchase Order Number is clearly indicated on your invoice together with the line number on the order you are billing for
8. Where the supply is subject to VAT at the standard rate, the following in Rand:
- The pre-VAT value, VAT amount and consideration OR
 - The total consideration with a statement that VAT is included @15% OR
 - The total consideration and the Rand amount of VAT charged.

Invoice Submission:

- All electronic invoices must be sent in PDF format only
- Each PDF file should contain one invoice; or one debit note; or one credit note only. Eskom SAP system does not support more than one PDF being linked into workflow at a time
- Only one PDF file per email. (i.e. one invoice or one debit note or one credit note only)
- Send all invoices in PDF straight from your system to the Eskom email address i.e. invoiceseskomlocal@eskom.co.za

Follow-up with Finance Shared Services (FSS):

All queries and follow-up on invoice payments should be made by contacting the FSS Contact Centre at +27 11 800 5060 or email fss@eskom.co.za

Introducing electronic invoicing does not guarantee payment, but will ensure visibility of all invoices as well as ensure that no invoices are lost. If the Goods Receipt (GR) is **not** done, the invoice will be parked and the system will automatically send an email to the end user to do the GR. This is also tracked by Eskom through the park invoice report.

Your company can request a park invoice report from the Finance Shared Services (FSS) Contact Center which can then be followed up and corrected. You are welcome to forward the details of invoices corrected to the FSS Contact Center.

Performance Management

- The *Contractor's* Performance will be assessed in accordance with the Performance Appraisal Process attached to this contract at completion of each works order.
- The signed Contractor performance appraisal needs to be submitted with the final invoice/payment for each works order.

2. Health and Safety Management

The *Contractor* shall ensure adherence to Eskom Life Saving Rules at all times.

Note: Contravention to any of the Eskom Life Saving rules, can result in termination of the contract subject to the outcome on an investigation.

RULE 1: OPEN, ISOLATE, TEST, EARTH, BOND AND/OR INSULATE BEFORE TOUCH

No person may work on any electrical network unless:

- He / she is trained and authorised as competent for the task to be done.
- A pre-task risk assessment to identify all risks and hazards must be conducted prior to any work commencing.
- An equi-potential zone is created for each worker on the job site by earthing, bonding and/or insulating according to approved divisional procedures.

- All conducting material is connected together, all staff onsite wear electrical safety shoes and insulating techniques are applied according to standards.
- The authorised person (Team leader) has certified and shown all team members that the apparatus is safe to work on. He / she is trained and authorised as competent for the task to be done.
- *Contractor* to take precautionary measures when working in close proximity to other power lines.
- Jumper covering is provided to serve as an overhead jumper protection covering above solid cut-outs to reduce bird electrocutions

RULE 2 : HOOK UP AT HEIGHTS

Working at height is defined as any work where an activity above 2 metres is performed from ladders, scaffolds, platforms, buckets, excavation, structures or where there is a potential for a fall. A pre-task risk assessment to identify all risks and hazards must be conducted prior to any work at height commencing.

No person may work at height where there is a risk of falling unless:

- You are appropriately trained.
- You are appropriately secured during ascending and descending.
- You are using an approved fall arrest system where applicable

The *Contractor* must be aware of the operating heights when working under HV lines.

RULE 3 : BUCKLE UP

No person may drive any vehicle on Eskom business:
Unless the driver and all passengers are wearing seat belt

RULE 4: BE SOBER

No person is allowed to work under the influence of drugs and alcohol. Under-the-influence' means the use of alcohol, drugs and /or a controlled substance to the extent that:

- The individuals faculties are in any way impaired by the consumption or use of the substances or;
- The individual is unable to perform in a safe, productive manner or;
- The individual has a level of any such substance in his body that corresponds with or exceeds accepted medical/legal standards or;
- The individual has a level of alcohol in his body that is greater than 0,02 % blood alcohol concentration.

- Any level of an illegal substance in the body' irrespective of when the substance was used

RULE 5: ENSURE THAT YOU HAVE A PERMIT TO WORK

Where an authorisation limitation dictates, no person shall work without the required Permit to Work. (PTW)

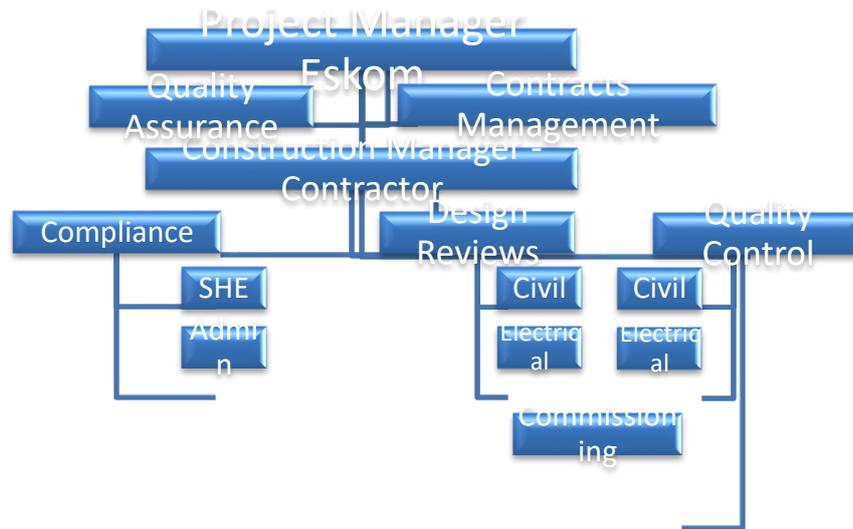
- Work is as defined in the Plant Safety Regulations (PSR) and Operating Regulations for High Voltage Systems (ORHVS) of Eskom.
- A Risk Assessment must be carried out jointly by the Authorised (AP) and Responsible Person (RP) on all work before it commences.
- The PTW must be issued by an AP, in accordance with the PSR.
- The PTW must be accepted in writing by an authorised RP.
- The PTW shall be shown to everyone working on the job and the risks explained.
- The RP must ensure that all staff working on that job is entered on a Workers' Register and the risks explained to each one.
- The RP must ensure that the conditions of the PTW are enforced for the duration of the work.

SHEQ REQUIREMENTS:

In compliance to Eskom's SHEQ Policy, the Contractor to ensure;

- Commitment to safety, health and environmental excellence
- Conduct business with respect and care for people and minimise or avoid impact on the environment
- Compliance to environmental legislation, conditions of Environmental Authorisations and requirements set out in environmental management plans
- Acceptance that all injuries and occupational illnesses, as well as safety and environmental incidents are preventable
- Report, respond to, investigate, close-out, and share learning from safety and environmental incidents
- That SHE is an integral part of your operations and that:
 - no operating condition, or urgency of service, can justify endangering the life of anyone or cause injury or damage to the environment

In addition, the *Contractor* to ensure as a **tender returnable** the following information (as per organogram) is provided to the *Employer*, stating who the relevant qualified person is as per various role levels of the below organogram with all required credentials.



Other Health & Safety Requirements:

- **The Contractor shall comply with:**
 - The **Occupational Health and Safety Act, 1993**, and all regulations made there under as per the standard clause Z6, stipulated on page 8 of this contract.
 - The **Construction Regulations, 2003**.
 - The Health and Safety Requirements of the *Employer* more fully set out in Distribution Standards **34-333** (The Contractor will sign page 36 of the specification as acknowledgement of receipt and adherence)
 - All Eskom Safety and Operating Procedures as outlined in the **ORHVS (Operating Regulations on High Voltage Systems)** and the standards attached to this document i.e. 34-145 and 34-146.
 - The Contractor shall ensure that the Site Supervisor has a valid and applicable ORHVS Authorisation. Should a Contractor be in the process of having an in-house employee authorised, then he should indicate by schedule as to when the person will be fully authorised. This however should be finalised before tenders are evaluated and proof thereof provided.

- The Contractor shall ensure that the Contractor’s Responsible Person shall supervise the works at all times and be available to take permits where necessary.

- The Contractor shall appoint a person who will liaise with the Eskom Safety Officer responsible for the premises relevant to this contract.

“LEGAL COMPLIANCE TO CONSTRUCTION REGULATIONS 2014 Regulation 8(5 and6) Appointment of Construction Health and Safety Officer (CHSO) and Professional Registration:

The 2014 Construction Regulations were promulgated in February 2014 and have fundamental implications on Eskom and its contractors. These regulations describe the requirements and obligations that are binding and applicable to all persons involved in construction work.

One of the fundamental requirements focuses on professional registration, where a contractor must appoint in writing, a full time or part time Construction Health and Safety Officer (CHSO) after consultation with the client and after having considered the size of the project, the degree of danger likely to be encountered or the accumulation of hazards or risks on the site. No contractor may appoint a CHSO who is not registered with the South African Council for the Project and Construction Management Professions (SACPCMP) and has necessary competencies and resources. The CHSO's involvement is generally to assist with the control of all health and safety related aspects on site. This will be effective as of 6th August 2015.”

- The person so appointed shall:
 - supply the Eskom Safety Officer with copies of minutes of all Health and Safety Committee meetings (if relevant), on a monthly basis.
 - supply the Eskom Safety Officer with copies of all appointments in respect of employees employed on this contract, in terms of the Act and Regulations and shall advise the Eskom Safety Officer of any changes thereto – to be handed over to the *Employer* prior to construction start.
- Eskom may, at any stage during the currency of this agreement, be entitled to;
 - do safety audits at the *Contractor's* premises, its work-places and on its employees;
 - refuse any employee, sub-contractor or agent of the *Contractor* access to its premises if such person has been found to commit any unlawful act or any unsafe working practice or is found to be not authorized or qualified in terms of the Act
 - issue the *Contractor* with a work stop order or a compliance order should Eskom become aware of any unsafe working procedures or conditions or any non-compliance with the Act, Regulations and Procedures referred to in 1 above by the *Contractor* or any of its employees, sub-contractors or agents.
- No extension of time will be allowed as a result of any action taken by Eskom in terms of the above and the *Contractor shall* have no claim against Eskom as a result thereof. Furthermore, no amendments to the Act or the Regulations or reasonable amendment to Eskom's Safety and Operating Procedures will entitle the *Contractor* to claim any additional costs incurred in complying therewith from Eskom.
- The *Contractor* shall be responsible for all expenses incurred to ensure adherence to Health and Safety Regulations as stipulated above which includes but is not restricted to ORHVS training courses, etc.
-
- Typically, the identified risks as listed in the “Health & Safety Specification” for this contract which could endanger persons/*works* as per scope of work to be completed by the *Contractor*. Specific risks, related to this project are as follows:

NB: To be prepared when issuing Works/Purchase Order, Site Specific

Typical Risk	Y/N	Detailed Description
LIVE UNDERGROUND CABLES		
WORK IN LIVE CHAMBERS/RESTRICTED AREAS		
LIVE OVERHEAD CONDUCTORS/CROSSINGS		
CLOSE PROXIMITY WORK TO LIVE EQUIPMENT		

OPERATING OF CRANES/VEHICLE MOUNTED		
STATIC ELECTRICITY/INDUCTION		
WORK WITH CHAINSAWS/MECHANICAL CUTTERS		
MATERIALS HANDLING/ HEAVY EQUIPMENT HANDLING		
CONDUCTOR STRINGING AND TENSIONING		
VEHICLE RISKS		
WORK IN OPEN TRENCHES/EXCAVATIONS		
BIOLOGICAL/HEALTH RISKS (CAMPS)		
WEATHER RELATED RISKS (UV, HEAT, COLD, WIND, RAIN, SNOW, ETC.)		
ENVIRONMENTAL RISKS		
ERGONOMIC RISKS (BODY POSITION, FATIGUE)		
WORK ON/DISMANTLING OF RUSTED & ROTTEN POLES AND STRUCTURES		
FIRE RISKS		
PUBLIC SAFETY RISKS		
WORK CLOSE TO PUBLIC ROADS		
WORKING IN ENVIRONMENTAL SENSITIVE AREA		
HISTORICAL EVENTS THAT COULD INFLUENCE THE PROJECT, I.E. CURRENT STRUCTURE DESIGNS, AGE OF STRUCTURES TO BE WORKED ON, ETC		
DEMOGRAPHICS OF THE AREA		

- **THE CONTRACTOR SHALL IDENTIFY MITIGATION ACTIONS FOR ALL IDENTIFIED RISKS, AS WELL AS IDENTIFY ANY ADDITIONAL RISKS AND INCLUDE IT IN THE HEALTH AND SAFETY PLAN TO BE PROVIDED TO THE EMPLOYER ON TENDER RETURN.**

3. Compensation for Occupational Injuries and Diseases (COID) Act

The *Contractor* shall submit with his tender proof of adherence to the above Act.

- To be completed per project and submitted to *Employer's* Representatives as per works order.

4. Quality of workmanship

- The *Contractor* is required to employ a competent Supervisor or Foreman on site for the duration of the project to implement workmanship quality checks. The Supervisor / Foreman appointed by the *Contractor* must be authorized to take a permit in terms of ORHVS and working earths.
- Eskom will do inspections and quality checks on installations completed by the *Contractor* prior to hand-over of each project.

5. Environmental Management

- The *Contractor* shall receive a Generic Environmental Management Plan where applicable and *Contractor* shall manage the documents.
- Specific Environmental Management Plans might be applicable to some projects. The specific EMP shall be handed over to the *Contractor* at commencement of the project and the *Contractor* shall manage it accordingly.
- *Contractor* shall provide toilet facilities, water and electricity.
- All environmental legal Liabilities and claims arising from the activities of the *Contractor* shall be for the *Contractors* expense and shall be priced for in the P&G's Price List.
- The *Contractor* is required to have an understanding of Eskom's basic environmental principles and commitments.
- No open fires will be allowed on Site.
- Existing roads or tracks are to be used as far as possible.

6. Construction Safety

- The *Contractor* shall comply with other Safety application provisions of Government, Provincial, Municipal Safety Laws, Building, Construction, Electricity Regulations and Eskom Distribution Standards.
- The *Contractor* shall accept full responsibility for the means, methods, sequence or procedures of construction for safety precautions or programmes incident to the work of the *contractor*.
- The *Contractor* is required to submit a working methodology statement with regards to the Safety Standards while working within hazardous areas such as live substations or in close proximity of energized apparatus and/or lines.
- The *Contractor* shall indemnify the *Employer* and the Engineer against responsibility for safety on the site of the works.
- Reference of the Safety Methodology Statement can be found in the Government Occupational Health and Safety Act (Act 85 of 1993) and Construction Regulations Document which is publicly available.
- Typically, RISK ANALYSIS IDENTIFYING RISKS THAT could endanger the work as done by the *Contractor* will be done per Works Order. The *Contractor* should identify mitigation actions for these risks, as well as identify any additional risks and submit at tender
- The safety of the *Contractors* personnel and employees acquire precedence over the construction works.
- The *Contractor* shall submit a Safety Plan to the *Employer* within one week of award of contract prior to starting on site. The Safety Plan to be assessed by the *Employers* Representative where after on approval will the *Contractor* be allowed access to site.

7. Handover on completion

1. On completion of the works as indicated on the works order, the Contractor shall complete the installation by adhering to all requirements as stipulated in the Handover Procedure as attached to this contract.
2. The Contractor shall negotiate with the *Employer* a reasonable handover date for each project.
3. At the handover meeting, all relevant requirements as per the Handover procedure shall be adhered to by the Contractor. The *Employer's* representative shall only verify the handover documentation.
4. All relevant test readings, including earth readings shall be indicated by the Contractor on the Handover Documentation. All test readings shall be done according to Eskom Specifications and Standards.

8. General

1. Except for site management and specialized labour such as operators for plant and equipment, the *Contractor* is encouraged to use "local" labour on a temporary basis for all manual tasks.
2. The *Contractor* will attend all site meetings as arranged by the *Employer*
3. The *Contractor* will report all obstacles on site that could impact on time and cost e.g. Trees, obsolete poles, and inclement weather to the *Employer* in writing.
4. All Construction work shall be carried out in accordance with all the statutory requirements applicable to the area, Eskom's specifications, standards and regulations
5. The *Contractor* will be given access to the proposed site and the *Contractor* must comply with Eskom's, National, Provincial and Local environmental policies, safety standards and laws.
6. The onus is on the *Contractor* to obtain the latest revision of standards applicable.
7. The *Employer* reserves the right to alter the scope of the works, programme and constraints.
8. The Clerk of Works of the *Employer* will do Quality Control Checks and inspections on the *works*. The *Contractor* notifies the Clerk of Works or *Employer's* Representative of any inspections to be done three days in advance.
9. The *Contractor* shall ensure that caution is exercised when working in close proximity of live electrical equipment.

9. Requirements for the programme

- A comprehensive and fully detailed programme is to be submitted within the seven (7) days after the introductory meeting and should indicate all milestones and critical dates. This programme must first be approved by the *Project Manager* and must be updated on an as and when required basis by the *Project Manager*.
- **The following dates shall be clearly reflected on the programme:**
- Starting and completion dates for all activities as well as relevant key dates for hold or witness points. All relevant significant activities shall be shown in order to monitor the progress in the factory/workshop.
- The programme shall also reflect a 2-week period for inspection and correcting of Defects before the completion date.
- Updated programmes must be available at all meetings reflecting progress to date and the date when delivery will take place through the use of task orders.
- **FORMAT OF THE PROGRAM**
- The *Contractor* shall submit his construction program in terms of the conditions of contract.
- The *Contractor* is to submit a revised programme for acceptance at each site meeting.
- This program shall be in the form of an approved Gantt Chart containing the following information:
- All construction activities, including milestones, initial tasks, critical path, required Outages, and target *Dates*. All potential risk activities should be clearly indicated on the critical path.
- Every activity on the programme will be clearly linked to labour resources and equipment required to perform the specific activity.
- Projected weekly progress on *site* for the entire duration of the contract.
- Completion and hand-over *Dates* for formal inspection by the site supervisor must be indicated.
- A column showing the daily tempo of all the construction activities must be indicated next to the activity on the programme.

- Project expenditure on a monthly basis for the entire duration of the contract.
- The following project phases and activities are minimum requirements for the programme:
- Site Establishment and Material Delivery – Lead times to be specified.
- Preparation work – Work that can be completed without the necessity of power outages
- Outage work – Work that must be completed under outage conditions
- Planned outages to be included in the programme
- *Contractors* float to be included in the programme
- The Contract Program will be on display in the *Contractors Site Offices* and will be updated weekly. In addition to the maintaining of this programme, the *Contractor* will report progress to the *Project Manager* at each site meeting or at request of the *Project Manager*.
- The *Contractor* shall also provide an organisation chart showing the personnel to be employed for the works, along with a detailed CV of all key personnel.
- Should any deviations to the program be found the *Contractor* shall submit a revised program to the *Project Manager* within one week of such deviations being brought to the *Contractor's* attention.
- The Outages must be arranged with *Employer* via the Outage arrangement procedures, as a prerequisite for the acceptance of the programme by the *Project Manager*.
- Acceptance of any program by the *Project Manager* shall have no contractual status other than an indication that the *Project Manager* is satisfied as to the order in which the work is to be carried out, and that the *Contractor* undertakes to perform all work in accordance with the accepted program.
- The *Project Manager* retains the right to alter the accepted program should circumstances on *site* necessitate such a change.
 - OTHER INFORMATION TO BE SHOWN ON THE PROGRAM.
- The following Statutory non-working days are included within the contract period:
- All Public Holidays for the duration of the contract.
- The programme must clearly indicate the non-working days for the entire construction period.

10. Services and other things provided by the Employer

Item	Date by which it will be supplied
Access to site	
All project specific drawings	
Way leaves	
Health and Safety Spec	

PART 4: SITE INFORMATION

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

Core clause 11.2(16) states

“Site Information is information which

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

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

General description

1. The Employer will arrange a site clarification meeting prior to the quote submission date.
2. The Contractor to ensure that he becomes fully aware of site conditions as well as access conditions such as soil/subsurface conditions prior to submitting a quote.
3. Contractor access is limited to the working area.
4. Access control to be strictly monitored by the contractor to avoid any negligent or illegal events on premises during and after working hours.
5. If an existing barrier fence is removed, it must be replaced the same day.
6. The contractor is deemed to execute safety procedures to ensure the safety of his staff, sub-contractors, Eskom staff and community during the contract period.
7. The safety of the contractors employees, sub-contractors and community takes preference over the scope of the works.
8. The contractor, his staff and sub-contractors must maintain identification at all times e.g. uniforms etc.
9. The Contractor should take all reasonable steps to become fully aware of existing services.
10. No fires are allowed on site (to fully comply as per EMP).